Appendix T8 - Hautapu Dairy Manufacturing Site

T8.1 Explanation

Permitted Gate Movement Threshold

T8.1.1 These represent the maximum vehicle movements permitted at individual gates to and from the site per day based on a seven-day average demand. They provide operational flexibility, allow growth on the wider road network and allow for the diversion of traffic from one gate to another within the stated maximum values. The effects of trip generation above these thresholds must be assessed in accordance with Rule 16.4.2.25.

Permitted Network Threshold

T8.1.2 These thresholds represent the limit of Heavy Commercial Vehicle (HCV) trips on the surrounding network per day, based on a seven day average demand, which can occur without the need for more detailed investigation. The effects of Heavy Commercial Vehicle volumes above these thresholds must be assessed in accordance with Rule 16.4.2.25.

T8.1.3 The seven day average traffic demands and trip generation values are maxima and take into account seasonal variation i.e. are based on peak season traffic demands. They are to be calculated by dividing seven continuous days' traffic data by seven to find the average daily demand or trip generation.

T8.2 Permitted Gate Movement Thresholds

T8.2.1 An Integrated Transport Assessment in accordance with Rule 16.4.2.25 shall be required if the daily trip generation based on the seven day average trip generation of all gates at the Hautapu Dairy Factory exceeds:

(a) 910 light vehicle movements per day; or

(b) 442 Heavy Commercial Vehicle movements per day.

T8.2.2 An Integrated Transport Assessment in accordance with Rule 16.4.2.25 shall be required if the daily trip generation based on the seven day average trip generation at any individual gate of the Hautapu Dairy Factory exceeds the limits set out in Table 1. The gate locations are identified on Figure 1.

Table 1: Maximum permitted trip generation for individual gates at the Hautapu Dairy Factory

Gate No.	Description	Daily trip generation limit (vehicle movements per day based on a seven day average)				
		HCV		AND / OR	Light Vehicles	
		In	Out		In	Out
1	Two-way. Main tanker access, plus staff parking	336	336	AND	215	215
2	Two-way. Staff parking only	0	0	AND	200	200
3	Two-way. Visitor parking and coal deliveries	1	1	AND	63	63
4	HCV lay-by access to plant	3	3	AND	0	0
5	Two-way. Access to plant	20	20	AND	0	0
6	Two-way. Access to staff parking	60	60	OR	180	180
7	Two-way. Access to staff parking, plus HCV depot	5	5	AND	30	30
8	Entry-only. Whey distribution	12	0	AND	0	0
9	Exit-only. Whey distribution	0	12	AND	0	0
10	Two-way. HCV exit from Gate 6. Access to staff parking	14	14	AND	100	100

Specific Requirements

- Where the daily trip generation limit in Table 1 specifies "AND", this represents the upper limit for each vehicle type. The daily trip generation at each gate should not exceed this upper limit for each vehicle type. For example, the daily limit for Gate 1 is 672 Heavy Commercial Vehicles and 430 light vehicles.
- Where the daily trip generation limit in Table 1 specifies "OR", this represents the combined upper limit for both vehicle types. The daily trip generation at each gate shall not exceed this upper limit. For combinations of Heavy Commercial Vehicles and light vehicles at Gate 6, Heavy Commercial Vehicle shall be converted to Equivalent Car Units (ECU) on the basis of 1 Heavy Commercial Vehicle = 3 light vehicles. For example, the daily limit for Gate 6 is 120 Heavy Commercial Vehicles or 360 light vehicles, or 60 Heavy Commercial Vehicles and 180 light vehicles.
- The calculation of daily trip generation includes movements between different parts of the site which use public roads (i.e. Where there is no internal route).

Figure 1: Hautapu Dairy Factory gate locations

T8.2.3 An Integrated Transport Assessment in accordance with Rule 16.4.2.25 shall be required if the operation of a gate changes fundamentally from the description set out in Table 1. Examples of a fundamental change include a gate changing from entry only to exit only, or from one-way to two-way operation.

T8.3 Permitted Network Thresholds

T8.3.1 An Integrated Transport Assessment in accordance with Rule 16.4.2.25 shall be required if the number of Heavy Commercial Vehicles movements per day, measured as a seven day average, exceeds the total volume set out in Table 2.

Table 2: Maximum permitted heavy commercial vehicle (HCVs) movements per day

Road	Total Heavy Commercial Vehicle Volumes (HCV movements /day) limit
State Highway 1B (north of the site)	75
State Highway 1B (immediately south of the site)	385
State Highway 1 through Cambridge	50
Via Waikato Expressway	335
Daily trip generation shall be measured as a seven day average trip generation. Note: These seven day averages represent maximum numbers when in operation and should not be averaged across longer periods.	

T8.4 Site Specific Assessment Criteria additional to 21.1.16.5

(a) Sight distance and access spacing deficiencies at individual gates identified in Table 3, in relation to the scale of activity and number of car parks accessed from these gates; and

(b) Ability for Gate 1 on Hautapu Road to be used as an alternative vehicle access; and

(c) Impact on safety of the State Highway 1B/Hautapu Road/Bruntwood Road intersection; and

(d) The extent to which redevelopment of the site considers opportunities to reduce the number of vehicle crossings to Bruntwood Road and State Highway 1B; and

(e) The extent to which redevelopment of the site considers opportunities to relocate Gate 2 further north if there is an increase in staff parking accessed from it; and

(f) The extent to which redevelopment of the site considers closing Gate 4.

Table 3: Sight Distance and Access Spacing Deficiencies

Gate No.	WIDTH AT BOUNDARY (m)		SIGHT DISTANCE (m)			SPACING FROM INTERSECTION (m)			SPACING FROM ADJACENT CROSSING (m)		
	Required	Actual	Required	To left	To right	Required	Left	Right	Required	Left	Right
1	5 to 7.5	22.0	-	-	-	100	-	55	-	-	-
2	5 to 7.5	10.2	175	-	145	-	-	-	-	-	-
3	5 to 7.5	10.7	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	40	20	-
6	5 to 7.5	16.6	-	-	-	-	-	-	40	-	20
7	-	-	105	90	46	45	-	41	-	-	-
8	5 to 7.5	12.0	-	-	-	-	-	-	40	27	35
9	5 to 7.5	11.0	-	-	-	-	-	-	40	34	27
10	5 to 7.5	10.0	175	140	-	-	-	-	40	-	34
Required sight distances are based on RTS6: Guidelines for visibility at driveways. Spacing of crossings from intersections and other vehicle crossings is based on Rule 16.4.2.5.											