

Ref: 310200185

9 October 2019

Waste Management New Zealand Ltd
PO Box 228
Silverdale
AUCKLAND 0944

Attention: **Bruce Horide**
 Ian Kennedy

Dear Bruce / Ian,

Auckland Regional Landfill, Section 92 Response

Stantec is pleased to formally provide the following response to the traffic comments received from Auckland Council, dated 18 September 2019, in respect of the above project.

1. Introduction

Following receipt of the resource consent application for the above development, Auckland Council has issued a request for further information under Section 92 of the Resource Management Act 1991 ("**s92 request**") dated 18 September 2019. The following response addresses the transport related matters raised within the s92 request on the application number BUN60339589 for the proposed Auckland Regional Landfill ("**ARL**") in Wayby Valley. These queries are cited in italics for ease of reference and responded to below.

2. Responding to Section 92 Requests

2.1. Item 110

"Within Figure 3-2 of the submitted Stantec traffic report there are five activities shown from 2022 to 2023. However, in Table 3-1 only the latter four activities are shown to develop the daily and peak hour construction vehicle movements. That is, the daily and peak hour construction vehicle movements for the Crowther Road Upgrade are not included. Please include these vehicle trips in Table 3-1 or provide an explanation / rationale why they aren't included."

Table 3-1 in the ITA has been revised to provide a more detailed breakdown of the traffic movements associated with the construction/site establishment phase for each construction season. Furthermore, the table breaks down the construction traffic via Crowther Road and via the Landfill Access Road as two separate activities.

The revised Table 3-1 and associated text summary has been included within this s92 response as an appendix.

A further revision to the first paragraph of Section 5.2.2.1 has also been identified as necessary to clarify over which peak period the traffic volumes in that paragraph refer. A revised page including this minor change has been attached to this s92 response.

2.2. Item 111

“With additional truck traffic to and from the north has there been a safety or capacity analysis completed on the possible effects to Wellsford traffic and the existing State Highway 1 (SH1), including consideration of peak holiday periods? This is a potentially significant concern.”

ARL Traffic Movements to/from the north

During the operation of the proposed ARL, including during the peak hour operations, the vast majority of waste trucks are predicted to arrive from and depart to the south. Any waste truck movements during the day to and from the north are expected to be modest and would generally be similar to those volumes currently accessing the Redvale Landfill from north of Wellsford and passing along the existing SH1 through Wellsford.

The waste volumes expected to be attracted to ARL are based on the current Redvale waste volumes and associated sources of waste. Given that the greater Whangarei area is currently serviced by the Puwera Landfill (which will continue to operate once ARL is operational), it is expected that very few customers (if any) will drive south from Whangarei to use ARL. Puwera is approximately 12km south of Whangarei as compared with the ARL, which is an additional 75km south from that facility.

It is understood that there is some potential for waste operators in the Mangawhai area to travel to ARL, but they would most likely adopt the more convenient travel route via Wayby Valley Road and avoid SH1 through Wellsford.

Waste Management NZ (“**WM**”) advises that the waste volumes likely to be generated from the rural areas between Whangarei and ARL would be very low due to the small population and limited levels of activity, and that even if some of this waste was to be transported south via Wellsford to ARL for disposal, the traffic volumes would be insignificant (likely to be no more than two waste truck loads per day).

Given current and proposed improvements to SH1 (Puhoi to Warkworth), it is expected that the waste from Auckland heading north would use the upgraded SH1 rather than negotiate the alternative SH16 bypass access via Kaukapakapa and Helensville. In this way the only Auckland traffic that might reasonably use SH16 to access ARL via Wellsford would be from the Helensville area, and again this would be unlikely to be more than two waste truck loads per day.

The very low level of additional movements of waste truck loads going to and from ARL through Wellsford will have a negligible effect on the safety or efficiency of that section of SH 1, during either peak periods (e.g. holiday periods) or off peak times.

Holiday Period Activity

In respect of the potential overlap of ARL traffic (from both the north and south along SH1) and possible impacts on SH 1 traffic during peak holiday periods (which have been assessed as negligible), the following general observations and assessments can be made:

- The existing Redvale landfill facility is close enough to urban Auckland for the kerbside waste collection trucks to deliver directly to the landfill however, because of the added travel distances between Auckland and ARL, it is expected that this waste will be delivered to refuse transfer stations and then hauled in bulk to ARL.
- Traffic from Waste Management's transfer stations is expected to comprise approximately 45-50% of the total waste traffic count. The ARL is intentionally being designed with a bin exchange area for the express purpose of WM's haulage fleet operating during off peak periods and spreading traffic across a 24 hour day, and across seven days a week.
- The ARL application relates to a 7-day operation which is further expected to assist in effectively spreading the waste transport activity, relative to the more restricted hours currently applying to the Redvale operation.

As experienced at Redvale Landfill, a lot of summer construction season contaminated soils originating from Auckland city area will typically be transported by contractors and hauliers on weekends outside the weekday peak period of higher delays and congestion. Allowing such 7-day access to ARL will therefore spread the traffic loads during any period, with a higher emphasis on Saturday and Sunday deliveries. While that may mean some additional traffic demand across the weekends, this does contribute to an overall reduction in the weekday summer holiday waste transport demands.

2.3. Item 112

“Based on the office space area, one cycle space is required? Please confirm that one space can be provided on-site or apply the non-provision of a cycle space as a consenting requirement, noting the relative practicalities (or lack thereof) of accessing the landfill by cycle.”

It can be confirmed that one cycle parking space will be provided on-site. The exact location of the cycle parking space will be confirmed at a later stage during detailed design.

2.4. Item 113

“50 carparking spaces are proposed on-site. Please confirm that there will be a compliant amount of accessible parking as set out in New Zealand Building Code D1/AS1 New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001).”

The New Zealand Building Code D1/AS1 requires two mobility parking spaces for the first 50 parking spaces and one for every additional 50 spaces or part thereof. For a provision of 50 parking spaces, two mobility spaces are required. Two mobility spaces will be provided on-site, with the exact location and dimensions of these spaces to be confirmed at a later stage. The design of the mobility spaces will satisfy the New Zealand Building Code.

2.5. Item 114

“Will the car parking space size and manoeuvring area be compliant with the AUP(OP)? If so, please demonstrate this.”

At this point in time, the exact dimensions and locations of the parking spaces within the weighbridge area have yet to be finalised. However, those parking spaces will be fully compliant with the design standards of the Auckland Unitary Plan (AUP).

A total of 10 car parking spaces are to be provided within the Bin Exchange Area. These parking spaces will be predominantly used by staff and so the parking layout dimensions are based upon the AUP requirements for regular users. All of the parking spaces are arranged perpendicular to the driveway. The AUP requires minimum dimensions of 2.4m width, 4m depth from the kerb and a manoeuvring space of 7.1m. The parking spaces have typical dimensions of 2.4m width and 5m length, with at least 1.6m of manoeuvring space. These dimensions comply with the minimum dimension requirements of the AUP requirements.

2.6. Item 115

“Please confirm if any marked loading spaces are to be provided on-site.”

The specific operations of the ARL as a landfill and the high reliance upon specific facilities for waste transport and other vehicles, there is not expected to be a significant demand for specific “other” loading facilities.

The visitation of service vehicles (e.g. fuel deliveries, other consumables, etc) will be catered for by the available space dedicated on-site.

WM confirms that it is intending to provide a specific loading space adjacent to the main site office catering for such occasional visitors while signing into the site prior to proceeding through access controls to deliver parts etc to the workshops. This bay will also be used for rural postage deliveries which are delivered to the main office. An appropriate location and design will be made for this loading space at detailed design stage. The location and design of this loading bay will comply with any AUP requirements.

2.7. Item 116

"Please provide truck tracking diagrams to show access to and from the roundabout and bin storage area to demonstrate that sufficient area is available to accommodate all required truck activity on site."

Truck tracking curves showing truck access to and from the roundabout to the Bin Exchange Area are demonstrated in the attached **Figure 1**.

The tracking curves demonstrate that sufficient space is provided at the connection between Landfill Access Road and the bin exchange area to accommodate truck movements, and that no manoeuvrability issues are expected. The detailed design of this area will be confirmed the detailed design stage and the approval of the overall roundabout and weigh-bridge access design will be subject to approval by NZTA.

2.8. Item 117

"Please confirm that the vertical clearance for car parking spaces, accessible spaces and loading spaces complies with AUP(OP) requirements, i.e. that there will not be any covered areas."

As previously discussed, the detailed design of the parking spaces has yet to be finalised. However, it is confirmed that the parking spaces will not be covered and will satisfy the AUP requirements regarding vertical clearance.

2.9. Item 118

"Will the gradient of the car parking spaces, accessible car parking spaces and the manoeuvring area comply with the AUP(OP)? If so, please demonstrate this."

The gradients of the parking spaces within the weighbridge area will be designed to satisfy the AUP requirements.

2.10. Item 119

"Has approval in principal been received from the New Zealand Transport Agency (NZTA) for the works within SH1, noting the ongoing consultation that has been undertaken to date. It would be of benefit to note any specific requirements from the NZTA in terms of possible conditions."

Ongoing consultation has been held with NZTA for the works within SH1 and NZTA are aware of the proposed roundabout and Crowther Road works within the SH1 designation. Any necessary statutory approvals will be sought directly from NZTA for works within that designation.

2.11. Item 120

"In terms of timing for construction of the roundabout, how will the proposed Dome Valley safety improvements integrate with the timing for construction of the roundabout access?"

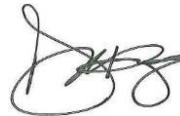
The Dome Valley Safety improvements will precede construction for the roundabout and any other works for the ARL project. Ongoing discussions have been held with Safe Roads Alliance (SRA) and more recently the Safer Networks Programme, which is understood to replace the SRA for projects beyond January 2020. These discussions are intended to integrate and pre-plan as best as possible the ARL project with the safety improvements works.

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



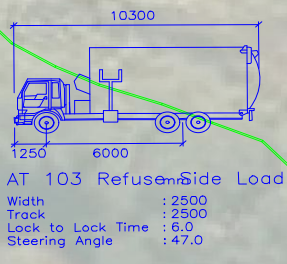
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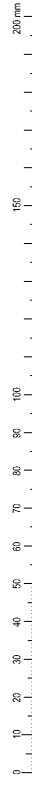
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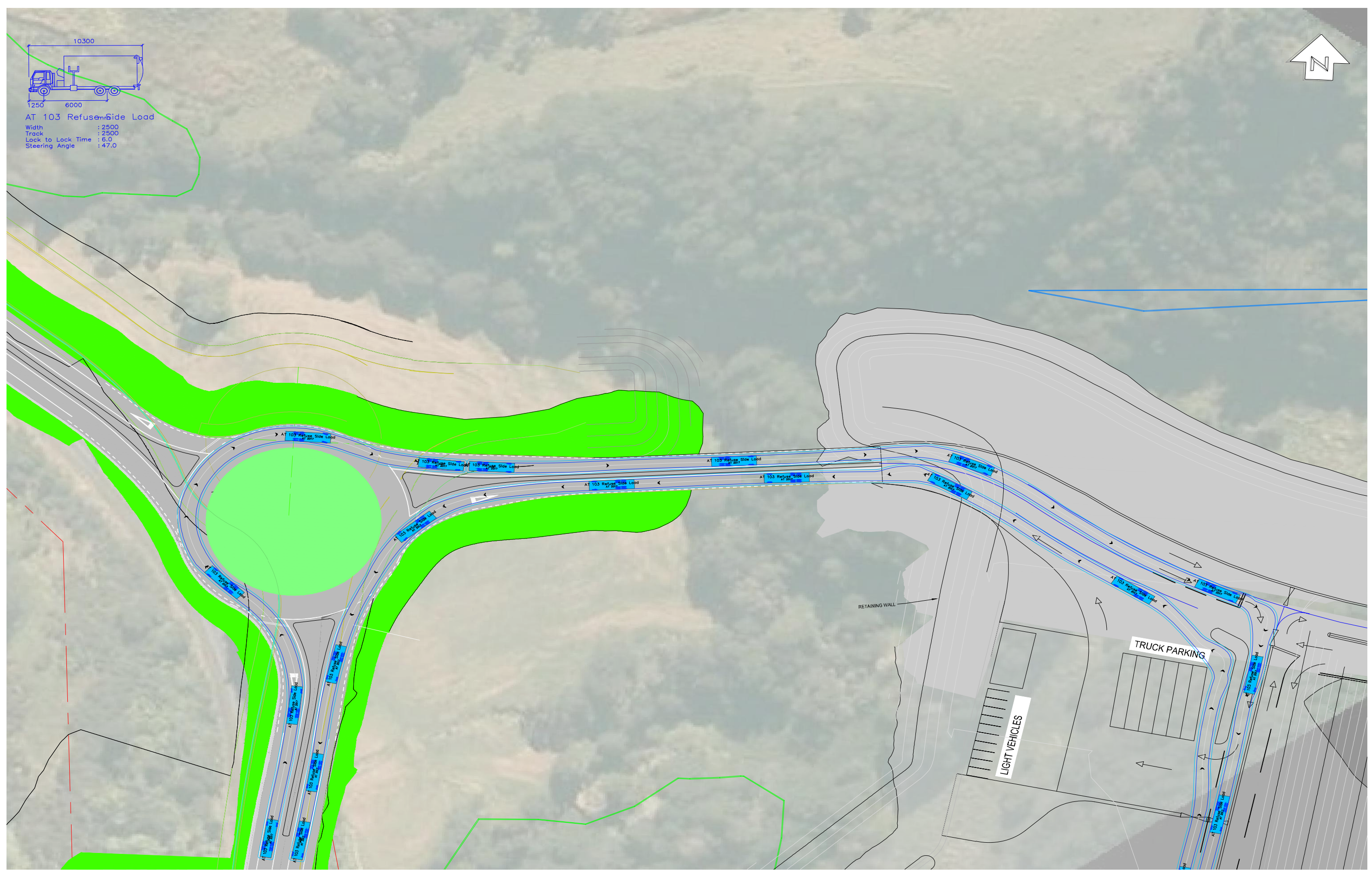
Encl: Attachments – Vehicle Tracking



DO NOT SCALE - IF IN DOUBT, ASK



ORIGINAL SIZE A1



NOT FOR CONSTRUCTION

REV	DESCRIPTION	SP	ZC	CHK	APP	DATE
A	VEHICLE TRACKING ANALYSIS					01.05.19
	REVISIONS	DRN	CHK	APP		DATE

SURVEYED		
DESIGNED		
DRAWN	SIJ PULETIJATOA	01.05.19
CAD REVIEW		
DESIGN CHECK		
DESIGN REVIEW		
APPROVED	NOT APPROVED	
PROF REGISTRATION:		



Client:

POLARIS ACCESS ASSESSMENTS
 DOME VALLEY, SH1
 PROPOSED ROUNDABOUT
 VEHICLE TRACKING

Status Stamp	CONCEPT
Date Stamp	02.10.19
Scales	1:500@A1
Drawing No.	80510280-0152-C120
Rev.	A

5.2.2 Trip Generation

5.2.2.1 Waste

In 2028, it is estimated that there will be a peak of 520 waste truck movements per day (inclusive of inbound and outbound directions of travel) spread over any 24- hour period, and a peak intensity of 72 waste truck movements during the assessed four hour peak period. For the purposes of a robust analysis, the peak intensity of waste truck movements with the peak intensity of non-waste traffic (which in reality will not coincide), have been adopted as a co-incident peak period of activity. This is considered to provide a conservative over-estimate of expected traffic movements and hence worst-case assessment of traffic effects at the proposed access road roundabout. The traffic generated by the site is only expected to represent approximately 3% of the traffic on SH1 in the morning peak hour and 1% in the evening peak hour.

In 2060, it is estimated that these truck numbers will be factored up by 56% to reflect a 1.4% growth per annum in waste for the period 2028 – 2060 (to a total of 811 waste truck movements per day).

In most cases, inbound waste trucks will be outbound again with little delay for their return trip.

5.2.2.2 Non-waste

Non-waste vehicles comprise staff, fuel and oil deliveries, leachate cartage, light deliveries, servicing and maintenance vehicles, and visitors. It is noted that the logging activity is excluded from these volumes.

In 2028, it is estimated that there will be a peak of 220 non-waste movements per day, and a peak intensity of 25 non-waste vehicle movements during the busiest hour of the peak 4-hour periods around work shift changes.

Notably, the non-waste vehicles numbers will reduce to two-thirds of these numbers in winter when construction works have ceased and will reduce further when leachate cartage is replaced by on-site treatment.

5.2.2.3 Logging

From the point of view of assessment of effects from the landfill, logging will be occurring regardless and is therefore part of the existing environment. However, the exit point onto SH1 for approximately 1000 ha of the Mahurangi Forest harvest will be shifted to the landfill's access road. The relevant next harvest is due in 2030-2034.

During the harvest commencing 2030, it is estimated that there will be a peak of 43 logging-related movements per day, and a peak intensity of 20 logging-related return trips over any 4-hour period.

Notably, logging trucks comprise less than half these numbers, the remainder being crew and service vehicles.

Over the course of the peak day in summer and during logging, it is expected that up to 415 vehicle movements at the entrance roundabout will be generated with 108 of these occurring over the peak 4-hour period. To estimate the peak hour period volume, 40% of the peak 4-hour volume has been conservatively assumed.

Given that the next harvest occurs after 2028, logging volumes have not been included in the 2026 and 2028 year model. Logging volumes have been accounted for in the 2060 scenario, based on the assumption that the volumes remain the same as those in 2030.

5.2.3 Trip Distribution

The road haulage waste trucks will usually depart the site within an hour of arriving, and as such this assessment considers that the number of waste trucks arriving will match the number leaving. Therefore, in the 2028 peak hour, 15 trucks will arrive to offload waste material and 15 trucks will leave the site generally within the same hour period.

Non-waste vehicles typically spend longer on the site with most vehicles arriving in the morning and departing in the evening. Of the 15 vehicle movements generated in the 2028 morning peak hour (non-waste excluding logging movements), it is expected that 90% of these will be inbound movements into the site. In the evening peak, the tidal direction will reverse so that 90% of vehicle movements are exiting the site.

At most (with the coincident activities of bridge construction, Landfill Access Road construction, liner preparation and forestry – exclusive of the roundabout construction activity which will be separately managed via construction traffic management plans in consultation with NZTA) there could be up to the following traffic movements associated with the construction/site establishment phase:

Table 3-1: Site Establishment/Construction Phase Heavy Vehicle Daily Volumes

Activity	First Construction Season (2022/23)	Second Construction Season (2023/24)	Third Construction Season (2024/25)	Fourth Construction Season (2025/26)
Via Landfill Access Road				
Crowther Road Upgrade				
Ponds and Stockpiles				
Forestry				
Bridge Construction	20	20		
Roundabout Construction	*	*		
Landfill Access Road Construction		20	20	
Bulk Earthworks/Liner			8	8
Fuel			4	4
TOTAL	20	40	32	12
Via Crowther Road				
Crowther Road Upgrade	40			
Ponds and Stockpiles	4			
Forestry	28	28		
Bridge Construction				
Roundabout Construction				
Landfill Access Road Construction				
Bulk Earthworks/Liner				
Fuel	4	4		
TOTAL	76	32		

This therefore equates to a total of up 76 heavy vehicle movements per day via Crowther Road during the First Construction Season, up to 40 heavy vehicle movement via Landfill Access Road (Second Construction Season) and 200 light vehicle movements per day visiting the site. During the busiest hour of the day there could be approximately 10% of the daily number of traffic movements representing approximately 8 movements per hour of heavy traffic and approximately 40 movements per hour of light traffic.

The assessment of these vehicle movements generated during the non-roundabout construction periods prior to the landfill operation is provided in Section 5 of this report. While the timing of certain construction and forestry activities have been selected as close as possible to the schedules and programmes provided by WMNZ, the overall conclusions as to the operation and effectiveness of the access provisions are not particularly critical, and minor delays or other changes in the programme are not expected to alter the overall conclusions reached in the respect to either the construction effects or operational assessment presented below.

3.3 Operational Activity

The proposed operating procedure for the ARL site will be similar to WMNZ's site at Kate Valley north of Christchurch in that it will operate a bin exchange area.