

BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA

Decision No. [2019] NZEnvC 137

IN THE MATTER of the Resource Management Act 1991
AND of appeals pursuant to s 120 of the Act
against a decision granting resource
consent applications for the taking of
groundwater from the Houhora, Motutangi
and Waiparera aquifer management sub-
units of the Aupouri Aquifer, Northland
BETWEEN A BURGOYNE / TE TAUMATUA O NGATI
KURI RESEARCH UNIT
(ENV-2018-AKL-121)
DIRECTOR-GENERAL OF
CONSERVATION
(ENV-2018-AKL-126)
Appellants
AND NORTHLAND REGIONAL COUNCIL
Respondent
AND MOTUTANGI-WAIHARARA WATER
USERS GROUP
Applicant

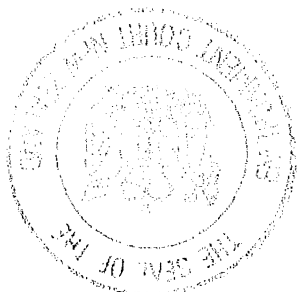
Court: Environment Judge JA Smith
Environment Commissioner RM Dunlop
Environment Commissioner SK Prime

Hearing: At Whangarei 12-14 December 2018

Appearances: CM Lenihan and M Downing for Department of Conservation (DoC)
A Burgoyne, assisted by Mr EJ Wagener, for himself and Te
Taumatua o Ngati Kuri Research Unit (Mr Burgoyne)
GJ Mathias for Northland Regional Council
AMB Green for the Motutangi-Waiharara Water Users Group
(Applicant)

Date of Decision: 16 August 2019

Date of Issue: 16 August 2019



SECOND DECISION OF THE ENVIRONMENT COURT

- A: The consent conditions are confirmed as annexed hereto and marked **A** subject to the following amendments:
- (a) Section 3.4.3.2 penultimate paragraph will now provide that at least one survey must be conducted every five years. Repeat surveys between this time shall occur as follows:
 - (i) once after the initial vegetation survey (to provide an accurate baseline)
 - (ii) otherwise where a technical assessment carried out according to section 2.1.1 confirms there is declined standing water level of the Kaimaumu Wetland resulting from groundwater extraction.
 - (b) Section 3.2.1.1 fourth bullet point should read 'wetland conditions survey' to align with the heading for 3.4.3.
- B: All consents are subject to the Groundwater Monitoring and Contingency Plan June 2019 attached as **B**. The Court recommends consideration of alternation to GMPC Section 1.1. Objective 1(d) to be "... such that existing bores operating as a permitted activity or in accordance with resource consent conditions cannot access groundwater of the quality and quantity authorised". Unless any party raises objection to this wording within 10 working days of the release of this decision this wording shall replace that in the existing document.
- C: Otherwise the terms of conditions are confirmed and annexed here to and marked **A**. Subject to updating, refer to annexure **B** and consequential track changes. The terms of **B** are also confirmed subject to [A] and [B] above.
- D: The consent attaches a master consent to be applied to individual consents as appropriate to take effect from today's date with the exception of the objective section 1.1.1(d) in 1.1 of the GMPC. That wording may be clarified by the Court and modified in due course.
- E: Costs are to lie where they fall in respect to the Department of Conservation matter unless any party files submissions in relation to this costs within 10 working days. So far as the Burgoyne matter is concerned, costs also seem to appropriately lie where they fall. However, costs are recorded until resolution of the High Court appeal.



REASONS

Introduction

[1] This decision is consequent upon a decision of the Court [2019] NZEnvC 28 and directed the parties to prepare a master consent with amendments suggested or indicated by the courts.

[2] There was an opportunity for parties to circulate their views on particular wording and a timetable was set. Mr Burgoyne notwithstanding did not engage in the original round of consultation and the Court then directed by a further Minute on the 16th of May which is annexed hereto and marked C.

[3] Mr Burgoyne did not respond to this and the other parties have otherwise largely agreed upon both the consents and conditions thereof. There are some minor disagreements remaining and the Court also has minor concerns as to the clarity of certain conditions. The consents in A also need to refer to the GMCP of June 2019 attached as “.

Issues remaining

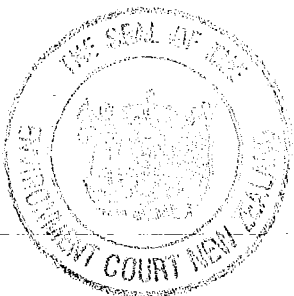
[4] DoC's submission was concerned at the wording of GMCP section 3.4.3.2(B) which seems to indicate that repeat surveys would not be conducted every five years even if there were no changes to water levels. That was certainly the Court's intention and the applicants do not appear to clearly respond to this change in their submission.

[5] For the Court's part we have decided that clearly it was always the Court's intention that there be repeat surveys to ensure that the conditions of consent were still maintaining the Wetland ecologies. To that end we amend the wording:

(a) Section 3.4.3.2 penultimate paragraph will now provide that at least one survey must be conducted every five years. Repeat surveys between this time shall occur as follows:

- (i) once after the initial vegetation survey (to provide an accurate baseline)
- (ii) otherwise where there is technical assessment carried out according to section 2.1.1 confirms there is declined standing water level of the Kaimaumu Wetland resulting from groundwater extraction.

[6] We make it clear that although additional surveys may be required if there are



concerns about the water levels within the Wetland, these must occur at least every five years.

[7] Parties have raised concerns about consent conditions Clause 5 by surrender of temporary consents. We have concluded the applicants give cogent reasons commencing in their submissions on why a condition of the type raised by DoC is not required.

[8] Furthermore section 3.2.1.1 of the applicant's proposed text change has not be implemented in the GMCP section 3.2.1 bullet points 2 and 4. We do not consider this is something the Court needs to concern itself with, it is a matter that could be rectified in the GMCP as necessary.

[9] In relation to 3.2.1.1 fourth bullet point, we conclude that the words should read "wetland condition survey" to align with the heading of 3.4.3.

Area for further consideration

[10] There is one particular area where our concerns may not be immediately made by a decision of the Court. In the GMCP section 1.1. Objective 1(d) there remain words which give some concern as to application. It speaks of existing "efficient bores" and words such as "cannot access". Both of these words are open to broad interpretation and argument and do not appear to us to give the degree of efficiency anticipated.

[11] We consider that alternative wording may overcome this by stating:

"... such that existing bores operated as a permitted activity or in accordance with resource consent conditions can access groundwater of the quality and quantity authorised."

[12] Given that we do not know the exact meaning of the words in relation to existing bores (it was not discussed in any detail in the evidence) we are reluctant to impose this wording without giving the parties an opportunity to consider it.

[13] Because of the Court's desire to reach finality, we make the following decisions:

(a) That pursuant to s 116 the specific authorisations following in the general form may be issued forthwith. Subject only to the finalisation of this particular wording.

(b) We do not consider that this wording effects the operation of the consent immediately.



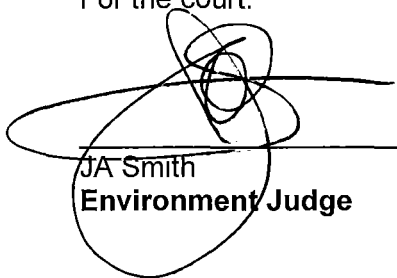
[14] So far as to the final wording for the GMCP section 1.1 Objective 1(d) is concerned we make the following directions:

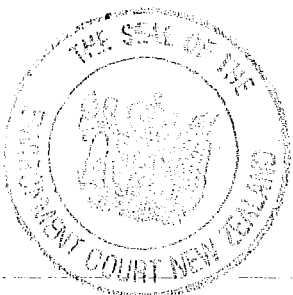
(a) If any party has concern as to the inclusion of the Court's suggested wording, they are to file a memorandum with the Court and serve on other parties within 10 working days of the date of this decision.

(b) The Court will then convene a telephone conference to discuss how this might be addressed or resolved. Consequently, this will involve only those parties who have filed a memorandum of concern and the applicant.

[15] It does not appear any applications for costs have been filed and nor would the Court normally consider them appropriate in the case of this sort. Nevertheless, given the matter is on appeal to the High Court (at least in respect to the Burgoyne matter) questions of costs can be reserved in that matter until the resolution of that appeal. So far as to the DoC matter is that the Court understands that costs are to lie where they fall. If the Court has a misapprehension in this regard the parties are to advise the Court within 10 working days and the Court will address this matter also at any reconvened telephone conference or issue instructions.

For the court:


JA Smith
Environment Judge



File: 027391
(01)
Change

IVAN ANTHONY STANISICH, 40 KAIMAUMAU ROAD, RD 1, AWANUI 0486

AUT.027391.01.02: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management units for the purposes of horticultural irrigation purposes.

LOCATION

Address of Site

485 Heath Road, Awanui

Legal Description of Site

Site of take: (Bore 1) Section 18 Block V Opoe Survey District, (Bore 2) Part Section 41 Block V Opoe Survey District

Sites of use: Lot 1 Deposited Plan 129554, Lot 1 Deposited Plan 322899, Section 47, 50, 61 Block V Opoe Survey District and Part Section 41 Block V Opoe Survey District, Section 55 Block V Opoe Survey District, Part Section 101 Block V Opoe Survey District

Map Reference (*Geodetic Datum 2000, New Zealand Transverse Mercator Projection*)

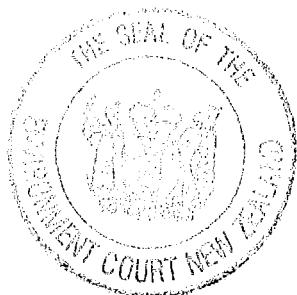
Bore 1: 1618046E 6133608N

Bore 2: 1617839E 6133475N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2025**



Conditions of AUT.027391.01.02

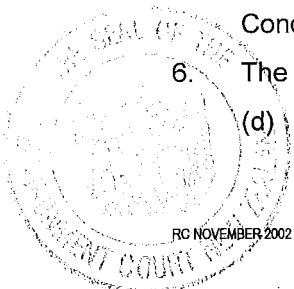
1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a). Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b). Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c). Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The Consent Holder may only take water up to the following quantities from Bore 1:
 - (a) 720 cubic metres within any continuous 24-hour period;
 - (b) 3000 cubic metres within 7 continuous days;
 - (c) 120,000 cubic metres within the 12-month period 1 July to 30 June.

This condition shall cease to have effect once water is taken in accordance with Condition 7.

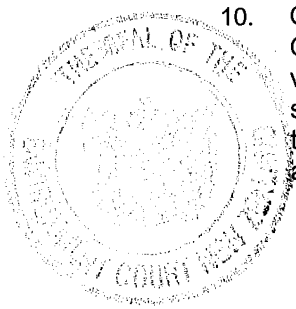
6. The taking of water in accordance with Condition 5 will be subject only to the following:
 - (d) Conditions 13 to 17, and 25 of this consent;



- (e) Condition 5MC of Appendix A– MWWUG Master Consent Conditions; and
 - (f) The Consent Holder shall comply with any water-rationing plan (including possible cessatin) required by the Council to cater for drought conditions;
 - (g) To prevent saline contamination, the Council's Compliance Manager reserves the right to require the Consent Holder to cease the exercise of this consent at all times when the chloride level in water delivered by the bore is measured by standard methods to be greater than 200 grams per cubic metre.
7. (a) If additional water above the quantities authorised by Condition 5, then the combined quantities of taking from both bores shall not exceed the following;
- (i) 1,150 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 apply;
 - (ii) 8,000 cubic metres within 7-continuous days; and
 - (iii) 120,000 cubic metres between 1 July in a year and 30 June in the following year;
 - (iv) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
- (b) The Consent Holder shall advise the Council's assigned monitoring officer when Condition 7(a) will be exercised for the first time, at least 5 working days beforehand.
8. The taking of water under Condition 7(a) will be subject to compliance with all conditions of this Consent excluding Conditions 5 and 6.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made



in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).

11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

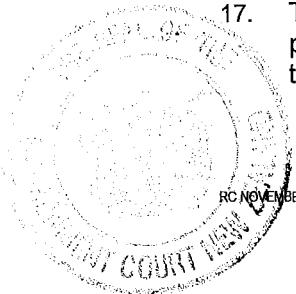
15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.



18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

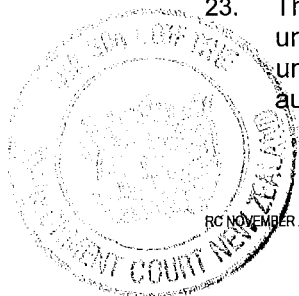
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
 22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation



Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.

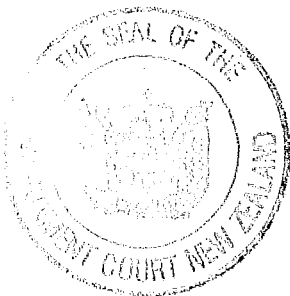
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumu-Motutangi wetland (Kaimaumu Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumu Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumu Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumu Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

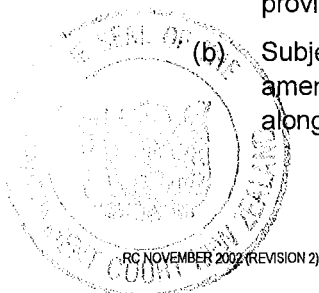
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



LARGUS ORCHARD LIMITED PARTNERSHIP, PO BOX 302608, NORTH HARBOUR,
AUCKLAND 0751

AUT.038420.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

385 Heath Road, Waiharara

Legal Description of Site

Site of take: Section 53 Block V Opoe Survey District, Section 118 Block V Opoe Survey District

Sites of use: Section 52 and Section 60 Block V Opoe Survey District, Section 129 Block V Opoe Survey District, Section 118 Block V Opoe Survey District, Section 53 and Part Section 38 Block V Opoe Survey District

Map Reference (New Zealand Transverse Mercator Projection)

1617919E 6132263N

1617905E 6132480N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**



Conditions of AUT.038420.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;



- (c) Stage 3, which shall be from the irrigation season immediately following written approval to progress from Stage 2 until the expiry of the consent, unless Conditions 9-12 apply.
6. The combined daily volume of water taken across all bores shall not exceed the following;
- (a) 1,300 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
- (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The combined annual volume of water taken across all bores for each stage shall not exceed the following unless Conditions 10-13 apply;
- (a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
- (b) Stage 2: 96,000 cubic metres between 1 July in a year and 30 June in the following year;
- (c) Stage 3: 193,700 cubic metres between 1 July in a year and 30 June in the following year;
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
- (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
- (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
- (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL 2 Trigger Level 2 has been reached;
- (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will



be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

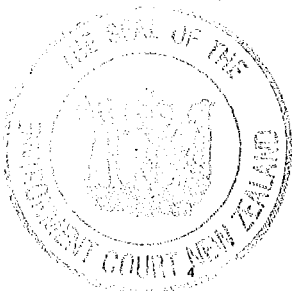
- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
 11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
 12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
 13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:
 - Water balance and crop water requirements;
 - Subsurface drainage; and
 - Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;

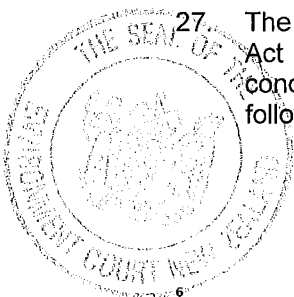


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:



- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

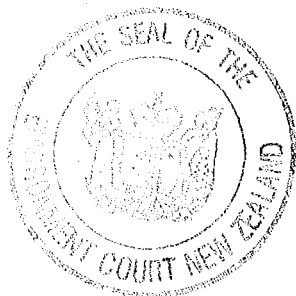
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



NEIL THOMPSON, ALMA VIOLET THOMPSON, STEVEN THOMPSON, AND
JOSEPHINE SUZANNE THOMPSON, 2049 FAR NORTH ROAD, RD 4, KAITAIA 0484

AUT.038589.01.01: To take and use groundwater from the Aupouri-Motutangi
sub-aquifer management units for the purposes of
horticultural irrigation.

LOCATION

Address of Site

38 Turk Valley Road, Motutangi

Legal Description of Site

Site of take: Lot 2 Deposited Plan 178824

Sites of use: Lot 2 Deposited Plan 178824

Map Reference (New Zealand Transverse Mercator Projection)

1614798E 6138773N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

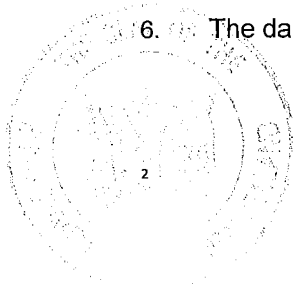


Conditions of AUT.038589.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

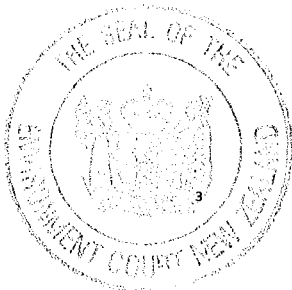
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be from the irrigation season immediately following written approval to progress from Stage 1 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;



- (a) 240 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-12 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2 until expiry: 35,280 cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).



10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the



Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

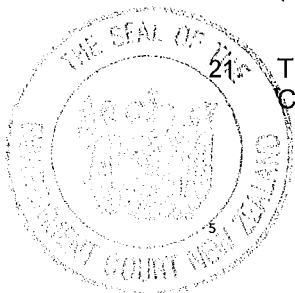
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:
 - Water balance and crop water requirements;
 - Subsurface drainage; and
 - Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;
- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
- (d) Soil moisture target to be maintained in each zone by irrigation;
- (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
- (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.

The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.



22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

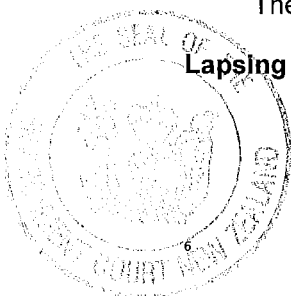
Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition



28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

- 1MC. The consented activity must not, individually or cumulatively, result in:
- (a) saltwater intrusion into the Aupouri aquifer; or
 - (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
 - (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
 - (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

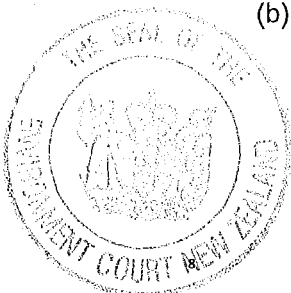
Prior to the Exercise of Consent

- 2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.
- 3MC. Prior to the exercise of this consent;
- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
 - (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

- 4MC. This consent shall be exercised and monitored in accordance with the GMCP.
- 5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.
- 6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:
- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
 - (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



KATHERINE YVONNE VALADARES, 3547 FAR NORTH ROAD, RD 4, KAITAIA 0484

AUT.038732.01.01: To take and use groundwater from the Aupouri-Houhora sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

3633 State Highway 1, Motutangi

Legal Description of Site

Site of take: Lot 3 Deposited Plan 477138

Sites of use: Lot 1 Deposited Plan 195379, Lot 1-3 Deposited Plan 477138, Section 81 Block XV Houhora East Survey District

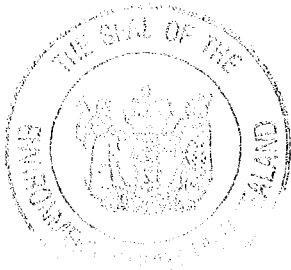
Map Reference (New Zealand Transverse Mercator Projection)

1612533E 6142943N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

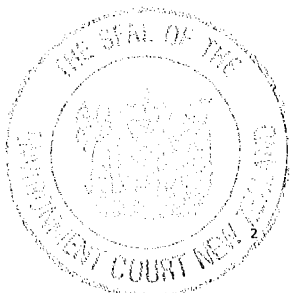


Conditions of AUT.038732.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The quantity of water taken from the bore shall not exceed the following;
 - (a) 150 cubic metres in any 24 consecutive hours unless Conditions 6(b) or 8 of this consent apply;
 - (b) 22,350 cubic metres between 1 July in a year and 30 June in the following year unless Conditions 6-10 apply; and
 - (c) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.



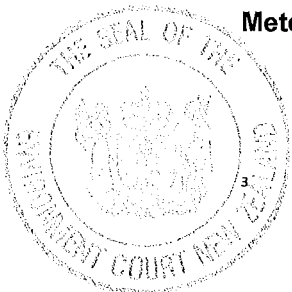
Breaching of Trigger Levels

6. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
 - (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 12. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
7. Once Condition 6(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 6(c).
8. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 6(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
9. Once Condition 8 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
10. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 6-8, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

11. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting



12. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
- (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

13. The Consent Holder shall verify that the meter required by Condition 12 is accurate. This verification shall be undertaken prior to 30 June:
- (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

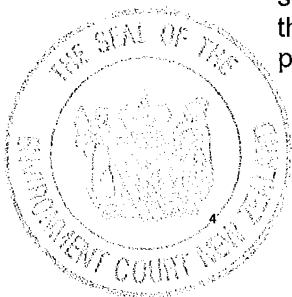
14. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 12.
15. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 12 shall have an electronic datalogger for automatic logging of meter data.
16. A copy of the records required to be kept by Condition 14 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

17. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;



- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
18. The Consent Holder shall not exercise this consent until the ISP required by Condition 217 has been certified by the Council's Compliance Manager.
 19. The ISP certified in accordance with Condition 18 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 20. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 21. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 20.
 22. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 23. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80% of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to*



the crop.

Review Condition

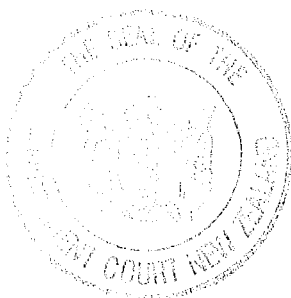
24. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

25. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

- 1MC. The consented activity must not, individually or cumulatively, result in:
- (a) saltwater intrusion into the Aupouri aquifer; or
 - (a) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
 - (b) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
 - (c) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

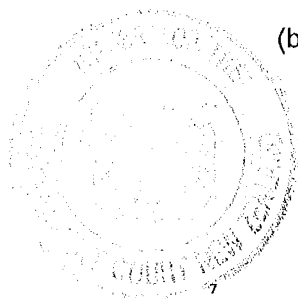
Prior to the Exercise of Consent

- 2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.
- 3MC. Prior to the exercise of this consent;
- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
 - (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

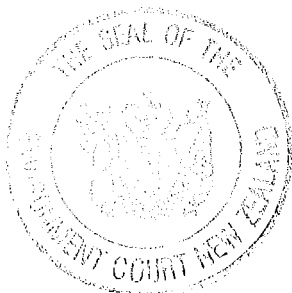
The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

- 4MC. This consent shall be exercised and monitored in accordance with the GMCP.
- 5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.
- 6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:
- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
 - (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



JONATHAN CHARLES BRIEN & CAROL NADINE CARR, 3994 FAR NORTH ROAD,
RD 4, KAITAIA 0484

AUT.039381.01.01: To take and use groundwater from the Aupouri-Houhora
and Aupouri- sub-aquifer management units for the
purposes of horticultural irrigation purposes.

LOCATION

Address of Site

Elingamite Drive, Houhora

Legal Description of Site

Site of take: Lot 3 Deposited Plan 425051

Sites of use: Lot 3 Deposited Plan 425051

Map Reference (New Zealand Transverse Mercator Projection)

1610058E 6147313N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

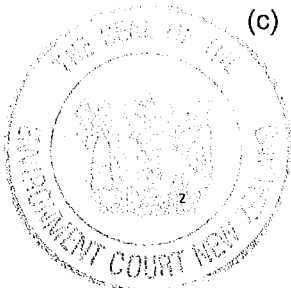


Conditions of AUT.039381.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The quantity of water taken from the bore shall not exceed the following;
 - (a) 100 cubic metres in any 24 consecutive hours unless Conditions 6(b) or 8 of this consent apply; and
 - (b) 14,900 cubic metres between 1 July in a year and 30 June in the following year unless Conditions 6-10 apply.
 - (c) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.



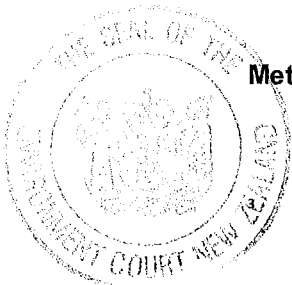
Breaching of Trigger Levels

6. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
 - (a) The Council will advise the Consent Holder in writing that a TL 2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 12. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
7. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 6(c).
8. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 6(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
9. Once Condition 8 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
10. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 6-8, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

11. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting



12. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
- (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

13. The Consent Holder shall verify that the meter required by Condition 12 is accurate. This verification shall be undertaken prior to 30 June:
- (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

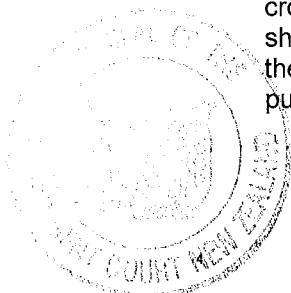
14. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 12.
15. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 12 shall have an electronic datalogger for automatic logging of meter data.
16. A copy of the records required to be kept by Condition 14 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

17. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;



- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
18. The Consent Holder shall not exercise this consent until the ISP required by Condition 17 has been certified by the Council's Compliance Manager.
 19. The ISP certified in accordance with Condition 18 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 20. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 21. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 20.
 22. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 23. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water*



applied to the crop.

Review Condition

24. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

25. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (a) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (b) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (c) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

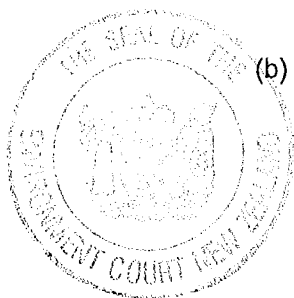
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



BERNARD KIM SHINE AND SHERYL DIANNE SHINE, 231 KAIMAUMAU ROAD, RD
1, AWANUI 0486

AUT.038328.01.01: To take and use groundwater from the Aupouri-Waiharara
sub-aquifer management unit for the purposes of
horticultural irrigation.

LOCATION

Address of Site

Kaimaumu Road, Waiharara

Legal Description of Site

Site of take: Part Lot 1 Deposited Plan 13971

Sites of use: Part Lot 1 Deposited Plan 13971 & Lot 2 DP 520488

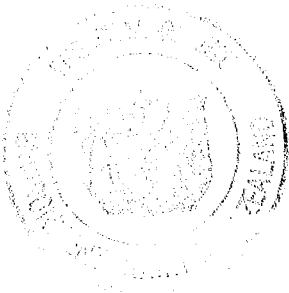
Map Reference (New Zealand Transverse Mercator Projection)

1619774E 6134083N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

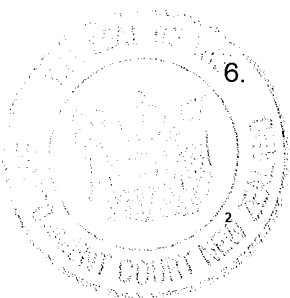


Conditions of AUT.038328.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

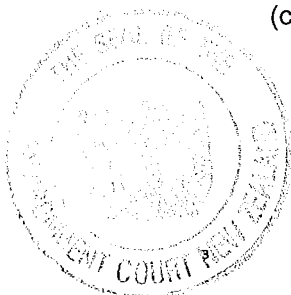
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be from the irrigation season immediately following written approval to progress from Stage 1 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;



- (a) 268 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-12 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 39,200 cubic metres between 1 July in a year and 30 June in the following year;
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 15. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s)



10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

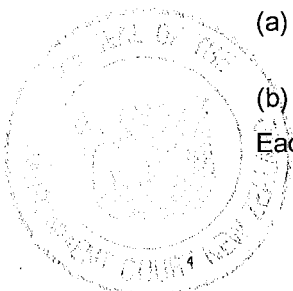
Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the



Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

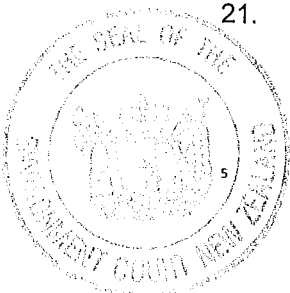
20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;
- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
- (d) Soil moisture target to be maintained in each zone by irrigation;
- (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
- (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.

21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.



22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.



Lapsing Condition

28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



ELBURY HOLDINGS LIMITED, 345 STATE HIGHWAY 1, RD 2, KAITAIA 0482

AUT.038454.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

Kaimaumau Road, Waiharara

Legal Description of Site

Site of take: Lot 1 Deposited Plan 22761

Sites of use: Lot 2 Deposited Plan 13971, Lot 1 and Lot 4 Deposited Plan 22761

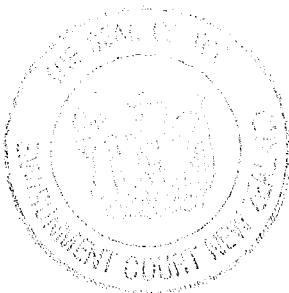
Map Reference (New Zealand Transverse Mercator Projection)

1617409E 6133139N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**



Conditions of AUT.038454.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

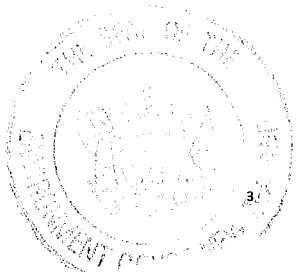
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;



- (c) Stage 3, which shall be from the irrigation season immediately following written approval to progress from Stage 2 until the expiry of the consent, unless Conditions 9-12 apply.
6. The daily volume of water taken from the bore shall not exceed the following;
- (a) 763 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 10-13 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 VOL cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 113,700 VOL cubic metres between 1 July in a year and 30 June in the following year;
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL 2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent



Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.



16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
- (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.
- Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.
17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;
- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
- (d) Soil moisture target to be maintained in each zone by irrigation;

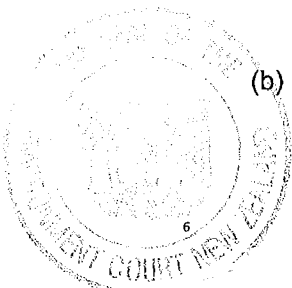


- (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
 22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
 25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.

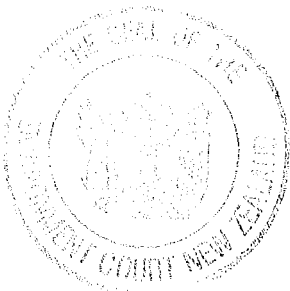


(c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

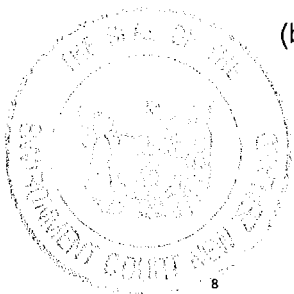
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



CYPRESS HILLS LIMITED, 27 TURK VALLEY ROAD, AWANUI 0484

AUT.038591.01.01: To take and use groundwater from the Aupouri-Motutangi sub-aquifer management units for the purposes of horticultural irrigation.

LOCATION

Address of Site

State Highway 1, Motutangi

Legal Description of Site

Site of take: Lot 1 Deposited Plan 336507

Sites of use: Lot 1 Deposited Plan 336507, Lot 10 Deposited Plan 178824, Lot 8 Deposited Plan 178824

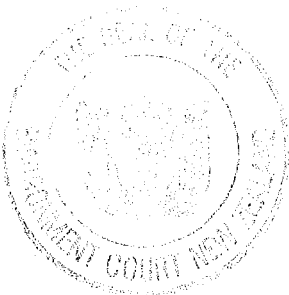
Map Reference (New Zealand Transverse Mercator Projection)

1614898E 6138495N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

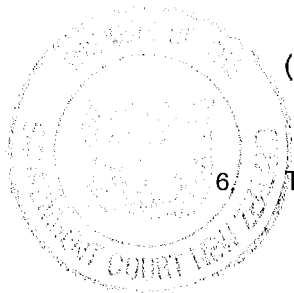


Conditions of AUT.038591.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be from the irrigation season immediately following written approval to progress from Stage 2 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;



- (a) 250 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-12 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 35,280 cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).



10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the



Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

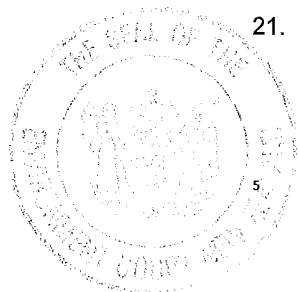
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.



22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

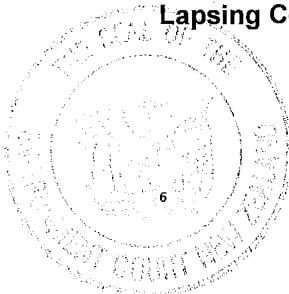
Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition



28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

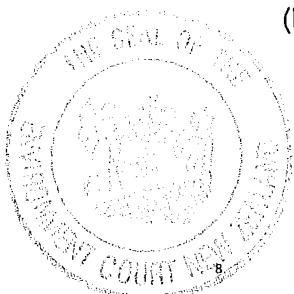
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



KEVIN WAYNE THOMAS AND DANNIELLE O'CONNOR, 556C KIMBERLEY ROAD,
RD 4, KAITAIA 0484

AUT.039244.01.01: To take and use groundwater from the Aupouri-Houhora
sub-aquifer management units for the purposes of
horticultural irrigation.

LOCATION

Address of Site

Elingamite Drive, Houhora

Legal Description of Site

Site of take: Lot 1 Deposited Plan 505956

Sites of use: Lot 1 Deposited Plan 505956

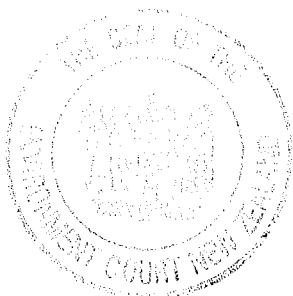
Map Reference (New Zealand Transverse Mercator Projection)

1610222E 6147542N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

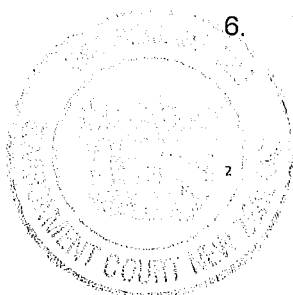


Conditions of AUT.039244.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

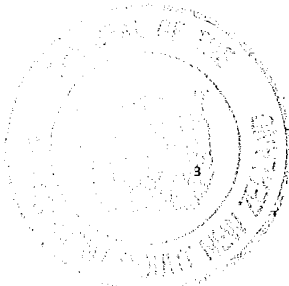
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be from the irrigation season immediately following written approval to progress from Stage 1 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;



- (a) 400 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-13 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 59,600 cubic metres between 1 July in a year and 30 June in the following year;
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).



10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
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12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

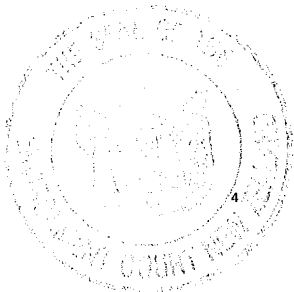
Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the



Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

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19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

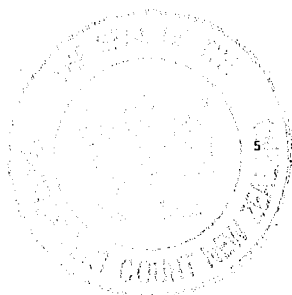
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.



22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

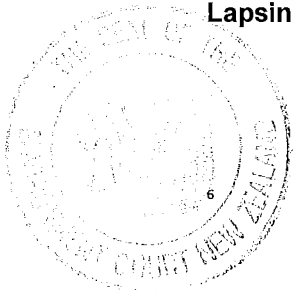
Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition



28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

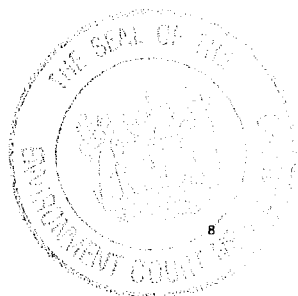
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



DAMIEN KENNETH HOLLOWAY AND KATHERINE ANNE HOLLOWAY, 305
KAIMAUMAU ROAD, AWANUI 0486

AUT.038380.01.01: To take and use groundwater from the Aupouri-Waiharara
management unit for the purposes of horticultural
irrigation.

LOCATION

Address of Site

305 Kaimaumau Road, Waiharara

Legal Description of Site

Site of take: Lot 1 Deposited Plan 193935

Sites of use: Lot 1 Deposited Plan 193935

Map Reference (New Zealand Transverse Mercator Projection)

1619886E 6134694N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

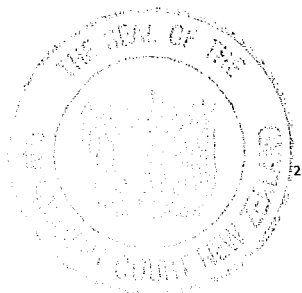


Conditions of AUT.038380.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The quantities of water taken from the bore shall not exceed the following;
 - (a) 100 cubic metres in any 24 consecutive hours unless Conditions 6(b) or 8 of this consent apply; and
 - (b) 14,900 cubic metres between 1 July in a year and 30 June in the following year;
 - (c) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.



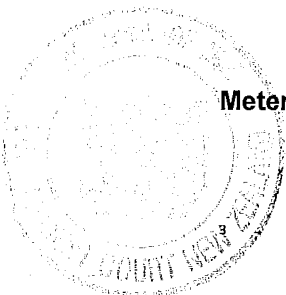
Breaching of Trigger Levels

6. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
 - (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 12. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
7. Once Condition 6(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 6(c).
8. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 6(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
9. Once Condition 8 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
10. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 6-8 the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

11. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting



12. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
- (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

13. The Consent Holder shall verify that the meter required by Condition 13 is accurate. This verification shall be undertaken prior to 30 June:
- (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

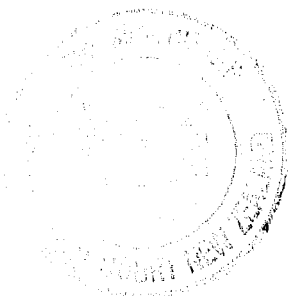
14. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 12.
15. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 12 shall have an electronic datalogger for automatic logging of meter data.
16. A copy of the records required to be kept by Condition 145 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

17. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;

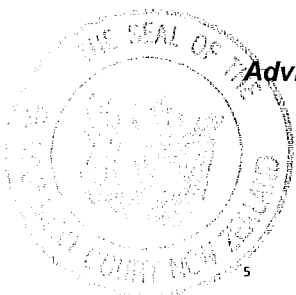


- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
18. The Consent Holder shall not exercise this consent until the ISP required by Condition 17 has been certified by the Council's Compliance Manager.
 19. The ISP certified in accordance with Condition 18 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 20. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 21. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 20.
 22. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 23. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water*



applied to the crop.

Review Condition

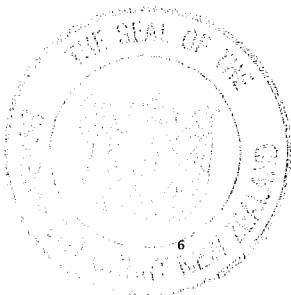
24. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

25. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (a) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (b) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (c) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



HONEYTREE FARMS LIMITED, 64 TE MAIKA ROAD, RD 3, WHANGAREI 0173

AUT.038471.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purpose of horticultural irrigation.

LOCATION

Address of Site

Norton Road, Waiharara

Legal Description of Site

Site of take: Section 55 Block IV Opoe Survey District, Lot 2 Deposited Plan 497050

Sites of use:

Map Reference (New Zealand Transverse Mercator Projection)

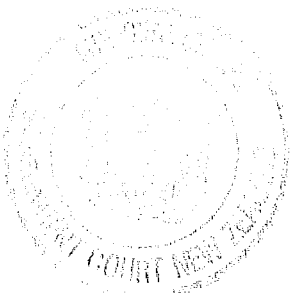
Bore 1: 1618894E 6136120N

Bore 2: 1618552E 6136318N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

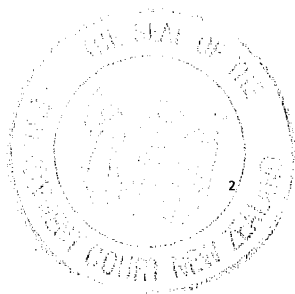


Conditions of AUT.038471.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

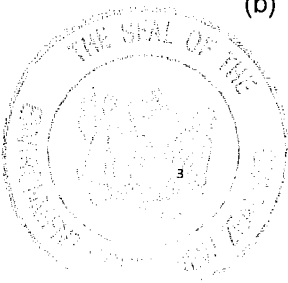
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;
 - (c) Stage 3, which shall be for the minimum period of two consecutive irrigation seasons;



- (d) Stage 4 which shall be from the irrigation season immediately following written approval to progress from Stage 3 until the expiry of the consent, unless Conditions 9-13 apply.
6. The combined daily volume of water taken across all bores shall not exceed the following;
- (a) 2,325 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The combined annual volume of water taken across all bores for each stage shall not exceed the following unless Conditions 9-12 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 198,000 cubic metres between 1 July in a year and 30 June in the following year;
 - d) Stage 4: 346,425 cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as



advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

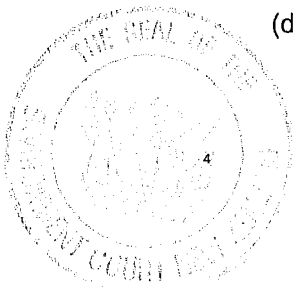
- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

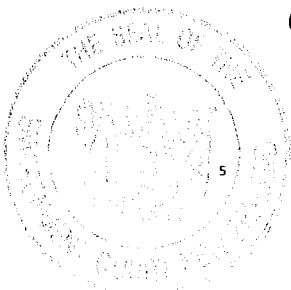
Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:
 - Water balance and crop water requirements;
 - Subsurface drainage; and
 - Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;

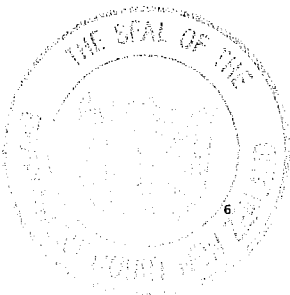


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
 22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
 25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

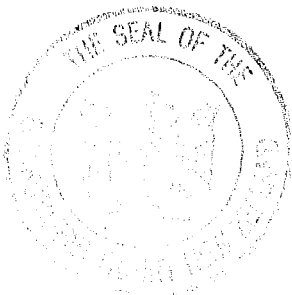


- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumu-Motutangi wetland (Kaimaumu Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumu Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumu Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumu Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

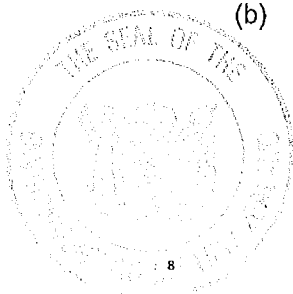
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

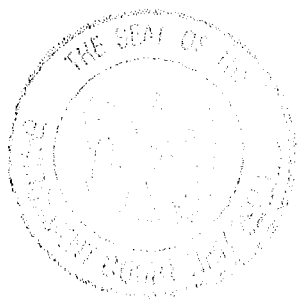
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



MAPUA AVOCADOS LIMITED, PO BOX 302608, NORTH HARBOUR, AUCKLAND
0751

AUT.038610.01.01: To take and use groundwater from the Aupouri-Houhora and Aupouri-Motutangi sub-aquifer management units for the purposes of horticultural irrigation purposes.

LOCATION

Address of Site

3547 State Highway 1, Motutangi

Legal Description of Site

Site of take: Section 89 Block XV Houhora Survey District, Lot 2 Deposited Plan 373078, Lot 2 Deposited Plan 497050

Sites of use: Section 87 Block XV Houhora East Survey District, Lot 2 Deposited Plan 373078, Section 67 and Section 90-91 Block XV Houhora East Survey District, Section 66, Section 79 and Section 89 Block XV Houhora East Survey District, Section 47-48 Block XV and Section 53 Block XV Houhora East Survey District, and Part Section 13 Block XV and Part Section 51 Block XV Houhora East Survey District

Map Reference (New Zealand Transverse Mercator Projection)

1612579E 6141738N

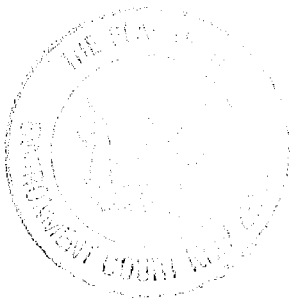
1613011E 6142457N

1612468E 6142348N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**



Conditions of AUT.038610.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

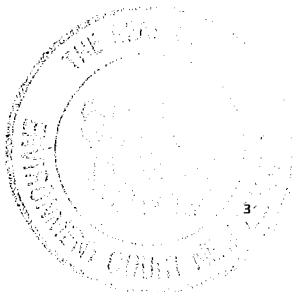
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;
 - (c) Stage 3, which shall be for the minimum period of two consecutive irrigation seasons;



- (d) Stage 4 which shall be from the irrigation season immediately following written approval to progress from Stage 3 until the expiry of the consent, unless Conditions 19-13 apply.
6. The combined daily volume of water taken across all bores shall not exceed the following;
- (a) 5,000 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The combined annual volume of water taken across all bores for each stage shall not exceed the following unless Conditions 9-13 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 198,000 cubic metres between 1 July in a year and 30 June in the following year;
 - d) Stage 4: 209,000 cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as



advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
 11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
 12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
 13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

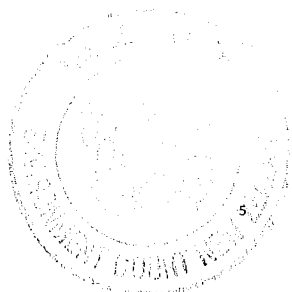
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;

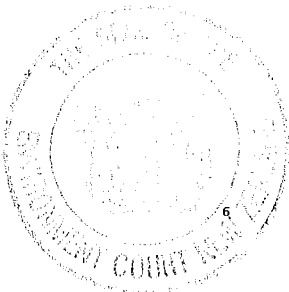


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
 22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
 25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

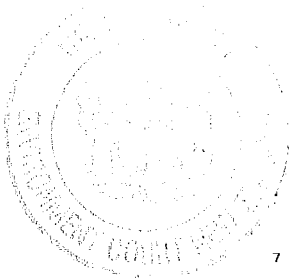


- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

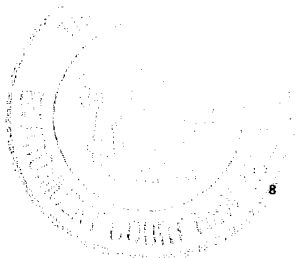
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

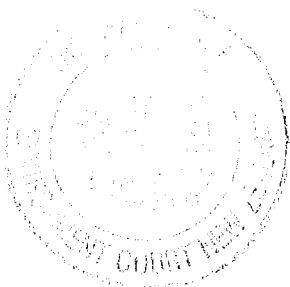
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



LJ KING LIMITED, 346 STATE HIGHWAY 1, RD 2, KAITAIA 0482

AUT.039332.01.01: To take and use groundwater from the Aupouri-Motutangi sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

State Highway 1, Motutangi

Legal Description of Site

Site of take: Lot 2 Deposited Plan 452703

Sites of use: Lot 2 Deposited Plan 452703

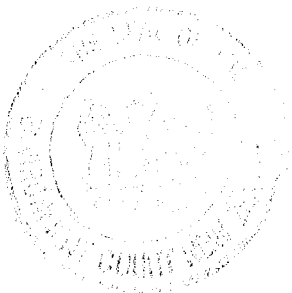
Map Reference (New Zealand Transverse Mercator Projection)

1614723E 6139203N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

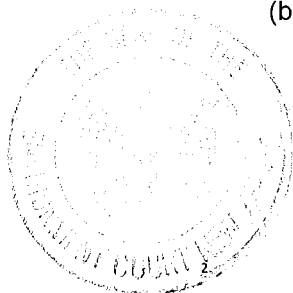


Conditions of AUT.039332.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

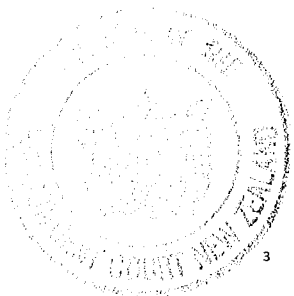
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;



- (c) Stage 3, which shall be from the irrigation season immediately following written approval to progress from Stage 2 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;
 - (a) 537 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
 7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-13 apply;
 - a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 113,700 cubic metres between 1 July in a year and 30 June in the following year;
 8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
 - (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
 - (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent



Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

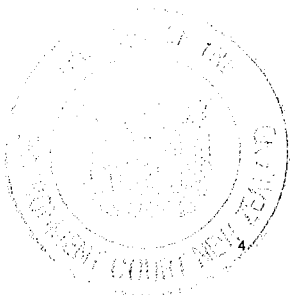
- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

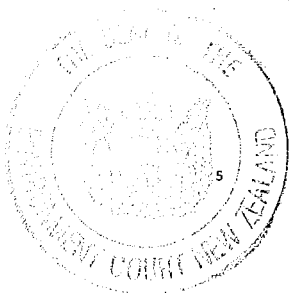
Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;
- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;

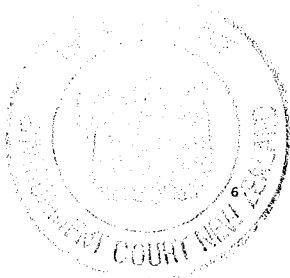


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

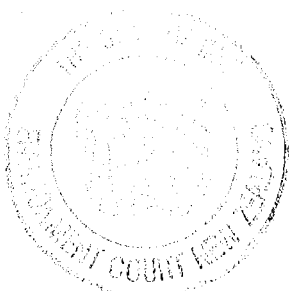


- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

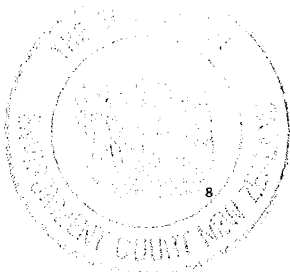
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

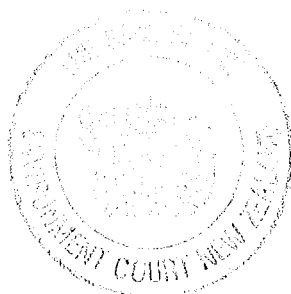
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



GEORGINA TUI COVICH AND MATE NICKOLAS COVICH, 2786 FAR NORTH ROAD,
RD 4, KAITAIA 0484

AUT.038410.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purposes of horticultural irrigation purposes.

LOCATION

Address of Site

Shroj Road, Waiharara

Legal Description of Site

Site of take: Section 27 Block IV Opoe Survey District, Section 16 Block IV Opoe Survey District

Sites of use: Section 39 Block IV Opoe Survey District, Section 16, Section 19, Section 27 and Section 30 Block IV Opoe Survey District, Section 5 and Section 32 Block IV Opoe Survey District, Section 9-10, Section 31 and Section 34 Block IV Opoe Survey District

Map Reference (New Zealand Transverse Mercator Projection)

Bore 1: 1617353E 6136859N

Bore 2: 1617128E 6136793N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

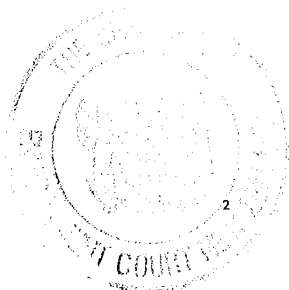


Conditions of AUT.038410.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

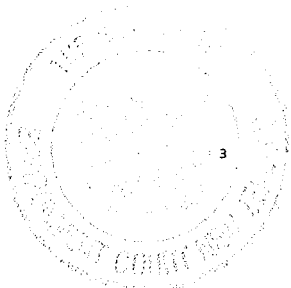
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;
 - (c) Stage 3, which shall be for the minimum period of two consecutive irrigation seasons;



- (d) Stage 4 which shall be from the irrigation season immediately following written approval to progress from Stage 3 until the expiry of the consent, unless Conditions 10-13 apply.
6. The combined daily volume of water taken across all bores shall not exceed the following;
- (a) 1,500 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The combined annual volume of water taken across all bores for each stage shall not exceed the following unless Conditions 10-13 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 VOL cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 198,000 VOL cubic metres between 1 July in a year and 30 June in the following year;
 - d) Stage 4: 223,500 VOL cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as



advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

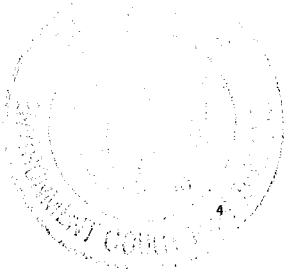
- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
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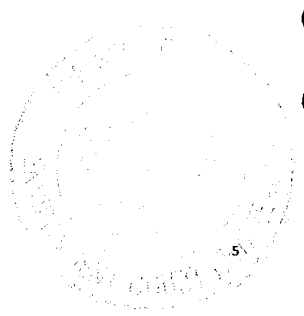
Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:
 - Water balance and crop water requirements;
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 - Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
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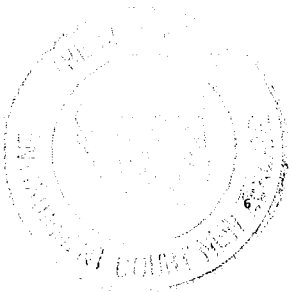


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
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23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

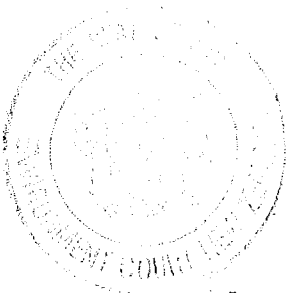


- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

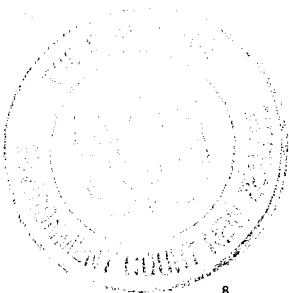
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

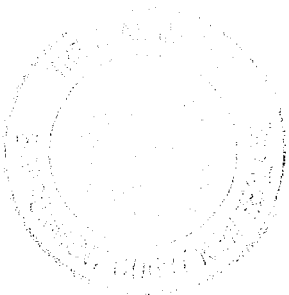
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



TE RŪNANGA O NGĀI TAKOTO, 16 MATTHEWS AVENUE, KAITAIA 0410

AUT.038513.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

Norton Road, Waiharara

Legal Description of Site

Site of take: Lot 6 Deposited Plan 405064

Sites of use: Lot 5-7 Deposited Plan 405064

Map Reference (New Zealand Transverse Mercator Projection)

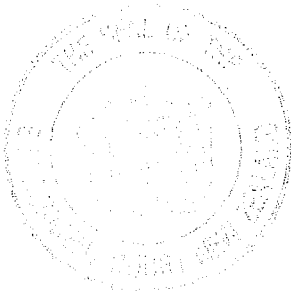
Bore 1: 1619097E 6135520N

Bore 2: 1618987N 6135795N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

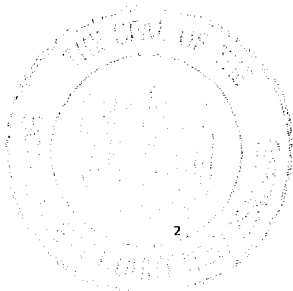


Conditions of AUT.038513.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

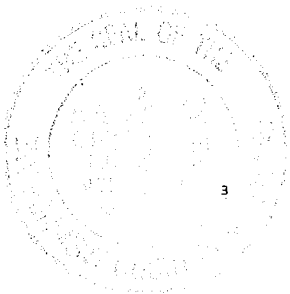
4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be for the minimum period of two consecutive irrigation seasons;



- (c) Stage 3, which shall be from the irrigation season immediately following written approval to progress from Stage 2 until the expiry of the consent, unless Conditions 9-13 apply.
6. The combined daily volume of water taken across all bores shall not exceed the following;
- (a) 1,300 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The combined annual volume of water taken across all bores for each stage shall not exceed the following unless Conditions 9-12 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 96,000 VOL cubic metres between 1 July in a year and 30 June in the following year;
 - c) Stage 3: 193,700 VOL cubic metres between 1 July in a year and 30 June in the following year;
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
 - (d) A report detailing the reasons for the Council's decision in regard to progressing to the next stage, including the identification and discussion of any matters raised during the consultation described in Condition 8(b), will be provided to the Consent Holder and the Director-General of Conservation.

Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by



Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;

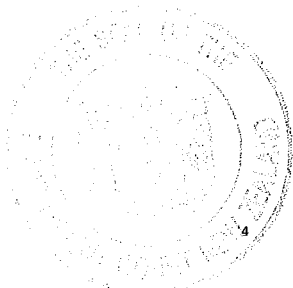
- (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
- 10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
- 11. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 9(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
- 12. Once Condition 11 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
- 13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

- 14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

- 15. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
 - (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.



The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

17. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 15.
18. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 15 shall have an electronic datalogger for automatic logging of meter data.
19. A copy of the records required to be kept by Condition 17 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

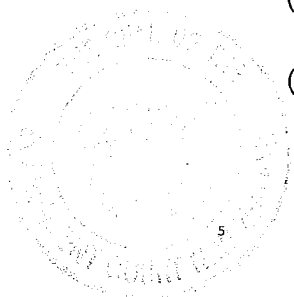
Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

20. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:
 - Water balance and crop water requirements;
 - Subsurface drainage; and
 - Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
- (b) Method(s) for assessing current soil moisture levels;

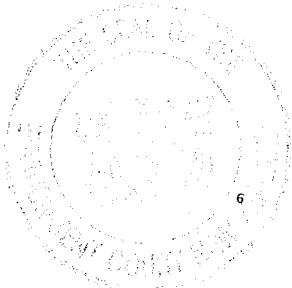


- (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.
22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

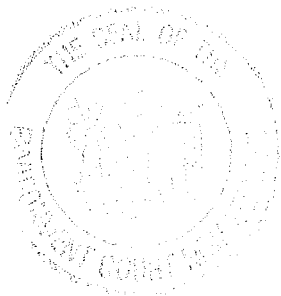


- (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
- (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

- 28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

- 1MC. The consented activity must not, individually or cumulatively, result in:
- (a) saltwater intrusion into the Aupouri aquifer; or
 - (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
 - (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
 - (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

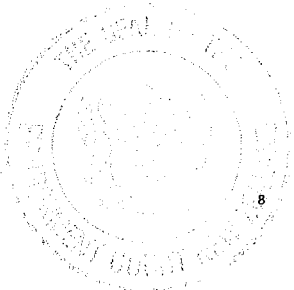
Prior to the Exercise of Consent

- 2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.
- 3MC. Prior to the exercise of this consent;
- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
 - (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

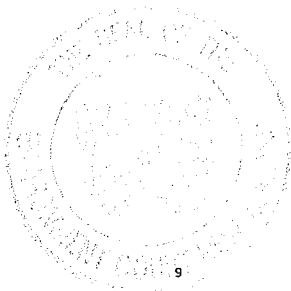
The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

- 4MC. This consent shall be exercised and monitored in accordance with the GMCP.
- 5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.
- 6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:
- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
 - (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



ANTHONY WILLIAM HEWITT, 17 CAMP ROAD, RD 4, KAITAIA 0484

AUT.038650.01.01: To take and use groundwater from the Aupouri-Waiharara sub-aquifer management unit for the purposes of horticultural irrigation.

LOCATION

Address of Site

17 Camp Road, Waiharara

Legal Description of Site

Site of take: Lot 1 Deposited Plan 194160

Sites of use: Lot 1 & 2 Deposited Plan 194160

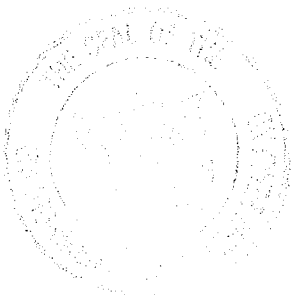
Map Reference (New Zealand Transverse Mercator Projection)

1617409E 6132267N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

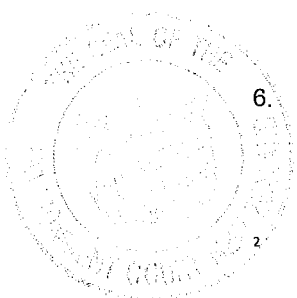


Conditions of AUT.038650.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
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For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

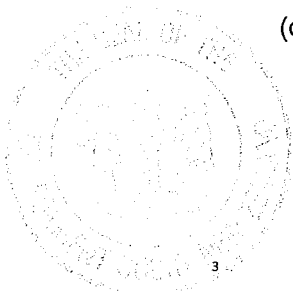
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5. The consent shall be exercised in a staged manner as follows:
 - (a) Stage 1, which shall be for the minimum period of the first full irrigation season after the consent is first exercised;
 - (b) Stage 2, which shall be from the irrigation season immediately following written approval to progress from Stage 1 until the expiry of the consent, unless Conditions 9-13 apply.
6. The daily volume of water taken from the bore shall not exceed the following;



- (a) 270 cubic metres in any 24 consecutive hours unless Conditions 9(b) or 11 of this consent apply; and
 - (b) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.
7. The annual volume of water taken from the bore for each stage shall not exceed the following unless Conditions 9-13 apply;
- a) Stage 1: 34,000 cubic metres between 1 July in a year and 30 June in the following year;
 - b) Stage 2: 39,200 cubic metres between 1 July in a year and 30 June in the following year.
8. Progress to the next stage shall only occur where written approval is given by the Council's Compliance Manager; and
- (a) This written approval will only be given if the council is satisfied that the Staged Implementation and Monitoring Review prepared in accordance with the GMCP confirms that the groundwater abstraction complies with Condition 1MC; and
 - (b) A decision on whether written approval will be given or not will not be made until the Council has consulted with the Consent Holder and the Director-General of Conservation over the Staged Implementation and Monitoring Review; and
 - (c) Notwithstanding Condition 8(b), written approval to progress from Stage 1 to Stage 2 will not be considered unless all the monitoring trigger levels required by the GMCP have been set; and
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Breaching of Trigger Levels

9. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
- (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 19. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).



10. Once Condition 9(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 9(c).
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13. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 9-11, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

14. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

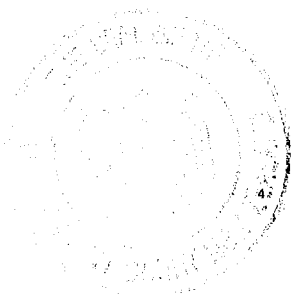
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 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

16. The Consent Holder shall verify that the meter required by Condition 15 is accurate. This verification shall be undertaken prior to 30 June:
 - (a) Following the first taking of water from each production bore in accordance with this consent; and
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Each verification shall be undertaken by a person, who in the opinion of the



Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

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Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

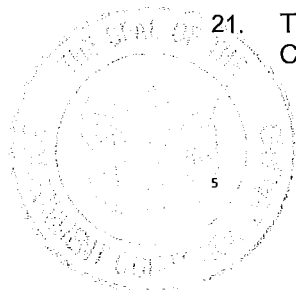
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For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
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- (d) Soil moisture target to be maintained in each zone by irrigation;
- (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
- (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.

21. The Consent Holder shall not exercise this consent until the ISP required by Condition 20 has been certified by the Council's Compliance Manager.



22. The ISP certified in accordance with Condition 21 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
23. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
24. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 23.
25. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
26. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

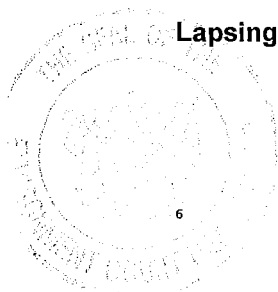
Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop.*

Review Condition

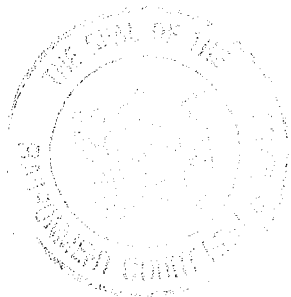
27. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - (b) To insert trigger level thresholds established in accordance with the GMCP as conditions of consent.
 - (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition



28. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

- (a) saltwater intrusion into the Aupouri aquifer; or
- (b) adverse effects on the hydrological functioning of the Kaimaumau-Motutangi wetland (Kaimaumau Wetland); or
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumau Wetland; or
- (d) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumau Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumau Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

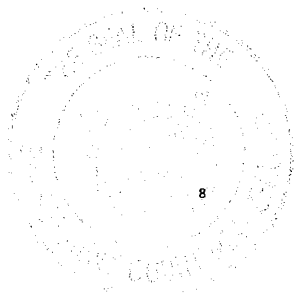
Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

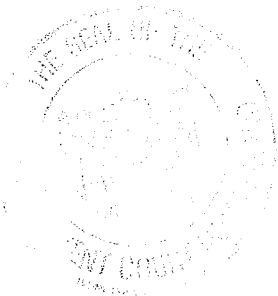
5MC. The Consent Holder shall, at all times, provide safe and easy access to the production bore wellhead(s) for the purpose of undertaking monitoring on the bore(s), as set out in the GMCP.

6MC. Excluding the Staged Implementation and Monitoring Review process, the GMCP may be amended at any time by the following process:

- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
- (b) Subject to Condition 6MC(d), the Consent Holder may submit a request for an amendment by giving written notice to the Council of the proposed amendment along with any supporting technical documents.



- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



IAN GORDON MCLARNON AND JASON IAN MCLARNON, 100 WHALERS ROAD, RD
4, KAITAIA 0484

AUT.039345.01.01: To take and use groundwater from the Aupouri-Houhora
sub-aquifer management unit for the purposes of
horticultural irrigation.

LOCATION

Address of Site

100 Whalers Road, Houhora

Legal Description of Site

Site of take: Lot 2 Deposited Plan 177332

Sites of use: Lot 1 Deposited Plan 101943, Lot 2 & 3 Deposited Plan 177332, Lot 5-7
Deposited Plan 405064

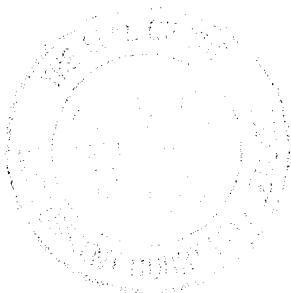
Map Reference (New Zealand Transverse Mercator Projection)

1611284E 6144679N

Note: An error accuracy of +/- 50 metres applies to these map references.

CONSENT DURATION

This consent is granted for a period expiring on **30 November 2033**

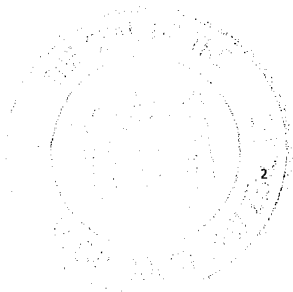


Conditions of AUT.039345.01.01

1. The consent holder shall pay all charges relating to the recovery of cost for the administration, monitoring and supervision of this consent fixed by Council under Section 36 of the Resource Management Act 1991.
2. The exercise of this consent is bound by the conditions of the 'MWWUG Master Consent Conditions' (herein referred to as **Master Consent**) attached as Appendix A. The Master Consent uses an alternate numbering system '1MC, 2MC, 3MC...'.
 3. Subject to compliance with the conditions of this consent, the activity authorised by this consent shall be carried out in accordance with the application and documents submitted as part of the application, including the following documents:
 - (a) Assessment of Environmental Effects prepared by Williamson Water Advisory Ltd: *Irrigation Water Supply, Groundwater Take Consent Application – Motutangi Waiharara Water User Group. WWA0026: Final – Rev. 4, dated 30 August 2017;*
 - (b) Model Report prepared by Williamson Water Advisory Ltd: *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017.*
 - (c) Technical Peer Review Letter Report prepared by LWP Ltd: *Water Permit Application – Motutangi – Waiharara Water User Group (MWWUG), Aupōuri Peninsula, dated 19 September 2017.*

For the avoidance of doubt, where information contained in the application documents is contrary to the conditions of this consent and those in the Master Consent (Appendix A), or where the information contained in the application documents is internally inconsistent, the conditions of this consent and the Master Consent shall prevail.

4. This consent operates under an adaptive management regime. The detail of that adaptive management regime is set out in the Groundwater Monitoring and Contingency Plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri Aquifer Management Unit, **Dated: June 2019 (“GMCP”)**. The primary purpose of the GMCP is to set out the procedures by which the abstraction will be monitored and managed to ensure compliance with Condition 1MC. For the purpose of this consent, the GMCP is the most recent version of the GMCP which may be changed under Condition 6MC. In the event that any of the provisions of the GMCP conflict with the requirements of these conditions of consent, these conditions of consent shall prevail.
5. The quantity of water taken from the bore shall not exceed the following;
 - (a) 118 cubic metres in any 24 consecutive hours unless Conditions 6(b) or 8 of this consent apply;
 - (b) 23,520 cubic metres between 1 July in a year and 30 June in the following year unless Conditions 6-10 apply; and
 - (c) That required to replace soil moisture depleted by evapotranspiration over the irrigated area.



Breaching of Trigger Levels

6. In the event of a Trigger Level 2 (TL2) in the GMCP being exceeded, the following actions and requirements shall be initiated;
 - (a) The Council will advise the Consent Holder in writing that a TL2 has been reached;
 - (b) Upon receipt of this notice, the Consent Holder shall immediately reduce their daily abstraction to 50% of the current average daily quantity, as advised by the Council in the notice. The current average daily quantity will be calculated using the previous months water use records required by Condition 12. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only;
 - (c) As required by the GMCP, the Council will commission a Groundwater Trigger Exceedance Report to assess why the trigger level has been breached, identify the pumping bores in the area of effect and review all of the available data collected in the affected area(s).
7. Once Condition 6(b) has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council's approval of an alternative reduction value will only be given if it is satisfied that a TL2 exceedance that is attributable to this consent will not occur and the alternative reduction value is not inconsistent with Condition 1MC. The applicable alternative reduction value is the value that is contained in the recommendations made in the Groundwater Trigger Exceedance Report required to be prepared by Condition 6(c).
8. If the TL2 trigger levels are still exceeded after 21 days, then the Consent Holder shall reduce their daily abstraction to 25% of the current average daily quantity calculated for Condition 6(b). The Council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
9. Once Condition 8 has been complied with, the Consent Holder shall also comply with the recommendations contained in the revised and updated Groundwater Trigger Exceedance Report commissioned by the Council which will be prepared for the purpose of specifying a programme of actions to achieve compliance with Condition 1MC.
10. If the TL2 trigger levels continue to be exceeded after the implementation of the remedial measures required under Conditions 6-8, the Council may require the Consent Holder to suspend the exercise of this consent, or continue their daily abstraction at a specified rate, until such time as the Council issues written notice that the Consent may be exercised again in accordance with the requirements of the revised and updated Groundwater Trigger Exceedance Report.

Notification of Irrigation

11. The Consent Holder shall advise the Council's assigned Monitoring Officer in writing when irrigation is to commence for the first time each season, at least five working days beforehand.

Metering and Abstraction Reporting

12. Prior to the first exercise of this consent, a meter shall be installed to measure the volume of water taken, in cubic metres, from each production bore. Each meter shall:
- (a) Be able to provide data in a form suitable for electronic storage;
 - (b) Be sealed and as tamper-proof as practicable;
 - (c) Be installed at the location from which the water is taken; and
 - (d) Have an accuracy of +/-5%.

The Consent Holder shall, at all times, provide safe and easy access to each meter installed for Council to undertake visual inspections and record water take measurements.

13. The Consent Holder shall verify that the meter required by Condition 12 is accurate. This verification shall be undertaken prior to 30 June:
- (a) Following the first taking of water from each production bore in accordance with this consent; and
 - (b) At least once in every five years thereafter.

Each verification shall be undertaken by a person, who in the opinion of the Council's Compliance Manager, is suitably qualified. Written verification of the accuracy shall be provided to the council's assigned Monitoring Officer no later than 31 July following the date of each verification.

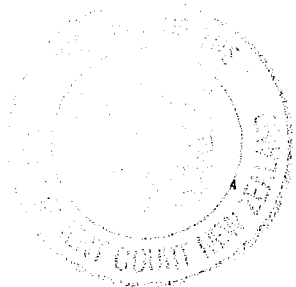
14. The Consent Holder shall keep a record of the daily volume of water taken from each production bore in cubic metres, including all nil abstractions, using the readings from the meter required by Condition 12.
15. If the instantaneous rate of taking is equal to or greater than 10 litres per second, then the water meter required by Condition 12 shall have an electronic datalogger for automatic logging of meter data.
16. A copy of the records required to be kept by Condition 14 shall be forwarded to the Council's assigned Monitoring Officer on a monthly basis, by the seventh of the following month. In addition, a copy of these records shall be forwarded immediately to the Council's assigned Monitoring Officer on written request. The records shall be in an electronic format that has been agreed to by the council.

Advice Note: *If no water is taken during any calendar month then the Consent Holder is still required to notify the council's Monitoring Manager in writing of the nil abstraction. Water use record sheets in an electronic format are available from the council's website at www.nrc.govt.nz/wur.*

Water Use Efficiency

17. The Consent Holder shall prepare an Irrigation Scheduling Plan (ISP) that outlines how irrigation decisions will be made. The purpose of the ISP is to set out how the irrigation will be undertaken to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water applied to the crop. The ISP shall be prepared by a suitably qualified and experienced person and submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP. The ISP shall, as a minimum, address:

- Water balance and crop water requirements;

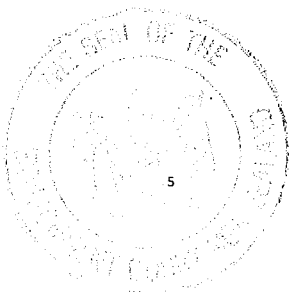


- Subsurface drainage; and
- Overall irrigation strategy.

For each irrigation area, the ISP should include:

- (a) A description of how water requirements for each irrigation cycle are calculated;
 - (b) Method(s) for assessing current soil moisture levels;
 - (c) Method(s) for assessing potential evapotranspiration (PET) and rainfall to date;
 - (d) Soil moisture target to be maintained in each zone by irrigation;
 - (e) How measured data will be used to assess irrigation requirements over the next irrigation cycle; and
 - (f) A description of proposed method(s) for remaining within consent limits at each borehole or group of boreholes.
18. The Consent Holder shall not exercise this consent until the ISP required by Condition 17 has been certified by the Council's Compliance Manager.
 19. The ISP certified in accordance with Condition 18 shall be implemented prior to the first irrigation season, unless a later date has been approved in writing by the Council's Compliance Manager.
 20. The Consent Holder shall, within six months of the first exercise of this consent, undertake an audit of the irrigation system and of the certified ISP. The audit shall be undertaken by a suitably qualified and experienced person. The irrigation system audit shall be prepared in accordance with Irrigation New Zealand's "Irrigation Evaluation Code of Practice" (dated 12 April 2010), and shall include recommendations on any improvements that should be made to the system to increase water efficiencies or any amendments to the ISP. The results of the audit and its recommendations shall be submitted in writing to the Council's assigned Monitoring Officer within one month of the audit being undertaken. Any recommended amendments to the ISP shall be submitted to the Council's Compliance Manager for written certification that it will achieve the purpose of the ISP before they take effect. A follow-up audit shall occur at five yearly intervals throughout the term of this consent with the intent of confirming an irrigation efficiency of at least 80 percent.
 21. The Consent Holder shall, within three months of notification in writing by the Council's Compliance Manager, implement any recommendations of the audit referred to in Condition 20.
 22. The reticulation system and its component parts shall be maintained in good working order to minimise leakage and wastage of water.
 23. The rate at which water is applied to the irrigated area shall not result in ponding of irrigated water within any irrigated area, or runoff from either surface or subsurface drainage to a water body, as a result of the exercise of this consent.

Advice Note: *The ISP seeks to ensure that at least 80 percent of the annual volume of water applied to the irrigable area is retained in the soil in the root zone of the crop, compared to the average gross depth of water*



applied to the crop.

Review Condition

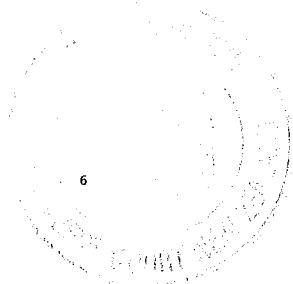
24. The Council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

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- (c) To review the allocation of the resource.

The Consent Holder shall meet all reasonable costs of any such review.

Lapsing Condition

25. This consent shall lapse five years after the date that the consent commences in accordance with section 116(1) of the Resource Management Act 1991, unless the consent has been given effect to before this date.



Appendix A – MWWUG Master Consent Conditions

General

1MC. The consented activity must not, individually or cumulatively, result in:

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- (a) adverse effects on the hydrological functioning of the Kaimaumu-Motutangi wetland (Kaimaumu Wetland); or
- (b) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumu Wetland; or
- (c) lowering of the groundwater levels in the Aupouri aquifer such that existing efficient bore takes within the aquifer cannot access groundwater.

Prior to the Exercise of Consent

2MC. Prior to the exercise of this consent, new bores and the Kaimaumu Wetland surface water level sensor required to be installed for the purposes of monitoring the baseline effects in accordance with the GMCP shall be constructed and all required equipment installed.

3MC. Prior to the exercise of this consent;

- (a) a suitable approach to detecting and responding to saline intrusion effects during Stage 1 (Year 1) shall be prepared; and
- (b) a relative water level shall be established at the Kaimaumu Wetland surface water level sensor installed in accordance with Condition 2.

The Council's Compliance Manager shall certify that the approach to detecting and responding to saline intrusion, and establishment of a relative water level will give effect to Condition 1MC. The certified information shall be inserted into the GMCP through the process set out in Condition 6MC prior to the exercise of this consent.

Monitoring and Contingency Measures

4MC. This consent shall be exercised and monitored in accordance with the GMCP.

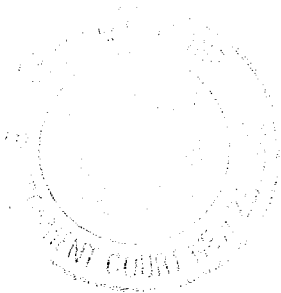
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- (a) Subject to Condition 6MC(d), the Council may amend the GMCP by providing notice in writing to the Consent Holder that the GMCP has been amended and providing a copy of the amended GMCP to the Consent Holder.
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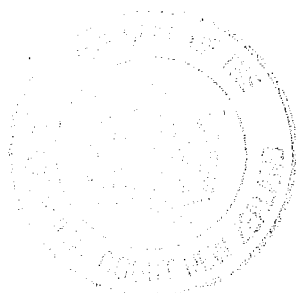


- (c) Prior to making any decision to amend the GMCP or not, the Council will seek input on any proposed amendment from the Consent Holder and from the Director-General of Conservation.
- (d) The Council will not approve any amendment to the GMCP unless the technical assessment of the proposed change clearly indicates that the change will not result in a breach of Condition 1MC.



**Groundwater Monitoring and Contingency
Plan for the Waiharara, Motutangi and
Houhora sub-areas of the Aupōuri Aquifer
Management Unit**

June 2019



Annexure B - GMCP Clean

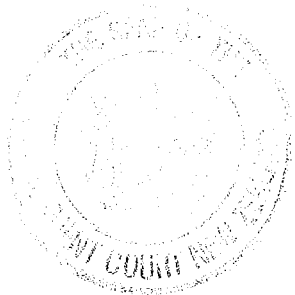
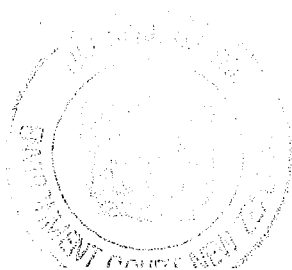


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1. INTRODUCTION

1.1 Scope and Objective of the GMCP

This document comprises a groundwater monitoring and contingency plan for the Waiharara, Motutangi and Houhora sub-areas of the Aupōuri aquifer management unit (GMCP). The GMCP covers the implementation and monitoring of the groundwater take consents listed in **Table 1** (the Consent Holders) and is a programme of adaptive management that is suitable to provide a platform for the implementation of the abstractions listed in **Table 1**.

An adaptive management regime requires reasonably clear objectives against which the effects and management progress may be evaluated against. The objective of this GMCP is that;

Objective 1: The abstractions must, individually and cumulatively, avoid:

- (a) saltwater intrusion into the Aupouri aquifer;
- (b) adverse effects on the hydrological functioning of the Kaimaumu-Motutangi wetland;
- (c) adverse effects on the significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial and freshwater environments of the Kaimaumu-Motutangi wetland; and
- (d) lowering of the groundwater levels of the Aupouri aquifer such that existing efficient bore takes cannot access groundwater from these sub-aquifers.

Extensive environmental monitoring is required to achieve avoidance of the effects listed above, and to support the proposed 'adaptive management' approach including a staged implementation of groundwater extraction. The purpose of the GMCP is to formalise specific monitoring requirements, establish groundwater level and groundwater quality monitoring triggers and outline a process for implementation of appropriate mitigation and remediation measures in the event that nominated trigger values are exceeded.

The GMCP is intended to allow the early detection of any impact to the Waiharara, Motutangi and Houhora sub-aquifers of the Aupōuri aquifer management unit and the Kaimaumu-Motutangi wetland (Kaimaumu Wetland) associated with the exercise of groundwater take consent(s), by:

- Ensuring regular monitoring of the groundwater system both on and off-site;
- Setting monitoring criteria (trigger levels) to indicate potential impact on the groundwater system and Kaimaumu Wetland;
- Changing the pumping regime if trigger levels are reached to ensure that Objective 1 continues to be met;
- Reviewing monitoring data before and after a step level increase in pumping rate;
- Ensuring that the monitoring data is available for regular review by the Council;
- Detailing a Contingency Plan to be implemented if an unanticipated impact(s) is identified;
- Providing information to quantify the actual effects of the abstraction on the groundwater resource; and
- Enabling validation of the numerical model by the Consent Holders for any replacement groundwater take consent applications.

1.2 Parties Associated with this GMCP

The parties who have been deemed to be associated with this GMCP at its inception are the Council, the Consent Holders in **Table 1**, and the Director-General of Conservation.

The following provides a brief description of the roles and responsibilities of each party associated with this GMCP.

Should any of these parties change during the implementation of this GMCP, either through addition or removal, the process as set out in **Section 1.3** below shall be applied.

1.2.1 Northland Regional Council

It has been agreed by all Consent Holders that the Council will undertake the requirements of the GMCP on their behalf.

The actual and reasonable cost of undertaking the ongoing monitoring of these consents for the Consent Holders will be charged in accordance with Council's Charging Policy. The cost of installing the additional sentinel bores and monitoring equipment, and the Kaimaumau Wetland water level monitoring station will be recouped directly from the Consent Holders once these facilities have been installed.

1.2.2 Consent Holders

The Consent Holders identified within this GMCP at **Table 1** are required to exercise their Water Permits in accordance this GMCP.

The exercise of the Water Permits will be in accordance with Council initiated instructions which will be issued once the actions and process established through this GMCP have been undertaken.

The Consent Holders may seek changes to the GMCP through either of the processes set out in **Section 1.3**.

1.2.3 Director-General of Conservation

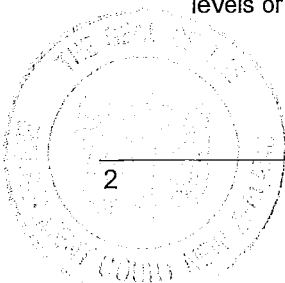
The Director-General of Conservation is responsible for administering parts of the Kaimaumau Wetland subject to scientific reserve status under the Reserves Act 1977 and stewardship area status under the Conservation Act 1987.

The Director-General of Conservation is a party to this GMCP to ensure that the relevant provisions of these Acts, which the Director-General of Conservation administers, in particular that Objective 1(b) and 1(c) matters are to be met.

1.3 Changes to the GMCP

This GMCP may be amended at any time to;

- incorporate new or replacement water permits, or remove water permits, in the Waiharara, Motutangi or Houhora sub-aquifers of the Aupōuri aquifer management unit that have overlapping and/or additional monitoring requirements or which are subject to different trigger levels or trigger levels based on monitoring described in this GMCP;



- Alter the nature and scope of the required monitoring (i.e. monitoring frequency and intensity (type and number of samples)) and associated trigger levels;
- Incorporate or remove parties who are, or may need to be, a part of this GMCP to ensure Objective 1 is met.

If either the Council or a Consent Holder wishes to amend the GMCP, then it shall provide notice in writing of the proposed changes, along with any supporting technical documents, to the other Consent Holders, and the Director-General of Conservation.

Parties, given notice by Council of a change to the GMCP, have 20 working days to provide a response to the Council on the proposed changes to the GMCP.

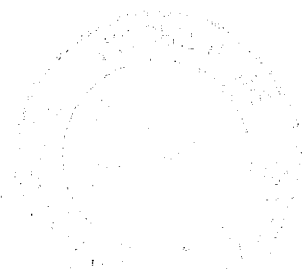
If no response is received from a party within the stated timeframe, then Council will consider that the party has no concerns with the conclusion of the report.

If any party does not agree with the proposed change, that party shall engage a suitably qualified hydrogeologist and/or an ecologist to prepare a report detailing the reasons for the disagreement which shall be provided to Council within 30 working days from the date that the written notice of the proposed changes was sent to the party.

Any change to the GMCP will only be authorised by Council if the technical or administrative assessment of the proposed change clearly indicates that the change will meet Objective 1 of the GMCP.

Council will provide a report to the Consent Holders detailing the reasons for its decision, including the identification and discussion of areas of agreement and disagreement. If the change would affect the interests of the Director-General of Conservation, then the report will also be provided to this party.

If any changes are made to the GMCP, then a copy of the amended GMCP will be provided to the Consent Holders and the Director General of Conservation.



2. FRAMEWORK FOR ADAPTIVE MANAGEMENT

In summary, the following adaptive management techniques are applied in this GMCP;

- (a) Baseline monitoring – a monitoring programme has been developed for Stage 1 of the **Table 1** abstractions to establish robust existing environment baseline. This monitoring programme is contained in this GMCP, however, some monitoring detail is still required and this is indicated by the acronym 'TBC'.
- (b) Early warning systems - Trigger levels (TLs) will be established to set up an early warning system that provides a response mechanism when differences between predicted and actual water levels, and/or salinity concentrations occur. A trigger level is an environmental criterion that if reached or met, requires a certain response to be actioned.
- (c) Staged development - Abstraction volumes will progressively be increased in a staged manner, with expansion contingent on compliance with yet to be established trigger levels and on regular reviews of groundwater level, wetland ecology and hydrology, and salinity monitoring results. It is noted that the consent documentation requires that all development starts at Stage 1 volumes whether or not others have progressed to Stage 2 or further. This is an essential mechanism for staging as an adaptive management response.
- (d) Stage 1 / Year 1 management – Until such time as there is adequate data to enable adaptive management to commence and for Objective 1 of this GMCP to be achieved, the abstractions during this stage will be subject to interim wetland water level and saline trigger levels and Trigger Exceedance Report procedures; and
- (e) Tiered approach to monitoring –Monitoring effort is proposed to increase if and when site trigger levels are approached or exceeded. Likewise, monitoring intensity may decrease with evidence of sustained compliance and stability and only by way of the process outlined in **Section 1.3** of this GMCP; and
- (f) Ongoing adaptive management – The abstractions will be managed adaptively within the term of consent, in the event of trigger level exceedance through the implementation of the recommendations of a Groundwater Trigger Exceedance Report (GTER) prepared by Council.
- (g) Suspension of abstractions – Should compliance with Objective 1 of this GMCP not be achieved, then the exercise of the consents to abstract and use groundwater may be suspended until such time as Council confirms in writing that compliance can be achieved.

The following sections provide detailed information relating to the adaptive management framework to be imposed for the exercise of the consents listed in **Table 1**.

2.1 Staged Implementation

The uptake of water by the Consent Holders will be over 4 stages in accordance with the following factors:

Level of current orchard development – the following orchards are already well established;
AUT.038650.01.01 – Tony Hewitt;

AUT.039345.01.01 – Ian McLarnon & Jason McLarnon;

AUT.038380.01.01 – Damien & Katherine Holloway;

AUT.038589.01.01 – Neil & Alma Violet Thompson, and Steven and Josephine Suzanne Thompson;

AUT.038610.01.01 – Mapua Avocados Limited;
 AUT.027391.01.02 – Ivan Anthony Stanisich;
 AUT.038471.01.01 – Honeytree Farms Limited
 AUT.038420.01.01 – Largus Orchard Limited Partnership; and
 AUT.038591.01.01 – Cypress Hills Limited.

Only AUT.027391.01.02, held by Mr Stanisich replaces an existing consent to take and use water. The other holders of consent that have established their orchards have been irrigating their trees under temporary consents issued by the Council.

Rate of orchard development - will occur at differing rates depending on the owner's cashflow and access to plants; and

Tree maturity - approximately nine years to full maturity and plant water usage, hence irrigation requirements commensurately increase with tree growth.

The steady progressive development of the orchards, particularly the new large developments, provides an opportunity to apply an adaptive management approach that establishes a baseline and allows the original hypotheses of avoidance of effects to be re-evaluated, specifically that Objective 1 of this GMCP is being met.

The management approach provides a series of responses to be taken based on the monitoring results, including where monitoring shows that Objective 1 of this GMCP is not being met, as discussed in **Section 2.2**.

The uptake by Consent Holders of the consented total allowable water volumes will be permitted in four stages over nine years, as shown in **Table 1** below, unless the outcome of the Staged Implementation and Monitoring Programme Review detailed in **Section 2.1.1** shows that there should be a delay in moving to the next stage, or that the next stage should not occur.

Table 1. Summary of staged implementation annual volumes

Application Number	Consent Holder	Allowable Annual Volume (m ³)			
		Stage 1 (Year 1)*	Stage 2 (Year 2-3)*	Stage 3 (Year 4-6)*	Stage 4 (Year 7-9)*
Houhora sub area management unit					
APP.038610.01.01	MAPUA AVOCADOS LIMITED (3)	34,000	96,000	198,000	209,000
APP.039244.01.01	KEVIN WAYNE THOMAS AND DANNIELLE O'CONNOR	34,000	59,600	59,600	59,600
APP.039381.01.01	JONATHAN CHARLES BRIEN & CAROL NADINE CARR	14,900	14,900	14,900	14,900
APP.039345.01.01	IAN GORDON MCLARNON AND JASON IAN MCLARNON	23,520	23,520	23,520	23,520
APP.038732.01.01	KATHERINE YVONNE VALADARES	22,350	22,350	22,350	22,350
Motutangi sub area management unit					
APP.038610.01.01	MAPUA AVOCADOS LIMITED (1 and 2),	34,000	96,000	198,000	418,000
APP.039332.01.01	LJ KING LIMITED	34,000	78,400	78,400	78,400

Application Number	Consent Holder	Allowable Annual Volume (m ³)			
		Stage 1 (Year 1)*	Stage 2 (Year 2-3)*	Stage 3 (Year 4-6)*	Stage 4 (Year 7- 9)*
APP.038589.01.01	NEIL THOMPSON, ALMA VIOLET THOMPSON, STEVEN THOMPSON, AND JOSEPHINE SUZANNE THOMPSON	34,000	35,280	35,280	35,280
APP.038591.01.01	CYPRESS HILLS LIMITED	34,000	35,280	35,280	35,280
Waiharaha sub area management unit					
APP.038471.01.01	HONEYTREE FARMS LIMITED	34,000	96,000	198,000	346,425
APP.038410.01.01	GEORGINA TUI COVICH AND MATE NICKOLAS COVICH	34,000	96,000	198,000	223,500
APP.038420.01.01	LARGUS ORCHARD LIMITED PARTNERSHIP	34,000	96,000	193,700	193,700
APP.038513.01.01	TE RŪNANGA O NGĀI TAKOTO	34,000	96,000	193,700	193,700
APP.038454.01.01	ELBURY HOLDINGS LIMITED	34,000	96,000	113,700	113,700
APP.038650.01.01	ANTHONY WILLIAM HEWITT AND DIANE ELEANOR HEWITT	34,000	39,200	39,200	39,200
APP.038328.01.01	BERNARD KIM SHINE AND SHERYL DIANNE SHINE	34,000	39,200	39,200	39,200
APP.038380.01.01	DAM2IEN KENNETH HOLLOWAY AND KATHERINE ANNE HOLLOWAY	14,900	14,900	14,900	14,900
AUT.02391.01.02**	IVAN ANTHONY STANISICH	120,000	120,000	120,000	120,000
TOTAL		517,670	1,034,630	1,655,730	2,060,655
% of Total		25%	50%	80%	100%
<p>Note: *The staged implementation is based on years when irrigation occurs following the granting of the consents.</p> <p>** Staged implementation does not apply to this consent as no change to the original consented annual volume has occurred as a result of the Section 127 of the RMA change of conditions.</p>					

2.1.1 Staging: Implementation and Monitoring Programme Review

A "Staged Implementation and Monitoring Programme Review" (SIMPR) will be required for Council to decide whether Consent Holders proceed to the next allocation stage. At the following times, the volume of abstraction authorised will be reviewed against the staged implementation outlined in **Section 2.1** at the minimum intervals of:

End of Stage 1 – 1 full irrigation season following date of commencement of the consents;

End of Stage 2 - 3 irrigation seasons following date of commencement of the consents;

End of Stage 3 - 6 irrigation seasons following date of commencement of the consents; and

End of Stage 4 - 9 irrigation seasons following date of commencement of the consents.

The main purpose of the SIMPR is to assess whether proceeding to the next stage would comply with Objective 1 of the GMCP.

The SIMPR will be commissioned by the Council and shall be prepared by a suitably qualified hydrogeologist and, in relation to monitoring of the Kaimaumu Wetland, a suitably qualified wetland ecologist. The Council will endeavour to ensure that both the hydrogeologist and the ecologist will have experience and knowledge of the locality.

The SIMPR will include a detailed assessment of all environmental monitoring data including groundwater levels, salinity indicators, and water quality, and include consideration of spatial and temporal trends including potential effects of groundwater abstraction on water levels in Kaimaumu Wetland and the effect of these on the ecology of the wetland. The SIMPR will assess whether Objective 1 of this GMCP is being met at the current level of abstraction, and whether Objective 1 will be met at the next stage level of abstraction. The SIMPR may also consider the nature and scope of continued monitoring (i.e. monitoring frequency and intensity (type and number of samples)) and associated trigger levels.

The SIMPR will provide recommendations based on the assessment of the environmental monitoring data to date on:

- the setting or alteration of the trigger levels;
- whether any changes to the monitoring programme are required; and
- whether to advance to the next stage of abstraction or to remain at the current level of abstraction, or to reduce the level of abstraction.

A copy of the SIMPR will be provided to the Consent Holders listed in **Table 1** and the Director General of Conservation a minimum of three months prior to the anticipated commencement of the subsequent irrigation season utilising volumes defined for the subsequent development stage as stated in **Table 1**. The Consent Holders and Director General of Conservation have 20 working days to provide a response to the Council on the conclusions and recommendations of the SIMPR.

If no response is received from a party within the stated timeframe, then Council will consider that the party has no concerns with the conclusions of the report.

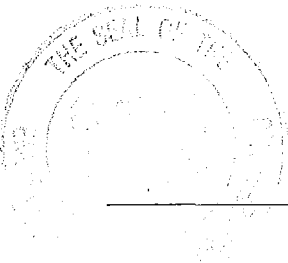
If any party does not agree with the conclusions and recommendations of the SIMPR, then a report by a suitably qualified hydrogeologist and/or an ecologist, both with experience and knowledge of the locality if possible, detailing the reasons for the disagreement shall be provided to Council within 30 working days from the date that the assessment was sent to the party.

An increase in the volume of abstraction to the next development stage and any change to the monitoring programme will only be authorised by Council if the technical assessment of the monitoring data clearly indicates that the increase in the allocation and change to GMCP would meet Objective 1 of this GMCP.

Council will provide a report to the Consent Holders and the Director General of Conservation detailing the reasons for its decision, including the identification and discussion of areas of agreement and disagreement.

If any changes are made to the GMCP, then a copy of the amended GMCP will be provided to the Consent Holders and the Director General of Conservation within 5 working days of the change being authorised as final.

A summary of the above process is also included in the conditions of each consent that is covered by this GMCP.



2.1.2 Stage 1 (Year 1) Management Regime

Stage 1 is the minimum period of the first full irrigation season after a consent listed in **Table 1** is first exercised. To ensure that Objective 1 is met during Stage 1 (Year 1), this will require the identification of;

- an interim minimum water level trigger for the Kaimaumau-Motutangi wetland; and
- interim trigger levels for minimum groundwater levels and salinity indicators in the Sentinel bores identified in **Table 5**.

These baseline figures are recognised as the 'default position' upon which a specific two-tier trigger level and contingency plan system will be implemented during Stage 1 (Year 1) only.

An establishment phase of monitoring will be required to identify default trigger levels for Kaimaumau-Motutangi wetland water level, groundwater levels and saline intrusion. These default trigger level parameters will apply to Stage 1 (Year 1) only.

Council is to notify the Consent Holders and the Director-General of Conservation of the default management parameters for Stage 1 (Year 1). The Consent Holders and Director-General of Conservation have 10 working days to provide responses to the Council on the default management parameters once notified.

Ongoing monitoring will be required to ensure that Objectives 1(a), (b), and (c) are met by implementing trigger level exceedance measures. These trigger level exceedance measures are those which sit in **Section 4** below.

The interim management regime established for Stage 1 (Year 1) will be superseded by the Monitoring and Trigger Level Setting components set out in **Section 2.2** of this GMCP.

2.1.2.1 Kaimaumau Wetland: Monitoring and Triggers

In order to provide a baseline management regime to achieve Objectives 1(b) and 1(c) of this GMCP for Stage 1 (Year 1), the following events have been recognised by the Environment Court as being events that will necessitate further investigations by both wetland ecologists, hydrologists, and hydrogeologists.

- **Trigger Level 1 Year 1 (TL1Y1)**– At any time, a decrease of greater than 25 millimetres from the relative water level.
- **Trigger Level 2 Year 1 (TL2Y1)** – At any time, a decrease of greater than 50 millimetres from the relative water level.

The relative water level which TL1Y1 and TL2Y1 reference must be a representative level, taking into account seasonal variation and any existing use and existing development of resources at the time of the grant of consent for the water takes which could affect the water levels in the Kaimaumau wetland. The relative water level which TL1Y1 and TL2Y2 reference must be confirmed in **Table 2** prior to Stage 1 exercise of any of the consents in **Table 1**.

The Kaimaumau Wetland standing water level monitoring and trigger levels for Stage 1 (Year 1) shall be inserted into the GMCP through the process set out in **Section 1.3** of this GMCP.

Table 2: Kaimaumau Wetland Stage 1 (Year 1) Monitoring and Trigger Levels.

Monitoring Installation	Target	Units	Frequency	Trigger Levels	
				TL1Y1	TL2Y1
Kaimaumau Wetland	Wetland water levels	mAMSL	Continuous	TBC	TBC

2.1.2.2 Saline Intrusion & Groundwater Level: Monitoring and Triggers

Saline intrusion monitoring for Stage 1 (Year 1) is proposed within the sentinel bores identified in **Table 4** of this GMCP. As each sentinel bore is drilled, groundwater level and salinity indicators will be measured and recorded. This information will be used to set interim trigger levels for these parameters as per the methodology established in **Section 2.2** below. Interim trigger levels must be set prior to exercise of any of the consents.

The saline intrusion and groundwater level monitoring trigger levels for Stage 1 (Year 1) shall be inserted into the GMCP through the process set out in **Section 1.3** of this GMCP prior to the exercise of any consents.

2.1.2.3 Trigger Level Responses

In the event of an exceedance of a Trigger Level applicable in Stage 1 (Year 1), the Trigger Level Exceedance response plan contained in **Section 4** of this GMCP shall apply.

2.1.2.4 Ceasing Interim Stage 1 (Year 1) Management Regime

This interim management regime shall remain in place until such time as Council has given authorisation to proceed to the next stage (Stage 2) as set out under **Section 2.1.1** above or where the setting of trigger levels as per **Section 2.2** below has been given effect to through amendment to this GMCP in accordance with the change process established in **Section 1.3** of this GMCP.

2.2 Trigger Level System

2.2.1 Timeframe for setting of trigger levels

The setting of trigger level values for each parameter (where TBC is indicated in the monitoring plan tables in **Section 3** Monitoring Programme) will be undertaken during the first implementation stage after 12 months of monitoring data has been collected and within 15 months of the date of commencement of these consents. This approach recognises that:

- There is historical monitoring data available for some parameters;
- In some areas, no baseline data has been established by the consent holder(s) or any of the key stakeholders in the area; and that
- The manifestation of any effects from the exercising of these consents will steadily progress with time in accordance with the stages of orchard developments and age of the crop. The scale of abstraction during the baseline data collection period (i.e. 12 months following granting of consent) will not vary significantly from existing conditions.

2.2.2 Method for setting of trigger levels

A two-tier trigger level system will be implemented on the consents:

- **TL1** - The first-tier trigger level establishes whether the parameter of concern is approaching outer limits of baseline data (e.g. Median ± 2 times the standard deviation, or some other criteria determined with agreement of Council). If this trigger level is breached, then additional monitoring will be undertaken by the Council;
- **TL2** - The second-tier trigger level is set at a threshold defining a 'significant' departure from baseline conditions and/or conditions where the risks of adverse environmental effects are increased. If this trigger level is breached, then the Consent Holders will be required to reduce their daily water take volume in a staged manner over a set period of time.

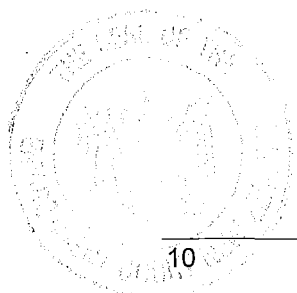
The TL parameters required under this GMCP for the various suites are summarised in **Table 3**.

Table 3: Summary trigger level parameters by monitoring suite

Monitoring Suite	Parameters
Groundwater level and salinity monitoring	Groundwater level, electrical conductivity
Saline intrusion monitoring	Electrical conductivity, chloride, sodium, total dissolved solids.
Kaimaumu-Motutangi Wetland water level	Standing water level within the wetland.

2.2.3 Response to exceeding trigger levels

The actions required should TL's be exceeded are set out in **Section 4**(Contingency Plan).

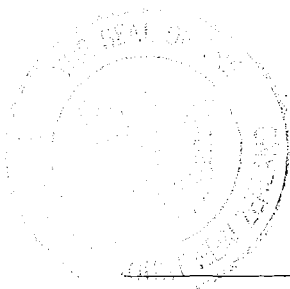


3. MONITORING PROGRAMME & TRIGGER LEVEL SETTING

3.1 Bore Locations and Details

A consolidated summary of the schedule of bores that are required to be monitored as part of this GMCP is provided in **Table 4**. Along with the bores identified for monitoring, the table provides key details relating to the bores' physical attributes and parameters to be monitored. The resultant wetland monitoring location is to be hydrologically connected with the full range of water levels in the open water habitat of the Kaimaumau Wetland. The following sections of the GMCP provide the monitoring schedules (frequency and trigger levels) for the bores.

The locations of the production bores in **Table 4** are shown in **Figure 1**. An error accuracy level of +/- 50 metres is applicable to these bore locations. Any differentiation to the location by greater than 50 metres will result in a requirement of an application to the Council for a change of consent condition pursuant to Section 127 of the Resource Management Act 1991 (RMA). Assessment of the effects on the environment of the change will be required pursuant to Schedule 4 of the RMA.



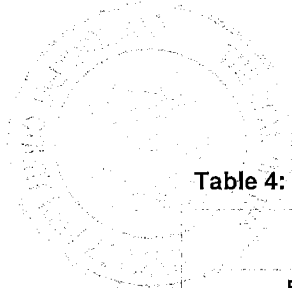
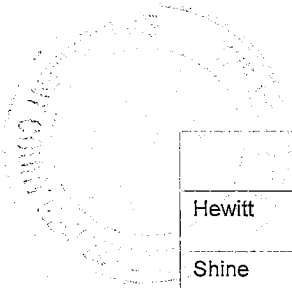


Table 4: Schedule of monitoring facility and production bore details.

MONITORING BORES									
Bore Details		Bore Owner	Coordinates (NZTM 2000)		Depth (m)	Dia. (mm)	Piezo. No.	Target aquifer	Purpose*
Name (Fig 1)	NRC ref.		Easting	Northing					
Fishing Club	LOC.200250	NRC	1611411	6146928	79			Deep shellbed	SI; MI
Waterfront	LOC.200210	NRC	1611712	6146689	19	32	1	Shallow sand	GL _c , EC _c
			1611712	6146689	74	32	4	Deep shellbed	GL _c , EC _c
Motutangi	TBC	NRC	1615677	6139811	<10	50	1	Shallow sand	GL _c ; EC _c
			1615676	6139821	80-100 (TBC)	50	2	Deep shellbed	GL _c ; EC _c
Norton Road	TBC	NRC	1619875	6134377	80-100 (TBC)	50	2	Deep shellbed	GL _c ; EC _c
Kaimaumu	LOC.316222	NRC	1622445	6134482	20		1	Shallow sand	GL _c ; EC _c ; SI; MI
	LOC.315766	NRC	1622426	6134466	72		2	Deep shellbed	GL _c ; EC _c ; SI; MI
Honeytree	TBC	NRC	1618911	6136120	6	50	2	Shallow sand	GL _c
Kaimaumu Settlement	TBC	NRC	TBC	TBC	<20	TBC	1	Shallow sand	GL _m , SI
	TBC	NRC	TBC	TBC	>50 (TBC)	TBC	2	Deep shellbed	GL _m , SI
KAIMAUMAU WETLAND									
Facility Details			Coordinates (NZTM 2000)		Target Feature		Purpose		
Name (Fig 1)	NRC Ref.	Facility Owner	Easting	Northing					
Wetland Monitoring Location	TBC	NRC	1619028	6139489	Wetland Water Level		SL _c		
PRODUCTION BORES									
Bore Details	Bore Owner	Coordinates (NZTM 2000)		Depth (m)	Dia. (mm)	Piezo No.	Target	Purpose	

Name (Figure 1)	NRC Ref.		Easting	Northing					
Brien	TBC	J. Brien & C. Carr	1610058	6147313	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Valadares	TBC	K. Valadares	1612533	6142943	TBC	TBC	1	Deep shellbed	GL _m , EC _m
McLarnon	TBC	I. & J. McLarnon	1611284	6144679	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Elbury Holdings	TBC	Elbury Holdings Limited	1617409	6133139	TBC	TBC	1	Deep shellbed	GL _m , EC _m SI
Holloway	TBC	Huanui Avocados Ltd	1619886	6134694	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Ngai Takoto 1 Ngāi Takoto 2	TBC	Te Runanga o Ngai Takoto	1619097	6135520	TBC	TBC	1	Deep shellbed	GL _m , EC _m
			1618987	6135795	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Cypress Hills Ltd	TBC	Cypress Hills Ltd	1614898	6138495	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Stanisich	TBC	I.A. Stanisich	1618046	6133608	TBC	TBC	1	Deep shellbed	GL _m , EC _m
			1617839	6133475	95	104	1	Deep shellbed	GL _m , EC _m
Honeytree Honeytree 2	TBC	Honeytree Farms Limited	1618894	6136120	112	310	1	Deep shellbed	GL _m , EC _m
			1618552	6136318	111	310	3	Deep shellbed	GL _m , EC _m
Thompson	TBC	N. & A. V. Thompson and S. & J.S. Thompson	1614798	6138773	TBC	TBC	1	Deep shellbed	GL _m , EC _m
LJ King	TBC	LJ King Limited	1614723	6139203	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Mapua Ltd1 Mapua Ltd2 Mapua Ltd3	TBC	Mapua Avocados Ltd	1612579	6141738	111	100	1	Deep shellbed	GL _m , EC _m
			1613011	6142457	122	100	2	Deep shellbed	GL _m , EC _m



			1612468	6142348	97	100	3	Deep shellbed	GL _m , EC _m
Hewitt	TBC	T. Hewitt	1617409	6132267	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Shine	TBC	B. K. & S. D. Shine	1619774	6134083	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Largus Ltd Largus Ltd	TBC	Largus Orchard Ltd Partnership	1617905	6132480	TBC	100	2	Deep shellbed	GL _m , EC _m
			1617919	6132263	94	100	1	Deep shellbed	GL _m , EC _m
Covich Covich	TBC	G.T. & M. N. Covich	1617353	6136859	TBC	TBC	1	Deep shellbed	GL _m , EC _m
			1617128	6136793	TBC	TBC	1	Deep shellbed	GL _m , EC _m
Thomas	TBC	K. Thomas & D. O'Connor	1610222	6147542	TBC	TBC	1	Deep shellbed	GL _m , EC _m

Notes:

TBC = to be confirmed within 15 months of the date of commencement of these consents.

* Purpose key:

GL_c = Continuous Groundwater Level;

GL_m = Manual (monthly) Groundwater Level;

EC_c = Continuous Electrical Conductivity;

EC_m = Manual (monthly) Electrical Conductivity;

SI = Salinity Indicators (quarterly);

MI = Major Ions (quarterly)

SL_c = Continuous Standing Wetland Water Level.

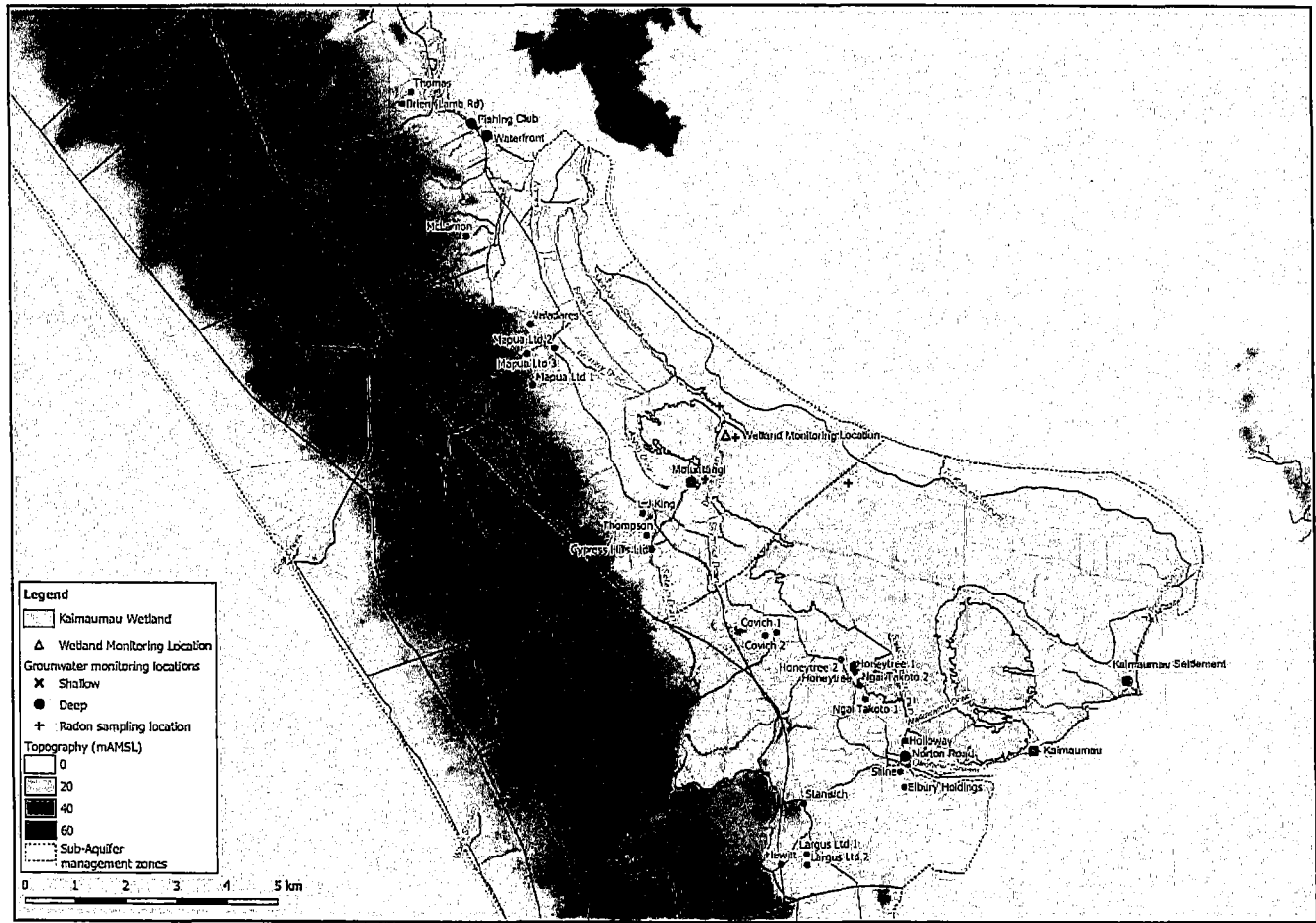


Figure 1. Monitoring facility and Production Bore Location Map

3.2 Groundwater Level and Salinity Monitoring

Sentinel bores will be utilised as the primary reference sites for regional groundwater level and salinity monitoring. These bores will provide early detection or warning of:

- Groundwater levels around the coastal margin lowering and approaching a threshold that could indicate a greater risk of saline intrusion; and
- Any reduction in water quality that could indicate the landward migration of the saline interface.
- Groundwater levels in the shallow sand aquifer lowering and having a potential adverse effect on the Kaimaumau-Motutangi wetland due to a decline in standing water level.

Details of the sentinel bores are summarised in **Table 5** below. These sentinel bores will collect data continuously for water levels and electrical conductivity in individual piezometers. A two-tier trigger level system (TL1 and TL2) for groundwater levels and electrical conductivity will be set in these bores.

Monitoring of groundwater levels in the "shallow sand" aquifer in bores listed in **Table 5** will enable identification of the potential for effects on the Kaimaumau-Motutangi wetland due to a decline in standing water level resulting from groundwater abstraction. It is also useful for understanding the overall response of the groundwater system to abstraction effects and to saline intrusion risks.

The setting of TL1 and TL2 trigger levels values for each parameter will be undertaken during the first implementation stage after 12 months of monitoring data has been collected and within 15 months of the date of commencement of these consents. The current trigger limit values that are shown in **Table 5** are based on existing data and will be reconfirmed by Council when the other trigger levels are confirmed.

All sentinel monitoring bores listed in **Table 5** will be installed prior to the exercise of the consents.

Checking of the sensors required for continuous monitoring will be undertaken on a monthly basis, and any faults will be recorded and remedied immediately.

Table 5: Schedule of sentinel monitoring bores for groundwater level and/or salinity indicators

Bore Name	Depth (m)	Piezo. No.	Target aquifer	Units	Frequency	Trigger Levels	
						TL1	TL2
Waterfront	19	4	Shallow sand	mAMSL	Continuous	2.3maMSL EC TBC	0.5 maMSL EC TBC
	37	3	Intermediate	mAMSL	Continuous	2.9 maMSL EC TBC	0.6 maMSL EC TBC
	57	2	Intermediate	mAMSL	Continuous	4.5 maMSL EC TBC	1.1 maMSL 1.2 EC TBC
	74	1	Deep shellbed	mAMSL	Continuous	4.4 maMSL EC TBC	1.8 maMSL EC TBC
Motutangi	<10	1	Shallow sand	mAMSL	Continuous	TBC	TBC
				µS/cm	Continuous	TBC	TBC
	80-100 (TBC)	2	Deep shellbed	mAMSL	Continuous	TBC	TBC
				µS/cm	Continuous	TBC	TBC
Norton Road	80-100 (TBC)	1	Deep shellbed	mAMSL	Continuous	TBC	TBC
				µS/cm	Continuous	TBC	TBC
Kaimaumau	20	1	Shallow sand	mAMSL	Continuous	TBC	TBC

Bore Name	Depth (m)	Piezo. No.	Target aquifer	Units	Frequency	Trigger Levels	
						TL1	TL2
				µS/cm	Continuous	TBC	TBC
	72	2	Deep shellbed	mAMSL	Continuous	TBC	TBC
				µS/cm	Continuous	TBC	TBC

Notes:
TBC = to be confirmed within 15 months of the date of commencement of these consents.
GL TL1s (where provided) have been calculated from long term monitoring data.
GL TL2s (where provided) have been interpolated from Table F1, WWA Groundwater Modelling Report.

3.2.1 Setting of Groundwater Trigger Levels

3.2.1.1 Shallow Sand Aquifer

After a period of 12 months of monitoring from the date of commencement of these consents, the Council will commission an assessment of the potential impact of shallow groundwater decline on the Kaimaumau-Motutangi Wetland by a suitably qualified and experienced Hydrogeologist and a suitably qualified and experienced Ecologist. This assessment shall be undertaken in consultation with Consent Holders and the Director General of Conservation, and shall include, but not be limited to:

- Analysis of a single round of radon samples collected in accordance with <https://www.gns.cri.nz/Home/Services/Laboratories-Facilities/Tritium-and-Water-Dating-Laboratory/Introduction-to-Water-Dating-and-Tracer-Analysis/Radon> following a two week period of no significant rainfall at four representative points in and around the area of the Kaimaumau Wetland (**Figure 1**) containing standing water within six months of the date of commencement of these consents;
- Analysis of temporal groundwater level variations in the shallow Motutangi piezometer and the Kaimaumau Wetland standing water level (**Table 4**); and
- Analysis of variation in shallow groundwater levels in response to pumping from the Honeytree Farms production bore.
- The results of the wetland vegetation survey required by **Section 3.4.3** Error! Reference source not found..

A copy of the above assessment will be provided to the Consent Holders covered by this GMCP and the Director-General of Conservation. The Consent Holders and Director-General of Conservation have 20 working days to provide a response to the Council on the conclusions of the assessment.

If no response is received from a party within the stated timeframe, then Council will consider that the party has no concerns with the conclusion of the report.

If any party does not agree with the conclusions of the assessment, then a report by a suitably qualified hydrogeologist and/or an ecologist detailing the reasons for the disagreement shall be provided to council within 30 working days from the date that the assessment was sent to the party.

Council will set trigger levels for "shallow sand" groundwater levels in the sentinel bores if the technical assessment of the potential impact of shallow groundwater decline on the Kaimaumau Wetland clearly indicates that adverse effects on the wetland¹ as a result of the groundwater takes

¹ Assessment of effects on wetland ecology shall be guided by a suitably qualified wetland ecologist approved by NRC, considering such matters as area of wetland impacted due to lowering of wetland water levels (cognisant of the relationship between aquifer porosity and open body water levels).

cannot be avoided without trigger level response measures. A precautionary approach will be taken to the decision on whether to set trigger levels or not.

If groundwater level triggers are required for the "shallow sand" monitoring bores identified in **Table 5**, then they will be set as follows:

- TL1 – Will be determined based on the median ground water level minus 2 standard deviations of the baseline data. The baseline dataset will comprise 12 months of monitoring data combined with actual historical monitoring data synthesised from an appropriate nearby shallow bore.
- TL2 – Will be determined based on the median ground water level minus 3 standard deviations of the baseline data. The baseline dataset will comprise 12 months of monitoring data combined with actual historical monitoring data synthesised from an appropriate nearby shallow bore. TL2 will be no less than 0.5 mAMSL in the shallow aquifer.

Council will provide a report to the Consent Holders and the Director-General of Conservation detailing the reasons for its decision, including the identification and discussion of areas of agreement and disagreement.

3.2.1.2 Deep Shell bed Aquifer

As a general guide TL2 for deep shell bed groundwater levels should be no less than 1.0 mAMSL (noting that changes in EC are also a key indicator of saline intrusion).

3.2.1.3 Electrical Conductivity Triggers

Electrical conductivity triggers will be no greater than:

- **TL1** - Median (weekly rolling average) EC from baseline monitoring period +25%
- **TL2** - Median (weekly rolling average) EC from baseline monitoring period + 50%

3.2.2 Ongoing monitoring

Ongoing monitoring of groundwater and electrical conductivity levels will be undertaken continuously via individual piezometers in sentinel monitoring bores.

3.3 Saline Intrusion Monitoring

During the initial 12-month monitoring period, sampling for the following salinity indicators in the bores listed in **Table 6** below will be undertaken at 6 weekly intervals²:

- Electrical conductivity;
- Chloride;
- Sodium;
- Total Dissolved Solids.

The samples will be collected in accordance with A National Protocol for State of the Environment Groundwater Sampling in New Zealand (Ministry for the Environment, 2006).

² This frequency applies to the initial 12-month monitoring period for the establishment of baseline information. The frequencies specified in Table 6 are for ongoing monitoring specifications.

3.3.1 Setting of Saline Intrusion Triggers

As an initial guide, trigger levels for individual determinants will be established as follows:

- TL1 - Median concentration from the baseline monitoring period +25%.
- TL2 - Median concentration from the baseline monitoring period + 50%.

3.3.1.1 Ongoing Monitoring

Sampling at the frequencies specified for the following salinity indicators will take place in the bores listed in **Table 6** below:

- Electrical conductivity;
- Chloride;
- Sodium;
- Total Dissolved Solids.

The samples will be collected in accordance with A National Protocol for State of the Environment Groundwater Sampling in New Zealand (Ministry for the Environment, 2006).

Table 6: Monitoring Schedule – Saline Intrusion

Bore Name	Depth (m)	Piezo. No.	Target aquifer	Parameter*	Units	Frequency	Trigger Levels	
							TL1	TL2
Fishing Club	79	1	Deep shellbed	EC	µS/cm	Quarterly	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
				Sodium	mg/L	Quarterly	TBC	TBC
				TDS	mg/L	Quarterly	TBC	TBC
Kaimaumuau (Sentinel)	20	1	Shallow sand	EC	µS/cm	Continuously	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
				Sodium	mg/L	Quarterly	TBC	TBC
				TDS	mg/L	Quarterly	TBC	TBC
	72	2	Deep shellbed	EC	µS/cm	Continuously	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
Kaimaumuau Settlement	<20 (12)	1	Shallow sand	EC	µS/cm	Quarterly	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
				Sodium	mg/L	Quarterly	TBC	TBC
				TDS	mg/L	Quarterly	TBC	TBC
	>50 (TBC)	2	Deep shellbed	EC	µS/cm	Quarterly	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
				Sodium	mg/L	Quarterly	TBC	TBC
				TDS	mg/L	Quarterly	TBC	TBC
Elbury Holdings	TBC	1	Deep shellbed	EC	µS/cm	Quarterly	TBC	TBC
				Chloride	mg/L	Quarterly	TBC	TBC
				Sodium	mg/L	Quarterly	TBC	TBC
				TDS	mg/L	Quarterly	TBC	TBC

Notes:

* Parameter key: GL = Groundwater Level; EC = Electrical Conductivity; SI = Salinity Indicators; TDS = Total Dissolved Solids.

TBC = to be confirmed within 15 months of the date of commencement of these consents.

3.4 Production Bore Monitoring

During the initial 12-month monitoring period, sampling for the following salinity indicators in the bores listed in **Table 7** below will be undertaken at 6 weekly intervals³.

3.4.1 Trigger levels

Electrical conductivity trigger levels will be established in the production bores listed in **Table 7** below.

During the initial 12-month monitoring period Electrical Conductivity Triggers will be no greater than:

- **TL1** – Departure exceeding 25% of the EC value from the initial monitoring round
- **TL2** – Departure exceeding 50% of the EC value from the initial monitoring round

Long-term EC triggers for individual production bores will be established following the initial 12-month monitoring period based on an assessment of spatial and temporal variation in EC observed during the initial period, in a manner consistent with EC trigger levels established in the sentinel monitoring bores.

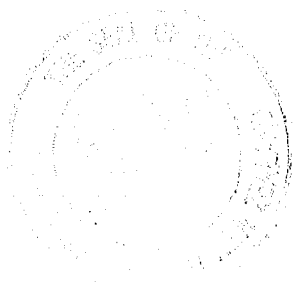
No trigger levels will be established for groundwater levels in the production bores as water levels in the production bores can be impacted by well efficiency and pumping schedules so are not necessarily representative of groundwater levels in the surrounding aquifer.

3.4.2 Ongoing monitoring

Monthly water level monitoring will be undertaken in the production bores listed in **Table 7**. During the winter months (nominally May to September) this monitoring will provide information to identify any inter-annual variations in aquifer storage which may be anomalous compared to regional trends. During the irrigation season, water level measurements will be undertaken a minimum of eight hours following the cessation of pumping.

Electrical conductivity values will also be measured at monthly intervals from the production bores during the irrigation season to check on any changes in salinity induced by the pumping.

Continuous water level monitoring is required in a shallow observation bore adjacent to the production bore for AUT.038471.01.01 to quantify any localised drawdown effects in the shallow sand aquifer in the vicinity of a relatively large abstraction proximal to Kaimaumau Wetland. This shallow aquifer monitoring will enable comparison between the shallow aquifer impact as modelled in the Model Report and the data from the shallow piezometers in the sentinel bores listed in **Table 5**.



³ This frequency applies to the initial 12-month monitoring period for the establishment of baseline information. The frequencies specified in **Table 6** are for ongoing monitoring specifications.

Table 7: Monitoring Schedule – Production Bore Water Levels

Bore Name	Depth (m)	Piezo. No.	Target aquifer	Parameter*	Units	Frequency	Trigger Levels	
							TL1	TL2
Lamb Road	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Valadares	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
McLarnon	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Elbury Holdings	TBC	1	Deep shellbed	GL, SI	mAMSL	Monthly	EC TBC	EC TBC
Holloway	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Ngai Takoto	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Cypress Hills	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Stanisich	95	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Honeytree	112	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
	6	2	Shallow sand	GL, EC	mAMSL	Continuous	EC TBC	EC TBC
	111	3	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Thompson	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
L J King Limited	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Mapua	111	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
	122	2	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
	97	3	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Hewitt	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Shine	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Largus	94	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Covich	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC
Thomas	TBC	1	Deep shellbed	GL, EC	mAMSL	Monthly	EC TBC	EC TBC

Notes:
 * Purpose key: GL = Groundwater Level; EC = Electrical Conductivity.
 All trigger limit values in this Table to be confirmed by Council.

3.4.3 Wetland Condition Survey

3.4.3.1 Initial Survey

Within six months of the date of commencement of these consents the Council, in consultation with the Director-General of Conservation and the Consent Holders, will commission a suitably qualified and experienced ecologist to catalogue the values and attributes of the significant indigenous vegetation and significant habitats of indigenous fauna of the Kaimaumau Wetland, including the standing water area of the Kaimaumau Wetland that is being monitored by the standing water level monitoring station required by **Table 5**. Initial survey work should take place in the months of September, October, or early November.

The main plant communities in the standing water shall be delineated on high quality aerial photographs of the wetland area at a suitable scale. The mapped vegetation types shall be classified and named using an appropriate system of classification such as the Atkinson system (1985).

Following the mapping of vegetation types and plant communities an assessment of the composition and structure of wetland vegetation, and associated wetland soil chemistry, shall be carried out.

The methodology will include an assessment of the overall wetland condition using the Wetland Condition Index described in Clarkson et al. (2004) that includes a semi-quantitative evaluation of the following indicators:

- Changes in hydrological integrity.
- Changes in physiochemical parameters,
- Changes in ecosystem intactness,
- Changes in browsing, predation and harvesting regimes.
- Changes in the dominance of native plants.

Reference shall also be made to other pressures which may be impacting on the wetland as described in Clarkson et al (2004):

- Modifications to catchment hydrology.
- Water quality within the catchment.
- Animal access,
- Key undesirable species.
- % catchment in introduced vegetation.

Detailed assessment of vegetation composition and structure in the standing water area will be undertaken using a series of three vegetation transects established across the standing water area, applying the Scott Height Frequency (SHF) method (Scott, 1965; Rose, 2012) supplemented with wetland soil monitoring.

The vegetation transects must encompass the complete hydrological gradient across the standing water area (littoral zone/shallow water and deep water habitats), and run perpendicular from the dune system at the north of the standing water, in a south west direction. The three vegetation transects must be geographically spaced apart to ensure vegetation monitoring covers all habitats in the standing water area.

Application of the SHF method must ensure that the transects are permanently marked to enable accurate resurvey.

Application of the SHF method must ensure that as a minimum wetland plant composition and height is recorded every 1.0m for a transect distance of 100m across the hydrological gradient. In addition, wetland plots of plots (5m x 5m) (Scott, 1965; Rose, 2012) must be undertaken every 20m (5 per transect) to assess variation in vegetation cover abundance.

Within each of the wetland plots, wetland soil cores must be collected for analysis at an accredited laboratory. Wetland soil chemistry analyses must include: pH, conductivity, total carbon, total phosphorus, total nitrogen, and bulk density. These are standard wetland soil analyses for vegetation monitoring (Clarkson et al. 2004) and are required to inform assessment of vegetation changes in relation to water level variation.

The information shall be recorded using standard forms and applying the scoring system, such as that from Clarkson et al. (2004) for the index of wetland condition, and the SHF method templates (Scott, 1965; Rose, 2012).

3.4.3.2 Repeat Survey

The Council shall commission, in consultation with the Director-General of Conservation and the Consent Holders, a suitably qualified and experienced ecologist to undertake wetland vegetation

survey and subsequent reporting every 5 years from the original date of survey at around the same time of year as the original survey. The repeat survey's must be designed in a way that enables ecologically meaningful and statistically robust scoring of the wetland condition in order to analyse changes to the wetlands condition resulting from the groundwater abstraction.

This repeat survey must be completed once after the initial vegetation survey (to provide an accurate baseline) but thereafter will only take place where technical assessment carried out according to Section 2.1.1 confirms that there is a decline in standing water level of the Kaimaumu Wetland resulting from groundwater abstraction.

A decline in standing water level of the Kaimaumu Wetland attributable to groundwater abstraction will be determined from the monitoring and analysis of temporal groundwater level variations in the shallow Motutangi piezometer in relation to the Kaimaumu Wetland Standing Wetland Water Level facilities as described in **Table 4** above.

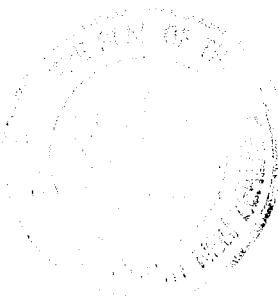
3.5 Environmental Monitoring Report

At the end of each irrigation season, the Council will commission the preparation of an Annual Environmental Monitoring Report (AEMR) by a suitably qualified hydrogeologist and, in relation to monitoring of the Kaimaumu Wetland, a suitable qualified wetland ecologist. The Council will endeavour to ensure that, if possible, both the hydrogeologist and the ecologist will have experience and knowledge of the locality. A copy of the AEMR will be provided to the Consent Holders and the Director General of Conservation by 31 July each year.

The purposes of the Annual Environmental Monitoring Report are to;

- provide a summary of the monitoring results for the previous year, including trends, against Objective 1 of the GMCP;
- assess the monitoring undertaken over the previous year against the standards set out in Objective 1;
- report on any issues apparent with the monitoring and
- identify any improvement that could be made with respect to the monitoring.

The AEMR will also contain an evaluation of whether the observed effects of the groundwater takes are consistent with the predictions of environmental response contained in the *Motutangi-Waiharara Groundwater Model, Factual Technical Report – Modelling. Motutangi-Waiharara Water User Group. WWA0026: Final – Rev. 9, dated 31 August 2017* (hereon in referred to as the 'Model Report').



4. CONTINGENCY PLAN

Exercise of the consents is subject to compliance with Objective 1 of this GMCP.

As described in **Section 2**, a trigger level system is used to define environmental criteria that signal changes may be occurring outside of what is normal (TL1) or at a point where remedial action is required to avoid Objective 1 not being met (TL2).

This section details the responses that will be undertaken where TLs are exceeded under any of the monitoring suite discussed in **Sections 2.1.2.1, 2.1.2.2, 3.2, 3.3, and 3.4**.

Where a trigger level is exceeded the Council will commission a Groundwater Trigger Exceedance Report (GTER). The objective of the GTER is to establish the cause of a trigger level exceedance and to recommend a programme of action to end the exceedance.

A GTER shall include:

- Review of the monitoring results collected and establish why the breach has occurred;
- set out requirements for more intense monitoring of the breach;
- update the report on a regular basis as more data becomes available; and
- recommend actions to end the breach, this could include;
 - a staged reinstatement of abstraction levels to pre-breach levels,
 - reduced levels of abstraction for all or some of the consent holders covered by the GMCP, or
 - suspension of abstraction by all or some of the consent holders covered by the GMCP.

4.1 Exceedance of TL1

In the event of a TL1 exceedance, which may represent declining groundwater levels, Kaimaumu wetland water levels, or rising salinity indicators, the following actions must be undertaken:

- (a) The Council will notify the Consent Holders within two working days of when the TL1 exceedance became known.
- (b) If the exceedance is of a salinity indicator in the bores listed in **Table 5**, then sampling of the monitoring bore(s) in exceedance shall immediately be upgraded to a weekly frequency for four weeks following the first exceedance of the TL1. Weekly monitoring shall continue until sample results are consistently below TL1 values for a period of four weeks or as directed by Council.
- (c) If after four weeks following the first exceedance of the TL1, the initiation of seawater intrusion and/or water level decline cannot be discounted to the satisfaction of the Council, then a Groundwater Trigger Exceedance Report (GTER) by a suitably qualified Hydrogeologist (and ecologist if the exceedance concerns the Kaimaumu wetland) shall be commissioned by Council.
- (d) The GTER shall assess the significance of the exceedance against the requirements of Objective 1 of the GMCP. The GTER shall assess why TLs have been breached, identify the pumping bores in the area(s) of effect and will review all of the available data collected in the affected area(s), in particular the data collected pursuant to this GMCP.

4.2 Exceedance of TL2

In the event of a TL2 exceedance, which represents significant departure from normal groundwater and/or Kaimaumau Wetland conditions, with either continuously declining groundwater levels and/or Kaimaumau Wetland water levels, or rising salinity indicators:

- (a). Council will immediately inform the Consent Holders upon TL2 exceedance becoming known.
- (b). All Consent Holders must reduce their abstraction to 50% of the current average daily quantity, as calculated using the previous months water use records required to be kept in accordance with the conditions of its groundwater take consent. If the exceedance occurs within one month of a Consent Holder first taking water for irrigation purposes within an irrigation season, then the average shall be calculated using the water use records for this period only. The council will advise the Consent Holder in writing of any breach and the required reduction in the daily water take volume.
- (c). A GTER by a suitably qualified hydrogeologist (and ecologist if the exceedance concerns the Kaimaumau wetland) shall be commissioned by Council. The GTER shall assess why the TL2 has been breached, identify the pumping bores in the area of effect, and include a review of all available data collected for the affected area(s), in particular, the data collected under this GMCP.
- (d). Once (b) above has been complied with, the Consent Holder may apply to the Council's Compliance Manager for an alternative reduction in its daily water take volume. Council approval for an alternative reduction value will only be given if it is satisfied that relevant TL2 values will not be exceeded. The Council will use the GTER to inform its decision on any alternative reduction value for a Consent Holder.
- (e). If the TL2 exceedance is in a bore(s) that is/are not continuously monitored, then weekly groundwater level measurements and/or sampling of saline intrusion (depending on which trigger level is breached) in all bores where TL2 trigger levels are breached will commence within one week of the TL2 trigger level exceedance. Monitoring will continue until such time as:
 - Three consecutive samples in an individual monitoring bore are below all TL2 thresholds established for that piezometer; or
 - As directed by Council.
- (f). If salinity indicators continue to increase or groundwater levels continue to decline after 21 days following the implementation of (b), then the Consent Holder's abstraction must be reduced to 25% of the current average daily quantity, as calculated for (b) above. The council will advise the Consent Holder in writing of this further reduction and the required reduction in the daily water take volume.
- (g). If (f) is implemented, then the Council will commission a review and update of the GTER report by a suitably qualified hydrogeologist (and ecologist if the exceedance concerns the Kaimaumau-Motutangi wetland) with a longer-term programme of recommended responses incorporating observed responses to interim pumping rate reductions. The updated GTER will include a specific programme (including timeframes) of actions which would achieve compliance with Objective 1 of this GMCP. The actions may include, but not be limited to incremental reductions in the daily quantity of groundwater taken as a percentage of the allowable daily pumped volume, as well as testing of domestic/stock water supplies in bores that are efficiently utilising the aquifer and are potentially impacted by saline intrusion, and if necessary, the provision of temporary water supplies to any affected parties (excluding any of

the Consent Holders) in the event that Chloride concentrations exceed 250 mg/L (being the guideline value for taste prescribed in New Zealand Drinking Water Standards for New Zealand 2005 (Revised 2008)). The GTER will also identify a methodology which Council will utilise to increase abstraction back to the volumes applicable to the relevant stage of taking (see Section 2.1), where this can be done such that Objective 1 of this GMCP will be met. If it is not possible to increase abstraction back to the relevant stage of taking, then the GTER will identify a methodology to increase abstraction to a lesser volume such that Objective 1 of the GMCP will be met.

- (h). Actions from the GTER shall continue as long as the issue continues.
- (i). Implement additional remedial measures as directed by Council, including of the suspension of taking.

5. REFERENCES

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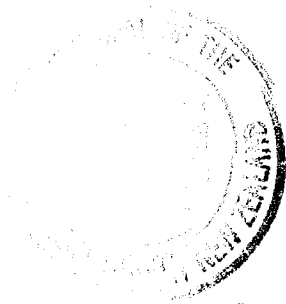
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C

**BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA**

IN THE MATTER	of the Resource Management Act 1991
AND	of an appeal under s120 of the Act
BETWEEN	A BURGOYNE / TE TAUMATUA O NGATI KURI RESEARCH UNIT (ENV-2018-AKL-000121) DIRECTOR OF CONSERVATION (ENV-2018-AKL-000121) Appellants
AND	NORTHLAND REGIONAL COUNCIL Respondent MOTUTANGI-WAIHARARA WATER USERS GROUP Applicant

**MINUTE OF THE ENVIRONMENT COURT BEFORE JUDGE J A SMITH SITTING IN
CHAMBERS
(16 May 2019)**

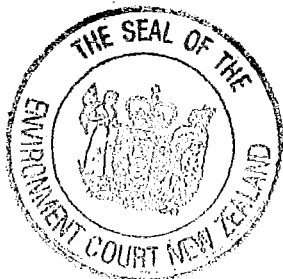
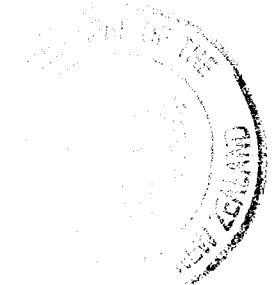
Introduction

[1] The Court has received a memorandum filed by Mr Green for the applicants setting out proposed conditions in respect of this matter.

[2] The introductory paragraphs do not refer at all to the appeal to Mr Burgoyne or the appeal (ENV-2018-AKL-000121) nor to the fact that the decision of the Court has been appealed to the High Court.

[3] It is unclear on what basis the memorandum was filed as it is signed only by Mr Green. He does indicate that there has been consultation with Northland Regional

BURGOYNE / TE TAUMATUA O NGATI KURI RESEARCH UNIT & ORS v NORTHLAND RC



Council and that his understanding is that agreement has been reached. He indicates that the consultation with the Department of Conservation has not taken place to date.

Existing directions

[4] On the basis of this memorandum I understand it to be anticipated that the Department of Conservation, NRC (if they do not agree with Mr Green) and Mr Burgoyne/ Te Taumatua O Ngati Kuri Research Unit have an opportunity now to comment on the proposed conditions. Accordingly, the steps taken to date do not comply with the directions of the Court and I need now to formulate an appropriate timetable to finalisation of this issue.

New directions:

- a) If the applicants have not served copies of the master consents and conditions with the memorandum already on all appellants and other parties and it is to do so within five working days;
- b) The appellants to confirm the date on which the service has occurred;
- c) Other parties have 15 working days to provide their comments on the proposed conditions to the Court. If they disagree with any particular condition they must identify the condition in question and their preferred wording. The other parties are also to identify whether the conditions should take effect immediately or be suspended until the resolution of the High Court appeal;
- d) A copy of any memorandum to the Court is also to be served on the applicant. The applicant is to file within a further 10 working days its response to the preferred wording and the timing of the operation of the consent under s114 of the Act;
- e) The Court will then in its discretion determine the matter on the papers or convene a judicial telephone conference to address further steps to resolution;
- f) Costs are reserved and the Court will include in any further direction or decision its directions as to the question of costs.




J A Smith
Environment Judge