



Technical Memorandum

TO David Wright FROM Daryl Irvine
Fonterra Limited DATE 8 April 2020
RE Hautapu Plant WWTF Section 92 response related to Traffic Movements (LU/0050/20)

1.0 Introduction

Fonterra Limited (Fonterra) has lodged a landuse consent application with Waipa District Council for activities associated with construction and operation of a wastewater treatment facility (WWTF) for the Fonterra Hautapu Plant, on land referred to as the Buxton Farm. The WWTF will require access via Fencourt Rd for construction vehicles, materials and equipment, and vehicles associated with the treatment facility operation.

Following lodgement of the application, Waipa District Council has requested further information, under Section 92 of the Resource Management Act 1991, in a letter dated 10 March 2020. This technical memorandum has been prepared by Pattle Delamore Partners Limited based on information provided by Fonterra, to address the questions raised in the request for further information, relating to traffic movements.

Since completion of the AEE, some more detailed evaluation of potential traffic movements has been carried out to better define the potential peaks that might occur. These new peak numbers are incorporated into this technical memorandum.

2.0 Section 92 Responses to Questions Relating to Traffic Movements

2.1 Question 1

- In the consideration of construction traffic effects, Section 4.1.3 of the AEE anticipates 240 vpd, inclusive of concrete truck movements. Please clarify the anticipated length of the construction period, based on the worst-case scenario. This will provide potentially affected parties with more certainty regarding the scale of this construction effect.*

The construction period may take up to a year (12 months) to complete, with the stages and associated daily traffic volumes summarised in Table 1. Traffic volumes are based on the number of vehicles accessing the property on a daily basis.

Table 1: Estimated Daily Traffic Volumes

	WWTF Construction Phase					Operations	
	Set up Stage	Civil Works (Earthworks)	Construction (Concrete structures)	Mechanical/ Electrical	Commission	WWTF Ops	Farm Ops (Existing)
Duration (sequential weeks)	4	12	16	12	6	ongoing	
Working Time	Monday – Saturday (7:30am – 6:00 pm)					24 hrs/ 7 days	Day light hours
People on site (per day)	5	20	30	50	20	5	3
Light Vehicle Movements (vehicles/day) ²	5 avg 10 max	10 avg 20 max	15 avg 30 max	25 avg 50 max	10 avg 20 max	10 avg	5-7 avg
Heavy Vehicle Movements ^{2, 3}	1 avg 5 max	5 avg 30 max (6 days)	15 avg 50 max (4 days)	1 avg 5 max (2 days)	2 avg 20 max (5 days)	5 avg 10 max	<1 avg 50 max (9 d/yr)
<p>Notes:</p> <ol style="list-style-type: none"> Traffic volumes are estimates only, provided prior to detailed design and detailed construction planning. Therefore, personnel and traffic numbers may vary; Traffic numbers are based on individual vehicles accessing the site via Fencourt Rd. One vehicle movement is defined as one vehicle. For example, a worker who arrives at the site alone in a single car and then leaves at the end of a shift represents one movement. A heavy vehicle movement represents one heavy vehicle. 							

2.2 Question 2

- Please outline the extent of construction traffic associated with any off-site transport of spoil as a result of the conventional pond option (requiring significant cut, c. 150,000 m³).

Earthworks associated with construction of the WWTF is intended to be based on a cut-to-fill construction, meaning minimal movement of fill material to and from the site. Excess fill will be managed on site. There may be a need for some foundation material to be brought to site, or a small fraction removed from site for local farm tracks. Heavy vehicle numbers outlined in Table 1 include potential movements of fill material to and from site and, comparatively, heavy vehicle movements associated with fill material will be minor.

2.3 Question 3

- In the consideration of operational traffic effects, section 4.2.6 of the AEE states “there will be heavy vehicle movement associated with the removal of waste activated sludge (WAS) and alum sludge if they cannot be irrigated onto land”. The commentary goes on to anticipate 10 peak movements per day comprising 6 movements for trucks and 4 movements for site operators. It is assumed that the proposed WWTF enables WAS and alum sludge to be irrigated onto land, and thus avoids heavy vehicle movement associated with conventional waste removal; this needs to be confirmed. With this in mind, it would be useful to understand if the proposed WWTF will lead to a reduction in vehicle movements relative to the existing activities on the site.

Anticipated vehicle movements associated with the operation of the WWTF are summarised in Table 1. Nutrient limits set by the proposed irrigation to land consent will dictate how much WAS can be irrigated to the Fonterra owned farms. The estimated traffic movements in Table 1 are based on the lowest expected nutrient limits (highest expected trucking rates) and include trucking WAS and other associated sludges from the site and importing treatment chemicals to the site. WWTP operational period traffic movements outlined in Table 1 are in addition to existing farm operational traffic movements from the site (also outlined in Table 1), therefore an increase in operational traffic movements is expected.

Traffic monitoring data, provided by Waipa District Council, for the Fencourt Rd section between Flume Rd and Hogan Rd indicates an average daily traffic count of 1,350 vehicles per day, of which 7.1 % (96) are heavy vehicles. Traffic data was collected over a 7 day period in June 2019. Based on the anticipated additional vehicles associated with the wastewater treatment plant operation (2, one-way, movements per vehicle), this will contribute an additional 2.2% to vehicle movement on that section of Fencourt Rd and 10% to heavy vehicle movements.

2.4 Question 4

4. *Please confirm the cumulative traffic effects associated with the proposed activity and existing day-to-day operation of the Buxton farm.*

Existing traffic movements to the Buxton Farm will include farm staff, irrigation staff, trucks associated with occasional movement of stock (to and from the site) and occasional harvesting machinery and trucks associated with cut and carry operations. Based on the move away from a dairy operation, daily milk tankers will have ceased, in 2019. Based on the current cut and carry operation of the Buxton Farm, assuming a third of the property is harvested on a given day, estimated traffic movements are summarised in the "Farm Ops" column in Table 1.

Prepared by



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