

6 October 2022

AW Holdings 2021 Limited
C/O James Kirkham
RCP
Level 2/25 Hargreaves Street
Freemans Bay
Auckland 1011

Dear James

SURF PARK DEVELOPMENT IN DAIRY FLAT, AUCKLAND – TRANSPORT MEMO

Flow Transportation Specialists (Flow) has been commissioned by AW Holdings 2021 Limited (the Applicant) to assess transport matters relating to the proposed surf park and ancillary land uses in Dairy Flat, Auckland. The proposal includes a surf recreational park, visitor accommodation, industrial land uses that support technology activities, a supporting solar farm and a vested road (the Proposal).

We have prepared this letter to support the application to the Minister for the Environment for fast-track consenting under the COVID-19 Recovery (Fast-track Consenting) Act 2020.

In summary, we consider that the Proposal

- ◆ Is aligned with Future Urban Land Supply Strategy and will integrate well with the Silverdale West Dairy Flat Industrial Area Structure Plan
- ◆ Is aligned with the Silverdale West Dairy Flat Industrial Area Structure Plan, with regard to transport connectivity (east-west road) and does not preclude the long term transport corridor running north-south about the site
- ◆ Can provide safe access onto the existing transport network and provide for safe access to the strategic transport network
- ◆ Can provide a shuttle service that connects to the Hibiscus Coast bus station, providing sustainable transport modes for both staff and visitors to the park
- ◆ Will generate between 150 to 300 vehicle trips per hour, of which will likely occur outside of peak commuter periods.

We are of the view that the existing transport network, with a proposed intersection on Dairy Flat Highway into the Site, will provide safe access and connectivity to the surrounding network. The proposed intersection can be accommodated within the existing road reserve with some land needed from the applicant's site. No third party land is required. We do not consider there to be any transport

matters that cannot be overcome to support the safe operation of the Proposal from a transport perspective.

1 THE SITE LOCATION

The site will be the amalgamated addresses of 1350 Dairy Flat Highway and adjacent lots (the Site), comprising of 42 hectares. The Site is accessed by Dairy Flat Highway to the west and Postman Road to the east. North Shore Airport is directly across Postman Road from the Site. Figure 1 shows the location of the Site in context with surrounding land uses. It is currently zoned as Future Urban Zone in the Auckland Unitary Plan (AUP).

Figure 1: Site location bounded in red



The Site is some 4 km south of Silverdale interchange with SH1 (via Dairy Flat Highway), and the Hibiscus Coast Station.

Both Dairy Flat Highway and Postman Road have a posted speed limit of 80 km/h, with a road reserve width of 20 m. Both roads have one lane in each direction and shoulders and swales on both sides. There is a bus route that travels along Dairy Flat Highway which travels between Albany Station and Hibiscus Coast Station in Silverdale providing 10 services per day on weekdays, and there is a bus stop pair within 500 m of the Site on Dairy Flat Highway. There are no footpaths or cycling facilities nearby.

2 THE FUTURE CONTEXT OF THE WIDER AREA

The wider Dairy Flat area is set to undergo development in the near future and some safety improvements were implemented by Auckland Transport recently on Dairy Flat Highway and its intersections on nearby roads.

We have reviewed two planning documents relevant to the area and considered how the Site and the Proposal will integrate into what's planned in these documents, namely the

- ◆ Future Urban Land Supply Strategy (FULSS)¹, and
- ◆ Silverdale West Dairy Flat Industrial Area Structure Plan, dated April 2020 (Structure Plan)².

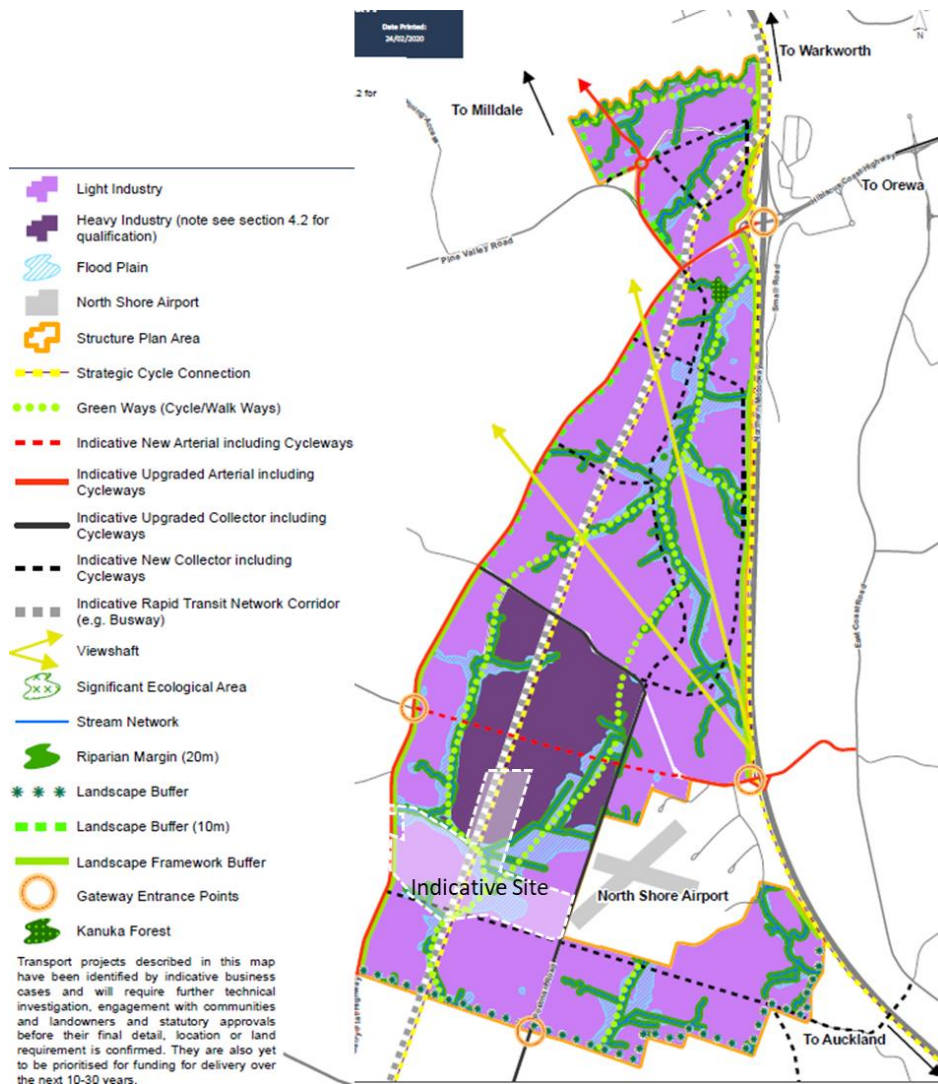
The FULSS document by Auckland Council sets out a 30-year strategy of the how and when urban land in Auckland will be developed. This area of Dairy Flat is identified as 'Development Ready' in Decade 1 of 2018-2022.

In the Structure Plan, this area is anticipated to be business land to provide local employment. The Structure Plan indicates the land to be zoned light and heavy industry (Figure 2).

¹ <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/housing-plans/Pages/future-urban-land-supply-strategy.aspx>

² <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/place-based-plans/Silverdale%20West%20Dairy%20Flat%20Industrial%20Area%20Structu/silverdale-west-dairy-flat-industrial-area-structure-plan-april-2020.pdf>

Figure 2: Silverdale West Dairy Flat Industrial Area Structure Plan (April 2020). Site indicated in white



There are a number of indicative transport network elements indicated in the Structure Plan within or about the Site, such as

- ◆ a Strategic Cycle connection
- ◆ an indicative Rapid Transit Network (RTN) corridor
- ◆ Green Ways (off road shared paths), roughly in the areas of flood plains
- ◆ Along the southern boundary of the Site, a new collector road is indicated connecting Dairy Flat Highway to the west and SH1.

As noted in the Structure Plan, the transport items are indicative only and have no funding committed. They are also subject to a detailed business case being approved.

With regard to construction timing, we anticipate this will align with the timeframes of adjacent land being developed. As such, any short-term development, including the Proposal, will need to rely on the current roading network. It is also important that key strategic elements present in the Structure Plan are not precluded in the future, should business cases support the elements presented. At this stage,

we expect that the traffic impacts of the Proposal would be able to be accommodated in the surrounding transport network and we have provided a conceptual design of modification of Dairy Flat Highway to include a right turn bay into the proposed road within Site, which will be contained within the existing road reserve and the Site (plan enclosed).

3 THE PROPOSED DEVELOPMENT

The land uses of the Proposal mainly compromise of a surf park, visitor accommodation and industrial activities (technology based data centre and solar farm). The indicative areas at this stage are outlined in Table 1:

Table 1: Proposed activity and areas

Proposed Activity	Indicative areas/units
Surf park	35,850 m ² (including lagoon) and 4,146 m ² gross floor area (GFA) of buildings
Visitor accommodation	60 units
Farm to Table (agricultural commercial, with markets and commercial activity)	71,200 m ² (land area) and 975 m ² GFA of buildings
Data centre	40,000 m ² (land area)
Solar farm	76,450 m ² (land area)
Car parking spaces	Approx 390

Two vehicle accesses are proposed from Dairy Flat Highway:

- ◆ A road access along the southern boundary of the Site (discussed further below) which will require a right turn bay on Dairy Flat Highway. A concept plan showing this proposed intersection design is shown in Figure 4, the PDF plan including visibility assessment is enclosed
- ◆ A vehicle crossing towards the north of the Site which will lead into 2 car parking areas for the short-stay accommodation and servicing of the surf park, such as staff and deliveries.

A concept of the Proposal is shown in Figure 3, setting out the location of activities and transport elements.

Figure 3: Proposal Concept

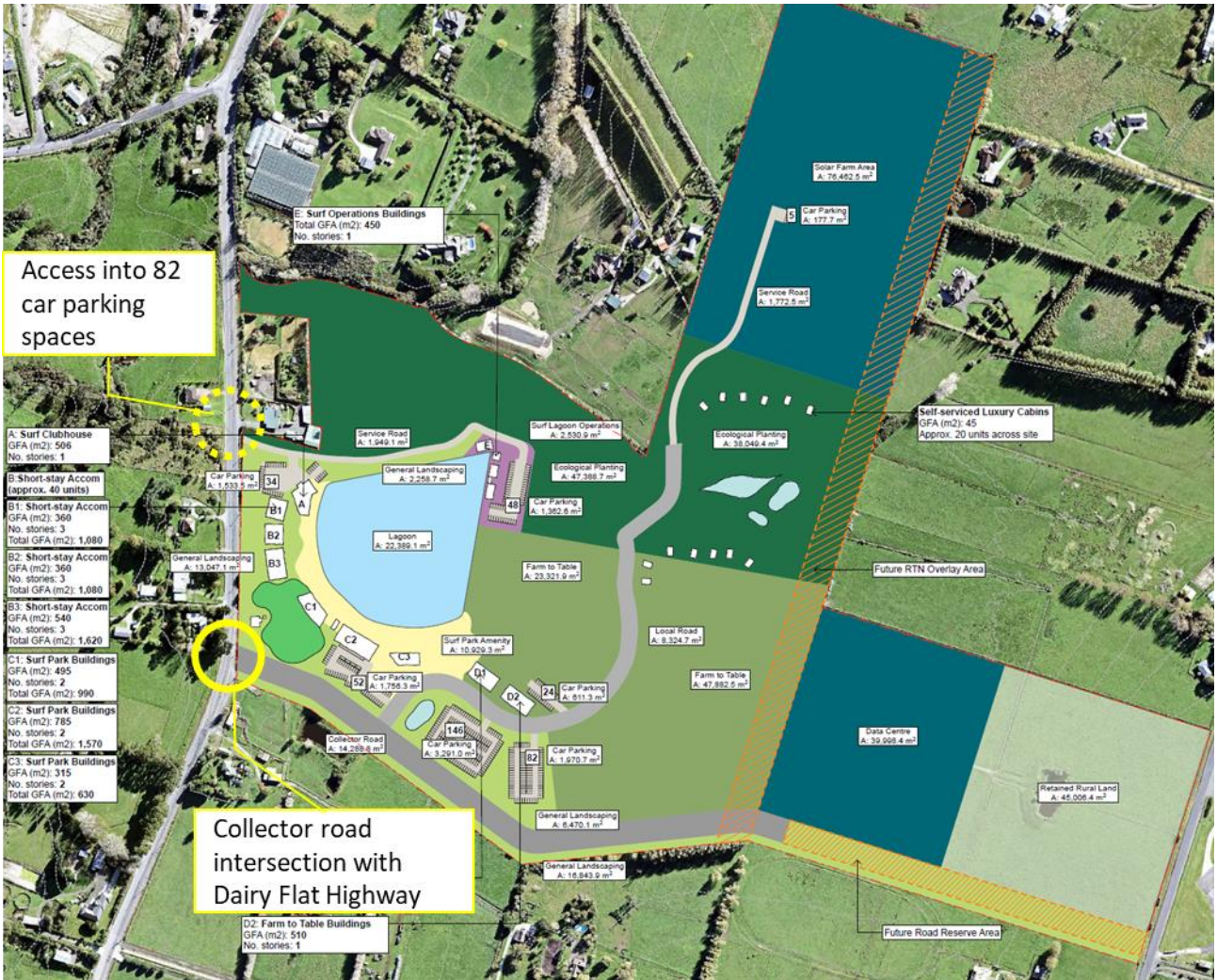
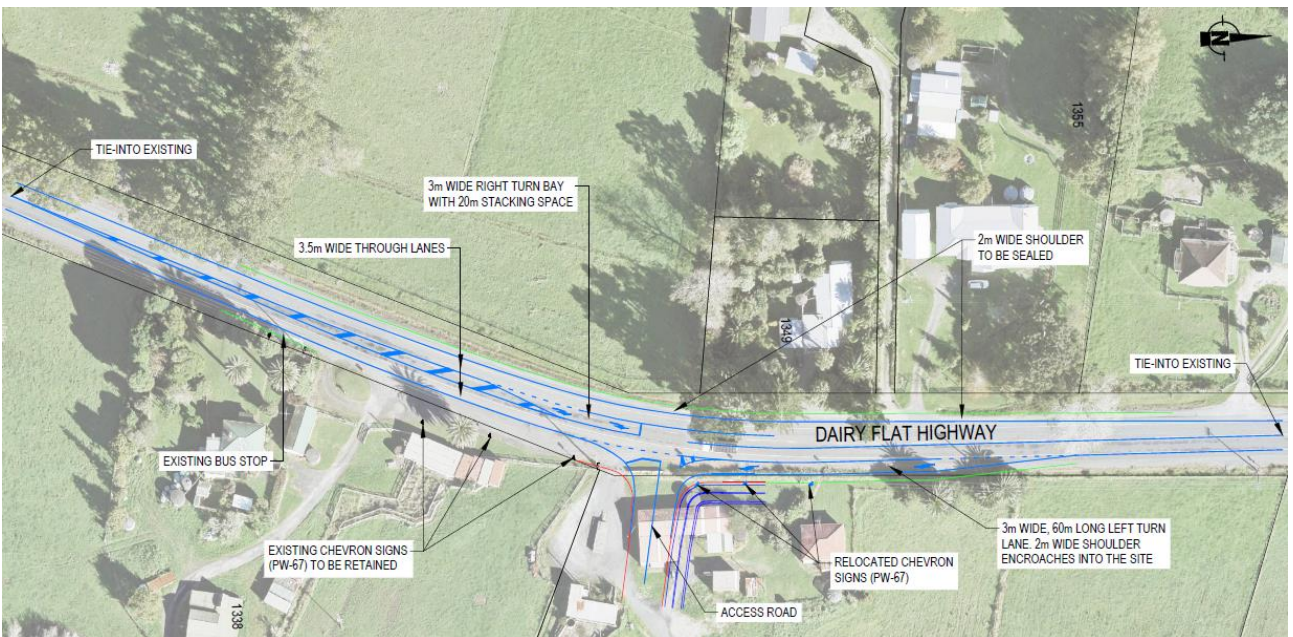


Figure 4: Proposed intersection on Dairy Flat Highway



3.1 How the Proposal fits into the Structure Plan

A new road is proposed running along the southern boundary of the Site along the alignment of the indicative collector road in the Structure Plan in Figure 2, and this is contained within the Site's boundary. At present this is proposed to intersect with Dairy Flat Highway with modification to accommodate a right-turn bay, as shown in Figure 4 (concept plan is enclosed; the intersection to be assessed in subsequent transport assessments with supporting traffic modelling) and terminates within the Site. There is provision to continue this road east to intersect with Postman Road in the future and to intersect with the indicative RTN corridor.

The RTN corridor identified in the Structure Plan has been considered and this is shown slightly realigned to the east of the Site rather than passing through the centre of the Site. We note that the RTN has not been funded or confirmed yet by Auckland Transport, but the Proposal has demonstrated how this could be accommodated within the Site should it go ahead in the future.

Intersecting this road within the Site, a formal access is proposed which will provide access to car parking areas and the rest of the Site. There is opportunity to continue this access road further north and south of the Site's boundaries.

Overall, the proposed Site layout has considered what the Structure Plan has indicated thus far and has not precluded further development in the wider area by others.

4 TRIP GENERATION

A high-level trip generation assessment has been carried out for the proposed activities using standard vehicle trip rates taken from:

- ◆ Roads and Traffic Authority '*Guide to Traffic Generating Developments*' (Version 2.2 October 2022) (RTA guide)
- ◆ New Zealand Trips and Parking Database Bureau Inc (June 2013 database) (NZTPDB)
- ◆ NZ Transport Agency Research Report 453 '*Trips and parking related to land use*' (November 2011) (NZTA RR453).

The proposed activities, trip generating areas and associated peak hour trip rates are summarised in Table 2. We have assumed the following in calculating peak hour vehicle trips:

- ◆ The trips generated by the proposed surf park is based on GFA of the surf park buildings and not the lagoon pool itself. We have consider trip rates available for other aquatic centres, which generally have a GFA of some 4,000m² to 5,000m²
- ◆ We understand that the farm to table activities are to support catering for the restaurant, visitor accommodation and surf park, and as such will generally have a low trip rate. We have therefore based the trip rates for this activity on restaurant activities, with visitor accommodation being a separate activity class being assessed

- ◆ The data centre is likely to be more akin to a warehouse; covering a large area with a small number of employees. While the site is some 40,000m², our assessment has assumed the centre will have some 50 staff, with 80% of staff assumed to arrive during the peak hour
- ◆ The nature of a solar farm is unlikely to generate vehicle trips in the peak hour, with peak trips associated with this activity only generated during the construction of the farm. Regular trips would only be by a small number of employees (about 10 full-time equivalent (FTE) staff, as informed by the Applicant), such as for maintenance and operation, and is assumed to be negligible in the peak hour.

Table 2: Traffic generation calculations

Proposed Activity	Areas	Peak hour trip rates	Peak hour vehicle trips	Source
Surf Park	4,146 m ² GFA (Buildings A, C1, C2, C3)	1.0 to 4.38 trips per 100 m ² of GFA	40 to 180	NZTPD for aquatic centre
Visitor accommodation	60 units	0.4 per unit	25	RTA guide for motels and NZTPD for Hotel/Lodge
Farm to Table / Restaurant	975 m ² GFA of buildings	4.0 to 5.0 trips per 100 m ² GFA	40 to 50	NZTA RR453 for garden centres
Data centre	40,000 m ² and some 50 staff	80% of staff assumed to arrive during peak hour	40	Assumption
Solar farm	76,450 m ²	-	10	10 FTE staff relates to maintenance and operation
TOTAL			150 to 300 vehicles per hour	

As can be seen in the table above, the Site is expected to generate some 150 to 300 vph. It is important to note that the recreational areas; surf park, accommodation and Farm to Table restaurant would have their peak traffic generated during the off-peak and weekend, mainly by customers. Furthermore, the calculations above have only considered primary trips, but it is likely that there will be linked trips for example, the accommodation, surf park and Farm to Table restaurant could be linked to one single trip.

As part of subsequent transport assessments, the effects of the trips generated by the Proposal on the surrounding roads and mitigation of adverse effects will be assessed with traffic modelling at key intersections. At this time however, we consider that the trips generated by the activity can be accommodated by the existing transport network, with some minor upgrades about the development Site to allow for safe access and connectivity. We do not consider there to be any transport matters that can be overcome to support the safe operation of the Proposal.

5 TRANSPORT BENEFITS AND EFFECTS

The Proposal will generate traffic in what is currently a largely undeveloped area. Because of the land uses nearby, the current public transport provision and state highway connections, we anticipate that there will be a high percentage of trips by private car until neighbouring land uses are developed and public transport frequencies increased.

There is an existing bus service on Dairy Flat Highway, with a southbound bus stop at the Site frontage and a northbound pair about 500 m north. The bus services are not frequent, currently only 10 services per day and only on weekdays.

In light of the infrequent bus service, the Applicant proposes to mitigate traffic effects by having a private shuttle operation between Hibiscus Coast bus station in Silverdale (about 5 km north from the Site) that can be used by staff and visitors to the Site. The proposed shuttle will add to the existing public transport provision and will be key to reducing reliance on private cars until improvements to the public transport services and connecting pedestrian facilities (eg. Footpaths, crossings) are carried out. The shuttle services can also be used as a 'trial' for reviewing how the public transport services can be improved.

The proposed shuttle also has the benefit of reducing carbon emissions, adding to the direct environmental benefits of the Proposal (ie. Solar farm and Farm to Table) as a whole.

6 CONCLUSIONS

To conclude, we consider that the Proposal

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Yours sincerely

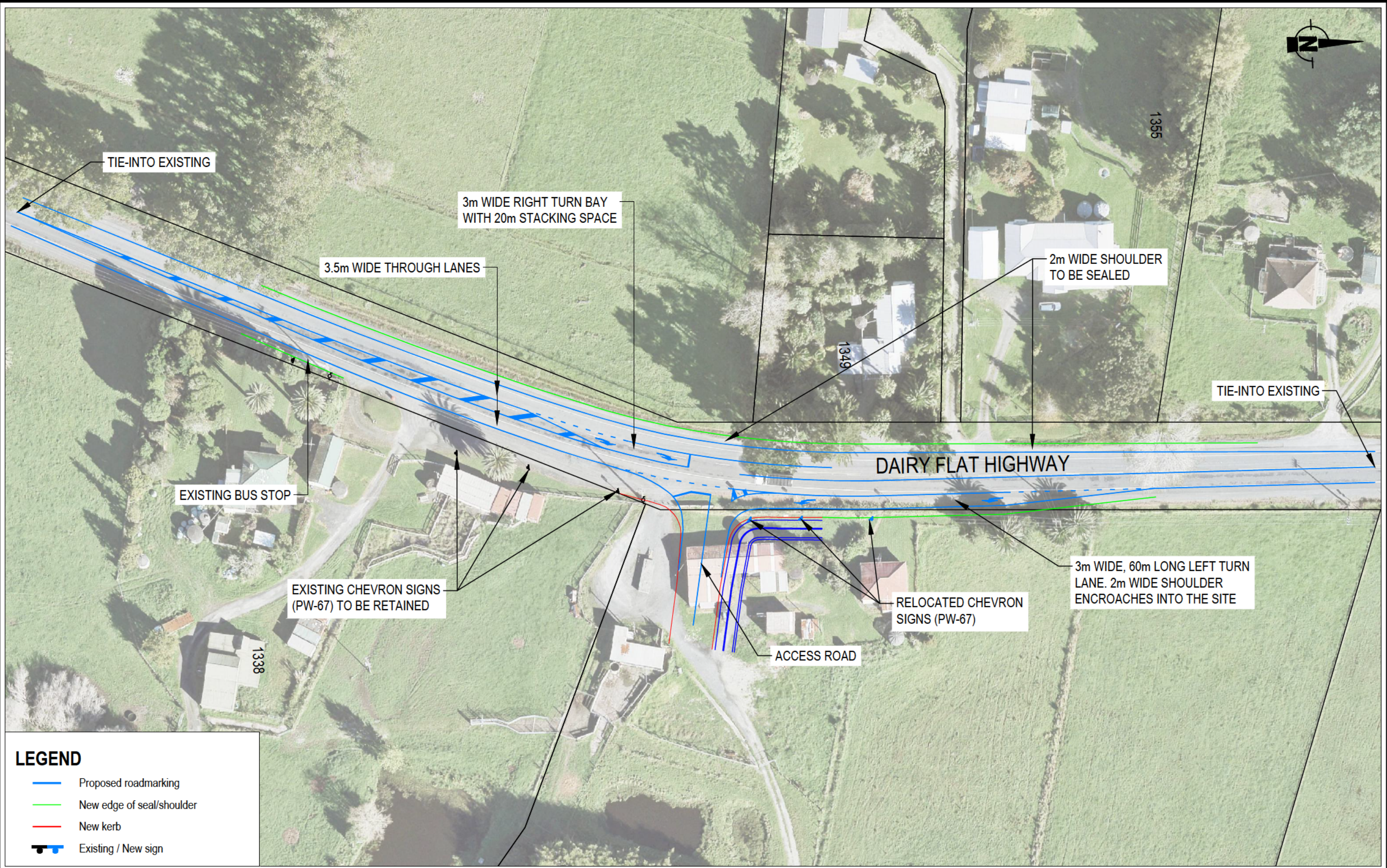


Elisa Hardijanto
SENIOR TRANSPORTATION ENGINEER



Terry Church
SENIOR ASSOCIATE

Reference: P:\RCXX\008 Dairy Flat Surf Park Development\4.0 Reporting\L1C221005 Transport Memo for fast track consent.docx - Elisa Hardijanto
Enclosed: Dairy Flat Highway General Layout Plan and Visibility Assessment (Sheet 1 and 2)



- LEGEND**
- Proposed roadmarking
 - New edge of seal/shoulder
 - New kerb
 - Existing / New sign

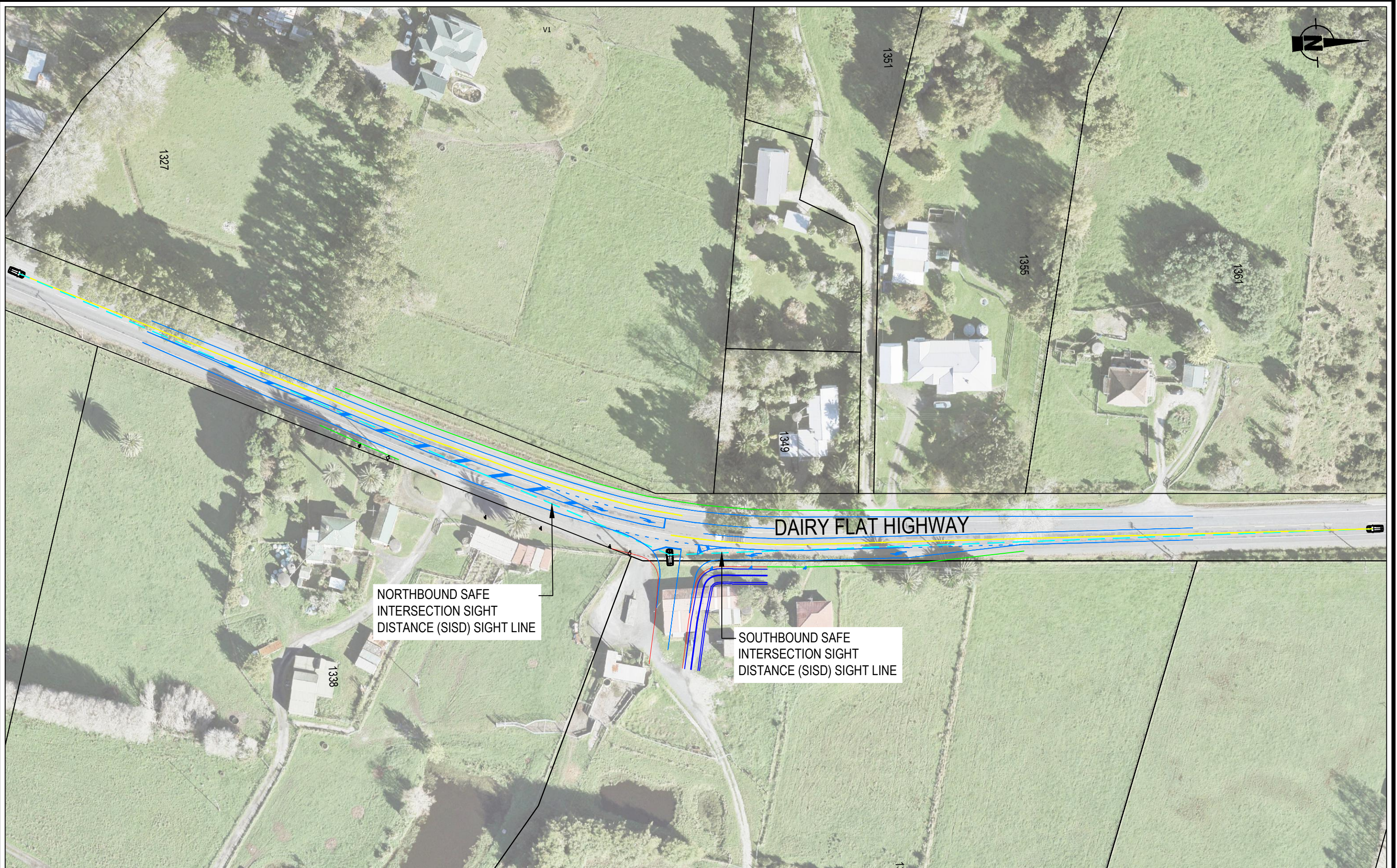


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revision: A	checked: EH

rev	status	issued
A	First Issue	09/09/2022

Surf Park Development, Dairy Flat Highway General Layout Plan

flow
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