#### Descriptive Specification

- This consent authorises the abstraction of groundwater from Bore No. 361080 on the property legally described as Lots 1 & 2 DP 51446 and part of Lot 4 DP 44581 Blks I III Waitohu SD (Esplanade Reserve) (hereafter referred to as the property) at 765 Muhunoa West Road at approximate map reference NZTopo50 BN33 833 979.
- The Consent Holder must undertake the activity in general accordance with the consent application including all accompanying plans and documents first lodged with the Manawatū-Whanganui Regional Council on 2 July 2021 and;
  - a. further information received on **14 September 2021** via **email** being a partial response to the s92 request of **1 September 2021**;
  - b. further information received on 4 October 2021 via email being a partial response to an the Regional Council email of 1 October 2021 relating to ecological and coastal information; and
  - c. further information received on **1 November 2021** via **email** being a partial response to the s92 request (Cultural effects) of **29 October 2021.**
- 3. Where there may be inconsistencies between information provided by the Applicant and conditions of the resource consent, the conditions of the resource consent apply.

**ADVICE NOTE:** Any variance from the location, design concepts and parameters, implementation and / or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

### Pre-Development Assurance

- 4. Prior to exercising this consent, the Consent Holder shall have an electromagnetic flow meter installed by an accredited installer. An accredited installer is currently accredited by Irrigation New Zealand (also referred to as IrrigationNZ) represented by the 'Blue Tick' logo. The flow meter must be:
  - a. located on the water abstraction line; and
  - b. have a pulse counter output traceably calibrated to +/- 5% or better; and
  - c. capable of providing daily water use as well as a pulse counter output; and

- d. positioned to measure the entire volume abstracted under authorisation of this consent; and
- e. installed in accordance with the Resource Management (Measurement and Reporting of Water Takes) Amendments Regulation 2020; and
- f. installed in accordance with the IrrigationNZ "The New Zealand Water Measurement Code of Practice" September 2018.

**ADVICE NOTE:** An accredited installer is currently accredited by Irrigation New Zealand (also referred to as IrrigationNZ) represented by the 'Blue Tick' logo. A list of accredited providers can be located at <u>www.irrigationnz.co.nz</u>

- 5. **Prior to** exercising this consent, the Consent Holder shall install and maintain, in fully operational condition, a GRS data logger / telemetry unit compatible with the Manawatū-Whanganui Regional Council's Telemetry System. The data logger / telemetry unit must be:
  - a. Installed on the water abstraction line; and
  - b. Have traceably calibrated to +/- 5% or better; and
  - c. Set to New Zealand Standard Time.

**ADVICE NOTE:** The GRS data logger / telemetry unit which is attached to the pulse counter output will be monitored by the Manawatū-Whanganui Regional Council to ensure compliance with the resource consent conditions and as part of a programme to enable monitoring of total catchment water use.

- 6. **Prior to** exercising this consent, the Consent Holder shall install and maintain an automatic backflow prevention device within the pump outlet plumbing or within the mainline to prevent the backflow of water through the meter referred to in **Condition 3** of this consent.
- 7. The Consent Holder shall ensure that the monitoring equipment referred to in conditions 3, 4, and 5 in respect to the flow meters, telemetry equipment and /or back flow preventer is located in a position where it can be read and safely accessed at all times.
- 8. The Consent Holder shall provide evidence of the pipe head works and associated infrastructure being installed in accordance with conditions 3 and 5 by submitting an installation certificate completed by an accredited installer and submitting it to the Manawatū-Whanganui Regional Council's Consents Monitoring Team Leader within three (3) months of the consent being granted.

**ADVICE NOTE:** Installation certificates can be sent to the Consents Monitoring Team Leader via email <u>consent.monitoring@horizons.govt.nz</u> –OR– via mail addressed to: C/- The Consent

Monitoring Team Leader, Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442.

## Environmental Standards

- The maximum daily abstraction of groundwater shall not exceed 1390 cubic metres per day (m<sup>3</sup>/day) from bore number 361080 at a maximum instantaneous rate of 17 litres per second (l/s).
- 10. The maximum annual abstraction rate of this resource consent shall not exceed **208,268** cubic **metres per year (208,268 m<sup>3</sup>/year)**.

**ADVICE NOTE:** The annual volume applies from 1 July – 30 June being the **first July** after consent the commences.

- 11. The Consent Holder shall, in circumstances when the electrical conductivity measured either under condition 17 of this consent exceeds:
  - a. 750  $\mu$ S/cm, immediately decrease the daily abstraction volume to a maximum of **927** m<sup>3</sup>/day;
  - b. 850  $\mu$ S/cm, immediately decrease the daily abstraction volume to a maximum of **463** m<sup>3</sup>/day;
  - c. 1,000 μS/cm, immediately cease the abstraction and shall not resume the abstraction until written notification from the Manawatū-Whanganui Regional Councils Consents Monitoring Team Leader has been received confirming that abstraction can continue.

# **Operational Restrictions**

12. In the event that the equipment detailed in conditions 3, 4, and 5 in respect to the flow meters, telemetry equipment and /or back flow preventer fails, replacement or repair will be at the Consent Holder's expense and replacement or repair will be required within seven (7) days.

### Post-Development Assurance

13. Within **three (3) months** of installation, the Consent Holder shall have the flow meter (required by Condition **3**) verified by an Irrigation New Zealand "Blue Tick" accredited verifier.

14. The flow meter shall be verified by an Irrigation New Zealand "Blue Tick" accredited verifier every **five (5) years** thereafter to ensure compliance with condition 13. The Consent Holder shall provide evidence of the verification in writing to the Manawatū-Whanganui Regional Council's Consents Monitoring Team Leader within **one (1) month** of the verification being completed.

**ADVICE NOTE:** Written verification can be sent to the Consents Monitoring Team Leader via email <u>consent.monitoring@horizons.govt.nz</u> –OR- via mail addressed to: C/- The Consent Monitoring Team Leader, Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442.

### Monitoring Provision

- 15. The Consent Holder shall allow any Manawatū-Whanganui Regional Council staff member and its agents to attach monitoring or telemetry equipment to monitor water use to ensure compliance with consent conditions and / or as part of a programme to enable monitoring of total water use.
- 16. In the event that the equipment detailed in conditions 3, 4, and 5 in respect to the flow meters, telemetry equipment and / or back flow preventer is removed for servicing or replacement, the Consent Holder shall notify the Manawatū-Whanganui Regional Council's Consents Monitoring Team Leader within one (1) working day and keep daily records of the volumes and rates of water abstracted under this resource consent. These records shall be submitted to the Manawatū-Whanganui Regional Council on a weekly basis until the equipment is reinstalled or replaced.

**ADVICE NOTE:** Records can be submitted to the Consents Monitoring Team Leader via email <u>consent.monitoring@horizons.govt.nz</u> –OR- via mail addressed to: C/- The Consent Monitoring Team Leader, Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442.

- 17. The Consent Holder shall in January, April and October of each year that the bore is in use, measure:
  - a. groundwater levels under static conditions; and
  - b. groundwater levels under pumping conditions; and
  - c. electrical conductivity of pumped water.
- The measurements shall be recorded in a log book and provided to the Manawatū-Whanganui Regional Council's Consents Monitoring Team Leader within five (5) working days of the measurements being made.

**ADVICE NOTE:** Measurements can be sent to the Manawatū-Whanganui Regional Council via email <u>consent.monitoring@horizons.govt.nz</u>–OR– by mail, addressed to: C/- The Consents Monitoring Team Leader, Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442.

- 19. If measurements of electrical conductivity under condition 17 increase by 50% from any earlier measured value -OR- are greater than 500  $\mu$ S/cm, then the Consent Holder at their expense, shall:
  - a. install telemetry to measure groundwater levels & electrical conductivity continuously;
    and
  - b. collect one water sample in each month July, October, January and April for the duration of the consent; and
  - c. have laboratory analysis undertaken on the sample for the parameters listed in **Table 1** below; and
  - d. have laboratory analysis undertaken for the ionic balance of the sampled water; and
  - e. provide the analysis results to the Manawatū-Whanganui Regional Council Consents Monitoring Team Leader.

#### Table 1: Water Quality Parameters

Parameter	Units
рН	
Calcium	ppm Ca <sup>2+</sup>
Magnesium	ppm Mg <sup>2+</sup>
Sodium	ppm Na <sup>+</sup>
Potassium	ppm K <sup>+</sup>
Iron	ppm Fe <sup>2+</sup>
Manganese	ppm Mn <sup>2+</sup>
Boron	ppm B <sup>3+</sup>
Silica	ppm SiO <sub>2</sub>
Sulphate	ppm SO <sub>4</sub> <sup>2-</sup>
Chloride	ppm Cl <sup>-</sup>
Carbonate	ppm CO <sub>3</sub> <sup>2-</sup>
Bicarbonate	ppm HCO₃ <sup>-</sup>

**ADVICE NOTE:** Analysis Results can be sent to the Manawatū-Whanganui Regional Council via email <u>consent.monitoring@horizons.govt.nz</u> –OR– by mail, addressed to: C/- The Consents Monitoring Team Leader, Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442.

**ADVICE NOTE:** The ionic balance of the sampled water should not have a discrepancy of greater than 5%.

### Review

- 20. The Manawatū-Whanganui Regional Council, under s128(1)(a) of the Resource Management Act, in July 2027, 2032 and 2037, serve notice of its intention to review the conditions of this resource consent for the purpose of reviewing the effectiveness of these conditions in avoiding and mitigating any adverse effects on the environment. The review of conditions shall allow for:
  - a. An assessment of the water abstraction volumes and rates detailed in the conditions of this consent against any future allocation policy, and if necessary a change to the monitoring outlined in the conditions of the consent; and/-OR-
  - b. To review the adequacy of and the necessity for monitoring undertaken by the Consent Holder; and/-OR-
  - c. deletion or amendments to any conditions of this resource consent to ensure adverse effects are appropriately mitigated; and/-OR-

- d. addition of new conditions as necessary, to avoid, remedy or mitigate any unforeseen adverse effects on the environment.
- 17. The Manawatū-Whanganui Regional Council, under s128(1)(b) of the Resource Management Act, may review this resource consent, when a regional plan has been made operative which sets rules relating to maximum or minimum levels, flows or rates of water use, and in Manawatū- Whanganui Regional Council's opinion is appropriate to review the conditions of this consent in order to enable the levels, flows or rates set by the rule to be met.

## Duration and Lapsing

- If this resource consent is not given effect to by the commencement date + 5 Years it shall lapse pursuant to s125 of the Resource Management Act 1991.
- 19. The resource consent will expire on **1 July 2042**.