

30 January 2020

Waste Management New Zealand Ltd
PO Box 228
Silverdale
AUCKLAND 0944

**Attention: Bruce Horide
Ian Kennedy**

Dear Bruce / Ian

Auckland Regional Landfill – Request for Further Information

Stantec is pleased to provide the following response to the traffic comments received from Auckland Council, dated 24 December 2019 with regards to the Private Plan Change application and the additional Section 92 comments dated 30 January 2020 with regards to the Resource Consent application, in respect of the above project.

1. Introduction

Following receipt of the Private Plan Change application for the above development, Auckland Council has issued a request for further information under Clause 23(2) of the Resource Management Act 1991 (**“the request”**), dated 24 December 2019. Auckland Council has also included these traffic comments within an additional request for further information under Section 92 of the Resource Management Act in regard to the Resource Consent application, dated 30 January 2020.

The following response addresses the transport related matters raised within the request for the proposed Auckland Regional Landfill (**“ARL”**) in Wayby Valley. These queries are cited in italics for ease of reference with the Stantec response following.

This response builds on the Integrated Transport Assessment (**“ITA”**) prepared by Stantec dated May 2019 in regard to the ARL.

2. Responding to Request for Further Information

Transport Bullet Point 1

“Traditionally, analysing the AM and PM peaks during the week is generally acceptable. However, given the popularity of this road during the weekend, particularly in summer periods, separate modelling for the weekends is needed to assess the situation fully”.

The reported traffic generation of 520 trips per day and the subsequent morning and evening peak hour traffic generation (as shown in Table 5-2 of the ITA) has been determined based on the expected peak hour traffic during the year. This has been assessed by considering the characteristics and patterns of current waste volumes, customers and total waste volume acceptance at the Redvale Landfill.

As experienced at the Redvale Landfill, the peak traffic generation associated with a regional landfill is strongly influenced by contaminated soils during the summer construction season, which are typically transported by contractors and hauliers on weekends and outside the weekday peak periods. Therefore, the peak traffic generation of waste truck movements (520 trips per day inclusive of both inbound and outbound movements) used in the modelling assessment is expected to occur on a Saturday.

In regards to holiday and weekend traffic, traffic flows from the New Zealand Transport Agency (“NZTA”) traffic count database on State Highway 1 (“SH1”) at a count site south of Wellsford across the first week of January 2019 (which can be considered the peak holiday period) have been analysed. Traffic data from NZTA database shows that a the two-way SH1 volume on Saturday 5 January 2019 was approximately 4,100 vehicles and 4,600 vehicles in the morning and evening peak four-hour periods, respectively. Assuming a 3% growth rate per annum (consistent with the growth rates used in the ARL ITA assessment), it is expected that the peak traffic flows on SH1 in 2028 (corresponding with an expecting year of ARL established operation) would be approximately 5,400 vehicles and 6,000 vehicles in the morning and afternoon peak-four hour periods, respectively.

A peak intensity of 72 waste truck movements (inclusive of laden inbound and unladen outbound movements) is expected to occur between 8am to 12am, and 12 and 4pm, which coincides with the identified four-hour peak period of SH1 usage. Across these morning and afternoon peak four-hour periods, the ARL traffic generated represent approximately 1% of the total SH1 Saturday holiday traffic. Such additional flows are considered to be well within the day-to-day and peak period to peak period variation of flows already being carried by the highway.

Heavy vehicle volumes during the peak four-hour period on the same day were recorded at 426 vehicles and 468 vehicles in the morning and evening peak four-hour period respectively. Considering the estimated background traffic growth between the 2019 data and the year of established operation, approximately 560 and 610 heavy vehicles in the morning and afternoon peak four-hour period respectively are expected to travel through this section of SH1 in 2028. The heavy vehicle generation of the landfill represents an increase of approximately 12% to 13% of the predicted heavy vehicle volumes along SH1 in 2028, taking the total proportion of heavy traffic from 10% to 11% of the total traffic within the peak four-hour periods (i.e. a 1% increase).

The proportional increase in traffic associated with the landfill during the summer periods remains modest and would not adversely affect the operation of the highway. It is noted that during the other January 2019 analysed periods SH1 traffic data record showed greater proportion and total number of heavy traffic movements. Analysis of the January 2019 data reveals that the hourly heavy vehicle proportion regularly exceeds 10% of the total traffic, both on a Saturday and weekdays.

In addition, the above assessment has been undertaken on the assumption that the peak waste truck generation would remain consistent during the summer holiday period. Whilst the waste truck generation over the holiday period is influenced by many factors, it is commonly known that residential waste tonnage collected during this period is less than on a regular day. Similarly, contaminated soil tonnages are known to drop during the Christmas and New Year break. In this regard, the above assessment is considered to provide a suitably conservative assessment of the effect of the landfill on weekend and holiday traffic.

Modelling undertaken within the ITA incorporated multiple levels of conservatism such as:

- assuming co-incident waste and non-waste peak periods; and
- upper estimate of waste volume generation.

As the modelling results in the ITA show that the proposed roundabout will operate with minimal delays and additional available capacity, no further modelling of SH1 holiday period is considered necessary.

Overall, it is considered that the modelling undertaken within the ITA is sufficient to understand the overall traffic effects of the proposed plan change and consent application.

Transport Bullet Point 2

“The operational impact of heavy vehicles travelling though Dome Valley from Warkworth to the proposed roundabout requires further assessment. With the daily addition of 260 heavy vehicles it

is assumed there will be an impact on traffic flows, particularly on the up-hill sections. An assessment is to include, but not be limited to, grades of hills to and from the roundabout, passing lanes in each direction, horizontal geometry, existing speed limits and operational speeds. This is particularly important as it has been noted that Dome Valley has a very high number of crashes, with almost 20% being directly related to overtaking”.

It is noted that this section of SH1 already carries a high heavy vehicle proportion, both during the weekday and on the weekend, with heavy vehicle proportions varying between 8% to 15% in 2019. As discussed previously, the ARL activity is expected to increase heavy vehicle volumes by 12% to 13% in the ARL 2028 operational year, taking the proportion of heavy traffic within the weekend peak four-hour periods to 11% of the total peak traffic volume (i.e. an increase in total heavy vehicles of approximately 1%). It is acknowledged that the increase in heavy vehicles will have some impact on traffic flows and speeds, however, the provision of various passing and slow lanes as currently exist (in part) and as being upgraded within the current NZTA safety improvements through the Dome Valley, will assist in the mitigation of any negative effects additional vehicles may have compared to the existing environment. It is also noted that the projected volumes and proportions of heavy traffic carried along the highway while giving rise to additional traffic flows along the highway are not greatly inconsistent with other periods of heavy traffic movements at other time of the week.

The NZTA Dome Valley Safety improvements being undertaken within the Safer Networks Programme will enhance the consistency of lower travel speed expectations and enhance the safety of any overtaking manoeuvres being undertaken. Work involves installing flexible median safety barriers and replacing the northbound and southbound passing lanes at the top of the Dome Valley with a wider shoulder, allowing slow vehicles space to pull over. These improvements are expected to be completed well in advance of the construction of the ARL access roundabout and other works for the ARL project, and are expected to positively address the high proportion of overtaking crashes and provide a more consistent speed environment. It is noted that all works on SH1 including grades and geometry will be subject to the express approval of NZTA and accordingly, these design matters will be addressed during the consent application.

We trust that the above response meets your requirements, however, please do not hesitate to contact us if you have any queries on the above.

Yours sincerely



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