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PROPOSED EMERGENCY HOUSING – 1695 PŌHUEHUE ROAD, WARKWORTH - TRANSPORT ASSESSMENT

1.0 INTRODUCTION

As requested, Traffic Planning Consultants Ltd (TPC) have prepared a Transport Assessment for the proposal to establish emergency housing at 1695 Pōhuehue Road, Warkworth. The site is zoned as a Future Urban Zone under the Auckland Unitary Plan – Operative in Part (AUP). **Figure 1** displays the subject site location.

The proposal consists of establishing 12 emergency housing dwellings, with a total of 12 parking spaces provided on-site. Vehicle access to the site will be provided via a new vehicle crossing onto Valerie Close.



Figure 1: Site Location

Image Source: Auckland Council GeoMaps

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2.0 EXISTING TRANSPORT ENVIRONMENT

2.1 Road Network

Valerie Close

Valerie Close is a local road with a length of approximately 1.1 kilometres, connecting to Pōhuehue Road at its eastern end and terminating near the Mahurangi River at its western end. At its eastern end, Valerie Close forms two intersections with Pōhuehue Road, some 150 metres apart. The northern intersection provides for exit-only movements onto Pōhuehue Road, with right-turn-out movements prohibited, and the southern intersection provides for two-way movements in both directions. Near the southern intersection, Valerie Close has a posted speed limit of 80 km/h for vehicles exiting onto Pōhuehue Road and a National Speed Limit for users entering onto Valerie Close.

Within the vicinity of the site, Valerie Close has a carriageway width of some 5.5 metres with sufficient space for two-way vehicle movements. Lane markings are not provided on Valerie Close, except for a short section near the southernmost Pōhuehue Road intersection. On-street parking is permitted on both sides of the road along its length, within the berm area. No footpaths are provided on either side of Valerie Close.

No recent traffic surveys along Valerie Close have been undertaken; however, based on the current development along its length, it's anticipated that daily traffic flows will be around 200 vehicles per day..

Pōhuehue Road (Formerly State Highway (SH1))

Pōhuehue Road connects the Warkworth area with Auckland and Northland. It should be noted that the recent Pūhoi to Warkworth Motorway project in 2023 provides an alternate route.

Prior to 2023, Pōhuehue Road within the vicinity of the site had an ADT of approximately 21,000 vehicles per day (vpd), which is expected to have reduced by 40% as a result of the Pūhoi to Warkworth Motorway project. There is no current traffic data available for Pōhuehue Road; however, it is estimated that it now carries an ADT of 12,500 – 13,000 vehicles per day.

Pōhuehue Road within the vicinity of the site has a posted speed limit of 80km/h, and a carriageway width of approximately 13.0 metres, providing one traffic lane in each direction and a right-turning bay into Valerie Close from the southern Pōhuehue Road/Valerie Close intersection. Furthermore, a northbound passing lane ends some 230 metres south of the southern Pōhuehue Road/Valerie Close intersection a northbound passing lane is provided. It has a posted speed limit of 80 km/h.

2.2 Crash History

A review of crash data for the latest available five-year period from January 2020 to present (2025 data subject to reporting delays) was undertaken along Pōhuehue Road and Valerie Close, within approximately 200 metres of the site, inclusive of both the Pōhuehue Road/Valerie Close intersections. The review indicated that one non-injury crash was reported.

The crash occurred in July 2020 and involved a vehicle failing to give way to an oncoming northbound vehicle while turning right into Valerie Close.

Overall, there is nothing that would suggest an inherent road safety issue concerning property access near the subject site.

3.0 THE PROPOSAL

The proposal consists of removing the existing dwelling on-site and establishing 12 emergency housing dwellings, with 12 parking spaces proposed on-site. Vehicle access to the site will be provided via a new vehicle crossing onto Valerie Close. The site layout used as the basis for this assessment is shown in **Figure 2**. It is noted that all dwellings will be shifted from 1711 Pōhuehue Road and 36 Valerie Close to the subject site. Additional details of this are provided within the application.

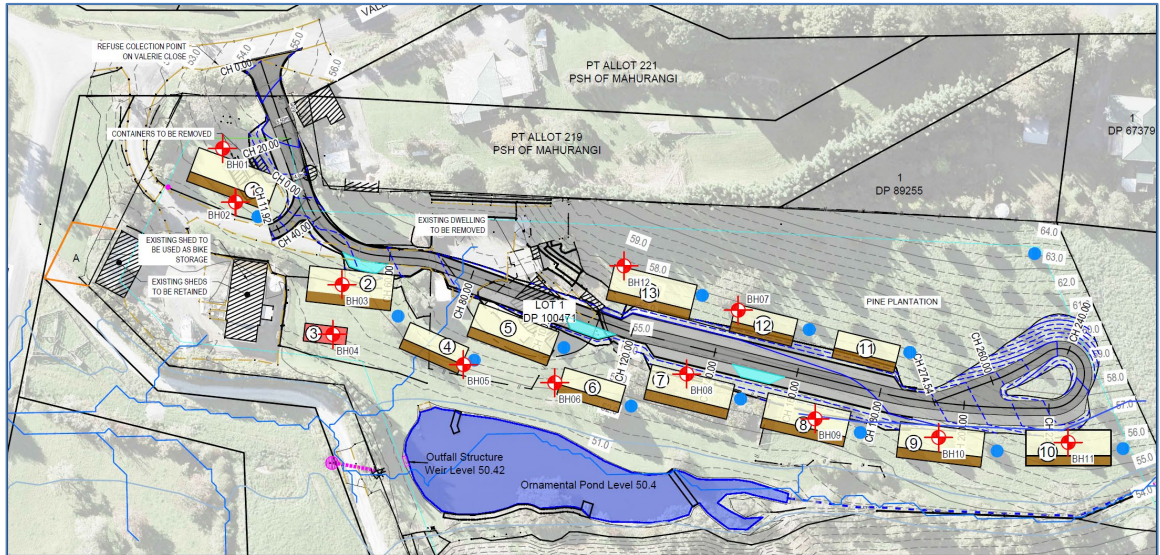


Figure 2: Proposed Site Plan

Image Source: Haigh Workman

3.1 Access

Vehicle Access

A new 5.5 metres wide vehicle crossing will be provided onto Valerie Close to serve the 12 parking spaces proposed on-site.

The vehicle crossing will have a separation of more than 5.0 metres from the adjacent vehicle crossing serving #1693 Pōhuehue Road and a separation of more than 20 metres from any intersections.

The vehicle access serving the 12 parking spaces will have a width of at least 5.5 metres for the first 15 metres before narrowing down to 4.0 metres for the next 185 metres. A final length of 75 metres is provided as a turnaround loop at the end of the driveway. Additionally, passing opportunities are provided at every 50-metre intervals starting at the road boundary.

The accessway will have a gradient not exceeding 1 in 5 (20%), and a 4.0 metres vehicle platform at the road boundary will be provided with a gradient no steeper than 1 in 20 (5.0%).

Pedestrian Access

The vehicle access will provide a shared space environment for pedestrians to access their units and communal amenities within the site, which is considered acceptable given the good forward visibility along the access, the number of units it is serving and that most will be regular users. Whilst pedestrians will be permitted to exit the site onto Valerie Close, it is considered unlikely that users would walk beyond Valerie Close, given the rural nature of the site and lack of dedicated pedestrian facilities within the vicinity of the site.

Overall, the site will provide good pedestrian connectivity between building entrances and parking areas, and Valerie Close.

3.2 Sight Distance

In respect of sight distance, the appropriate standard to use is the Land Transport Safety Authority publication "Guidelines for Visibility at Driveways". There are two components to the sight distance measurement:

- ❖ sight distance requirement, and
- ❖ lines of clear sight.

The sight distance/lines of clear sight required are dependent upon:

- ❖ traffic generation of the proposal,
- ❖ 85th percentile speed of vehicles on the frontage road, and
- ❖ classification of the frontage road.

For this location, the access is forecast to accommodate less than 200 vehicle trips per day; therefore, the driveway is classified as low volume. Although this section of Valerie Close has been posted with an unrestricted speed limit, however, due to the proximity to intersections towards both directions of travel from the site, the vehicle operating speeds approaching the site's proposed access are observed to be no greater than 50 km/h. As Valerie Close is a local road, a sight distance of 40 metres is required.

The sight distances at the proposed vehicle crossing location were confirmed to be in excess of 60 metres in both directions onto Valerie Close, providing acceptable sight distances. **Figures 3 and 4** display the indicative sight distances for Valerie Close. Overall, it is considered that the vehicle crossing has a suitable level of sightlines.



Figure 3: Valerie Close Indicative Sight Distance (to/from the North)
Source: Traffic Planning Consultants Ltd



Figure 4: Valerie Close Indicative Sight Distance (to/from the South)

Source: Traffic Planning Consultants Ltd

3.3 Parking Design

The proposal will provide a total of 12 open parallel parking spaces for the 12 residential dwellings. There is no requirement for any parking spaces for residential dwellings under the AUP. Therefore, the proposal is compliant with this standard.

All parking spaces will be provided with a width of 6.0 metres, a depth of 2.4 metres, with at least 4.0 metres of manoeuvring depth available.

All the spaces will be formed on a gradient not exceeding 1 in 20 (5.0%), except eight spaces will have a gradient of 6.0%- 9.0%. Manoeuvring areas will not exceed the permitted maximum gradient of 1 in 8 (12.5%) for all parking spaces, and as such, are compliant in this regard.

Parking spaces for all lots have been configured so that vehicles will be able to enter and exit the site in a forward direction. Vehicle tracking curves for a B85 design vehicle are included in **Attachment 1**.

3.4 Refuse Collection and Deliveries

The proposal is expected to be serviced predominantly on-street by means of public refuse collection. A dedicated bin enclosure will be provided within the site, which will be wheeled out to the street for collection by residents.

Delivery vehicles will be able to either park on-street or access the site to make deliveries. Within the site, it is expected that delivery vehicles can park within the available parking bays, and if not, they can momentarily park within the access while making deliveries. As the deliveries will be infrequent and completed within a short time, this arrangement is considered acceptable.

4.0 AUCKLAND UNITARY PLAN STANDARDS

4.1 Operative E27 Standards

Section E27 of the Auckland Unitary Plan (Operative in Part) sets out the development standards relating to transport. **Table 1** lists the relevant standards that apply to this development and comments on compliance.

Table 1: Transport Development Controls

Standard	Requirement/Details	Comment
E27.6.1 Traffic Generation	Sets the threshold for when resource consent as a restricted discretionary activity is required.	This development has 12 dwellings proposed – does not apply
E27.6.2 (1) Number of Parking Spaces	Defines the minimum and maximum number of parking spaces for new developments.	A total of 12 parking spaces are proposed where there is no minimum parking requirement – complies
E27.6.2 (6) Bicycle Parking	Defines the number of bicycle parks required for new residential and commercial developments.	There are 12 dwellings proposed – does not apply
E27.6.2 (7) End Trip Facilities	End trip facilities to be provided for any office, education or hospital facilities.	The proposal is for residential buildings – does not apply
E27.6.2 (8) Number of Loading Spaces	Outlines the minimum loading space requirements for new developments.	The proposed GFA is under 5,000 m ² – does not apply
E27.6.3.1 (1) Size and Location of Parking Spaces	Defines the size, use and location of parking spaces.	All spaces are located within the same site, will not be used for any other purposes, and will be available at all times – complies All the parking spaces will have a width of 6.0 metres, a depth of 2.4 metres, and 4.0 metres of manoeuvring available – complies
E27.6.3.2 Size and Location of Loading Spaces	Defines the size, use and location of loading spaces	No loading spaces will be provided – does not apply
E27.6.3.3 Access and Manoeuvring for Parking	Defines the requirements for design vehicles, driveways, manoeuvring area and stacked parking allowances.	All parking spaces will have dedicated access aisles to accommodate a B85 design vehicle's tracking, as shown in Attachment 1 – complies
E27.6.3.4 Reverse Manoeuvring	Defines the conditions in which reversing manoeuvring is prohibited to and from a site.	All the vehicles will be able to turn around on site to exit in a forward direction – complies
E27.6.3.5 Vertical Clearance	Defines the minimum overhead clearance for vehicles to pass safely under overhead structures.	No vertical structures will be provided within vehicle circulating areas – complies
E27.6.3.6 Formations and Gradients	Defines the formation and gradients for all parking spaces and manoeuvring areas.	All parking areas will be formed, drained, and with all-weather surfaces – complies All the spaces will be formed on a gradient not exceeding 1 in 20 (5.0%), except for four

Standard	Requirement/Details	Comment
		spaces for dwellings 1,2, 9 and 10, which will have a gradient of between 6.0% and 9.0%. – does not comply Manoeuvring areas for all parking spaces will have gradients not exceeding 1 in 8 (12.5%) – complies
E27.6.3.7 Lighting	Lighting is required where there are 10 or more parking spaces and associated pedestrian routes used in the hours of darkness.	Suitable lighting will be provided – complies
E27.6.4.1 Vehicle Access Restrictions	Defines the acceptable locations of access points in relation to strategic roads and intersections.	Valerie Close is not an arterial road – complies The vehicle crossing will be located more than 20 metres from any nearby intersection (minimum 10.0 metres required) – complies
E27.6.4.2 Width and Number of Vehicle Crossings	Defines the maximum number of vehicle crossings, proximity to others and permitted widths.	One vehicle crossing is proposed to serve the site – complies The vehicle crossing serving 30 parking spaces will have a width of 5.5 metres – complies The vehicle crossing will have a separation of more than 5.0 metres from the adjacent property's vehicle crossing serving #1693 Pöhuehue Road (at least 2.0 metres required) – complies
E27.6.4.3 Width of Vehicle Access and Queuing	Defines the standards for vehicle access widths for on-site parking and pedestrian movements.	Within the site, the accessway serving the 12 parking spaces will have a minimum formed width of 4.0 metres with passing bays provided at 50 metres intervals (minimum 5.5 metres required) – does not comply
E27.6.4.4 Gradient of Vehicle Access	Defines the gradients of circulating aisles for vehicle movements.	All gradients within the vehicle circulating areas will be no steeper than 1 in 5 (20.0%) – complies The vehicle access will be designed with a gradient no greater than 1 in 20 (5.0%) for four metres at the road boundary (5.0% required) – complies
E27.6.5 Design and Location of Pedestrian/Cycle Facilities	Defines the requirements for off-road and pedestrian and cycle facilities.	The pedestrian facilities on site are considered to meet the requirements of this standard – complies

4.2 Plan Change 79 Standards

On 9 August 2024, the Independent Hearing Panel released the decision version of Plan Change 79 that modified some of the transport related standards under Section E27. Whilst it is noted these amendments are not yet operative, the proposal has been reviewed against the decision version of Section E27. **Table 2** lists the relevant standards that have been modified and comments as necessary in relation to this development.

Table 2: PC79 Development Controls

Development Control	Requirement/Details	Comment
E27.6.1 Trip Generation	New thresholds for residential uses Dwellings - (TA1) Threshold 1 - 40 dwellings; - (T1) Threshold 2 - 100 dwellings	This development has 12 dwellings proposed and as such, does not meet a trip generation threshold requirement – does not apply
E27.6.2 (6) Bicycle Parking	Long stay bike parking must be designed and located in a manner that is: - Not part of the required outdoor living space or landscaped area - Directly access from the road, vehicle access, ped access or car park (i.e. cannot be in a rear yard with access only through a dwelling) - Sheltered from the weather, lockable and secure. Long-stay bike parking is required at the rate of one per dwelling (irrespective of the number of dwellings) when no dedicated garage or basement parking space is provided (previously required when more than 20 dwellings were provided).	An existing shed present along the northwestern side of the site will be utilised to accommodate 12 bicycle parking spaces – complies
E27.6.2 (8) Number of Loading Spaces	A loading space is now required for all residential activities where part of the site has frontage onto an arterial road. Existing loading rates retained, with additional 'small loading space' requirement: - No loading for developments where all dwellings have pedestrian access directly from a public road - No loading for up to 9 dwellings without individual pedestrian access from public roads. - Greater than 9 dwellings up to 5,000m2 require 1 loading space.	The site does not have frontage to an arterial road. As such, no loading space is required - complies

Development Control	Requirement/Details	Comment
E27.6.3.2 (A) Accessible Parking	Accessible parking is now a requirement of all developments (new activities, changes of activity type, or expansion of existing activity) with some exclusions – i.e. not required in certain business zones and THAB zones if no parking is proposed.	One accessible parking space is required, where none are proposed – does not comply
E27.6.3.3. 4A On-site Manoeuvring	Where a site in a residential zone provides heavy vehicle access, it must provide sufficient space onsite so that an 8m heavy vehicle does not need to reverse onto or off the site or road with a maximum reverse manoeuvre within the site of 12m.	The site is not located within a residential zone – does not apply
E27.6.4.3 Vehicle Access	Requires speed management measures when vehicle access exceeds 30m in a residential zone at locations of not more than 10m from the site boundary with the legal road, and at spacings of not more than 30m.	The site is not located within a residential zone – does not apply
E27.6.6 Pedestrian Access	New primary pedestrian access requirements in a residential zone are now required. These include: serving 4-19 parking spaces or dwellings (whichever is greater). - 1.8m formed width where not adjacent vehicle access; or - 1.4m (including kerb) where adjacent vehicle access must be vertically separated.	The site is not located within a residential zone – does not apply
E27.6.7 Electric Vehicle Charging	Any new dwelling with car parking (excluding detached dwellings) must provide each undercover car park with the capability to install electric vehicle supply equipment (note definition below) with designated space for necessary conduit, circuit and metering between the car park and an electrical distribution board on the same building storey, or ground level (if at ground level).	No undercover car parking is proposed - complies

5.0 AUCKLAND UNITARY PLAN ASSESSMENT CRITERIA

5.1 Auckland Unitary Plan Assessment Criteria

Section E27.8.2 of the AUP sets out the assessment criteria when there is an infringement in development standards for development. For this proposal, the following standard is infringed:

- E27.6.3.6 – Formation and Gradient (Criteria 8).
- E27.6.4.3 – Width of Vehicle Access and Queuing (Criteria 8).

The following lists the relevant assessment criteria for these infringements and comments on each as they apply to this development.

8. Any activity or development which infringes the standards for the design of parking and loading areas or access under Standard E27.6.3, E27.6.4.2, E27.6.4.3, and E27.6.4.4:

- (a) *effects on the safe and efficient operation of the adjacent transport network having regard to:*
- (i) *the effect of the modification on visibility and safe sight distances;*
 - (ii) *existing and future traffic conditions including speed, volume, type, current accident rate and the need for safe manoeuvring;*
 - (iii) *existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Plan; or*
 - (iv) *existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes, footpaths, and cycleways.*
- (b) *effects on pedestrian amenity or the amenity of the streetscape, having regard to:*
- (i) *the effect of additional crossings or crossings which exceed the maximum width; or*
 - (ii) *effects on pedestrian amenity and the continuity of activities and pedestrian movement at street level in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone.*
- (c) *the practicality and adequacy of parking, loading and access arrangements having regard to:*
- (i) *site limitations, configuration of buildings and activities, user requirements and operational requirements;*
 - (ii) *the ability of the access to accommodate the nature and volume of traffic and vehicle types expected to use the access. This may include considering whether a wider vehicle crossing is required to:*
 - *comply with the tracking curve applicable to the largest vehicle anticipated to use the site regularly;*
 - *accommodate the traffic volumes anticipated to use the crossing, especially where it is desirable to separate left and right turn exit lanes;*
 - *the desirability of separating truck movements accessing a site from customer vehicle movements;*
 - *the extent to which reduced manoeuvring and parking space dimensions can be accommodated because the parking will be used by regular users familiar with the layout, rather than by casual users;*
 - (iv) *any use of mechanical parking installation such as car stackers or turntables does not result in queuing beyond the site boundary; or*

- (v) *any stacked parking is allocated and managed in such a way that it does not compromise the operation and use of the parking area.*

Comment E27.6.3.6 – Formation and Gradient

The reason for consent under this standard relates to the gradient of the parking spaces associated with dwellings 1,2,9, and 10. provided along the shared access. Under the AUP, parking spaces should be provided with a maximum gradient of 1 in 20 (5.0%), where eight spaces between CH20-CH30, CH60-CH68 and CH190-CH230 are provided with gradients of 8.68%, 6.10% and 6.11% respectively. The following points are made in support of the proposed parking space gradients:

- Within the Auckland Transport Code of Practice/NZS 4404:2010, local roads are permitted to have gradients upwards of 1 in 8 (12.5%), where on-street parking is unrestricted, demonstrating that the proposed parking space gradients are acceptable and will have less than a minor effect on the safety of users.
- Suitable forward visibility will be available along the access, given the straight alignment, allowing vehicles to identify any other manoeuvring vehicle and give way as required;
- Providing compliant gradients for these parking spaces would require excessive retaining, which is not considered a better outcome for the site as a whole.
- Manoeuvring gradients are compliant, to reduce the likelihood of sudden acceleration/deceleration when manoeuvring;
- Vehicle tracking in **Attachment 1** demonstrates users can safely enter and exit the parking spaces whilst retaining at least a 300mm clearance from buildings or structures;
- The users of the parking spaces will be residents and regular users and will have knowledge of the layout.

Overall, the effect of this non-compliance is considered less than minor from a safety and functionality perspective and would only be a minor amenity effect on users of the site.

Comments E27.6.4.3 – Width of Vehicle Access and Queuing

The reason for consent under this standard relates to the width of vehicle access, serving 12 parking spaces. Under the AUP, vehicle access within “all other zones” (T153), serving ten or more parking spaces, should be provided with a minimum width of 5.5 metres, providing for two-way traffic flow. As the vehicle access serving the site will have a minimum formed width of 4.0 metres, resource consent is required. The following points are made in support of this non-compliance:

- The access is designed with a compliant width for the first 15 metres.
- If the access had been serving three less parking spaces, it would have been considered compliant as a minimum width of 3.5 metres would suffice. Therefore, the effect of this non-compliance is considered to be minor.
- The 12 dwellings would generate about 10 peak hour vehicle movements, and considering the tidal flow from residential establishments (i.e., the majority of vehicles exiting in the AM peak and vice versa during PM peak), the probability of vehicles opposing each other is considered low.
- The access is designed with good sightlines and straightforward visibility, and as such, users will be able to locate each other and yield accordingly.

- In the rare event of two vehicles opposing each other, passing opportunities are provided at least every 50-metre intervals, which will provide for safe and comfortable passing.
- The site will have a classification of urban residential zone in future, and then the access will have a permitted narrow width of 2.75 metres (with passing bays), and hence it is considered that the access will operate safely.
- The access is designed with a compliant gradient and will prevent vehicles from sudden deceleration/acceleration, and from skidding.
- The users of the vehicle access will be regular users and are expected to be familiar with the site layout and manoeuvre safely.

For these reasons, the proposed width of the access for the site will have a less than minor effect on the safety and operation of the site and is therefore considered acceptable.

5.2 PLAN CHANGE 79 ASSESSMENT

Plan Change 79 sets out the assessment criteria when there is an infringement in development controls for a proposed development. For this proposal, the following items require consent:

- E27.6.3.2(A) – Accessible Parking (Criteria 4A).

The following lists the relevant assessment criteria for this infringement and comments as applied to this development.

(4A) any activity or development that provides less than the required number of accessible parking spaces under Standard E27.6.3.2.(A):

- (a) the trip characteristics of the proposed activities on the site requiring accessible parking spaces;*
- (b) the extent to which it is physically practicable to provide the required accessible parking spaces on the site including in terms of the existing location of buildings, the type of the existing building(s) site dimensions, topography and the availability of access to the road;*
- (c) the availability and capacity of alternative accessible parking in the immediate vicinity, including on street and other public accessible car parking, with an accessible route to and from the building designed in accordance with New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001), to provide the additional parking sought for the proposal;*
- (d) mitigation measures to provide accessible parking which may include measures such as by entering into a shared accessible parking arrangement with another site or sites in the immediate vicinity;*
- (e) the availability of alternatives to private vehicle trips in the immediate vicinity with access to public transport by an accessible route designed in accordance with New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001) and a maximum distance of 200m.*

Comment E27.6.3.2(A) – Accessible Parking

The reason the design is not considered consistent with the PC79 amendments relates to the non-provision of accessible parking spaces on-site, where one will be required. The following points are made in support of the design:

- These dwellings are relocated, and the same occupants are expected to occupy these dwellings. Given, the current occupants did not have the requirement of accessible space, the effect of the infringement is considered minimal;
- The dwellings within the proposal will not be constructed to an accessible/universal access standard. As such, residents with accessibility requirements would be unlikely to find these dwellings to suit their respective needs;
- Any future tenants would be aware of the on-site parking provisions and will not rent/purchase a property if it does not meet their requirements.

For these reasons, the proposed parking arrangement will have minimal effect on site accessibility and is therefore considered acceptable.

6.0 CONCLUSIONS

Based on the assessment described in this report, the following conclusions can be made in respect of the proposal to establish 12 residential dwellings at 1695 Pōhuehue Road, Warkworth:

- A review of the transport standards has identified two items that require consent under the operative standard in Section E27 of the Auckland Unitary Plan.
- A review of the relevant changes to transport standards under PC79 identified one design matter that is not considered consistent with the revised requirements. The effects of these are considered acceptable.
- Vehicle and pedestrian access to the site is designed to a suitable standard such that the proposal will not have an adverse effect on the surrounding road network or on the safety of pedestrians and vehicles using the site.

Overall, it is considered that the traffic engineering effects of the proposal can be accommodated on the road network without compromising its function, capacity, or safety. Therefore, from a traffic engineering perspective, it is considered that the proposal will have less than a minor effect.

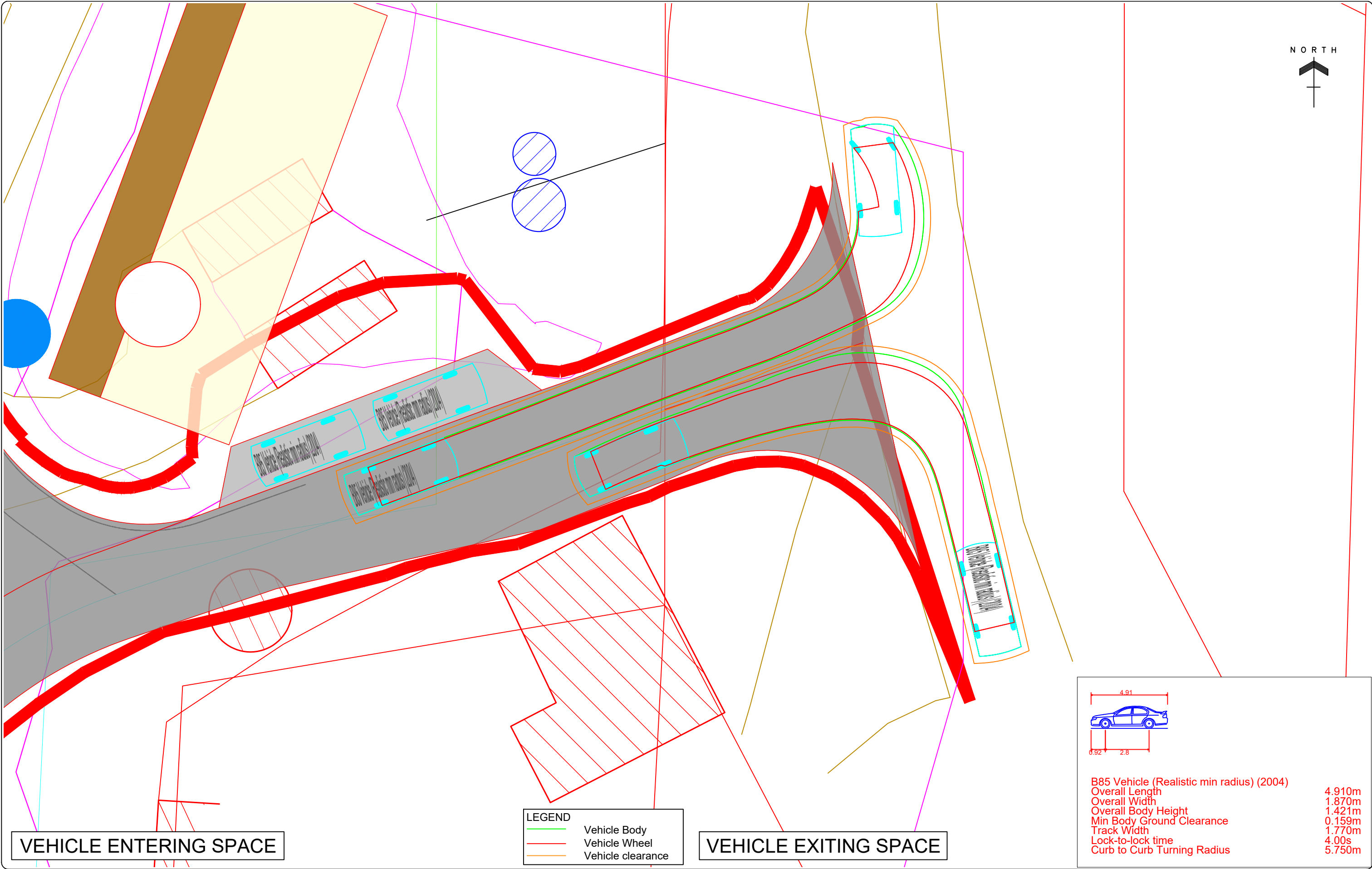
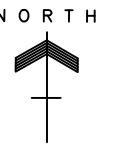
Prepared by,



Udit Bhatti
Traffic Engineer

ATTACHMENT 1:
VEHICLE TRACKING DIAGRAMS

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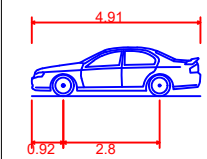


VEHICLE ENTERING SPACE

LEGEND

- Vehicle Body
- Vehicle Wheel
- Vehicle clearance

VEHICLE EXITING SPACE



B85 Vehicle (Realistic min radius) (2004)	
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

Rev	Revisions	By	Date

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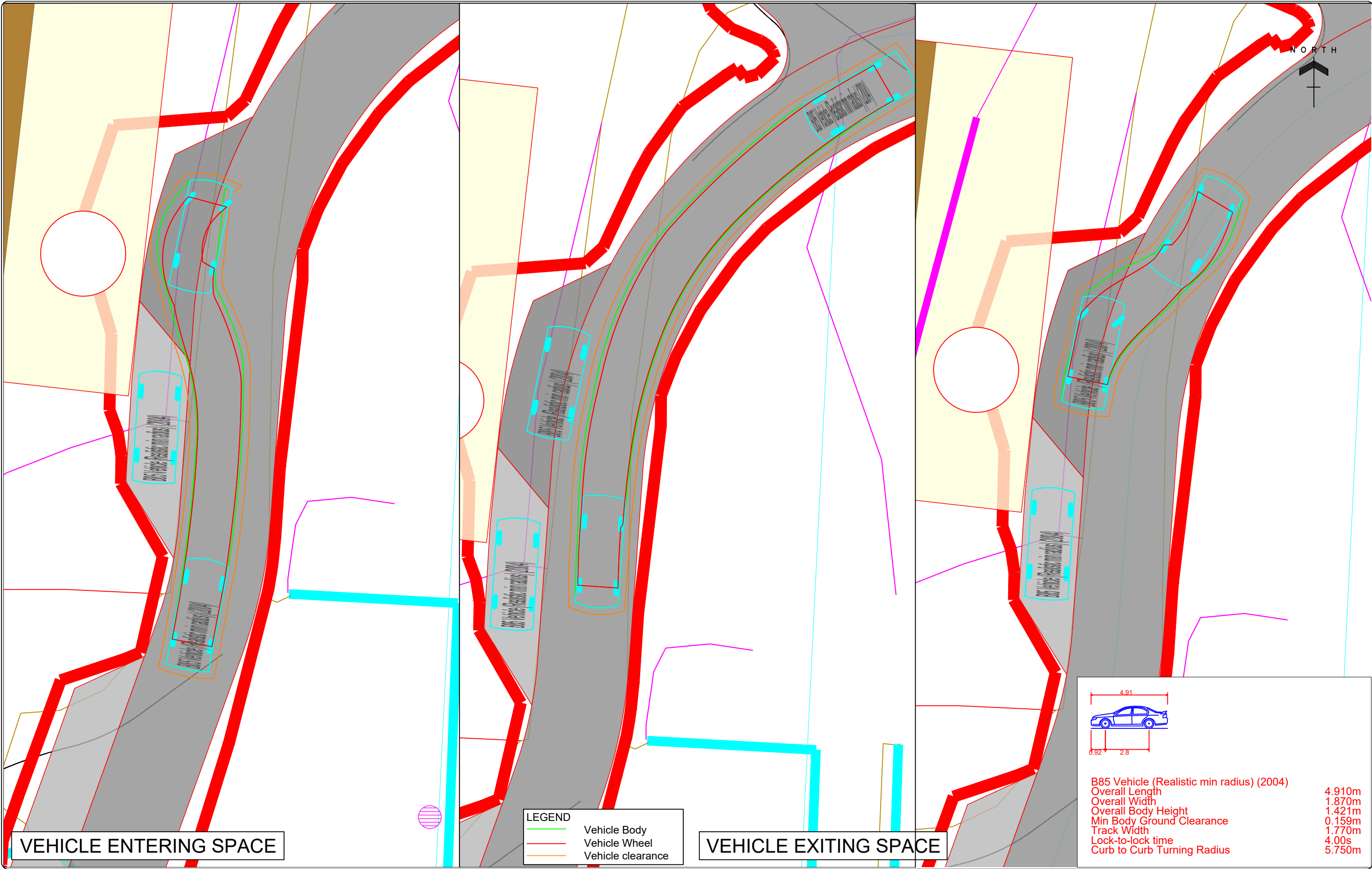
Project Title
**Proposed Development
 1695 Pohuehue Road, Warkworth**

Sheet Title
Vehicle Tracking - 85th Percentile Vehicle (300mm Clearance)

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VEHICLE ENTERING SPACE

VEHICLE EXITING SPACE

LEGEND

- Vehicle Body
- Vehicle Wheel
- Vehicle clearance

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

Rev	Revisions	By	Date

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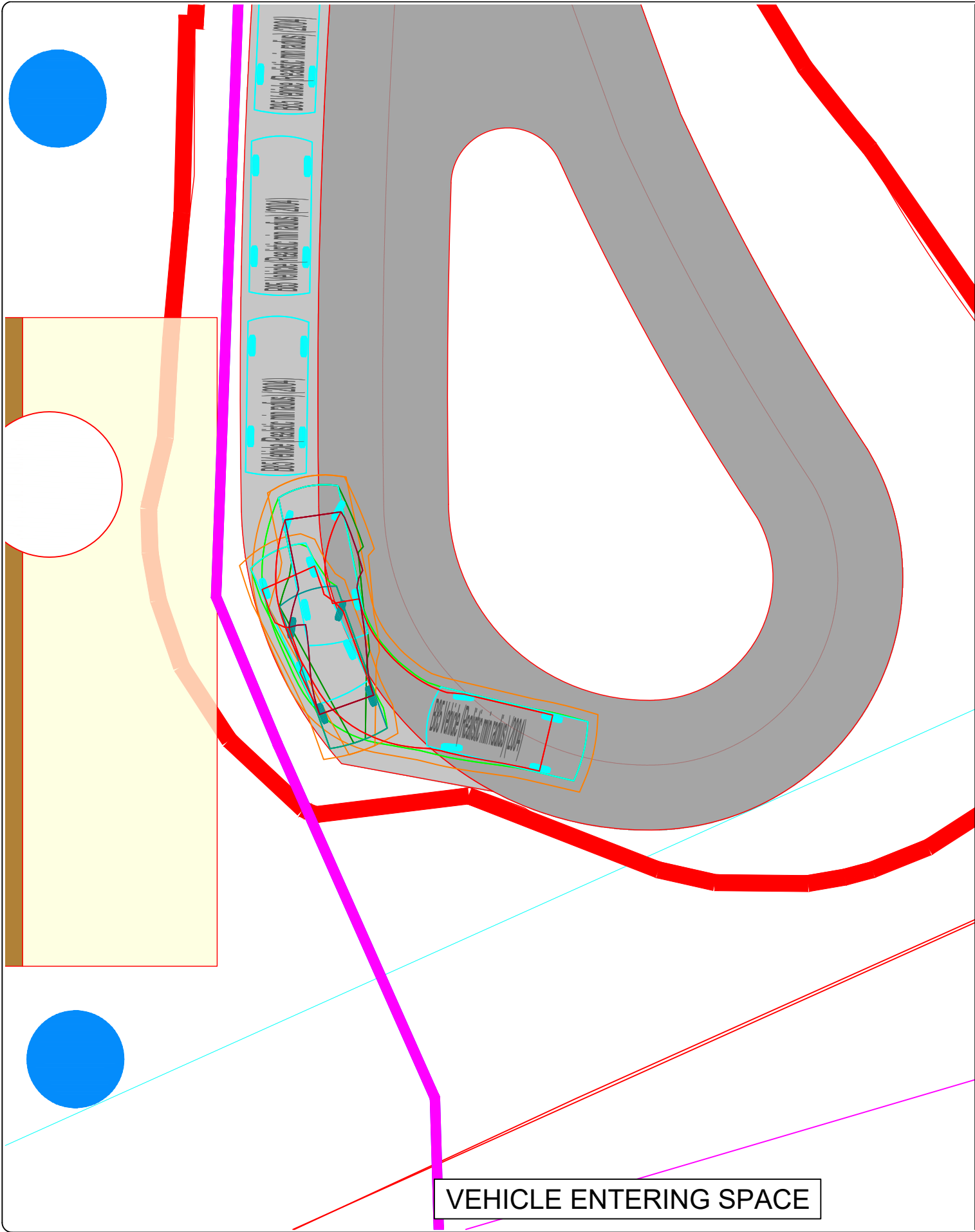
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 Proposed Development
 1695 Pohuehue Road, Warkworth

Sheet Title
 Vehicle Tracking - 85th Percentile Vehicle (300mm Clearance)

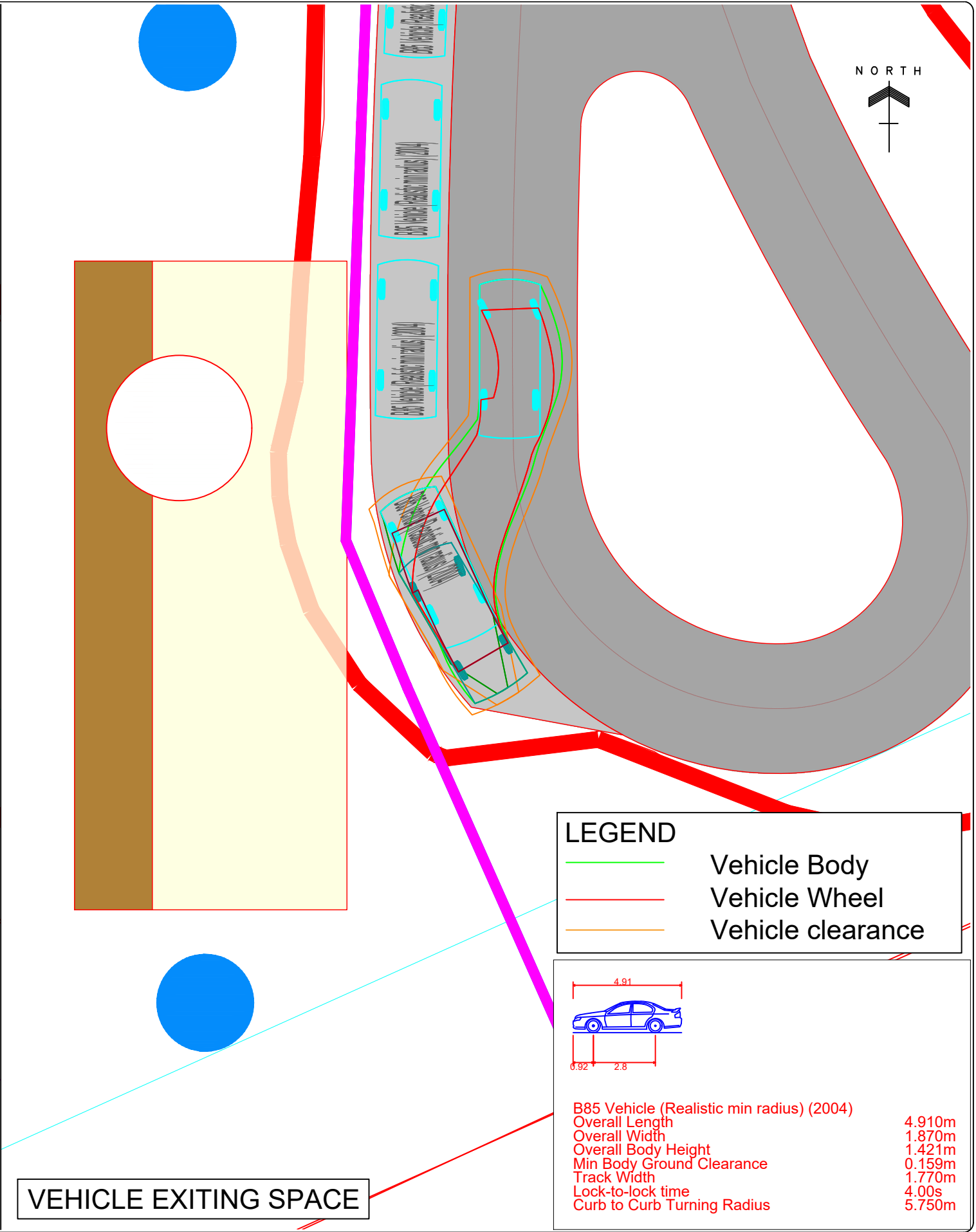
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Checked	UB	Approved	TL	250129 VTD - (2)	1:150.0001 (A3)
				Date	25.06.25

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VEHICLE ENTERING SPACE



VEHICLE EXITING SPACE

LEGEND

- Vehicle Body
- Vehicle Wheel
- Vehicle clearance

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

Rev	Revisions	By	Date

TPC TRAFFIC PLANNING CONSULTANTS LTD

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 Phone: 09 817-2500 www.trafficplanning.co.nz

Project Title
Proposed Development
 1695 Pohuehue Road, Warkworth

Sheet Title
Vehicle Tracking - 85th Percentile Vehicle (300mm Clearance)

Designed	IY	Drawn	IY	Project No - (Sheet No)	Scales
Checked	UB	Approved	TL	250129 VTD - (3)	1:150 (A3)
				Date	25.06.25

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