Resource Consent Engineering Assessment Report

1. Executive Summary

Proposal

The application is for a land use consent for the construction and operation of an eight shed poultry breeder operation.

Three Waters Servicing

Wastewater

- Onsite wastewater discharge is proposed.
- Consents to discharge to land are being sought from CRC.

Water

- There is no Council water supply.
- There is a regional council consent to take 8 L/s that was transferred to the site. This should be sufficient for potable water supplies. However, it is not clear how the firefighting needs will be met,
- A RFI has been generated for further clarity on potable water and firefighting servicing.

Stormwater

- Stormwater will be discharged to ground. Applications have been lodged with CRC for stormwater discharge consents.

Flooding

The SDC 1:200 Year flood maps show that there are only small water level depths within the proposed building platforms. Given the proposed site use we have no concerns regarding flooding.

Power, Telecoms

The applicant advises that the is already served. No conditions are proposed.

Roading, Traffic and Access

Hunters Road and Sharlands Road are local road. The traffic generated from the operation will comply with the permitted activity status.

Two access will be maintained. The existing access on Hunters Road will be retained for the existing dwelling. The commercial operation will be serviced via a new access on Sharlands Road.

The proposal complies with all the relevant transport rules. Therefore, standard conditions are proposed on the consent.

Water Race

A water race runs along the Sharlands Road frontage. The new access on Sharlands Road will be over the access. No details of the crossing have been provided. A RFI for the details has been requested.

Vested Assets

The crossing over the water race will be vested given that it will be over or within the council waterway.

Landscaping, Reserves and Fencing

Joe Clark will provide comments on these.

2. Legend

Blue highlighting = Consent Conditions/Advice Notes
RFI questions
Comment to or flagging a potential issue to the Development Manager/Planner

3. Project Information

Applicant	Lifestyle Chickens Limited
Address	227 Hunters Road, Dunsandel
Application Description	To establish and operate an 8 shed poultry breeder farm
Application Type	Appln Type Land use Appln Type
Activity Level	Activity Level Non-Complying Activity Level
Zone	*Operative District Plan – Outer Plains* *Partially Operative District Plan – General Rural Zone* *Overlays* - Electricity Transmission Line: Orion 33 to 66kV, Plains Flood Management Area, Liquefaction Damage Unlikely, Rural Density (SCA-RD3)
Valuation No.	2412045406
Date Sent to Assets	13 August 2024
Return to Planning by	20 August 2024
Planner	TBA
Land Development input	☒ Victor Mthamo — 4 June 2024

3.1. Background and Site Description

3.1.1. The Site

The application site is located at 227 Hunters Road, Dunsandel. Total area of property: 30.689 ha. The site is 8 km west of Dunsandel Township and 10 km north-east of Rakaia Township.

The site is currently used for agricultural purposes and contains a dwelling to the south-eastern corner of the site which is accessed via a vehicle entrance off Hunters Road. The site also has frontage to Sharlands Road.

The location of the site is shown in Figure 1.

3.2. Proposed Development and Consents Sought

Lifestyle Chickens are seeking resource consent for the construction and operation of an eight shed poultry breeder operation. The operation will be spilt into two distinct sites, with each site containing:

- Four 1,836 m^2 poultry sheds, with a maximum height of 4.1m to the apex of the roof.
- An egg packing facility (height 7.2m).
- Generator.
- 3000 litre diesel tank.
- LPG gas storage (90kgs bottles).
- 12 staff carparks

The total combined GFA of the eight sheds will be approximately 14,690 m^2 and 15,347 m^2 with the egg packing facilities. The sheds will be built with a Colorsteel non-reflective product and poly panelling.

Each shed will house up to 10,000 birds, with a total of 80,000 birds being housed on the property at any one time.

The setup of the proposed operation is shown in Figure 2.

Figure 1 – Location of the Site

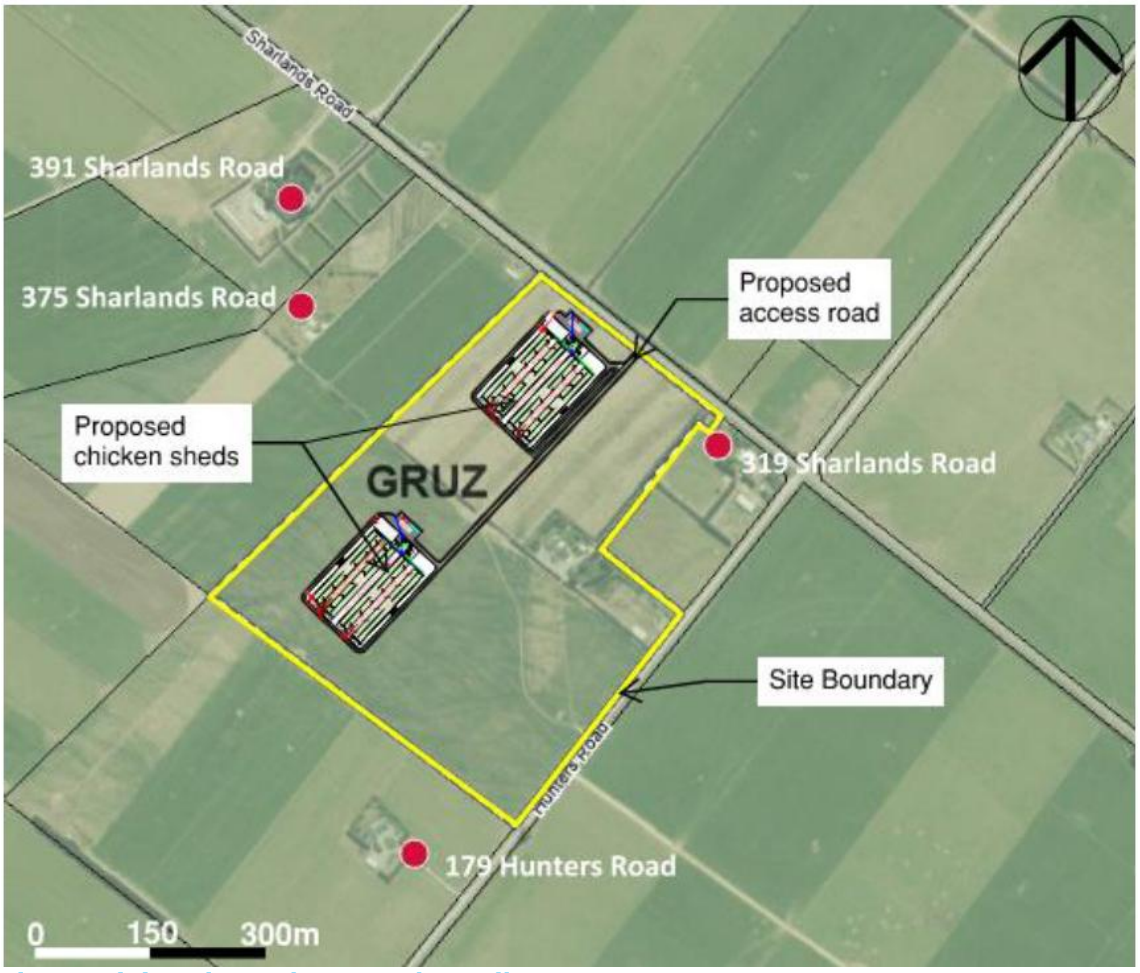

Figure 2(a) – Site and Proposal Details

Figure 2(b) – Site and Proposal Details

3.3. Certificates of Titles, Existing Consents and Consent Notices

There are a number of easements and covenants shown on the Certificate of Title. None of these are relevant to this engineering report.

3.4. District Plan Information

Refer to the summary table in Section 3 above.

4. Engineering Requirements

4.1. Geotechnical

No Geotech assessment has been carried out.

Given the location of the site (e.g. Liquefaction Damage Unlikely overlay) and the nature of the proposal we consider a Geotech report is not critical for the proposed development.

4.2. Site Contamination

The Listed land Use Register (LLUR) shows a site of interest being a former vineyard. A PSI/DSI has been carried out and the results of sampling show that there are no concentrations of contaminants in the soil above background resulting from the HAIL activity (i.e. the operation of the vineyard) and the site is deemed not to be contaminated.

4.3. Earthworks

To enable the construction of the:

- New sheds/building platforms some earthworks will be required.

- Creation of the vehicle crossing/accessway off Sharlands Road

The total volume of earthworks is in excess of 10,000 m^3. The earthworks plan is shown in Figure 3.

Figure 3 – Proposal Details

The AEE proposes to:

- Limit the volume of earthworks with a cut-to-fill balance to avoid having to import fill material.
- Adopt erosion and sediment control measures during the construction period to retain sediment within the site. The ECan guidelines on erosion and sediment control are proposed. Measures to retain sediment on the site such as silt fences and clean water diversion channels/bunds are proposed.

Internal Comments/Notes

The volume of earthworks at >10,000 m3 is > the 7,500 m3 limit specified under Rule EW-R2.

Conditions

Standard earthworks conditions apply.

4.4. Existing and Proposed Three Waters Infrastructure

4.4.1. Stormwater Servicing

Introduction

There is no existing st*ormwater network within the site as this is essentially a greenfield site.*

The AEE states that *"Once the sheds are built, an increased area of the site will become impervious (approximately 2.56cha). Stormwater from the roofs "will discharge into a gravel filled trench which is excavated the full length of each side of the building or gutters and soak pits will be installed". The gravel filled trench or soak pit will be sized to meet the runoff from all storm events up to 24 hr duration with a 10% chance of occurring in any one year. Additionally, the hardstand areas surrounding the poultry buildings will be sloped to edge of*

the seal surrounding the buildings where runoff will be discharged by overland flow into infiltration swales that can cater for time of a rainfall depth of 25 mm".

Internal Comments/Notes
The Canterbury Maps and the ECan Consents Search tool show that a number of consents have been applied for (CRC250039, CRC250040, CRC250041, CRC250042, CRC250043, CRC240479). These include consents to discharge construction phase and operational phase stormwater.

Conditions
Standard stormwater consent conditions will be imposed.

4.4.2. Wastewater

Domestic Wastewater
There are no Council wastewater services. The applicant proposes on-site wastewater discharges. The AEE states that the discharge of wastewater will be a permitted activity under the relevant CLWRP rules.

Stock Holding
The AEE provides an assessment of the management of the stock effluent against the CLWRP rules and concludes that:

- *The proposed use of land for a stock holding area is a Permitted Activity as per Rule 5.31 of the LWRP.*
- *The proposed use of land for the collection, storage and treatment of animal effluent is a Permitted Activity as per Rule 5.33 of the LWRP.*
- *the proposed discharge of washdown water falls to be assessed as a Non-Complying Activity as per Rule 5.37 of the LWRP.*

Conditions
Standard on-site wastewater conditions are proposed.

4.4.3. Water Supply Infrastructure and Servicing

Existing Infrastructure and Services
There is no existing Council water supply network in the area. The closest downgradient community water supply well is at Dunsandel around 7.2 km away.

Proposed Servicing
Water will be supplied to the farm from an existing bore (Bore ID L36/0887). The extracted water will be used for bird drinking supply, and within the amenities blocks for staff showers etc. Washdown water will be supplied by water collected from the shed roofs. A copy of the water take consent (CRC240479) is appended to the AEE.

Internal Notes/ Comments
CRC240479 permits:
- Taking 8 L/s with a volume not exceeding 432 cubic metres per day.
- The annual volume of water authorised to this consent shall not exceed 66,774 cubic metres between the 1st July and the following 30th June;

While this will be sufficient for at least the potable supplies the AEE does not discuss the firefighting requirements.

RFI
We have the following RFI questions regarding the water supply:
- Provide an assessment of the adequacy of the water supply to meet fire flow requirements for the proposal.

4.4.4. Consent Conditions

Final conditions will depend on the responses to the above RFI. However, in the interim some general conditions are proposed.

4.5. Flooding and Flood Management

4.5.1. Flooding Assessment

The 200-year flooding depths are shown in Figure 4 below. The site has low risk of flooding.

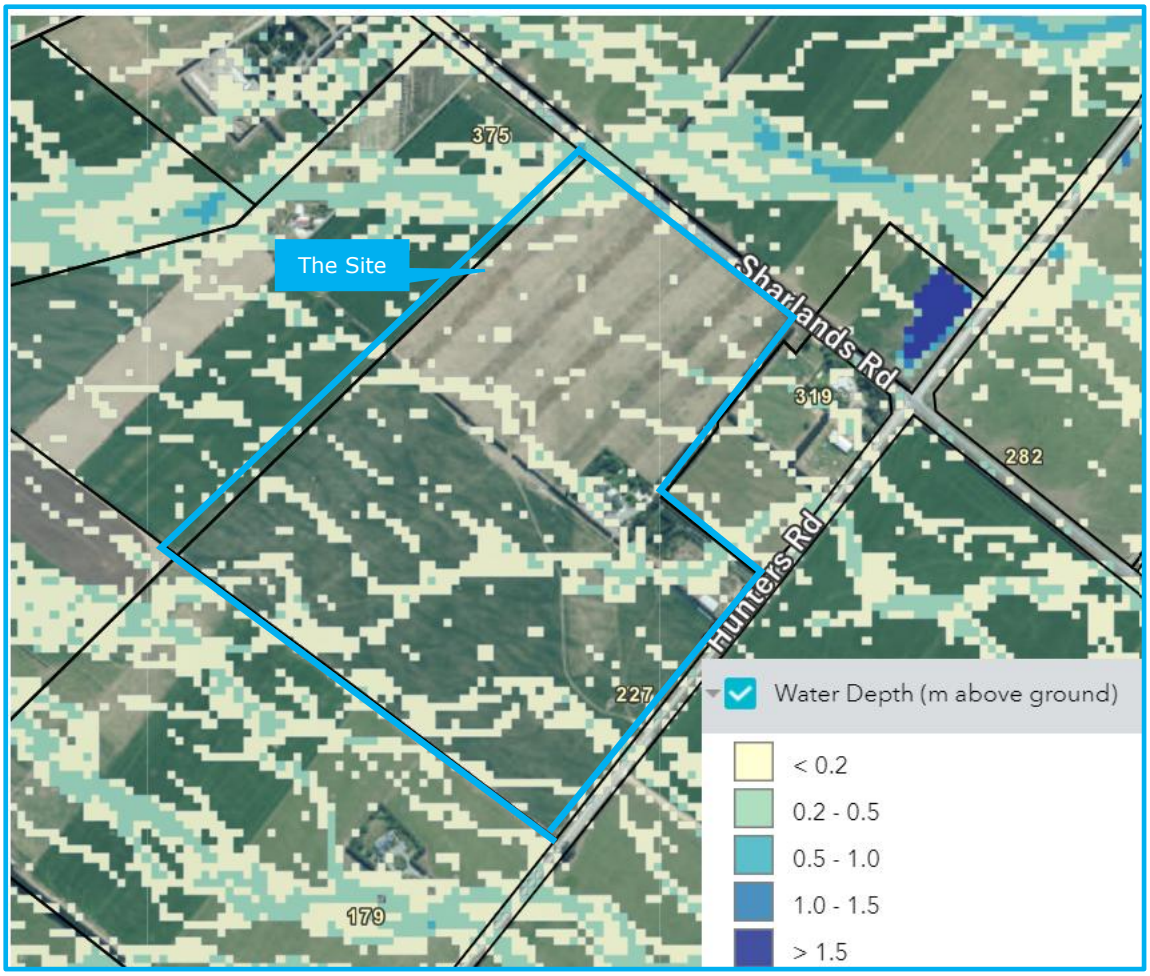

Figure 4 – 1:200 Year Flood Maps

4.5.2. Internal Notes/Comments

The site has low risk of flooding. While the earthworks will be significant (>10,000 m^3) these will be on a flat site and for the building platforms and access. Given the nature of the proposed activity and site we have no concerns as regards the flooding.

4.5.3. Consent Conditions

The standard flooding conditions will apply.

4.6. Power, Telecommunications

4.6.1. Utilities

The AEE states that:

- *There are also existing connections to electricity and telecommunications services in place.*
- *A connection to the existing electricity system will be provided to both poultry sites. Each site will also have an electricity generator which will be used in the event that there is a power failure.*
- *The emergency generators will be used as part of the continued operation of the Breeder Farm as and when required of which will all occur on the same property. Further the electricity will not be distributed to any external network electricity grid*

4.6.2. Conditions

Given the nature of the proposal and the fact that infrastructure is said to already be in place no conditions are proposed.

4.7. Streetlighting

No applicable.

4.8. Roading, Traffic and Access

4.8.1. Road Classification

Hunters Road and Sharlands Road are local roads.

4.8.2. Traffic and Access Proposal

The site will have two vehicle crossings (one being the proposed access off Sharlands Road and the other being the existing vehicle crossing off Hunters Road used by the existing dwelling).

The AEE provides an assessment of traffic and access as follows:

- *"Access to the meat chicken operation will be via a new vehicle entrance off Sharlands Road approximately 290m from the Sharlands Road/Hunters Road intersection. The vehicle crossing will be constructed to safely accommodate the traffic resulting from the proposal.*
- *The vehicle crossing will be sealed for the full width and length of the vehicle crossing between the carriageway and the site boundary.* This vehicle entrance will be sealed for at least the first 10m of its length.
- *It is expected that the proposal will generate approximately 47 car equivalent movements (CEM) per day, or 338 CEM per week*
- *Each site will have a parking area for up to 12 light vehicles located to the east of the egg packing facilities. There is also a perimeter service road where heavy vehicles will be able to move around the site exiting the site without onsite manoeuvring."*

4.8.3. Internal Notes/Comments

The proposal complies with all the relevant traffic and access rules.

4.8.4. Consent Conditions

Standard consent conditions roading, access and a LIM for accessways and crossings should suffice.

4.9. Trees and Landscaping

4.9.1. Landscaping Review

This will be updated when JC's comments become available.

4.10. Water Races

4.10.1. Proposal

There is a water race that runs along the road Sharlands Channel water race.

4.10.2. Internal Notes/Comments

We note that the proposed access will be over the Sharlands Chanel water Race as shown in Figure 5. Engineering approval will be required for the crossing. However, as there are no details of the nature of the cross e.g. culvert vs bridge a RFI has been generated.

4.10.3. RFI

Can the applicant provide the proposed details of the proposed access on Sharlands Road? In particular, the nature of the crossing given the water race.

4.10.4. Consent Conditions

Standard consent conditions are proposed.

Figure 5 – Location of the Water Race

4.11. Land Drainage

4.11.1. Assessment of the Proposal

The flood maps shows that the land provides drainage to the upstream catchments. There are no concerns with flooding.

4.11.2. Consent Conditions

Standard drainage conditions are recommended.

4.12. Environmental Management

4.12.1. Proposal

Environmental management will include:

- Activities associated with the earthworks. This will include dust management and ESCP.
- Compliance with any regional council consents to avoid or minimise environmental impacts.

4.12.2. Consent Conditions

Standard conditions associated with the earthworks are recommended.

5. Assessment Methodology

5.1. Regulatory Framework

5.1.1. General

These have been addressed against the relevant engineering aspects in Section 4 above.

5.1.2. Vested Assets

The crossing over the water race will be vested given that it will be over or within the council waterway.

5.2. Engineering Approval Requirements

These have been addressed against the relevant engineering aspects in Section 4 above.

6. Recommended Conditions

See Engineering Assessment Report.