

Technical Design Note

Project: Huntlee
Subject: Response to TfNSW Sidra review
Date: 14 June 2022
Attention: Glenn Swan

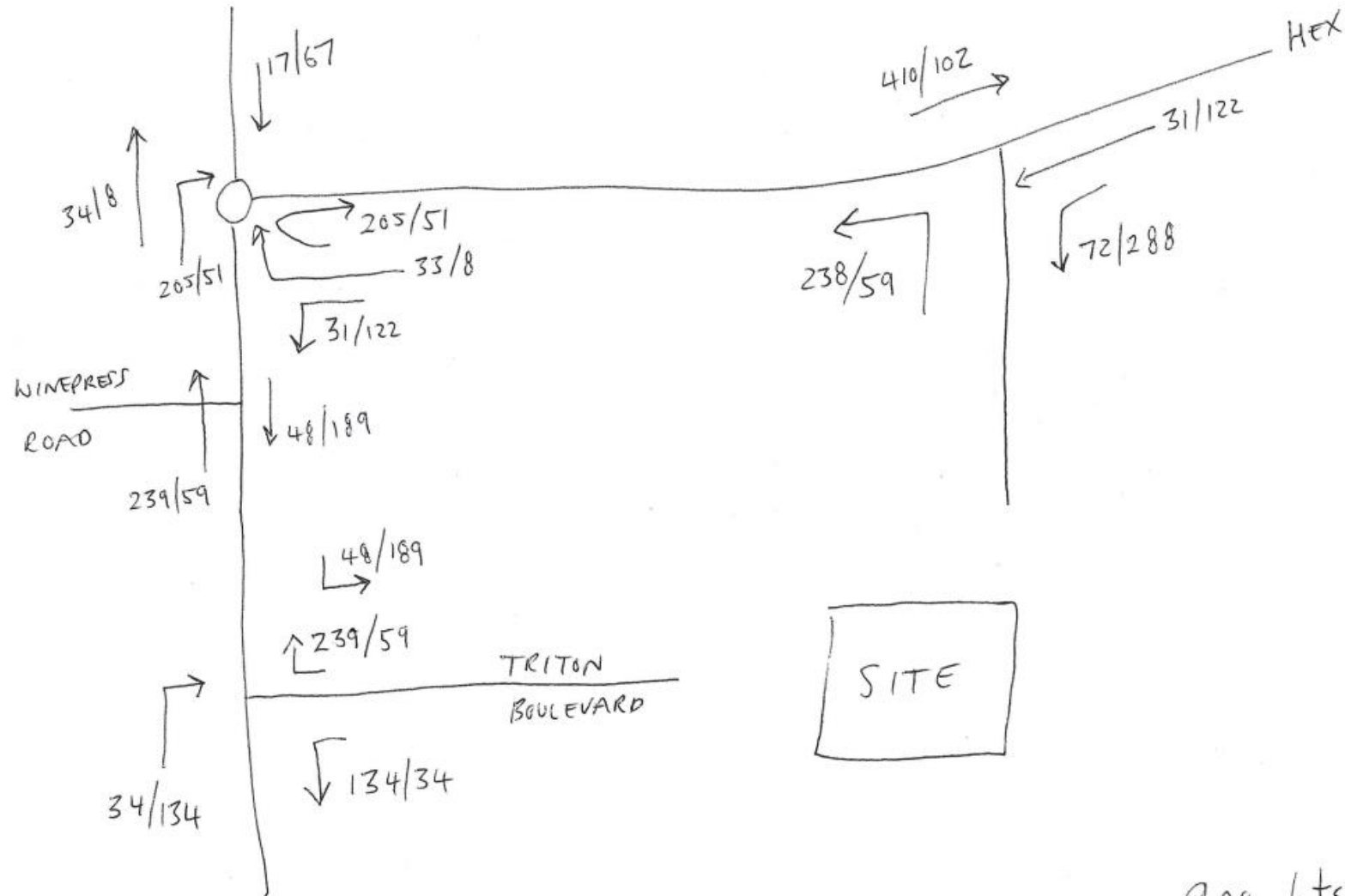
We request that the proponent provide a breakdown of the LV/HV volumes within the report. Given that the proponent undertook the count in 2020, this should be made available. The counted values for heavy vehicles should be used if available, instead of %.	The model has been updated with the light and heavy vehicle numbers.
We request that the proponent confirm trip distribution assumptions that have been used. Has the trip distributions been adopted from the original Stage 1 Hyder Traffic Report which was completed in 2012?	<p>The trip distribution was as per the original Stage 1 prepared by Hyder in 2021 and shown below.</p> <ul style="list-style-type: none"> • 67% trips via Branxton (Hunter Expressway) Interchange. Of that: • 38% trips travel to east via Hunter Expressway; • 18% trips travel via New England Highway to Maitland; • 11% trips travel to west via Hunter Expressway to Singleton and the Upper Hunter; • 22% trips travel to south via Wine Country Drive to Cessnock; and • 11% trips travel to north via Wine Country Drive to Branxton.
We request the proponent to provide calculation of the future flows (both for the additional 900 lots and additional 1350 lots scenarios) - trip generation calculations and the trip distribution assumptions out of/into the 4 intersections modelled. The values shown in the last image 'Predicted Generated Flows (1350 lots) AM/PM' in the technical design note does not match up with what has been inputted into SIDRA.	Updated calculation flows provided below.
We request that the proponent provide justification of the changes to the default growth rate (specifically the growth rates adopted) - is this for sensitivity testing?	2% background growth applied in updated Sidra model. This is considered realistic in this location with the majority of the development in this location being



	<p>the development site, Huntlee.</p> <p>4% was originally applied but given the lack of development south of the site on WCD the value of 2% is considered appropriate.</p>
TWSC Calibration should be turned off as this will reduce the actual critical gap and follow-up headway values used by SIDRA.	TWSC Calibration turned off for all intersections.
Change maximum number of iterations to 60 before processing each network.	Adjusted to 60.
Volumes should be checked as the differences in midblock flows are quite large (>100) within the network - this also appears in the diagnostic messages for these networks	Reviewed and corrected.
Left turn on the east approach enters the short lane on the south approach. It is recommended to first utilise the full lanes before allowing vehicles to turn into a short lane.	Adjusted.
We request the proponent to justify why the Wine Country Drive / Triton Boulevard intersection was not modelled with the base and base+900 network.	<p>This intersection is considered to have little interaction with the intersections to the north and does not create any platooning etc. At this time the intersection is not signal controlled and hence very minor impacts on the through traffic movements.</p> <p>This intersection is to be upgraded to signal control in 2022 and hence allowed for in the base+900 lots and 2023 model plus 1350 lots as at this time the signals will be operational.</p>
We request the proponent to justify why a U-turn movement has been specified for the east approach lane for the 2023 + 900 & 2023 + 1350 scenarios but not for the base scenarios.	<p>Currently there are no side roads or driveways between the HEX and the roundabout on Wine Country Drive. There is therefore no demand for U-turns currently. No U-turns observed during the surveys.</p> <p>With the introduction of the left in and left out U-turns are required.</p>
We request the proponent to confirm whether the lane geometry of the intersection(s) are subject to change at a later stage (between 1500 lots and 1950 lots), and hence why it differs to the layout geometry of the 2023 base and 2023 plus 900 scenarios	<p>Other road works required at this stage will mean that the HEX link connection to the roundabout will alter as part of the provision of the Left in / Left out connection to the HEX. This is consistent with the original report prepared by Hyder is 2012.</p> <p>With the left in / left out scenario, the HEX link is upgraded to provide 2 lanes of travel westbound.</p>

Traffic calculations and assumptions:

- 0.85 trips per lot as per original model
- 80% outbound AM and 20% inbound AM
- 20% outbound PM and 80% inbound PM
- 11% of trips to / from Cessnock to south shall use Triton Boulevard interchange
- The 11% of trips to Branxton will be split 5.5% via the left turn out onto HEX then right at the WCD roundabout. 5.5% will turn right out of Triton Boulevard then straight through WCD roundabout
- Of the 67% of trips FROM the Hunter Expressway, 47% shall turn left into the site via the new connection and 20% shall continue through to the roundabout, turn left then left again into Triton Boulevard.
- Of the 67% of trips TO the Hunter Expressway, 33.5% shall turn left onto the HEX then complete a U-turn at the roundabout to head back along the HEX link to the Hunter Expressway. 33.5% shall turn right out of Triton Boulevard, then right at the WCD roundabout to then travel along the HEX to the Hunter Expressway.



900 lots
AM/PM

