

Consent Evaluation Report

Applicant:	Bains Hort Group Limited	File No.:	61 80 83A
Address of Site:	582 Parallel Road, Cambridge	Project Code:	RC222
Consent Type:	Land Use Consent	Application Number:	APP143442

1 Description of Activity

Bains Hort Group Limited has applied for a resource consent to construct, use and maintain a well for crop irrigation water supply purposes at 582 Parallel Road, Cambridge. The proposed maximum abstraction rate is shown as 1,200 cubic metres per day.

2 Status of Activities under the Waikato Regional Plan

Under the Waikato Regional Plan drilling below the water table is a controlled activity under Rule 3.8.4.7. Drilling below the water table which does not comply with the standards and terms of the controlled activity rule is a discretionary activity under rule 3.8.4.8.

Note that this application is to authorise the construction, use and maintenance of the well only, and does not authorise the taking of water from the well. The taking of groundwater from a well for reasonable domestic purposes, or for the purposes of providing drinking water for animals does not require any authorisation under the Resource Management Act unless it causes, or is likely to cause, adverse effects on the environment. The taking of up to 15 m³ per day of groundwater for purposes not covered in the above is allowed by permitted activity rule 3.3.4.12 (attached) of the Waikato Regional Plan subject to compliance with the conditions of that rule. Any additional groundwater take over 15 m³ per day would require a separate resource consent to that being considered in this report.



Figure 1: Proposed location of bore

Note: The proposed bore location appears to be just a little more than 50 metres east from a watercourse. It is unclear whether that area could be deemed to be a natural inland wetland. The area around the stream to the east (shown in yellow on Figure 1 above) is shown as a wetland on Council's mapping system.

The National Environmental Standard for Freshwater (2020) deems the taking of water within 100 metres of a natural wetland to be a non-complying activity requiring consent. The applicant needs to be aware of this when locating the bore as any such application for a water take would require a full assessment of the impacts on an adjoining wetland. Any bore should be located more than 100 metres away from the area shown in yellow. If an application is lodged to take water from a bore within 100 metres of the stream to the west then an assessment would be made at the time as to whether the area constitutes a natural wetland. It would be advisable to consider a location that was more than 100 metres from the surrounds of both streams.

3 Consultation/Affected Party Approvals

This activity falls within Rule 3.8.4.7 of the Plan. That rule provides that "Applications under this rule will be considered without notification or the need to obtain written approval of affected persons in accordance with section 94(1)(b) of the RMA" [now s95A(3)] and, on that basis, s95A(1) provides for non-notification of this application. In addition, it is not considered that any special circumstances exist that would warrant notification in accordance with s95A(4). Accordingly, no party's approval has been sought and it is recommended that this application be processed on a non-notified basis.

4 Statutory Considerations

Section 104 of the Resource Management Act 1991 requires the Waikato Regional Council to have regard to the following matters when considering a resource consent application:

- Any actual or potential effects on the environment of allowing the activity
- The New Zealand Coastal Policy Statement and Regional Coastal Plan (for coastal consents)
- The Waikato Regional Policy Statement
- The Waikato Regional Plan and any proposed variations to that plan
- Other matters considered relevant and necessary to consider

4.1 Assessment of Environmental Effect

Drilling and its associated activities can have a variety of adverse environmental effects including:

1. contamination of ground water, surface water and soils by drilling fluids
2. reduction in ground water quality by contamination from surface water run-off, other surface water and other ground water sources
3. fuels and other hazardous substances on drill sites contaminating soils and surface water
4. accelerated soil erosion
5. vegetation removal to create drilling pads and drill rig access
6. well placement causing adverse environmental effects on other ground water users
7. loss of artesian water or aquifer pressure both in the short and long term
8. flow between previously isolated aquifers
9. adverse effects on geothermal characteristics
10. loss of geothermal fluid/pressure both in the short and long term
11. blow-outs (i.e. uncontrolled well discharges) in geothermal wells

The magnitude of these effects is influenced by the physical setting of the site, the scale of the drilling operation, the type of drilling, duration of the activity, and the hydrology and water quality at the site. Effects can be minimised through good drilling practices and through compliance with the

recommended consent conditions, which are taken directly from the conditions of the controlled activity within the Waikato Regional Plan.

I consider that as long as these conditions, and the conditions in the attached schedule/certificate are complied with, there are less than minor risks of any adverse effects occurring from the granting of this resource consent application.

4.2 Policy Statements and Plans

4.2.1 Waikato Regional Plan

The Waikato Regional Plan contains two policies in section 3.8.3 which relate to drilling. Policy 1 is relevant to this application:

Policy 1: Effects of Drilling Activities

Manage the effects of drilling and any associated discharges in a manner that avoids significant adverse effects on the quality of ground water, surface water and soils from:

- a. contamination by drilling fluids
- b. contamination of ground water by contaminants in surface water
- c. mixing of previously isolated aquifers
- d. loss of aquifer pressure/level
- e. disturbance of waahi tapu and other identified sites of significance to tangata whenua as Kaitiaki
- f. inappropriate drilling in geothermal systems.

Rules

As discussed in section 2 above, drilling below the water table is a controlled activity, provided that the activity complies with the standards and terms of rule 3.8.4.7, which states:

3.8.4.7 Controlled Activity Rule - Drilling Below the Water Table

The drilling of holes or wells below the water table where the hole or well is not permitted by or does not comply with Rule 3.8.4.6, is a controlled activity (requiring resource consent) subject to the following standards and terms:

- a. All drilled holes/wells shall be constructed, maintained and/or abandoned so that they shall not cause cross-contamination between hydraulic units (aquifers) in any water including ground water and geothermal water.
- b. Holes drilled shall be at least 100 metres away from any Significant Geothermal Feature.
- c. All holes/wells shall be managed and maintained such that leakage of water or contaminants to or from the ground surface is prevented.
- d. Materials used for well construction shall be of such quality and strength to enable the well to be completed without casing or seal leakage during construction or subsequent well operation.
- e. Wells used for potable water supply shall be located at least 30 metres from any on-site sewage disposal system.
- f. Wells used for taking water, shall be located at least 50 metres from a lake or stream, and 100 metres from Mean High Water Springs.
- g. A log for each drilled hole/well shall be forwarded to the Waikato Regional Council within two months of completion of drilling. Each log shall show:
 - i. the location of the hole/well
 - ii. date of completion
 - iii. duration of drilling
 - iv. depth and diameter of the hole/well

- v. the method of drilling
 - vi. full construction details
 - vii. the subsurface geology
 - viii. results of any tests undertaken during drilling, including permeability, temperature and water quality
 - ix. a site diagram.
- h. The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme, or by the Historic Places Trust except where Historic Places Trust approval has been obtained.

Waikato Regional Council reserves control over the following matters:

- i. Measures to avoid, remedy or mitigate the adverse effects of the activity on soil and water quality.
- ii. Measures to avoid, remedy or mitigate the effects on other users of water.
- iii. Monitoring, sampling and analysis requirements.
- iii. The location and depth of drilling.
- iv. Any measures necessary to rehabilitate the land following the completion of the activity.
- v. Measures to avoid, remedy or mitigate the effect of the activity on areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- vi. The requirement for bonds to ensure appropriate control and abandonment of deep geothermal wells.
- viii. Measures taken to remove wastes introduced to the hole/well during drilling and construction.

5 Relevant Part 2 Considerations

I consider that, if carried out in accordance with the conditions of this consent, the well construction will not contravene the purpose and principles of the Resource Management Act 1991 (as set out in Part 2 of the Act)

6 Monitoring

Whilst no scheduled monitoring of this consent is proposed, should the need arise, Waikato Regional Council may undertake monitoring of the well to ensure compliance with the resource consent conditions.

7 Conclusion

I consider that the exercise of this consent, if carried out in accordance with the conditions set out below, will have only minor environmental effects, and recommend that, in accordance with s104A of the Resource Management Act, this consent be granted with a term and conditions in line with Waikato Regional Council guidelines and with standard conditions for drilling and well construction.

8 Recommendations

Recommended Decision

- That resource consent application APP143442 be processed non-notified.
- That resource consent application APP143442 be granted in accordance with the duration and conditions prescribed in the attached schedule/certificate for the following reasons:
- The activity will have no more than minor actual or potential adverse effects on the environment
- The activity is not contrary to any relevant plans or policies
- The activity is consistent with the purpose and principles of the Resource Management Act 1991



Caitlyn Harty
Resource Officer
Resource Use Directorate

Date: 22 June 2021

9 Decision

That the resource consent application is granted in accordance with the above recommendations.



Mark Row
Project Manager, Farm Water & Drilling
Resource Use Directorate

Date: 28 June 2021

Acting under authority delegated subject to the provisions of the Resource Management Act 1991 which at the time of decision had not been revoked.

RESOURCE CONSENT CERTIFICATE

Resource Consent: AUTH143442.01.01

File Number: 61 80 83A

*Pursuant to the Resource Management Act 1991, the
Regional Council hereby grants consent to:*

Bains Hort Group Limited
PO Box 745
Te Puke

(hereinafter referred to as the Consent Holder)

Consent Type: Land Use Consent

Consent Subtype: Land - well

Activity authorised: construct, use and maintain a well for crop irrigation water supply purposes

Location: 582 Parallel Road, RD 3, Cambridge

Map reference: NZTM 1810641 E 5802227 N

Consent duration: This consent will commence on the date of decision notification
and the term is unlimited.

Subject to the conditions overleaf:

CONDITIONS

1. The well shall be constructed and maintained and/or abandoned so that it will not cause cross-contamination between hydraulic units (aquifers) in any water (including ground water and geothermal water).
2. The well shall be completed and sealed such that leakage of water or contaminants to or from the ground surface is prevented.
3. Materials used for well construction shall be of such quality and strength to enable the well to be completed without casing or seal leakage during construction or subsequent well operation.
4. If the well is to be used for potable water supply, it shall be located at least 30 metres horizontally from any on-site sewage disposal system.
5. If the well is to be used for taking water, it shall be located at least 50 metres horizontally from a lake or stream, and if near the coast, located at least 100 metres from mean high water springs (MHWS).
6. Upon completion of the well, wastes introduced to the well during drilling and construction shall be removed.
7. If artesian conditions are encountered, a conductor casing shall be grout sealed to ensure control of potential flowing artesian ground water and to prevent instability of the ground at the well head. Well head completion shall be such that ground water leakage under flowing artesian pressures is prevented.
8. The Waikato Regional Council shall be notified of the anticipated date of drilling commencing if the well is not to be drilled within three months of this consent being granted.
9. A log for each well drilled shall be forwarded to the Waikato Regional Council within two months of drilling being completed. Each log shall show:
 - i. the location of the hole/well
 - ii. date of completion
 - iii. duration of drilling
 - iv. depth and diameter of the hole/well
 - v. the method of drilling
 - vi. full construction details
 - vii. the subsurface geology
 - viii. full results of any tests (e.g. well yield, temperature, water quality) undertaken on the drilled hole/well
 - ix. a site diagram
10. The activity shall not disturb any archaeological site or waahi tapu as identified in any district plan or by Heritage New Zealand except where Heritage New Zealand approval has been obtained.
11. Abandoned or obsolete bores must be identified and decommissioned to prevent contamination. Advice of decommissioning of bores should be provided to Council within 4 weeks of the work being completed.

Note: If an existing bore is to be decommissioned then this should be properly capped and sealed by a driller, and Council advised of this. If you are decommissioning a bore, you must ensure that

contaminants are prevented from entering the bore by filling it with clean material and compacting or sealing the surface.

Advice Notes - General

- This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.
- Where a resource consent has been issued in relation to any type of construction (e.g. dam, bridge, jetty) this consent does not constitute authority to build and it may be necessary to apply for a Building Consent from the relevant territorial authority.
- This resource consent is transferable to another owner or occupier of the land concerned, by written notice to the Council, on the same conditions and for the same use as originally granted (s.134-137 RMA). The transfer of water, including changes of location, may occur as provided for in Chapter 3.4 of the Waikato Regional Plan, subject to the requirements of those rules.
- The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
- The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
- Note that pursuant to s332 of the RMA 1991, enforcement officers may at all reasonable times go onto the property that is the subject of this consent, for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.

Consent Evaluation Report

Applicant:	Bains Hort Group Limited	File No.:	61 80 83A
Address of Site:	582 Parallel Road, Cambridge	Project Code:	RC222
Consent Type:	Land Use Consent	Application Number:	APP144142

1 Description of Activity

Bains Hort Group Limited has applied for a resource consent to construct up to 2 bores, use and maintain a well for pasture or crop irrigation supply and monitoring bores for the purposes of monitoring a pumping test at 582 Parallel Road, Cambridge. The proposed maximum abstraction rate is shown as 1200 cubic metres per day. Four locations have been proposed and only two will be used. The final locations will be confirmed on the day drilling is undertaken.

2 Status of Activities under the Waikato Regional Plan

Under the Waikato Regional Plan drilling below the water table is a controlled activity under Rule 3.8.4.7. Drilling below the water table which does not comply with the standards and terms of the **controlled activity rule is a discretionary activity under rule 3.8.4.8.**

As this well is within 50m of a Water Course, it is considered to be a discretionary activity under rule 3.8.4.8. Note: This consent is to drill the bore and by granting Council makes no statement as to the suitability of the water should the applicant wish to use it for potable water purposes.

Note that this application is to authorise the construction, use and maintenance of the well only, and does not authorise the taking of water from the well. The taking of groundwater from a well for reasonable domestic purposes, or for the purposes of providing drinking water for animals does not require any authorisation under the Resource Management Act unless it causes, or is likely to cause, adverse effects on the environment. The taking of up to 15 m³ per day of groundwater for purposes not covered in the above is allowed by permitted activity rule 3.3.4.12 (attached) of the Waikato Regional Plan subject to compliance with the conditions of that rule. Any additional groundwater take over 15 m³ per day would require a separate resource consent to that being considered in this report.

3 Consultation/Affected Party Approvals

This activity falls within Rule 3.8.4.8 of the Plan. No consultation has been undertaken by the applicant or affected party approvals supplied.

A decision to process this application non-notified was undertaken as a separate process (Waikato Regional Council reference number # 23172664).

4 Statutory Considerations

Section 104 of the Resource Management Act 1991 requires the Waikato Regional Council to have regard to the following matters when considering a resource consent application:

- Any actual or potential effects on the environment of allowing the activity
- The New Zealand Coastal Policy Statement and Regional Coastal Plan (for coastal consents)
- The Waikato Regional Policy Statement
- The Waikato Regional Plan and any proposed variations to that plan
- Other matters considered relevant and necessary to consider

4.1 Assessment of Environmental Effect

Drilling and its associated activities can have a variety of adverse environmental effects including:

1. contamination of ground water, surface water and soils by drilling fluids
2. reduction in ground water quality by contamination from surface water run-off, other surface water and other ground water sources
3. fuels and other hazardous substances on drill sites contaminating soils and surface water
4. accelerated soil erosion
5. vegetation removal to create drilling pads and drill rig access
6. well placement causing adverse environmental effects on other ground water users
7. loss of artesian water or aquifer pressure both in the short and long term
8. flow between previously isolated aquifers
9. adverse effects on geothermal characteristics
10. loss of geothermal fluid/pressure both in the short and long term
11. blow-outs (i.e. uncontrolled well discharges) in geothermal wells

One of the proposed locations outlined in this application is for a bore that will be located within 50m of a water course. There are a range of potential issues with a bore located close to a stream depending on the proposed volume and use.

Whilst the proposed use is not for potable water where matters such as inundation of the well head are a potential concern, the applicant is advised to have the well-head raised set above the ground level as much as possible.

The proposed take is 1200 m³/day for Irrigation. Takes of that size may have an impact on stream depletion. It is noted that the proposed well depth is 120 metres. Technical comment was sought from Council Senior Scientist John Hadfield. Using information from a nearby bore he noted there are likely to be a couple of intervening silt layers (aquitards) which would mitigate stream depletion effects. He points out that proximity is one factor in stream depletion consideration and the applicant may wish to be mindful of that in selecting their sites (WRC doc # 23175323).

Given the advice received, no additional conditions are proposed aside from the standard conditions that are associated with controlled activity drilling consents. The applicant is advised to be mindful of where the bores are located and a technical review of any associated water take consent will look more closely at issues such as effect of the take on proximal bores and stream depletion effects.

4.2 Policy Statements and Plans

4.2.1 Waikato Regional Plan

The Waikato Regional Plan contains two policies in section 3.8.3 which relate to drilling. Policy 1 is relevant to this application:

Policy 1: Effects of Drilling Activities

Manage the effects of drilling and any associated discharges in a manner that avoids significant adverse effects on the quality of ground water, surface water and soils from:

- a. contamination by drilling fluids
- b. contamination of ground water by contaminants in surface water
- c. mixing of previously isolated aquifers
- d. loss of aquifer pressure/level

- e. disturbance of waahi tapu and other identified sites of significance to tangata whenua as Kaitiaki
- f. inappropriate drilling in geothermal systems.

Rules

As discussed in section 2 above, drilling below the water table is a discretionary activity.

3.8.4.8 Discretionary Activity Rule – Drilling Below the Water Table

The drilling of holes or wells below the water table where the hole or well is not permitted by or does not comply with Rule 3.8.4.6 or 3.8.4.7 and which is not classified as a non-complying activity under rule 3.8.4.9, is a discretionary activity (requiring resource consent).

Council has the discretion to grant the consent with conditions in addition to the standard controlled activity consent conditions detail in Rule 3.8.4.7 of the Waikato Regional Plan. As noted, in section 4.1 of this report, no additional conditions related to the proximity of one of the proposed bore locations to the stream have been included.

5 Relevant Part 2 Considerations

I consider that, if carried out in accordance with the conditions of this consent, the well construction will not contravene the purpose and principles of the Resource Management Act 1991 (as set out in Part 2 of the Act)

6 Monitoring

Whilst no scheduled monitoring of this consent is proposed, should the need arise, Waikato Regional Council may undertake monitoring of the wells to ensure compliance with the resource consent conditions.

7 Conclusion

I consider that the exercise of this consent, if carried out in accordance with the conditions set out below, will have only minor environmental effects, and recommend that, in accordance with s104A of the Resource Management Act, this consent be granted with a term and conditions in line with Waikato Regional Council guidelines and with standard conditions for drilling and well construction.

8 Recommendations

Recommended Decision

- That resource consent application APP144142 be granted in accordance with the duration and conditions prescribed in the attached schedule/certificate or the following reasons:
- The activity will have no more than minor actual or potential adverse effects on the environment
- The activity is not contrary to any relevant plans or policies
- The activity is consistent with the purpose and principles of the Resource Management Act 1991



Sean Whatarangi
Consents and Data Officer
Resource Use Directorate

Date: 17/01/2022

9 Decision

That the resource consent application is granted in accordance with the above recommendations.



Mark Row
Project Manager, Farm Water & Drilling
Resource Use Directorate

Date: 18/01/2022

Acting under authority delegated subject to the provisions of the Resource Management Act 1991 which at the time of decision had not been revoked.

RESOURCE CONSENT CERTIFICATE

Resource Consent: AUTH144142.01.01

File Number: 61 80 83A

*Pursuant to the Resource Management Act 1991, the
Regional Council hereby grants consent to:*

Bains Hort Group Limited
PO Box 745
Te Puke

Contact Details:
Nick Hazard – c/- Hazard Consulting Limited
Mobile: 0214 22 913

Resource Consent No	Site/Station
AUTH144142.01.01	72_10955
AUTH144142.01.01	72_10956
AUTH144142.01.01	72_10957
AUTH144142.01.01	72_10958

(Hereinafter referred to as the Consent Holder)

Consent Type: Land Use Consent

Consent Subtype: Land - well

Activity authorised: to construct bores, use and maintain a well for pasture or crop irrigation supply and monitoring bores for the purposes of monitoring a pumping test

Location: 582 Parallel Road, RD 3, Cambridge

Map reference: NZTM 1810593 E 5802338 N, NZTM 1810407 E 5802401 N, NZTM 1810479 E 5802554 N, NZTM 1810434 E 5802598 N

Consent duration: This consent will commence in accordance with section 116 of the Resource Management Act 1991 and the term is unlimited.

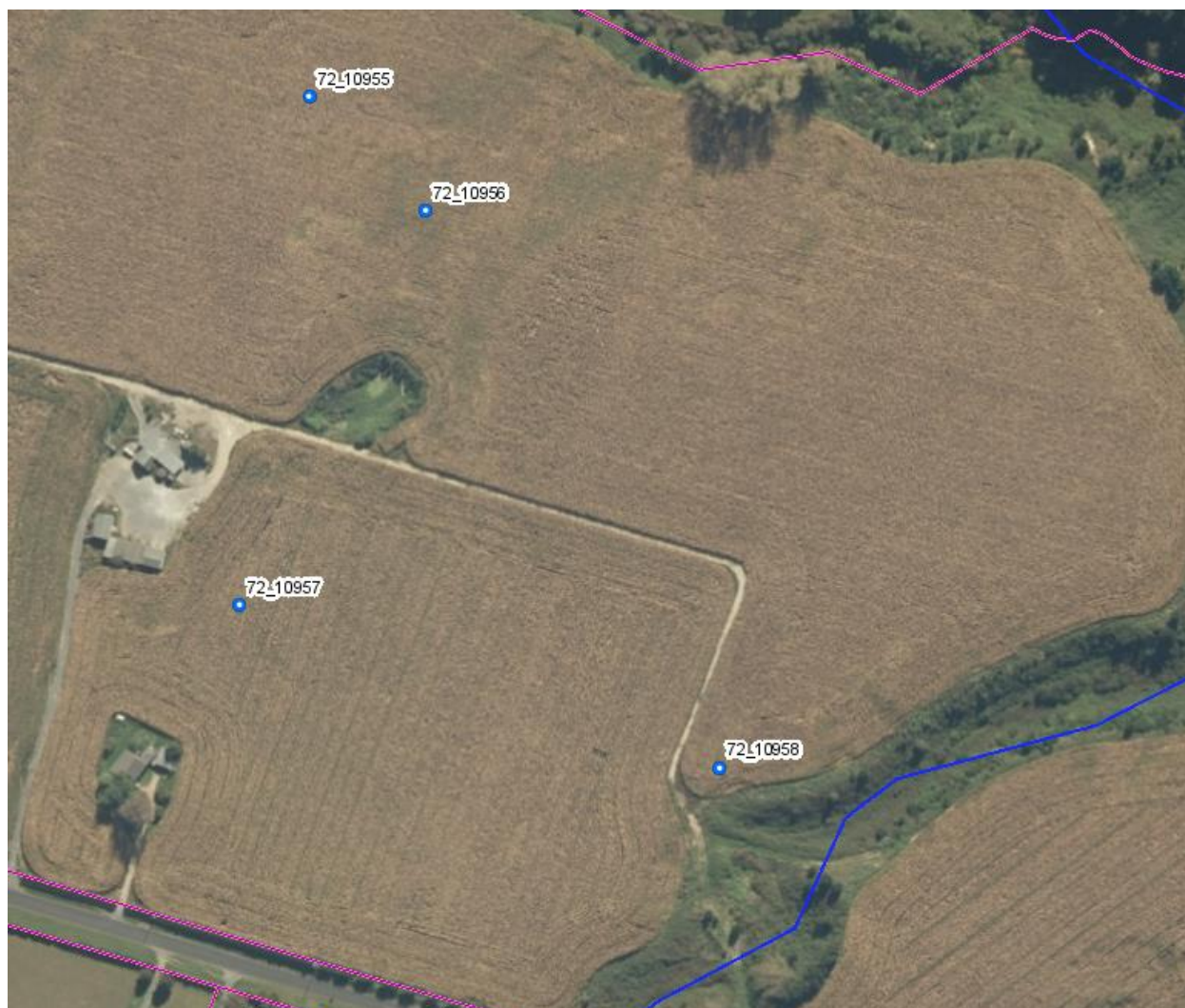
Subject to the conditions overleaf:

CONDITIONS

1. The wells shall be constructed and maintained and/or abandoned so that they will not cause cross-contamination between hydraulic units (aquifers) in any water (including ground water and geothermal water).
2. The wells shall be completed and sealed such that leakage of water or contaminants to or from the ground surface is prevented.
3. Materials used for well construction shall be of such quality and strength to enable each well to be completed without casing or seal leakage during construction or subsequent well operation.
4. If a well is to be used for potable water supply, it shall be located at least 30 metres horizontally from any on-site sewage disposal system.
5. Upon completion of each well, wastes introduced to the well during drilling and construction shall be removed.
6. If artesian conditions are encountered, a conductor casing shall be grout sealed to ensure control of potential flowing artesian ground water and to prevent instability of the ground at the well head. Well head completion shall be such that ground water leakage under flowing artesian pressures is prevented.
7. The Waikato Regional Council shall be notified of the anticipated date of drilling commencing if a well is not to be drilled within three months of this consent being granted.
8. A log for each well drilled shall be forwarded to the Waikato Regional Council within two months of drilling being completed. Each log shall be provided with the correct identifier as detailed in the table below (include the co-ordinates of actual location that the well was drilled). Each log shall show:
 - i. the location of the hole/well
 - ii. date of completion
 - iii. duration of drilling
 - iv. depth and diameter of the hole/well
 - v. the method of drilling
 - vi. full construction details
 - vii. the subsurface geology
 - viii. full results of any tests (e.g. well yield, temperature, water quality) undertaken on the drilled hole/well
 - ix. a site diagram
9. The activity shall not disturb any archaeological site or waahi tapu as identified in any district plan or by Heritage New Zealand except where Heritage New Zealand approval has been obtained.
10. Abandoned or obsolete bores must be identified and decommissioned to prevent contamination. Advice of decommissioning of bores should be provided to Council within 4 weeks of the work being completed.

Bore Log Reference Numbers

Resource Consent No	Site/Station
AUTH144142.01.01	72_10955
AUTH144142.01.01	72_10956
UTH144142.01.01	72_10957
AUTH144142.01.01	72_10958



Note: If an existing bore is to be decommissioned then this should be properly capped and sealed by a driller, and Council advised of this. If you are decommissioning a bore, you must ensure that contaminants are prevented from entering the bore by filling it with clean material and compacting or sealing the surface.

Advice Notes - General

- This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.

- Where a resource consent has been issued in relation to any type of construction (e.g. dam, bridge, jetty) this consent does not constitute authority to build and it may be necessary to apply for a Building Consent from the relevant territorial authority.
- This resource consent is transferable to another owner or occupier of the land concerned, by written notice to the Council, on the same conditions and for the same use as originally granted (s.134-137 RMA). The transfer of water, including changes of location, may occur as provided for in Chapter 3.4 of the Waikato Regional Plan, subject to the requirements of those rules.
- The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
- The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
- Note that pursuant to s332 of the RMA 1991, enforcement officers may at all reasonable times go onto the property that is the subject of this consent, for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.

Notification and Consent Evaluation Report

Applicant: Kiwifruit Investments Limited **File No.:** 61 84 04A
Address of Site: 582 Parallel Road, Ohaupo **Project Code:** RC26189
Application Number: APP144393

1 Introduction

Feathers Planning Limited on behalf of Kiwifruit Investments Limited have applied for a resource consent for the following:

Reference Id	Activity Subtype	Activity Description
AUTH144393.02.01	Land - disturbance	Earthworks in association with proposed Kiwifruit Orchard development

This report assesses the application, the potential environmental effects and the relevant planning provisions in the Resource Management Act 1991 (RMA) and Waikato Regional Council policies and plans. The report recommends whether to process the application with or without notification and whether consent should be granted.

2 Background and Description of Proposal

2.1 Background

The site is located at 582 Parallel Road, Ohaupo with the following map coordinate reference NZTM 1810584.0000 E 5802358.0000 N. The site is legally described as Lot 3 DPS 89413 and held in record of title SA70D/525, with a total land area of 35.3ha. The site is zoned rural under the Operative Waipa District Plan (District Plan). The site currently contains a milking shed, and ancillary farming related buildings. A dwelling is located towards the centre of the site near the road boundary. Access to the site is via an existing driveway from Parallel Road. Figure 1 below shows the location of the property.



Figure 1: Location of property

As shown in Figure 1, two gullies transect the site, one near the western boundary, the other near the centre of the site. Both gullies contain unnamed tributaries to the Mangawhero Stream to the north of the site and have a 'surface water classification' under the Waikato Regional Plan (WRP). The remainder of the topography is flat and in pasture.

The Applicant has provided an Ecological Impact Assessment (EIA) prepared by Titoki Landcare, dated May 2022. The EIA provides an assessment of the ecological values of the site, and in particular provides an assessment of the two gully features. The EIA identifies a wetland features in the base of the eastern gully. Figure 2 below shows the wetland location relative to the proposed earthworks area.

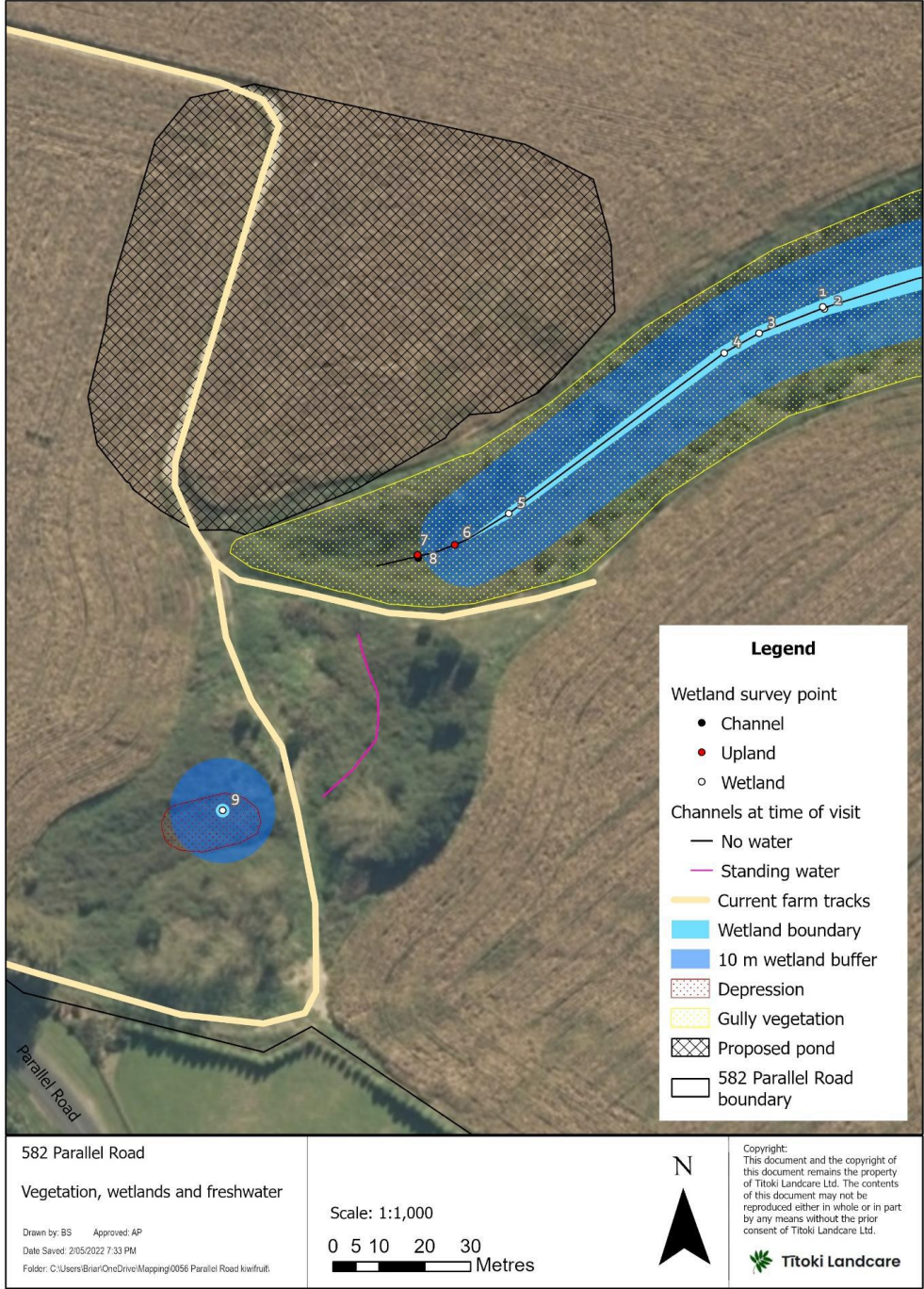


Figure 2: Vegetation, wetlands and freshwater map (sourced from EIA)

The site is surrounded by a mixture of rural properties, and rural residential properties, the closest dwelling being to the south of the earthworks area (577 Parallel Road), and a dwelling being what appears to be a previous subdivision of the wider site at 598 Parallel Road.

2.2 Proposal

Cut and fill earthworks are proposed in the centre of the site to establish a water storage pond. The water will be stored and used for frost protection initially, and subsequently for irrigation purposes once the kiwifruit orchard is established. The earthworks are proposed to be undertaken in a single stage, over a single earthworks season. The Applicant has proposed to commence earthworks as soon as practical, and within the winter period. The extent of the earthworks is summarised in the following table and depicted in Figure 2 below.

Table 1: Proposed earthworks details

Description	Volume	Area
Cut – topsoil stripping	1,650m ³	8,410m ²
Cut	10,600m ³	
Fill	5,700m ³	
Maximum cut depth	4.5m	-
Maximum fill depth	2.7m	-

It is noted that the application originally included an activity to import cleanfill material. This aspect of the proposal is no longer proposed, with all fill material to be sourced onsite from cut. The excess cut material will be stockpiled or exported from the site.

The application includes an Erosion and Sediment Control Plan (ESCP), and a Construction Management Plan (CMP) prepared by Titus Consulting Engineers Ltd. The proposed sediment and erosion control measures are as follows, and shown in Figure 3 below:

1. *Dirty Water Diversion Bund formed out of “stripped topsoil” and shaped to be direct surface run-off to the Decant Earth Bunds.*
2. *Dirty Water Diversion Bund formed out of “metal” and shaped to be traversable by construction vehicles at “construction entrance” to the excavation site. Location of these entrances are to be formed at the top any catchment to minimise material exiting the site via vehicle tires/movements*
3. *Decant Earth Bunds will be constructed at the low point of each catchment as per Waikato Regional Council guidelines*
4. *Silt Fence to be constructed 1.0m off set from the existing gully edge*
5. *Once earthworks construction is completed, and the internal pond liner has been installed the topsoil from the Dirty Water Diversion Bunds can be respread on the pond embankment batter, along with grass-seeding & hay mulching to stabilise the site.*
6. *Decant Earth Bunds will only be disestablished once written approval from Waikato Regional Council representatives has been received.*

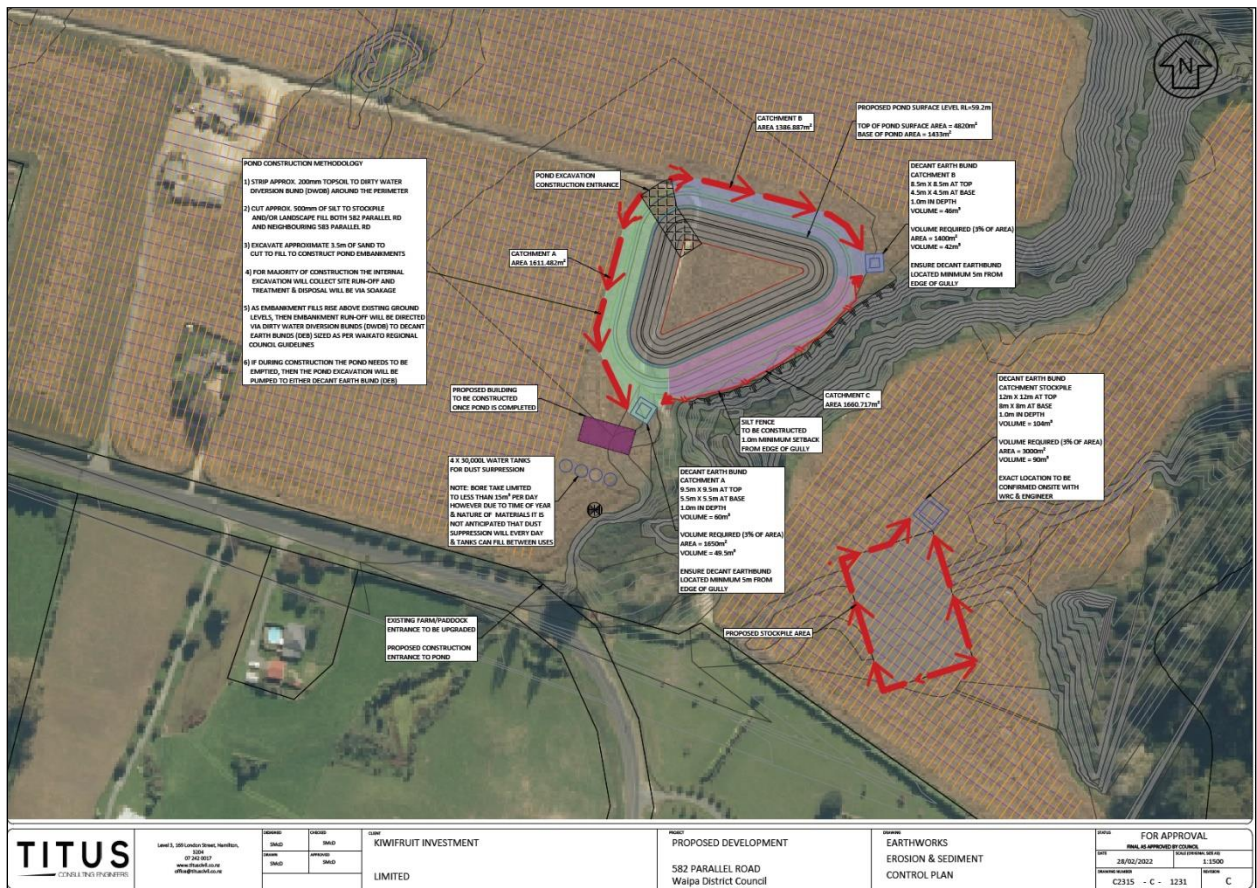


Figure 3: Erosion and Sediment Control Plan

3 Status of Activities under the Plans

The WRP contains objectives, policies and rules to address issues of use, development and protection of land and water.

The National Environmental Standards for Freshwater (NES-F) came into force on 3 September 2020 and contains a number of regulations relating to activities that may impact natural wetlands. An assessment of the proposal against the rules of the WRP and NES-F has been completed, with the relevant non-compliances identified below.

3.1 Earthworks

3.1.1 Waikato Regional Plan

The application notes that the proposed earthworks will not be able to achieve the permitted activity standards of Rule 5.1.5 5(h). As noted above, the unnamed tributary of the Mangawhero Stream is adjoining the earthworks area to the east. The tributary is classified as 'surface water' and therefore a suspended solids standard of 100g/m³ applies. The Applicant has noted that it is unlikely compliance with this standard can be achieved, and has therefore sought consent under Rule 5.1.4.13 of the WRP as a **Discretionary Activity**.

3.1.2 NES for Freshwater

The EIA identifies a qualifying wetland is located within the eastern gully system. The wetland is not within 10m of the earthworks area but is within 100m. As set out below, the earthworks are unlikely to result in the partial or complete drainage of the wetland, and therefore resource consent is not required under Regulation 52 of the NES-F. There are no other activities proposed that require resource consent under the NES-F.

3.2 Activity status

Overall, resource consent is required under the WRP for the earthworks as a Discretionary Activity. Overall, the application is assessed as a **Discretionary Activity**.

4 Consultation/Affected Party Approvals

4.1 Iwi

The Applicant has advised that consultation was initiated with Nga Iwi Toopu o Waipa (NIToW) and Waikato Tainui. An email was sent to both iwi representative groups on the 3rd March 2022 and 10th March 2022. Gaylene Roberts (NIToW representative) provided a response asking for further details. The Applicant has advised that no further response has been received.

4.2 Other Parties

No other consultation has been undertaken.

5 Process Matters

The resource consent application was received as complete on the 24 March 2022. The following processing matters are noted:

Date	Process Detail
24/03/2022	Lodged
11/04/2022	Active
13/04/2022	S91 advice issued
20/07/2022	S91 advice satisfied
29/07/2022	S37 extension for review of draft conditions (5 working days)

In terms of the s91(1) advice that further consents were required, this advice related to the necessary groundwater take to fill the water storage pond. The Applicant subsequently lodged an application on the 20 July 2022 (APP144723) to take groundwater for the purpose of frost control and spraying. A further water take application is required for the irrigation of the kiwifruit. However, for the purposes of progressing this application, APP144723 satisfies the s91 advice, and subsequently enables this application to progress. APP144723 is being processed via a separate consent process.

5.1 Adequacy of information

It is my opinion that the information contained within the application is substantially suitable and reliable for the purpose of making a recommendation of and decision on notification. The information within the application is sufficient to understand the characteristics of the proposed activity as it relates to provisions of the WRP, for identifying the scope and extent of any adverse effects on the environment, and to identify persons who may be affected by the activity's adverse effects.

5.2 S95A: Determining whether the application should be publicly notified

Step 1(a): Has the applicant requested public notification? (s95A(3)(a))

The applicant has not requested public notification.

Step 1(b): Is public notice required under s95C due to required information not being provided? (s95A(3)(b))

There are no further information requests (s92(1)) or reports to be commissioned (s92(2)) that have not been responded to or provided.

Step 2(a): Is there a Rule or NES that precludes public notification? (s95A(5)(a))

There are no rules in the WRP or national environmental standard relevant to this proposal that preclude public notification.

Step 2(b): Is public notice precluded on the basis that the application is for a controlled activity under the Regional Plan? (s95A(5)(b)(i))

The activity is not for a controlled activity.

Step 3(a): Is there a rule or NES that requires public notification? (s95A(8)(a))

There are no rules in the WRP or national environmental standard relevant to this proposal that require public notification.

Step 3(b): Is public notification required on the basis that the activity will have adverse effects on the environment that will be, or are likely to be, more than minor? (s95A(8)(b))

In forming this opinion, I have had appropriate regard to all of the matters in s95D (a) to (e) which are assessed below.

- (a) I confirm that I have disregarded effects on persons who own or occupy the land in, on or over which the activity will occur or any land adjacent to that land.
- (b) There are no rules in the WRP or national environmental standard relevant to this proposal that permit an activity with this effect.
- (c) There are no restricted discretionary activities which limit the effects that may be considered (s95D(c)).
- (d) I confirm that I have had no regard to any trade competition matters.
- (e) No written approvals have been provided.

Section 104(1)(a) of the RMA provides that when considering a consent application, the consent authority must, subject to Part 2, have regard to the actual and potential effects on the environment of allowing the activity. Case law has determined that the "environment" must be read as the environment which exists at the time of the assessment and as the environment may be in the future as modified by the utilisation of permitted activities under the plan and by the exercise of resource consents which are being exercised, or which are likely to be exercised in the future. It does not include the effects of resource consents which might be sought in the future nor any past reversible effects arising from the consent being considered. In this instance the existing environment is described in section 2.1 of this report, and has been taken into account.

Permitted baseline

Section 104(2) provides that when forming an opinion about the actual or potential effects of the activity, the consent authority may disregard an adverse effect of the activity on the environment if the regional plan permits an activity with that effect.

There are no permitted activity baseline effects relevant to the applications and as such none have been discounted.

Actual and potential effects:

The key environmental effects considered relevant to this proposal are:

- Water quality effects from sediment discharges during earthworks;
- Ecological effects;
- Effects of dust discharges;
- Exotic weed invasion; and
- Cultural and archaeological effects.

The Applicant has undertaken an assessment of environmental effects, as presented in Section 11 of the application. This assessment informs key conclusions and management recommendations. Therefore, and for the purpose of this assessment, in accordance with s 42A(1A) and (1B) of the RMA, I wish to generally adopt the applicant's assessment and provide the additional commentary below.

Water Quality Effects from Sediment Discharges during the Earthworks

Soil disturbance activities increase the potential for erosion and destabilisation effects and have the potential to discharge sediment into waterways both during and after the works until the ground surface is stabilised. Sediment discharges to water can cause a range of adverse effects on freshwater ecosystems, including smothering aquatic life, damaging fish and invertebrates' gills, destruction of spawning grounds, and the deposition of nutrients to waterways. Increased turbidity can interfere with aquatic animal's abilities to feed due to poor visibility and reduced light penetration can reduce photosynthetic activity.

The Applicant has proposed to manage the potential erosion and sediment effects of the earthworks through implementation of erosion and sediment controls as detailed in the ESCP. The ESCP proposes to use dirty and clean diversion bunds and decanting earth bunds. As noted above, an unnamed tributary of the Mangawhero Stream is located near the earthworks area. Adherence with the erosion and sediment controls is essential to ensure sediment does not enter this gully system. The effective management of sediment discharges from the site is reliant on robust monitoring and maintenance of the specified erosion and sediment control devices throughout the duration of these activities. Conditions of consent are recommended to ensure this occurs.

The applicant has provided an '*Erosion and Sediment Control Plan*' (ESCP) with the application, which outlines the methodology to mitigate any potential adverse effects from the earthworks activities. The '*Erosion and Sediment Control Plan*' has been assessed by Waikato Regional Council (WRC) staff, who consider that the plan has been prepared in general accordance with WRC's publication, '*Erosion and Sediment Control – Guidelines for Soil Disturbing Activities, January 2009*'.

Overall, the Applicant has demonstrated that appropriate ESCP can be implemented to manage the earthworks to ensure that any potential sediment discharge effects from the earthworks will be minimised to levels to ensure that any residual effects are no more than minor within downstream receiving environments. A consent condition is included in the attached certificate requiring provision of a final ESCP for certification and implementation.

Ecological effects

As outlined above, the site contains a possible wetland within the base of the gully feature immediately to the east of the proposed earthworks area. The proposal has the potential to result in adverse effects

on the ecological values of the gully feature and wetland. The Applicant has engaged Titoki Landcare Ltd to prepare an ecological assessment that considers the potential impacts of the proposal on the ecological features on the site. This assessment concludes that the proposal is likely to have low to very low level of effect and has recommended the following actions:

1. A silt fence will be constructed with a minimum setback of 1 m from the gully edge to prevent any soil from entering the gully (as per the current pond construction design).
2. No construction materials or construction waste should enter the gully.
3. Gully vegetation should not be cleared or damaged.
4. The pond must be located a minimum of ten metres from any wetland.

The Applicant has confirmed that the above actions will be implemented and are reflected in the draft CMP submitted with the application.

I agree and adopt the conclusions and recommendations outlined above and, on that basis, consider the potential adverse ecology effects to be less than minor.

Dust Effects

The exposure of earth surfaces associated with earthworks activities has the potential to create adverse dust effects on neighbouring properties when machinery is working during dry and windy conditions.

In this instance, while there are two residential properties to the north and east of the earthworks area, the earthworks scale is not significant, and can be managed via typical suppression measures. On this basis, the risk of dust presenting an adverse effect is considered to be less than minor.

Exotic Weed Invasion

The proposed earthworks will provide conditions for invasive weeds to become established on exposed surfaces during and after construction. Machinery brought onto the site to undertake earthworks could potentially carry plant matter and/or seeds, which could result in the introduction of new weed species in the area. This is a potential detrimental impact as weeds may threaten the ecological integrity of the surrounding indigenous vegetation.

I recommend that all machinery brought onsite is first cleaned to remove any plant matter and/or seeds. If consent is granted, I have proposed a condition of consent in the attached certificate regarding washing of machinery. On this basis, I consider that the risk of exotic weed invasion will be adequately avoided.

Cultural/Archaeological Effects

As set out above, the Applicant has contacted mana whenua in relation to this proposal. To date, the Applicant has advised that no response has been received from NITOW or Waikato-Tainui.

Notwithstanding this, on review of both WRC and District Council planning maps, there are no recorded cultural or archaeological sites identified on the site. However, there is potential to uncover unidentified archaeological sites during earthworks activities. Therefore, accidental protocol procedures are recommended as consent conditions, should consent be granted. The inclusion of these conditions does not preclude the use of other protocols if agreed between the applicant and iwi, but rather provides a minimum standard to be followed. On this basis, the risk of disturbing archaeological sites is considered to be appropriately managed.

Taking the above into account, I consider the potential for adverse cultural effects to be less than minor and can be appropriately managed through consent conditions.

Conclusion

The actual or potential adverse effects of the proposal on the environment will be, or are likely to be, minor or less than minor. Therefore, public notification is not required on this basis.

Step 4: Are there special circumstances that warrant public notification (s95A(9))?

There are no other matters or special circumstances that warrant public notification.

Conclusion

The application does not require public notification.

5.3 S95B: Determining whether the application should be limited notified

Step 1: Is there a Statutory Acknowledgment Area under s95E? (s95B(3)(a))

There is no statutory acknowledgement applicable to the site.

Step 2: Is there a rule or NES that precludes limited notification? (s95B(6)(a))

There are no rules in the WRP or national environmental standard relevant to this proposal that preclude limited notification.

Step 3: Is limited notification required on the basis that there are persons who are affected to a “minor or more than minor” extent? (s95B(8))

In forming this opinion, I have had appropriate regard to the matters in s95E which I assess as follows:

- (a) There are no rules in the WRP or national environmental standard relevant to this proposal that permit an activity with this effect on a person;
- (b) There are no controlled or restricted discretionary activities which limit the effects that may be considered;
- (c) No written approvals have been provided with the application; and
- (d) There are no persons whose approval it is unreasonable to seek.

Assessment

An assessment of effects is captured in section in Section 5.2 of this report. There are no persons that own or occupier adjoining land nor any interest groups considered affected.

Conclusion

The application does not require limited notification on the basis of Step 3.

Step 4: Are there Special Circumstances? (s95B(10))

There are no special circumstances existing that warrant notification to any other persons not already determined to be eligible for limited notification.

Conclusion

The application does not require limited notification.

6 Section 95 notification recommendation and decision under delegated authority

It is recommended the application proceed on a non-notified basis for the reasons discussed above:

Reporting Officer:



Tim Wilson
Consultant Planner

Date: 3 August 2022

Approved By:



Date: 4 August 2022

Team Leader

Resource Use Directorate

Acting under authority delegated subject to the provisions of the RMA 1991 which at the time of decision had not been revoked.

7 Section 104

A decision was made under section 95 of the RMA to process the application on a non-notified basis. An assessment of, and decision on, the application under section 104 of the RMA is provided below.

8 Section 104(1)(a) - actual and potential effects on the environment

8.1 Effects of the proposal

The assessment of adverse effects in the approved notification report (section 5.2 of this report) is also relevant for the purposes of the assessment required under s104(1)(a). In summary it was concluded that the proposal has the potential to result in the following adverse effects:

- Water quality effects from sediment discharges during earthworks;
- Ecology effects;
- Effects of dust discharges;
- Exotic weed invasion; and
- Cultural and archaeological effects.

The assessment found that the actual and potential effects of the proposal are able to be avoided, remedied or mitigated through the imposition of conditions and are therefore acceptable.

9 Section 104(1)(b) - relevant policies & plans

9.1 National Policy Statement for Fresh Water Management

There is only one NPS that is relevant to the application being the NPS for Freshwater Management 2020 (NPS-FM). The NPS-FM came into effect on 3 September 2020 and replaces the NPS-FM 2014 (amended 2017). The NPS-FM sets out the objectives and policies for freshwater management under the RMA (1991) to support improved freshwater management in New Zealand.

In terms of the proposed activities, I have had regard to the fundamental concept of 'Te Mana o te Wai' and the objectives and policies of the NPS-FM and consider them to be consistent. Specifically, the proposal involves the implementation of appropriate erosion and sediment control measures to effectively manage the potential for sediment from the earthworks to enter water bodies. It is therefore my opinion that should the application be granted it will not be contrary to the NPS-FM.

9.2 New Zealand Coastal Policy Statement

The NZ Coastal Policy Statement is not relevant to this application.

9.3 National Environmental Standards

There are eight NESs that have come into effect. There are two NESs considered relevant, the NES-F and the NES for Sources of Human Drinking Water, both of which are addressed below.

9.3.1 National Environmental Standards for Freshwater

The NES-F commenced on 3 September 2020 and sets standards for freshwater management under the RMA to support improved freshwater management in New Zealand.

In terms of the proposed activities, I have had regard to the NES-F, which is specifically addressed under section 3.2 of this report, where it was found that there are no consents required under the NES-F.

9.3.2 National Environmental Standard for Sources of Human Drinking Water

The National Environmental Standard for Sources of Human Drinking Water commenced on 17/5/2008. This standard is a regulation enacted by an Order in Council, under s43 of the Resource Management Act. The regulation requires that a regional council must not grant a water or discharge permit for an activity that will occur upstream of a drinking water abstraction point if specific criteria at the point of abstraction are exceeded. The criteria within the NES will not be exceeded and therefore no further consent conditions are required.

9.4 **Waikato Regional Policy Statement**

The Regional Policy Statement (RPS) identifies the significant resource management issues of the region and sets out the objectives, policies and methods to address these issues and to achieve integrated management of the natural and physical resources of the Region. The RPS aims to ensure the way we use our resources does not tip the balance and compromise the ability of future generations to provide for their own needs. The RPS was made operative on 20 May 2016.

Key issues in the RPS relating to this proposal are the state of resources (Issue 1.1), effects of climate change (Issue 1.2), managing the built environment (Issue 1.4) the relationship of tangata whenua with the environment (Issue 1.5) and the health and wellbeing of the Waikato River catchment (Issue 1.6). There are also many overlapping objectives under each of these issues which are relevant, including:

- Integrated management (Objective 3.1).
- Resource use and development (Objective 3.2).
- Decision making (Objective 3.3).
- Health and well-being of the Waikato River (Objective 3.4).
- Adapting to climate change (Objective 3.6).
- Ecosystem services (Objective 3.8).
- Relationship of tangata whenua with the environment (Objective 3.9).
- Sustainable and efficient use of resources (Objective 3.10).
- Built environment (Objective 3.12).
- Mauri and health of freshwater bodies (Objective 3.14).
- Allocation and use of fresh water (Objective 3.15).
- Ecological integrity and indigenous biodiversity (Objective 3.19).

Relevant policies to address these issues include:

- Integrated approach (Policy 4.1).
- Tangata whenua involvement (Policy 4.3).
- Planned and coordinated subdivision, use and development (Policy 6.1).
- Coordinating growth and infrastructure (Policy 6.3).
- Significant infrastructure and energy resources (Policy 6.6).
- Approach to identifying freshwater body values and managing freshwater bodies (Policy 8.1).
- All freshwater bodies (Policy 8.3)
- Catchment-based intervention (Policy 8.4).
- Waikato River Catchment (Policy 8.5).
- Allocating freshwater (Policy 8.6).
- Relationship of Maori to taonga (Policy 10.2).
- Maintain or enhance indigenous biodiversity (Policy 11.1).
- Protect significant indigenous vegetation and significant habitats of indigenous fauna (Policy 11.2).
- Collaborative management (Policy 11.3).

In assessing the proposed activity, the objectives and policies of the RPS have been considered and conditions have been recommended to avoid, remedy or mitigate potential adverse effects, should

consent be granted. On this basis, I am satisfied that the proposed activities are consistent with the relevant provisions of the RPS.

9.5 Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River

As of 24 September 2010, Waikato Regional Council, in addition to any requirement specified in the RMA, must have particular regard to Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River (the Vision and Strategy) under Schedule 2 of the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Claims Act. The Vision and Strategy applies to applications relating to the Waikato River or activities in the catchment that affect the Waikato River.

The site is near an unnamed tributary of the Mangawhero Stream, which meets the Waikato River approximately 1km to the north of the site. While the Applicant has not proposed specific betterment, the earthworks proposed will occur over a single earthworks season, be undertaken in accordance with the erosion and sediment control measures proposed in the draft ESCP, and subject to adherence to the conditions of consent recommended, will avoid adverse effects on the Waikato River. On this basis, no specific betterment is required to be demonstrated, and is considered that the proposal is consistent with the Vision and Strategy.

9.6 Waikato Regional Plan

The purpose of regional plans are to help regional councils carry out their functions under s30 of the RMA.

The objectives and policies contained in the WRP which are relevant to this proposal are those relating to matters of significance to Maori and water resources. These are outlined below.

Matters of Significance to Maori

- Objective 2.3.2 (Tangata Whenua Relationship with Natural and Physical Resources);
- Policy 1: Processes for Defining Relationship;
- Policy 2: Increase Awareness.

Water Resources

- Objective 3.1.2: (Water Resources);
- Policy 1: Management of Water Bodies;
- Policy 4: Waikato Region Surface Water Class;
- Policy 6: Tangata Whenua Uses and Values;

Land and Soil

- Objective 5.1.2: (Accelerated Erosion);
- Policy 1: Managing Activities that Cause or Have the Potential to Cause Accelerated Erosion and Encouraging Appropriate Land Management Practices
- Policy 2: Use of Regulatory and Non-Regulatory Approaches of Management for Soil Disturbance/Vegetation Clearance Activities in High Risk Erosion Areas
- Objective 5.2.2: (Discharges Onto or Into Land);
- Policy 2: Other Discharges Onto or Into Land.

In assessing this proposal, the objectives and policies of the WRP have been considered and conditions are recommended to avoid, remedy or mitigate actual and potential adverse effects, should consent be granted. On this basis, I am satisfied that the proposed activities are consistent with the relevant provisions of the WRP.

9.7 Waikato Regional Plan Change 1 - Waikato and Waipā River Catchments

Waikato Regional Plan Proposed Plan Change 1 (PPC1) is applicable to the Waikato and Waipā River catchments and gives effect to the NPS-FM and the V&S. The purpose of the proposed plan change is to

reduce point source and non-point sources of contaminants – nitrogen, phosphorus, sediment and bacteria - entering waterbodies (including groundwater) within the Waikato and Waipā River catchments.

The “Decisions Version” of PPC1 was formally notified on 22 April 2020 and must be given regard to. The objectives and policies of PPC1 are unlikely to be in conflict with the objectives and policies of the WRP as they introduce new provisions not previously included in the WRP. As such, the PPC1 objectives and policies should be given “considerable” (but not “full”) weight. In assessing this proposal, the relevant objectives and policies of PPC1 have been considered. However, given that appropriate erosion and sediment control measures will be implemented, the proposal is unlikely to increase the levels of nitrogen, phosphorus, sediment and bacteria in waterbodies, I am therefore satisfied that this activity is consistent with the relevant objectives and policies of PPC1.

10 Section 104(1)(c) – any other matter considered relevant and reasonably necessary

10.1 Other Matters

10.1.1 Waikato-Tainui Environmental Plan

The Waikato-Tainui Environmental Plan provides a background to, and identifies key, resource-based issues for Waikato-Tainui. The plan sets out Waikato-Tainui’s vision statement for environmental and heritage issues and key strategic objectives such as tribal identity and integrity, including “to grow our tribal estate and manage our natural resources.” The plan is designed to enhance Waikato-Tainui participation in resource and environmental management.

I have assessed this proposal against the objectives and outcomes within this plan and overall, I consider that the proposal is consistent with this Iwi Environmental Plan.

10.1.2 Climate change

Section 7(i) of the RMA identifies the effects of climate change on the proposal as an “other matter” to which particular regard must be had. I have considered the potential for climate change to affect the proposal and conclude that there is unlikely to be any such effects of concern.

10.2 Customary activities

There are no customary activities relevant to this consent process.

11 Part 2 Matters

The Court of Appeal decision in *R J Davidson Family Trust v Marlborough District Council* means that there is no need to assess applications against Part 2 of the RMA, unless doing so would add something beneficial to the process.

The RPS gives complete coverage over the proposed activities and potential effects, however, given the age of the WRP, I consider that an assessment of Part 2 is appropriate. In that regard, I have considered the proposal to not be inconsistent with Part 2 of the RMA.

12 Discussion/Conclusions

Feathers Planning Limited, on behalf of Kiwifruit Investments Limited, has made an application for resource consent to undertake earthworks associated with establishing a kiwifruit orchard at 582 Parallel Road, Ohaupo. The potential adverse environmental effects associated with the proposed works are considered to be:

- Water quality effects from sediment discharges during earthworks;
- Ecology effects;
- Effects of dust discharges;

- Exotic weed invasion; and
- Cultural and archaeological effects.

For the reasons outlined in this report, I am satisfied that these adverse effects can be avoided, remedied or mitigated such that they can be managed to be no more than minor.

The proposal has been assessed in respect to its consistency with the standards, objectives and policies of the NES-F, NPS-FM, RPS, Vision and Strategy, WRP, Waikato-Tainui Environmental Plan, and the statutory provisions of the RMA. It has further been considered in accordance with section 104B of the RMA which has regard to the determination of applications for discretionary activities. Provided the activities are undertaken in accordance with the application for consent and subsequent supporting documentation, and the recommended consent conditions in the attached Resource Consent Certificate, I consider that they will not be inconsistent with Council's policy and plans, or the statutory provisions of the RMA.

For these reasons, I recommend that consent be granted subject to the consent conditions in the attached Resource Consent Certificate for a period of 5 years, being the period applied for.

The following considerations have been taken into account in recommending these terms:

- The temporary nature of the soil and bed disturbance activities;
- The various proposed mitigation measures and ongoing monitoring requirements;
- The actual and potential adverse effects of the proposed activities on the environment;
- Consistency with Regional Council policies, objectives and plans;
- Consistency with the purpose and principals of the RMA; and
- Waikato Regional Council's internal guidelines for consent duration.

13 Monitoring

The Waikato Regional Council has a statutory obligation under section 35 of the RMA to monitor the effects of resource consents being exercised in its region. Waikato Regional Council staff and/or its authorised agents will therefore monitor the proposed activities throughout the term of consent.

Consent conditions are recommended requiring monitoring and maintenance procedures to be implemented over the course of the consent term for the activities to ensure that the required environmental management procedures are implemented on site in accordance with the specifications outlined within the consent application documents, consent conditions and in accordance with Waikato Regional Council best practice guidelines. Accordingly, I have recommended conditions to this effect in the attached resource consent certificate. In particular, it is recommended that the consent ensures that all erosion and sediment controls at the site are regularly inspected and in good working order prior to, and immediately after rain events, and that these controls are maintained to achieve optimal sediment capture efficiency at all times.

All costs associated with monitoring are recovered from the consent holder on a reasonable and actual basis.

14 Recommended Decision

I recommend that in accordance with s104B, resource consent application be granted in accordance with the duration and conditions prescribed in the attached Resource Consent Certificates for the following reasons:

- The activities will have no more than minor actual or potential adverse effects on the environment.
- The activities are not contrary to any relevant plans or policies.

- The activities are consistent with the purpose and principles of the RMA.

Reporting Officer:



Tim Wilson
Consultant Planner
Resource Use Directorate

Date: 5 August 2022

15 Decision



Diane Palmer
Team Leader
Resource Use Directorate

Date: 5 August 2022

RESOURCE CONSENT CERTIFICATE

Resource Consent: AUTH144393.02.01

File Number: 61 84 04A

*Pursuant to the Resource Management Act 1991, the
Regional Council hereby grants consent to:*

Kiwifruit Investments Limited
10A Oxford Street
Te Puke 3119

(hereinafter referred to as the Consent Holder)

Consent Type: Land Use Consent

Consent Subtype: Land - disturbance

Activity authorised: Earthworks in association with proposed Kiwifruit Orchard development

Location: 582 Parallel Road, RD 3, Cambridge

Map reference: NZTM 1810584.0000 E 5802358.0000 N

Consent duration: This consent will commence in accordance with section 116 of the Resource Management Act 1991 and will expire on 6 August 2027

Subject to the conditions overleaf:

CONDITIONS

General

1. The earthworks and all associated activities authorised by this resource consent shall be undertaken in general accordance with the application for this resource consent '*Resource Consent Application, Kiwifruit Investment Limited, 582 Parallel Road, Ohaupo*' (Feathers Planning Limited, March 2022) – (WRC Doc #23647939), except where otherwise required in the resource consent conditions below. Where there is any inconsistency between the application documents and the resource consent conditions then the conditions below shall prevail.
2. The consent holder shall be responsible for all contracted operations relating to the exercise of this resource consent and shall ensure contractors are made aware of the conditions of this consent and ensure compliance with those conditions.
3. A copy of this resource consent shall be kept onsite at all times that the works authorised by this consent are being undertaken and shall be produced without unreasonable delay upon request from a servant or agent of the Waikato Regional Council.

Pre-works Requirements

4. The consent holder shall inform the Waikato Regional Council in writing, 10 working days prior to commencement of any works authorised by this resource consent, of the start date of the works authorised by this resource consent.
5. The consent holder shall appoint a representative(s) prior to commencement of any works authorised by this resource consent, who shall be the Waikato Regional Council's principal contact person in regard to matters relating to this consent. The consent holder shall inform the Waikato Regional Council of the representative's name and how they can be contacted prior to this consent being exercised. Should that person(s) change during the term of this resource consent, the consent holder shall immediately inform the Waikato Regional Council and shall also give written notice to the Waikato Regional Council of the new representative's name and how they can be contacted.
6. The consent holder shall arrange and conduct a pre-construction site meeting and invite, with a minimum of 10 working days' notice, the Waikato Regional Council, the site representative nominated under condition 5 of this consent, the contractor, and any other party representing the consent holder prior to any works authorised by this consent commencing on the site.

Advice Note: *In the case that any of the invited parties, other than the site representative does not attend this meeting, the consent holder will have complied with this condition, provided the invitation requirement is met.*

Erosion and Sediment Control

7. The consent holder shall provide the Waikato Regional Council with an "Erosion and Sediment Control Plan" (E&SCP), at least 10 working days prior to the commencement of activities authorised by this consent. The objective of the E&SCP shall be to minimise sediment discharge from the site to the extent practicable.
8. The E&SCP shall as a minimum be based upon and incorporate those specific principles and practices which are appropriate for the activity authorised by this consent and contained within the Waikato Regional Council document titled "*Erosion and Sediment Control – Guidelines for Soil Disturbing Activities*" (Technical Report No. 2009/02 – dated January 2009), and shall include at least the following;

- a) Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control to minimise the potential for sediment discharge from the site;
- b) The design criteria and dimensions of all key erosion and sediment control structures;
- c) A site plan of a suitable scale to identify;
 - i. The locations of waterways;
 - ii. The extent of soil disturbance and vegetation removal;
 - iii. Any “no go” and/or buffer areas to be maintained undisturbed adjacent to watercourses;
 - iv. Areas of cut and fill;
 - v. Locations of topsoil stockpiles;
 - vi. All key erosion and sediment control structures;
 - vii. The boundaries and area of catchments contributing to all stormwater impoundment structures;
 - viii. The locations of all specific points of discharge to the environment; and
 - ix. Any other relevant site information
- d) Construction timetable for the erosion and sediment control works and the bulk earthworks proposed;
- e) Timetable and nature of progressive site rehabilitation and re-vegetation proposed;
- f) Maintenance, monitoring and reporting procedures;
- g) Rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall events and/or the failure of any key erosion and sediment control structures;
- h) Procedures and timing for review and/or amendment to the E&SCP; and
- i) Identification and contact details of personnel responsible for the operation and maintenance of all key erosion and sediment control structures.

The E&SCP shall be certified in writing by the Waikato Regional Council acting in a technical certification capacity prior to any works authorised by this consent commencing. The Council's certification will be based on its assessment as to whether the E&SCP addresses the matters required. The consent holder shall undertake all earthworks authorised by this consent in accordance with the certified E&SCP.

9. Any changes proposed to the E&SCP shall be confirmed in writing by the consent holder and the Waikato Regional Council, acting in a technical certification capacity, prior to the implementation of any changes proposed.
10. The consent holder shall ensure that a copy of the certified E&SCP, including any confirmed amendments, is kept onsite and this copy is updated within 5 working days of any amendments being confirmed.
11. The consent holder shall ensure that all sediment laden run-off from the site is treated by sediment retention structures. These structures are to be fully operational before bulk earthworks commence and shall be maintained to perform at least at 80% of their full operational capacity.
12. The consent holder shall ensure that all clean water run-off from stabilised surfaces including catchment areas above and around the site shall be diverted away from the earthworks area via a stabilised diversion system.
13. The earthworks and associated activities shall be undertaken in accordance with the recommendations set out in the Ecological Assessment titled ‘Ecological Impact Assessment: Parallel Rd Kiwifruit farm’, prepared by Titoki Landcare, dated May 2022 (Doc Ref # 24471823). In particular, the activity shall be undertaken in accordance with the following requirements:

- a) A silt fence shall be constructed with a minimum setback of 1 m from the gully edge.
 - b) No construction materials or construction waste is to enter the gully.
 - c) Gully vegetation must not be cleared or damaged.
 - d) The pond must be located a minimum of ten metres from any wetland.
14. The concentration of suspended solids in the unnamed tributary of the Mangawhero Stream shall not exceed 110 grams per cubic metre suspended solids concentration as a result of the exercise of this consent. This standard shall apply, except where the suspended solids concentration in the named water body, unaffected by the activity, is greater than the standard specified. When the concentration of suspended solids in the named water body, unaffected by the activity, exceeds 110 grams per cubic metre then there shall not be any increase in the suspended solids concentration in the named water body as a result of activities authorised by this consent.

Erosion and Sediment Control Monitoring and Maintenance

15. The consent holder shall ensure that the erosion and sediment controls at the site are inspected a minimum of once per week and within 24 hours of each rainstorm event that is likely to impair the function or performance of the controls.
16. The consent holder shall carry out monitoring and maintenance of erosion and sediment controls in accordance with the conditions of this consent and shall maintain records detailing:
- a) The date, time and results of the monitoring undertaken; and
 - b) The erosion and sediment controls that required maintenance; and
 - c) The time when the maintenance was undertaken; and
 - d) The type of maintenance carried out.

These records shall be provided to the Waikato Regional Council on request.

Machinery

17. The consent holder shall ensure that all machinery used in the exercising of this consent is cleaned prior to being transported to/from the site to ensure that all seed and/or plant matter has been removed and documented in accordance with the National Pest Control Agencies A series, best practice (Code A16) guidelines.

[Keep it clean - machinery cleaning guidelines and handbook | Waikato Regional Council](#)

18. All earthmoving machinery, pumps and generators shall be operated in a manner which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during refuelling and machinery servicing and maintenance. Refuelling and lubrication activities shall be carried out away from any surface water such that any spillage can be contained and does not enter any surface water.
19. Any storage of fuel, oil or other hazardous substances shall be fully contained within an area where any accidental spillages are unable to discharge to any waterbody.

Dust

20. All earthworks activities carried out on site shall be conducted and managed in such a manner as to ensure that all dust and particulate emissions are kept to a practical minimum to the extent that there are no dust discharges beyond the boundary of the site that cause an objectionable effect.

21. The consent holder shall ensure that, at all times, the soil moisture of exposed areas is maintained at sufficient levels, under prevailing wind conditions, to prevent dust generated by normal earthmoving operations from remaining airborne beyond the boundary of the work site.
22. The consent holder shall ensure that, outside of normal working hours, staff are available on-call at all times to operate the water application system for dust suppression.
23. If so required by the Waikato Regional Council, the consent holder carry out immediate sealing of any problematic dust generating surfaces within the site using hydro-seed/hydro-mulch, polymer soil stabilisers or a similar dust control product to provide instant remediation of dust effects to the satisfaction of the Waikato Regional Council.

Archaeology

24. The consent holder shall ensure that the exercise of this resource consent does not disturb any sites of archaeological value or of cultural significance to Tangata Whenua other than those sites for which specific archaeological authorities have been granted by Heritage New Zealand. In the event of any archaeological artefacts being discovered the works shall, in the vicinity of the discovery, cease immediately and the Waikato Regional Council, Heritage New Zealand and representatives of local iwi (where artefacts are of Māori origin) shall be notified within 24 hours. Works may recommence on the written approval of the Waikato Regional Council after considering:
 - a) Tangata Whenua interests and values;
 - b) Protocols agreed upon by Tangata Whenua and the consent holder;
 - c) The consent holders interests;
 - d) Any Heritage New Zealand authorisations; and
 - e) Any archaeological or scientific evidence.

Stabilisation

25. The site shall be stabilised against erosion as soon as practicable. The consent holder shall monitor and maintain the site during the entirety of the works period to prevent sediment from entering any watercourse.
26. If required by the Waikato Regional Council, the consent holder shall carry out immediate stabilisation of any required area of exposed earthworks surfaces on site using straw mulching, pinned geotextile or similar instant stabilisation techniques to the satisfaction of the Waikato Regional Council.

Administrative

27. The consent holder shall pay the Waikato Regional Council any administrative charge fixed in accordance with section 36 of the Resource Management Act (1991), or any charge prescribed in accordance with regulations made under section 360 of the Resource Management Act (1991).

Advice Notes - General

1. In accordance with section 125 RMA, this consent shall lapse five (5) years after the date on which it was granted unless it has been given effect to before the end of that period.
2. This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.
3. This resource consent is transferable to another owner or occupier of the land concerned, upon application, on the same conditions and for the same use as originally granted (s.134-137 RMA). The transfer of water, including changes of location, may occur as provided for in Chapter 3.4 of the Waikato Regional Plan, subject to the requirements of those rules.
4. The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
5. The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
6. Note that pursuant to s332 of the RMA 1991, enforcement officers may at all reasonable times go onto the property that is the subject of this consent, for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.
7. If you intend to replace this consent upon its expiry, please note that an application for a new consent made at least 6 months prior to this consent's expiry gives you the right to continue exercising this consent after it expires in the event that your application is not processed prior to this consent's expiry.
8. If at any time during the resource consent period, you no longer require your consent, it may be surrendered, in whole or part, by giving written notice of such to the consent authority. Alternatively, please contact Resource Use staff on 0800 800 402 and we can provide you with a surrender form. Note that the surrender takes formal effect when you receive a notice of acceptance of the surrender from the Council.

Consent Evaluation Report

Applicant:	Bains Hort Group Limited	File No.:	61 80 83A
Address of Site:	582 Parallel Road, Cambridge	Project Code:	RC222
Consent Type:	Land Use Consent	Application Number:	APP144627

1 Description of Activity

Bains Hort Group Limited has applied for a resource consent to drill up to 3 test bores for the construction of a single production bore hole and up to 2 monitoring bores to take groundwater for a new kiwifruit orchard irrigation at 582 Parallel Road, Cambridge. The proposed maximum abstraction rate is shown as 1200 cubic metres per day.

Important Note: Irrigation of dairy pasture will require a consent. The National Environmental Standard for Freshwater requires that the irrigation of dairy farm land that is more than 10 ha above what was irrigated at any time in the 12 months before the close of 2 September 2020 is a discretionary activity that requires consent. The NES sets a high bar for granting such consents and the requirement is copied below. The applicant is advised to discuss this further with Council Farm Consenting Team staff if they wish to irrigate dairy pasture.

Note: Some bore location are within the vicinity of a mapped wetland. Under the rules of the NES Freshwater this could have an impact on any application for a water take consent. The applicant is advised to site the bores at least 100 metres away from the wetland.

2 Status of Activities under the Waikato Regional Plan

Under the Waikato Regional Plan drilling below the water table is a controlled activity under Rule 3.8.4.7. Drilling below the water table which does not comply with the standards and terms of the controlled activity rule is a discretionary activity under rule 3.8.4.8.

Note that this application is to authorise the construction, use and maintenance of the well only, and does not authorise the taking of water from the well. The taking of groundwater from a well for reasonable domestic purposes, or for the purposes of providing drinking water for animals does not require any authorisation under the Resource Management Act unless it causes, or is likely to cause, adverse effects on the environment. **The taking of up to 15m³ per day of groundwater for purposes not covered in the above is allowed by permitted activity rule 3.3.4.12 (attached) of the Waikato Regional Plan subject to compliance with the conditions of that rule. Any additional groundwater take over 15m³ per day would require a separate resource consent to that being considered in this report.**

3 Consultation/Affected Party Approvals

This activity falls within Rule 3.8.4.7 of the Plan. That rule provides that “Applications under this rule will be considered without notification or the need to obtain written approval of affected persons in accordance with section 94(1)(b) of the RMA” [now s95A(3)] and, on that basis, s95A(1) provides for non-notification of this application. In addition, it is not considered that any special circumstances exist that would warrant notification in accordance with s95A(4). Accordingly, no party’s approval has been sought and it is recommended that this application be processed on a non-notified basis.

4 Statutory Considerations

Section 104 of the Resource Management Act 1991 requires the Waikato Regional Council to have regard to the following matters when considering a resource consent application:

- Any actual or potential effects on the environment of allowing the activity
- The New Zealand Coastal Policy Statement and Regional Coastal Plan (for coastal consents)
- The Waikato Regional Policy Statement
- The Waikato Regional Plan and any proposed variations to that plan
- Other matters considered relevant and necessary to consider

4.1 Assessment of Environmental Effect

Drilling and its associated activities can have a variety of adverse environmental effects including:

1. contamination of ground water, surface water and soils by drilling fluids
2. reduction in ground water quality by contamination from surface water run-off, other surface water and other ground water sources
3. fuels and other hazardous substances on drill sites contaminating soils and surface water
4. accelerated soil erosion
5. vegetation removal to create drilling pads and drill rig access
6. well placement causing adverse environmental effects on other ground water users
7. loss of artesian water or aquifer pressure both in the short and long term
8. flow between previously isolated aquifers
9. adverse effects on geothermal characteristics
10. loss of geothermal fluid/pressure both in the short and long term
11. blow-outs (i.e. uncontrolled well discharges) in geothermal wells

The magnitude of these effects is influenced by the physical setting of the site, the scale of the drilling operation, the type of drilling, duration of the activity, and the hydrology and water quality at the site. Effects can be minimised through good drilling practices and through compliance with the recommended consent conditions, which are taken directly from the conditions of the controlled activity within the Waikato Regional Plan.

I consider that as long as these conditions, and the conditions in the attached schedule/certificate are complied with, there are less than minor risks of any adverse effects occurring from the granting of this resource consent application.

4.2 Policy Statements and Plans

4.2.1 Waikato Regional Plan

The Waikato Regional Plan contains two policies in section 3.8.3 which relate to drilling. Policy 1 is relevant to this application:

Policy 1: Effects of Drilling Activities

Manage the effects of drilling and any associated discharges in a manner that avoids significant adverse effects on the quality of ground water, surface water and soils from:

- a. contamination by drilling fluids
- b. contamination of ground water by contaminants in surface water
- c. mixing of previously isolated aquifers

- d. loss of aquifer pressure/level
- e. disturbance of waahi tapu and other identified sites of significance to tangata whenua as Kaitiaki
- f. inappropriate drilling in geothermal systems.

Rules

As discussed in section 2 above, drilling below the water table is a controlled activity, provided that the activity complies with the standards and terms of rule 3.8.4.7, which states:

3.8.4.7 Controlled Activity Rule - Drilling Below the Water Table

The drilling of holes or wells below the water table where the hole or well is not permitted by or does not comply with Rule 3.8.4.6, is a controlled activity (requiring resource consent) subject to the following standards and terms:

- a. All drilled holes/wells shall be constructed, maintained and/or abandoned so that they shall not cause cross-contamination between hydraulic units (aquifers) in any water including ground water and geothermal water.
- b. Holes drilled shall be at least 100 metres away from any Significant Geothermal Feature.
- c. All holes/wells shall be managed and maintained such that leakage of water or contaminants to or from the ground surface is prevented.
- d. Materials used for well construction shall be of such quality and strength to enable the well to be completed without casing or seal leakage during construction or subsequent well operation.
- e. Wells used for potable water supply shall be located at least 30 metres from any on-site sewage disposal system.
- f. Wells used for taking water, shall be located at least 50 metres from a lake or stream, and 100 metres from Mean High Water Springs.
- g. A log for each drilled hole/well shall be forwarded to the Waikato Regional Council within two months of completion of drilling. Each log shall show:
 - i. the location of the hole/well
 - ii. date of completion
 - iii. duration of drilling
 - iv. depth and diameter of the hole/well
 - v. the method of drilling
 - vi. full construction details
 - vii. the subsurface geology
 - viii. results of any tests undertaken during drilling, including permeability, temperature and water quality
 - ix. a site diagram.
- h. The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme, or by Heritage New Zealand except where Heritage New Zealand approval has been obtained.

Waikato Regional Council reserves control over the following matters:

- i. Measures to avoid, remedy or mitigate the adverse effects of the activity on soil and water quality.
- ii. Measures to avoid, remedy or mitigate the effects on other users of water.
- iii. Monitoring, sampling and analysis requirements.
- iv. The location and depth of drilling.
- v. Any measures necessary to rehabilitate the land following the completion of the activity.
- vi. Measures to avoid, remedy or mitigate the effect of the activity on areas of significant indigenous vegetation and significant habitats of indigenous fauna.

- vii. The requirement for bonds to ensure appropriate control and abandonment of deep geothermal wells.
- viii. Measures taken to remove wastes introduced to the hole/well during drilling and construction.

5 Relevant Part 2 Considerations

I consider that, if carried out in accordance with the conditions of this consent, the well construction will not contravene the purpose and principles of the Resource Management Act 1991 (as set out in Part 2 of the Act)

6 Monitoring

Whilst no scheduled monitoring of this consent is proposed, should the need arise, Waikato Regional Council may undertake monitoring of the well/s to ensure compliance with the resource consent conditions.

7 Conclusion

I consider that the exercise of this consent, if carried out in accordance with the conditions set out below, will have only minor environmental effects, and recommend that, in accordance with s104A of the Resource Management Act, this consent be granted with a term and conditions in line with Waikato Regional Council guidelines and with standard conditions for drilling and well construction.

8 Recommendations

Recommended Decision

- That resource consent application APP144627 be processed non-notified.
- That resource consent application APP144627 be granted in accordance with the duration and conditions prescribed in the attached schedule/certificate for the following reasons:
- The activity will have no more than minor actual or potential adverse effects on the environment
- The activity is not contrary to any relevant plans or policies
- The activity is consistent with the purpose and principles of the Resource Management Act 1991



Breeahn Munns
Resource Officer - Water Allocation
Resource Use Directorate

Date: 28 June 2022

9 Decision

That the resource consent application is granted in accordance with the above recommendations.



Mark Row

Date: 8 July 2022

Project Manager, Farm Water & Drilling
Resource Use Directorate

Acting under authority delegated subject to the provisions of the Resource Management Act 1991 which at the time of decision had not been revoked.

RESOURCE CONSENT CERTIFICATE

Resource Consent: AUTH144627.01.01

File Number: 61 80 83A

*Pursuant to the Resource Management Act 1991, the
Regional Council hereby grants consent to:*

Bains Hort Group Limited
PO Box 745
Te Puke 3153

Contact Details:
Nick Hazard
Mobile: 021 422 913

(hereinafter referred to as the Consent Holder)

Consent Type: Land Use Consent

Consent Subtype: Land - well

Activity authorised: To drill up to 3 test bores for the construction of a single production bore hole for groundwater take for new kiwifruit orchard irrigation. In addition, up to 2 monitoring bores are required to be drilled. Groundwater take consent to be lodged following bore construction and pumping test.

Location: 582 Parallel Road, Cambridge

Map reference: NZTM 1810194 E 5802667 N, NZTM 1810904 E 5802428 N, NZTM 1810924 E 5802413 N, NZTM 1810760 E 5802124 N, NZTM 1810745 E 5802135 N

Resource Consent No	Site/Station
AUTH144627.01.01	72_11225
AUTH144627.01.01	72_11226
AUTH144627.01.01	72_11227
AUTH144627.01.01	72_11228
AUTH144627.01.01	72_11229

Consent duration: This consent will commence in accordance with section 116 of the Resource Management Act 1991 and the term is unlimited.

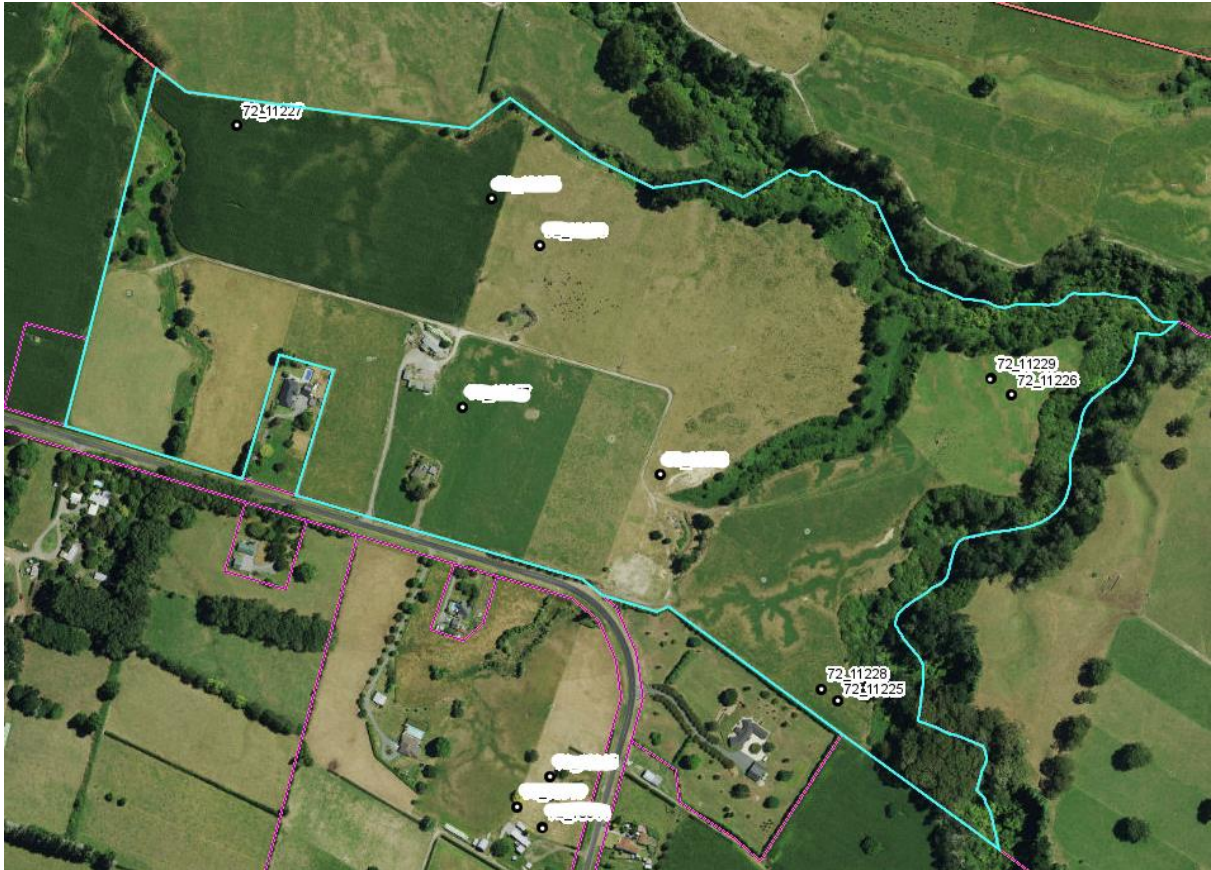
Subject to the conditions overleaf:

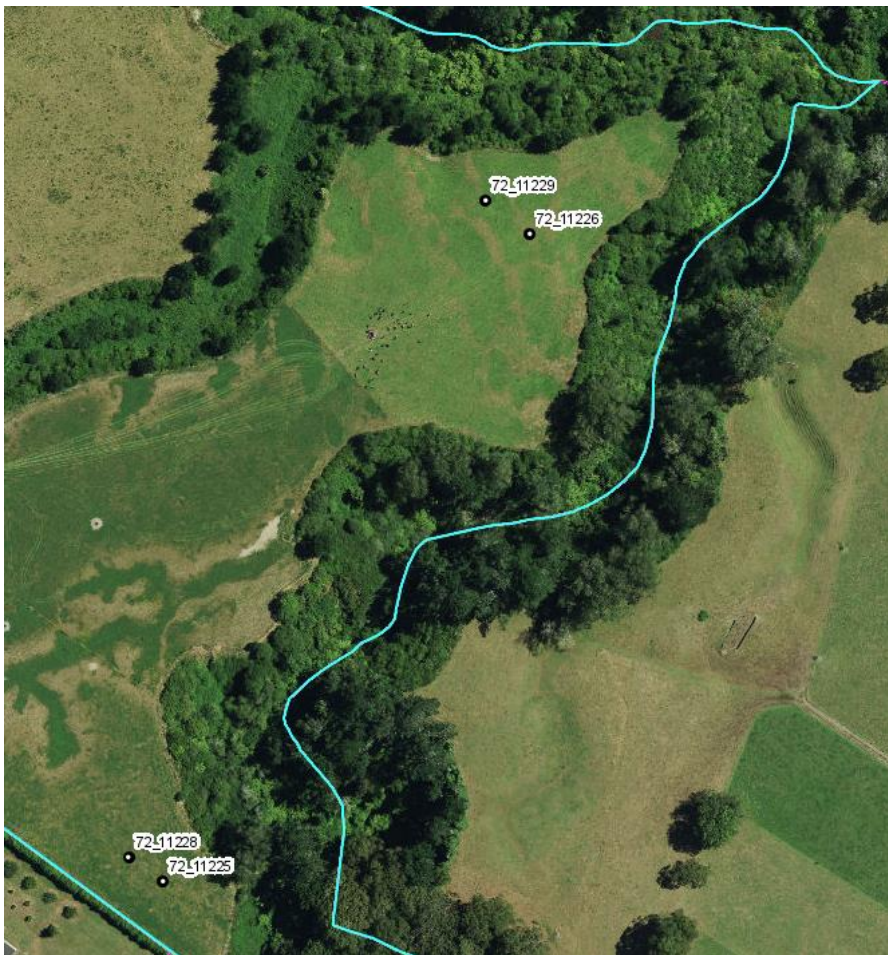
CONDITIONS

1. The wells shall be constructed and maintained and/or abandoned so that they will not cause cross-contamination between hydraulic units (aquifers) in any water (including ground water and geothermal water).
2. The wells shall be completed and sealed such that leakage of water or contaminants to or from the ground surface is prevented.
3. Materials used for well construction shall be of such quality and strength to enable the well to be completed without casing or seal leakage during construction or subsequent well operation.
4. If a well is to be used for potable water supply, it shall be located at least 30 metres horizontally from any on-site sewage disposal system.
5. If a well is to be used for taking water, it shall be located at least 50 metres horizontally from a lake or stream, and if near the coast, located at least 100 metres from mean high-water springs (MHWS).
6. Upon completion of each well, wastes introduced to the well during drilling and construction shall be removed.
7. If artesian conditions are encountered, a conductor casing shall be grout sealed to ensure control of potential flowing artesian ground water and to prevent instability of the ground at the well head. Well head completion shall be such that ground water leakage under flowing artesian pressures is prevented.
8. The Waikato Regional Council shall be notified of the anticipated date of drilling commencing if a well is not to be drilled within three months of this consent being granted.
9. A log for each well drilled shall be forwarded to the Waikato Regional Council within two months of drilling being completed. Each log shall be provided with the correct identifier as detailed in the table below (include the co-ordinates of actual location that the well was drilled). Each log shall show:
 - i. the location of the hole/well
 - ii. date of completion
 - iii. duration of drilling
 - iv. depth and diameter of the hole/well
 - v. the method of drilling
 - vi. full construction details
 - vii. the subsurface geology
 - viii. full results of any tests (e.g. well yield, temperature, water quality) undertaken on the drilled hole/well
 - ix. a site diagram
10. The activity shall not disturb any archaeological site or waahi tapu as identified in any district plan or by Heritage New Zealand except where Heritage New Zealand approval has been obtained.
11. Abandoned or obsolete bores must be identified and decommissioned to prevent contamination. Advice of decommissioning of bores should be provided to Council within 4 weeks of the work being completed.

Bore Log Reference Numbers

Resource Consent No	Site/Station
AUTH144627.01.01	72_11225
AUTH144627.01.01	72_11226
AUTH144627.01.01	72_11227
AUTH144627.01.01	72_11228
AUTH144627.01.01	72_11229





Note: If an existing bore is to be decommissioned then this should be properly capped and sealed by a driller, and Council advised of this. If you are decommissioning a bore, you must ensure that contaminants are prevented from entering the bore by filling it with clean material and compacting or sealing the surface.

Advice Notes - General

- This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.
- Where a resource consent has been issued in relation to any type of construction (e.g. dam, bridge, jetty) this consent does not constitute authority to build and it may be necessary to apply for a Building Consent from the relevant territorial authority.
- This resource consent is transferable to another owner or occupier of the land concerned, by written notice to the Council, on the same conditions and for the same use as originally granted (s.134-137 RMA). The transfer of water, including changes of location, may occur as provided for in Chapter 3.4 of the Waikato Regional Plan, subject to the requirements of those rules.
- The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
- The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
- Note that pursuant to s332 of the RMA 1991, enforcement officers may at all reasonable times go onto the property that is the subject of this consent, for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.

Ecological Impact Assessment: Parallel Rd Kiwifruit farm

May 2022



PROJECT NUMBER	0056			
PROJECT NAME	Ecological Impact Assessment: Parallel Rd Kiwifruit farm			
PROJECT ADDRESS	582 Parallel Road, Kaipaki			
PREPARED FOR	Kiwifruit Investments Limited			
AUTHOR/S	Dr Briar Taylor-Smith			
REVIEW	Technical	QA	Version	Date to client
	Adam Purcell		1.0	05/05/2022

This report should be cited as: ‘Titoki Landcare. (2022). *Ecological Impact Assessment: Parallel Rd Kiwifruit farm*. Prepared for Kiwifruit Investments Ltd.’

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TITOKI LANDCARE LTD | 115 KINGSLEY ST, CAMBRIDGE 3432, NZ | P: 07 808 0431

Ecological Impact Assessment: Parallel Rd Kiwifruit farm

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Executive Summary

Titoki Landcare Ltd has been engaged by Kiwifruit Investments Ltd to undertake an ecological impact assessment (EIA) of the proposed pond and shed construction at 582 Parallel Road, Kaipaki.

Ecologists carried out desktop and site assessment of type and distribution of vegetation and fauna habitat across the property and a wetland delineation assessment to determine the presence and extent of wetlands.

The proposed pond and shed sites are currently weedy pasture adjacent to a modified gully system. Modified willow wetlands are present within the adjacent gully system and improved pasture wetlands are present within the proposed pond and shed site. The wetlands are highly modified and hydrological processes have already been highly modified by unculverted track and road construction. The habitats onsite have been assessed being low and moderate in value, however, some indigenous fauna that potentially utilise the areas such as long-tailed bats (*Chalinolobus tuberculatus*) and copper skink (*Oligosoma aeneum*) have high ecological value due to being classified as Threatened or At Risk.

Three potential ecological impacts have been identified as a result of the pond and shed construction. These include:

- Use of land as storage pond rather than weedy pasture.
- Harm or disturbance to indigenous wildlife during pond and shed construction.
- Potential hydrological changes to adjacent wetland and subsequent impacts to wetland species.

The magnitude of each of these potential effects have been assessed as low and the level of effect and does not require mitigation. The associated level of effects have been assessed as low or very low.

Although the effects of pond and shed constructions are assessed as having a very low to low level of effect, indigenous fauna species such as fantail (*Rhipidura fuliginosa*) and silveryeye (*Zosterops lateralis*) are likely present in the gully or use the gully at times and these species may be killed or injured if construction materials enter the gully or if gully vegetation is removed or damaged. These species are protected species under the Wildlife Act 1953 and it is illegal to harm or disturb them without a Department of Conservation issued Wildlife Act Authority. Actions should therefore be undertaken to ensure they are unharmed during pond construction or any other activity that may harm or disturb protected animals.

The following actions are recommended:

1. A silt fence will be constructed with a minimum setback of 1 m from the gully edge to prevent any soil from entering the gully (as per the current pond construction design).
2. No construction materials or construction waste should enter the gully.
3. Gully vegetation should not be cleared or damaged, unless as part of ecological restoration or weed management work and with the necessary care taken to ensure indigenous fauna is not harmed during vegetation clearance.

A Waikato Regional Council representative visited the site on 22 April 2022 and advised that the pond must be located a minimum of ten metres from any wetland habitat.

1 Introduction

Titoki Landcare Ltd has been engaged by Kiwifruit Investments Ltd to undertake an ecological impact assessment (EIA) of the proposed pond and shed construction at 582 Parallel Road, Kaipaki. The property is being developed into a kiwifruit farm and the following works are proposed for the site:

- Construction of a 15,000 m³ lined water storage pond (surface area 4,820 m²). The earthworks extent will be 8,128 m² and topsoil removed from the pond site will be used to construct erosion and sediment control bunds at 582 Parallel Road. The bunds will be located a minimum 5 m from the gully edge. Silt removed from the pond site will be stockpiled on pasture and/or used as landscape fill on 582 and 303 Parallel Road. A silt fence will be constructed with a minimum setback of 1 m from the gully edge.
- Construction of a farm shed. This will be approximately 25 x 12 m but exact location and dimensions are to be confirmed.

1.1 Report scope and layout

This report is structured as following:

Section 2: Ecological assessment methods.

Section 3: Site ecological context.

Section 4: Ecological characteristics of the site.

Section 5: Ecological assessment.

Section 6: Ecological management recommendations.

Section 7: Summary.

2 Ecological assessment methods

2.1 Desktop assessment

Relevant source materials for the property were reviewed to gather information on the property and its context within the wider landscape. The following resources were reviewed as part of our desktop assessment:

- Aerial imagery (including historic) of the project area sourced from Land Information New Zealand, Google Inc., and Retrolens to investigate the change in vegetation at the site over time.
- Department of Conservation Bioweb Database.
- eBird database.
- iNaturalist database.
- Significant natural areas of the Waikato District: terrestrial and wetland ecosystems (Kessels Ecology, 2018).

2.2 Field survey

Titoki Landcare ecologists visited the property on 8 March and 8 April 2022. During the initial site visit, qualitative information was collected regarding the type and distribution of vegetation and fauna habitat across the property. Any indigenous plant species encountered were recorded. Any indigenous bird species observed (seen or heard) was recorded. Any habitat considered suitable for indigenous herpetofauna or bats was noted. During the second site visit, a wetland delineation assessment was carried out to determine the position of any wetlands on the property following the methodology of Clarkson (2013) and Fraser *et al.* (2018) and using the 2021 wetland plant list (Clarkson *et al.* 2021).

2.3 Assessment of ecological effects

The assessment of ecological effects was undertaken in general accordance with the Ecological Impact Assessment guidelines (EclA) produced by the Environment Institute of Australia and New Zealand (Roper-Lindsay *et al.*, 2018). The EclA approach follows the steps outlined below:

Step 1: Ecological values within the site are assigned a value of very high, high, moderate, low, or negligible based on assessments of the ecosystems within the site. Sites are assigned an ecological value based on four attributes: representativeness, rarity/distinctiveness, diversity and pattern, and ecological context. More information on the components of each of these attributes is provided in Appendix 1 Table 1. The national threat status¹ of individual plant and animal species present or likely present on the site are used to determine potential ecological values of the site. Examples of characteristics that would trigger each of the different values of very high, high, moderate, low or negligible are provided in Appendix 1 Table 2.

The overall value of a site is produced based on a combined score of the four attributes as outlined in Appendix 1 Table 3.

¹ As classified in the NZ Threat Classification System database

Step 2: The magnitude of effects on ecological values is assigned as either very high, high, moderate, low or negligible based on the criteria provided in the EclA guidelines (Appendix 1 Table 4). The assignment of the magnitude of effect is based on:

- The size of the expected area impacted (i.e. the site boundary);
- The amount of habitat loss/gain and/or modification versus local availability;
- The intensity of the effect (e.g. the conversion of wetland to pasture, pond or pavement); and
- The duration of the effect (e.g. permanent, medium-long term, short-term etc.) (Appendix 1 Table 5).

Step 3: The overall level of effect is determined using a matrix based on the combination of ecological values and the magnitude of effects on these values (Appendix 1 Table 6). Overall level of effect categories include positive, negligible, very low, low, moderate, high and very high. We used the overall level of ecological effect to determine if effects management (mitigation) is required.

2.4 Ecological management recommendations

Ecological management recommendations are provided to manage any moderate or high adverse effects of that are identified.

3 Site ecological context

The property at 582 Parallel Road covers c. 35.3 ha of land south of Hamilton city within the Hamilton Ecological District. The property is within 2 km of the Waikato River and is flat land intersected by tributaries to the Mangawhero Stream and their gullies. Parts of the property fall within a significant natural area (SNA): WP344, Mangawhero Stream riparian margin (Figure 1).

3.1 Vegetation

Singers & Rogers (2014) classify the land as being historically covered in Kahikatea-pukatea-tawa forest (WF8). The property is now largely surrounded by exotic pasture and exotic-dominated gully systems. The property is located within 2.5 km of Moanatuatua Scientific Reserve (Figure 1), a 140 ha remnant of restiad peatland that once blanketed low lying areas of the Hamilton Ecological District. Several Threatened plants have been recorded within 5 km of 582 Parallel Road (Table 1); however, these species are all peat bog specialists found at Moanatuatua Scientific Reserve and they are not suited to conditions at 582 Parallel Road.

Table 1. List of threatened plant species recorded within 5 km of the property.

Common name	Scientific name	Conservation status ²	Distance from site (km)
Bog clubmoss	<i>Brownseya serpentina</i>	Threatened – Nationally Vulnerable	2.5
Bladderwort	<i>Utricularia delicatula</i>	At Risk – Relict	2.5
Bamboo rush	<i>Sporadanthus ferrugineus</i>	At Risk – Relict	2.5

² As classified in de Lange *et al.* (2018).



Figure 1. Site ecological context map.

3.2 Fauna

Our desktop assessment found records of 25 native bird species within 5 km of the property, including five species classified as At Risk or Threatened (Table 2) (Robertson *et al.*, 2021).

Copper skink (*Oligosoma aeneum*) have been recorded within 5 km of the property and are classified as At Risk – Declining (Hitchmough *et al.*, 2021).

In 2015, low levels of long-tailed bat (*Chalinolobus tuberculatus*) activity were recorded at a location approximately 3.5 km away along the Waikato River near Hooker Road (DOC BioWeb Database). Long-tailed bats, which are classified as Threatened – Nationally Critical (O’Donnell *et al.*, 2018), are known to forage and commute along the Waikato River and its tributaries.

Table 2. Native bird species recorded within 5 km of the property.

Common name	Scientific name	Conservation status ³	Distance from site (km)
Kererū	<i>Hemiphaga novaeseelandiae</i>	Not Threatened	4
Pukeko	<i>Porphyrio melanotus</i>	Not Threatened	4
NZ scaup	<i>Aythya novaeseelandiae</i>	Not Threatened	4
Australasian shoveler	<i>Spatula rhynchotis</i>	Not Threatened	4
Black swan	<i>Cygnus atratus</i>	Not Threatened	4
Grey duck	<i>Anas superciliosa</i>	Threatened – Nationally critical	4
Black shag	<i>Phalacrocorax carbo</i>	At Risk – Naturally uncommon	2.5
Grey teal	<i>Anas gracilis</i>	Not Threatened	4
Pied stilt	<i>Himantopus himantopus</i>	Not threatened	4
Tūī	<i>Prosthemadera novaeseelandiae novaeseelandiae</i>	Not Threatened	4
Fantail	<i>Rhipidura fuliginosa</i>	Not Threatened	4
Grey warbler	<i>Gerygone igata</i>	Not Threatened	4
Little shag	<i>Phalacrocorax melanoleucos brevirostris</i>	Not Threatened	2
Sacred kingfisher	<i>Todiramphus sanctus vagans</i>	Not Threatened	4
Silvereye	<i>Zosterops lateralis</i>	Not Threatened	4
Spur-winged plover	<i>Vanellus miles novaehollandiae</i>	Not Threatened	4
Welcome swallow	<i>Hirundo neoxena</i>	Not Threatened	4
White-faced heron	<i>Egretta novaehollandiae</i>	Not Threatened	4
Paradise shelduck	<i>Tadorna variegata</i>	Not Threatened	4
Swamp harrier	<i>Circus approximans</i>	Not Threatened	4
Morepork	<i>Ninox novaeseelandiae novaeseelandiae</i>	Not Threatened	4
Shining cuckoo	<i>Chrysococcyx lucidus lucidus</i>	Not Threatened	4
New Zealand pipit	<i>Anthus novaeseelandiae novaeseelandiae</i>	At Risk – Declining	4
Spotless crake	<i>Porzana tabuensis</i>	At Risk – Declining	4
New Zealand dabchick	<i>Poliocephalus rufopectus</i>	At Risk – Recovering	4

³ As classified in Robertson *et al.* (2021).

4 Ecological characteristics of site

4.1 Plant species and vegetation

The proposed location of the pond and shed is vegetated with weedy pasture (Photo 1). This vegetation type was dominated by exotic grasses, clovers (*Trifolium repens*, *Trifolium pratense*), thistles (*Cirsium* spp.) and fleabane (*Conyza sumatrensis*). Grasses present include ryegrass (*Lolium* sp.), cocksfoot (*Dactylis glomerata*), bristle grass (*Setaria* sp.), paspalum (*Paspalum dilatatum*), witchgrass (*Panicum dichotomiflorum*), crowfoot grass (*Eleusine indica*), prairie grass (*Bromus catharticus*) and soft brome (*Bromus hordaceus*). Other weeds present included dandelion (*Taraxacum officinale*), chicory (*Cichorium intybus*), plantain (*Plantago lanceolata*), dock (*Rumex obtusifolius*), hedge mustard (*Sisymbrium officinale*), spotted spurge (*Euphorbia maculata*) and creeping mallow (*Modiola caroliniana*).

Adjacent to the proposed pond site is a gully (Figure 2, Photo 2) that is dominated by the following weeds: blackberry (*Rubus fruticosus* agg.), Himalayan honeysuckle (*Leycesteria formosa*), grey willow (*Salix cinerea*), Chinese privet (*Ligustrum sinense*) and hawthorn (*Crataegus monogyna*). Some indigenous vegetation is present in the understory in some places and includes seedlings of karamu (*Coprosma robusta*), mahoe (*Meliccytus lanceolatus*), wheki (*Dicksonia squarrosa*) and ponga (*Cyathea dealbata*).

South of the gully is a short length of incised channel with standing water (Figure 2, Photo 3), the margins of which are vegetated with water pepper (*Persicaria lapathifolia*, *P. maculata*), fleabane, dock, creeping buttercup (*Ranunculus repens*), sow thistle (*Sonchus* sp.), blackberry and some native plants including rautahi (*Carex geminata*), kiokio (*Blechnum novae-zelandiae*) and pig fern (*Paesia scaberula*). Further south of the channel is a depression containing a mixture of pasture and weedy vegetation as described above (Figure 2, Photo 5).

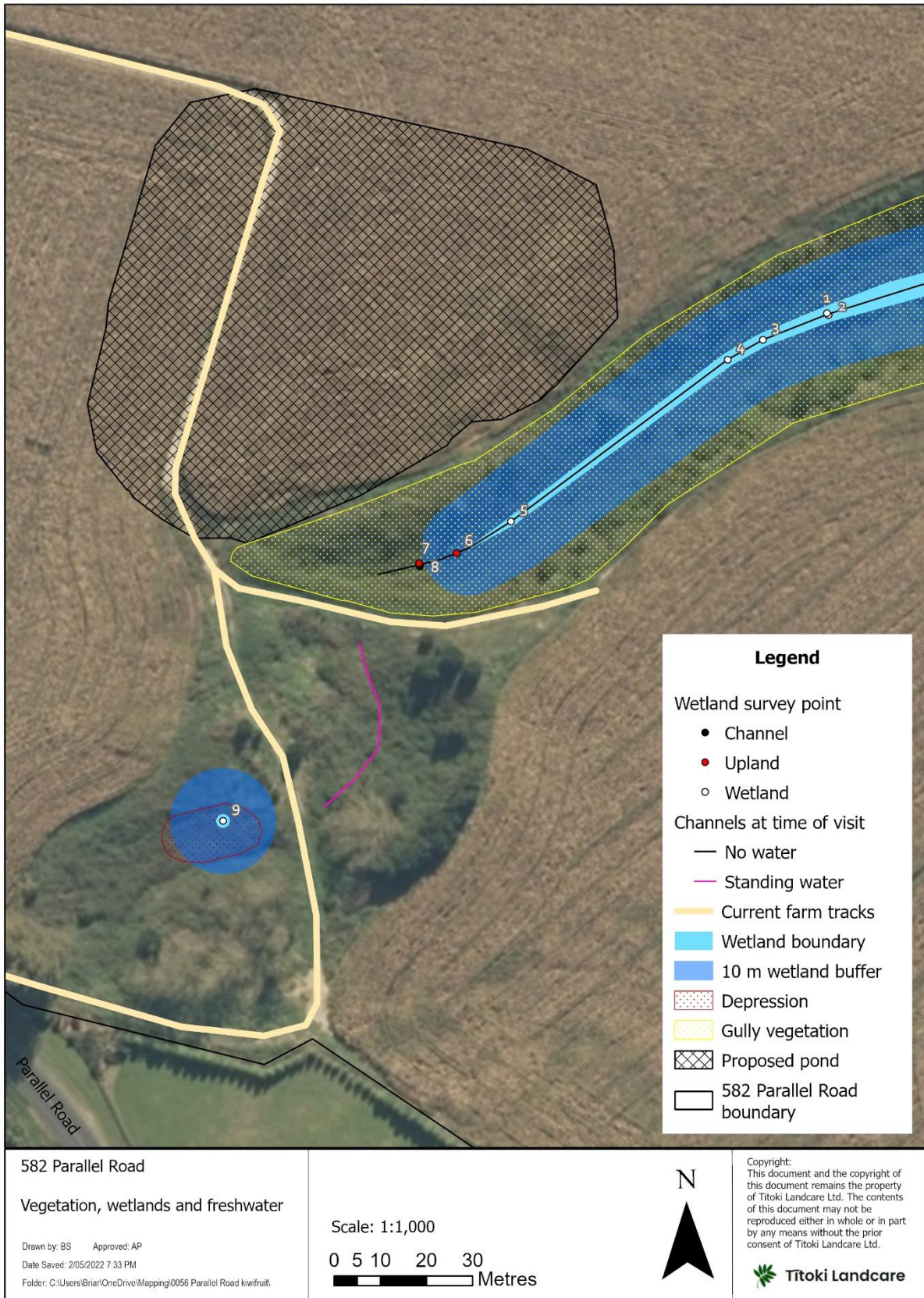


Figure 2. Vegetation, wetlands and freshwater map.



Photo 1. Weedy pasture vegetation at the proposed pond location.



Photo 2. Weedy gully vegetation.



Photo 3. Incised channel and adjacent vegetation.



Photo 4. Depression containing a mixture of pasture and weedy vegetation.

4.2 Fauna and fauna habitat

4.2.1 Fauna

Four bird species were observed on the property during the site visits, all of which are introduced species (Table 3). No At Risk or Threatened bird species were observed. No lizard species or bats were observed but no field surveys for their presence were undertaken.

Table 3. Bird species observed onsite during the site visit.

Common name	Scientific name	Conservation status ³
Myna	<i>Acridotheres tristis</i>	Introduced and Naturalised
Goldfinch	<i>Carduelis carduelis</i>	Introduced and Naturalised
Greenfinch	<i>Carduelis chloris</i>	Introduced and Naturalised
Sparrow	<i>Passer domesticus</i>	Introduced and Naturalised

4.2.2 Fauna habitat

The gully vegetation adjacent to the proposed pond site may provide suitable habitat for indigenous birds, lizards, and bats (Table 4). The weedy pasture areas are unlikely to provide suitable habitat for these species.

Table 4. Fauna habitat assessment of 582 Parallel Rd pond site.

Fauna group	Habitat assessment
Birds	The gully vegetation provides suitable habitat for several of the Not Threatened bird species listed in Table 2 that were not observed during the site visits such as fantail and silvereye. The weedy pasture vegetation may provide nesting habitat for New Zealand pipits and foraging habitat suitable for other indigenous bird species.
Lizards	Copper skinks like sheltered, moist habitats such as low growing vegetation or piles of woody debris. The weedy gully vegetation may provide potential habitat for copper skinks. The weedy pasture vegetation is unlikely to provide habitat suitable for indigenous lizards.
Bats	Long-tailed bats forage for insects along waterways. The gully vegetation adjacent to the proposed pond site may provide potential foraging habitat for long-tailed bats. Given the connectivity between this site and the Waikato River, it is likely that bats feed in the area from time to time. The gully vegetation is too small in stature to provide suitable habitats for roosting for long-tailed bats.

4.3 Freshwater ecology and wetland assessment

The gully base contains a defined stream channel approximately 50 cm in width with flat riparian areas (Photo 5). No water was present within the channel at the time of the visit. The channel is bare soil covered by leaves. Upstream of but not connected to the gully channel is a short section of channel containing standing water (Figure 2). Further south of this is a depression containing some wetland vegetation. Historically, the stream channel in the gully would have been linked with the short area of channel and the depression to the south but

these upstream areas have been highly modified by the creation of farm tracks with no bridges or culverts present.

4.3.1 Wetland delineation

A wetland delineation assessment was carried out to determine whether the flat riparian areas of the gully and the depression to the south contain areas of wetland. Nine holes were dug to determine whether hydric soils were present. Vegetation plots were measured at five sites to determine whether wetland plant species were prevalent and/or dominant.

Wetland soils and vegetation are present at the base of the gully. Wetland vegetation is present within the depression at the south end of the site. A summary of results is presented in Table 5, detailed results are presented in Appendix 2 Table 1. The approximate extent of wetland areas is mapped in Figure 2.



Photo 5. Defined stream channel and flat riparian areas in base of gully.

Table 5. Summary of wetland delineation assessment results.

Site (see Figure 2)	Vegetation	Soils	Water table	Wetland
1	Wetland	Hydric	Water not observed	Wetland
2	Not measured	Hydric	30 cm	Wetland
3	Not measured	Hydric	Water not observed	Wetland
4	Wetland	Hydric	Water not observed	Wetland
5	Not measured	Hydric	27 cm	Wetland
6	Not measured	Not wetland	Water not observed	Upland
7	Not wetland	Not wetland	Water not observed	Upland
8	Not wetland	Hydric	Water not observed	Channel
9	Wetland	Not wetland	Water not observed	Wetland

5 Ecological assessment

This section provides an assessment of the ecological value of the site.

5.1 Ecological values assessment

The ecological values associated with pasture and gully vegetation are assessed in Table 6. This includes a values assessment of each vegetation type as habitat for indigenous fauna with a focus on At Risk and Threatened fauna. The ecological values associated with individual species are assessed in Table 7.

Table 6. Ecological values assessment of vegetation/habitat at 582 Parallel Road.

Habitat type	Assessment of ecological value
Weedy pasture (including margins of channel with standing water)	<p>The proposed pond site is vegetated with weedy exotic pasture. Adjacent to the channel with standing water is mostly also exotic weeds with some native species. This vegetation scores:</p> <p>Negligible value for representativeness because it is dominated by exotic weeds and therefore not representative of the vegetation that would have naturally occurred here.</p> <p>Low for rarity and distinctiveness because it is not a naturally occurring vegetation type but can still be used as habitat by native birds and potentially long-tailed bats for commuting. The site may contain suitable nesting habitat for pipits but is unlikely utilised due ongoing disturbance from people and vehicles at the site.</p> <p>Low value for diversity and pattern because the vegetation is dominated by exotic plant species but may still provide habitat for some native birds and bats.</p> <p>Low value for ecological context because although vegetated, it is low quality habitat for indigenous fauna and provides little connectivity or buffering to other habitats.</p> <p>Exotic pasture is assessed as having an overall low ecological value.</p>
Weedy gully vegetation	<p>Adjacent to the proposed pond site is a gully that is vegetated mostly with exotic weedy species. This vegetation scores:</p> <p>Low value for representativeness because it is dominated by exotic weeds and therefore the vegetation structure and composition is not representative of the vegetation that would have naturally occurred in this area.</p> <p>Moderate value for rarity and distinctiveness because although it is not a naturally occurring vegetation type, it is potential habitat for copper skinks (At Risk), bats (Threatened) and indigenous bird species.</p> <p>Low value for diversity and pattern because the vegetation is dominated by exotic plant species, though it may still provide habitat for some indigenous species.</p> <p>Moderate value for ecological context because the gully vegetation provides buffering to the tributary to Mangawhero Stream and connectivity with the Waikato River.</p> <p>Weedy gully vegetation is assessed as having an overall moderate ecological value</p>

Habitat type	Assessment of ecological value
Wetland comprising riparian margins in gully bottom	<p>At the bottom of the gully is an area of wetland vegetated mostly with exotic weedy species but also some native seedlings. This vegetation scores:</p> <p>Low value for representativeness because it is dominated by exotic weeds and therefore the vegetation structure and composition is not representative of the vegetation that would have naturally occurred in this area.</p> <p>Moderate value for rarity and distinctiveness because it is potential habitat for copper skinks (At Risk), bats (Threatened) and indigenous bird species. Furthermore, wetlands are underrepresented in the Waikato with less than 10% of their original extent remaining⁴. However, the wetland vegetation is highly modified 'willow wetland' and so is not high value wetland habitat.</p> <p>Low value for diversity and pattern because the vegetation is dominated by exotic plant species, though it may still provide habitat for some indigenous species.</p> <p>Moderate value for ecological context because it provides buffering to the tributary to Mangawhero Stream and connectivity with the Waikato River.</p> <p>The gully-bottom wetland is assessed as having an overall moderate ecological value</p>
Small area of wetland within a depression	<p>Towards the southern boundary of the property is an area of wetland vegetated mostly with exotic weedy species but also some native species. This vegetation scores:</p> <p>Low value for representativeness because it is dominated by exotic weeds and therefore the vegetation structure and composition is not representative of the vegetation that would have naturally occurred in this area.</p> <p>Low value for rarity and distinctiveness because although wetlands are underrepresented in the Waikato, the area of wetland is very small (likely <5 m²) and the wetland vegetation is highly modified.</p> <p>Low value for diversity and pattern because the vegetation is dominated by exotic plant species but may still provide habitat for some indigenous species.</p> <p>Low value for ecological context because although vegetated, it is low quality habitat for indigenous fauna and provides little connectivity or buffering to other habitats.</p> <p>The small area of wetland within the depression is assessed as having an overall low ecological value</p>

Table 7. Ecological values of species potentially present at 582 Parallel Road.

Species	Threat status	Likelihood of presence at site	Ecological value
Long-tailed bat	Threatened – Nationally Critical	Likely at least occasionally present foraging and/or commuting	Very high

⁴ <https://www.waikatoregion.govt.nz/environment/water/lake-and-wetland-monitoring/extent-freshwater-wetlands/>. Accessed 03/05/2022.

Species	Threat status	Likelihood of presence at site	Ecological value
Copper skink	At Risk – Declining	Possibly present	High
NZ pipit	At Risk – Declining	Unlikely	High
Other locally common indigenous bird species (e.g. tui, silvereye)	Not threatened	Likely	Low

5.2 Magnitude and level of ecological effect without mitigation or offset

The magnitude of effects on ecological values is assessed based on the extent, intensity, duration, and timing of identified ecological effects associated with the vegetation management on the property.

The overall level of effect is determined by a combination of the magnitude of effect and the ecological value of a feature as per the EIANZ guidelines (Appendix 1 Table 4 and Appendix 1 Table 6).

Ecological effects of the pond and shed construction include:

- Use of land as storage pond rather than weedy pasture.
- Harm or disturbance to indigenous wildlife during pond and shed construction.
- Potential hydrological changes to adjacent wetland and subsequent impacts to wetland species.

5.2.1 Use of land as storage pond rather than weedy pasture

The proposed area for the water storage pond (surface area 4,820 m²) is currently weedy pasture. The weedy pasture has low ecological value because it is dominated by exotic weeds, is low quality habitat for indigenous fauna and provides little connectivity or buffering to other habitats. The construction of the storage pond will also provide open water habitat for fauna and has the potential to be of higher ecological value than the existing weedy pasture. The conversion of this habitat is assessed as having **very low magnitude of the effect**. A very low magnitude of effect on low value vegetation is assessed as a **very low level of effect**.

5.2.2 Harm or disturbance to indigenous wildlife

With vegetation removal and earthworks there is inherent risk to fauna. This weedy pasture vegetation has been assessed as potential nesting habitat for pipits, but this is considered highly unlikely due ongoing disturbance from people and vehicles at the site. The magnitude of the potential harm or disturbance to indigenous wildlife within the weedy pasture areas is therefore considered **low**. A low magnitude of effect on high value pipits is assessed as a **low level of effect**.

The gully vegetation may contain copper skinks and indigenous birds, which may be killed or injured if construction materials (e.g. soil) enter the gully or if gully vegetation is damaged. Native birds within the area should be able to emigrate out of the area, unless unfledged chicks are present in nests. The magnitude of the potential harm or disturbance to

indigenous wildlife within the gully vegetation is considered **low**. A low magnitude of effect on moderate value vegetation and high value indigenous species is assessed as a **low level of effect**.

Note that many indigenous species are protected species under the Wildlife Act 1953 and it is illegal to harm or disturb them without a Department of Conservation issued Wildlife Act Authority. Actions should therefore be undertaken to ensure they are unharmed during pond construction or any other activity that may harm or disturb protected animals.

5.2.3 Potential hydrological changes to adjacent wetland and impacts to wetland species

Pond and shed construction may change the hydrology of the wetlands and so adversely impact wetland species. Given that the wetlands are highly modified willow and unimproved pasture wetlands and that hydrological processes have already been highly modified by unculverted track and road construction, any changes to the hydrology are likely to have a **low magnitude of effect** on the ecology of the wetlands. A low magnitude of effect on a low to moderate ecological value wetlands is assessed as a **very low to low level of effect**.

Table 8. Summary of ecological effects due to pond and shed construction.

Ecological effect	Magnitude of effect	Ecological value	Level of effect without mitigation
Use of land as storage pond rather than weedy pasture	Low	Low	Very low
Harm or disturbance to indigenous wildlife within weedy pasture	Low	High	Low
Harm or disturbance to indigenous wildlife within gully vegetation	Low	High	Low
Hydrological changes to willow and unimproved pasture wetlands	Low	Low to moderate	Low to very low

6 Ecological management recommendations

Any moderate or high adverse ecological effects warrant management measures to avoid, remedy, mitigate and/or offset those effects. Effects of pond and shed constructions are assessed as having a very low to low level of effect, so do not require management measures. However, species that are protected by the Wildlife Act (1953) are likely present in the gully or use the gully at times, including copper skinks, bats and common indigenous birds. These species may be killed or injured if construction materials (e.g. soil) enter the gully or if gully vegetation is removed or damaged. It is illegal to harm or disturb protected species without a Department of Conservation issued Wildlife Act Authority. Actions should therefore be undertaken to ensure they are unharmed during pond construction or any other activity that may harm or disturb protected animals. Accordingly, the following actions are recommended:

1. A silt fence will be constructed with a minimum setback of 1 m from the gully edge to prevent any soil from entering the gully (as per the current pond construction design).
2. No construction materials or construction waste should enter the gully.
3. Gully vegetation should not be cleared or damaged.

Further to this, as per Waikato Regional Council (WRC) instruction (following the site visit by Resource Officer Martin Keep on 24/04/2022), the National Environmental Standards for Freshwater⁵ is not triggered and the National Policy Statement for Freshwater Management 2020 (NPS-FM) applies, therefore:

4. The pond must be located a minimum of ten metres from any wetland.

⁵ Resource Management (National Environmental Standards for Freshwater) Regulations 2020.

7 Summary

The proposed pond and shed sites are currently weedy pasture adjacent to a modified gully system. The potential impact of the construction of the proposed pond and shed have been assessed as having a very low to low level of ecological effect.

However, indigenous species are likely present in the gully or use the gully at times and these species may be killed or injured if construction materials enter the gully or if gully vegetation is removed or damaged. These species are protected species under the Wildlife Act 1953 and it is illegal to harm or disturb them without a Department of Conservation issued Wildlife Act Authority. Actions should therefore be undertaken to ensure they are unharmed during pond construction or any other activity that may harm or disturb protected animals.

Therefore, the following actions are recommended to manage potential ecological impacts associated with the construction of the pond and shed:

1. A silt fence will be constructed with a minimum setback of 1 m from the gully edge to prevent any soil from entering the gully (as per the current pond construction design).
2. No construction materials or construction waste should enter the gully.
3. Gully vegetation should not be cleared or damaged.
4. The pond must be located a minimum of ten metres from any wetland, as per WRC instruction to comply with the NPS-FM.

References

- Clarkson, B. R. (2013). A vegetation tool for wetland delineation in New Zealand. New Zealand: Landcare Research.
- Clarkson, B. R., Fitzgerald, N. B., Champion, P. D., Forester, L., Rance, B. D. (2021). New Zealand Wetland Plant List 2021 Contract Report: LC3975
- de Lange, P. J., Rolfe, J. R., Barkla, J. W., Courtney, S. P., Champion, P. D., Perrie, L. R., Beadel, S. M., Ford, K. A., Breitwieser, I., Schonberger, I., Hindmarsh-Walls, R., Heenan, P. B. & Ladley, K. (2018). *Conservation status of New Zealand indigenous vascular plants, 2017*. New Zealand Threat Conservation Series 22. Department of Conservation, Wellington.
- Department of Conservation. (2020). National Bat Database. Wellington, New Zealand.
- Department of Conservation. (2021). Bioweb Database. Wellington, New Zealand.
- eBird. (2021). Hotspots. Retrieved from <https://ebird.org/hotspots>
- Fraser, S., Singleton, P., Clarkson, B. (2018). Hydric soils – field identification guide. Landcare Research.
- Hitchmough, R., Barr, B., Knox, C., Lettink, M., Monks, J., Patterson, G., Reardon, J., Dylan van Winkel, D., Rolfe, J. & Pascale, M. (2021). *Conservation status of New Zealand reptiles, 2021*. New Zealand Threat Classification Series 35. Department of Conservation, Wellington.
- iNaturalist. (2021). Observations. Retrieved from <https://www.inaturalist.org/observations>
- Kessels Ecology. (2017). *Significant natural areas of the Waikato District: terrestrial and wetland ecosystems*. Technical report prepared for Waikato Regional Council.
- Landcare Research. (2015). Land Cover Database 5.
- LINZ. (2021). Retrolens – Historical Image Resource. Sourced from <https://retrolens.co.nz/>.
- Maseyk, F., Maron, M., Seaton, R. & Dutson, G. (2015). *A Biodiversity Offsets Accounting Model for New Zealand*. Technical report prepared for Department of Conservation by The Catalyst Group.
- Robertson, H.A., Baird, K.A., Elliott, G.P., Hitchmough, R.A., McArthur, N.J., Makan, T.D., Miskelly, C.M., O'Donnell, C.F., Sagar, P.M., Scofield, R.P. and Taylor, G.A. (2021). *Conservation status of New Zealand birds, 2021*. New Zealand Threat Classification Series 36. Department of Conservation, Wellington.
- O'Donnell, C. F. J., K.M. Borkin, J.E. Christie, B. Lloyd, S. Parsons and R.A. Hitchmough. (2018). *Conservation status of New Zealand bats, 2017*. New Zealand Threat Classification Series 21. Department of Conservation, Wellington.
- Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. *Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and*

freshwater ecosystems. 2nd edition. Environment Institute of Australia and New Zealand Inc.

Singers, N. & Rogers, J. (2014). *Classification of New Zealand's terrestrial ecosystems. Science for Conservation*. Department of Conservation, Wellington.

Appendices

Appendix 1 Table extracts from the EIANZ ecological impact assessment guidelines (adapted from Roper-Lindsay et al., 2018)

Appendix 1 Table 1. Ecological values assigned to habitats.

Recommended attributes to be consider for determining ecological value or importance to a site or area of vegetation/habitat/community.	
Matters	Attributes to be considered
Representativeness	<p>Attributes for representative vegetation and aquatic habitats:</p> <ul style="list-style-type: none"> • Typical structure and composition • Indigenous species dominate • Expected species and tiers are present <p>Attributes for representative species and species assemblages:</p> <ul style="list-style-type: none"> • Species assemblages that are typical of the habitat • Indigenous species that occur in most of the guilds expected for the habitat type
Rarity/distinctiveness	<p>Attributes for rare/distinctive vegetation and habitats:</p> <ul style="list-style-type: none"> • Naturally uncommon, or induced scarcity • Amount of habitat or vegetation remaining • Distinctive ecological features • National priority for protection <p>Attributes for rare/distinctive species or species assemblages:</p> <ul style="list-style-type: none"> • Habitat supporting nationally Threatened or At Risk species, or locally uncommon species • Regional or national distribution limits of species or community • Unusual species or assemblages • Endemism
Diversity and Pattern	<ul style="list-style-type: none"> • Level of natural diversity, abundance and distribution • Biodiversity reflecting underlying diversity • Biogeographical considerations – pattern, complexity • Temporal considerations, considerations of lifecycles, daily or seasonal cycles of habitat availability and utilisation
Ecological context	<ul style="list-style-type: none"> • Site history, and local environmental conditions which have influenced the development of habitats and communities • The essential characteristics that determine an ecosystem’s integrity, form, functioning, and resilience (from “intrinsic value” as defined in RMA) • Size, shape and buffering • Condition and sensitivity to change • Contribution of the site to ecological networks, linkages, pathways and the protection and exchange of genetic material • Species role in ecosystem functioning – high level, key species identification, habitat as proxy

Appendix 1 Table 2. Ecological values assigned to species.

Value	Species values
Very high	Nationally Threatened - Endangered, Critical or Vulnerable.
High	Nationally At Risk – Declining.
Moderate	Nationally At Risk - Recovering, Relict or locally uncommon or rare

Value	Species values
Low	Not Threatened Nationally, common locally
Negligible	Exotic species, including pests

Appendix 1 Table 3. Overall ecological value scoring for sites or areas based on the four matters in Appendix 1 Table 1

Value	Description
Very High	Area rates High for 3 or all of the four assessment matters listed in Appendix 1 Table 1. Likely to be nationally important and recognised as such.
High	Area rates High for 2 of the assessment matters, Moderate and Low for the remainder, or Area rates High for 1 of the assessment matters, Moderate for the remainder. Likely to be regionally important and recognised as such.
Moderate	Area rates High for one matter, Moderate and Low for the remainder, or Area rates Moderate for 2 or more assessment matters Low or Very Low for the remainder Likely to be important at the level of the Ecological District.
Low	Area rates Low or Very Low for majority of assessment matters and Moderate for one. Limited ecological value other than as local habitat for tolerant native species.
Negligible	Area rates Very Low for 3 matters and Low or Very Low for remainder.

Appendix 1 Table 4. Criteria for describing magnitude of effect.

Magnitude	Description
Very high	Total loss of, or very major alteration to, key elements/features/ of the existing baseline conditions, such that the post-development character, composition and/or attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature
High	Major loss or major alteration to key elements/features of the existing baseline conditions such that the post-development character, composition and/or attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature
Moderate	Loss or alteration to one or more key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature
Low	Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition and/or attributes of the existing baseline condition will be similar to pre-development circumstances or patterns; AND/OR Having a minor effect on the known population or range of the element/feature
Negligible	Very slight change from the existing baseline condition. Change barely distinguishable, approximating the 'no change' situation; AND/OR Having negligible effect on the known population or range of the element/feature

¹Baseline conditions are defined as 'the conditions that would pertain in the absence of a proposed action' (Roper-Lindsay *et al.*, 2018).

Appendix 1 Table 5. Timescale for duration of effects.

Timescale	Description
Permanent	Effects continuing for an undefined time beyond the span of one human generation (taken as 25 years)
Long-term	Where there is likely to be substantial improvement after a 25 year period (e.g. the replacement of mature trees by young trees that need > 25 years to reach maturity, or restoration of ground after removal of a development) the effect can be termed 'long term'
Temporary¹	Long term (15-25 years or longer – see above) Medium term (5-15 years) Short term (up to 5 years) Construction phase (days or months)

¹Note that in the context of some planning documents, 'temporary' can have a defined timeframe.

Appendix 1 Table 6. Matrix for determining overall levels of ecological effects based on ecological value and magnitude of effect.

Ecological value \ Magnitude	Very high	High	Moderate	Low	Negligible
Very high	Very high	Very high	High	Moderate	Low
High	Very high	Very high	Moderate	Low	Very low
Moderate	High	High	Moderate	Low	Very low
Low	Moderate	Low	Low	Very low	Very low
Negligible	Low	Very low	Very low	Very low	Very low

Appendix 2 Wetland assessment results

Appendix 2 Table 1. Wetland sampling points: vegetation and soil descriptions.

Site	Vegetation description	Soil description
1	5 metre radius: LIGsin 15 COProb 12 RUBfru 3 SALcin 1 10 metre radius: SALcin 40 Prevalance = 2.8	0-30 cm: 10YR 2/2
2	NA	0-6 cm: topsoil 10Y 3/2 6-34 cm: 10Y 3/1
3	NA	0-30 cm: Top soil with sand 10YR 2/2 30-36 cm: silty 10Y 2/2
4	5 metre radius: RUBfru 95 LIGsin 5 10 metre radius: SALcin 25 Prevalance = 2.84	0-30 cm: 10YR 2/2 plenty of organic material - exotic or young soil
5	NA	0-30 cm: 10 YR 4/2
6	NA	0-30 cm: 10YR 4/3 sandy
7	Blackberry (FAC)	0-30 cm: Top soil 10YR 4/4, some mottling 15% 2mm iron mineral
8	Blackberry (FAC)	0-1 cm: detritus 1-15 cm: sand 15-24 cm: 10YR 2/2 24-38 cm: Sand
9	2 x 2 m plot: RUMobt (FAC) 40, PERmac (FACW) 20, CARgem (FACW) 15, PLAlAn (FACU) 10, TRlrep (FACU) 5, Sonchus (FACU) 2, RANrep (FAC) 2, HYPrad (FACU) 2, LOLper (FACU) 1, LOTper (FAC) 1, CYNdac (FACU) 1, DACglo (FACU) 1. Prevalance = 2.9	0-28 cm: 10YR 3/4 28-31 cm: 10YR 5/6 60% mottling 1cm iron mineral 31-37 cm: 10YR 5/8 sand