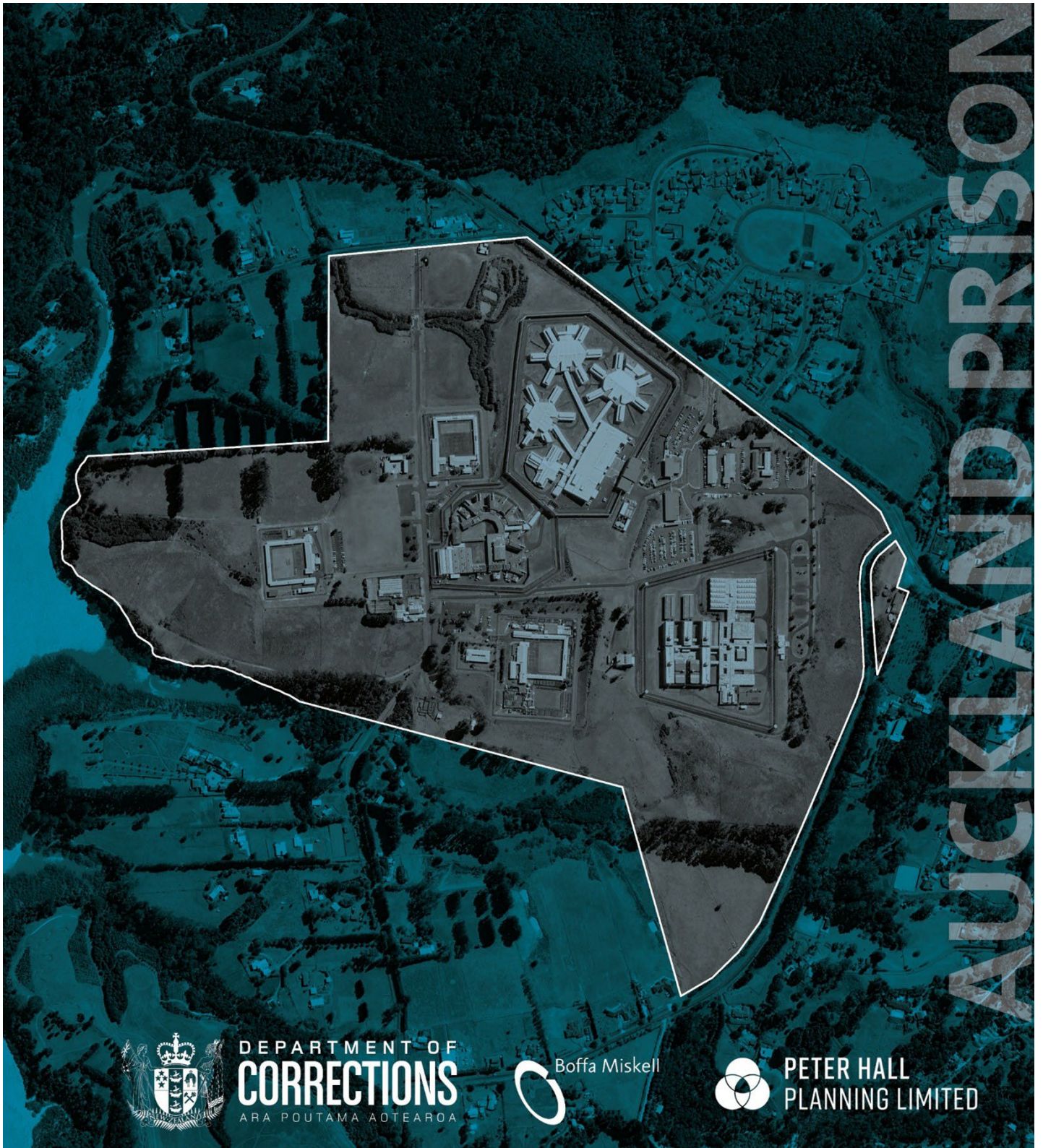


Auckland Prison Capacity Increase

Volume 3 – Appendix 3F
Traffic Assessment



DEPARTMENT OF
CORRECTIONS
ARA POUTAMA AOTEAROA



Boffa Miskell



PETER HALL
PLANNING LIMITED

Department of Corrections

**Auckland Prison – Capacity
Increase – Watercourse Works
Application**

**Construction Traffic Assessment
and Framework Construction
Traffic Management Plan**

March 2026

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Revision Schedule

Revision Number	Date	Description	Prepared/Approved by
1	05/09/25	First Draft	DJM
2	29/10/25	Second Draft	DJM
3	17/02/26	Final Draft	DJM
4	25/03/26	Final	DJM

The conclusions in the report are Don McKenzie Consulting Limited's professional opinion, as at the time of issuing report, and concerning the scope described in the report. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. The report relates to the specific project for which Don McKenzie Consulting Limited was retained and the stated purpose for which the report was prepared. The report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorised use or reliance is at the user's own risk.

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1 Executive Summary

This report considers the effect of construction traffic and provides a consequential Framework Construction Traffic Management Plan relating to the construction activities associated with proposed watercourse works within the Auckland Prison site at Pāremoremo Road, Pāremoremo. The watercourse works and associated earthworks and vegetation removal are required to facilitate the Auckland Prison Capacity Increase proposal being advanced through the Fast-track Approvals Act 2024 (“**FTAA**”) via an alteration of designation process by the Department of Corrections (“**Corrections**”). Concurrent with that will be a resource consent application for watercourse works and an outline plan waiver request to authorise the watercourse works. In order to provide for future secure facilities, the need has been identified to extend the piping of two watercourses within that part of the Auckland Prison site. Open watercourses would compromise the security of the Prison.

Accordingly, the works required to pipe the two watercourses will involve the following:

- Erosion and sediment controls established.
- Removal of vegetation surrounding watercourses.
- Temporary stream diversion and dewatering (as necessary).
- Process for the excavation of unsuitable material and the bedding zone for the proposed pipe (includes removal of any remaining vegetation surrounding the watercourses).
- Process for the installation and compaction of imported material to strengthen subgrade, provide bedding, lay pipe and backfill the barrel of the pipe.
- Install pipe extension (expected to be a 1500mm diameter pipe for Watercourse 1 and a 750mm diameter pipe for Watercourse 2).
- Create new outfall structures and energy dissipation features (such as a riprap apron).
- Backfill material over the pipe to a level generally consistent with the adjacent existing ground levels and associated reinstatement (hydroseeding).

It is estimated that these activities will occur over a total of approximately 2-3 months with the earthworks component occurring over approximately a 1-2 month period. During the earthworks period, it is expected that an average of approximately 10-15 return truck trips (up to 30 truck movements) per day (excluding Sundays and public holidays) will be required to cart fill material to site and remove any unsuitable material from site.

Construction access to the Site of the works is expected to be arranged via a combination of Pāremoremo Road, Iona Avenue and Sanders Road (“**Operational access 1**”), with other potential construction access route available via the existing main gate (“**Operation access 2**”) and eastern access (“**Operational access 3**”) connections to Pāremoremo Road. It is not expected that there would be any need for upgrading of the physical or operational form of these roads (or the wider transport network) to undertake the watercourse works given the



modest nature and scale of additional heavy transport movement anticipated and the ability and capacity of the adjoining and surrounding roads to accommodate such movements.

This Construction Traffic Assessment (which includes a Framework Construction Traffic Management Plan incorporated into the body of this report) considers and quantifies the scale of traffic movements associated with the proposed watercourse works, and sets out the proposed and recommended methods that should be included in the appointed contractor's Construction Traffic Management Plan once the contractor is appointed and the detailed methodology and scale/nature of construction traffic is confirmed. The following report presents the recommended measures required in order to manage the operational construction-related transport effects generated during the watercourse works and the expected interaction with other road users in the Pāremoremo Road, in a safe manner.

Accordingly, the following mitigation measures are recommended:

- Signage should be installed to alert road users to the potential crossing movement of trucks at the Pāremoremo/Iona and Iona/Sanders intersections. The proposed signage should be consistent with relevant parts of the NZTA's Code of Practise for Temporary Traffic Management and the emerging Guide to Temporary Traffic Management;

All heavy vehicles travelling to or from the Auckland Prison site (including the Iona Avenue/Sanders Road access (Operational access 1) should this access be used for construction access) should be fitted with an orange flashing beacon(s) visible from both ahead and behind the vehicle. These heavy vehicles should be required to activate the flashing beacon while entering and existing the Site. Upon leaving the Site, heavy vehicles should be required to activate the beacon until the truck reaches the legally posted speed limit of 60km/h applying to Pāremoremo Road/Brookdale Road;

- It is recommended that, on weekdays during school term times, there should be a "blackout" period on any watercourse works-related heavy vehicle movements along Pāremoremo Road past Ridgeview School prior to and following the school day (i.e. 8.30 – 9.15am, 2.30 – 3.15pm).
- There should be no heavy vehicle or other watercourse works-related vehicles waiting, queuing or parking on Iona Avenue or Pāremoremo Road. The adopted management of construction-related access into the Auckland Prison site from either Sanders Road or Pāremoremo Road access points should be arranged to avoid queuing of construction-related vehicles on any public road, and
- All works-related worker parking should be provided within the Auckland Prison site.

Based on the analyses undertaken within this assessment and Framework Construction Traffic Management Plan, it is considered that any impact arising during watercourse construction can be managed such that there is no unacceptable effect on the operation of the adjacent public road network.



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2 BACKGROUND

Introduction

1. The Department of Corrections – Ara Poutama Aotearoa (“**Corrections**”) is seeking an alteration to its designation at Auckland Prison (530 Pāremoremo Road, Pāremoremo, Auckland) (“**the Site**”) to increase the capacity from the current designation limit of 681 prisoners to 1,220 prisoners under the Fast-track Approvals Act 2024 (“**FTAA**”). In order to provide for that capacity, two watercourses on the Site are proposed to be reclaimed and piped. Corrections is seeking resource consent and making a request for an outline plan waiver under the FTAA for the piping of these two watercourses and associated works. The watercourses are referred to in this report as Watercourse 1 and 2. This report assesses the associated transport effects of the proposed watercourse works. This report has been prepared to accompany the resource consent applications and request for an outline plan waiver (Volume 3 of the Substantive Application). Where stated, this assessment relies on the proposed designation conditions and/or the proposed resource consent conditions (contained within Volume 6, Appendix 6A and 6B respectively).
2. This assessment report and Framework Construction Traffic Management Plan (“**FCTMP**”) report considers the construction traffic effects and recommended mitigations associated with the proposed watercourse works
3. The FCTMP accompanying this report has been prepared to direct and guide the future detail and content of a Contractor CTMP to be prepared by the appointed contractor delivering the works, and which will be required to be submitted to and certified by Auckland Council prior to the works being undertaken in accordance with Designation Condition DES38. The report considers:
 - the proposed construction impact on the adjacent road network during construction works at the Site and includes a brief review of the existing traffic environment in this vicinity;
 - assessing the anticipated construction traffic volumes expected to occur within the supporting transport network and any identified impact arising from the works; and
 - an overview of the recommended traffic management and control measures to be implemented at the Site and which should be included in the Contractor’s CTMP.
4. The proposed watercourse construction works will be confined to the Site.
5. This report has been prepared based on information available at the time of writing. The proposed temporary traffic management controls have been developed based on the Code of Practise for Temporary Traffic Management (“**CoPTTM**”) and the emerging Guide to Temporary Traffic Management (“**GTTM**”). The methodology currently



described may require amending prior to construction commencing on site and will be submitted to Council for certification in accordance with Designation Condition DES38.

Qualifications and Experience

6. This report has been prepared by Don McKenzie – an experienced professional transportation engineering consultant. He is the Director and co-owner of the consultancy firm Don McKenzie Consulting Ltd and has a professional experience of over 30 years. His qualifications and experience are outlined in **Appendix 1: Expert Summary Statement and Curriculum Vitae** along with confirmation that this report has been prepared in accordance with the Environment Court’s Code of Conduct for Expert Witnesses.



3 Existing Site Location and Supporting Road Network

7. Figure 1 below shows the location of the Site within the context of the surrounding Pāremoremo roading environment. In strategic transportation and travel terms, the following distances by road are relevant with respect to the Site:

- 7.5km to Albany Village;
- 9km to Albany Town Centre;
- 8.5km to Riverhead;
- 16.3km south to Westgate;
- 23km south to the Harbour Bridge, and
- 27km south to the Auckland city centre.

8. The nearest arterial routes with respect to the Site are:

- Coatesville Riverhead Highway (“CRH”) – 5.5km to the west (via Brookdale Road and Ridge Road), and
- Dairy Flat Highway (“DFH”) - 7.1km to the northeast via the eastern section of Pāremoremo Road.

9. These can be seen in the following Figure 1.

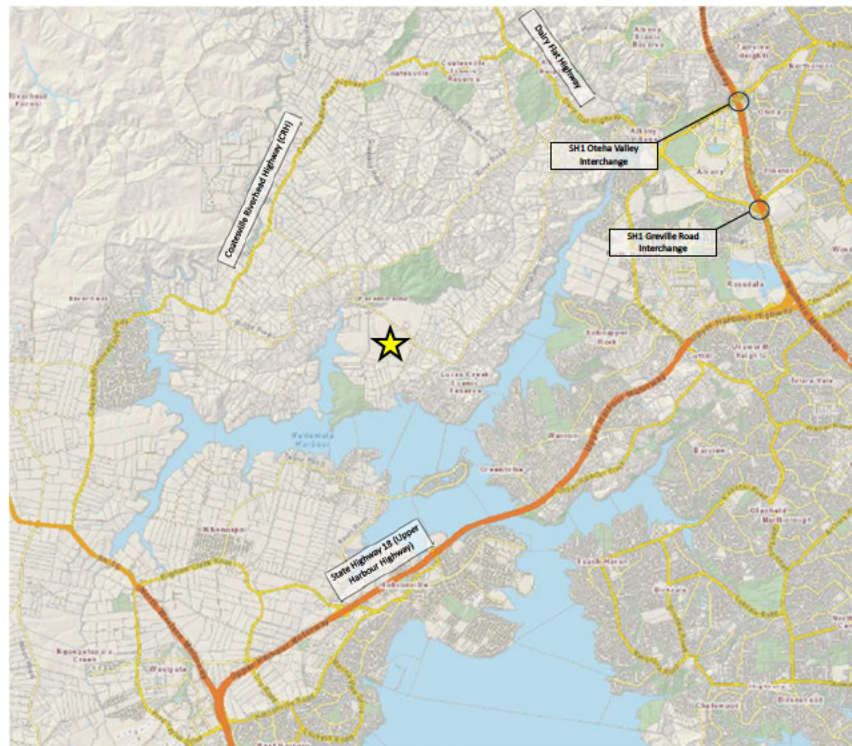


Figure 1: Site Location (Source: Auckland Council GeoMaps)

10. Pāremoremo Road (to the east) and Brookdale Road (to the west) will be the key routes linking the Site to the nearest arterial routes represented by DFH and CRH. It is



anticipated that construction traffic to and from the Site will adopt one or both of these routes.

Pāremoremo Road

11. Pāremoremo Road along the northeastern side of the Auckland Prison Site has a sealed roadway carriageway approximately 10.5m wide between kerbs (near the Prison Access Road and main gate intersection), providing a trafficable width of approximately 6.5 – 7.0m in width – enabling one traffic lane in each direction. A sealed shoulder along the southern side of the carriageway (approximately 2.5m wide) provides an area for vehicles turning into the current main gate. There is no dedicated right turning bay for vehicles approaching the Site from the west turning into the main gate.
12. Construction-related movements associated with the watercourse works may occur via Iona Avenue and Sanders Road. Iona Avenue is a public road that connects with Pāremoremo Road approximately 500m west of the Main Prison Gate access (Operational access 2). Alternatively, construction vehicles may use other access locations which will be confirmed in the final CTMP.
13. The existing intersection of Iona Avenue and Pāremoremo Road is shown in Figure 2.



*Figure 2: Existing Intersection of Iona Avenue and Pāremoremo Road
(Source Auckland Council GeoMaps)*

14. The intersection with Pāremoremo Road is in the form of a standard, Stop-controlled tee-intersection with a single traffic lane approaching from each of the intersecting roads. Turning and through movements are required to share each approach lane – there being no dedicated turning lanes and the upgrading required to accommodate the generated additional traffic movements to and from the watercourse works will be



based on the current general form of the intersection (i.e. the existing tee-intersection form, existing turning lanes and existing carriageway width of Pāremoremo Road and Iona Avenue).

15. The available visibility to and from the Iona Avenue approach is shown in the following **Figures 3 and 4**.



Figure 3: Visibility from Iona Avenue towards the west (Brookdale Road)



Figure 4: Visibility from Iona Avenue towards the east (Pāremoremo Road)



16. On-site measurements of the available sight distances (based on observations from the driver's eye height of a passenger car/light vehicle) show that a distance of a minimum of approximately 150m is available towards the west as observed and measured outside the existing vegetation (within the legal road reserve). Additional visibility of up to a further 50m beyond what is currently available (up to a total of approximately 200m) could be achieved if this road reserve vegetation is trimmed or removed as part of AT's on-going maintenance of the public road reserve.
17. From Iona Avenue to the east the available, clear visibility is at least 400m as far as the Cutts Crescent intersection.
18. In terms of acceptable or recommended sight distances, the generally accepted guidance documents for assessment of both roadway and driveway design are:
 - Austroads Guide to Road Design Part 4A – Unsignalised and Signalised Intersections ("**Austroads Guide**")
 - Land Transport New Zealand (now NZTA) Roads and Traffic Standard 6 "Guideline for Visibility at Driveways" ("**RTS6**")
19. The relevant guidance for driveways connecting to 60km/h roadways such as Pāremoremo Road, is RTS6. This applies as Pāremoremo Road and Brookdale Road both have 60km/h posted speed limits. These apply for the full length of Brookdale Road to the west and across the full frontage of the Auckland Prison site to the east.
20. The RTS6 guidance for a high-volume driveway (one that carries more than 200 movements per day) connecting to a collector road operating at a speed of 60km/h is for a minimum of 115m.
21. The Austroads Guide which is widely adopted for road design guidance throughout New Zealand including by Auckland Transport, includes reference to the Safe Intersection Sight Distance criteria for visibility from the side road approach (Iona Avenue) when viewing along the major road approaches being Brookdale and Pāremoremo Roads. The Austroads Guide recommends that for a road operating at 70km/h (the operational or design speed for a posted speed limit of 60km/h) a minimum Safe Intersection Sight Distance of 151m should be provided (as measured from the driver's eye height of a passenger car or light vehicle). Should this vegetation not be trimmed, the marginal difference between the available and recommended minimum sight distance is not considered to be critical, especially given that the more elevated driver's eye height from a construction vehicle affords a greater level of advance visibility to approaching traffic.
22. In both regards, the available sight distances from the Iona Avenue approach viewing along both Brookdale and Pāremoremo Roads broadly align with the expectation of both local, minor road connections or high volume private accessways. It is further noted that the visibility distance available to heavy vehicle drivers will exceed the values given above due to the more elevated drivers position within these larger vehicles.



Iona Avenue

23. Iona Avenue is the local access road that connects from Pāremoremo Road and extends along the western edge of the Site. It provides access to:
- six residential properties;
 - an Auckland Prison wastewater screening facility (within the existing designation applying to the Site);
 - a wastewater pump station owned and operated by Watercare;
 - an electrical sub-station facility; and
 - three contractor/farming/private activity sites.
24. Iona Avenue is a public road and is classified as an access road within the NZTA's One Network Road Classification system.
25. The eastern 160m section of Iona Avenue between the intersections with Pāremoremo Road and Sanders Road is sealed to a width of approximately 6m providing one traffic lane in each direction, separated by standard painted centreline markings and painted edgelines. There are localised areas of sealed and gravel shoulder, and driveway aprons adjacent to some of the property accesses.

Sanders Road

26. The Sanders Road/Iona Avenue intersection is a Stop-controlled, tee- intersection with a large area of road marking indicating via hatch marking the area that can be used for larger and longer vehicles turning left into Sanders Road (as would be expected to be associated with the proposed watercourse works). The Sanders Road connection into the Site is not currently available for public access into the Site, with Corrections controlling access further south along Sanders Road via locked gates.
27. During the proposed watercourse works it is expected that there would be security protocols in place to enable access to the works areas in a secure and efficient manner irrespective of which access location is ultimately adopted. It is recommended that the access control and management of the future construction access point to the Site be managed to ensure that there is no heavy vehicle queuing extending onto any public road Iona Avenue or Pāremoremo Road. Should the Sanders Road access be adopted, it is considered that the length of Sanders Road from the current security gate to the Site and the Iona Avenue intersection – a distance of approximately 35m – is sufficient to allow approximately two heavy vehicles to queue back from the security gate before interrupting public vehicle passage along Iona Avenue.
28. West of the Sanders Road intersection, the width and form of the Iona Avenue carriageway reduces to a 3.5m wide, single lane carriageway without road markings or shoulders.
29. The current form of the Sanders Road/Iona Avenue intersection is shown in **Figure 5**.



Figure 5: Iona Avenue / Sanders Road Intersection

30. Designation condition DES19 requires closure of Iona Avenue / Sanders Road access within two years of the designation alteration being confirmed. It may be used for construction traffic, if necessary, in accordance with any certified CTMP, but must be closed and replanted upon completion of construction of new prison facilities.
31. If used for construction traffic, the Iona Avenue access would be used for temporary construction traffic only and will ultimately be closed (as required by proposed Designation Condition DES19).

Daily and Peak Hour Volumes

32. Existing traffic volumes within the surrounding transport network were obtained using the latest information available from various publicly available sources including the AT and NZTA traffic count databases, and the MobileRoads online traffic database.



Table 3: Existing Traffic Volumes

Location	Date of Count	Average Daily Traffic (vpd)	Weekday PM Peak Hour (vph)
Coatesville Riverhead Highway (near Ridge Road)	2024	7,200	760
Ridge Road	2025	1,590	170
Brookdale Road	2021	1,730	110
Iona Avenue	Est.	200	12
Pāremoremo Road – west of Cutts Cres	2022	1,420	150
Pāremoremo Road (Elmore Road – Hardens Lane)	2024	4,200	420
The Avenue	2024	6,390	640
Dairy Flat Highway (east of The Avenue)	2023	19,480	1,950

33. The arterial routes of DFH and CRH carry the greatest overall volumes in the area, with the volumes along DFH representing what is a heavy-loaded arterial route experiencing notable peak period reduced traffic performance (especially during weekday late afternoon) at The Avenue/DFH intersection and though the Albany Village section. The section of the eastern access route that would be expected to be used for the larger proportion of heavy vehicle access between the Site and DFH (i.e. Pāremoremo Road) carries the greater volumes compared with the western section via Brookdale and Ridge Road. However, each of the reported volumes above along both routes afford readily available spare mid-block capacity to cater for the expected construction-related traffic movements.

34. Based on the traffic volume information above regarding the localised sections of road network closest to the works site, it is considered that Pāremoremo Road should be classed as a Level 1 Road (in terms of the CoPTTM approach) and Iona Avenue represents a Low Volume Road. However, in terms of the updated risk-based approach adopted with the NZGTTM, the risk posed to other road users associated with the proposed works (undertaken entirely within the Site) there is expected to be a low level of risk to other road users associated simply with the movement of construction-related vehicles on the public road network. Any risk will be associated with the movement of construction-related vehicles moving to and from the works site (in Iona Avenue) in a manner entirely consistent with the movement of other vehicles within the wider road network and transport routes via Brookdale and Pāremoremo Roads.



4 Construction Works.

Development Scope

35. Corrections proposes to alter the designation at Auckland Prison, Pāremoremo, to enable prisoner capacity to be increased. As part of the process to cater for this increased growth within the Site, there is a requirement to extend the piping of watercourses where future secure prisoner accommodation facilities will be located.

Work Stages and Methodology

36. The proposed works will involve:

- Removal of approximately 3,945m² of riparian vegetation surrounding Watercourse 1 and approximately 2,179m² of vegetation surrounding Watercourse 2.
- Extending the existing pipe networks (including relocating the existing discharge points) for Watercourse 1 (a permanent stream) and Watercourse 2 (an ephemeral stream) to beyond the edge of Area A, involving:
 - 124m of piping and reclamation for Watercourse 1 plus an additional 8m length of riprap outlet;
 - 114m of piping and reclamation for Watercourse 2, plus an additional 4m length of riprap outlet.
- Earthworks extending over an indicative area of approximately 2,000m² and volume of approximately 2,500m³ for Watercourse 1, and an indicative area of 2,500m² and volume of approximately 2,180m³ for Watercourse 2 to fill over the extended pipework (refer **Appendix 3A**).

37. Details and location of the specific watercourse works are provided in other reports accompanying the application.

38. The indicative construction methodology for the watercourse piping and reclamation is expected to involve the following key steps:

- Erosion and sediment controls established.
- Removal of vegetation surrounding watercourses.
- Temporary stream diversion and dewatering (as necessary).
- Process for the excavation of unsuitable material and the bedding zone for the proposed pipe (includes removal of any remaining vegetation surrounding the watercourses).
- Process for the installation and compaction of imported material to strengthen subgrade, provide bedding, lay pipe and backfill the barrel of the pipe.
- Install pipe extension (expected to be a 1500mm diameter pipe for Watercourse 1 and a 750mm diameter pipe for Watercourse 2).
- Create new outfall structures and energy dissipation features (such as a riprap apron).



- Backfill material over the pipe to a level generally consistent with the adjacent existing ground levels and associated reinstatement (hydroseeding).

Construction Programme

39. It is conservatively estimated that the earthworks and construction works will occur over a period of approximately 2-3 months, within which earthworks will occur over approximately 1-2 months.

Hours of Operation

40. It is anticipated that construction traffic movements associated with the proposed watercourse works that would potentially use Iona Avenue and then move into either Brookdale or Pāremoremo Road, would operate generally across the following operating hours listed in Table 2 below. Alternatively, they may use other access locations (including operational access 2 or 3) which will be determined in the final CTMP prepared by the contractor and certified by Council in advance of works occurring.

Table 2: Proposed Operating Hours

Work Item	Timing of Activity	Days of Activity
Watercourse Works	7.00-6.00pm (with the exception of proposed heavy vehicle “blackout” window 8.30-9.15am and 2.30-3.15pm on school days)	Monday to Saturday (no Sunday or public holiday works)

Construction Traffic Volumes

41. The forecast daily and busiest hour heavy vehicle volumes are predicted as follows:

- Maximum daily heavy vehicle traffic movements: approximately 10-15 return trips (30 truck movements) per day are anticipated (excluding Sundays and public holidays),
- Maximum hourly traffic movements: 5 trucks per hour (two-way).

42. In addition, it is expected that there would be a number of construction staff members based at the Site during the course of the works. The busiest period of on-site construction staff requirement would typically be associated with the period during the pipework installation.

43. It is expected that most earthworks and delivery vehicles (together with contractor employee vehicles) will travel to and from the Site via Pāremoremo Road, The Avenue, Dairy Flat Highway connection to SH1 and shown in green, and the Ridge Road/Coatesville Riverhead Highway route to SH16 (shown in red) the following in Figure 6.

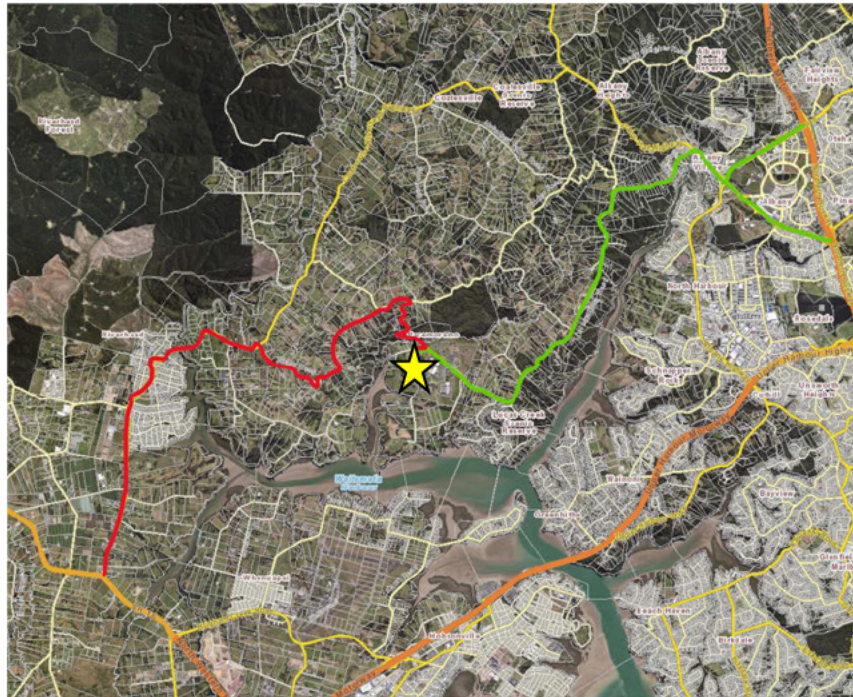


Figure 6: Construction Transport Routes

44. The movement of up to 30 truck movements per day and up to 5-6 truck movements per hour (either inbound or outbound), plus staff member car movements to and from the Site at Pāremoremo will represent a small proportion of current traffic volumes carried by the surrounding road network to both the east and west of the Site. Such volumes would represent a small fraction of the adjoining traffic volumes along the frontage and roads nearest the Site, and an even smaller fraction when considered in the context of the wider arterial road network.



5 Traffic Effects

Construction Traffic

45. Given the nature and the scale of the proposed works and the Site arrangement, it is expected that movement of the earthworks related vehicles and the construction materials will all be directed via the existing public road network links to the east and west of the Site. As previously noted, there are no changes to, or works proposed within, the public roads surrounding the Site. Vehicles associated with the works may move to and from the Sanders Road (private road) connection serving the Auckland Prison site, and then adopt Iona Avenue and then either Pāremoremo Road, The Avenue and Dairy Flat Highway before use of either Oteha Valley Road or Albany Expressway to gain access to the SH1 Northern Motorway route, or Brookdale Road/Ridge Road/Coatesville Riverhead Road to connect with SH16 (as show in **Figure 6**) depicting the two primary route options from the Auckland State Highway network.
46. As part of the Contractor’s CTMP that will give practical effect to the FCTMP, the appointed Contractor will be required to liaise with Auckland Transport to identify any major events or other specific matters where additional traffic management or control of construction activities may be required.
47. Should the construction traffic activity occur via the existing security gate in Sanders Road, it is recommended that all construction vehicles can turn fully off Iona Avenue before having to stop for any security checks or other protocols. If Sanders Road is adopted for the watercourse construction works traffic access, the access would only be provided for construction-related traffic movement, and not providing any degree or scale of operational traffic access to the wider Site. It would only be used for these watercourse construction-related activities and would be permanently closed thereafter (per Designation Condition DES19).
48. Whether the construction traffic movements occur via Sanders Avenue or other access points to the Site, it is not anticipated that there would any significant, over-dimension loads or vehicles, any such access should be programmed, to arrive outside of peak construction staff arrival and departure times or the network peak hours.
49. Wheel washes, or other appropriate means of ensuring material is not tracked onto Pāremoremo Road (or other public access roads used for the construction works) should be appropriately located within the Site before vehicles leave move onto the public roadways. In the event of material being tracked onto the public road network (i.e. the sealed parts of external public roads), the Contractor should be required to employ road washing machines to remedy this.
50. All construction vehicles carrying loose material must be covered.



Employee Traffic and Parking

51. As with the heavy vehicle construction traffic discussed above, the indicative construction plan for the Site and proposed works are expected to operate across up to a typical 12-hour working day, Monday to Friday between the hours of 7am to 6pm. There may be some work on Saturdays. The details of these working times will be confirmed within the Contractor’s CTMP. The Contractor will also provide a construction program to Council outlining timing of the expected construction stages and highlighting any periods where construction traffic activity is anticipated to be higher than average.
52. Shared transport should be encouraged to reduce contractor staff vehicle numbers. However as noted above the staffing level associated with watercourse works will be generally modest aligned with the extent of works proposed. All staff parking should be contained within the Site. There is sufficient and flexible area within the Site to accommodate the practical needs of contractor staff parking. There should be no use of Pāremoremo Road or Iona Avenue for any contractor parking, in accordance with proposed Designation Condition DES15 which requires the Requiring Authority to ensure that there is full provision on-site for all parking of vehicles including during operation and construction phases and including all construction worker parking within the Auckland Prison site.
53. It is also recommended that the Contractor give staff “toolbox talks” on safe access and safe driving tips.



6 Traffic Management Stages/Approaches

Overview

54. All of the watercourse works addressed within this report will occur outside of the public road corridor – the use of the public road corridors via Iona Avenue, Pāremoremo Road and Brookdale Road (and beyond) will be simply the movement of both heavy and light construction traffic moving to and from the Auckland Prison site. The main traffic effect will therefore be the movement of construction vehicles, materials and staff to and from the Site. In terms of traffic management scenarios, it is therefore proposed that there will be a single phase of traffic management within the wider public road network applying through the 2-3 month period of the watercourse works construction activity.
55. The primary features of the proposed external temporary traffic management centre on:
- Timing and direction of heavy traffic movement to and from the Site.
 - Temporary warning signs either side of the Iona/Pāremoremo/Brookdale intersection.
 - Requirement for the operation of flashing beacons on heavy vehicles while trucks are moving between the Site and Pāremoremo/Brookdale Roads (and resuming on-road travel speeds).
56. The proposed temporary traffic management measures across the 2-3 month earthworks/pipeworks installation periods are discussed below and will be set out in a Construction Traffic Management Plan (CTMP) in accordance with Designation Condition DES38.

Pāremoremo/Iona Intersection – Traffic Management Signage

57. Should the Sanders Road access point be adopted, then the Pāremoremo Road/Iona Avenue intersection would be adopted as the primary access connection providing for all light and heavy traffic movement to and from both Pāremoremo Road and Brookdale Road. While there are no direct temporary or construction-related works proposed within either Pāremoremo Road or Iona Avenue, it is identified that the movement of additional heavy traffic movements through the intersection warrants a degree of driver warning of the heavy traffic activity through this location.
58. All heavy and light traffic movement through this intersection will proceed in accordance with standard road rules, adhering to the lane markings and intersection controls (i.e. Stop control for all turning movements out of Iona Avenue). Given the anticipated modest scale of traffic movements associated with the works and their movement to and from the surrounding road network following established access points, intersections and road/traffic lanes, there is no requirement for any changes to



any of the carriageway or line markings along Pāremoremo Road and through Iona Avenue.

59. The temporary traffic controls associated with these works will therefore be focused on temporary warning signs only. There is expected to be no adverse traffic or safety effect associated with these temporary measures. Rather, they are intended to raise the awareness of increased heavy vehicle movement through the intersection where there is typically and currently a very low level of such movement.
60. A diagram showing a concept level Traffic Management Plan for the area surrounding the intersection (should the Sanders Road construction access be adopted) is included in **Appendix 2**.
61. It is forecast that this stage of temporary traffic management would be in place throughout the watercourse works for approximately 8-12 weeks.
62. Should other access points connecting to Pāremoremo Road be used to facilitate these construction traffic movements, a similar structure and extent of Traffic Management Plan would be appropriate should be adopted, and confirmed via the final Contractor's CTMP submitted to Council.

Heavy Traffic Controls and Requirements

Flashing Orange Beacons

63. It is recommended that all heavy vehicles associated with the watercourse works be fitted with an orange flashing beacon(s) visible from both ahead and behind the vehicle and be required to activate the beacon before leaving the works area and entering Iona Avenue, and continue to operate the beacon(s) until the vehicles reach on-road travel speeds (of 60km/h) within Pāremoremo Road or Brookdale Road.

Heavy Vehicle Exclusion Period

64. Lying to the east of the Iona/Pāremoremo intersection is the Main Prison Gate access (Operational access 2) to Auckland Prison, the intersection with Cutts Crescent and the Ridgeview School access via Cutts Crescent. During the period at the start and end of the school day, parents will often park along either Cutts Crescent or Pāremoremo Road to pick-up and drop-off their children. Other children and their parents walk along and across Pāremoremo Road to their residences in the area to the south of Pāremoremo Road.
65. The movement of additional large and heavy vehicles associated with the watercourse works through these periods prior to and at the end of the school day has the potential to be a distraction and risk to the children and their parents. Accordingly, it is proposed that, on weekdays during school term times, there would be a heavy vehicle exclusion period around these drop-off/pick-up times of the school. Specifically, these would be:



- Thirty (30) minutes before, to fifteen (15) minutes after the school drop-off time in the morning during school term time, and,
- Thirty (30) minutes before, to fifteen (15) minutes after the school pick-up time in the afternoon during school term time.

66. Consequently, the recommended exclusion times are:

- School Term Mornings: 8:30 – 9.15am
- School Term Afternoons: 2.30 - 3:15pm

67. These periods would only apply during the term-time weekdays.

Vehicle Waiting and Queueing – Sanders Road

68. All trucks and other construction work-related vehicles (including contractor staff parking) should not wait or park on any section of Iona Avenue, Brookdale Road or Pāremoremo Road prior to entering the Site.

69. The scale of the Site is such that there is more than sufficient space for the construction/ designation of truck waiting and queueing areas, and other activities within this northern part of the Site. There is a distance of approximately 35m between the intersection of Sanders Road and Iona Avenue to the gate through the current security perimeter fence, which is sufficient to accommodate at least one and up to three heavy vehicles when approaching the Site should the Iona Avenue/Sanders Road construction access route is adopted. Use of other potential access options (Operational accesses 2 and 3) connections to Pāremoremo Road similarly have sufficient setback to security gates/control points to minimise queueing of construction vehicles on Pāremoremo Road.

70. In this regard, it is unlikely that there would be a risk of any heavy vehicle queueing out of Sanders Road (a private road serving the Site) and into Iona Avenue (a public road serving a range of residences and other activities) should this construction access be adopted. However, it is recommended that the contractor should manage the movement of vehicles to and from the site to maintain the security of the gate, and minimise queueing into Iona Avenue.

Wheelwash

71. Where heavy vehicles are required to traverse exposed ground within the Site or might otherwise pick up mud, dirt or debris, a truck cleaning or wheel-wash facility should be made available within the Site to clean the trucks prior to exiting the Site onto Iona Avenue.



Construction Traffic Management Plan (CTMP)

72. Upon appointment of the contractor to undertake these watercourse works, a Contactor's CTMP shall be prepared in accordance with Designation Condition DES38 and incorporating (as a minimum) the elements specified in the Traffic Management Plan (**Appendix B**) and within the FCTP including the heavy traffic controls and requirements, vehicle waiting and queuing (Sanders Road) and wheelwash requirements. The CTMP shall be submitted to AT for its approval at least 40¹ working days prior to earthworks/construction commencing.
73. The objective of the CTMP is to manage construction traffic to ensure ongoing safe and efficient movement of traffic on public roads surrounding the Auckland Prison site.
74. In accordance with DES38, the CTMP must be prepared by a suitably qualified and experienced traffic engineer and shall:
- a. Be consistent with the New Zealand Guide to Temporary Traffic Management.
 - b. Provide details of:
 - i. the nominated Traffic Management Coordinator for the construction works, demolition and/or removal;
 - ii. the proposed construction programme identifying the sequence and timing of construction phases;
 - iii. the traffic generating activities and vehicle types expected during the construction programme;
 - iv. material source locations;
 - v. construction transport routes;
 - vi. daily and peak hour traffic volumes for each construction phase;
 - vii. driver and tradesperson inductions;
 - viii. construction site access (with appropriate visibility) and parking arrangements;
 - ix. potential effects on other road users and residents of the construction routes identified including information regarding private property access during periods of traffic disruption on the construction routes adopted, dust, noise, safety and convenience;

¹ Subject to confirmation with AT at the time of preparing the Contractors CTMP.



- x. The Temporary Traffic Management Plans (TTMP) to be employed for each construction phase or stage of construction until construction of the New Prison Facilities is complete;
- xi. a communication plan for notifying residents of the construction traffic routes adopted and other members of the community who may be potentially affected by construction traffic of the nature, timing and duration of the different construction phases;
- xii. Details of consultation with the Ridgeview School and Ministry of Education, and any resulting limitations on heavy vehicle movements past Ridgeview School (along Pāremoremo Road) between school pick-up and drop-off hours (for example 8.30 – 9.15am, 2.30 – 3.15pm);
- xiii. evidence of how the requirements of the relevant road controlling authorities have been met;
- xiv. a complaints procedure for community members to report construction traffic issues. The complaints procedure will include:
 - a) the process for members of the community to report issues;
 - b) the process to be followed by the requiring authority to investigate and then take action to address issues identified; and
 - c) the process used to report to the Council and the complainant regarding the outcome of the investigation and the actions taken to address the issue identified.
 - d) process for review of the CTMP.



7 Conclusions

75. This Construction Traffic Assessment and FCTMP has been prepared in relation to the construction and earthworks activities associated with the watercourse works within the Site. It assesses the recommended temporary traffic measures that will be in operation during the construction works required to create new pipework features in replacement of current open watercourses within areas that will potentially be used to facilitate additional future secure accommodation within Site.
76. The proposed temporary traffic management will support the movement of construction-related movements between the Site and wider public road network. There are no construction-related activities that will directly impact the public road sections. The proposed temporary traffic management is intended to raise awareness and attention of drivers passing through the Iona/Pāremoremo intersection to the potential for heavy and construction-related traffic movements into and out of the Auckland Prison site.
77. Based on the analyses undertaken within this assessment, it is considered there will be negligible adverse impact arising on public roads surrounding the Site during construction, subject to the implementation of the proposed mitigation/ measures and appropriate temporary traffic management.
78. It is noted that the FCTMP that accompanies this report is a concept or framework document, prepared to support the consent application and outline plan waiver request for the watercourse works. A separate and more detailed Contractors CTMP will be required to be prepared, submitted to and approved by Auckland Council prior to the works commencing. The CTMP shall be prepared by a suitably qualified and experienced traffic engineer and shall be in accordance with Designation Condition DES38.
79. On the basis of the work undertaken in preparing this assessment and the FCTMP, it is concluded that there are suitable temporary traffic management measures and methods available to ensure that the construction-related effects of the watercourse works will be at an acceptable level such that the effect on other road users will be less than minor.

Don McKenzie Consulting Ltd.

Appendix 1 – Expert Summary Statement and Curriculum Vitae

Qualifications and experience

This report has been prepared by Don McKenzie (Don McKenzie Consulting Ltd).

Don is a nationally recognised transportation engineering consultant bringing over 30 years' experience within traffic engineering and transportation planning specialisms. Over his career Don has provided professional traffic and transportation engineering consulting services to a wide variety of clients within the private sector, local government and central government agencies throughout New Zealand. His professional experience has involved leading and completing traffic and transportation assessments for land-use developments; safety and road user investigations and reporting, transportation studies for road network management and strategic transportation planning, together with various studies, traffic management planning and transport facility design and assessment for all transport system users.

He has leadership and technical experience built up over his career within the professional engineering field including international responsibilities within transportation membership and professional organisations. Don is highly regarded within the development community for the leadership and contribution to successful outcomes adding not only technical value but insights to process and a “bigger picture” project and community solution. He is sought after for his ability to be at the project table from day one right through to successful delivery of the project. He provides insights within multi-disciplinary teams helping to address the complex interaction of land-use, transportation and communities.

Further details of his experience and expertise are provided in his CV below.

Code of Conduct for Expert Witnesses

In the context of this application, which is made under the FTAA, and in relation to which there may be no hearing, I have been asked to confirm that the reporting has been prepared in accordance with the Environment Court's Code of Conduct for Expert Witnesses.

I confirm that I have read the Environment Court's Code of Conduct for Expert Witnesses, as contained in section 9 of the Environment Court's Practice Note 2023, and agree to comply with it.

The data, information, facts and assumptions that I have considered in forming my opinions are set out in this technical report. The reasons for the opinions I express are also set out in the technical report.

I confirm that the matters addressed in this technical report are within my area of expertise, with the exception of where I confirm that I am relying on information provided by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions I express. I have specified where my opinion is based on limited or partial information, and where I have identified any assumptions made in forming my opinion.



Curriculum Vitae

EDUCATION

Bachelor of Engineering (Honours) (Civil), University of Canterbury, Christchurch, New Zealand, 1991

REGISTRATIONS

Chartered Professional Engineer (CPEng) #143780, Engineering New Zealand

MEMBERSHIPS

- Chartered Professional Member, Engineering New Zealand
- Fellow, Engineering New Zealand
- Fellow, Institute of Transportation Engineers
- International Professional Engineer (NZ)
- Member, Resource Management Law Association

EMPLOYMENT

- Don McKenzie Consulting Ltd, Auckland (2023 – present)
- Stantec New Zealand, Auckland (2018-2023)
- Traffic Design Group Limited, Wellington, Christchurch and Auckland (1992-2018)
- Land Transport Division, Ministry of Transport, Wellington (1991-1992)

PROJECT EXPERIENCE

Transportation Assessments

Don is experienced in the leadership and preparation of transportation assessments for a wide range of land-use developments including brownfield central urban developments, public infrastructure, airports, regional commercial and shopping centres, residential subdivisions and Plan Change rezonings (including Fast Track applications), central city apartment buildings, retail parks and shopping centres, service stations, supermarkets, office buildings, business parks, and to a range of institutional developments including schools, polytechnics, childcare centres and hospitals. He has been involved in the preparation of Transportation Assessments for a wide range of developments including representation at Council and Environment Court hearings including:

- Residential: Fletchers Waiata Shores Auckland, Wairaka Precinct Carrington Road Auckland; Waimahia Affordable Housing, Auckland
- Visitor Accommodation: Pounamu Apartments Frankton Road, Perron Developments, Frankton Road, YHA developments in Queenstown and Wanaka
- Shopping centres: Tauranga Crossing Tauriko, Westagte Town Centre/NorthWest Shopping Centre Auckland, Stockyard Falls Warkworth
- Mixed Use: Wynyard Quarter Plan Change, Auckland; Bayswater Marina Auckland
- Public Facilities: Auckland Regional Landfill Dome Valley resource consent and appeal, Canterbury Regional Landfill; Westhaven Marina; Auckland; Auckland International Airport – master planning and retail developments
- Large format retail centres: Massey North Town Centre, Auckland, The Base Hamilton.
- Individual retail and other developers: Countdown/Woolworths; McDonalds; The Warehouse, Gull, BP; Shell; Caltex, Z

Institutional / Public Sector Development



Specialised transportation design, investigation and approval for various institutional and public facility developments throughout New Zealand including:

- Recreational: Various visitor attractions and recreational sites across NZ
- Correction and Care: Wiri Men’s Prison; Mt Eden Central Remand Prison Auckland; Otago Regional Corrections Facility; Waikeria Prison
- Educational: numerous schools, universities and private educational sites across consenting, rezoning and Notices of Requirements
- Waste Management: regional landfills in Canterbury and Auckland including appeals to the Environment Court

Education

Don has had an extensive involvement in the design and assessment of education facilities from early childcare through to tertiary institutions around the country. He is typically working within multi-disciplinary teams assisting both the Ministry of Education and other education providers (such as Boards of Trustees and Universities) to achieve effect, safe and efficient connection of these education facilities with their surrounding communities. Previous education projects have included:

- Chapel Downs Notice of Requirement (2024)
- Te Kapehu Whetu Notice of Requirement (2024)
- Panmure District School – Sommerville Satellite Classrooms (2023)
- Kristin School – Access Review and Direct Referral to Env. Court (2020-2022)
- Auckland University School of Medicine (2019)

Master Planning

Don is regularly called upon within multi-disciplinary teams to provide specialist transport advice and input to planned residential and mixed-use developments. Working alongside and within multi-disciplinary teams, he provides a co-ordinated and strategic development approach incorporating transportation and traffic objectives. Projects included:

- Unitec / Wairaka Precinct, Carrington Road, Auckland (2017-2024)
- Avarua Town Centre, Cook Islands (2019)
- Drury Town Centre Plan Change (2019-2022)
- Auckland Airport Integrated Terminals (2015-2017)
- Waimahia Residential, Weymouth, Auckland (2015-2016)
- Southern Gateway Plan Change, Puhinui Road, Auckland (2010-2017)

Safety Assessment

Don has experience across a range of traffic engineering, transport safety and planning fields for all users of the transport system. He has undertaken and reviewed safety audits across the transport system including consideration of drivers, public transport users, pedestrians and cyclists in multiple jurisdictions across the country. This provides him with a valued experience and expertise across number of settings, situations and contexts. He has applied these areas of expertise to a number of situations.

- MetlifeCare Site Assessment Guidelines (2017/2018)
- Kawarau River Jetboat Appeal - risk assessments, Queenstown (2010)
- Skyline Gondola Upgrade, Queenstown (2018)

Expert Witness



Don is among the country’s leading transportation expert witnesses, frequently called upon to provide expert testimony to local authority hearings and Environment Court appeals involving traffic, road user safety, roading, parking and operational issues. Recent examples have included:

- Notices of Requirement for Auckland to Botany Busway, Supporting Growth Alliance North-west and North Route Protection Package NOR including appeals (2023-2024)
- Auckland Plan Changes – Drury Central PC48-50 (2022)
- High Court Judicial Review for NZRPG vs Auckland Council/Auckland Transport (2022); Stellan Trust and Auckland Council, Warkworth (2023)
- Auckland Regional Landfill – Council and Environment Court Appeal (2021-2022)
- Plan Change 100 Riverhead (2025)
- Plan Change 81 Dargaville (2023)
- Plan Change 72 McKinney Road, Warkworth (2022)

Public Authority Review/Technical Assessment

Don is engaged by Councils and other public agencies to provide expert review and assessment of land use, Plan Change and designation applications. He brings experience from preparing and directing such assessments himself and bringing value and expertise on behalf of the planning and regulatory authorities. In providing this expertise, he is also called upon to prepare and present expert evidence within public hearings and Environment Court. In this regard, he is able to provide perspectives from both the development and the local authority perspectives.

Research

Developed and managed studies, investigations and research into various aspects of transportation activity both locally and internationally:

- Co-author of “Trip Generation and Parking Demand by Land Use” (Transfund Research Reports 209 and 210)
- Peer and Quality Reviewer for NZTA Research projects TAR09/27 (Generation of Walking, Cycling and Public Transport Trips: Pilot Study) and TAR09/16 (Trips and Parking Related to Land Use - Second Edition)
- International reviewer for the Canadian Institute of Transportation Engineers’ “Roundabouts in Canada: A Primer for Decision-Makers” (2012-13)
- Member of Expert Review Panel for Institute of Transportation Engineers’ (ITE) Committee “Update to Trip Generation Handbook 2nd Edition” (2012-13)
- Member of Expert Review Panel for Institute of Transportation Engineers’ (ITE) Committee “Development of Person Trip Generation Database” (2013)

CONTRIBUTIONS TO THE PROFESSION

Engineering NZ

- Member of Engineering New Zealand Competence Assessment Board (2024 – present)
- National Secretary of Engineering New Zealand Transportation Group (2004-2007)
- Practise Area Assessor for Engineering New Zealand Chartered Professional Engineer qualification (2015 – present)

Institute of Transportation Engineers

- International Director (Global District), (2015-2019)
- NZ Representative ITE Australia New Zealand Section (2013-2019)



- Member, Advisory Board, ITE Pakistan Section (2024 – present)

Other

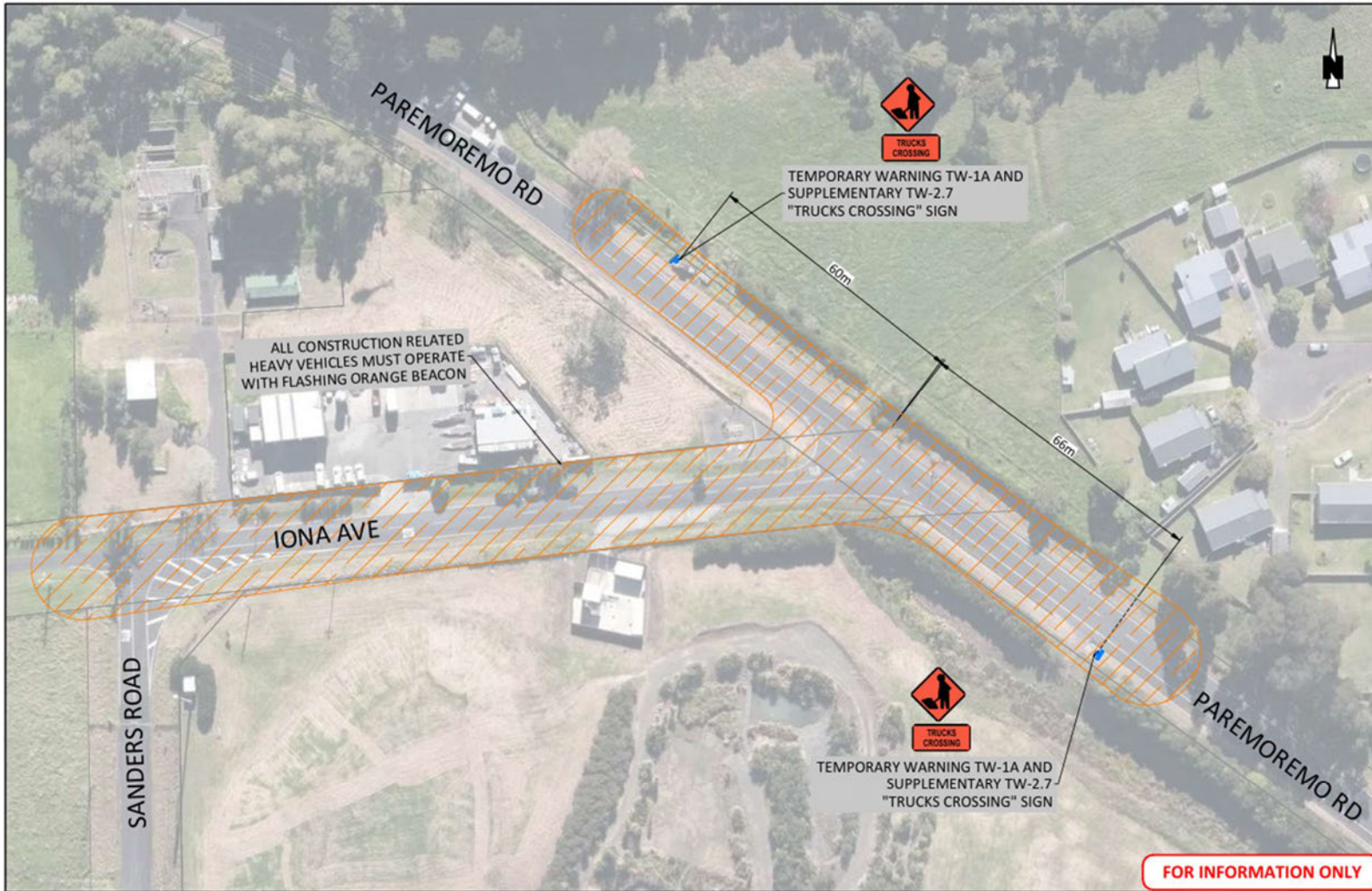
- Member University of Auckland Industry Advisory Board (2024 – present) Assessor for National Diploma of Civil Engineering (Applied) (2010-2013)
- Guest lecturer to University of Auckland Civil and Environmental Engineering (undergraduate and masters level) (2018-present)

PUBLICATIONS AND PRESENTATIONS

- Douglas, M. & McKenzie, D. 2001, “Trips and Parking Related to Land Use - Volume 1: Report” and “Trips and Parking Related to Land Use – Volume 2: Trip and Parking Surveys Database”, Transfund New Zealand Research Reports 209 and 210
- Rizavi, A. & McKenzie D., “From TIA to ITA - A Quantum Shift in Transportation Assessments”. Presentation to ITE Annual Meeting, August 2015



Appendix 2 – Temporary Traffic Management Layout



FOR INFORMATION ONLY

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PAREMOREMO
 DEPARTMENT OF CORRECTIONS
 DMC24109

TRAFFIC MANAGEMENT
 PRELIMINARY PLAN
 SHEET 1 OF 1

Issue Description	Checked	Date	Designed	Date	Scale
0 PRELIMINARY TMP	DM	05.09.2025	AD	05.09.2025	1:750
			AD	05.09.2025	(A3 Original)
			DM	05.09.2025	
			Job No:	Dwg No:	Rev:
			A23104	1	0