APPENDIX A AUP E27 and PC79 Assessment

CHAPTER E27 TRANSPORT ASSESSMENT

E27 Standards assessment

Table A 1: Chapter E27 transport standards and assessment

E27 Standard	Assessment
E27.6.1. Trip generation	
(1) Where a proposal (except where excluded in Standard E27.6.1(2)) exceeds one of the following thresholds: (a) a new development in Table E27.6.1.1 (b) 100 v/hr (any hour) for activities not specified in Table E27.6.1.1 requiring a controlled or restricted discretionary land use activity consent in the applicable zone where there are no requirements for an assessment of transport or trip generation effects. This standard does not apply to development activities provided for as permitted in the applicable zone (c) a proposed subdivision of land which has capacity under this Plan to accommodate more than 100 dwellings Resource consent for a restricted discretionary activity is required	**Applicable** (T1) more than 100 dwellings (T3) more than 100 visitor accommodation units (T8A) retail exceeding 1,667m^2 GFA
E27.6.2. Number of parking and loading spaces	
(1) The number of parking spaces must meet rates specified in Table E27.6.2.4	**Complies** No minimum nor maximum parking rates apply.
(6) Bicycle parking (a) the activities specified in Table E27.6.2.5 must provide the minimum number of bicycle parking spaces specified; and (b) the following bicycle parking requirements apply to new buildings and developments ***(T81) Residential – development of 20 or more dwellings*** ◆ visitors: 1 per 20 dwellings ◆ long-stay: 1 per dwelling without a dedicated garage ***(T81) Residential – visitor accommodation and boarding houses*** ◆ visitors: 1 space + 1 space per 20 rooms/beds ◆ long-stay: 1 per 10 FTE employees ***(T87) Retail – food and beverage greater than 350 m^2 GFA*** ◆ visitors: 1 per 350 m^2 GFA ◆ long-stay: 1 per 300 m^2 GFA ***(T89) All other retail – greater than 500 m^2 GFA up to 5000 m^2 GFA*** ◆ visitors: 1 per 500 m^2 GFA ◆ long-stay: 1 per 300 m^2 GFA ***(T92) Industrial activities and storage and lockup facilities*** ◆ visitors: 1 space + 1 space per 750 m^2 GFA of office space ◆ long-stay: 1 per 300 m^2 GFA of office ***(T93) Care centres*** ◆ visitors: 1 space + 1 space per 50 people to be accommodated ◆ long-stay: 1 per 10 FTE employees ***(T101) Major recreation facility*** ◆ visitors: 1 space + 1 space per 1000 m^2 GFA of office and other accessory activities	**Complies** Each dwelling will have space within each lot for visitor bike parking. Each dwelling without a garage will have a secure space sheltered from the weather that can store bicycles. All other activities requiring bicycle parking will have visitor bike parking distributed throughout each precinct, or in the case of the data centres, will have parking in its own lot, and secure bike parking for staff.

◆ long-stay: 1 per 300 m^2 GFA of office and other accessory uses ***(T102) Community facilities*** ◆ visitors: 1 per 200 m^2 GFA ◆ long-stay: 1 per 500 m^2 GFA	
(7) End-of-trip facilities: (a) the activities specified in Table E27.6.2.6 must provide end-of-trip facilities as listed below; and (b) the following end-of-trip facilities requirements apply to new buildings and development	**Not applicable** The Proposal does not include offices, education facilities nor hospitals
(8) Number of loading spaces: (a) all activities must provide loading spaces as specified in Table E27.6.2.7 ***(T111) retail and industrial activities greater than 5,000 m^2 GFA up to 10,000 m^2 GFA*** ◆ 2 loading spaces ***(T113) All other activities where located in rural zones*** ◆ No minimum rate	**Complies** All non-residential precincts (including Live/Work Precinct) will have on-site loading. Neighbourhood Precincts will not have dedicated on-site loading spaces given their proposed dwelling typologies. All loading and rubbish collection will be undertaken from the road or JOAL that the individual dwellings front on to, as is most practical.
E27.6.3.1. Size and location of parking spaces	
(1) Every parking space must (a) comply with the minimum dimensions given in Table E27.6.3.1.1 and Figure E27.6.3.1.1; and (b) be located on the same site as the activity to which it relates unless one of the following criteria is met (i) the parking is located in an H7 Open Space Zone and the reserve, park or recreation area consists of more than one adjoining Certificate of Title. In that case, the parking must be located within the same reserve, park or recreation area as the activity to which it relates; or (ii) resource consent is granted to an alternative arrangement, such as shared parking, offsite parking, or non-accessory parking (c) not be used for any other purpose; and (d) be kept clear and available at all times the activity is in operation, except where stacked parking is permitted by Standard E27.6.3.3(3) below (e) be located outside any area designated for road widening; and (f) parking located in part of any yard on the site (where it is permitted in the zone) must not: (i) impede vehicular access and movement on the site; and (ii) infringe any open space and landscape requirements for the relevant zone; and (g) not to be sold or leased separately from the activity for which it provides parking required under a resource consent	**Complies**
E27.6.3.2. Size and location of loading spaces	
(1) Every loading space must: (a) comply with the minimum dimensions given in Table E27.6.3.2.1; and (b) be located on the same site as the activity to which it relates and be available at all times while the activity is in operation; (c) be located outside any area designated for road widening; and (d) comply with the following when any yard of a site is used to provide the loading space (where it is permitted within the zone): (i) ensure that the footpath or access to the rear of the site or access to an adjacent property is not blocked at any time; and (ii) (ii) the use of the loading space does not create a traffic hazard on the road at any time. ***(T137) Industrial activities*** ◆ 11 x 3.5m ***(T137) All other activities*** ◆ 8 x 3.5m ***(T137) All sites and developments designed to accommodate articulated vehicles***	**Complies**

◆ 18 x 3.5m	
E27.6.3.3. Access and manoeuvring	
(1) Every parking space must have driveways and aisles for entry and exit of vehicles to and from the road and for vehicle manoeuvring within the site. Access and manoeuvring areas must accommodate the 85 percentile car tracking curves in Figure E27.6.3.3.1	**Complies**
(2) For every loading space accommodating heavy vehicles the access and manoeuvring areas associated with that loading space must comply with the tracking curves set out in the NZTA guidelines: RTS 18: NZ on-road tracking curves (2007	**Complies**
(3) Where a dwelling provides more than one parking space, these may be stacked. Stacked parking means access is required through another parking space.	**Complies**
E27.6.3.4. Reverse manoeuvring	
(1) Sufficient space must be provided on the site so vehicles do not need to reverse off the site or onto or off the road from any site where any of the following apply: (a) Four or more parking spaces are served by a single access; (b) there is more than 30m between the parking space and the road boundary of the site; or (c) access would be from an arterial road or otherwise within a Vehicle Access Restriction covered in Standard E27.6.4.1.	**Complies**
E27.6.3.5. Vertical clearance	
(1) To ensure vehicles can pass safely under overhead structures to access any parking and loading spaces, the minimum clearance between the formed surface and the structure must be (a) 2.1m where access and/or parking for cars is provided for residential activities (b) 2.3m where access and/or parking for cars is provided for all other activities (c) 2.5m where access and/or accessible parking for people with disabilities is provided; or (d) 3.8m where loading is required	**Complies** The height clearance in the apartment block parking areas are more than 2.1 m. All overhead structure above loading areas are at least 3.8 m high.
E27.6.3.6. Formation and gradient	
(1) Except for Standard E27.6.3.6(2) below, the whole area of parking and loading spaces, and manoeuvring areas and aisles must be formed, drained, provided with an all-weather surface to prevent dust and nuisance, and be marked out or delineated. This must be done before the activity to which those parking and loading spaces relate commences, and maintained for as long as that activity is continued.	**Complies**
(3) The gradient for the surface of any parking space must not exceed: (a) 1 in 25 in any direction for accessible spaces for people with disabilities; or (b) 1 in 20 (five per cent) in any direction for other spaces.	**Complies**
(4) The gradient for the manoeuvring area must not exceed 1 in 8	**Complies**
E27.6.3.7. Lighting	
(1) Lighting is required where there are 10 or more parking spaces which are likely to be used during the hours of darkness. The parking and manoeuvring areas and associated pedestrian routes must be adequately lit during use in a manner that complies with the rules in Section E24 Lighting.	**Can comply**
E27.6.4.1. Vehicle Access Restrictions	
(1) Vehicle Access Restrictions apply and new vehicle crossings must not be constructed to provide vehicle access across that part of a site boundary which is subject to: (a) a Vehicle Access Restriction – General Control as shown on the planning maps in the Business – City Centre Zone; or (b) a Key Retail Frontage Control as shown on the planning maps	**Not applicable** The Site is not subject to the specified Controls

(2) Standard E27.6.4.1(3) below applies in any of the following circumstances (a) a new vehicle crossing is proposed; (b) a new activity is established on a site; (c) there is a change of type of activity	**Applicable**
(3) Vehicle Access Restrictions apply and vehicle crossings must not be constructed or used to provide vehicle access across that part of a site boundary which (a) is located within 10m of any intersection as measured from the property boundary (b) is subject to the following types of Vehicle Access Restriction as identified on the planning maps in the zones listed in Table E27.6.4.1.1; (c) has frontage to an arterial road as identified on the planning maps; (d) is located closer than 30m from a railway level crossing limit line	**Does not comply** (a) In the North-East Neighbourhood Precinct – 2 private roads (assessed as vehicle crossings) create an intersection leg at the roundabout on the vested road. In the Surf Village Centre Precinct, the private road to the BOH Surf Lagoon and staff car park is within 10 m of the intersection across the road. In the North-West Neighbourhood Precinct, some vehicle crossings to the corner lots are be situated within 10 m of the intersection setback requirement. The private road to the eastern industrial lots (assessed as vehicle crossings) create an intersecting leg onto the Postman Road roundabout. (c) A vehicle crossing for the surf park car park is proposed on Dairy Flat Highway, an arterial road. An existing vehicle crossing on Dairy Flat Highway is proposed to be used as a left-out exit-only by vehicles associated with the water treatment plant.
E27.6.4.2. Width and number of vehicle crossings	
(1) The maximum number of vehicle crossings permitted for any site and separation distance between crossings is specified in Table E27.6.4.2.1. ***(T146) All other sites*** ◆ One crossing per 25m of site frontage ◆ 2m separation from adjacent vehicle crossings, or combined with adjacent vehicle crossings and not exceeding 6m width ◆ Minimum of 6m separation between crossing serving the same site	**Does not comply** The main entry/exit vehicle crossing for the data centre is approximately 3 m apart – does not comply with minimum separation of 6.0 m for crossings serving the same site. All lots within the Neighbourhood Precincts will have a single vehicle crossing to each lot, 2 m apart. **Complies**
(2) The width of a vehicle crossing(s) must meet the minimum width and not exceed the maximum width as specified in Table E27.6.4.3.2. ***(T156) Rural zones*** ◆ Minimum width of crossing at site boundary of 3.0m ◆ Maximum width of crossing at site boundary of 6.0m. Provided that a maximum width of 9.0m is permitted where the crossing needs to accommodate the tracking path of large heavy vehicles	**Does not comply** The vehicle crossing on the Postman Road roundabout to the eastern industrial private accessway is about 10 m wide. Vehicle crossings to the main surf park car park, the data centres will be no more than 9 m wide to accommodate the tracking path of heavy vehicles. **Complies**
(3) With the exception of vehicle crossings on unsealed roads, all vehicle crossings must be designed and constructed to maintain the level, colour, and materials of the footpath to clearly identify to vehicles that pedestrians have priority.	**Will comply**
(4) Vehicle crossings on unsealed roads: *(a) where the vehicle crossing is served by an access steeper than 1 in 8, the vehicle crossing must be sealed for 6m between the site boundary and the unsealed road.* *(b) vehicle crossings not covered by Standard E27.6.4.2(3)(a) above must be formed using materials similar to the existing road surface or better.*	**Not applicable**
(5) Where a vehicle crossing is altered or no longer required, the crossing, or redundant section of crossing, must be reinstated as berm and/or footpath and the kerbs replaced. The cost of such work will be borne by the owner of the site previously accessed by the vehicle crossing	**Will comply**
E27.6.4.3. Width of vehicle access and queuing requirements	
(1) Every on-site parking and loading space must have vehicle access from a road, with the vehicle access complying with the following standards for width: *(a) passing bays are provided in accordance with Table E27.6.4.3.1;*	**Will comply**

(T147) Rural zones ◆ Where the length of access exceeds 100m and the width of access is less than 5.5m, passing bays are required at a maximum of 100m spacing ◆ Increase formed width of access to 5.5m over a 15m length (to allow two vehicles to safely pass each other) *(b) meeting the minimum formed access width specified in Table E27.6.4.3.2.* ***(T156) Rural zones*** ◆ No minimum specified	
(2) Access must be designed so that vehicles using or waiting to use fuel dispensers, ticket vending machines, remote ordering facilities and devices, entrance control mechanisms, or other drive-through facilities do not queue into the adjoining road reserve or obstruct entry to or exit from the site.	**Complies**
E27.6.4.4. Gradient of vehicle access	
(1) The gradient of the access must not be steeper than specified in Table E27.6.4.4.1: ***(T158) vehicle access used by heavy vehicles*** ◆ Maximum gradient of 1:8	**Complies**
(2) To avoid the underside of the car striking the ground, as illustrated in Figure E27.6.4.4.2, access with a change in gradient exceeding 1 in 8 (greater than 12.5 per cent change) at the summit or a 1 in 6.7 (15 per cent change) at a sag must include transition sections to achieve adequate ground clearance, refer to Figure E27.6.4.4.3. Typically, a transition section requires a minimum length of 2m.	**Complies**
(3) All vehicle access must be designed so that where the access adjoins the road there is sufficient space onsite for a platform so that vehicles can stop safely and check for pedestrians and other vehicles prior to exiting. This is illustrated in Figure E27.6.4.4.4. The platform must have a maximum gradient no steeper than 1 in 20 (5 per cent) and a minimum length of 4m for residential activities and 6m for all other activities	**Complies**
E27.6.5. Design and location of off-road pedestrian and cycling facilities	
(1) The design and location of the proposed facility to ensure good connections to existing facilities.	**Complies** The Proposal includes a connected series of off-road shared paths throughout the Site, connecting to the footpath and cycle path on the proposed spine road through the Surf Village Centre Precinct and the east-west Collector Road.
(2) The width of the path is designed to accommodate the anticipated number and type of users.	
(3) The surface of the path is designed to safely provide for the anticipated number and type of users.	

The Proposal infringes the following transport standards:

- **E27.6.1 Trip generation**
  - The Proposal includes more than 100 dwellings, more than 100 visitor accommodation, retail exceeding 1,667m^2 GFA and warehousing and storage exceeding 20,000 m^2 GFA
- **E27.6.4.1 (3) Vehicle Access Restrictions**
  - A vehicle crossing is proposed on Dairy Flat Highway, an arterial road, for the surf park car park
  - An existing vehicle crossing on Dairy Flat Highway, is proposed to be used by vehicles exiting the water treatment plant, which is proposed to be a left-out only
  - Several private roads (vehicle crossings) create an intersecting leg onto roundabouts within the public road reserve, thereby are within 10 m of the intersection
  - Vehicle crossings in the Surf Village Centre Precinct and North-West Neighbourhood Precinct are within 10 m of a T-intersection
- **E27.6.4.2 Width and number of vehicle crossings**
  - The vehicle crossing to the Eastern Industrial Precinct at the roundabout is 10 m wide, exceeding the permitted 9.0 m maximum width
  - The separate entry and exit vehicle crossings to the data centre is proposed to be about 3 m apart at the boundary where 6.0 m is the minimum separation distance.

The infringements above are assessed against the relevant assessment criteria in E27.8.2, summarised in the table below.

Table A 2: Chapter E27 Assessment criteria

E27.8.2.(3) – Activity/subdivision exceeds trip generation thresholds under E27.6.1	
Assessment Criteria	**Comment**
a) the effects on the function and the safe and efficient operation of the transport network including pedestrian movement, particularly at peak traffic times; b) the implementation of mitigation measures proposed to address adverse effects which may include measures such as travel planning, providing alternatives to private vehicle trips including accessibility to public transport, staging development, or contributing to improvements to the local transport network; or; c) the trip characteristics of the proposed activity on the site.	Refer to Section 5 of this ITA which includes an assessment of traffic effects on the key intersections of the Site and the proposed threshold for a secondary access point on Postman Road. Refer to Section 15 of this ITA which outlines proposed mitigation measures.
E27.8.2.(7) – Fewer than minimum loading spaces under E27.6.2.(8)	
(A) effects of the loading arrangements proposed for the site on the safe and efficient operation of adjacent transport network; (B) the specific business practice, operation or type of customer associated with the proposed activities; (C) the extent to which an accessible and adequate on-street loading space is available nearby or can be created while having regard to other demands for kerbside use of the road; (D) the extent to which loading can be provided informally on site or on another site in the immediate vicinity; or (E) the extent to which the reduction in loading spaces will contribute to the efficient use of land and the growth and intensification provided for in this Plan.	The Neighbourhood Precincts will not have dedicated on-site loading spaces given their proposed dwelling typologies. All loading and rubbish collection will be undertaken from the road or JOAL that the individual dwellings front on to, as is most practical.
E27.8.2.(8) – Infringes on design standards for parking/loading areas or access	
Assessment Criteria	**Comment**
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;* *(iii) any use of mechanical parking installation such as car stackers or turntables does not result in queuing beyond the site boundary; or* *(iv) any stacked parking is allocated and managed in such a way that it does not compromise the operation and use of the parking area.*	Applicable infringement 1: The private road to the eastern industrial lots will create an intersecting leg onto the Postman Road roundabout, measuring more than 9.0 m wide at the boundary. • the wider vehicle crossing is proposed to cater for simultaneous semi-trailer entering at the same time as a medium rigid truck is stopped at the give-way line. Refer to vehicle tracking plan provided which shows the vehicle crossing width is not wider than it needs to be. • vehicles exiting the Site will be able to see towards the footpath and the road. Any fencing proposed will maintain visual permeability Applicable infringement 2: The separate entry and exit vehicle crossings to the data centre is proposed to be 3.1 m apart at the boundary where 6.0 m is the minimum separation distance. • The entry and exit vehicle crossings are separated by a central island of about 3 m wide at the site boundary. This central island is provided so it can allow for a future gate house. To provide a compliant 6.0 m separation will be too large for a gate house and will reduce the manoeuvring area in front of the loading docks; impacting the operation of the site. • The island between the entry/exit vehicle crossings provide a 2.5 m gap where footpath can stop between the vehicle crossings. This gap is sufficient for a cyclist to wait on (a bicycle being about 1.8 m long) without conflicting with the path of a vehicle. • vehicles exiting the Site will be able to see towards the footpath, cycle path and the road. The fencing proposed will maintain visual permeability.

E27.8.2.(11) – Construction/use of new vehicle crossing where vehicle access restriction applies	
Assessment Criteria	**Comment**
a) this applies where a Vehicle Access Restriction is identified in Standard E27.6.4.1(2) and Standard E27.6.4.1(3), other than a Vehicle Access Restriction Level Crossing or a Vehicle Access Restriction Motorway Interchange: *(i) effects of the location and design of the access on the safe and efficient operation of the adjacent transport network having regard to:* • *visibility and safe sight distances* • *existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;* • *proximity to and operation of intersections;* • *existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Plan* • *existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways;* *(ii) the effects on 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; or* *(iii) the practicability and adequacy of the access arrangements considering site limitations, arrangement of buildings and activities, user requirements and operational requirements, proximity to and operation of intersections, having regard to:* • *the extent to which the site can reasonably be served by different access arrangements including:* - *access from another road;* - *shared or amalgamated access with another site or sites* - *via a frontage road, such as a slip lane or service road; or* • *the extent to which the need for access can reasonably be avoided by entering into a shared parking and/or loading arrangement with another site or sites in the immediate vicinity* b) for any proposed access within a Vehicle Access Restriction Motorway Interchange Control: *(i) the intensity, scale and traffic generating nature of activities on the site are such that any adverse effects on the safe and efficient operation of the motorway interchange are avoided, remedied or mitigated; or* *(ii) the extent to which, when considered against other access opportunities for the site, comparable or better outcomes are achieved in terms of effects on the safe and efficient operation of the interchange* c) for any proposed access within a Vehicle Access Restriction Level Crossing Control: *(i) effects on the safe and efficient operation of the level crossing; or* (ii) *the practicability and adequacy of the access arrangements having regard to site limitations, arrangement of buildings and activities, user requirements and operational requirements.*	a) A new vehicle crossing is proposed on Dairy Flat Highway for the surf park car park. An existing vehicle crossing on Dairy Flat Highway, is proposed to be used by vehicles associated with the water treatment plant, which is proposed to be a left-out exit-only *(i) effects of the location and design of the access on the safe and efficient operation of the adjacent transport network having regard to:* For the new vehicle crossing for the surf park car park: ◆ visibility requirements can be met, refer to Section 7.1.1 and Appendix D of this ITA for assessment on visibility from the proposed car park vehicle crossing ◆ this access is proposed as a secondary access to the main car park, mainly used by servicing vehicles, as such will not have a lot of traffic. This is proposed to minimise service vehicles mixing with customer traffic in the main car park. For the existing vehicle crossing to be used by the WTP: ◆ this access is proposed as an exit-only only by trucks associated with the WTP and is proposed to only allow left-out only onto Dairy Flat Highway. The frequency of vehicles to the WTP is only expected to be once or twice a week, which is significantly less than the current residential land use. As such effects relating to the proposed use is expected to be no more than the current use. ◆ visibility requirements can be met, refer to Section 8.1 ad Appendix E of this ITA for assessment on visibility from the existing vehicle crossing b) Not within Control specified. c) Not within Control specified.

Plan Change 79 Decisions Version Transport Assessment

PC79 Standards assessment

Table A 3: Plan Change 79 (Decisions version) transport standards and assessment

E27 Standard	Assessment
PC79 - E27.6.1. Trip generation (1) Where a proposal (except where excluded in Standard E27.6.1(2)) exceeds one of the following thresholds: (a) a new development or subdivision in Table E27.6.1.1; or	**Applies** – (T1) Dwellings – threshold 2, the Proposal exceeds 100 dwellings.

<table>
<tr><td>(b) 100 v/hr (any hour) for activities not specified in Table E27.6.1.1 requiring a controlled or restricted discretionary land use activity consent in the applicable zone where there are no requirements for an assessment of transport or trip generation effects. This standard does not apply to development activities provided for as permitted in the applicable zone
resource consent for a restricted discretionary activity is required.</td><td></td></tr>
<tr><td colspan="2">E27.6.2. Number of parking and loading spaces</td></tr>
<tr><td>PC79 - (6) Bicycle parking
(e) the activities specified in Table E27.6.2.5 must provide the minimum number of bicycle parking spaces specified;
(aa) for residential developments, the required secure long–stay bicycle parking must be located and designed in a manner that (is):
i. not part of any required outdoor living space or landscaped area;
ii. in a location accessible from either the road, vehicle access, pedestrian access or car parking area;
iii. sheltered from the weather;
iv. lockable and secure;
xii. the following bicycle parking requirements apply to new buildings and developments
(T81) Residential: All residential developments
◆ Minimum of 1 visitor space per 20 for developments of 20 or more dwellings
◆ Minimum of 1 secure space per dwelling without a dedicated garage or basement car parking space</td><td>Complies
In Neighbourhood Precinct South, North-East and North-West, all dwellings without a dedicated garage has a secure shed within each lot and all dwellings can accommodate visitor bicycle parking within each lot.
In the Surf Village Centre Precincts the apartment units have a basement car parking space and storage inside the basement. Bicycle parking for visitors are provided outside in clusters within proximity of the apartment buildings.</td></tr>
<tr><td>PC79 - (8) Number of loading spaces:
(a) residential activities where part of the site has frontage to an arterial road as identified on the planning maps, must provide loading as specified in Table E27.6.2.7A.
Add New Table E27.6.2.7A Minimum small loading space requirements
<table>
<tr><th>Activity</th><th>GFA/Number of dwellings</th><th>Minimum rate</th></tr>
<tr><td>(T111B)</td><td>Developments where all dwellings have individual pedestrian access directly from a public road</td><td>No loading space required</td></tr>
<tr><td></td><td>Up to 9 dwellings without individual pedestrian access directly from a public road</td><td>No loading space required</td></tr>
<tr><td></td><td>Greater than 9 dwellings up to 5,000m^2 without individual pedestrian access directly from a public road</td><td>1*</td></tr>
<tr><td></td><td>Greater than 5,000m^2</td><td>NA</td></tr>
</table></td><td>Not applicable – no residential activities front onto an arterial road.</td></tr>
<tr><td>PC79 - E27.6.3.2. Size and location of loading spaces
(1) Every loading space must:
(a) comply with the minimum dimensions given in Table E27.6.3.2.1; and
(e) have a maximum crossfall of 1:50 (2%) in all directions</td><td>Complies</td></tr>
<tr><td colspan="2">PC79 - E27.6.3.2(A). Accessible Parking</td></tr>
<tr><td>(1) Accessible parking must be provided for all new activities, changes of activity type, and/or the expansion or intensification of an existing activity in all zones, except for those listed below in E27.6.3.2(A)(2):
(2) Accessible parking is not required in the following zones, unless car parking is provided on-site, in which case the required number of accessible parking spaces must be determined in accordance with Table 1 or Table 2 below, whichever is relevant:
Business Zones:
a) Business – City Centre Zone;</td><td>Complies
• The proposed residential activities are not in residential zones, as such do not require accessible parking. However most of the housing typologies can accommodate parking in their own individual lot which complies with the accessible parking dimensions.</td></tr>
</table>

b) Business – Metropolitan Centre Zone;

c) Business – Town Centre Zone;

d) Business – Local Centre Zone;

e) Business – Mixed Use Zone;

f) Business – Neighbourhood Centre Zone.

Residential Zones:

a) Residential - Terrace Housing and Apartment Buildings Zone.

(3) For residential developments in residential zones (excluding the Terrace Housing and Apartment Buildings Zone unless car parking is provided on-site), accessible parking spaces must be provided for developments of 10 or more dwellings on a site.

(4) The required number of onsite accessible parking spaces provided must be calculated using the following method:

i. For non-residential land uses:

Step 1 - Use the Parking Demand Guidelines in Appendix 23 to determine the theoretical parking demand.

Step 2 - Use Table 1 – Number of accessible parking spaces – Non-Residential, below to determine the required number of accessible car park spaces based on either the number of parking spaces that are proposed to be provided or the theoretical parking demand calculated in step 1, whichever is the higher.

Table 1 – Number of accessible parking spaces – Non-Residential land uses

Total number of parking spaces provided or theoretical parking spaces, whichever is the higher	**Number of accessible parking spaces**
1 – 20	Not less than 1
21 – 50	Not less than 2
For every additional 50 parking spaces or part of a parking space	Not less than 1

ii. For retirement villages, supported residential care, visitor accommodation and boarding houses. The same method for calculating the required number of onsite accessible parking spaces for non-residential uses in 4(i) applies.

iii. For residential land uses the required number of accessible parking spaces provided must be in accordance with Table 2 below:

Table 2 – Number of accessible parking spaces – Residential land uses

Number of dwellings	**Number of accessible parking spaces**
10 - 19	Not less than 1
20 - 29	Not less than 2
30 – 50	Not less than 3
For every additional 25 dwellings or units	Not less than 1

- Based on both theoretical parking demand and overall car parking numbers, 12 accessible spaces are required for the Surf Lagoon Precinct, Accommodation Precinct and the Village Centre and 4 are required for the Eastern Industrial Precinct. The proposed accessible parking spaces meet the requirement and are spread within the public car park areas in the Surf Lagoon Precinct, Accommodation Precinct and the Village Centre. No formal car parking spaces are proposed in the Eastern Industrial Precinct, given the size of the lots. Sufficient accessible parking spaces will be provided on-site to comply with the requirement.

E27.6.3.3. Access and manoeuvring	
PC79 - (2A) For every loading space required by Table E27.6.3.2.1.(T137A) the access and manoeuvring areas associated with that loading space must accommodate the 6.4m van tracking curves set out in Figure E27.6.3.3.3.	Not relevant – no loading space required by T137A
PC79 - E27.6.3.4A. Heavy vehicle access	

<table>
<tr><td>(1) Where a site in a residential zone provides heavy vehicle access it must provide sufficient space on the site so an 8m heavy vehicle does not need to reverse onto or off the site or road, with a maximum reverse manoeuvring distance within the site of 12m

(2) Heavy vehicle access and manoeuvring areas associated with access required by E27.6.3.4A(1) must comply with the tracking curves set out in the Land Transport New Zealand Road and traffic guidelines: RTS 18: New Zealand on-road tracking curves for heavy motor vehicles (2007).</td><td>Not relevant – the Site is not in a residential zone</td></tr>
<tr><td colspan="2">E27.6.3.5. Vertical clearance</td></tr>
<tr><td>PC79 – E27.6.3.5. Vertical clearance
(1) To ensure vehicles can pass safely under overhead structures to access any parking and loading spaces, the minimum clearance between the formed surface and the structure must be:
(c) 2.5m where access and/or accessible parking is provided and/or required;
(ca) 2.8m where loading is required for residential activities denoted with an asterisk (*) in Table E27.6.2.7A;
(cb) 3.8m where heavy vehicle access in Standard E27.6.3.4A is provided; or</td><td>Complies</td></tr>
<tr><td colspan="2">E27.6.3.7. Lighting</td></tr>
<tr><td>PC79 - E27.6.3.7. Lighting
(2) Lighting is required, in residential zones to primary pedestrian access, vehicle access, parking and manoeuvring areas, where any of the following apply:
(a) There are four or more dwellings accessible from a primary pedestrian access which is not adjacent to a vehicle access;
(b) There are 10 or more parking spaces; or
(c) There are 10 or more dwellings.
Adequate lighting must be provided during the hours of darkness in a manner that complies with the rules in Section E24 Lighting.</td><td>Not relevant – the Site is not in a residential zone</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>PC79 - E27.6.4.3. Width of vehicle access and queuing requirements
(1) Every on-site parking and loading space must have vehicle access from a road, with the vehicle access complying with the following standards:

b) meeting the minimum speed management measure spacing specified in Table E27.6.4.3.3
Table E27.6.4.3.3 Speed Management Requirements
<table><tr><th>Activity</th><th>Length of vehicle access</th><th>Location of minimum speed management measures</th></tr><tr><td>(T156A) Residential zones</td><td>Exceeds 30m</td><td>Not more than 10m from the site boundary with the legal road; and not more than 30m spacing between speed management measures.</td></tr></table>
Note: Where heavy vehicle access and speed management measures are required, the design of speed management measures should include consideration of heavy vehicle requirements.</td><td>Not relevant – the Site is not in a residential zone</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>(1) Where two or more dwellings are proposed in residential zones, primary pedestrian access must be provided which meets the following:
(a) have the minimum pedestrian access width and separation specified in Table E27.6.6.1 for its full length;
Table E27.6.6.1. Primary Pedestrian Access width and separation requirements</td><td>Not relevant – the Site is not in a residential zone</td></tr>
</table>

Location of site		The total number of parking spaces or dwellings served by a vehicle and/or Primary Pedestrian Access	Minimum formed Primary Pedestrian Access width where not adjacent to vehicle access	Minimum formed Primary Pedestrian Access width and separation where adjacent to vehicle access
(T156A)	Residential zones	Serves 2 – 3 dwellings	1.8m	No requirement under E27.6.6(1) to (3)
(T156B)		Serves 4 to 19 parking spaces or 4 to 19 dwellings, whichever is the greater.	1.8m	1.4m (including the kerb), which must be vertically separated from trafficable areas as shown in Figure E27.6.4.3.1.
(T156B)		Serves 20 or more parking spaces or 20 or more dwellings, whichever is the greater.	1.8m	1.8m (including the kerb), which must be vertically separated from trafficable areas as shown in Figure E27.6.4.3.1.

Note 1: Works within the legal road, such as connections to public footpaths, require prior approval from Auckland Transport as the road controlling authority. This approval is separate and additional to any land use or subdivision approval required.

(c) have a gradient no greater than:

(i) 1 in 12 for pedestrian access which is not adjacent to vehicle access;

(ii) the maximum vehicle access gradient as specified in Table E27.6.4.4.1 where the pedestrian access is adjacent to vehicle access;

(i) have a surface treatment which is firm, stable and slip resistant in any weather conditions;

(ii) provide direct and continuous access to the dwellings from a public footpath;

(iii) be free from permanent obstructions and have a clear height of at least 2.1m for its full length.

(2) A minimum clear width of 3m and a minimum clear height of 2.1m for its full length is required for primary pedestrian access where not adjacent to vehicle access and serving:

(a) up to three dwellings and has a length greater than 50m; or

(b) four or more dwellings

(3) For the purposes of (2) above, the clear width may include:

(a) the minimum 1.8m formed primary pedestrian access width;

(b) landscape treatment with a maximum mature height of 600mm;

(c) lighting infrastructure.

(4) Standards E27.6.6(1), (2) and (3) above do not apply where:

(a) up to three dwellings are proposed on a site and vehicle access is provided to each dwelling; or

(b) a dwelling directly fronts and has direct access to a street.

(5) For four or more dwellings in residential zones, pedestrian access must be provided to each parking space within a parking area (excluding garages) consisting of four or more parking spaces served by the same vehicle access and:

(a) have a minimum width of 1.2m;

(b) be vertically separated from trafficable areas as shown in Figure E27.6.4.3.1;

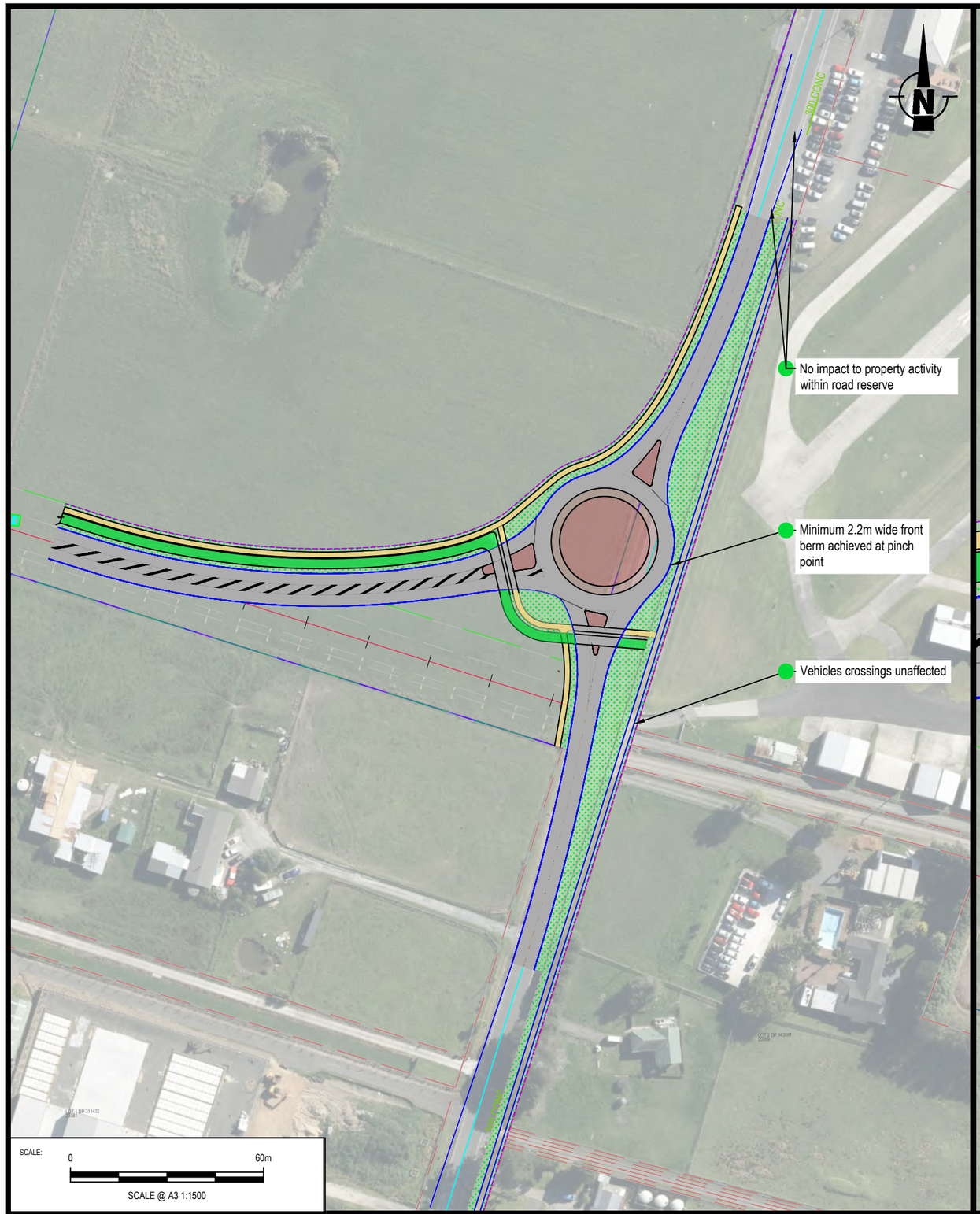
(c) connect to the primary pedestrian access or the dwellings associated with those parking spaces;

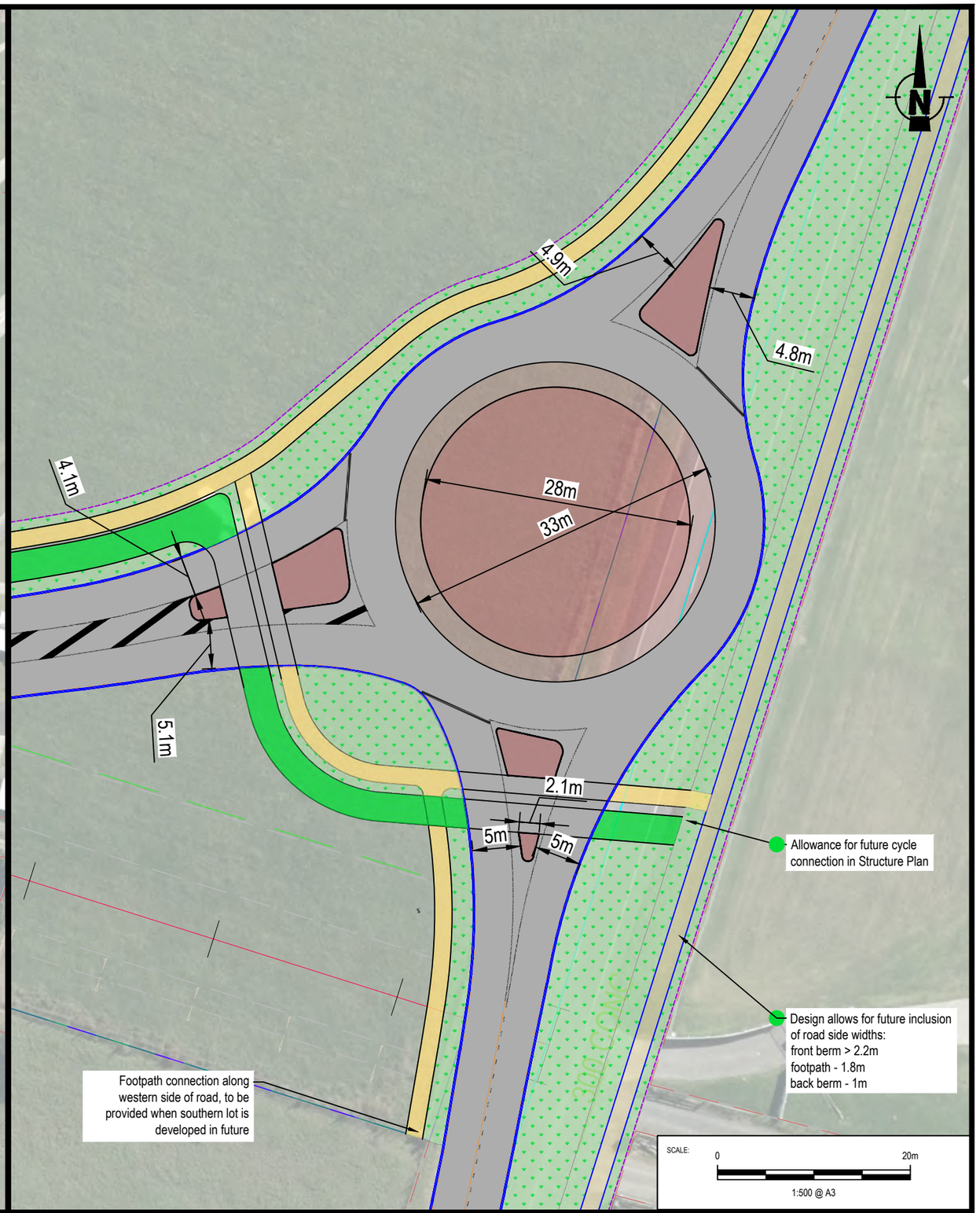
(d) have a surface treatment which is firm, stable and slip resistant in any weather condition; and

(e) be free from permanent obstructions and have a clear height of 2.1m for its full length.

This standard does not apply where the pedestrian access forms part of a primary pedestrian access.	
Purpose: to ensure that any undercover car parks for new semi-detached dwellings or for new dwellings within a terrace or apartment building are provided with the capability to install Electric Vehicle Supply Equipment. (1) Any new dwellings with car parking (with the exception of new detached dwellings) must provide each undercover car park with the capability to install Electric Vehicle Supply Equipment with designated space for the necessary conduit, circuit and metering between the car park and an electrical distribution board on the same building storey, or ground level if the car parking space is at ground level. (a) This standard does not apply to any car parking permanently allocated to visitors.	**Complies**

APPENDIX B Postman Road roundabout





REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 NTS
NTS

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

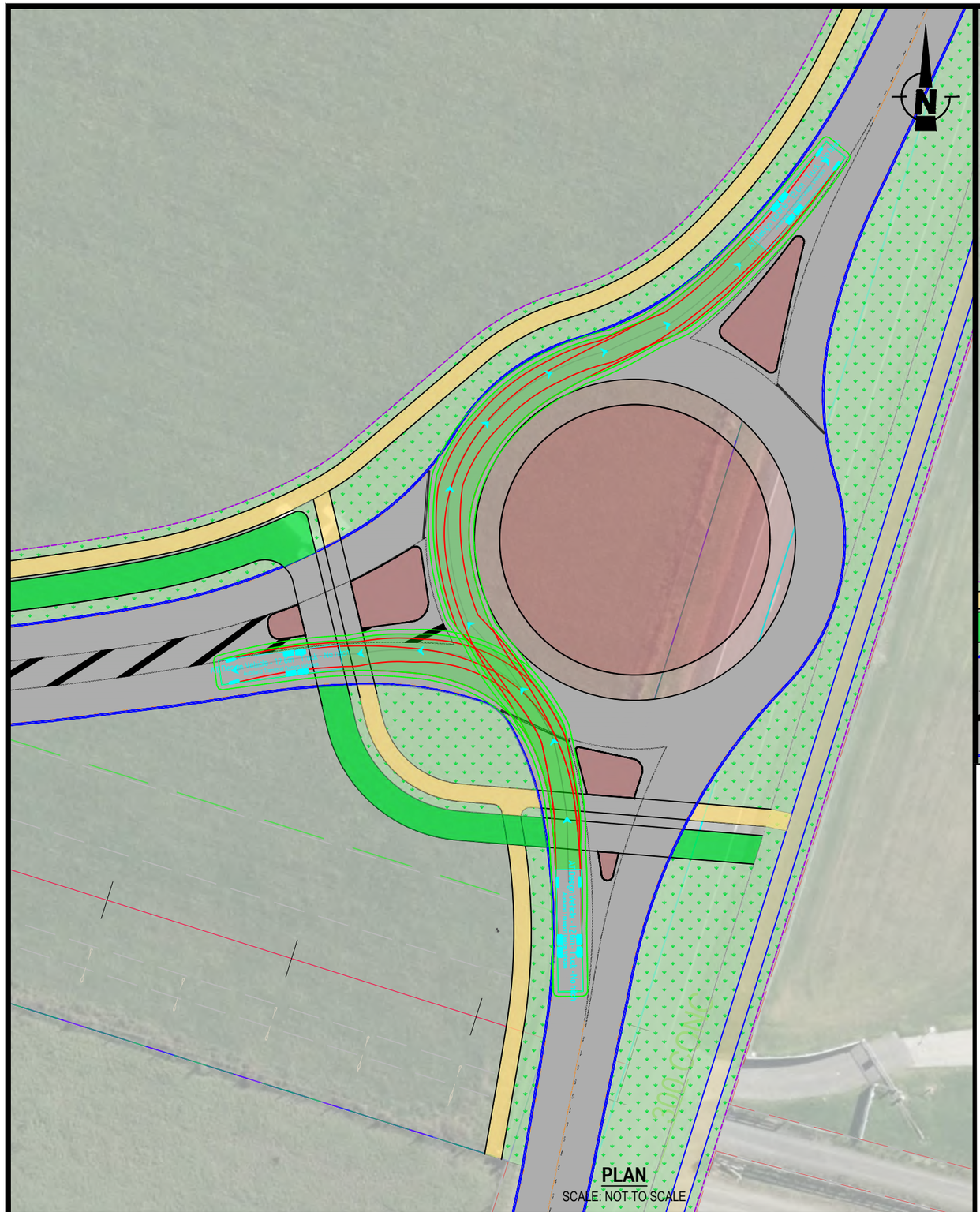
SHEET TITLE: POSTMAN ROAD - INTERSECTION ROUNDABOUT

DRAWING NUMBER: INOV002-PR-SK05

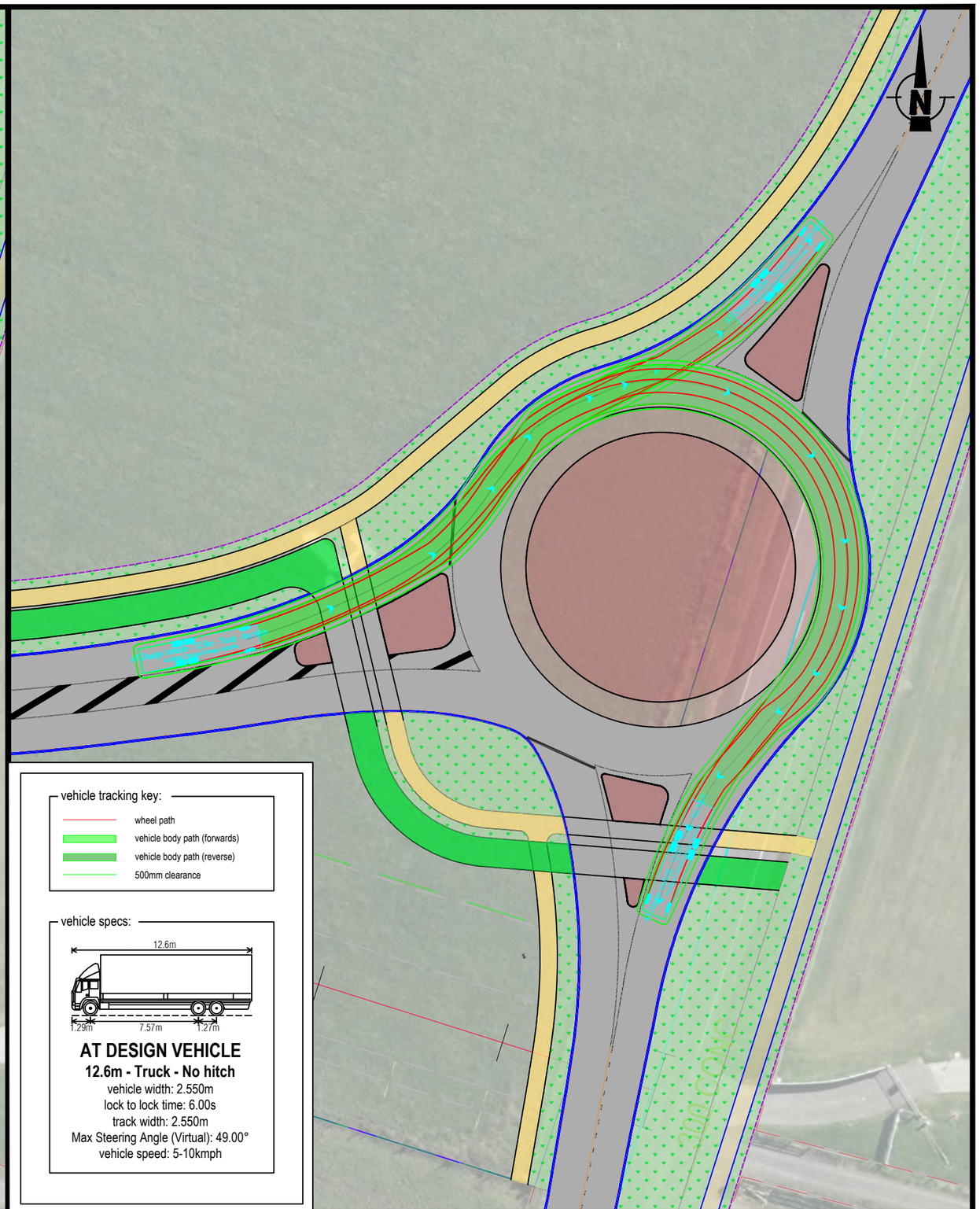
SHEET: 01 of 07

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



PLAN
SCALE: NOT TO SCALE



vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
12.6m - Truck - No hitch
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 49.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 — 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

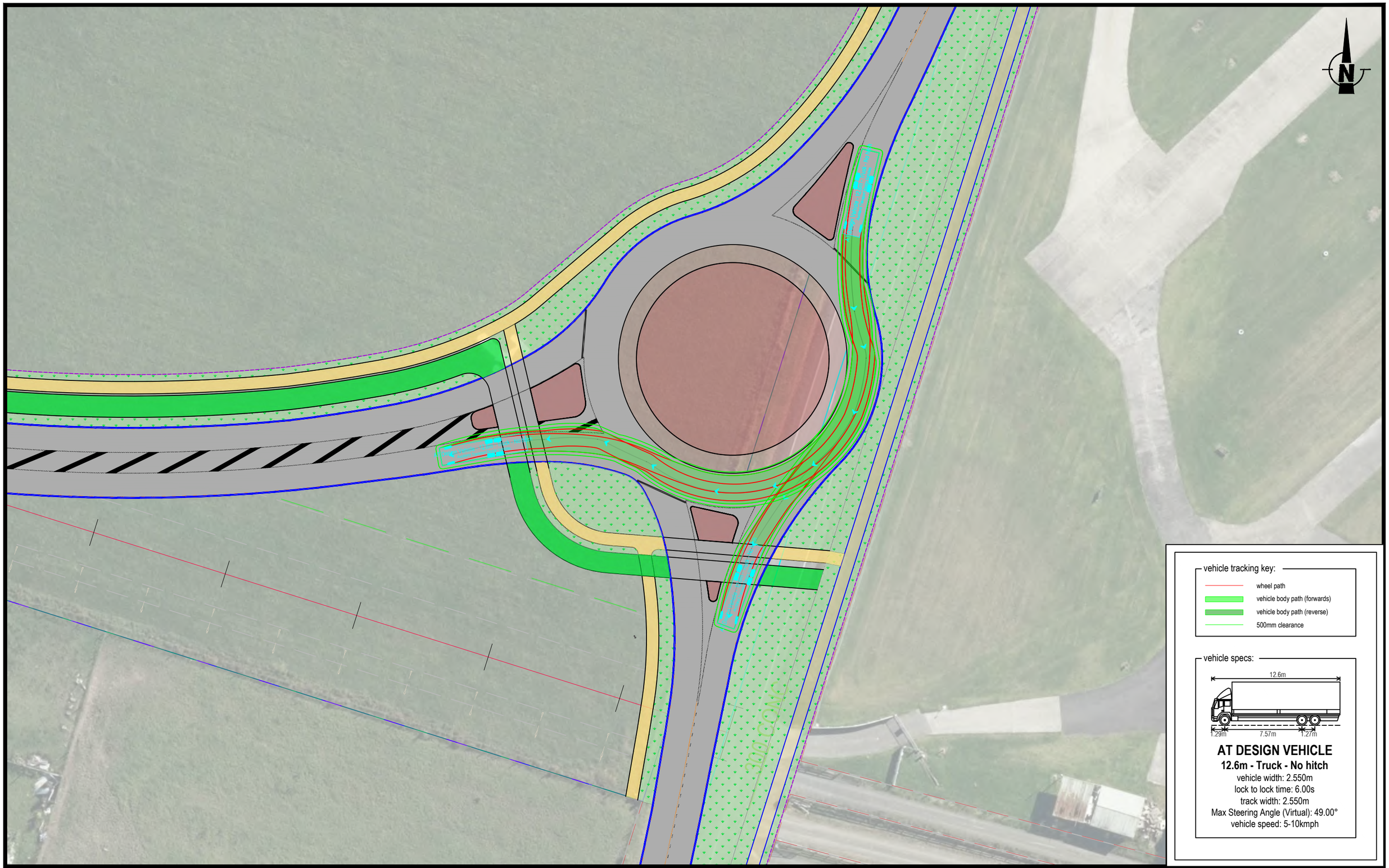
FOR RESOURCE CONSENT

SHEET TITLE: POSTMAN ROAD - INTERSECTION
VEHICLE TRACKING - DESIGN VEHICLE

DRAWING NUMBER: INOV002-PR-SK05

SHEET: 02 of 07
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

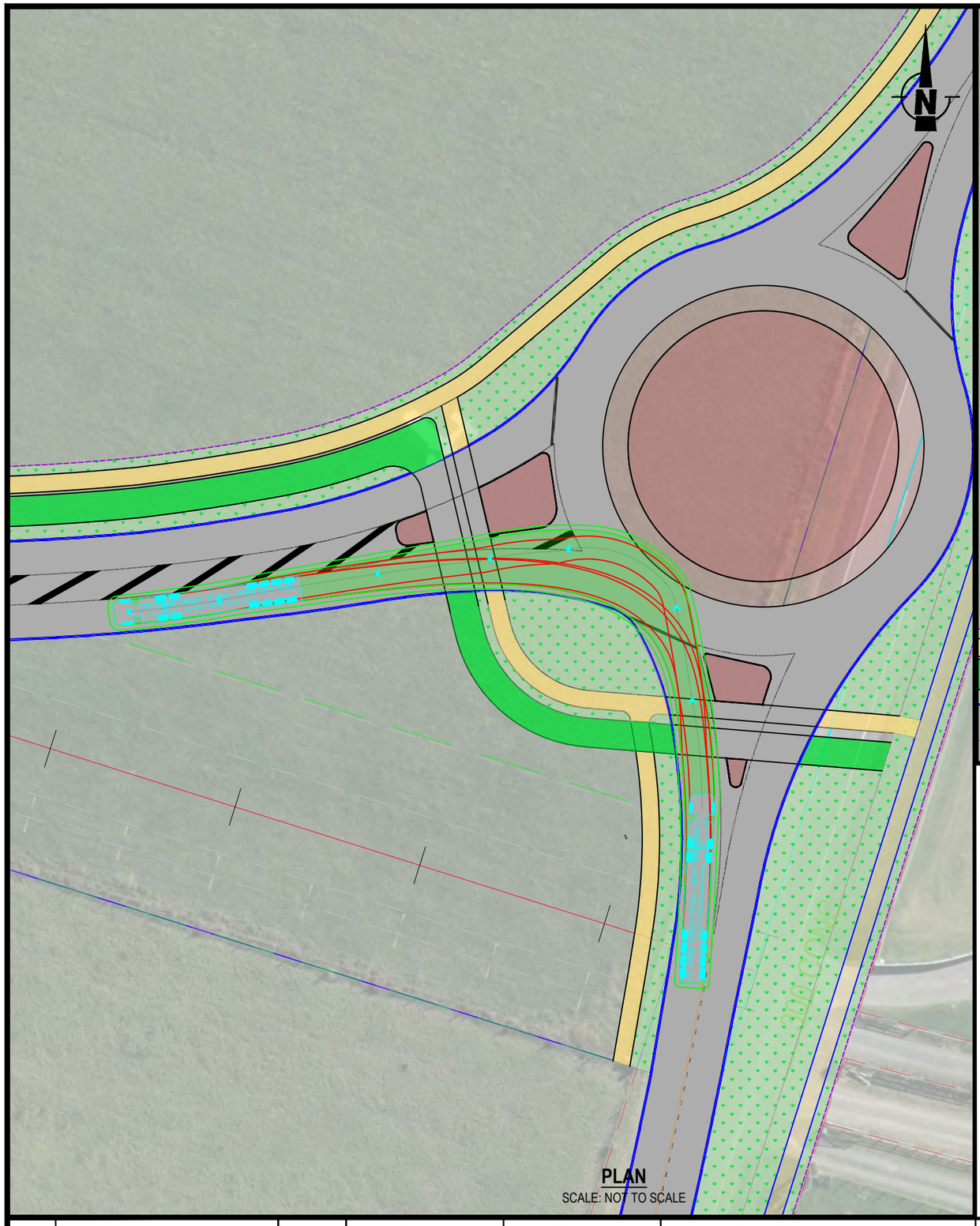
FOR RESOURCE CONSENT

SHEET TITLE: POSTMAN ROAD - INTERSECTION
VEHICLE TRACKING - DESIGN VEHICLE

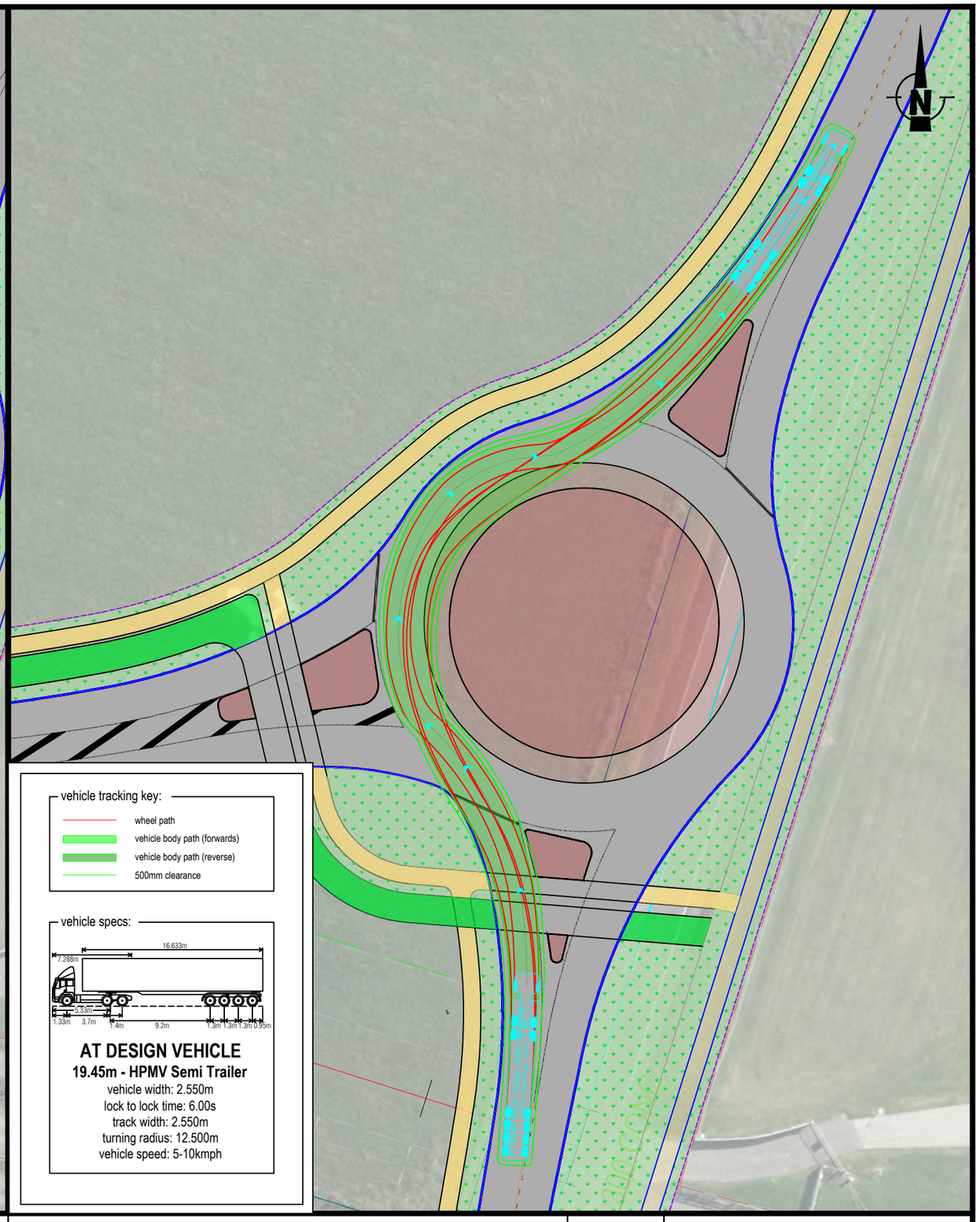
DRAWING NUMBER: INOV002-PR-SK05

SHEET: 03 of 07
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



PLAN
SCALE: NOT TO SCALE



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
19.45m - HPMV Semi Trailer
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

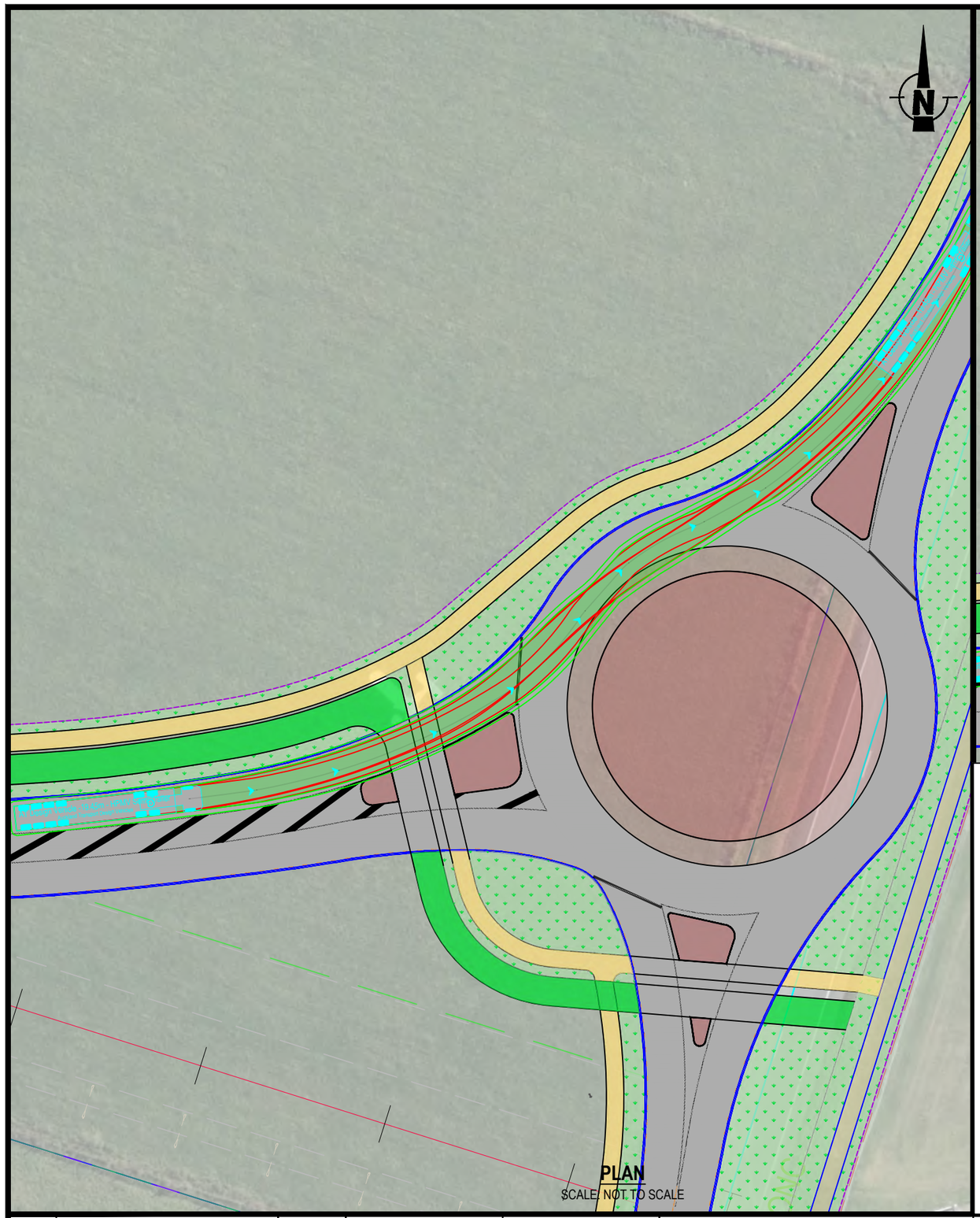
FOR RESOURCE CONSENT

SHEET TITLE: POSTMAN ROAD - INTERSECTION VEHICLE TRACKING - DESIGN VEHICLE

DRAWING NUMBER: INOV002-PR-SK05

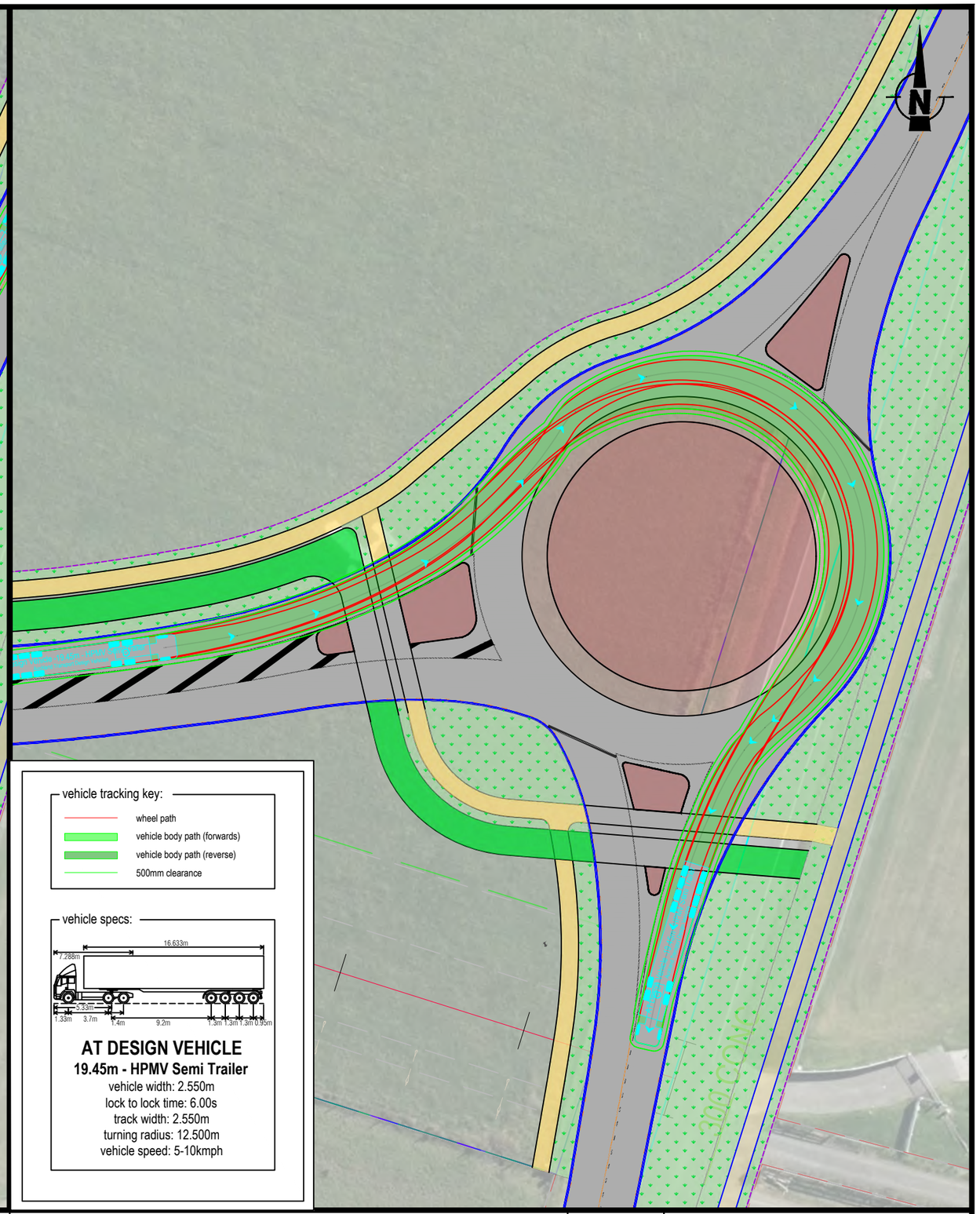
SHEET: 04 of 07
REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



PLAN

SCALE: NOT TO SCALE



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

19.45m - HPMV Semi Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 — 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

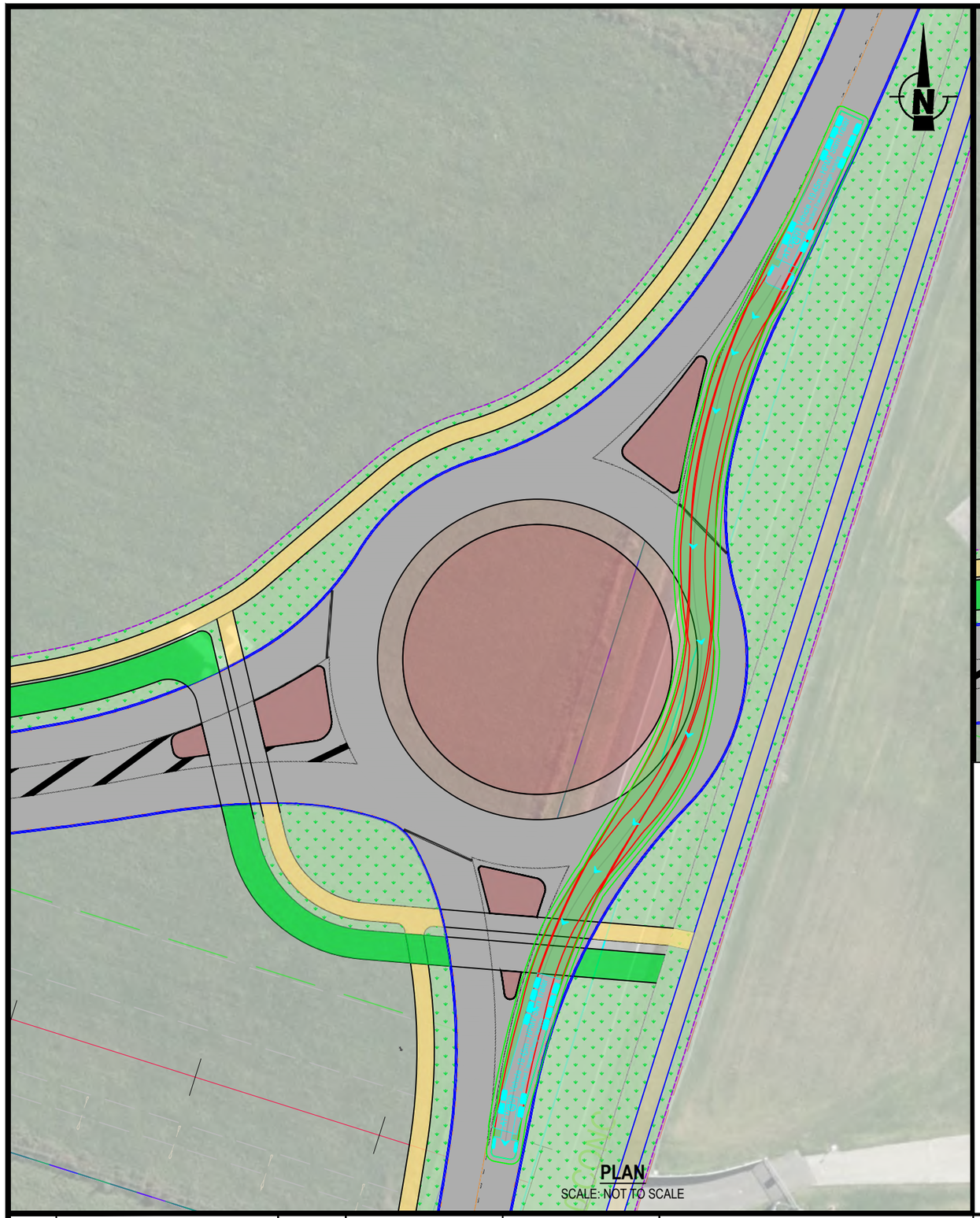
SHEET TITLE: POSTMAN ROAD - INTERSECTION
VEHICLE TRACKING - CHECK VEHICLE

DRAWING NUMBER: INOV002-PR-SK05

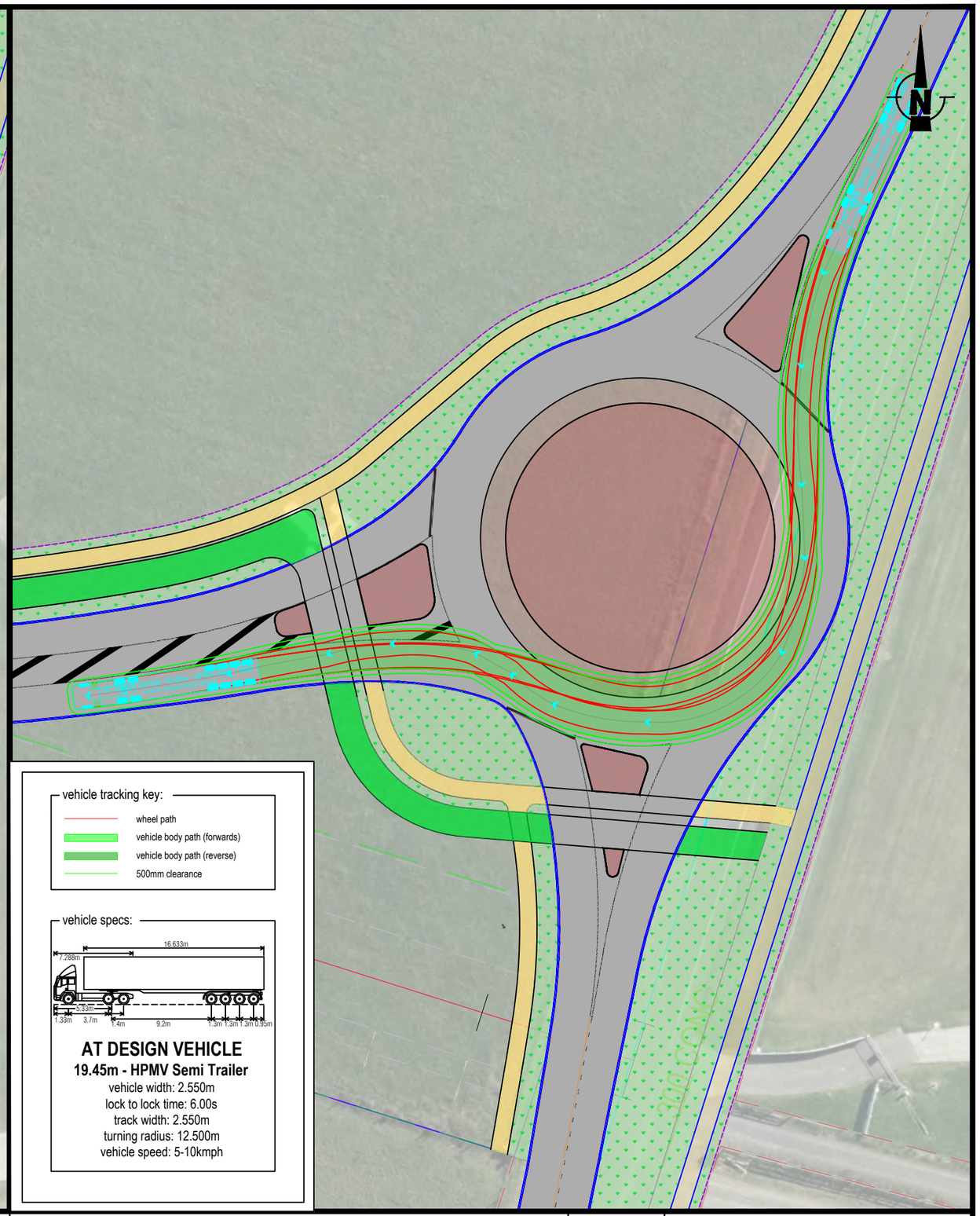
SHEET: 05 of 07

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



PLAN
SCALE: NOT TO SCALE



vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
19.45m - HPMV Semi Trailer
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 — 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: POSTMAN ROAD - INTERSECTION
VEHICLE TRACKING - CHECK VEHICLE

DRAWING NUMBER: INOV002-PR-SK05

SHEET: 06 of 07
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

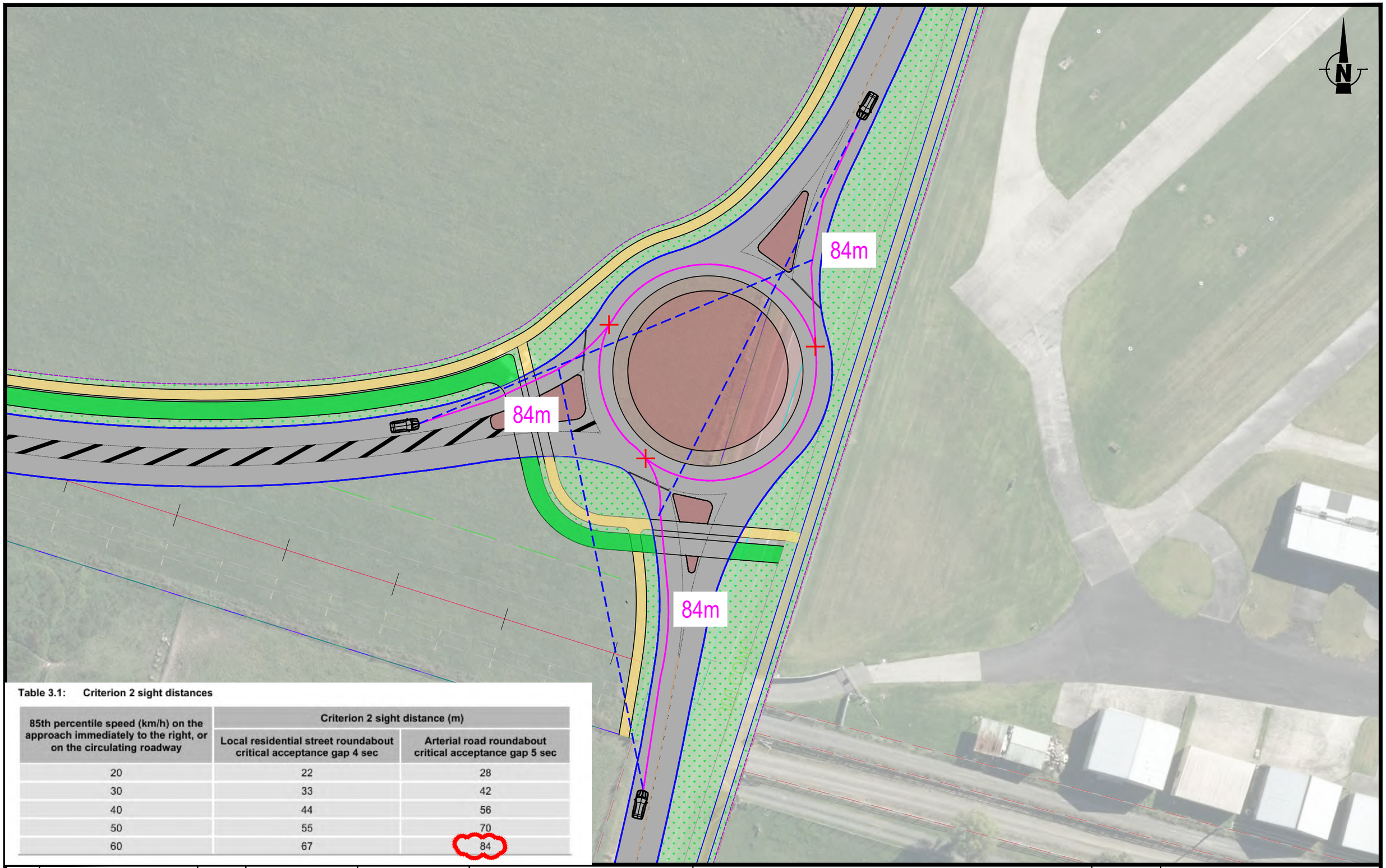


Table 3.1: Criterion 2 sight distances

85th percentile speed (km/h) on the approach immediately to the right, or on the circulating roadway	Criterion 2 sight distance (m)	
	Local residential street roundabout critical acceptance gap 4 sec	Arterial road roundabout critical acceptance gap 5 sec
20	22	28
30	33	42
40	44	56
50	55	70
60	67	84

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: SC | DRAWN: RG
CHECKED: ET | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: POSTMAN ROAD - INTERSECTION SIGHT DISTANCE

DRAWING NUMBER: INOV002-PR-SK05

SHEET: 07 of 07

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

APPENDIX C SIDRA movement summary results

Figure 1: Dairy Flat Highway and Collector Road layout

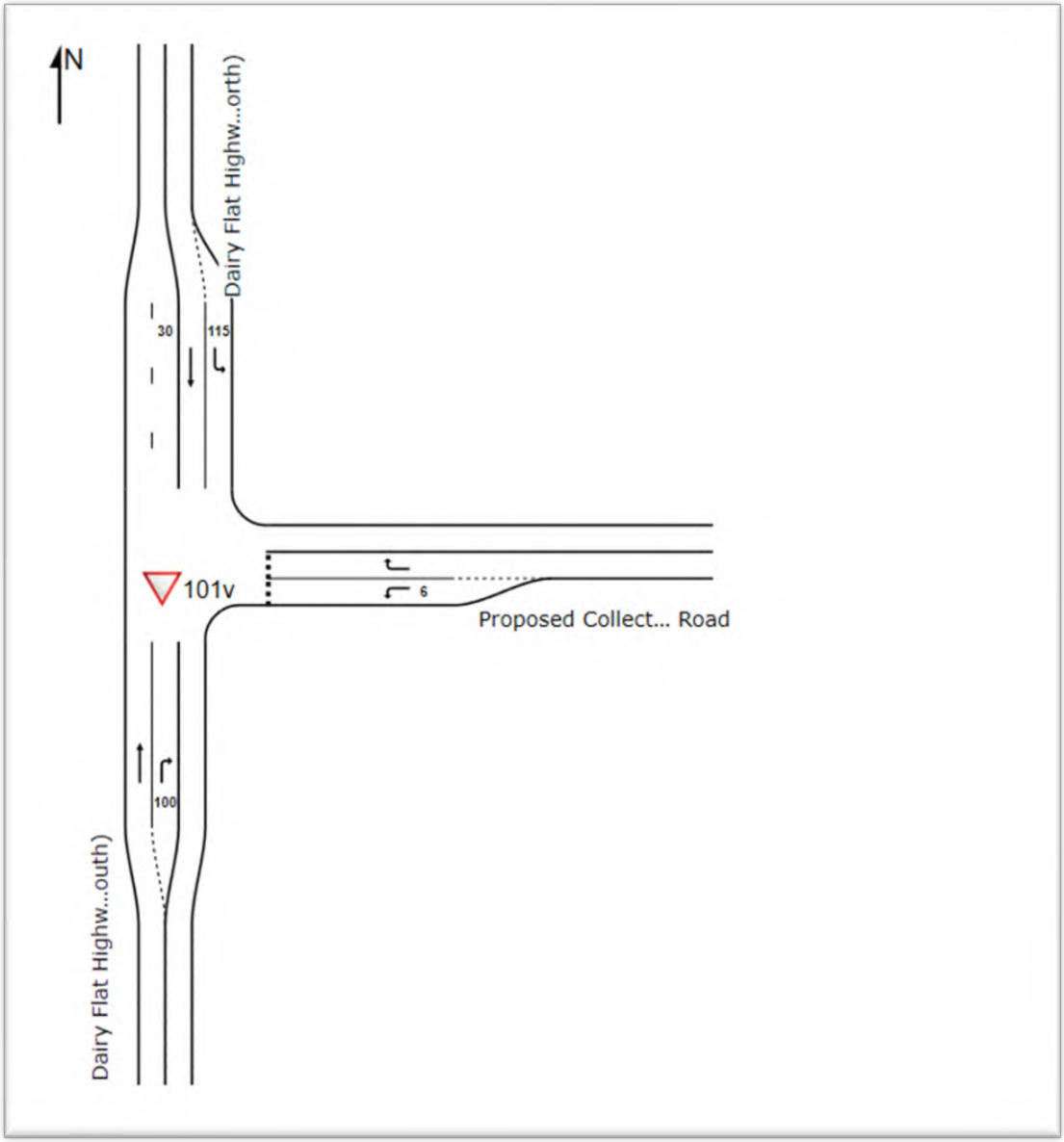


Figure 2: Postman Road and Collector Road Layout - Full built-out Scenario

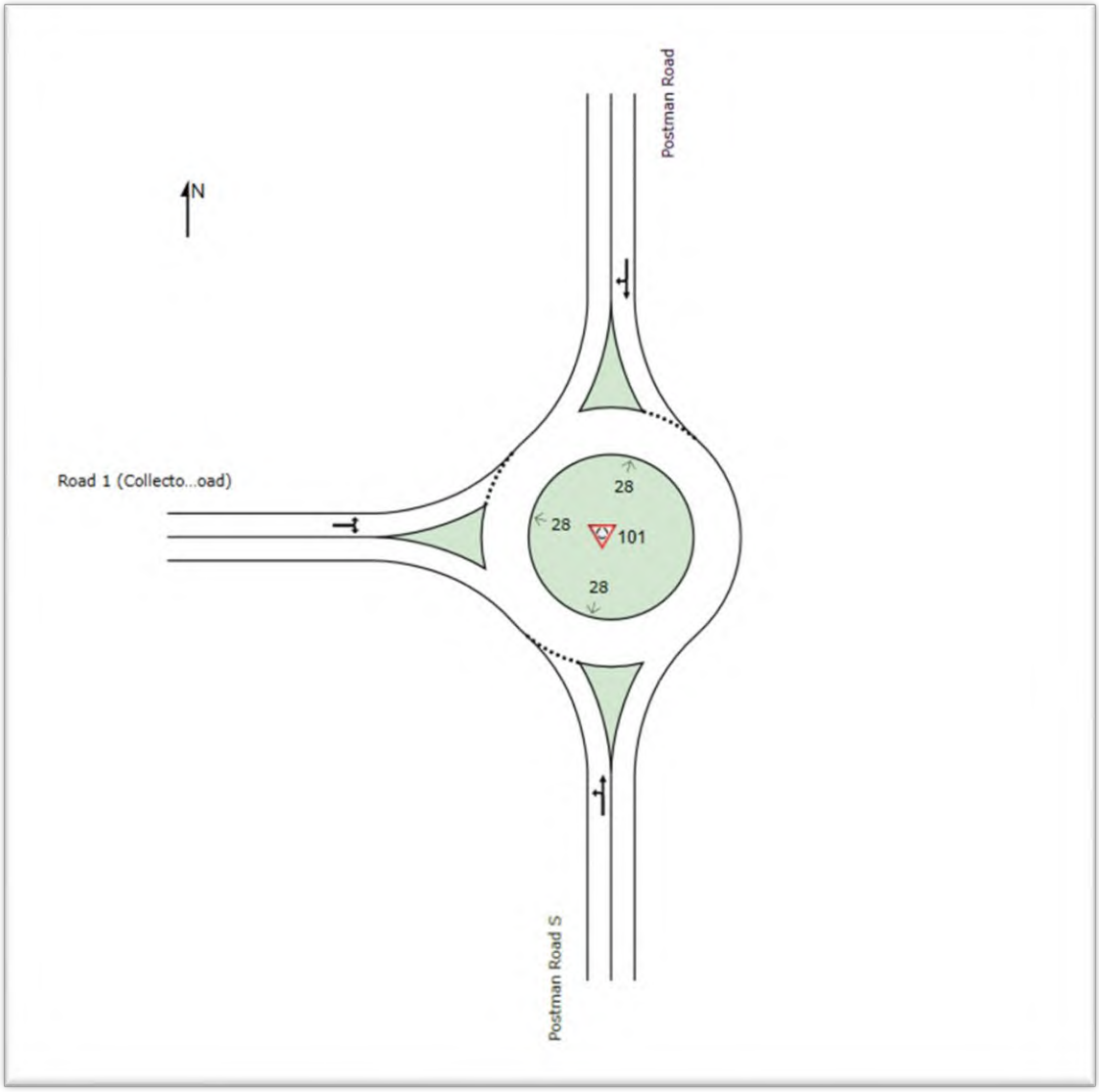


Figure 3: Scenario 1 with 200 Dwellings – AM Peak - Dairy Flat Highway

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dairy Flat Highway (South)															
2	T1	All MCs	458	4.0	458	4.0	0.241	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	All MCs	61	4.0	61	4.0	0.088	8.2	LOS A	0.3	2.3	0.55	0.75	0.55	43.8
Approach			519	4.0	519	4.0	0.241	1.1	NA	0.3	2.3	0.07	0.09	0.07	49.1
East: Proposed Collector Road															
4	L2	All MCs	76	4.0	76	4.0	0.108	7.8	LOS A	0.4	2.7	0.51	0.73	0.51	44.1
6	R2	All MCs	87	4.0	87	4.0	0.288	17.7	LOS C	1.0	7.6	0.81	0.96	0.95	39.4
Approach			163	4.0	163	4.0	0.288	13.1	LOS B	1.0	7.6	0.67	0.85	0.75	41.5
North: Dairy Flat Highway (North)															
7	L2	All MCs	70	4.0	70	4.0	0.039	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	45.9
8	T1	All MCs	526	4.0	526	4.0	0.277	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			596	4.0	596	4.0	0.277	0.6	NA	0.0	0.0	0.00	0.06	0.00	49.4
All Vehicles			1278	4.0	1278	4.0	0.288	2.4	NA	1.0	7.6	0.11	0.17	0.12	48.1

Figure 4: Scenario 1 with 200 Dwellings – AM Peak - Dairy Flat Highway

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dairy Flat Highway (South)															
2	T1	All MCs	774	4.0	774	4.0	0.407	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
3	R2	All MCs	99	4.0	99	4.0	0.130	7.8	LOS A	0.5	3.6	0.54	0.74	0.54	44.1
Approach			873	4.0	873	4.0	0.407	1.1	NA	0.5	3.6	0.06	0.08	0.06	49.1
East: Proposed Collector Road															
4	L2	All MCs	124	4.0	124	4.0	0.163	7.4	LOS A	0.6	4.2	0.50	0.72	0.50	44.3
6	R2	All MCs	75	4.0	75	4.0	0.458	34.1	LOS D	1.6	11.4	0.92	1.05	1.21	33.6
Approach			199	4.0	199	4.0	0.458	17.5	LOS C	1.6	11.4	0.66	0.84	0.77	39.6
North: Dairy Flat Highway (North)															
7	L2	All MCs	60	4.0	60	4.0	0.033	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	45.9
8	T1	All MCs	471	4.0	471	4.0	0.248	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			531	4.0	531	4.0	0.248	0.6	NA	0.0	0.0	0.00	0.06	0.00	49.4
All Vehicles			1603	4.0	1603	4.0	0.458	2.9	NA	1.6	11.4	0.12	0.17	0.13	47.7

Figure 5: Full buildout - Dairy Flat Highway & Collector Road – AM Peak

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total	HV]	Arrival Flows [Total	HV]	Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [Veh.	Dist]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Dairy Flat Highway (South)															
2	T1	All MCs	458	4.0	458	4.0	0.241	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	All MCs	56	4.0	56	4.0	0.080	8.2	LOS A	0.3	2.1	0.55	0.74	0.55	43.9
Approach			514	4.0	514	4.0	0.241	1.0	NA	0.3	2.1	0.06	0.08	0.06	49.2
East: Proposed Collector Road															
4	L2	All MCs	95	4.0	95	4.0	0.135	7.9	LOS A	0.5	3.4	0.52	0.75	0.52	44.1
6	R2	All MCs	109	4.0	109	4.0	0.356	18.5	LOS C	1.4	9.9	0.82	0.99	1.04	39.0
Approach			204	4.0	204	4.0	0.356	13.6	LOS B	1.4	9.9	0.68	0.87	0.80	41.3
North: Dairy Flat Highway (North)															
7	L2	All MCs	64	4.0	64	4.0	0.035	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	45.9
8	T1	All MCs	526	4.0	526	4.0	0.277	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			590	4.0	590	4.0	0.277	0.6	NA	0.0	0.0	0.00	0.06	0.00	49.4
All Vehicles			1308	4.0	1308	4.0	0.356	2.8	NA	1.4	9.9	0.13	0.19	0.15	47.8

Figure 6: Full buildout - Dairy Flat Highway & Collector Road – PM Peak

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total	HV]	Arrival Flows [Total	HV]	Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [Veh.	Dist]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Dairy Flat Highway (South)															
2	T1	All MCs	774	4.0	774	4.0	0.407	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
3	R2	All MCs	114	4.0	114	4.0	0.151	7.9	LOS A	0.6	4.2	0.55	0.75	0.55	44.0
Approach			888	4.0	888	4.0	0.407	1.2	NA	0.6	4.2	0.07	0.10	0.07	48.9
East: Proposed Collector Road															
4	L2	All MCs	111	4.0	111	4.0	0.146	7.4	LOS A	0.5	3.8	0.50	0.72	0.50	44.4
6	R2	All MCs	68	4.0	68	4.0	0.430	34.3	LOS D	1.4	10.4	0.92	1.04	1.17	33.5
Approach			179	4.0	179	4.0	0.430	17.6	LOS C	1.4	10.4	0.66	0.84	0.75	39.5
North: Dairy Flat Highway (North)															
7	L2	All MCs	70	4.0	70	4.0	0.039	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	45.9
8	T1	All MCs	471	4.0	471	4.0	0.248	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			541	4.0	541	4.0	0.248	0.7	NA	0.0	0.0	0.00	0.07	0.00	49.3
All Vehicles			1608	4.0	1608	4.0	0.430	2.8	NA	1.4	10.4	0.11	0.17	0.12	47.8

Figure 7: Full buildout – Postman Road & Collector Road – AM Peak

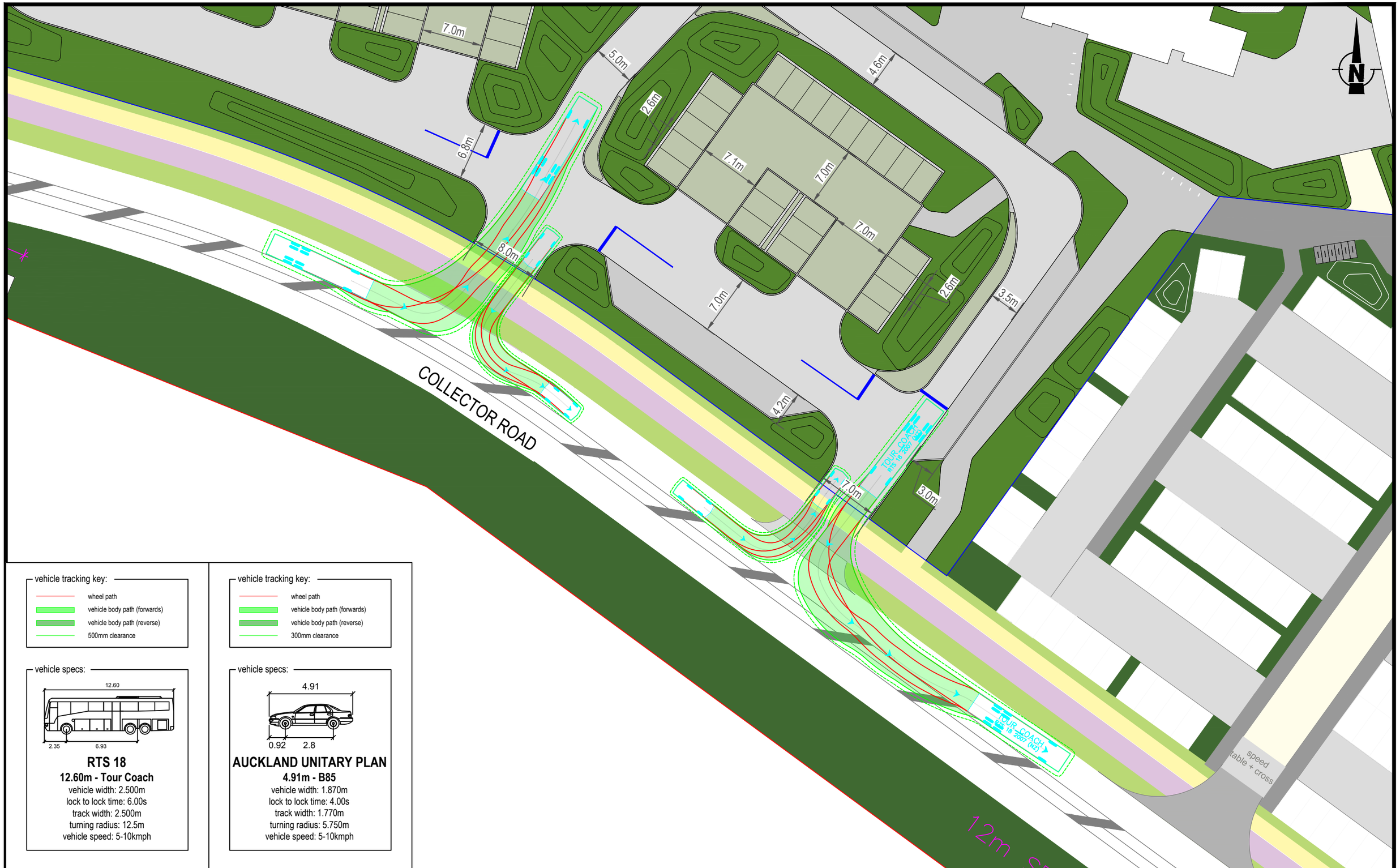
Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total	HV]	Arrival Flows [Total	HV]	Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [Veh.	Dist]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Postman Road S															
1	L2	All MCs	44	8.0	44	8.0	0.217	3.8	LOS A	1.3	9.4	0.17	0.36	0.17	54.5
2	T1	All MCs	263	8.0	263	8.0	0.217	3.9	LOS A	1.3	9.4	0.17	0.36	0.17	54.9
Approach			307	8.0	307	8.0	0.217	3.8	LOS A	1.3	9.4	0.17	0.36	0.17	54.9
North: Postman Road N															
8	T1	All MCs	232	8.0	232	8.0	0.201	4.0	LOS A	1.2	9.0	0.24	0.41	0.24	54.0
9	R2	All MCs	39	8.0	39	8.0	0.201	9.5	LOS A	1.2	9.0	0.24	0.41	0.24	53.0
Approach			271	8.0	271	8.0	0.201	4.8	LOS A	1.2	9.0	0.24	0.41	0.24	53.9
West: Road 1 (Collector Road)															
10	L2	All MCs	76	8.0	76	8.0	0.134	5.1	LOS A	0.7	5.2	0.44	0.59	0.44	52.0
12	R2	All MCs	67	8.0	67	8.0	0.134	10.6	LOS B	0.7	5.2	0.44	0.59	0.44	51.4
Approach			143	8.0	143	8.0	0.134	7.6	LOS A	0.7	5.2	0.44	0.59	0.44	51.7
All Vehicles			721	8.0	721	8.0	0.217	5.0	LOS A	1.3	9.4	0.25	0.43	0.25	53.9

Figure 8: Full buildout – Postman Road & Collector Road – PM Peak

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total	HV]	Arrival Flows [Total	HV]	Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [Veh.	Dist]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Postman Road S															
1	L2	All MCs	66	8.0	66	8.0	0.279	4.0	LOS A	1.7	12.8	0.24	0.38	0.24	54.2
2	T1	All MCs	314	8.0	314	8.0	0.279	4.0	LOS A	1.7	12.8	0.24	0.38	0.24	54.6
Approach			380	8.0	380	8.0	0.279	4.0	LOS A	1.7	12.8	0.24	0.38	0.24	54.5
North: Postman Road N															
8	T1	All MCs	302	8.0	302	8.0	0.265	4.0	LOS A	1.7	12.9	0.24	0.42	0.24	53.9
9	R2	All MCs	63	8.0	63	8.0	0.265	9.4	LOS A	1.7	12.9	0.24	0.42	0.24	52.9
Approach			365	8.0	365	8.0	0.265	4.9	LOS A	1.7	12.9	0.24	0.42	0.24	53.7
West: Road 1 (Collector Road)															
10	L2	All MCs	64	8.0	64	8.0	0.123	5.3	LOS A	0.6	4.8	0.48	0.60	0.48	51.8
12	R2	All MCs	61	8.0	61	8.0	0.123	10.8	LOS B	0.6	4.8	0.48	0.60	0.48	51.2
Approach			125	8.0	125	8.0	0.123	8.0	LOS A	0.6	4.8	0.48	0.60	0.48	51.5
All Vehicles			871	8.0	871	8.0	0.279	5.0	LOS A	1.7	12.9	0.28	0.43	0.28	53.8

APPENDIX D

Surf Park car park and Accommodation Precinct



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18
12.60m - Tour Coach
vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 12.5m
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN
4.91m - B85
vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
VEHICLE CROSSING ON ROAD 1

DRAWING NUMBER: INVO002-007

SHEET: 01 of 09
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

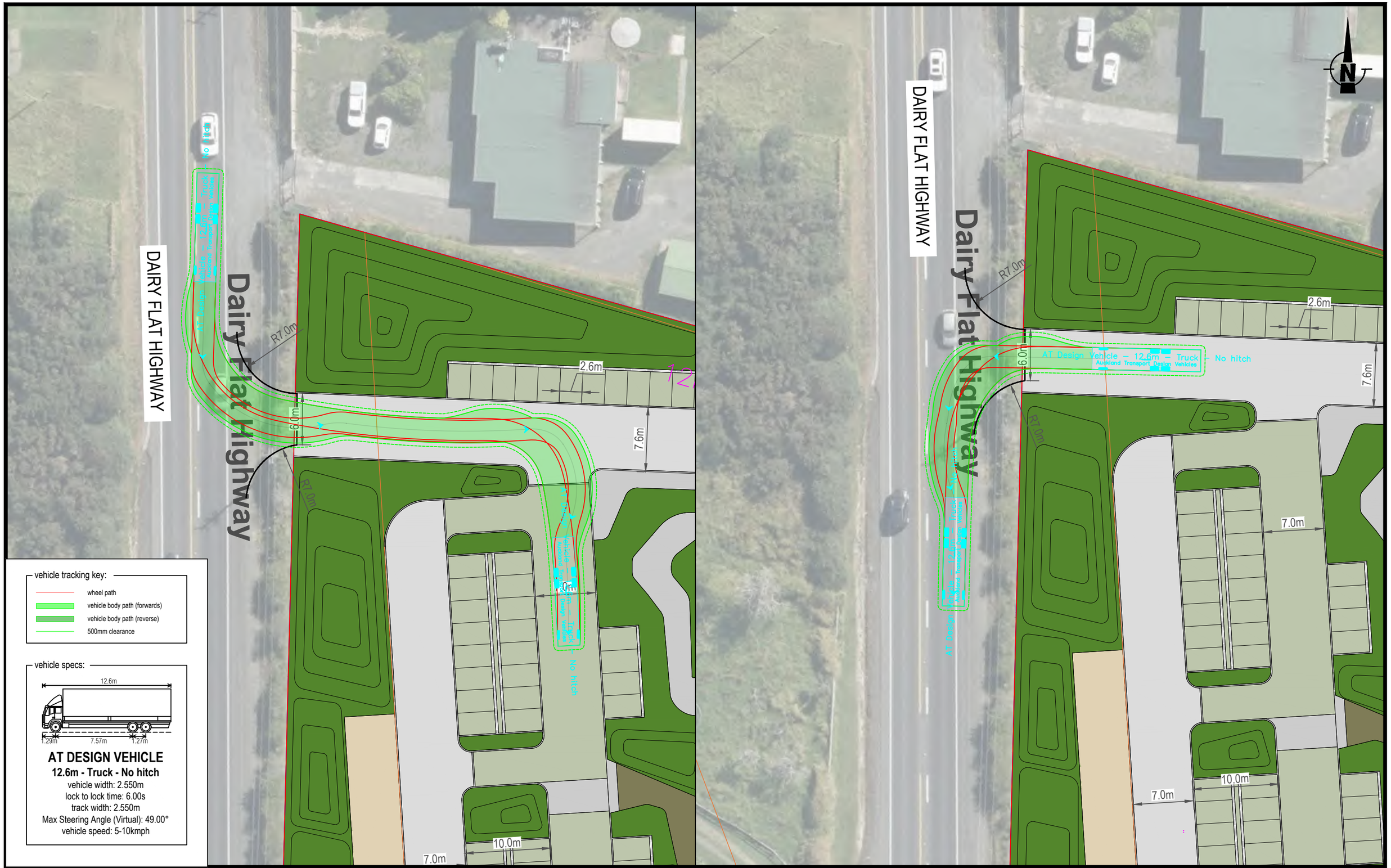
FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
VEHICLE CROSSING - DAIRY FLAT HIGHWAY

DRAWING NUMBER: INVO002-007

SHEET: 02 of 09
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

12.6m - Truck - No hitch

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 49.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

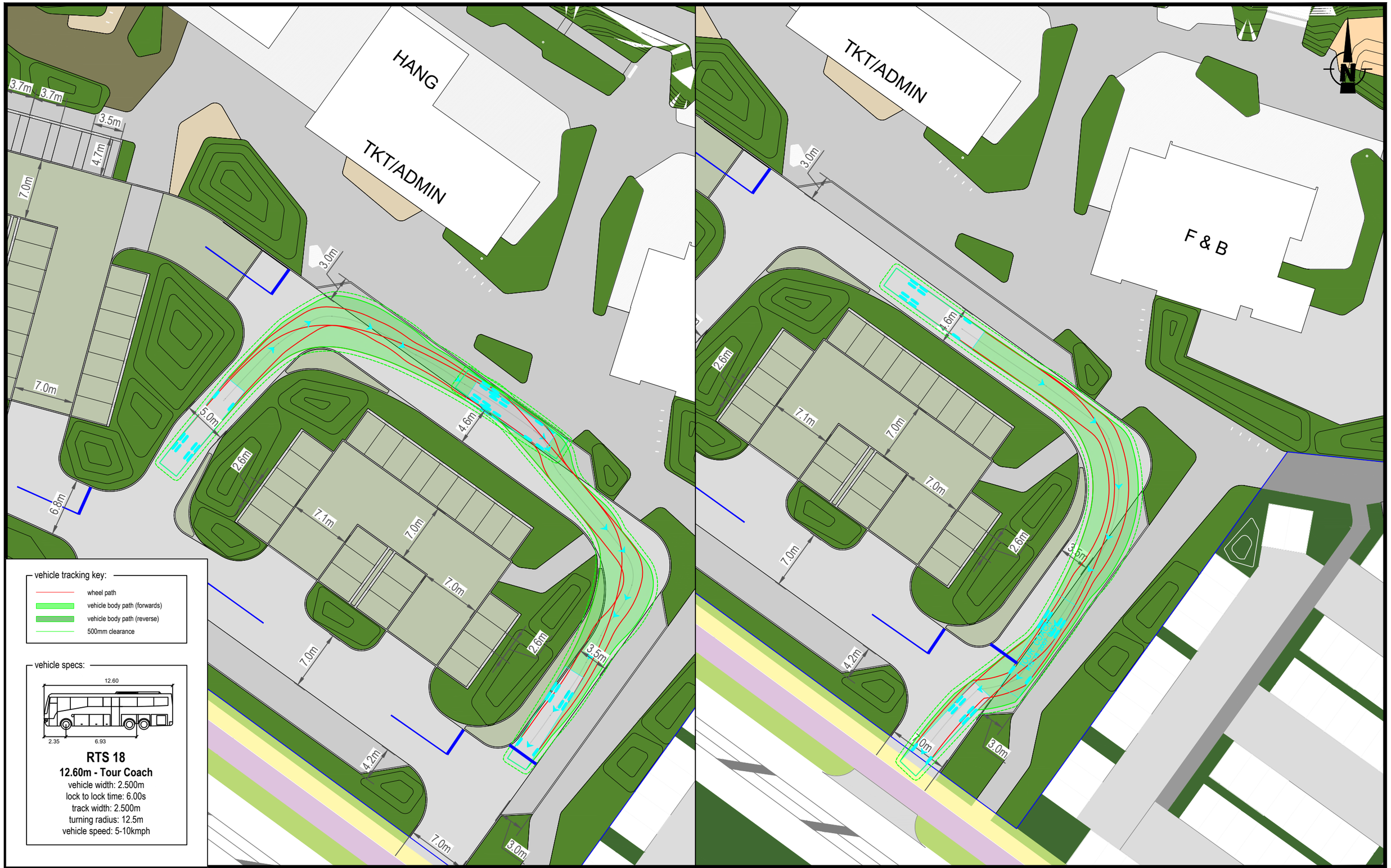
SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
VEHICLE CROSSING - DAIRY FLAT HIGHWAY

DRAWING NUMBER: INVO002-007

SHEET: 03 of 09

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18

12.60m - Tour Coach

vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 12.5m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
12.6m TOUR COACH

DRAWING NUMBER: INVO002-007

SHEET: 04 of 09

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18

12.60m - Tour Coach

vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 12.5m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
12.6m TOUR COACH

DRAWING NUMBER: INVO002-007

SHEET: 05 of 09
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN

4.91m - B85

vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

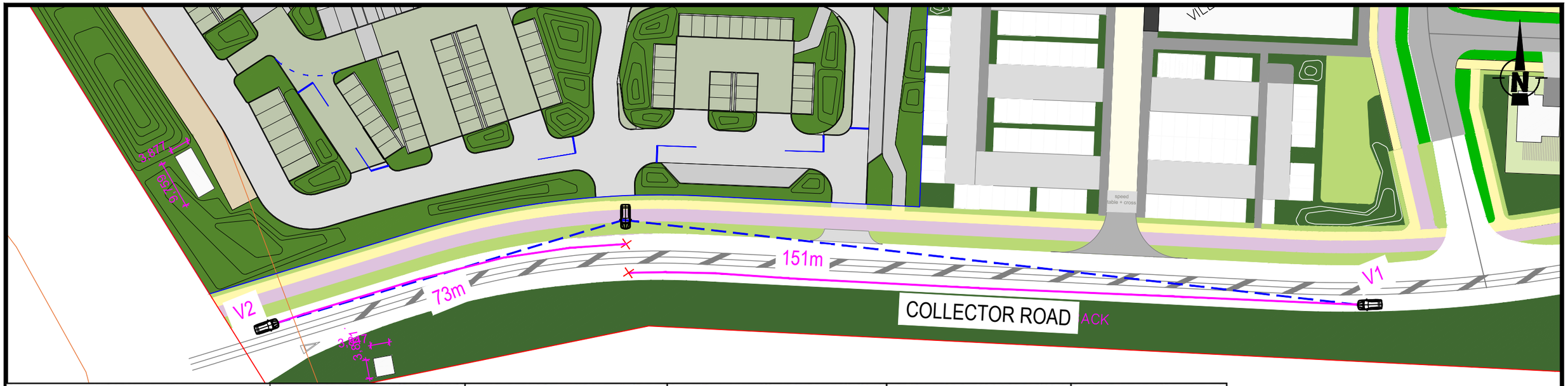
SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
INTERNAL TWO-WAY CAR MOVEMENT

DRAWING NUMBER: INVO002-007

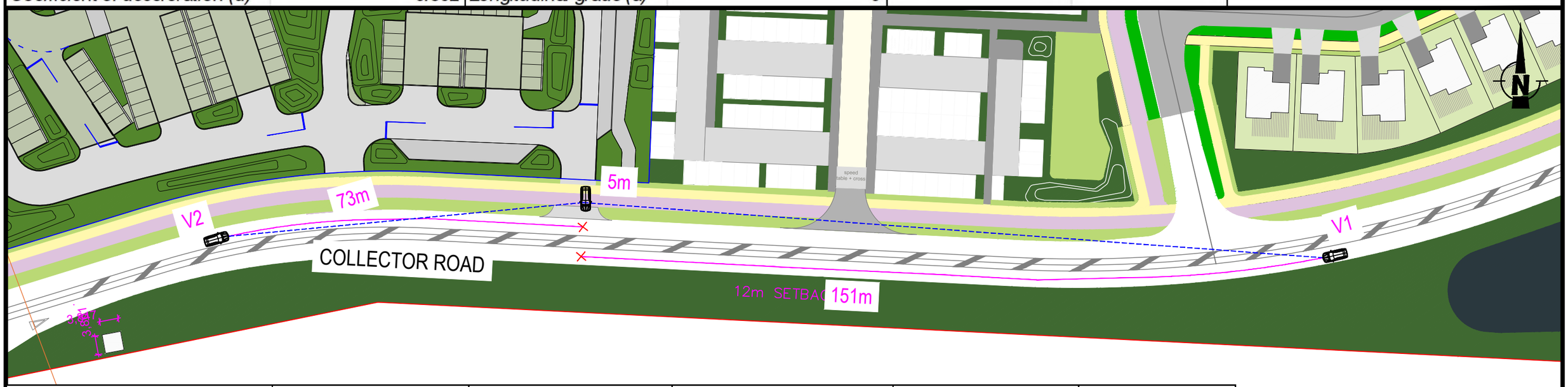
SHEET: 06 of 09

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	YES
V2	40	2	3	73	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	YES
V2	40	2	3	73	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

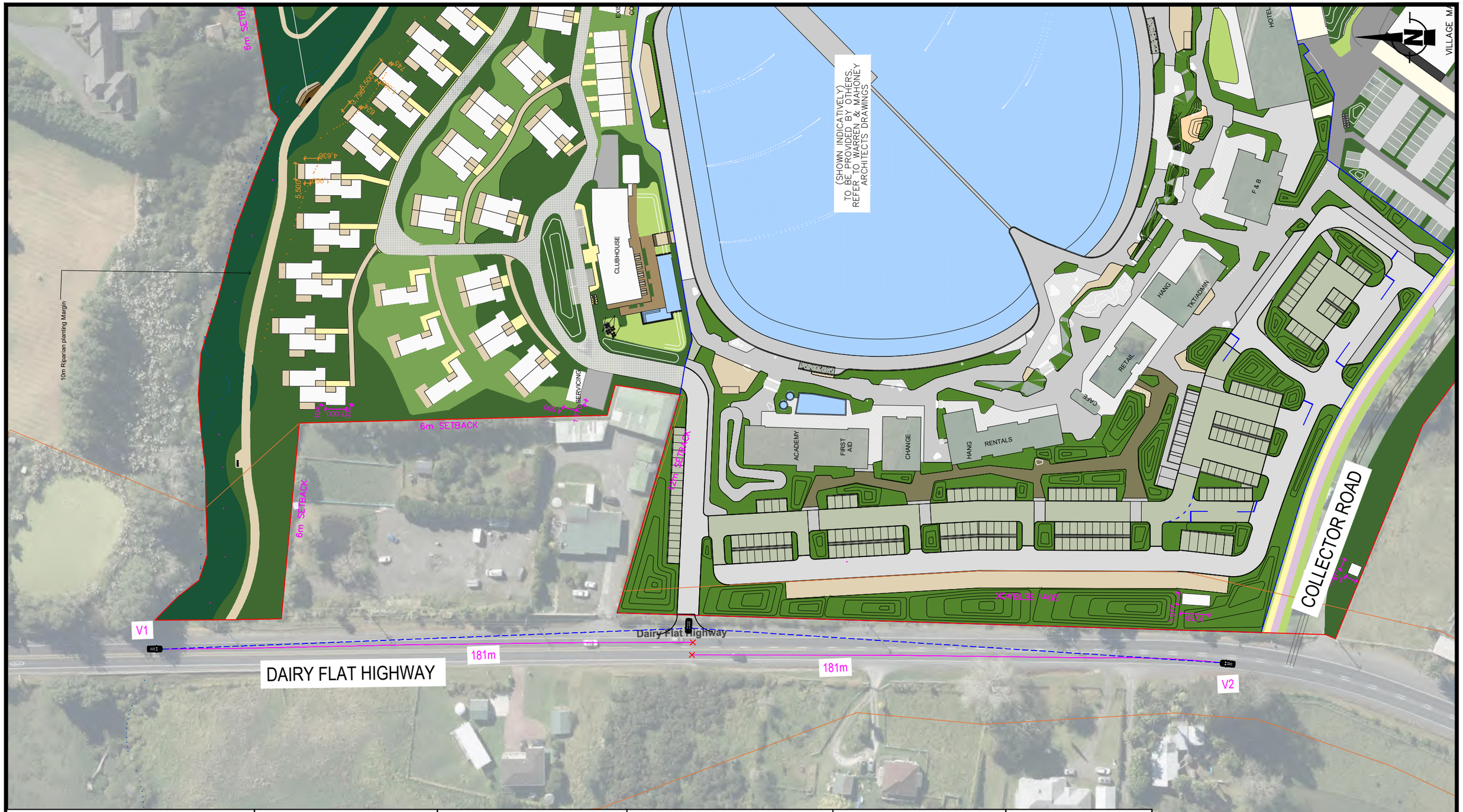
FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
SAFE INTERSECTION SIGHT DISTACE

DRAWING NUMBER: INVO002-007

SHEET: 07 of 09
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	80	2	3	181	**YES**
V2	80	2	3	181	**YES**
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 50m
1:1250 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

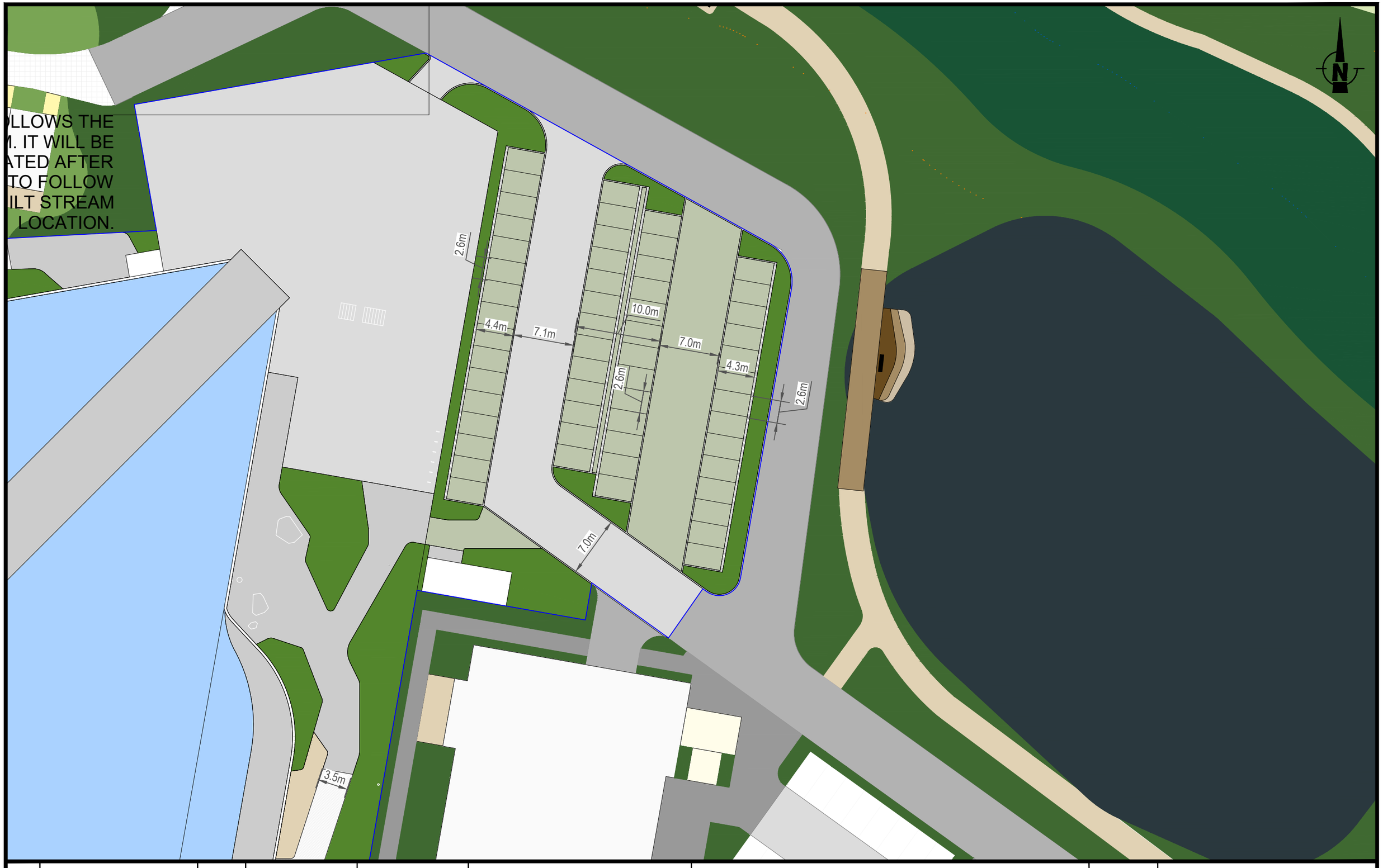
SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT
SAFE INTERSECTION SIGHT DISTACE

DRAWING NUMBER: INVO002-007

SHEET: 08 of 09

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG

CHECKED: ET/NH | DATE: 09/02/2026

SCALE: 0 16m

1:400 @ A3

CLIENT: AW HOLDINGS LTD

PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION

LOCATION: 1350 DAIRY FLAT HIGHWAY, AUCKLAND

FOR RESOURCE CONSENT

SHEET TITLE: SURF LAGOON AND AMENITY PRECINCT DIMENSION PLAN

DRAWING NUMBER: INVO002-007

SHEET: 09 of 09

REV: A

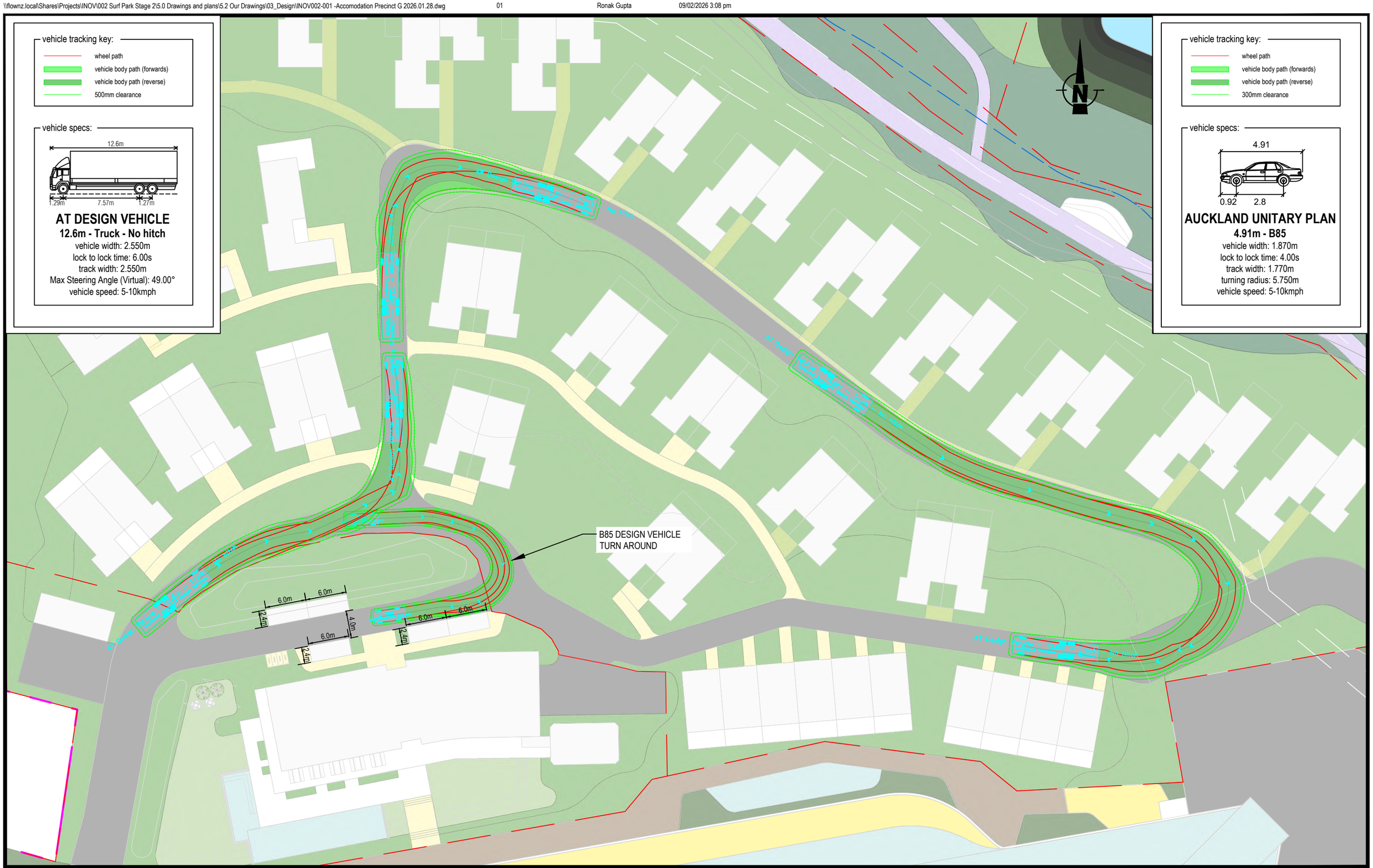
flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
12.6m - Truck - No hitch
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 49.00°
vehicle speed: 5-10kmph



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN
4.91m - B85
vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: TC/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: ACCOMMODATION PRECINCT
CIRCULATING AROUND THE ACCESSWAY

DRAWING NUMBER: INOV002-001

SHEET: 01 of 02
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

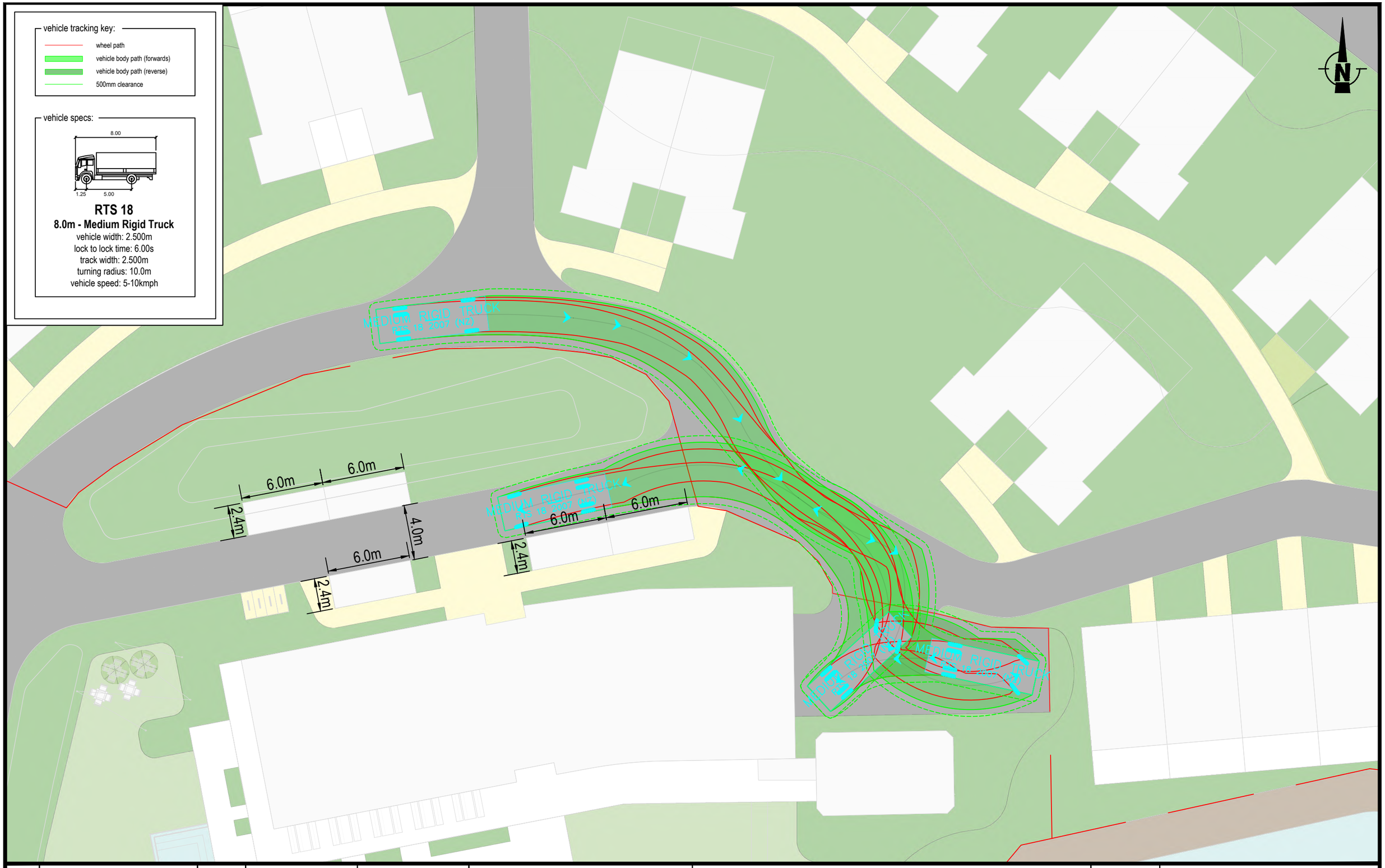
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18

8.0m - Medium Rigid Truck

vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: TC/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: ACCOMMODATION PRECINCT
TRUCK TURN AROUND

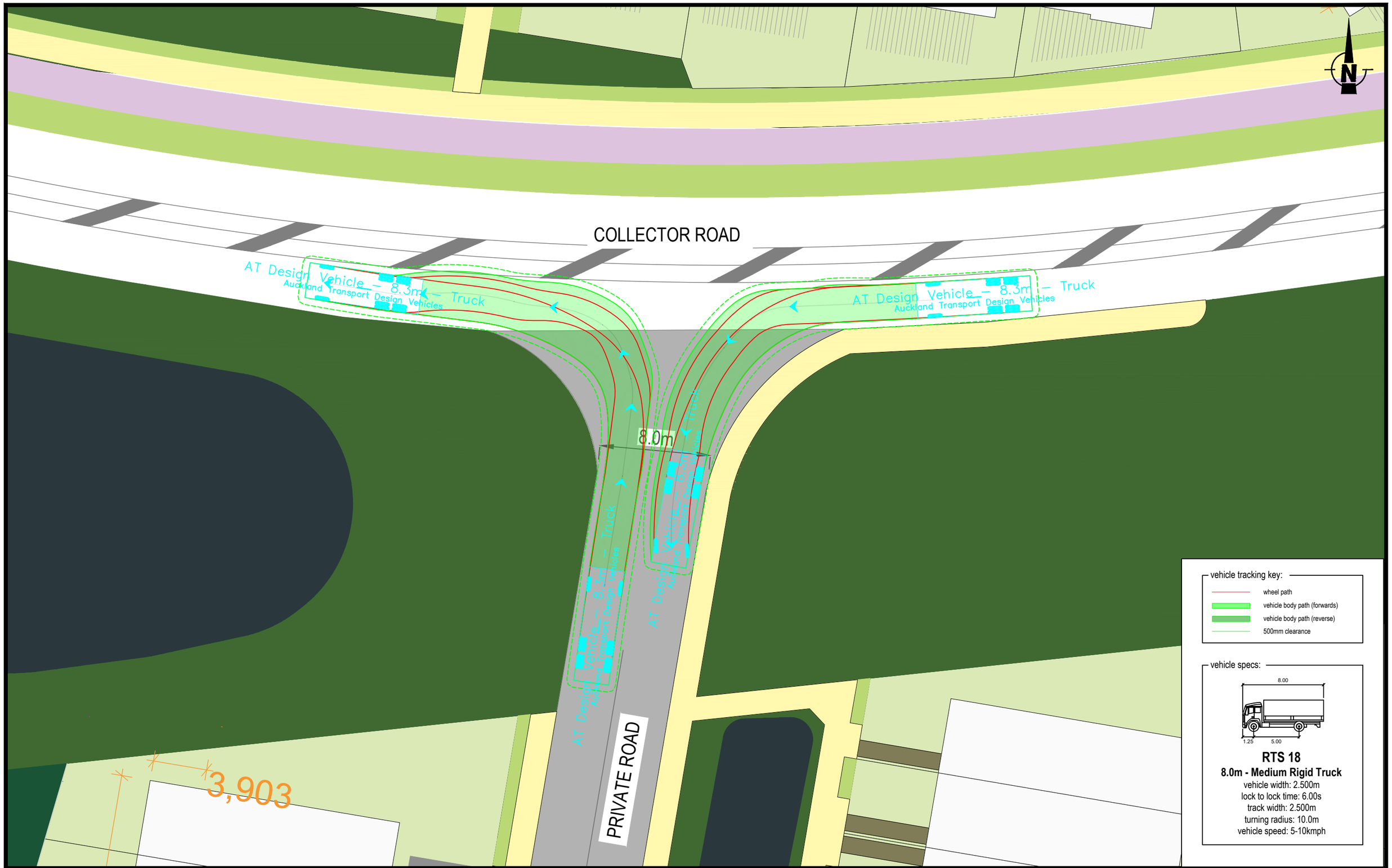
DRAWING NUMBER: INOV002-001

SHEET: 02 of 02

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

APPENDIX E Live/Work Precinct



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

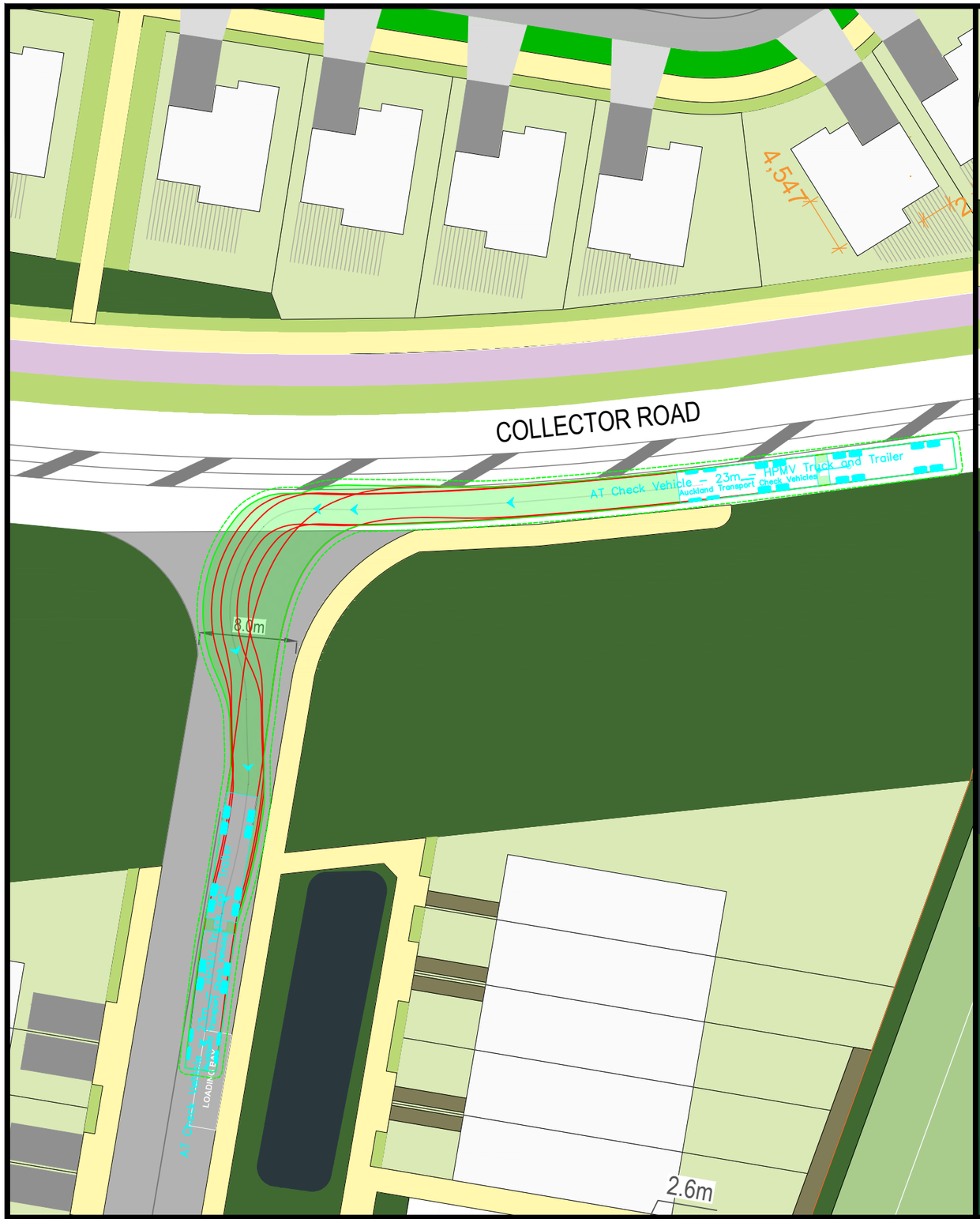
SHEET TITLE: LIVE AND WORK PRECINCT
VEHICLE CROSSING ON COLLECTOR ROAD

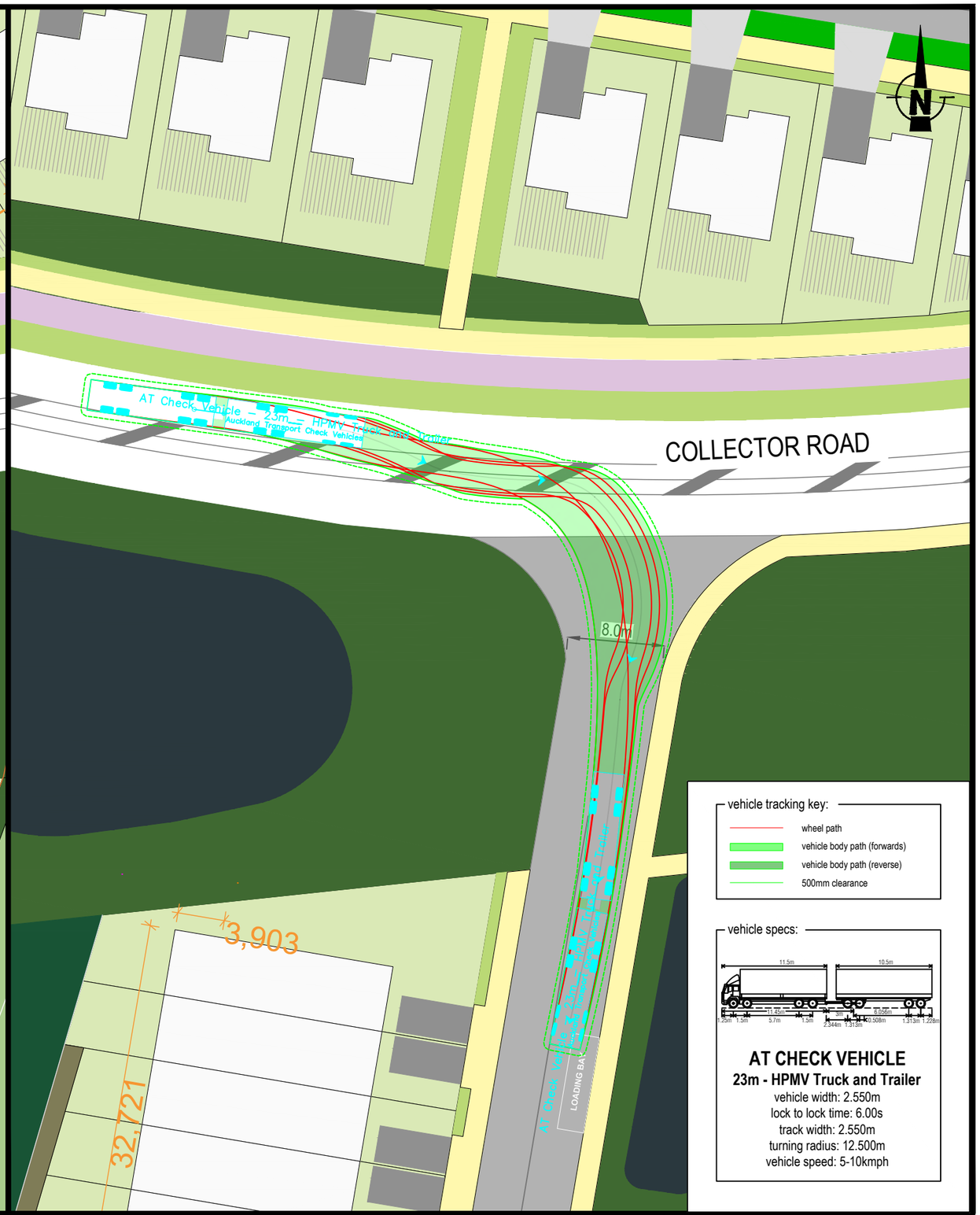
DRAWING NUMBER: INOV002-002

SHEET: 01 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

23m - HPMV Truck and Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: LIVE AND WORK PRECINCT
VEHICLE CROSSING ON COLLECTOR ROAD

DRAWING NUMBER: INOV002-002

SHEET: 02 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

10m Riparian Planting Margin

12m

Potential for future link

2.6m

7m

6m

8m

LOADING BAY

7m

7m

2.6m

Solar Farm Access

WTP / WWTP
(SHOWN INDICATIVELY)
TO BE PROVIDED BY OTHERS. REFER
TO APEX WATER DRAWINGS

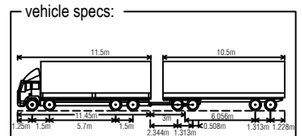
20m Riparian setback

12m SETBACK

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:



AT CHECK VEHICLE

23m - HPMV Truck and Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

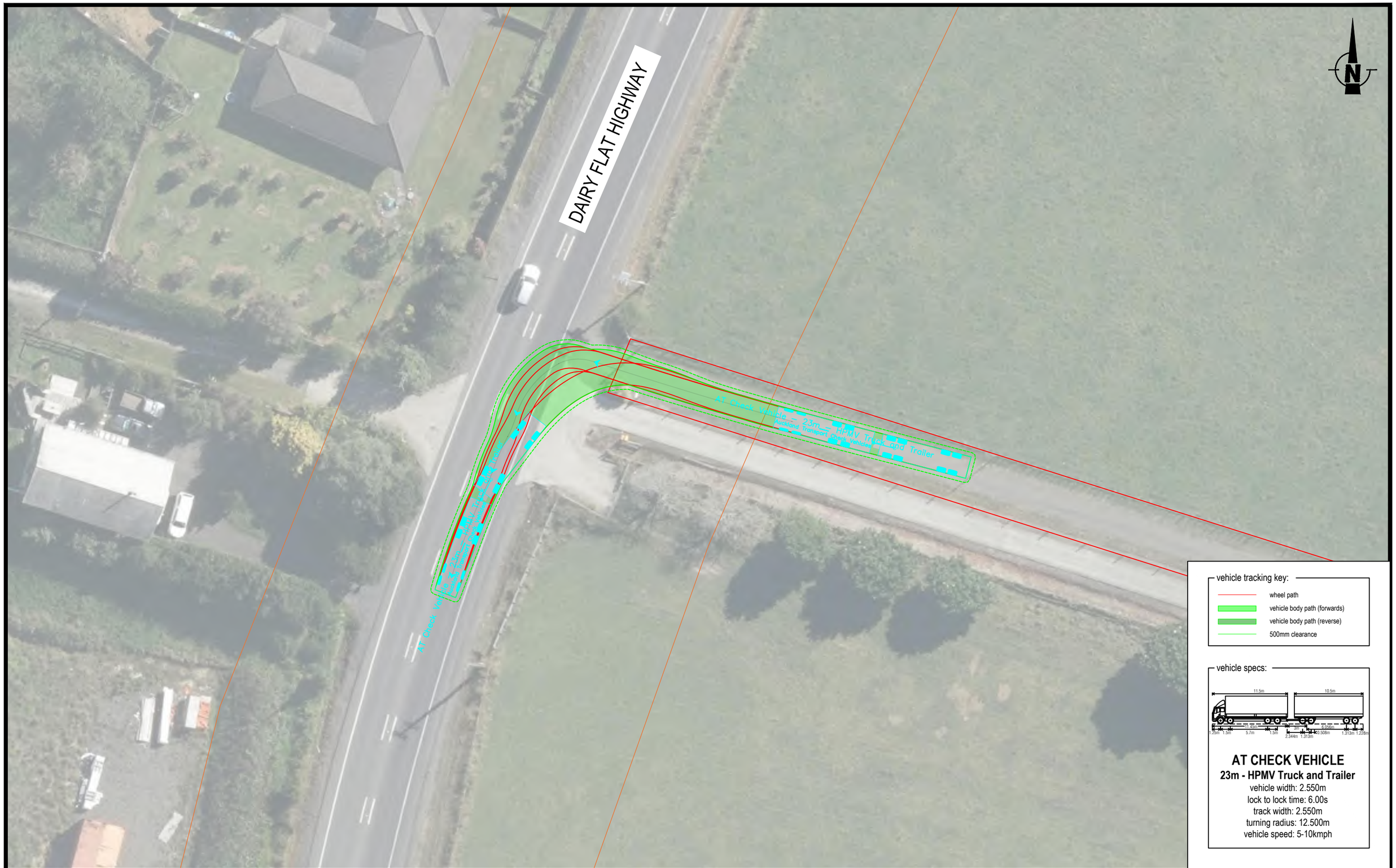
SHEET TITLE: LIVE AND WORK PRECINCT
B-TRAIN INTO THE WWTP

DRAWING NUMBER: INOV002-002

SHEET: 03 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

23m - HPMV Truck and Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: LIVE AND WORK PRECINCT
VEHICLE CROSSING - DAIRY FLAT HIGHWAY

DRAWING NUMBER: INOV002-002

SHEET: 04 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

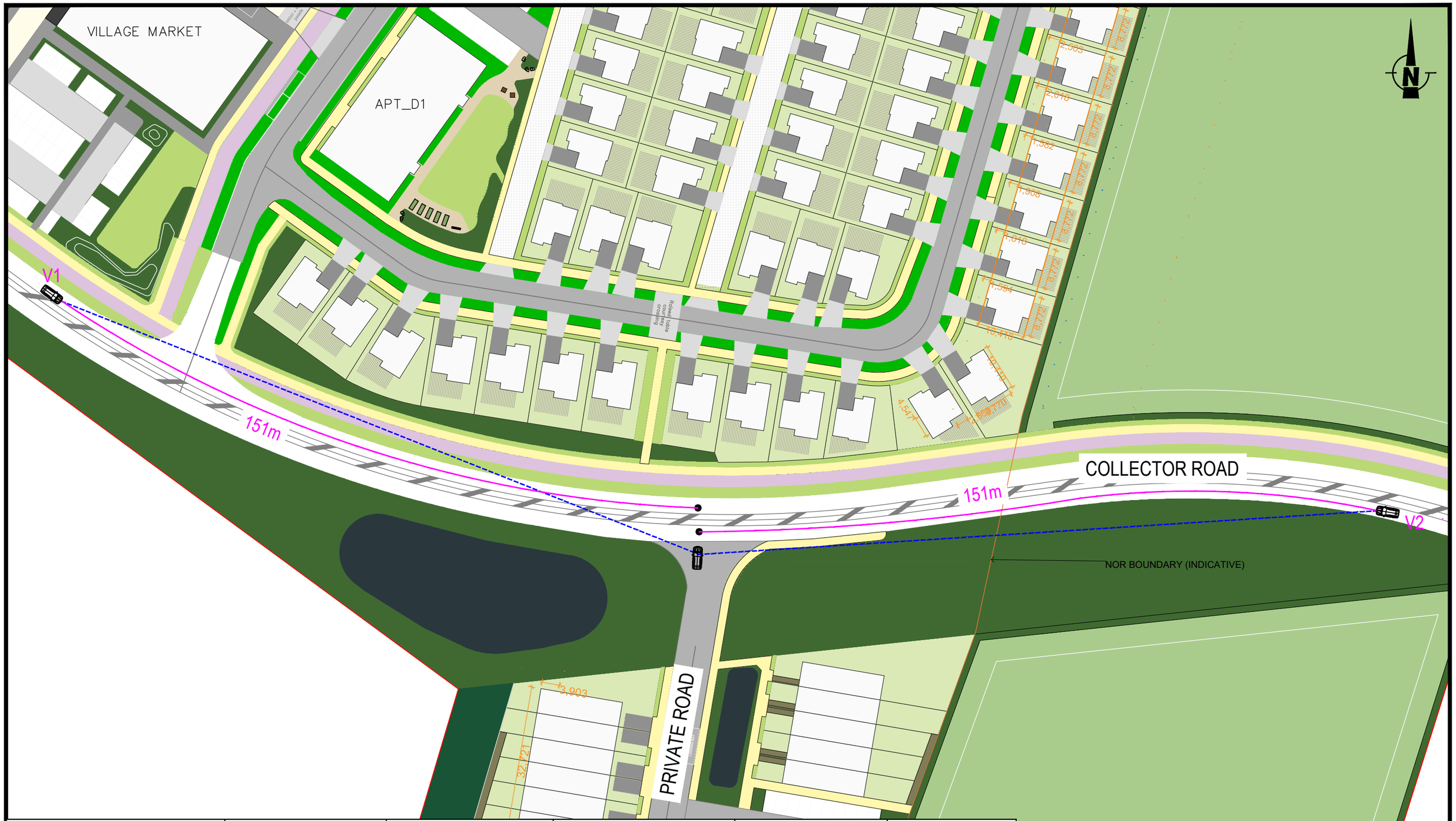
SHEET TITLE: LIVE AND WORK PRECINCT
DIMENTION PLAN

DRAWING NUMBER: INOV002-002

SHEET: 05 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	**YES**
V2	70	2	3	151	**YES**
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

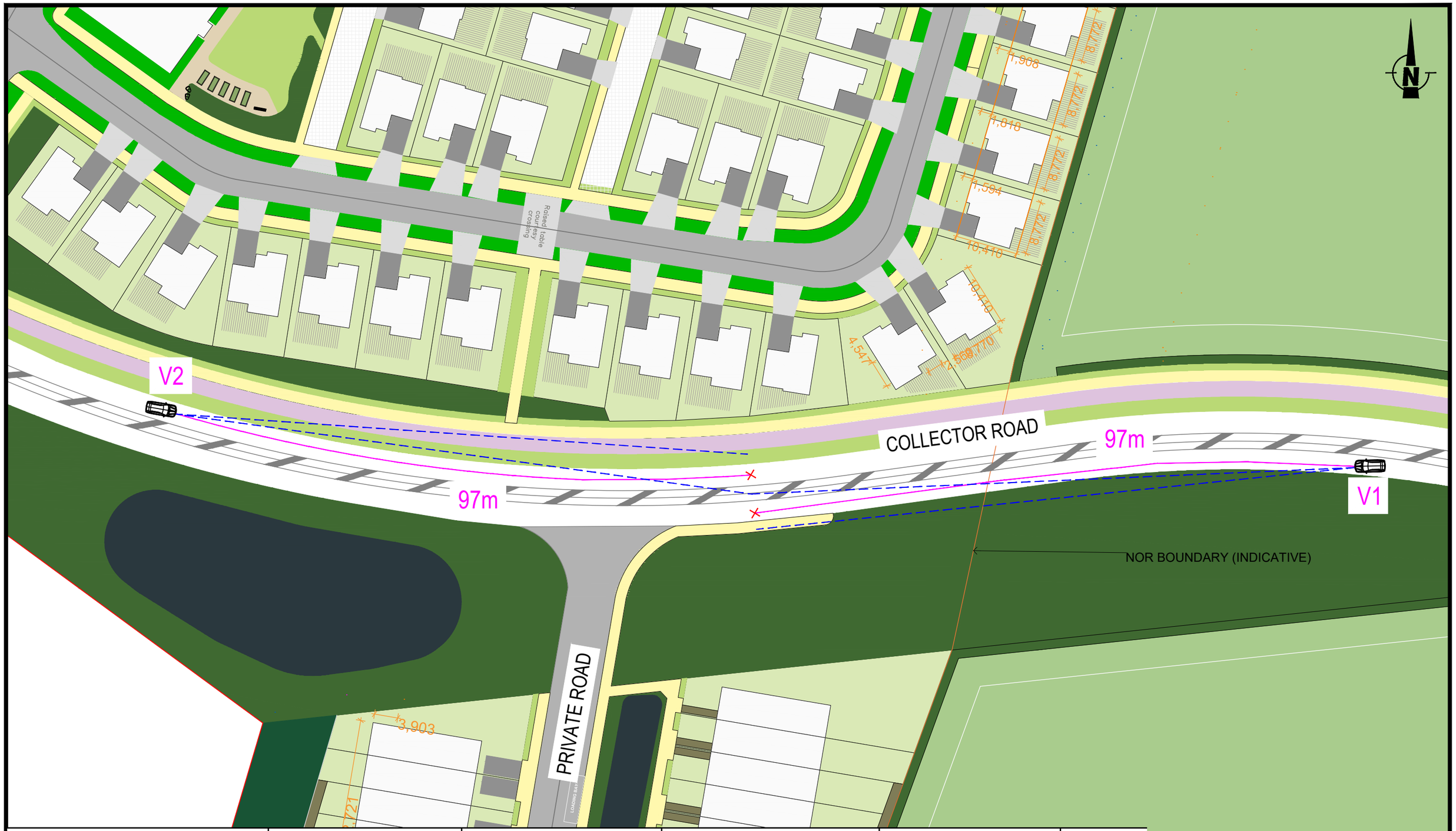
SHEET TITLE: LIVE AND WORK PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INOV002-002

SHEET: 06 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Crossing Distance	Walking Speed (m/s)	Approach Speed (km/hr)	Calculated CSD (m)	Compliant
Eastbound (V1)	6	1.2	70	97	YES
Westbound (V2)	6	1.2	70	97	YES

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 24m
SCALE @ A3 1:600

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

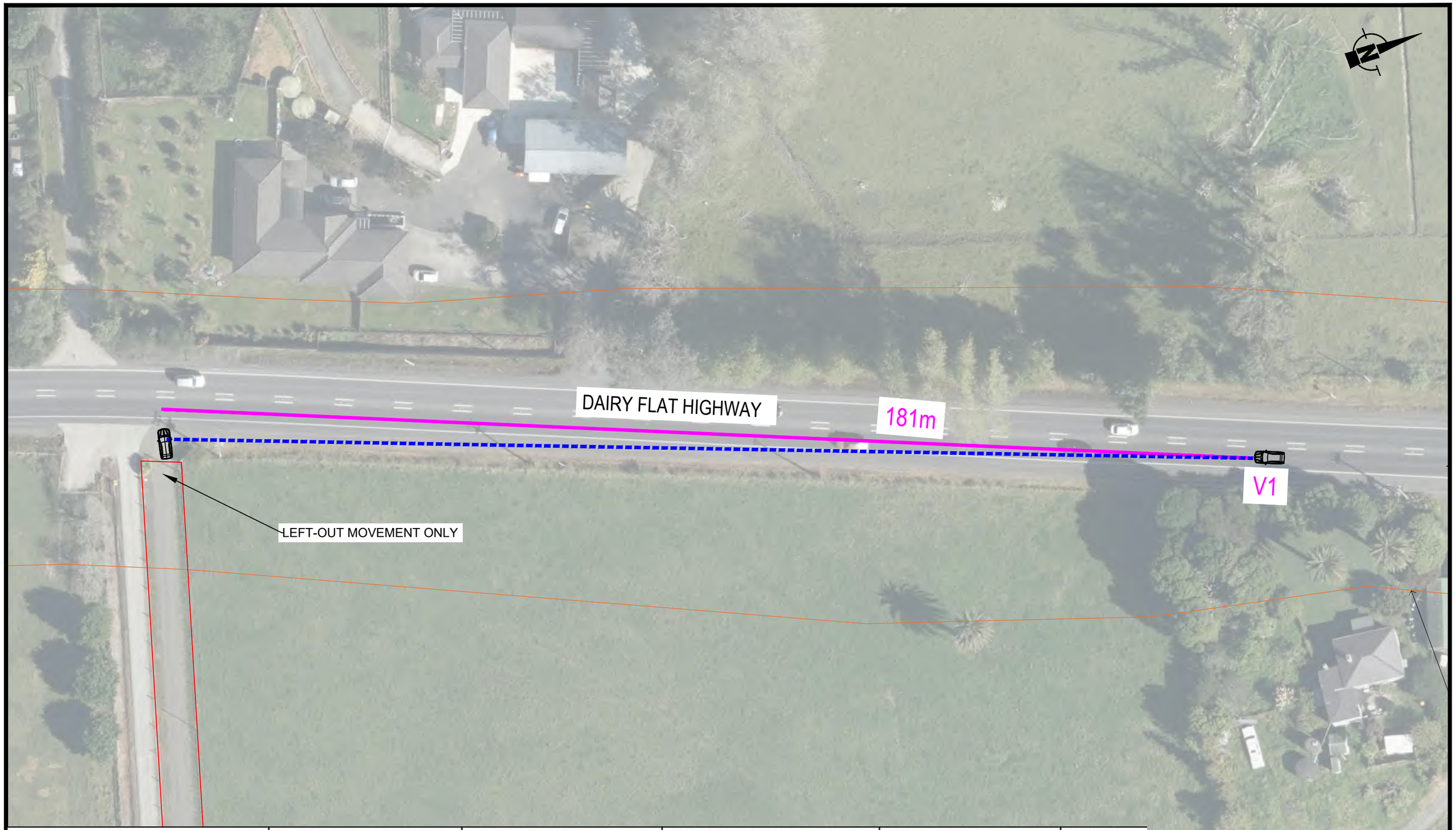
SHEET TITLE: LIVE AND WORK PRECINCT CROSSING SIGHT DISTANCE (CSD)

DRAWING NUMBER: INOV002-002

SHEET: 07 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	80	2	3	181	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

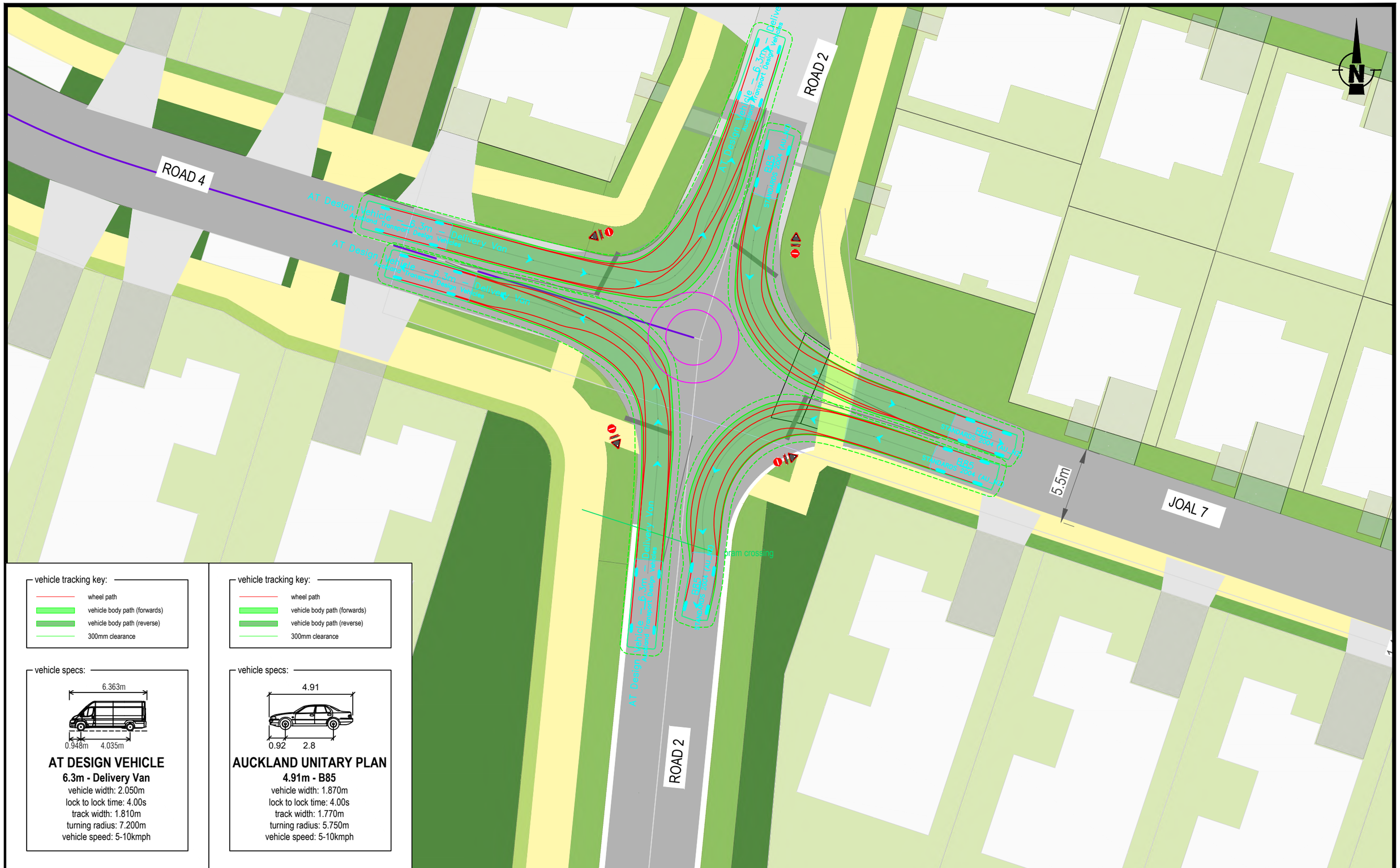
SHEET TITLE: LIVE AND WORK PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INOV002-002

SHEET: 08 of 08
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

APPENDIX F North-West and North-East neighbouhoods



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN

4.91m - B85

vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

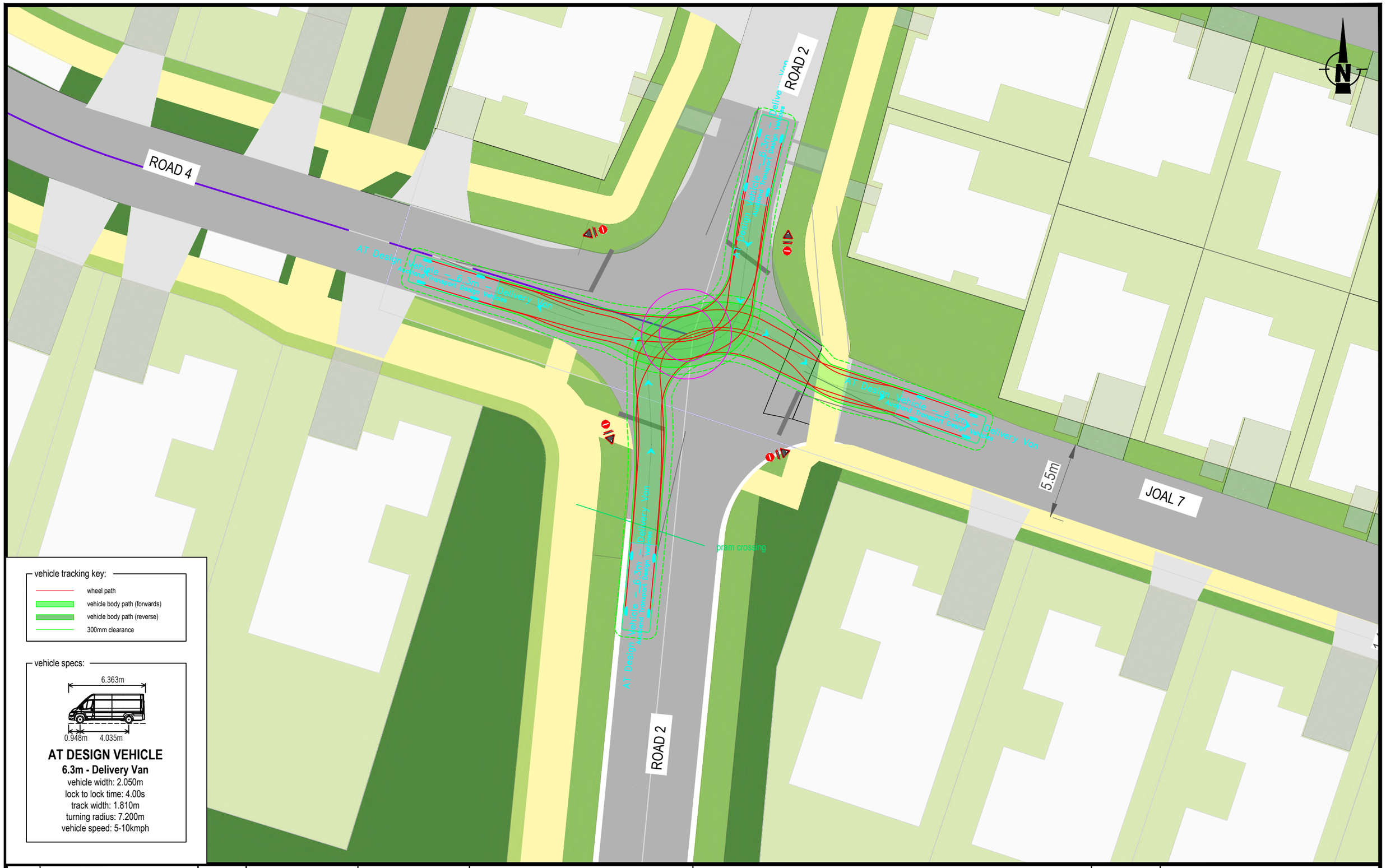
SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
SOUTH ROUNDABOUT

DRAWING NUMBER: INOV002-003

SHEET: 01 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

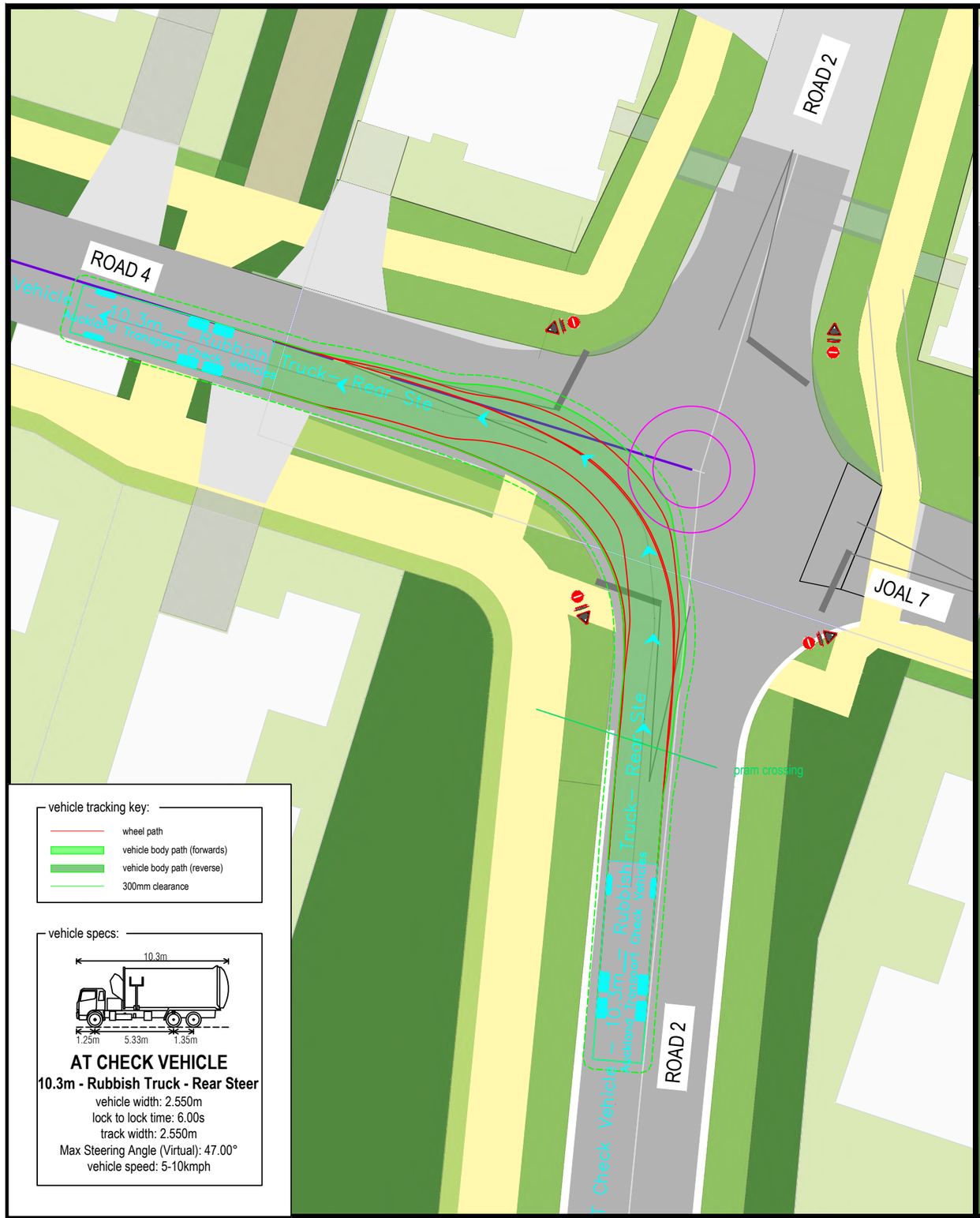
SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT SOUTH ROUNDABOUT

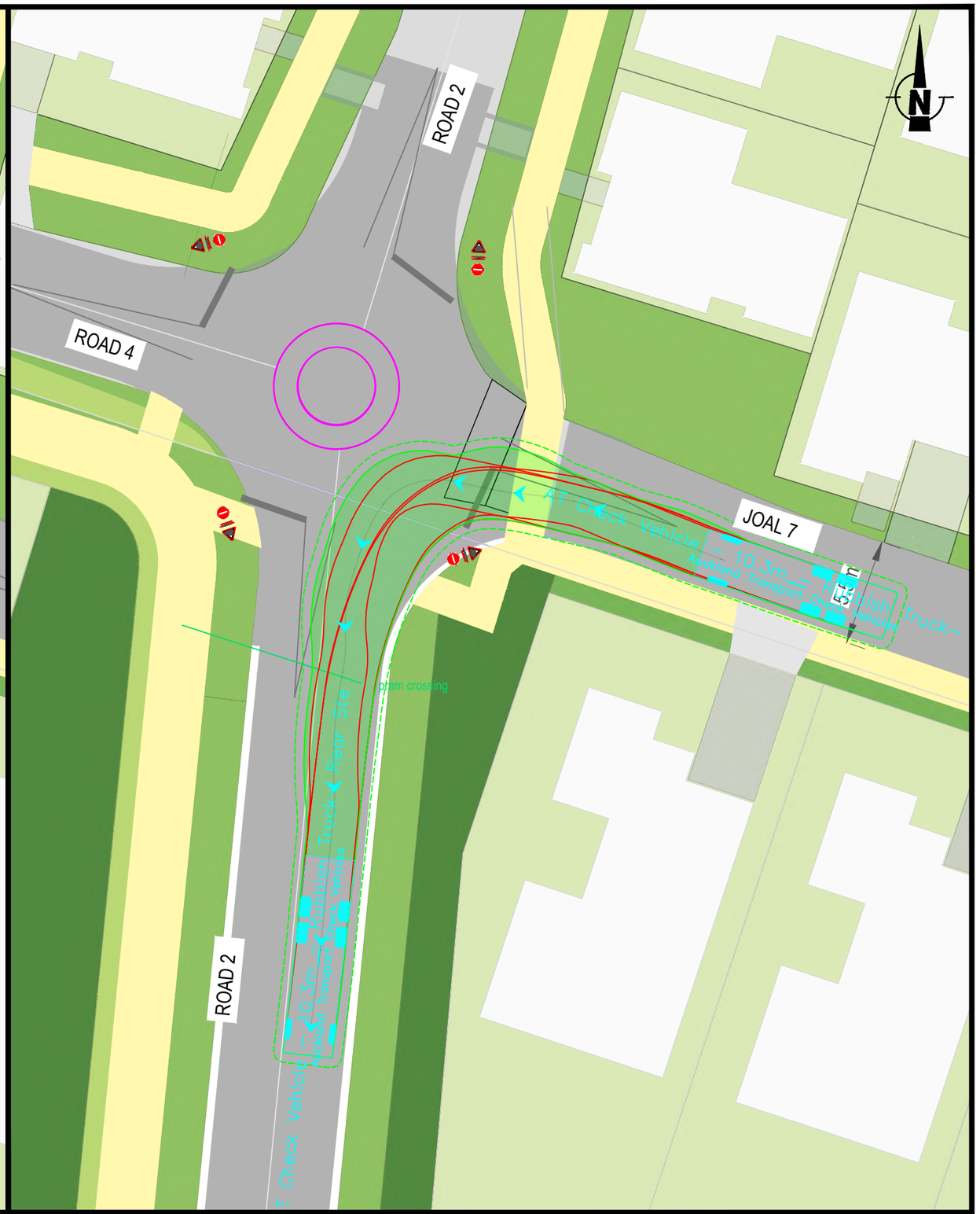
DRAWING NUMBER: INOV002-003

SHEET: 02 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT SOUTH ROUNDABOUT

DRAWING NUMBER: INOV002-003

SHEET: 03 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
INTERNAL ROAD - DELIVERY VAN & TRUCK

DRAWING NUMBER: INOV002-003

SHEET: 04 of 18
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
INTERNAL ROAD - DELIVERY VAN & TRUCK

DRAWING NUMBER: INOV002-003

SHEET: 05 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

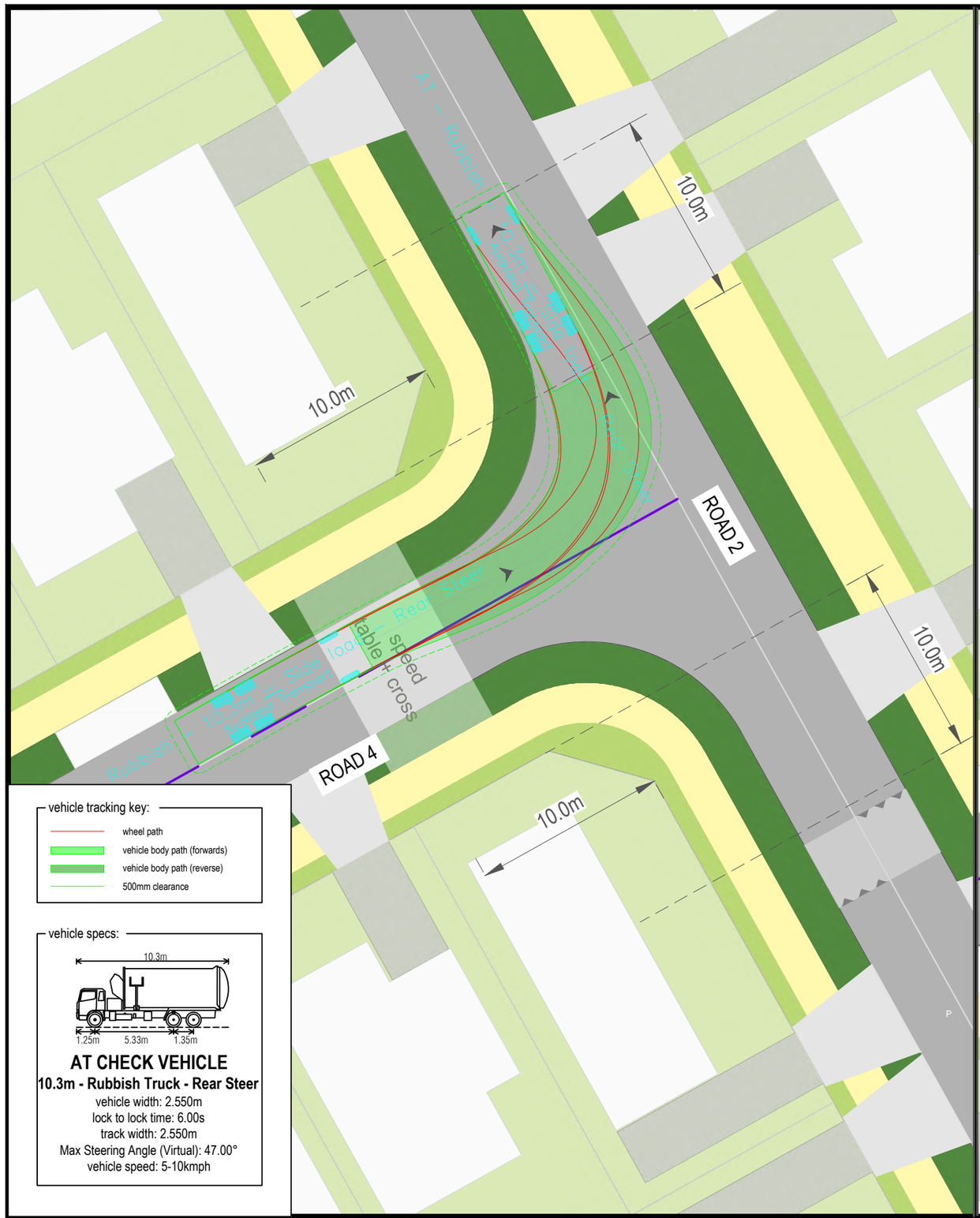
SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
INTERNAL ROADS - DELIVERY VAN

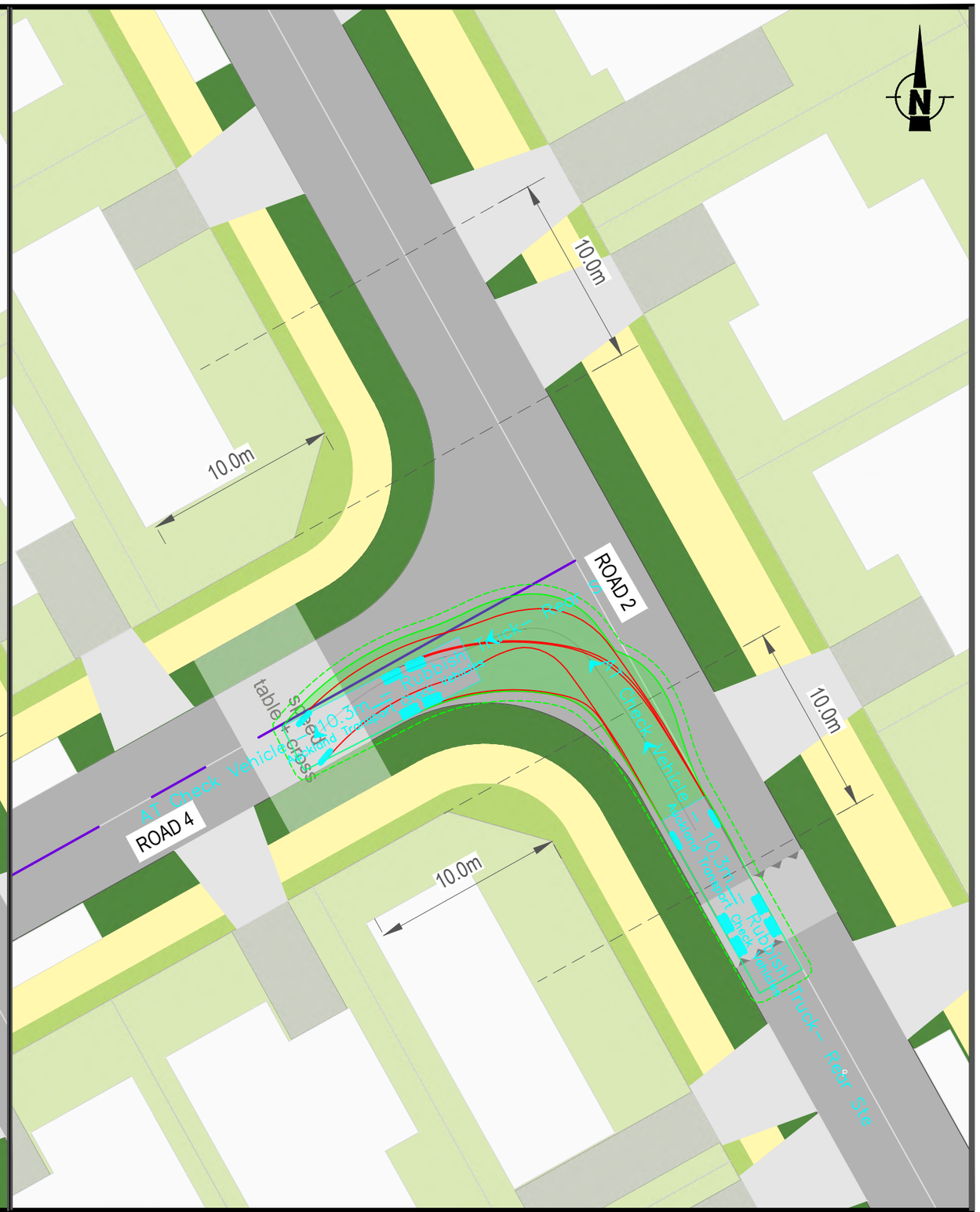
DRAWING NUMBER: INOV002-003

SHEET: 06 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

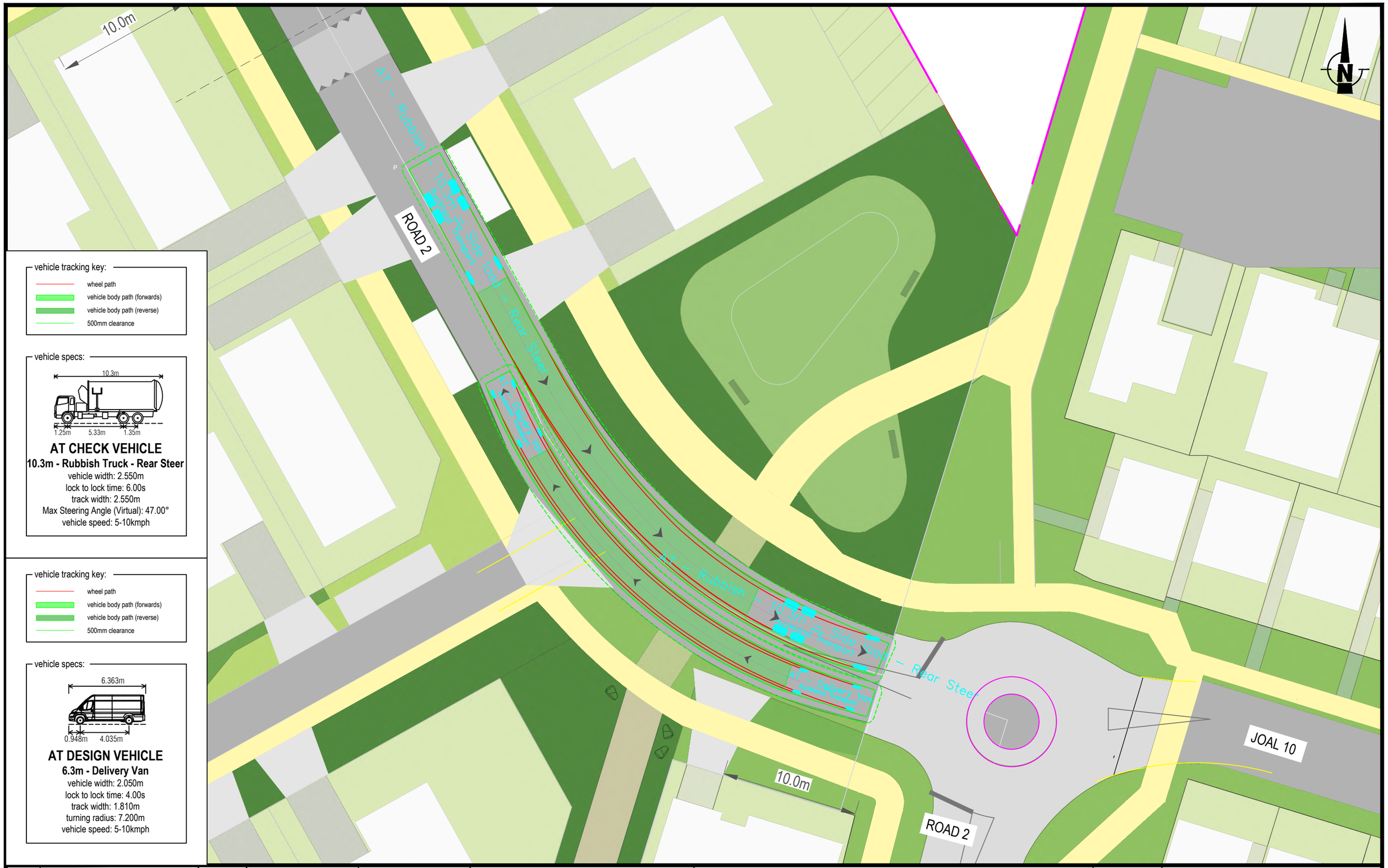
SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
INTERNAL ROADS - CHECK VEHICLE

DRAWING NUMBER: INOV002-003

SHEET: 07 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

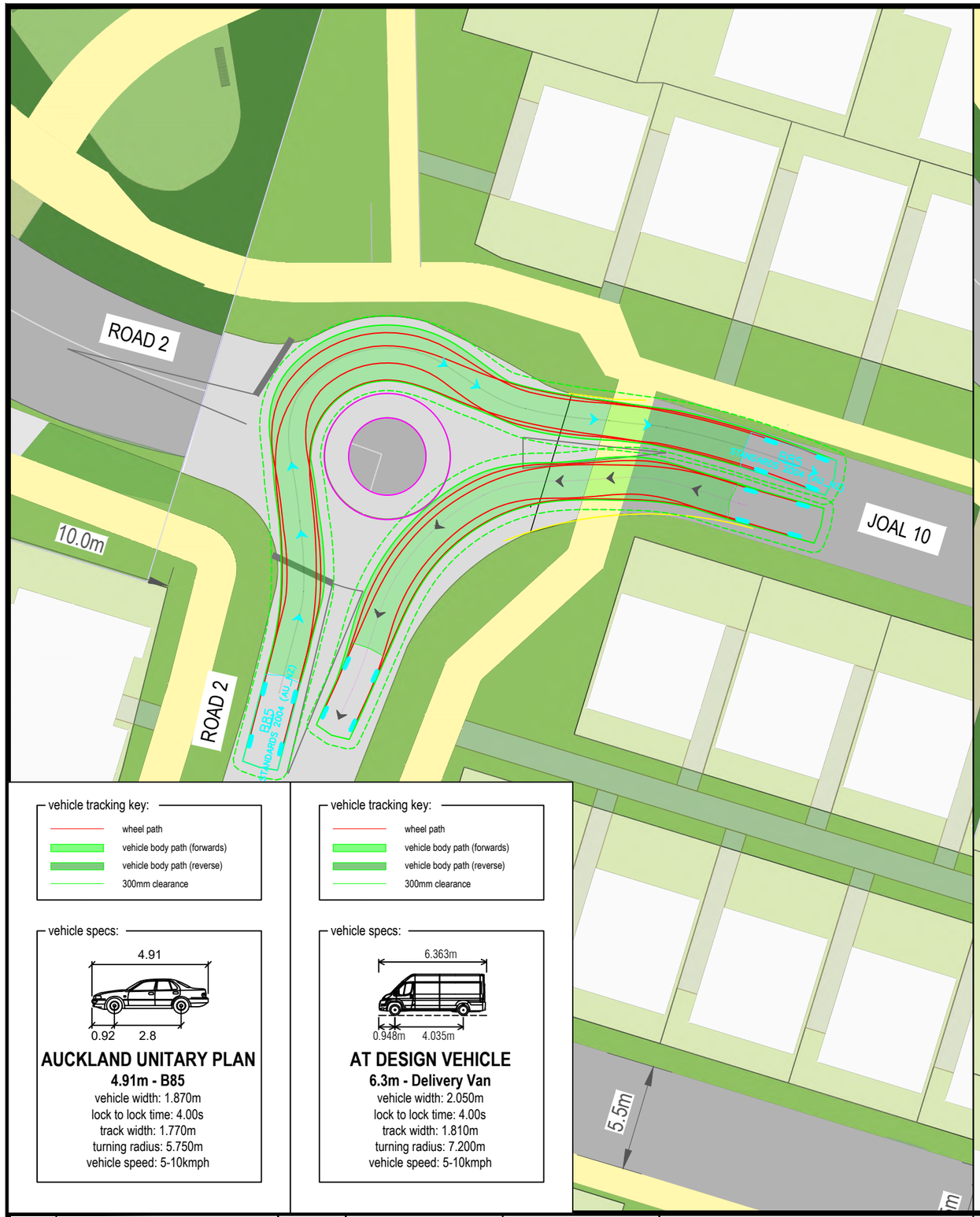
SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
INTERNAL ROAD

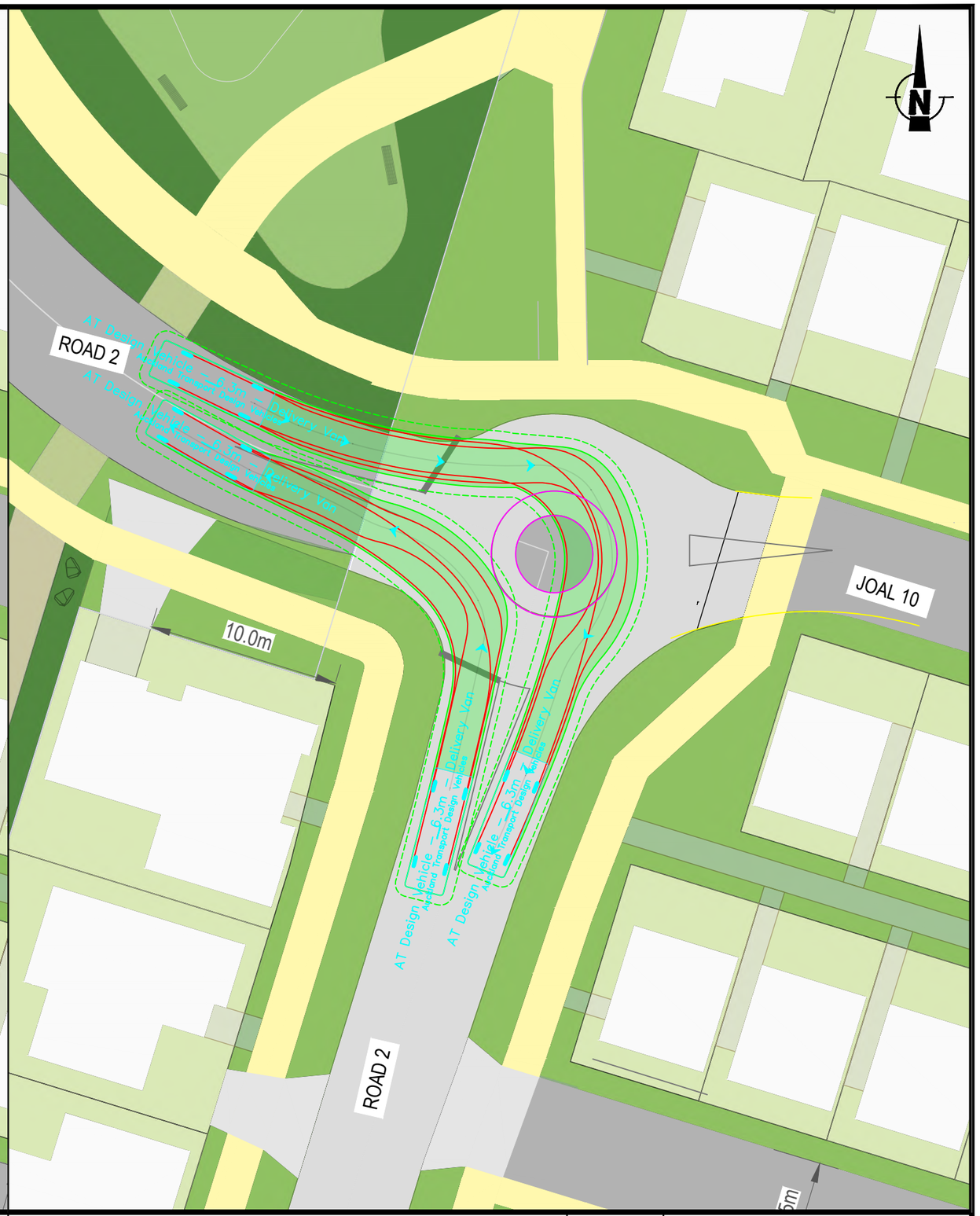
DRAWING NUMBER: INOV002-003

SHEET: 08 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

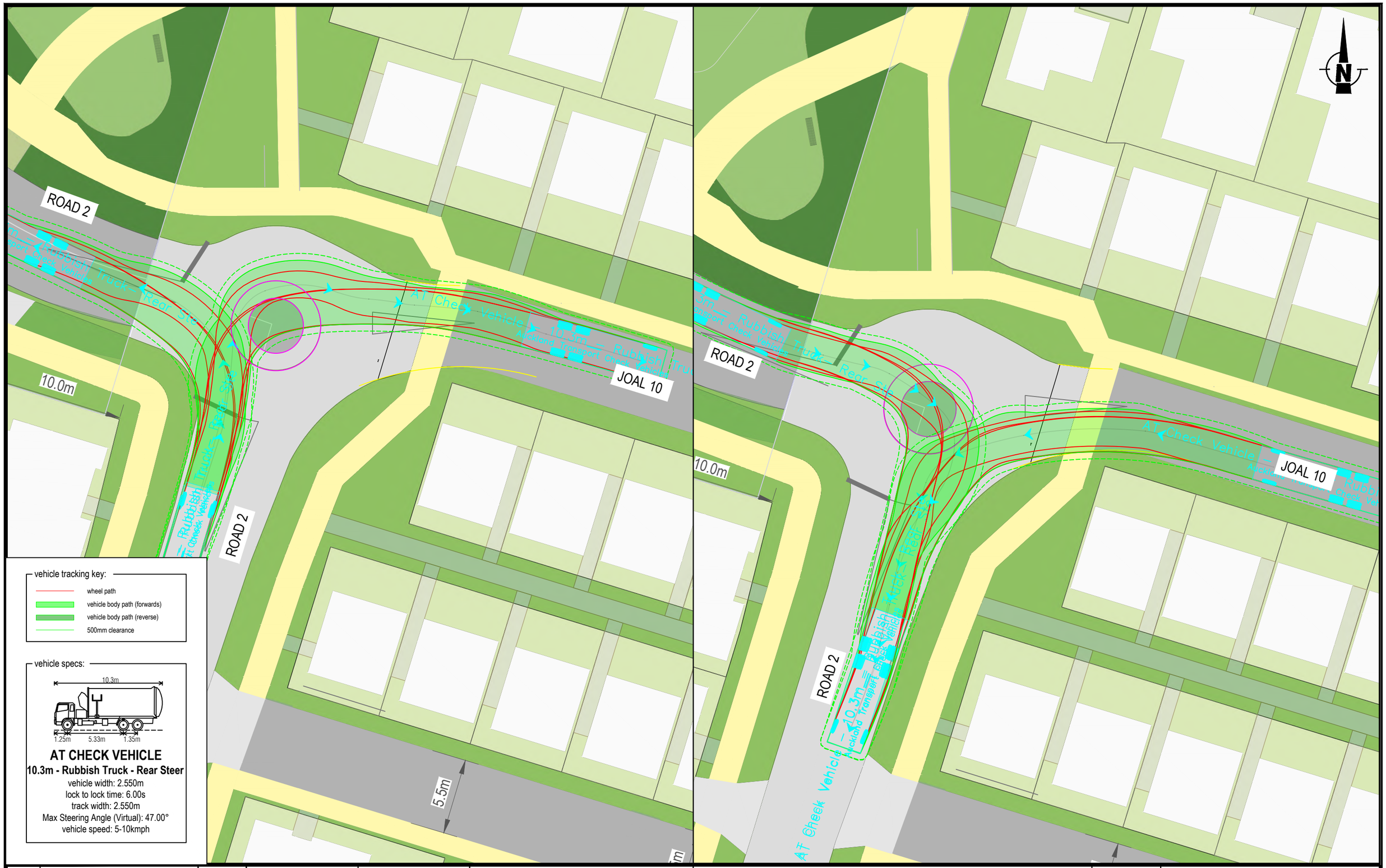
FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
NORTH ROUNDABOUT

DRAWING NUMBER: INOV002-003

SHEET: 09 of 18
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT NORTH ROUNDABOUT

DRAWING NUMBER: INOV002-003

SHEET: 10 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18
8.0m - Medium Rigid Truck
vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-EAST NEIGHBOURHOOD PRECINCT INTERNAL ROAD

DRAWING NUMBER: INOV002-003

SHEET: 11 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

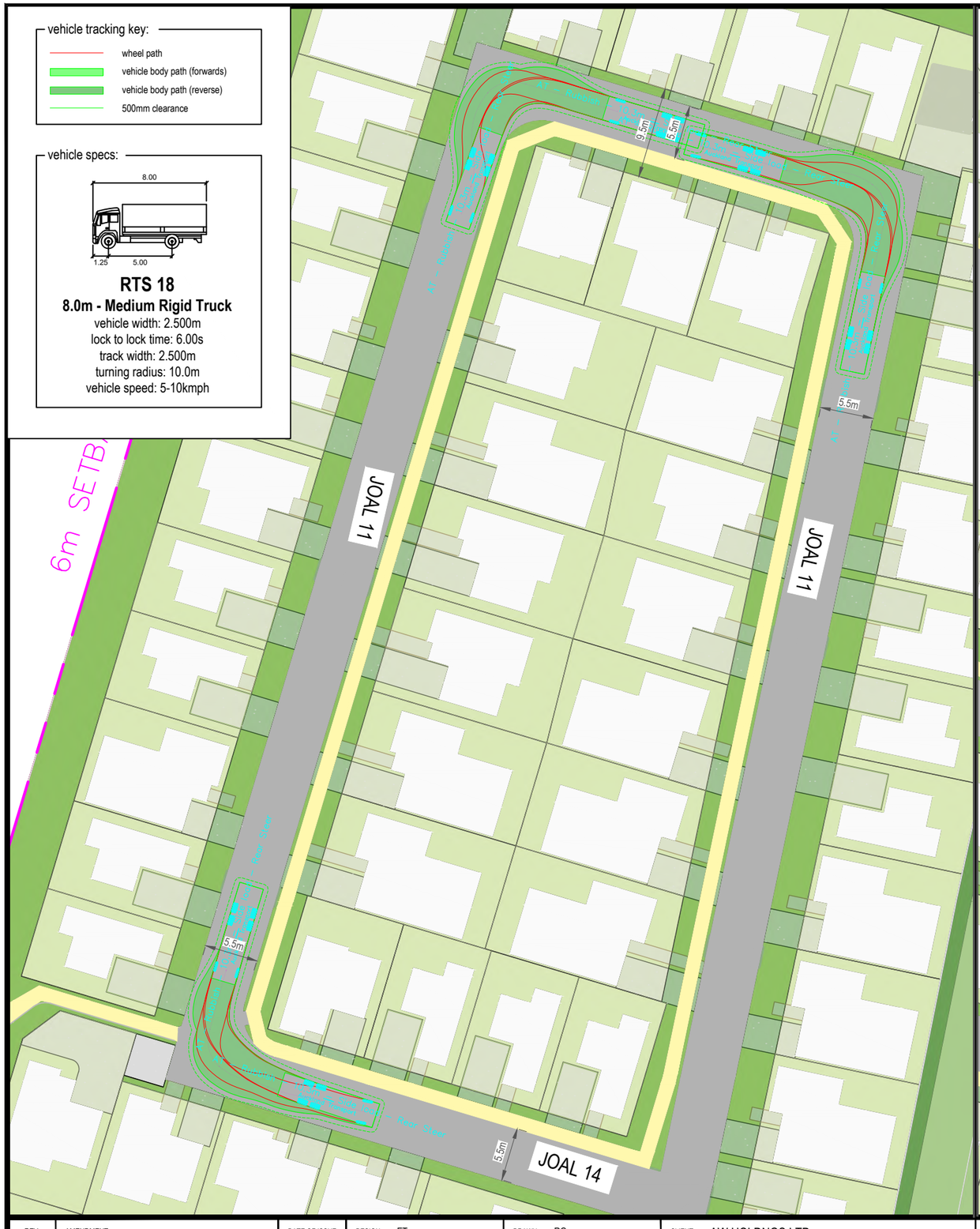
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18

8.0m - Medium Rigid Truck

vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-EAST NEIGHBOURHOOD PRECINCT
INTERNAL ROAD

DRAWING NUMBER: INOV002-003

SHEET: 12 of 18

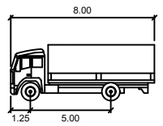
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:



RTS 18

8.0m - Medium Rigid Truck

vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

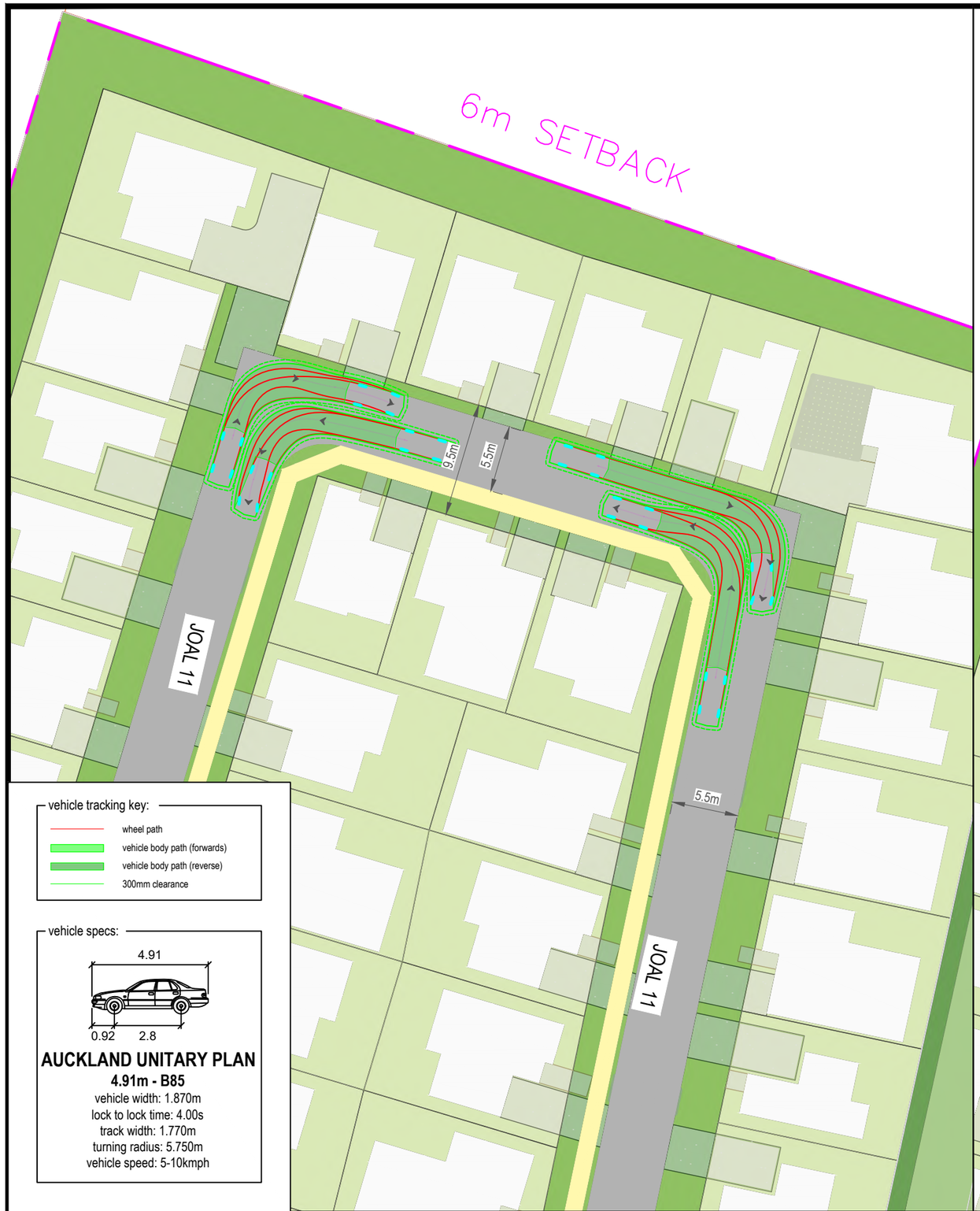
SHEET TITLE: NORTH-EAST NEIGHBOURHOOD PRECINCT
INTERNAL ROAD

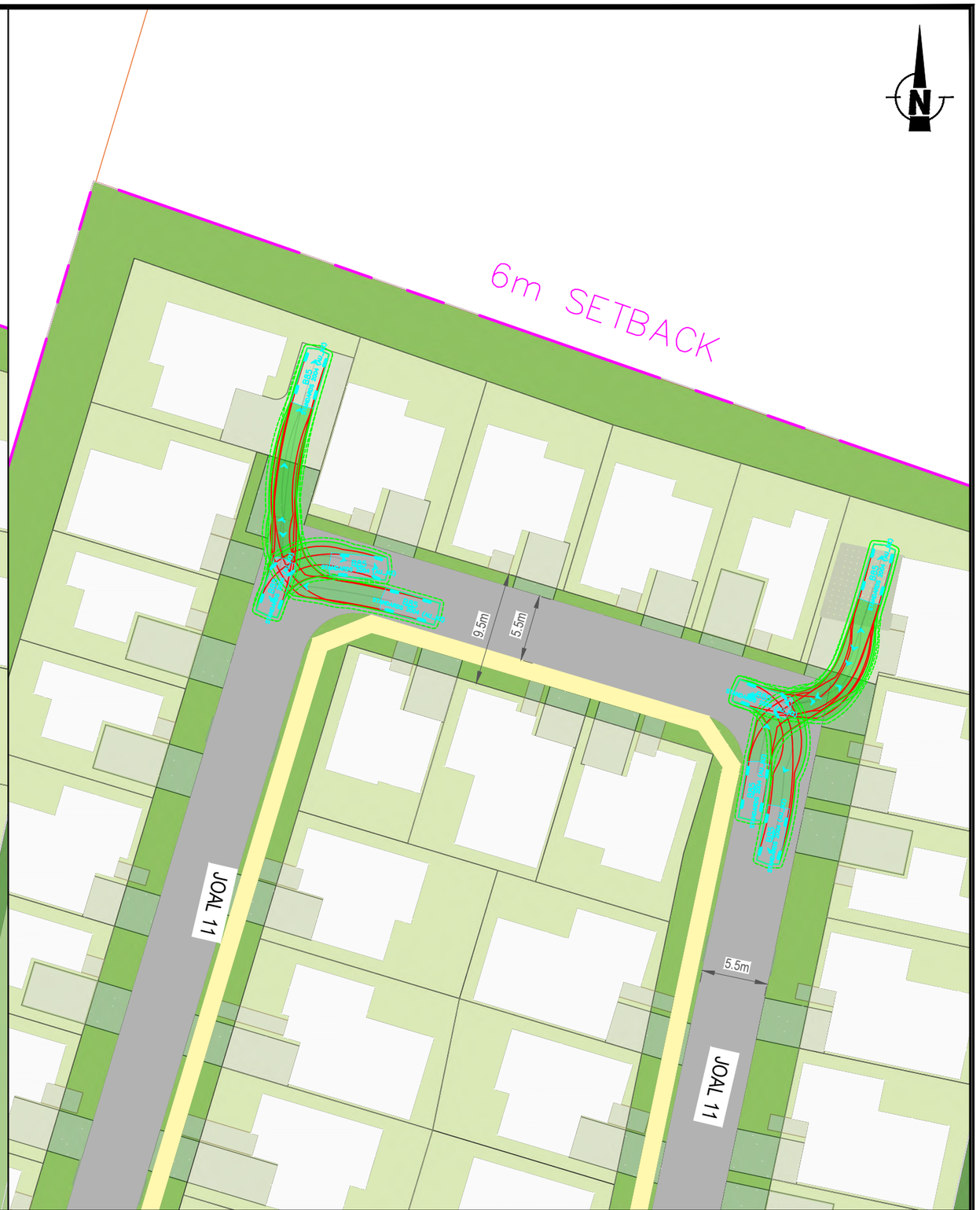
DRAWING NUMBER: INOV002-003

SHEET: 13 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN

4.91m - B85

vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-EAST NEIGHBOURHOOD PRECINCT INTERNAL ROAD

DRAWING NUMBER: INOV002-003

SHEET: 14 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN

4.91m - B85

vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-EAST NEIGHBOURHOOD PRECINCT INTERNAL ROAD

DRAWING NUMBER: INOV002-003

SHEET: 15 of 18

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

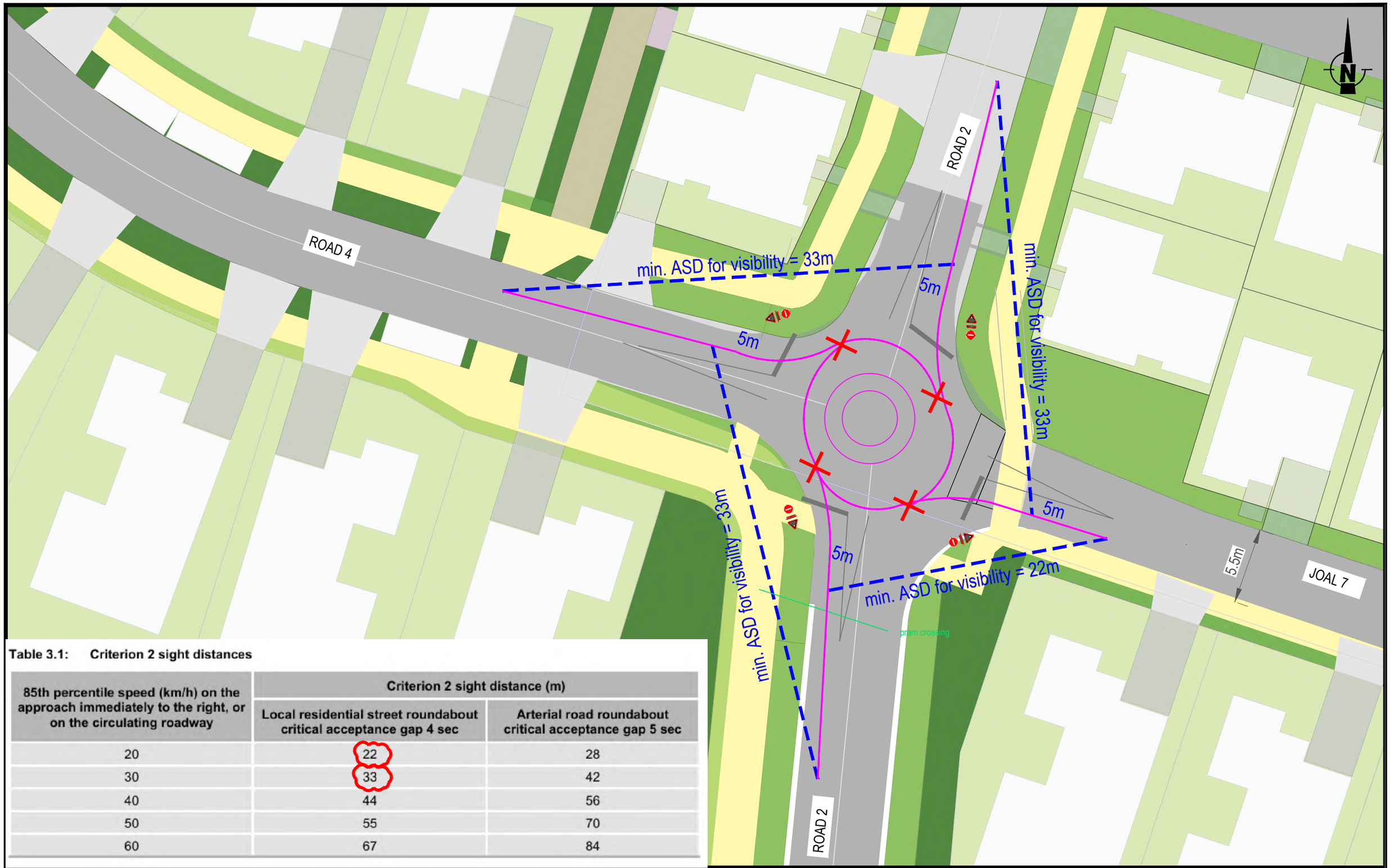


Table 3.1: Criterion 2 sight distances

85th percentile speed (km/h) on the approach immediately to the right, or on the circulating roadway	Criterion 2 sight distance (m)	
	Local residential street roundabout critical acceptance gap 4 sec	Arterial road roundabout critical acceptance gap 5 sec
20	22	28
30	33	42
40	44	56
50	55	70
60	67	84

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT APPROACH SIGHT DISTANCE (ASD)

DRAWING NUMBER: INOV002-003

SHEET: 16 of 18

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

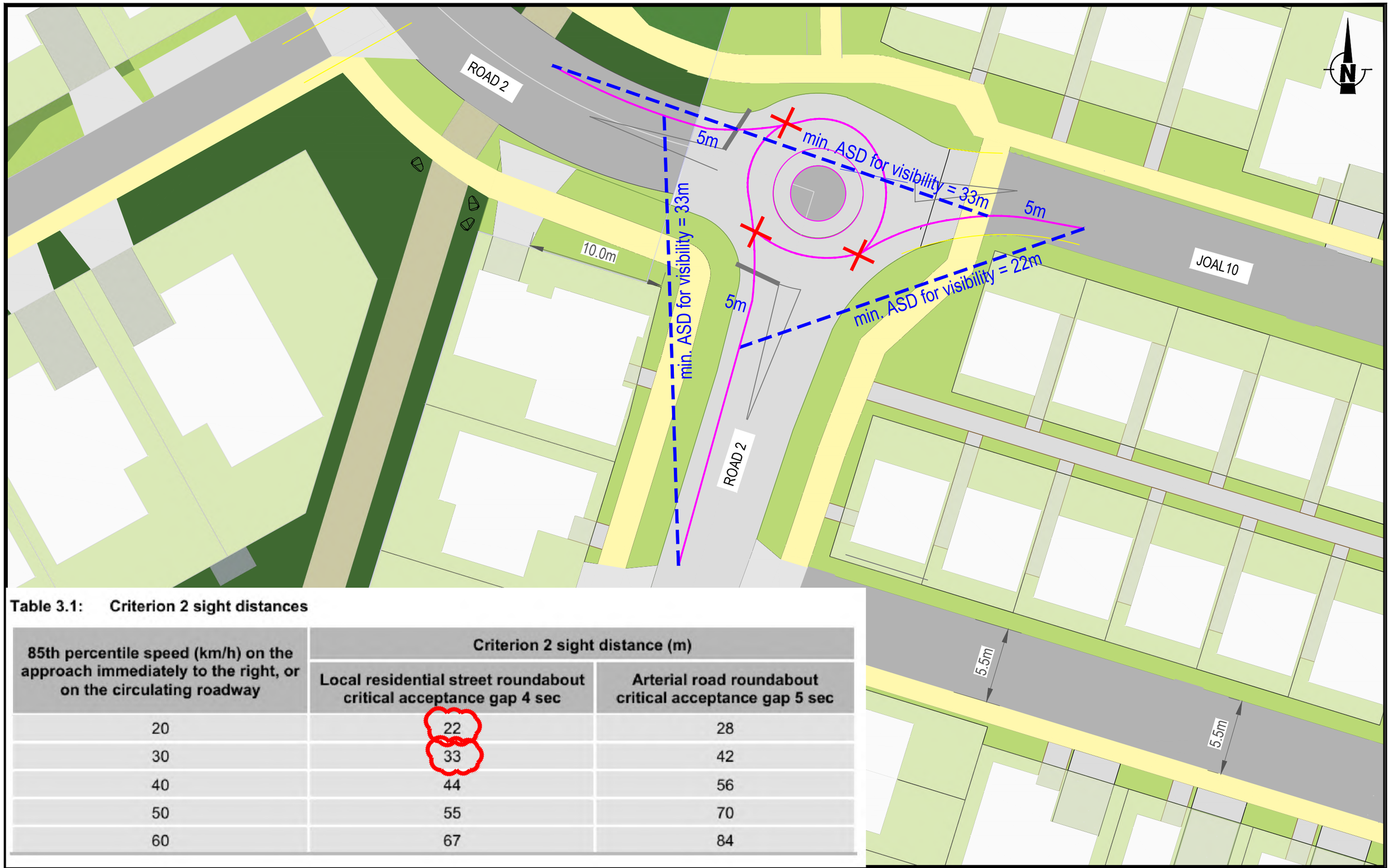


Table 3.1: Criterion 2 sight distances

85th percentile speed (km/h) on the approach immediately to the right, or on the circulating roadway	Criterion 2 sight distance (m)	
	Local residential street roundabout critical acceptance gap 4 sec	Arterial road roundabout critical acceptance gap 5 sec
20	22	28
30	33	42
40	44	56
50	55	70
60	67	84

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT APPROACH SIGHT DISTANCE (ASD)

DRAWING NUMBER: INOV002-003

SHEET: 17 of 18

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	30	2	3	51	YES
V2	30	2	3	51	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PATH STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: NORTH-WEST NEIGHBOURHOOD PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INOV002-003

SHEET: 18 of 18
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

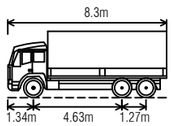
APPENDIX G

Village Centre and South Neighbourhood Precinct

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

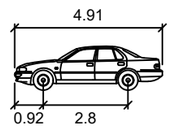


AT DESIGN VEHICLE
8.3m - Truck
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 40.20°
vehicle speed: 5-10kmph

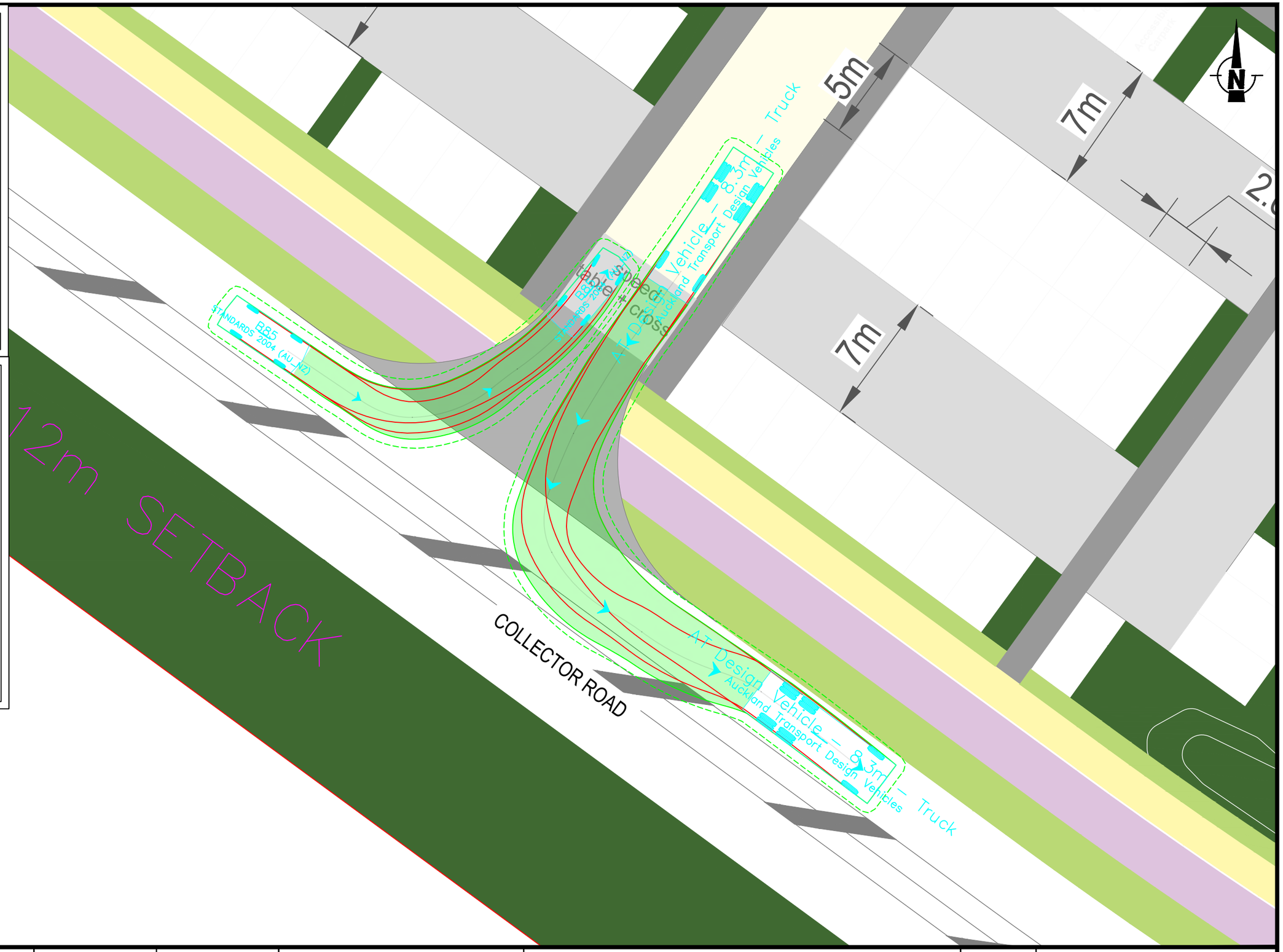
vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:



AUCKLAND UNITARY PLAN
4.91m - B85
vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 8m
1:200 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
VEHICLE CROSSING - DAIRY FLAT HIGHWAY

DRAWING NUMBER: INVO002-008

SHEET: 01 of 10
REV: A

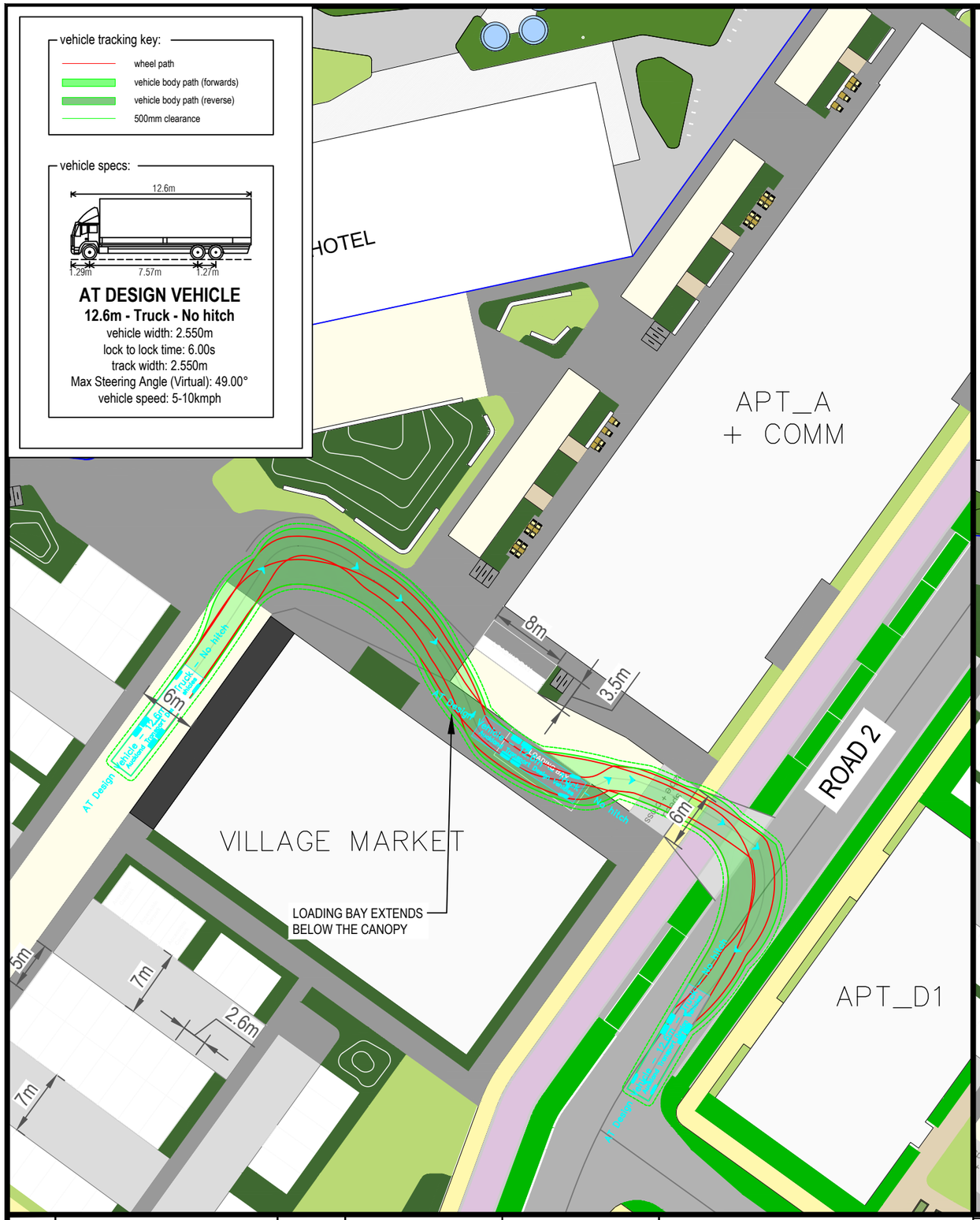
flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
12.6m - Truck - No hitch
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 49.00°
vehicle speed: 5-10kmph



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AUCKLAND UNITARY PLAN
4.91m - B85
vehicle width: 1.870m
lock to lock time: 4.00s
track width: 1.770m
turning radius: 5.750m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

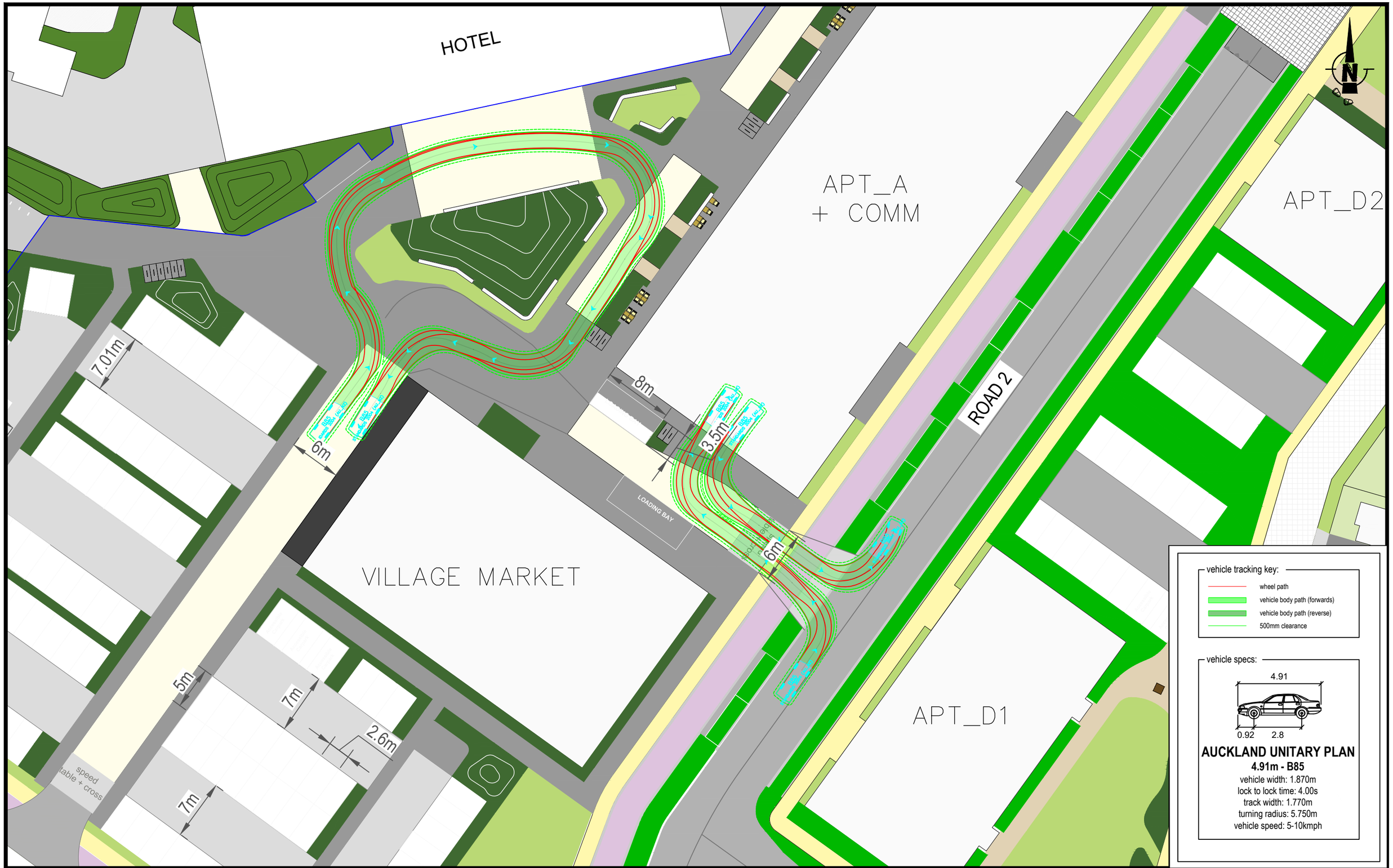
FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
INTERNAL CIRCULATION

DRAWING NUMBER: INVO002-008

SHEET: 02 of 10
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

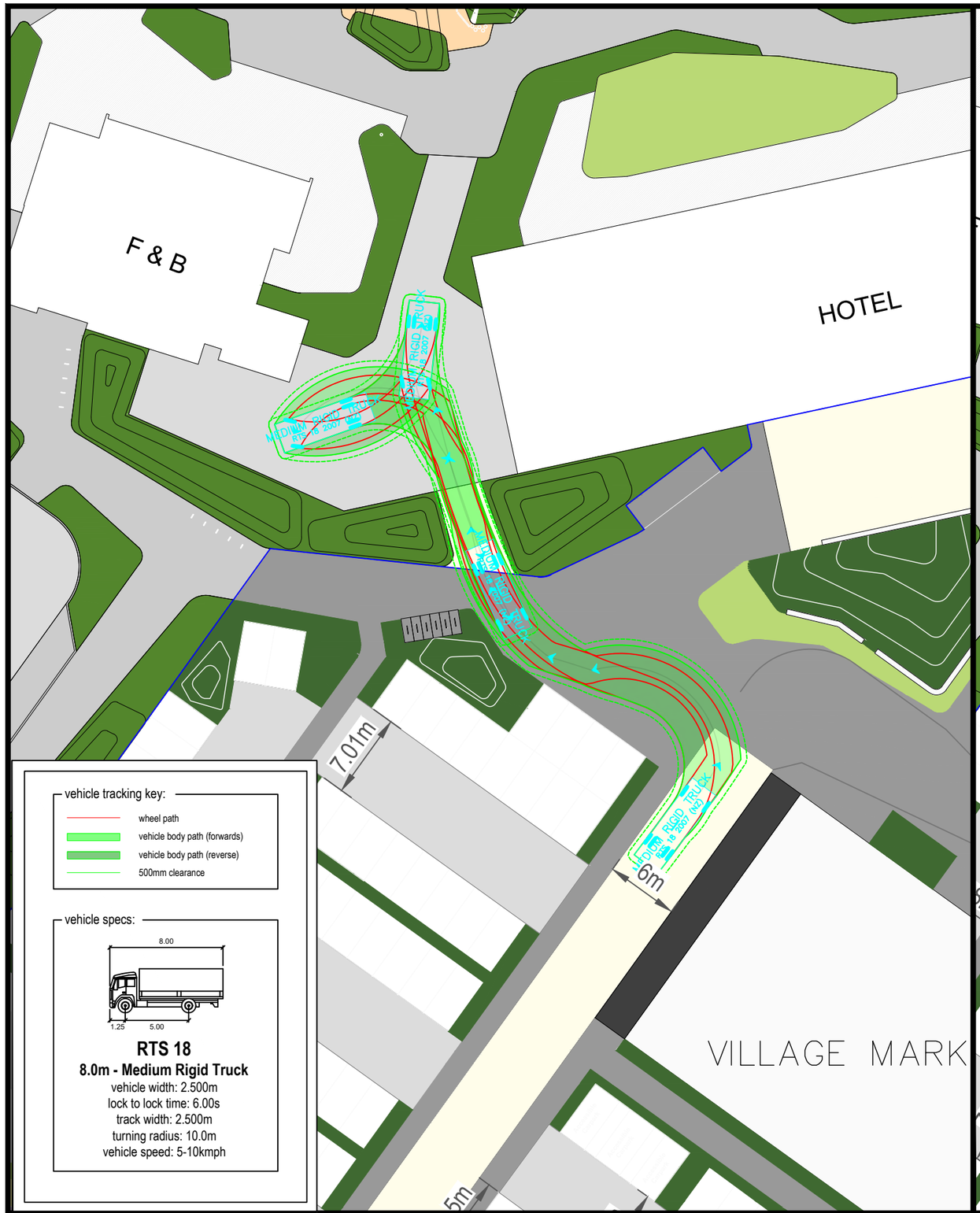
SHEET TITLE: VILLAGE CENTRE PRECINCT
INTERNAL CIRCULATION

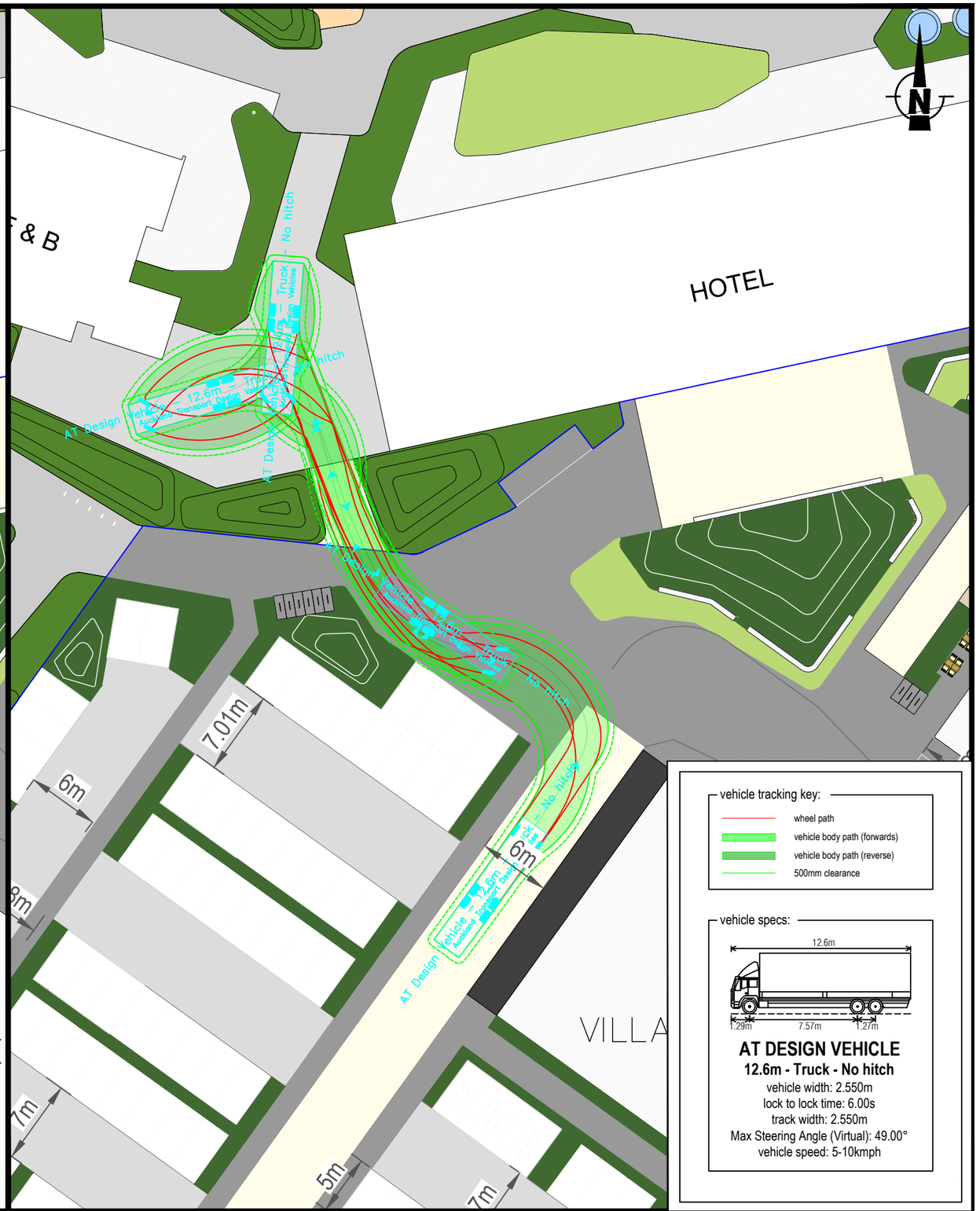
DRAWING NUMBER: INVO002-008

SHEET: 03 of 10

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com





REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
INTERNAL CIRCULATION

DRAWING NUMBER: INVO002-008

SHEET: 04 of 10

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
6.3m - Delivery Van
vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18
8.0m - Medium Rigid Truck
vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph

vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
12.6m - Truck - No hitch
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 49.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
INTERNAL CIRCULATION

DRAWING NUMBER: INVO002-008

SHEET: 05 of 10
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

PT_C

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18
8.0m - Medium Rigid Truck
vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 10.0m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
INTERNAL CIRCULATION

DRAWING NUMBER: INVO002-008

SHEET: 06 of 10

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

UNDARY (INDICATIVE)

Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	YES
V2	70	2	3	151	YES

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

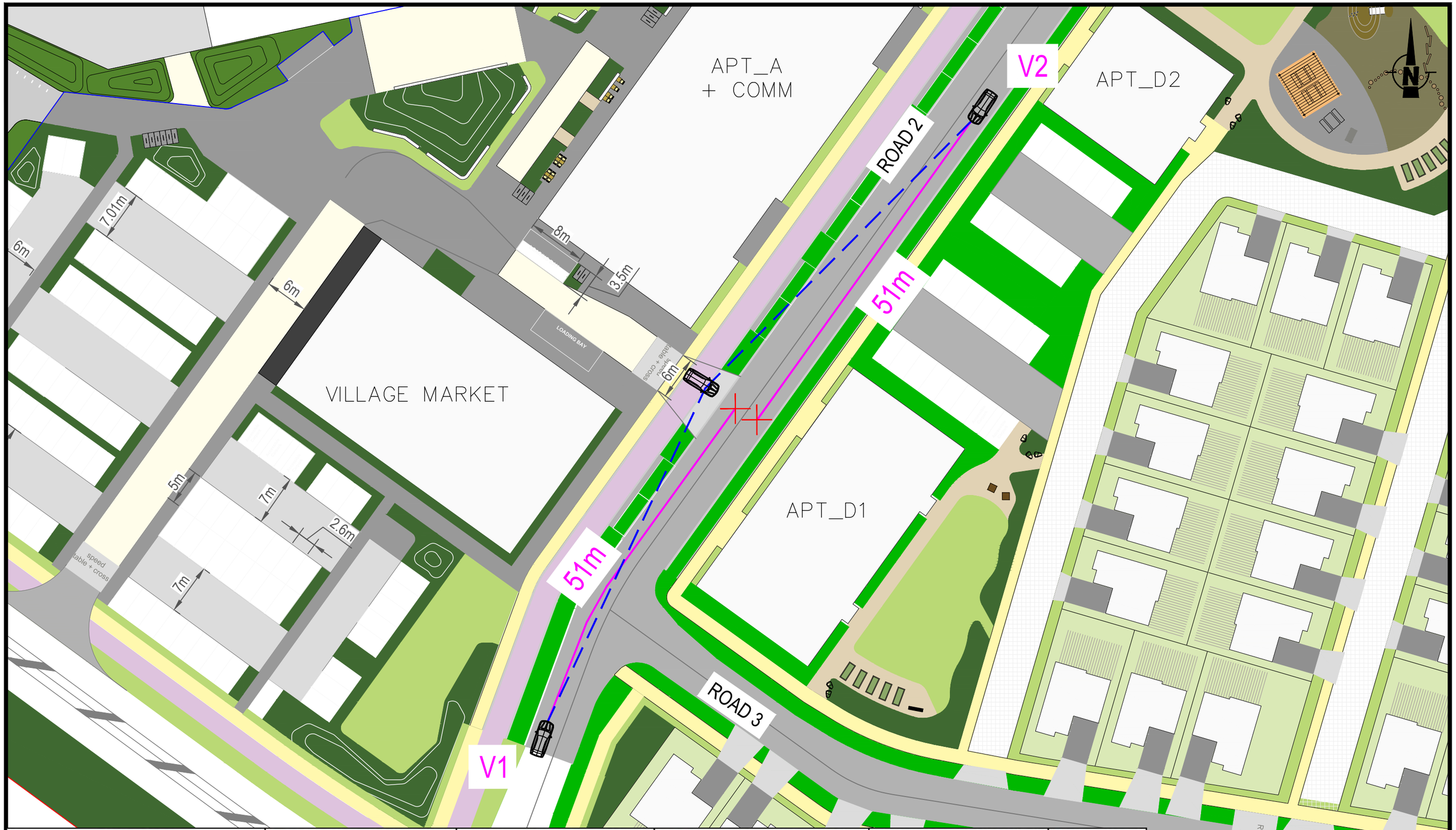
FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INVO002-008

SHEET: 07 of 10
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	30	2	3	51	YES
V2	30	2	3	51	YES

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

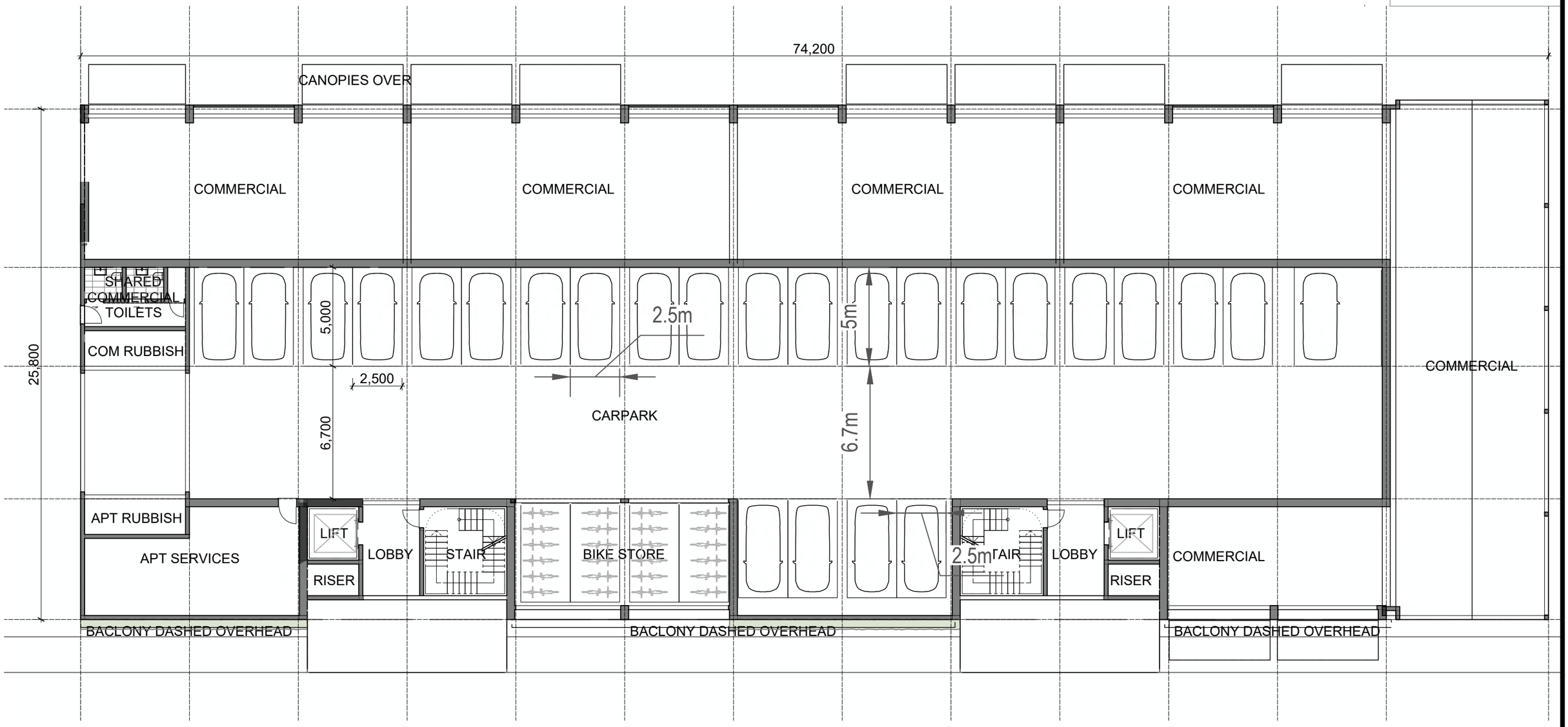
FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INVO002-008

SHEET: 08 of 10
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



1 - APT A + B | Level 00 (Ground) - 1:200

: Note apartment B is mirrored

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 8m
1:200 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

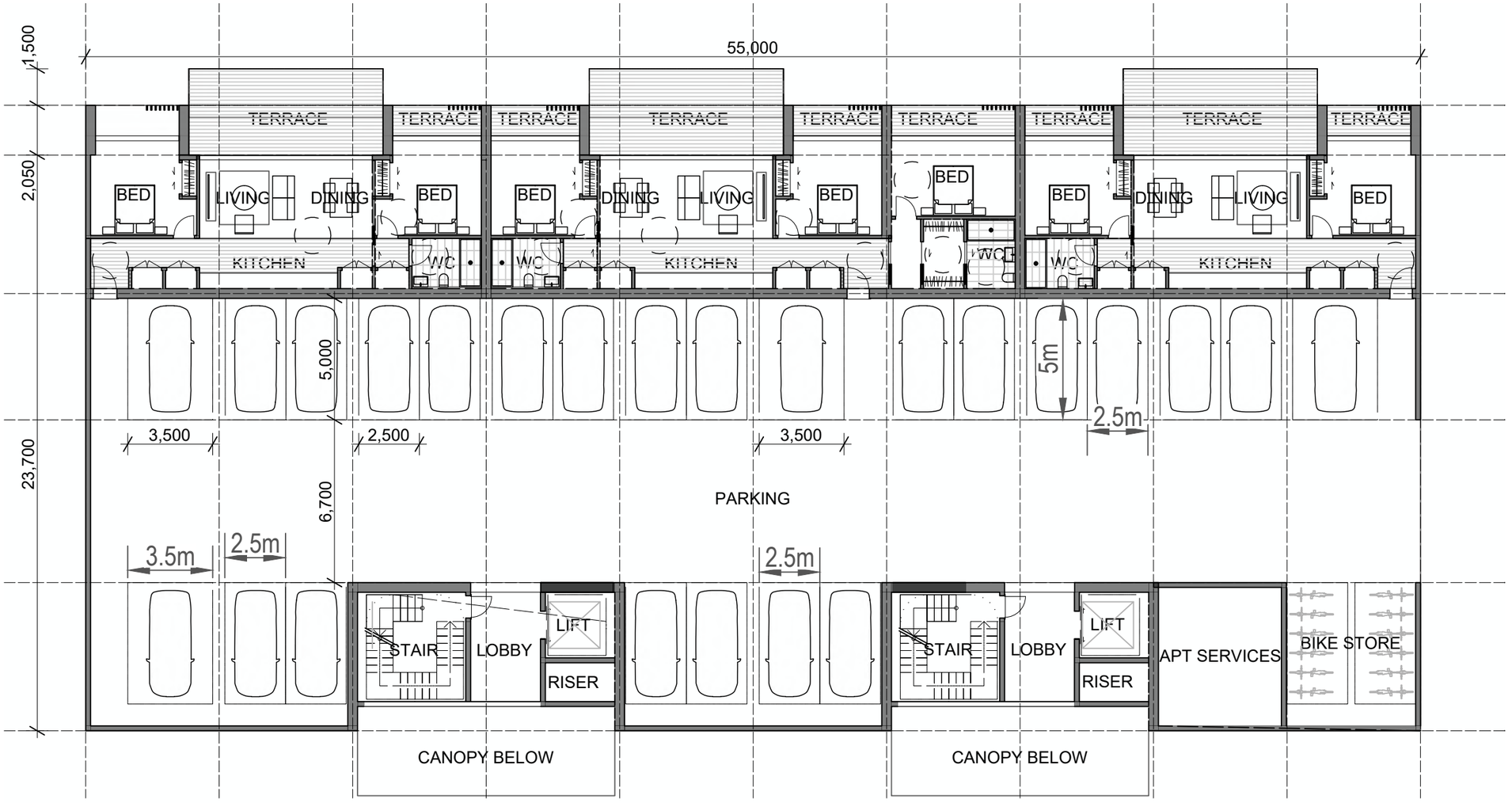
SHEET TITLE: VILLAGE CENTRE PRECINCT APT A + B - BASEMENT PLAN

DRAWING NUMBER: INVO002-008

SHEET: 09 of 10

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



1 - APT C | Level 00 (Ground) - 1:200

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 8m
1:200 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

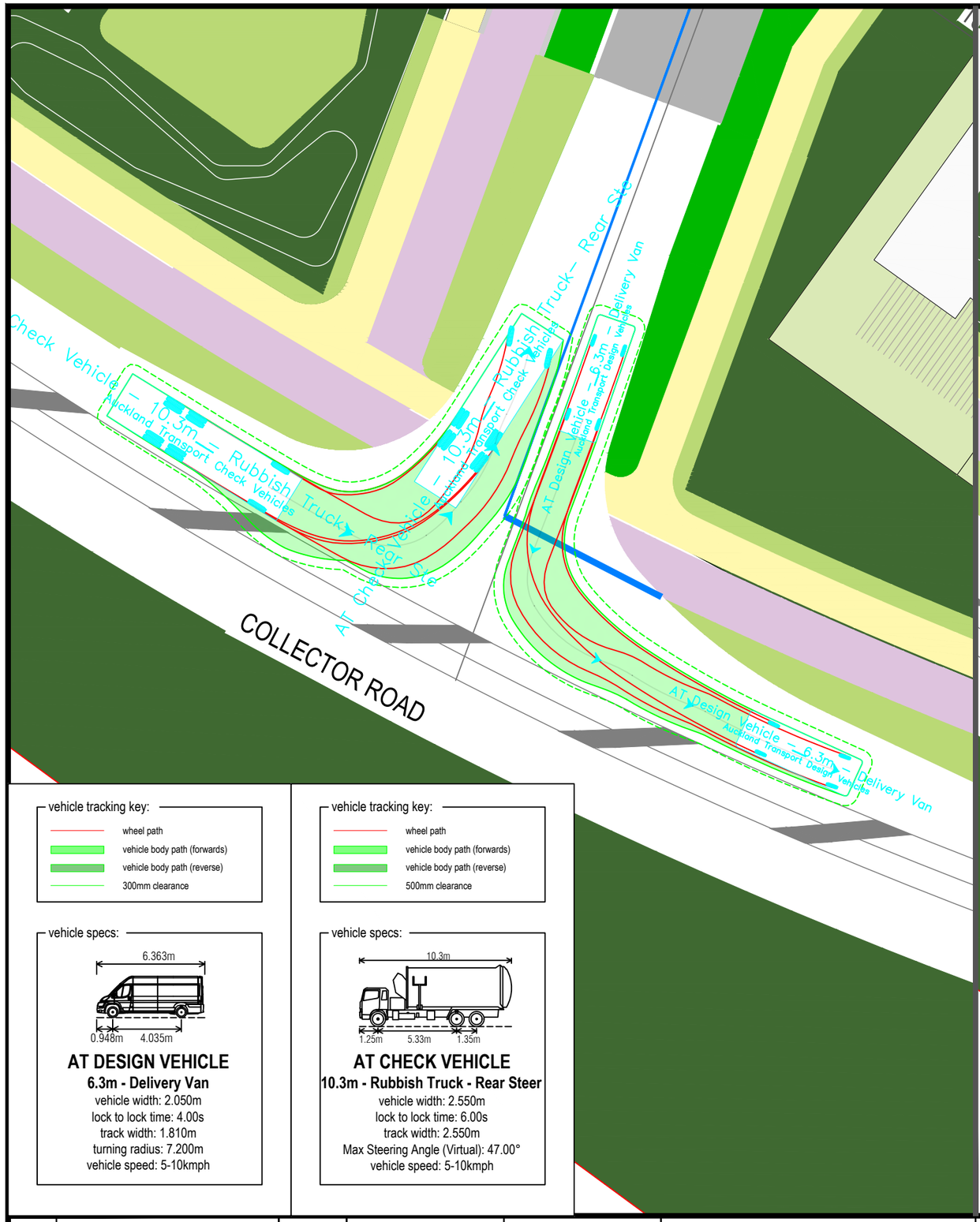
FOR RESOURCE CONSENT

SHEET TITLE: VILLAGE CENTRE PRECINCT
APT C - BASEMENT PLAN

DRAWING NUMBER: INVO002-008

SHEET: 10 of 10
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

vehicle tracking key:

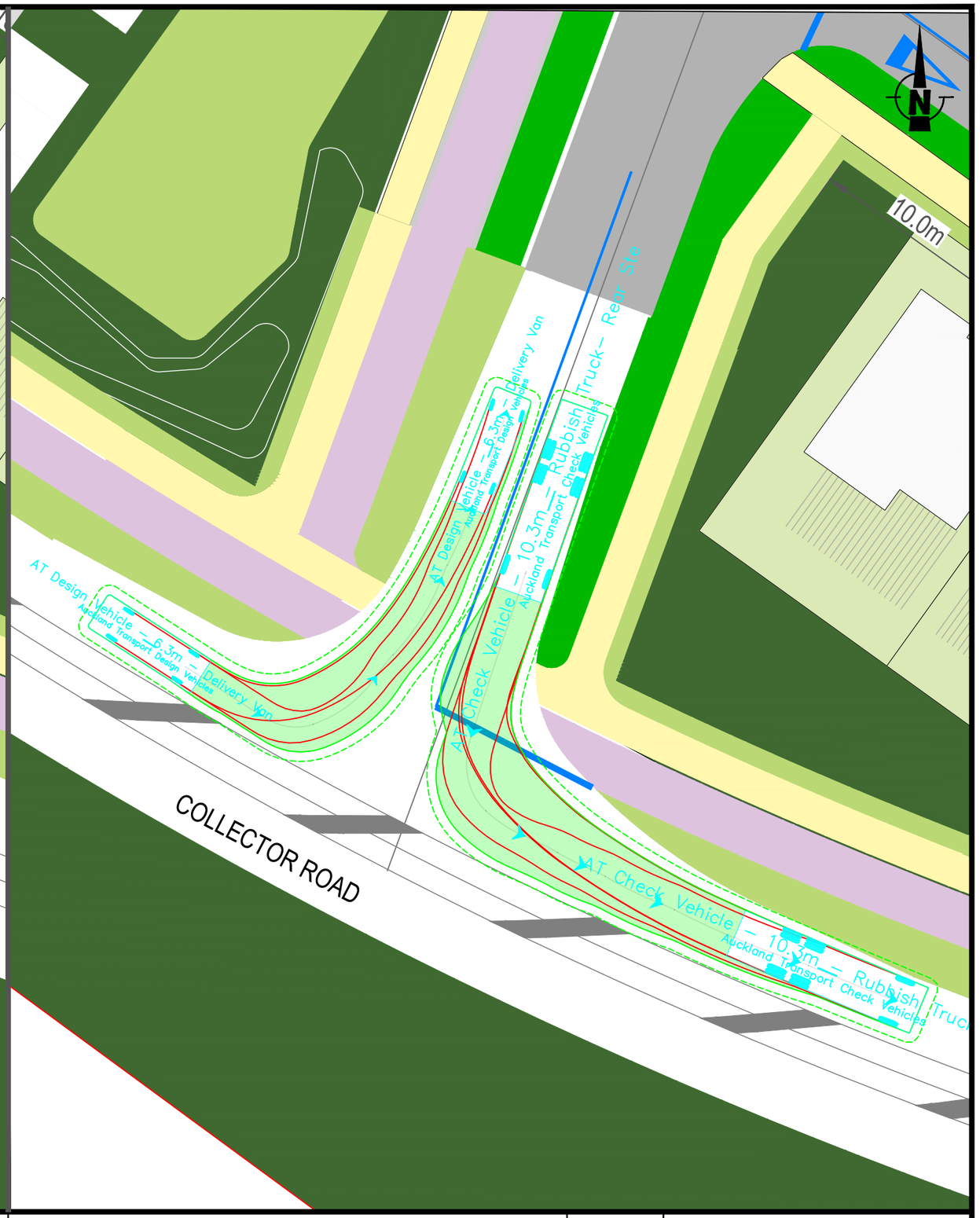
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph



REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

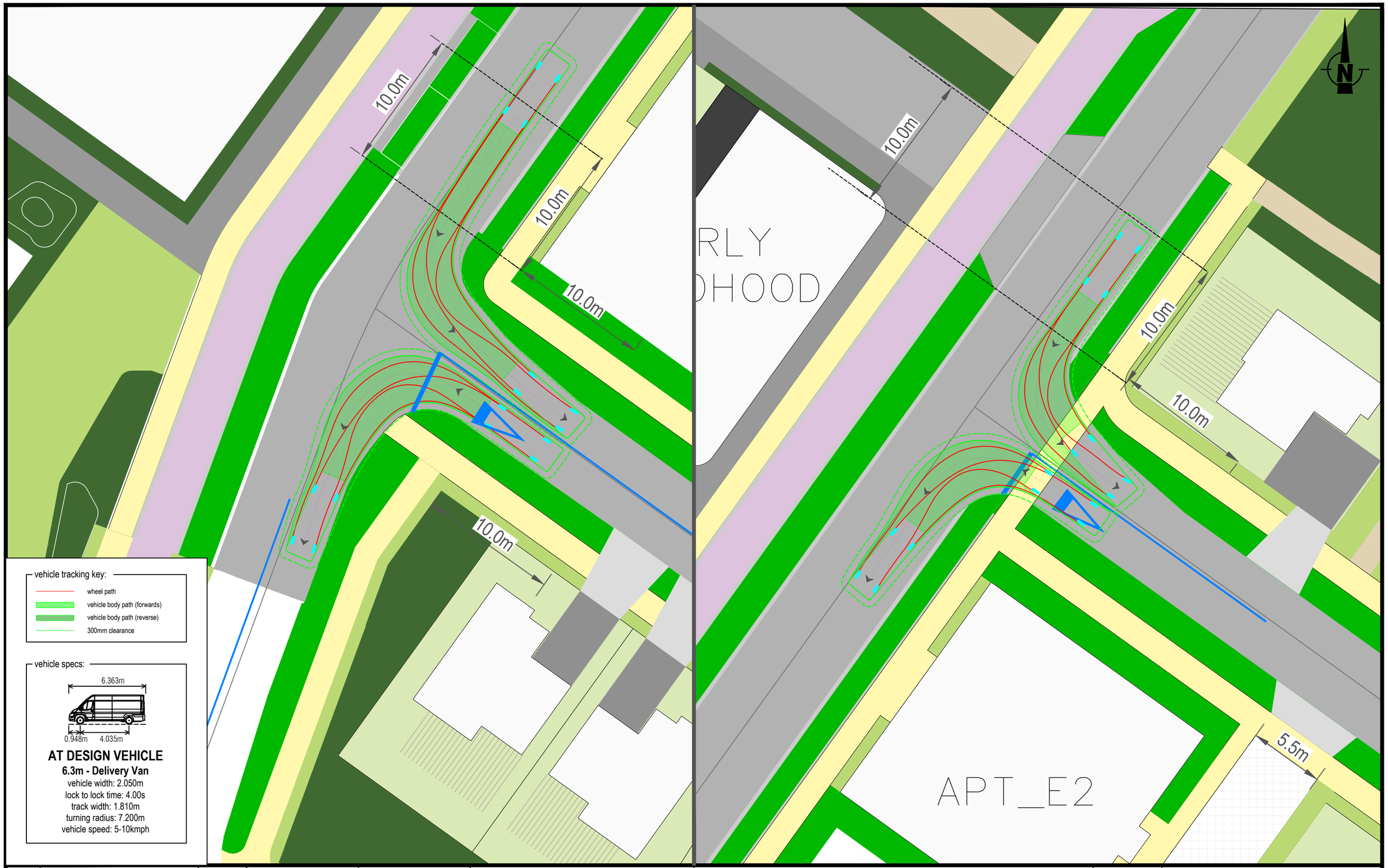
SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT ROAD 1 INTERSECTION

DRAWING NUMBER: INOV002-004

SHEET: 01 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 10m
1:250 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
INTERNAL PUBLIC ROAD INTERSECTIONS

DRAWING NUMBER: INOV002-004

SHEET: 02 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

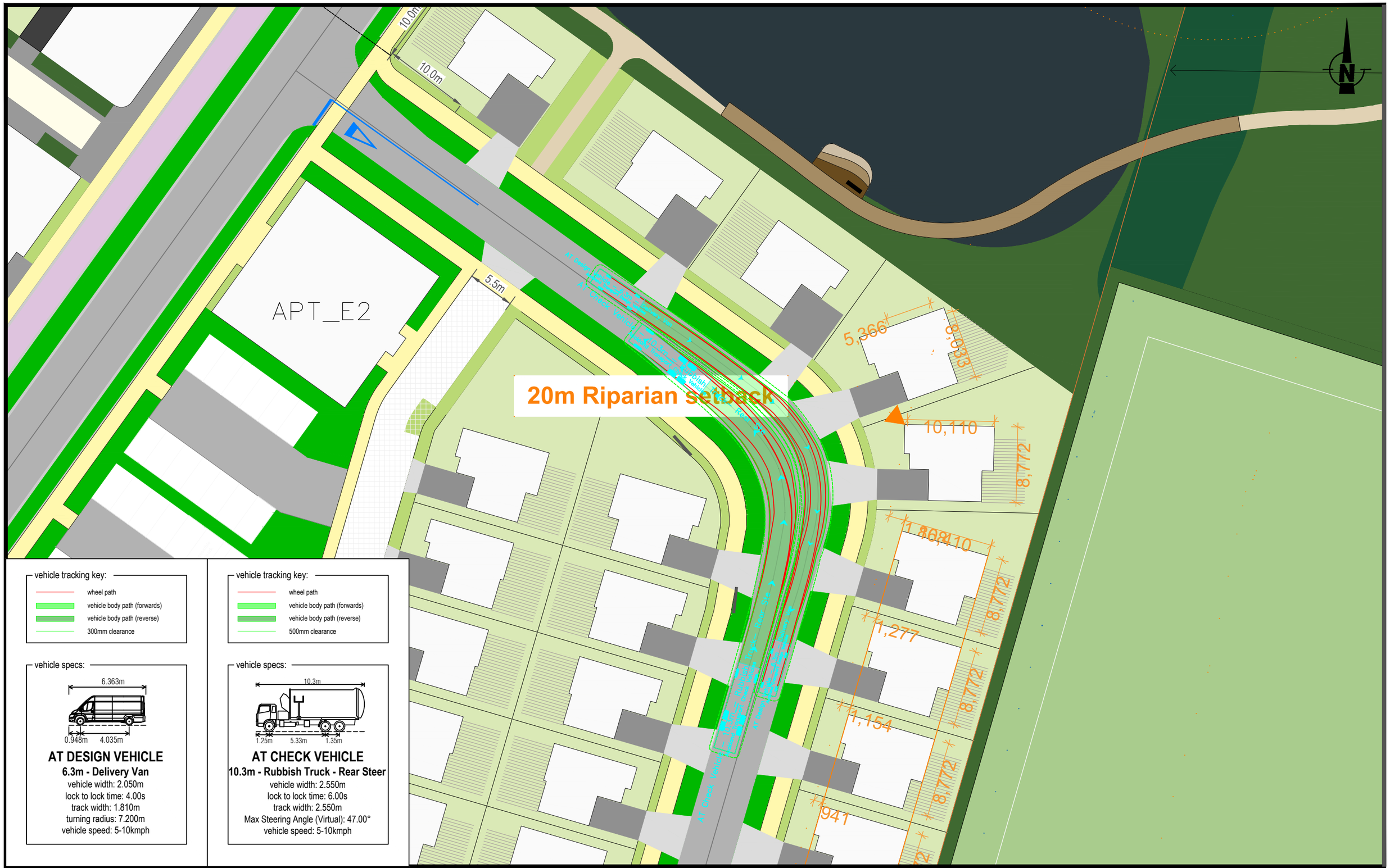
SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
INTERNAL PUBLIC ROAD INTERSECTIONS

DRAWING NUMBER: INOV002-004

SHEET: 03 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 300mm clearance

vehicle specs:

AT DESIGN VEHICLE

6.3m - Delivery Van

vehicle width: 2.050m
lock to lock time: 4.00s
track width: 1.810m
turning radius: 7.200m
vehicle speed: 5-10kmph

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

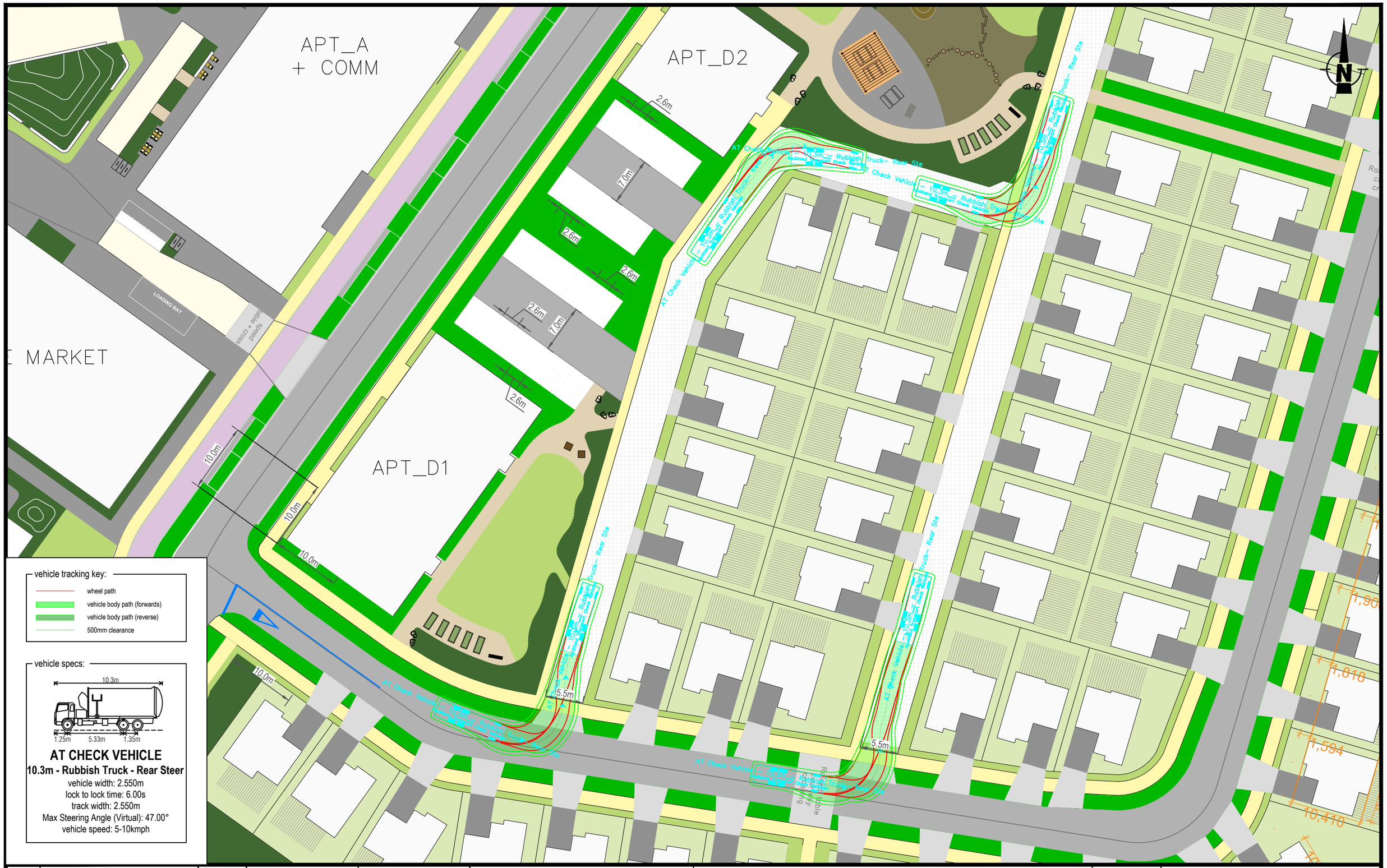
SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
INTERNAL PUBLIC ROAD CORNERS

DRAWING NUMBER: INOV002-004

SHEET: 04 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

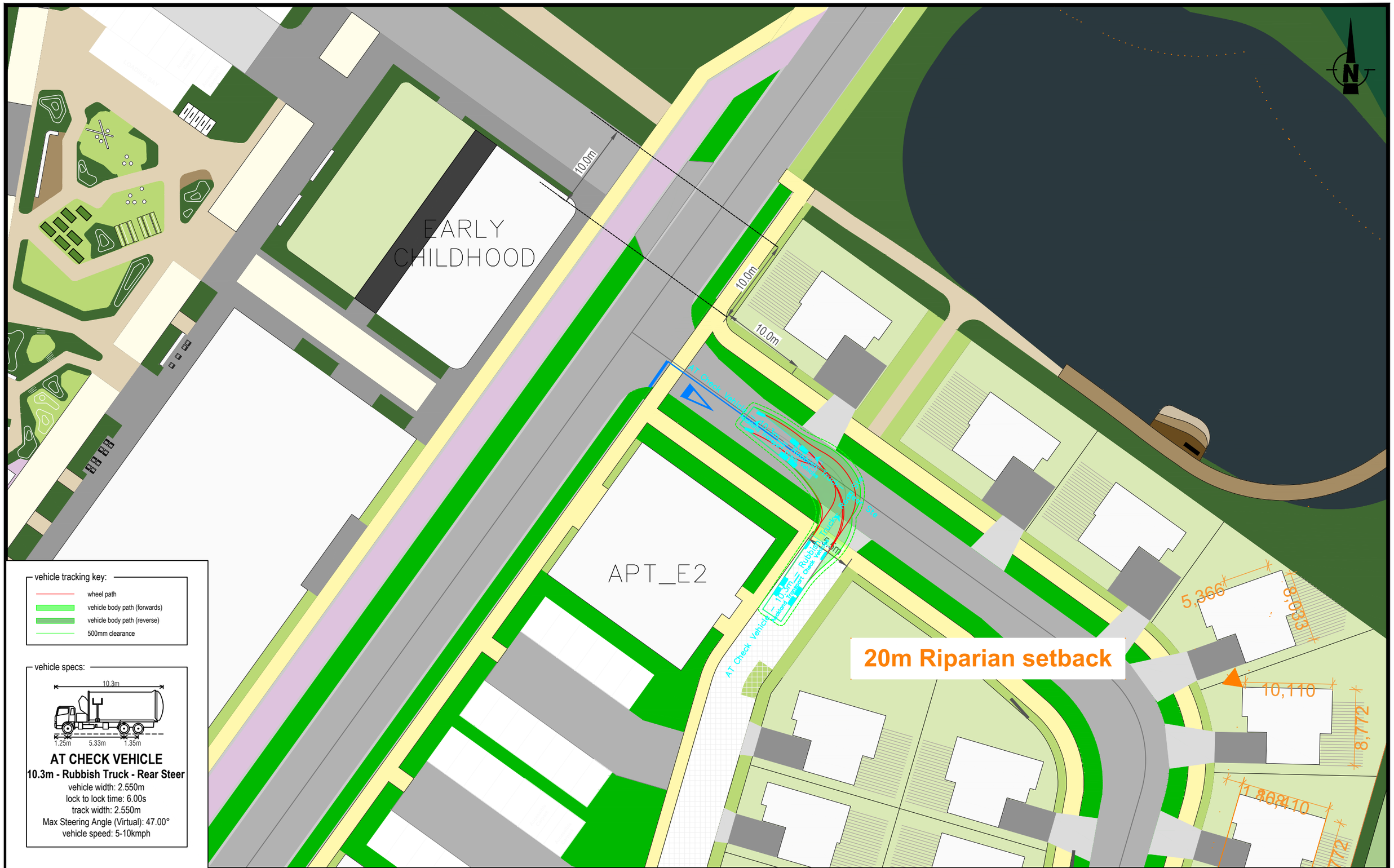
SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
RUBBISH TRUCK TRACKING WITH JOALS

DRAWING NUMBER: INOV002-004

SHEET: 05 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE

10.3m - Rubbish Truck - Rear Steer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
Max Steering Angle (Virtual): 47.00°
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
RUBBISH TRUCK TRACKING WITH JOALS

DRAWING NUMBER: INOV002-004

SHEET: 06 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	**YES**
V2	70	2	3	151	**YES**
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

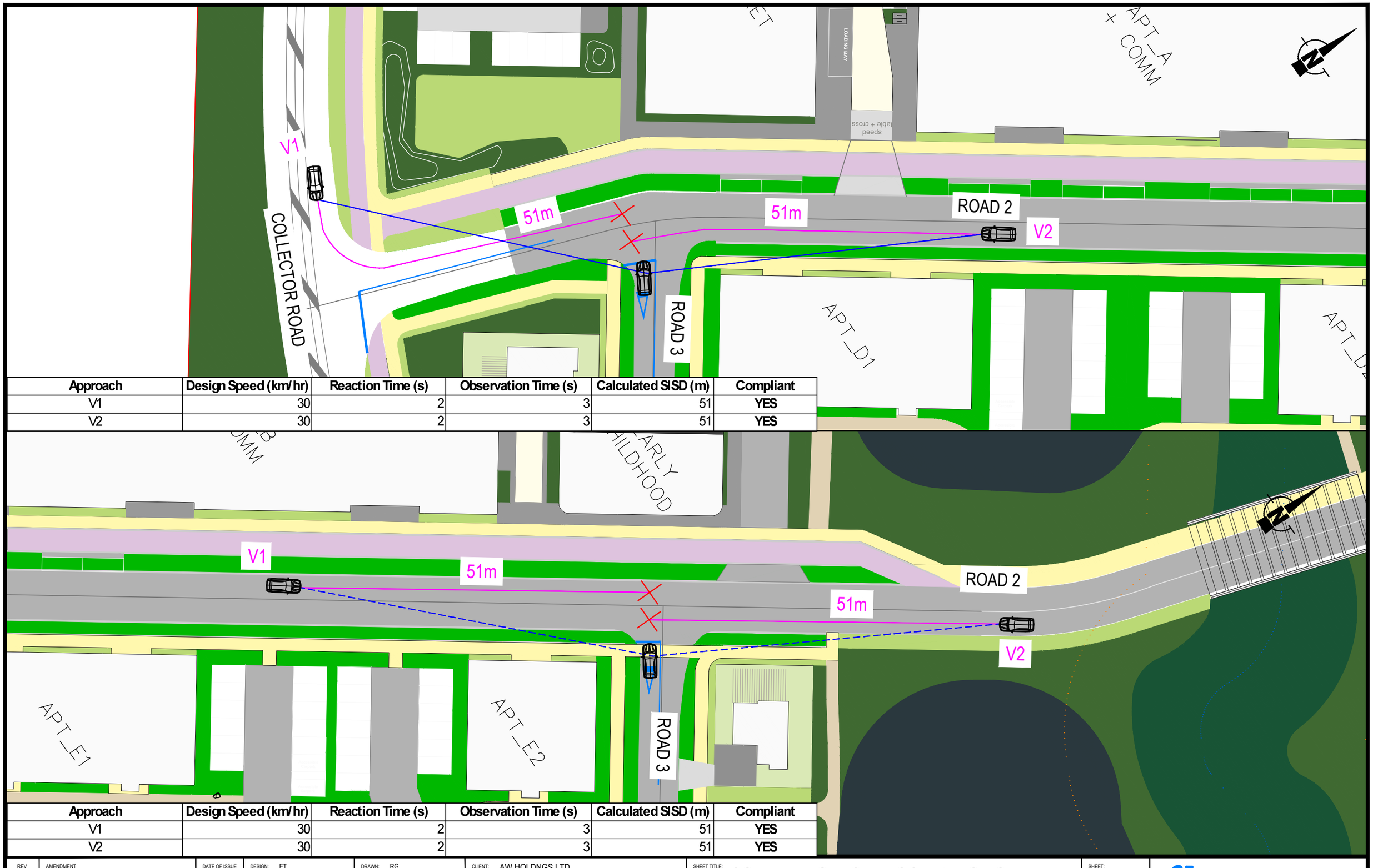
FOR RESOURCE CONSENT

SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
SAFE INTERSECTION SIGHT DISTANCE

DRAWING NUMBER: INOV002-004

SHEET: 07 of 08
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	30	2	3	51	YES
V2	30	2	3	51	YES

Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	30	2	3	51	YES
V2	30	2	3	51	YES

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: ET | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 32m
1:800 @ A3

CLIENT: AW HOLDNGS LTD
PROJECT: AUCKLAND SURF PARK STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: SOUTH NEIGHBOURHOOD PRECINCT
SAFE INTERSECTION SIGHT DISTANCE

DRAWING NUMBER: INOV002-004

SHEET: 08 of 08

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

APPENDIX H Data Centres

vehicle tracking key:

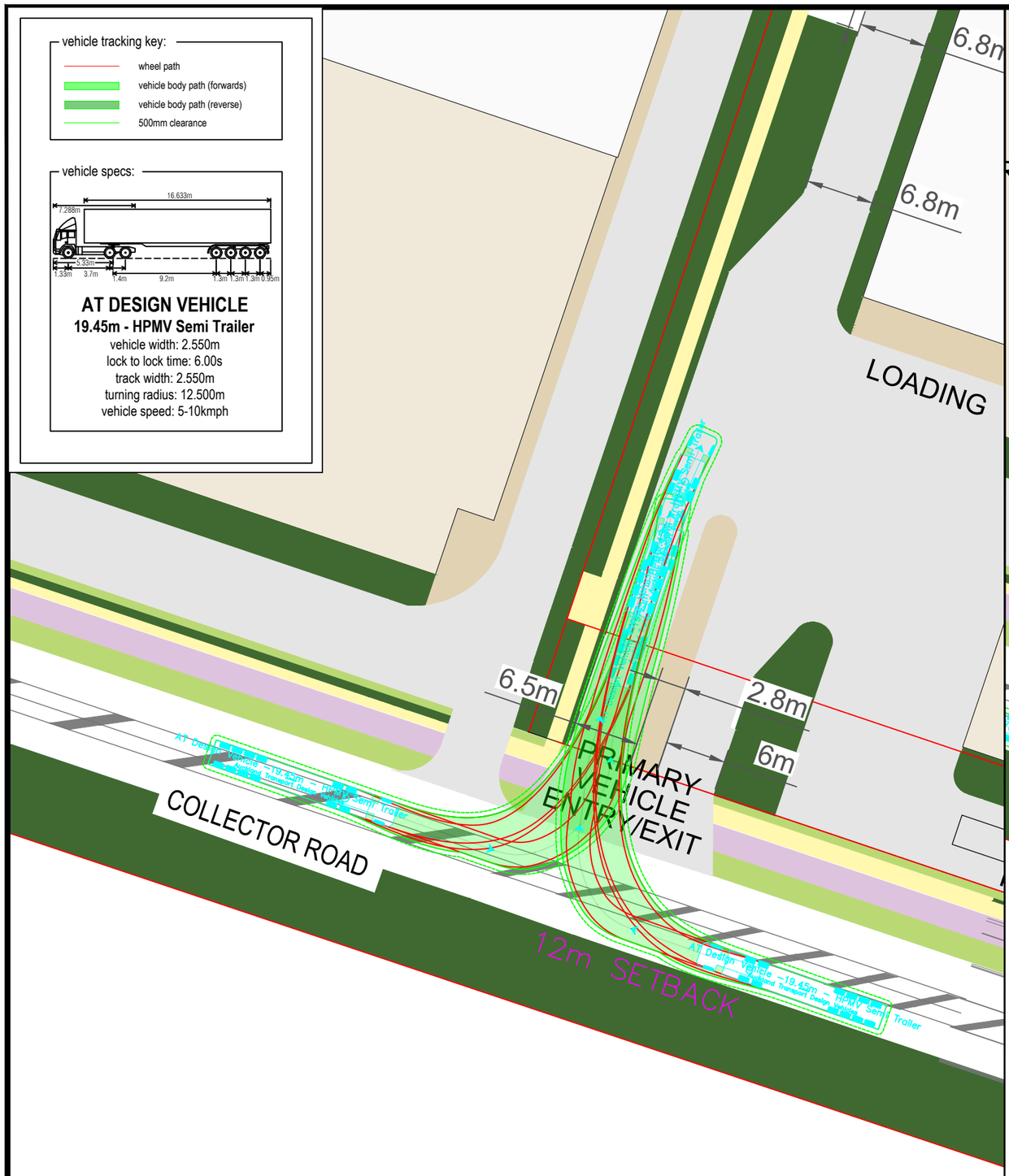
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

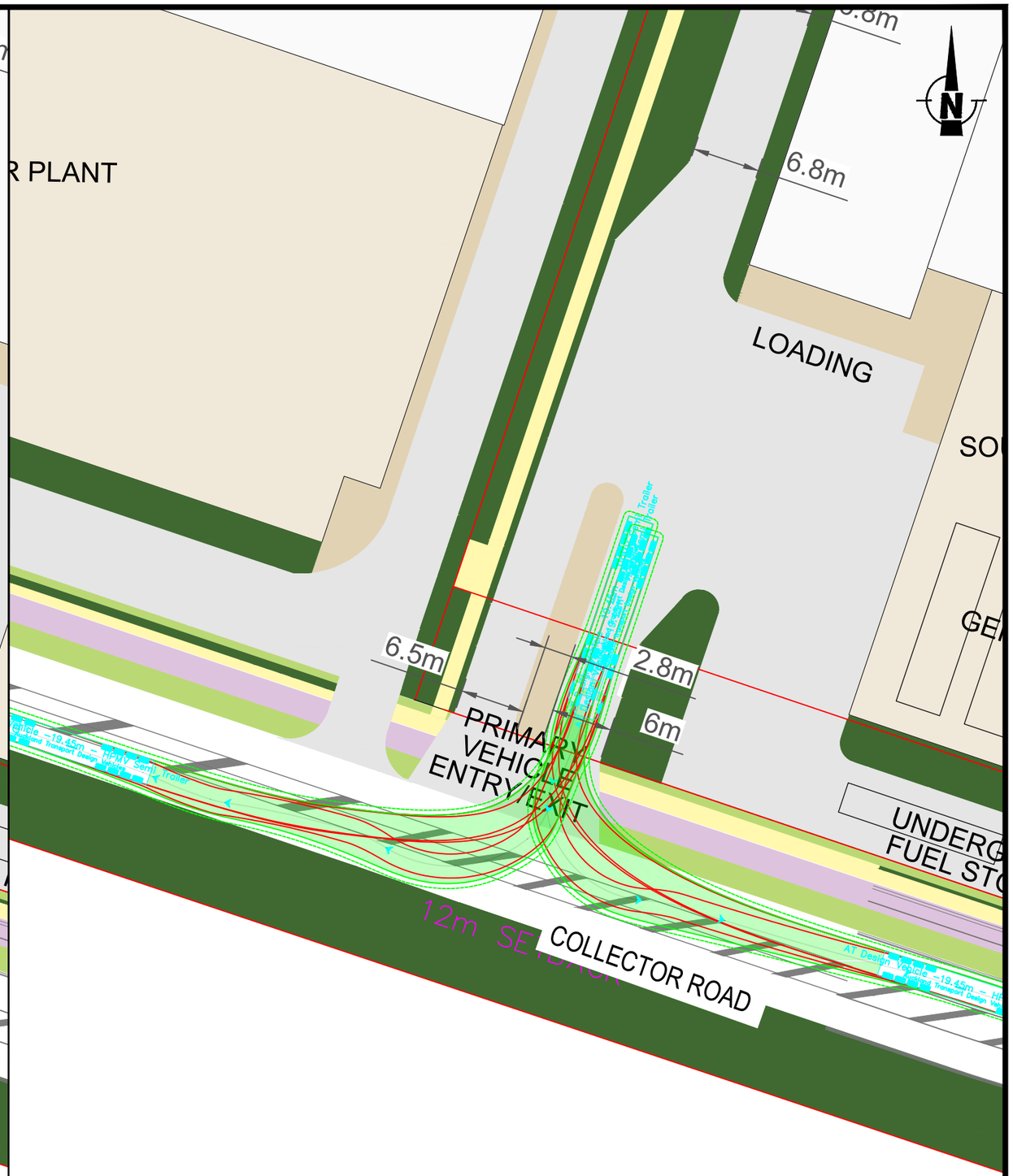
vehicle specs:

AT DESIGN VEHICLE

19.45m - HPMV Semi Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph





REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: DATA CENTRE PRECINCT
DATA CENTRE STAGE 2 ENTRY AND EXIT

DRAWING NUMBER: INVO002-006

SHEET: 01 of 05

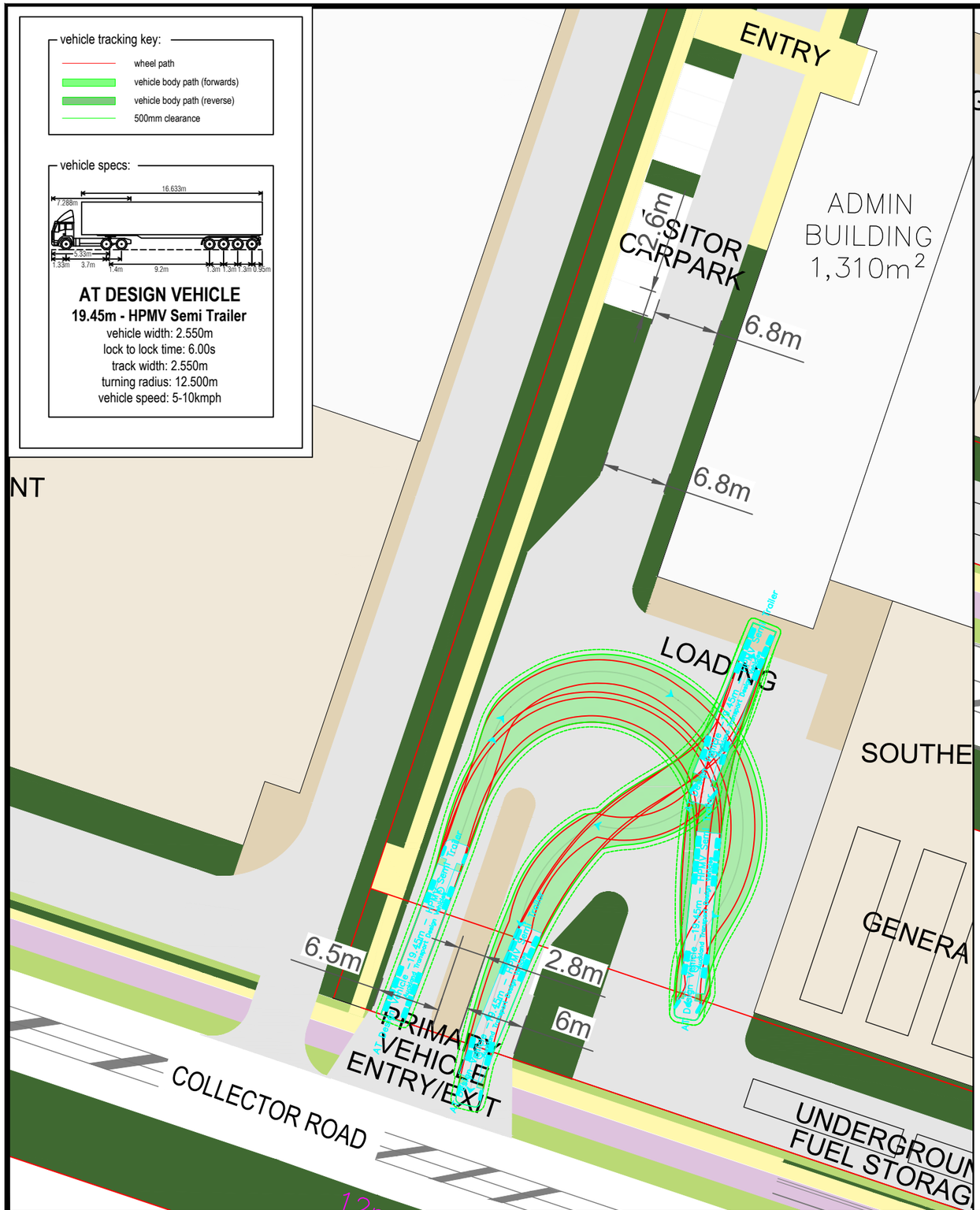
REV: A

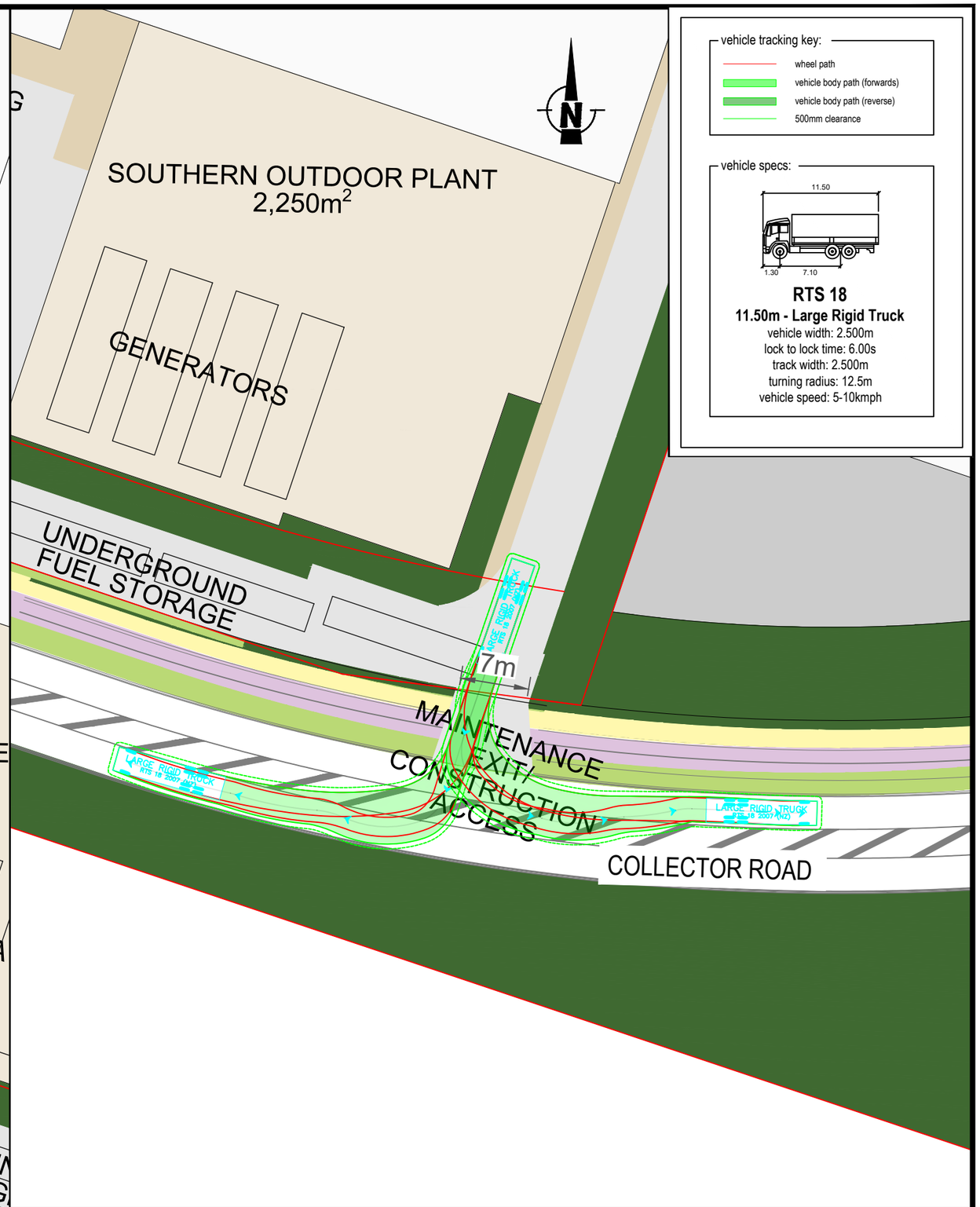
flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT DESIGN VEHICLE
19.45m - HPMV Semi Trailer
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph





vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

RTS 18
11.50m - Large Rigid Truck
vehicle width: 2.500m
lock to lock time: 6.00s
track width: 2.500m
turning radius: 12.5m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 20m
1:500 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: DATA CENTRE PRECINCT
DATA CENTRE STAGE 2

DRAWING NUMBER: INVO002-006

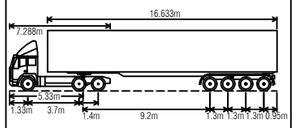
SHEET: 02 of 05
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:



AT DESIGN VEHICLE

19.45m - HPMV Semi Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

OUTDOOR PLANT

NO CHANGE TO SITE LAYOUT AND ARCHITECTURE APPROVED UNDER STAGE 1 BUN60429155

12m SETBACK

MAINTENANCE ACCESS

6.6m

2.6m

GENERATORS

NORTHERN OUTDOOR PLANT
3,110m²

30.600

5.985

10m Setback

SUBSTATION

REFER TO VECTOR ELECTRICITY DRAWINGS

STAFF CARPARK

2.6m

6.8m

ENTRY

ADMIN BUILDING
1,310m²

EQUIPMENT ROOMS AND SUPPORTING TECHNICAL FACILITIES 5,970m²

VISITOR CARPARK

2.6m

6.8m

6.8m

OUTDOOR PLANT

LOADING

SOUTHERN OUTDOOR PLANT
2,250m²

GENERATORS

COLLECTOR ROAD

6.5m

2.8m

6m

PRIMARY VEHICLE ENTRY/EXIT

UNDERGROUND FUEL STORAGE

7m

MAINTENANCE EXIT/ CONSTRUCTION ACCESS

12m SETBACK

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 40m
1:1000 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

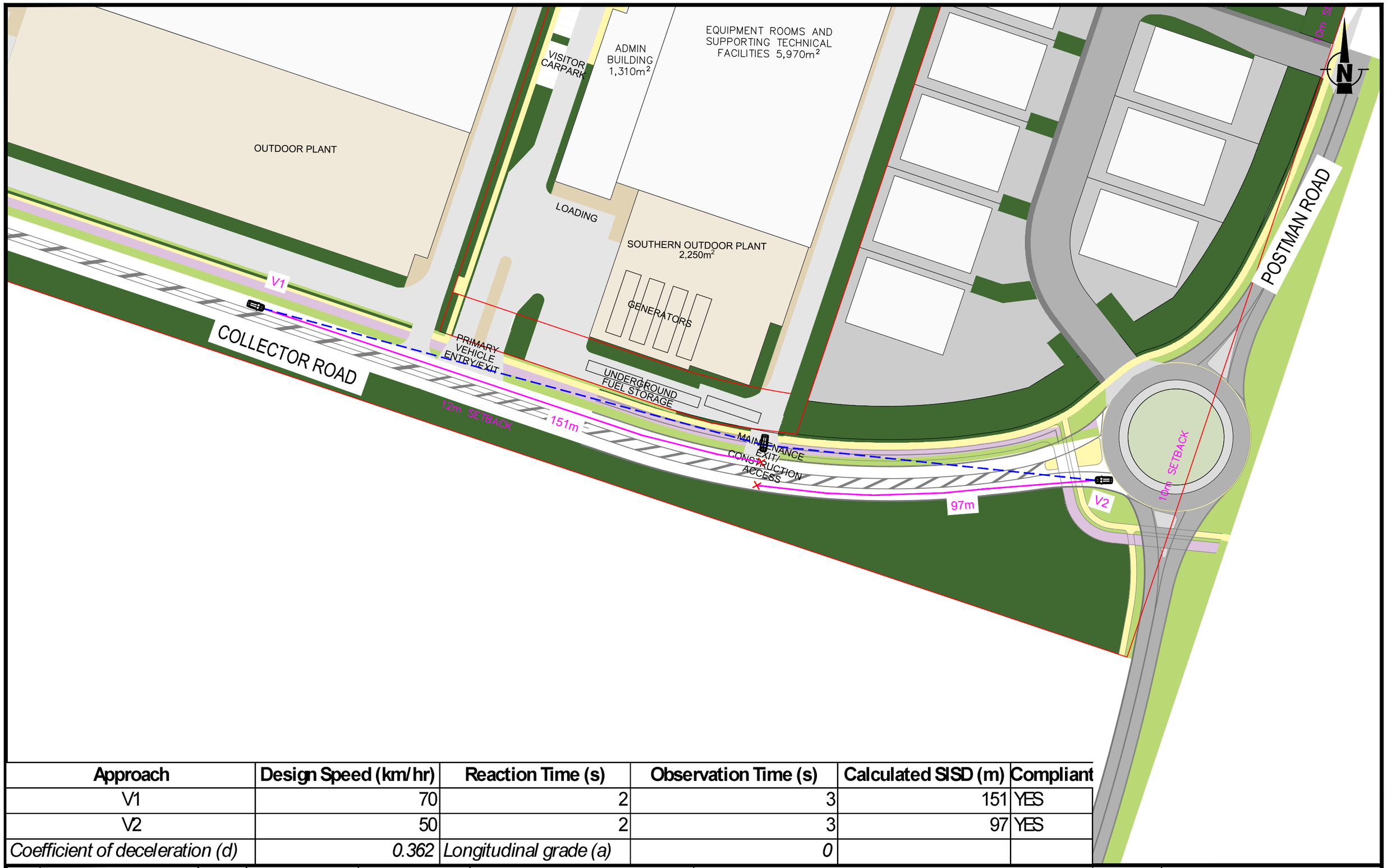
SHEET TITLE: DATA CENTRE PRECINCT
DATA CENTRE STAGE 2 - CIRCULATION

DRAWING NUMBER: INVO002-006

SHEET: 03 of 05

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	YES
V2	50	2	3	97	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 40m
1:1000 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

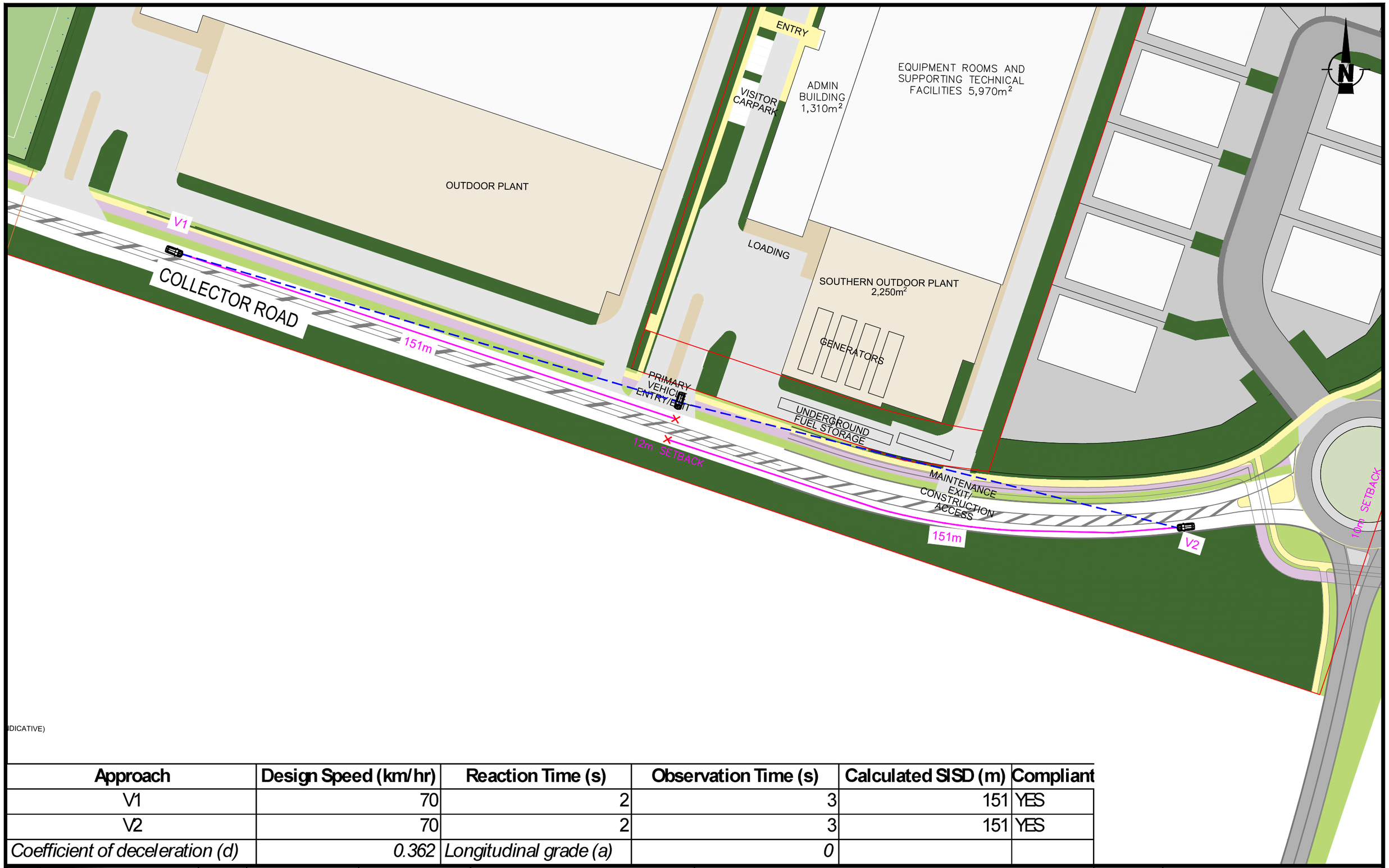
FOR RESOURCE CONSENT

SHEET TITLE: DATA CENTRE PRECINCT
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INVO002-006

SHEET: 04 of 05
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



(INDICATIVE)

Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	70	2	3	151	YES
V2	70	2	3	151	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 40m
1:1000 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: DATA CENTRE PRECINCT SAFE INTERSECTION SIGHT DISTANCE (SISD)

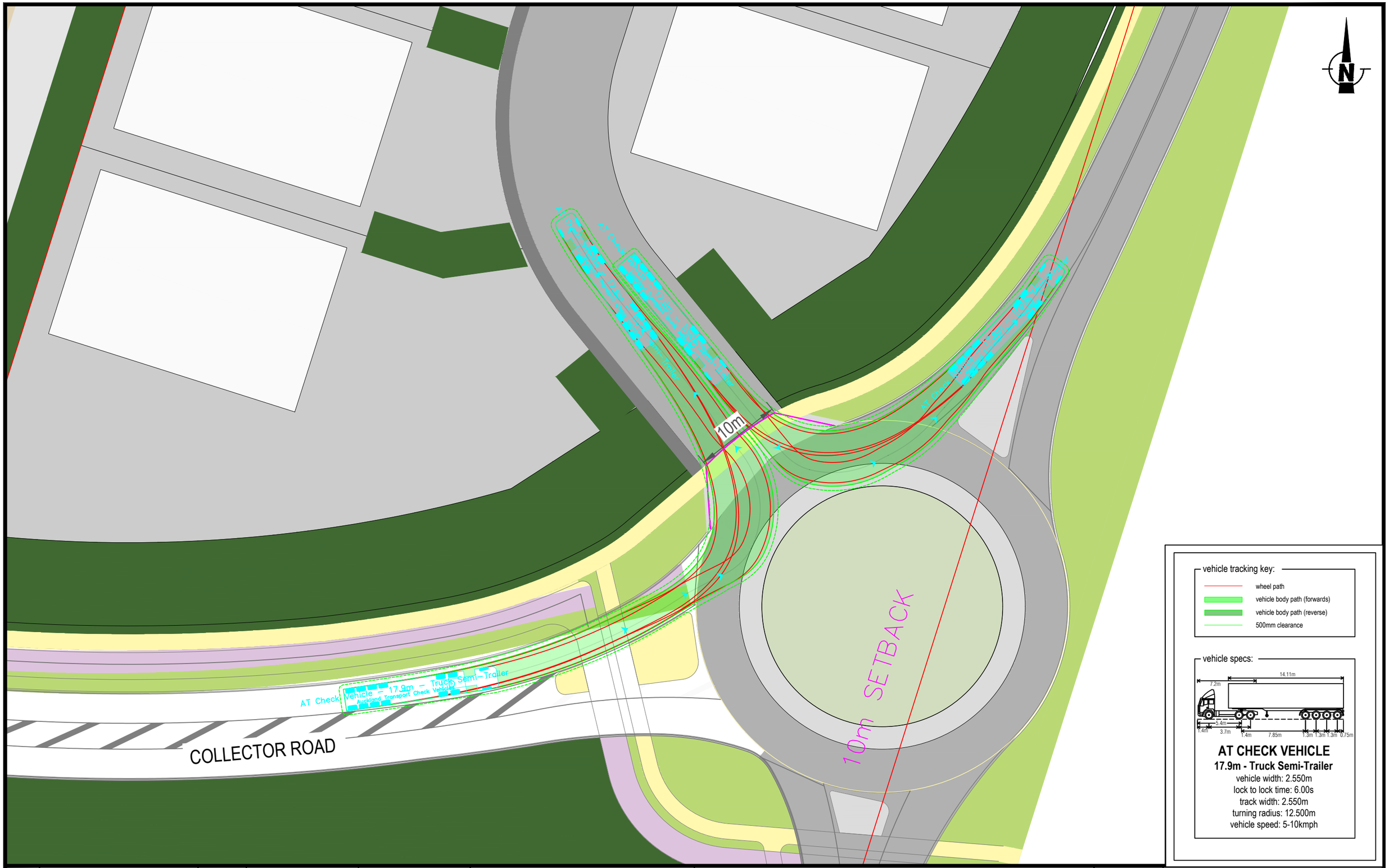
DRAWING NUMBER: INVO002-006

SHEET: 05 of 05

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

APPENDIX I Eastern Industrial



vehicle tracking key:
- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:

AT CHECK VEHICLE
17.9m - Truck Semi-Trailer
vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: LIGHT INDUSTRIAN LOTS
POSTMAN ROAD ROUNDABOUT

DRAWING NUMBER: INVO002-005

SHEET: 01 of 04
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

REFER TO VECTOR ELECTRICITY DRAWINGS

10m SETBACK

9m

DAIRY FLAT HIGHWAY

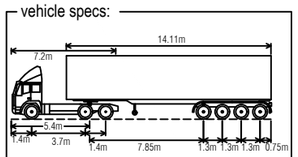
AT Check Vehicle – 17.9m – Truck Semi-Trailer

AT Check Vehicle – 17.9m – Truck Semi-Trailer

vehicle tracking key:

- wheel path
- vehicle body path (forwards)
- vehicle body path (reverse)
- 500mm clearance

vehicle specs:



AT CHECK VEHICLE

17.9m - Truck Semi-Trailer

vehicle width: 2.550m
lock to lock time: 6.00s
track width: 2.550m
turning radius: 12.500m
vehicle speed: 5-10kmph

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: LIGHT INDUSTRIAN LOTS POSTMAN ROAD VEHICLE CROSSING

DRAWING NUMBER: INVO002-005

SHEET: 02 of 04

REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com

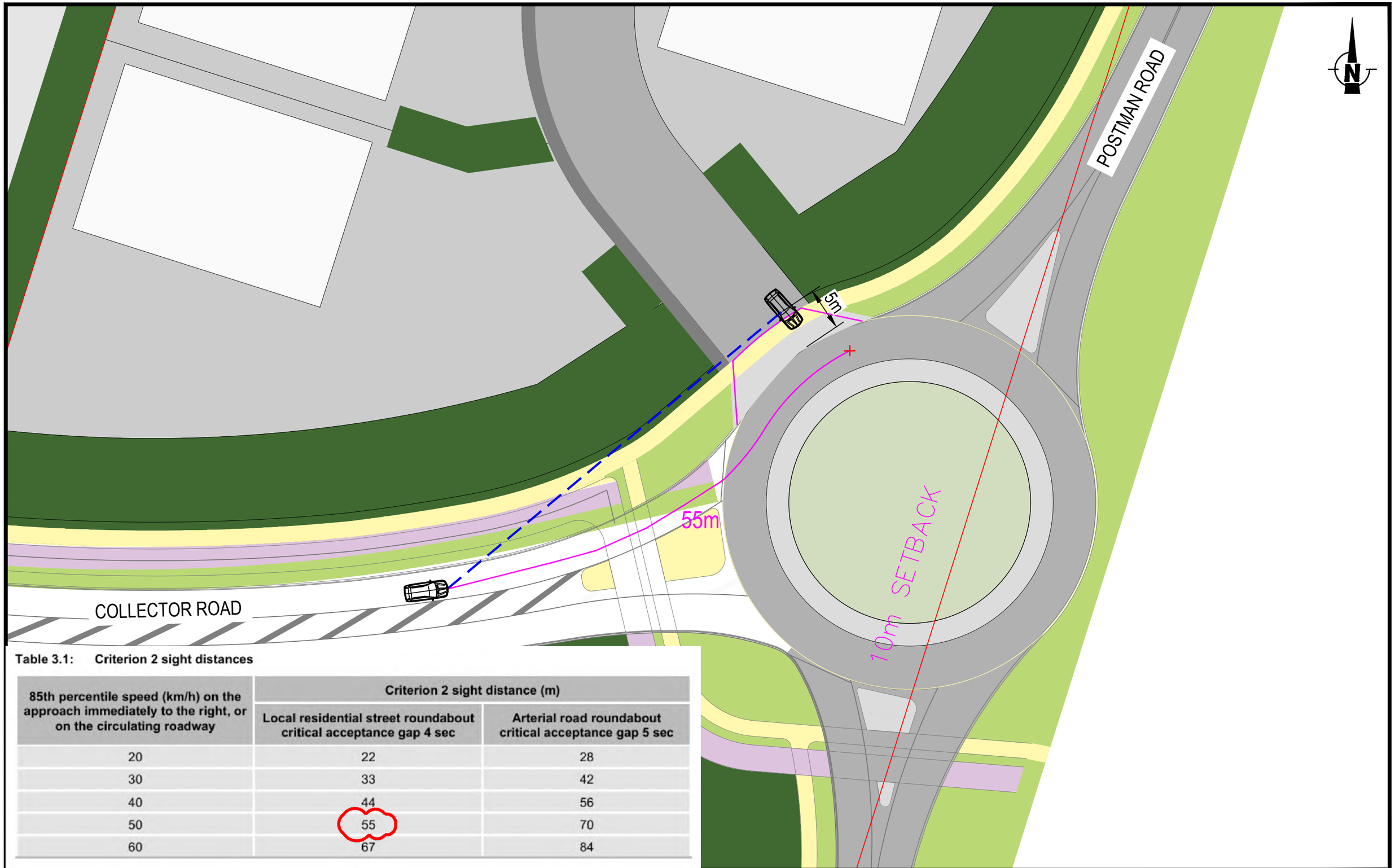


Table 3.1: Criterion 2 sight distances

85th percentile speed (km/h) on the approach immediately to the right, or on the circulating roadway	Criterion 2 sight distance (m)	
	Local residential street roundabout critical acceptance gap 4 sec	Arterial road roundabout critical acceptance gap 5 sec
20	22	28
30	33	42
40	44	56
50	55	70
60	67	84

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2 FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

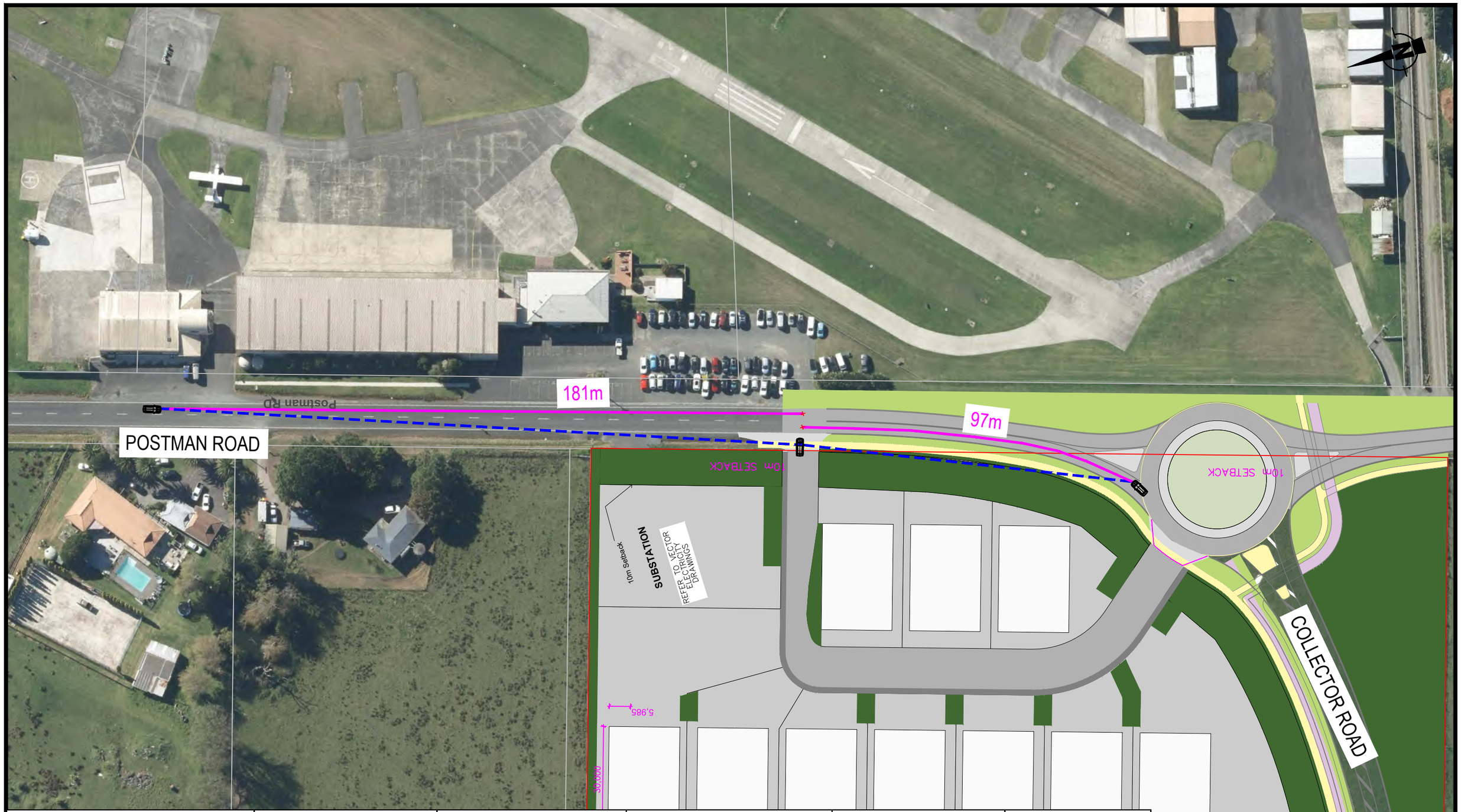
SHEET TITLE: LIGHT INDUSTRIAN LOTS SIGHT DISTANCE

DRAWING NUMBER: INVO002-005

SHEET: 03 of 04

REV: A

flow TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com



Approach	Design Speed (km/hr)	Reaction Time (s)	Observation Time (s)	Calculated SISD (m)	Compliant
V1	80	2	3	181	YES
V2	50	2	3	97	YES
Coefficient of deceleration (d)	*0.362*	*Longitudinal grade (a)*	*0*		

REV	AMENDMENT	DATE OF ISSUE
A	First Issue	09/02/2026

DESIGN: RG | DRAWN: RG
CHECKED: ET/NH | DATE: 09/02/2026
SCALE: 0 16m
1:400 @ A3

CLIENT: AW HOLDINGS LTD
PROJECT: AUCKLAND SURF PARK - STAGE 2
FAST TRACK APPLICATION
LOCATION: 1350 DAIRY FLAT HIGHWAY

FOR RESOURCE CONSENT

SHEET TITLE: LIGHT INDUSTRIAN LOTS
SAFE INTERSECTION SIGHT DISTANCE (SISD)

DRAWING NUMBER: INVO002-005

SHEET: 04 of 04
REV: A

flow
TRANSPORTATION SPECIALISTS
Level 1, 11 Blake Street, Ponsonby, Auckland | PO Box 47497 Ponsonby
p 09 970 3820 | f 09 970 3890 | www.flownz.com