

Memo

To: Paulyn Chew – AV Jennings
From: Dean Brodie
CC:
Date: 22 December 2020
Re: 2154 Illawarra Hwy Tulimbar – Preliminary Modelling Assessment of Planning Proposal

Paulyn

As requested please find below the findings of the preliminary modelling assessment of the planning proposal and the associated potential impacts on the intersection of Illawarra Highway intersections.

Context

The proposed development would be located within / adjacent to Calderwood Project and include local road access to the northern portion (approximately 125 lots) and Illawarra Highway access to the southern portion (approximately 267 lots). The arrangements as shown in the planning proposal document are shown below:



Future Traffic Analysis

The potential traffic impacts and infrastructure needs for the redevelopment of the Calderwood Project have been assessed to date by Cardno. The findings of these assessments as underpinned the infrastructure delivery strategy for the area include a new four way roundabout at the intersection of Illawarra Highway / Escarpment Drive / Tongarra Road / Yellow Road which would be impacted upon to a degree by the redevelopment of the subject site.

Of note, the subject site was not included in the assessment boundaries of the Cardno Calderwood Project traffic impact assessment reports to date.

The Cardno reports included forecast (2031) traffic flows and intersection analysis for the new roundabout at Illawarra Highway / Escarpment Drive assuming *full development* of the Calderwood Precinct and background traffic increases. The 2031 intersection operating conditions for the AM and PM peak periods are shown below.

Figure 1 - 2031 Full Calderwood Project Development Intersection Operating Conditions AM Peak

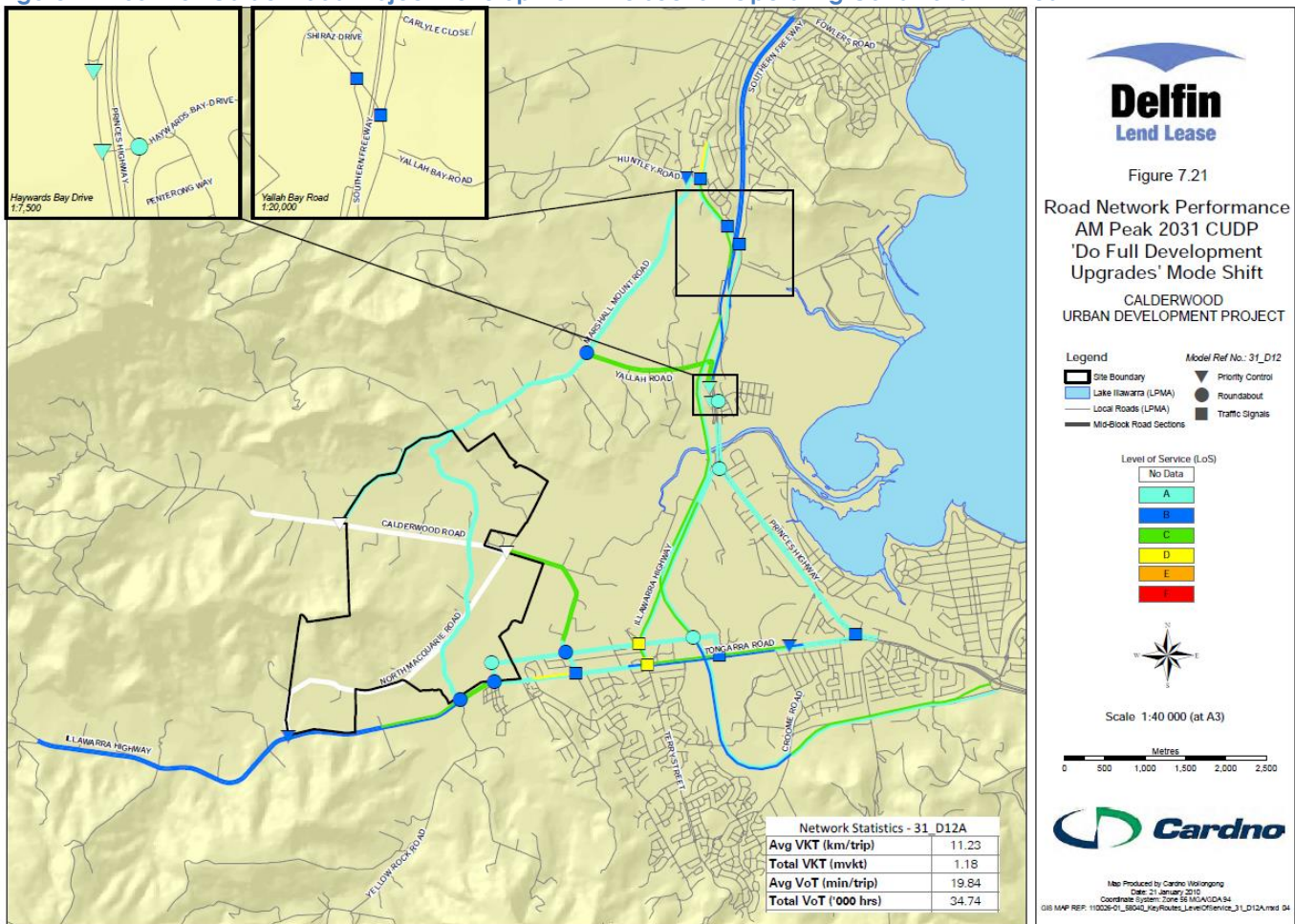
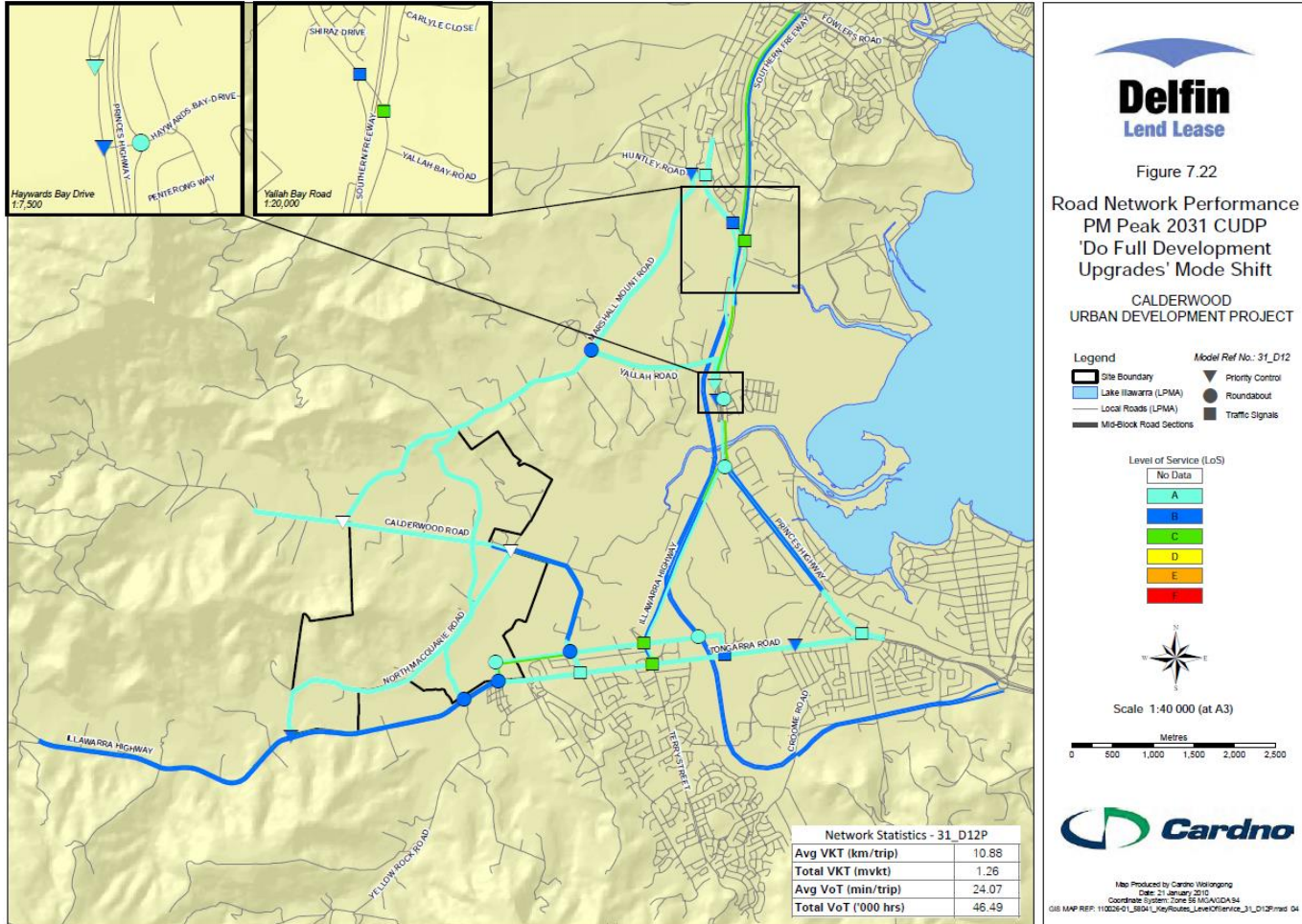


Figure 2 - 2031 Full Calderwood Project Development Intersection Operating Conditions PM Peak



From Figure 1 and 2 above it is noted the roundabout at Illawarra Highway / Escarpment Drive would operate satisfactory at Level of Service B (blue) in the future. This indicates the intersection has spare capacity to accommodate the potential traffic impacts of the AV Jennings Planning Proposal.

Modelling Assessment

As you would be aware intersection counts were undertaken in December 2020 to gauge existing traffic flows and compare to historical counts in the ultimate traffic report. Modelling of the existing traffic flows at the roundabout found that the existing Illawarra Highway / Escarpment Drive intersection currently operates at **Level of Service A** in the AM peak and **Level of Service A** in the PM peak.

The proposed development is expected to generate 0.99 trips per lot in the AM peak and 0.95 trips per lot in the PM peak. Thus, the northern portion would generate 124 / 119 trips in the AM / PM peak respectively and the southern portion would generate 265 / 254 trips in the AM / PM peak respectively.

As a conservative estimate the above traffic generation by portion was assumed to *all* travel through the roundabout at Illawarra Highway / Escarpment Drive and travel the east in the morning and back from the east in the afternoon.

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The resulting future intersection operating conditions of the existing roundabout was found to continue to operate at **Level of Service A** in the AM peak and **Level of Service A** in the PM peak.

The proposed roundabout connection to the southern portion of the planning proposal, which would not include any traffic generated by the Calderwood Precinct to any great degree and on the basis it was of a similar scale to the existing roundabout at Escarpment Drive / Yellowrock Road, is expected to operate at a similar satisfactory level of service in both peak periods in the future following full development of the southern portion.

I trust the above assists and I look forward to discussing further in the future.

Yours sincerely

A handwritten signature in black ink, appearing to read "D. Brodie", with a horizontal line drawn underneath it.

DEAN BRODIE

Managing Director