

WR number: Ref 180 - V 005 (previous WR 1245)
SIDRA Model Review
SIDRA files metadata

Provided by	Masa Kimuar
Email	masa.kimura@transport.nsw.gov.au
Date provided	17/06/2026
Sidra file	20260611 - Supporting Information - P6458.005M Newcastle Indoor Sports Facility TIA SIDRA Models_Survey Sensitivity.sip9 20250819 - SIDRA Models - P6458.004M Newcastle Indoor Sports Facility TIA.sip9
Scenarios	2024 Base Newcastle Indoor Sports Facility - WE Peak Fine Weather Adjustment Newcastle Indoor Sports Facility - WE Peak Project - WE Peak 2024 Project Project - WE Peak
Supporting documentation	20260519 - Supporting Document - Appendix I - SIDRA Technical Note - Hunter Indoor Sports Centre - RTS 2_EXH-90849960.pdf 20260611 - Supporting Information - P6458.005T Newcastle Indoor Sports Facility TIA Modelling Technical Note.pdf
Model reviewer	Angel Shrestha
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Review date	23/06/2026

Status	Description	Count
Closed	Review comment addressed - no further action required	7
Not reviewed	Not reviewed	0
Satisfactory	No issues or risks identified. Documented for posterity	0
Note	Reviewer note - no immediate action required	3
Info required	Additional information / clarification required to confirm key details	0
Minor	A small issue / risk identified that is unlikely to have any significant impact on the strategic outcomes. Modeller may choose whether or not to rectify for this project	1
Medium	An issue / risk identified that may influence the outcomes at a local level and rectification should be considered	5
Major	An issue / risk identified that is wide-reaching and propagating in nature, requiring immediate rectification	0
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Ref 180 - V 005 (previous WR 1245)									
SIDRA Model Review									
Review findings									
Status	SIDRA file (sip)	Scenario ID / Section	Intersection	Category	Review comment	Model developer response	Review Comment	Review Comment V005	
Minor	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All		Modelling Results	Please include the outputs for Turton Road / McDonald Jones Stadium Southern Access in the results table. Please ensure results are transferred correctly. Please report on the overall intersection performance for signalised intersections and the worst movement for priority intersections. The approach performance is not considered when determining the intersection's performance. Please document movement summary for 2024 Project Update PM Peak in the Attachment.	In the next revision of the report, we will ensure that the outputs for Turton Road/McDonald Jones Stadium Southern Access are included in the results table. Additionally, we'll ensure that all results are accurately transferred. We will also provide a report on the overall intersection performance for signalised intersections and the worst movement for priority intersections, focusing on the intersection's performance instead of the approach performance. The movement summary for the 2024 Project Update PM Peak will be documented in the attachment.	Please update the correct results in Table 3.5, Table 4.4 for Project Weekend and Table 4.5 Base Case vs Project case SIDRA Results Comparison. It is recommended to report on worst movement delay and queue for priority control intersection.	Please update output for Turton Road/Monash Road/ Newcastle Hockey Centre North Exit in table 3.4, table 3.6, table 4.2, table 4.4, table 4.5 to match the table note.	
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	Turton Road / Griffiths Road - TCS 201 Turton Road / Lambton Road / Bridges Road - TCS 350	Geometry	Please update lane configuration at north approach for TCS 201 to match site condition (as observed in google earth image) or document reasoning for the change. It was observed that length of lane was different during AM, PM and Weekend peak for TCS 350. Please update.	The northern approach at Turton Rd Lane 2 has been converted to a short 40-meter lane in all scenarios. The length of the left turn lane on Lambton Street should be modelled longer in the PM peak due to the "No Stopping" zone enforcement along this restricted parking area during the PM peak.			
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	2024 Base PM Peak 2024 Project PM Peak 2024 Project Update PM Peak	Turton Road / Griffiths Road - TCS 201 Turton Road / Lambton Road / Bridges Road - TCS 350	Volume Factors / Peak Flow Factor	It was observed that Peak Flow Factor was changed from default Sidra value of 95%. Please provide reasoning for the change and calculation for Peak Flow Factor.	The peak flow factor values have been reset to default 95%			
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All TCS Sites	Vehicle Movement Data - Signals	Arrival type > 4 should only be used when there is a very short distance between coordinated signalised intersections, however it was found to be used on approaches with significant distance from the next signalised intersection. Please document reasoning for adopting arrival type 5 and 6 in the model. Start loss changed from default value of 3 to 1 for Young Rd and Minor phase actuation set as % phase = 100 %. Please provide reasoning for the change	Offset times were extracted from the LX file, and the intersections were modelled at the network level, incorporating real-time offset time values from the LX. The Start Loss and Minor Phase Actuation values were revised to default values at the affected intersection.			
Medium	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All TCS Sites	Phasing and Timing	It was observed that Optimum Cycle time was used for Project Update PM peak scenario. Use of Optimum Cycle is not supported. Please provide reasoning for adopting and changing Red Arrow Drop off from SIDRA default value of 5 sec. Please provide reasoning for adopting Phase transition. Use 120. Please seek concurrence from TNSW NOPS team for signal phase and time / signal coordination and any changes to it in the model	A practical cycle time will be adopted instead of optimum. Red Arrow Drop was removed from the Young/Turton intersection signal coding. All phase transitions have been removed from the Sidra models. All signal phase and offset times were adopted directly from SCATS and LX data provided by TNSW .	Please update signal phase as per TCS plan. Allow for ped in Phase A for TCS 201 Allow for ped and filter right in Phase D for TCS 350 Please seek concurrence from TNSW NOPS for signal phase and time.	It was observed that partial update has been made in V005 but since V05 only contains sensitivity test, please also update V004. Please update signal phase as per TCS plan. Allow for ped in Phase A for TCS 201 Allow for ped and filter right in Phase D for TCS 350 Please seek concurrence from TNSW NOPS for signal phase and time.	
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All Intersection	Parameter Settings	Please provide reasoning and document change made to PCU equivalents Sidra Default value for Heavy Vehicles movement Class	We didn't find changes to the default PCU. All PCU values were reset to 1 for light vehicles, 2 for heavy vehicles and 1.65 for buses.			
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All TCS Sites	Intersection / Area Type Factor	The Area type factor has been changed from default value and it is not consistent across AM/ PM peak and scenarios. Please ensure consistent Area type factor for each approach and also document reasoning for changing it from the default value.	All area-type factors at all sites were checked, and inconsistencies between AM/PM have been addressed.			
Note	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All TCS Sites	Lane Geometry / Lane Data	It is noted that Buses Stopping data has been applied for kerb side lane.	Noted			
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All Scenario	All Intersection	Vehicle Movement Data	Please ensure cruise speed is correct in all peaks and across scenarios.	The difference between exit & approach cruise speeds in the morning and afternoon scenarios is due to the operating school zone at Young Street leg at Turton/Young intersection. No changes have been applied			
Closed	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All	All TCS Sites	Priorities	Please ensure priorities are consistent across scenarios.	All priority discrepancies were identified and modified for consistency			
Note	20241023 - Supporting Document - SIDRA - P6458.002M Newcastle Indoor Sports Facility TIA SIDRA Models.sip9	All	All		Given the proximity of intersections, it is recommended to model intersection as network model. It was also observed that there is an existing midblock signalised crossing, which has not been considered in the model.		Midblock signalised pedestrian crossing has not been considered in the model	Midblock signalised pedestrian crossing has not been considered in the model.	
Medium		All	All Intersection	Diagnostics / Capacity Adjustment / Arrival Flow Rates			From the Diagnostics report, it was observed that there are reductions in arrival flow rate at intersections in all scenarios. Please document the observation and provide reasoning for the diagnostics report or adjust the model reasonably to address the issue.	Please respond to previous comment on reduction in arrival flow at Intersection. It was observed that total arrival flow at intersection is lower than demand flow for base as well as in project scenarios. It is recommended to match demand and arrival flow to ensure all the input volume has passed through the intersection. This also helps bring down DOS to less than 1 for operating intersections. Intersections in Base case has DOS > 1 with Turton Road / Monash Road / Newcastle International Hockey Centre North Exit DOS >3 and delay >1800 second. DOS >1 is not ideal for operating intersections. There is a large difference (98 vehicles) between observed and modelled queue at Turton Road / Young Road Intersection during Weekend Peak.	

