

Traffic Engineer Referral Response

Application Number:	DA2025/0132
Proposed Development:	Demolition works and construction of a restaurant (McDonalds) including signage
Date:	19/06/2025
Responsible Officer	
Land to be developed (Address):	Lot 100 DP 1199949 , 37 Roseberry Street BALGOWLAH NSW 2093

Officer comments

Additional Comments relating to Amended Plans & Reports (18/06/2025)

The Traffic Team has reviewed the latest version of the traffic report and the Sidra Models prepared by CBRK, dated June 17, 2025. This updated information was prepared to address the concerns raised by Councils traffic team regarding the amended traffic report and SIDRA models from May 14, 2025, as well as issues discussed during the online meeting with the applicant on June 2, 2025.

There were a number of concerns raised in the initial Traffic Engineer Referral Response dated March 10, 2025. Many of these issues, along with topics discussed during a meeting with the applicant on April 10, 2025, were addressed in the amended traffic report dated May 14.

As requested, concept sketches were developed for a mini roundabout at the intersection of Hayes Street and Roseberry Street and a median along the Roseberry Street frontage of the site. A slight shifting of the centreline for the westbound traffic lanes on Kenneth Road on departure from Roseberry Street was also proposed to assist traffic approaching the intersection with Condamine Street. As a result of the proposed Roseberry Street median, access to the site will now be restricted to left-in and left-out turns onto Roseberry Street. The consultant has updated the traffic distribution to reflect these changes in access arrangements.

After reviewing the plans and swept path analysis for the roundabout at Hayes and Roseberry, Council has determined that the benefits achieved by the roundabout are outweighed by negative impacts on access to/from adjacent properties and adverse impacts on pedestrian safety and amenity. The applicant is no longer required to construct the roundabout.

The items not addressed in the amended traffic report dated May 14, 2025, were as follows:

- The traffic generation rates outlined in the TfNSW Guide to Transport Impact Assessment indicate that a McDonald's generates approximately 260 vehicle trips during peak weekend hours and 180 vehicle trips during the PM peak on weekdays.
- The phasing of the intersection at Condamine Street and Kenneth Road should be aligned with the current TCS plans.
- The modelled cycle and phase times for the existing conditions did not accurately represent the current operation of the Condamine Street and Kenneth Road intersection.
- The modelled queue lengths along Kenneth Road did not accurately reflect the observed existing conditions.

- Additional line marking and modifications were to be considered to facilitate concurrent right turns from the second and third westbound lanes on Kenneth Road. The above to operate concurrently with the eastbound right turn lane. This included accommodating semi-trailers turning right out of Kenneth Road westbound, which would necessitate redesignating the second westbound lane on Kenneth Road.

In the updated traffic report dated June 17, 2025, CBRK has included additional information addressing each of the issues raised.

- The applicant aimed to align the traffic signal timing at the intersection of Condamine Street and Kenneth Road with the TCS plans. Since the TCS plan includes several variable phases for this intersection, the applicant analysed observed data collected over a 30-minute period to identify the phases utilised by the TCS. The traffic report should include a cross-reference of the modelled phases/cycle times with the observed phases/cycle times, based on approximately 10 signal phase cycles.
- The consultant's observations indicate that the intersection of Condamine Street and Kenneth Road operates on a consistent cycle time of 120 seconds. The report notes that the phases at this intersection change according to demand within these fixed cycle times. Council believes that a variable or actuated signalised intersection can adjust its cycle time based on traffic demand. Unlike fixed-time signals that maintain a constant cycle length, actuated signals use sensors to detect the presence and volume of vehicles and pedestrians, dynamically adjusting the timing of the signal phases to optimise traffic flow. This flexibility allows the cycle time to change according to the real-time needs of the intersection. Therefore, Council asserts that it is inappropriate to model the intersection using fixed cycle times (user-given cycle times).
- The model has been calibrated to ensure that the simulated queue lengths closely match the observed queue lengths recorded by the applicant during peak periods on weekday afternoons and Saturday middays. The 95th percentile queue lengths for key traffic movements during both weekday afternoon and Saturday midday peak hours are similar, as shown in Tables 1 and 2 of the report. However, the area surrounding the proposed development faces existing significant traffic congestion issues, particularly during peak times such as the morning and evening peak periods, the weekday school pick-up period around 3 PM, and on weekends particularly around midday. There is concern that despite the additional observations undertaken by the applicant, the base case modelling still does not accurately reflect Council's observations of site conditions with Council having queues extending east to Quirk Road and south to Hayes Street. This is not reflected in the modelling.
- The traffic study was conducted on a Friday afternoon and Saturday midday. To gain a more comprehensive understanding of the traffic impact, additional studies should be conducted over multiple days and at other peak times. As the Kenneth Road/Condamine Street intersection is very close to capacity and oversaturated on the westbound approach at peak times, small changes in demands can significantly impact upon queue lengths and congestion.
- The updated models have incorporated the TfNSW traffic generation rates, which indicate 180 two-way vehicles on Friday afternoons and 260 two-way vehicles on Saturdays around midday. Additionally, it has been assumed that 50% of these trips are pass-by trips, and the traffic diagrams have been revised accordingly.
- An updated traffic assessment has been conducted, incorporating the above matters into the model for both existing and existing plus development scenarios.
- The modelling has been completed for the intersections at Condamine Street / Kenneth Road, Kenneth Road/ Roseberry Street, Roseberry Street/ Hayes Street and Access to the site. The intersections are closely spaced; therefore, a network-wide process (SIDRA Network Model) was assessed by the consultant. This determines the backward spread of congestion as

queues on downstream lanes block upstream lanes (queue spillback), and applies a capacity constraint to oversaturated upstream lanes, thus limiting the flows entering downstream lanes.

- The modeling for the "existing + development" scenario shows that even after the upgrades and changes to the intersection, queues on Kenneth Road can extend back past the Kenneth Road/Roseberry Street roundabout. Despite Council's reservations that this modelling cannot be relied upon as the base model does accurately reflect sight conditions it never-the-less suggests that the queues are not clearing with each traffic signal cycle, which impedes vehicles from proceeding through or turning out of the roundabout.
- While the movement summary shows a LOS D for the signalised intersection of Condamine Street / Kenneth Road and LOS B for the roundabout, the 95th percentile back of the queue extends to the upstream site lane. The capacity reduction has also been determined at the proposed access to the development based on the queue blockage probability derived from the percentile back of the queue values of a site located further downstream.
- Further refinement of the models for the site is necessary to ensure satisfactory performance. There are still strong concerns that the additional traffic generated by the development will result in unacceptable increases to queuing and delays and Council's belief remains that additional mitigation measures are required to achieve acceptable traffic conditions to manage increased traffic resulting from the development. Although the applicant's proposal for shifting of the centreline on Kenneth Road, provides some benefit, it does little to assist traffic efficiency exiting Kenneth Road. What Council was actually seeking was works to allow the centre lane of three westbound traffic lanes to be utilised for right turns. This turn is currently not permitted from the centre lane due to conflict with right turns out of Kenneth Road eastbound. The applicant's traffic engineer argues that such a change results in no improvement to overall intersection efficiency although it would reduce delays and queuing on Kenneth Road. Council believes this option should be further pursued with TfNSW. The applicant should also review other options focussed on designing storage lanes, turn lanes etc on Kenneth Road and or Roseberry St, to provide adequate space for vehicles to queue without obstructing through traffic and to improve efficiency of ingress/egress to the site. This may require road widening. Additionally, converting the Roseberry Street/Kenneth Road intersection into a signalised intersection and adjusting traffic signal timings to create a "green wave" and more effective platooning of traffic onto Condamine Street during the green light phase should also be more closely examined if other options are found to be infeasible. This option has not to date been adequately reviewed by the applicant.

Conclusion

The traffic report and the SIDRA Models in their current form remain unacceptable for the reasons outlined above and have not addressed Council's concerns relating to the traffic impacts of the development and have not proposed adequate mitigation measures to address the adverse traffic implications of the additional generated traffic.

The proposal is therefore unsupported.

Comments dated 10/03/2025

Proposal description: Demolition works and construction of a restaurant (McDonald's) including signage

The traffic team has reviewed the following documents:

- Traffic Impact Assessment (TIA), Reference 12473/1, prepared by Colston Budd Rogers & Kafes Pty Ltd dated December 2024,
- The Statement of Environmental Effects, Ref No. 610.032207.00001, Revision 1.0 prepared by SLR Consulting Australia, dated 16 December 2024.
- Plans (Master Set), Rev C – designed by Webber Architects, dated 12/12/2024, and
- Pre-Lodgement Advice (PLM2024/0130) dated 05 November 2024.

Parking Requirements and Design

- Manly DCP applies to the subject site. The Manly DCP requires 1 space per 40m² of GFA for a takeaway restaurant; however, the new TfNSW Guide to Transport Impact Assessment recommends the greater of 1 space per 2 internal seats or 1 space per 3 seats (internal and external).
- The proposed McDonald's restaurant will have a GFA of approximately 380m² and will accommodate 52 internal seats. According to the Manly DCP, the site requires 10 parking spaces. Applying the car parking rates from TfNSW to the proposed development indicates a need for 26 residential parking spaces. The provision of 26 parking spaces, therefore, satisfies the parking requirements set out by TfNSW.
- A dual-lane drive-through facility is proposed for the development, which includes a queuing system designed to accommodate at least 14 vehicles without interfering with parking operations. The facility features designated spaces for six vehicles to queue before reaching the order points. Additionally, there are two waiting bays available after the collection point. This design complies with the queue length requirements established by TfNSW for drive-through facilities.
- The internal carpark layout and car spaces appear to be compliant with Australian Standards AS2890.1:2004 Off-Street Parking requirements. However, parking spaces' widths and the access driveway widths have not been dimensioned; this needs to be confirmed on dimensioned plans, and dimensioned plans are to be submitted to confirm that the access driveway and all bays are appropriately sized.
- Swept path plots for access to and from the development have been satisfactorily demonstrated with B99 vehicles entering and exiting the site from Roseberry Street, including drive-through facilities, and then exiting the car park area.
- Due to frequent traffic queues along the entire frontage of the site, the PLM comments suggest installing a median on Roseberry Street at the proposed driveway. This median would physically prevent right turns into and out of the driveway, ensuring that vehicles making those turns are not obstructed by traffic queues. This measure aims to reduce congestion both within the site and on surrounding roads. To facilitate access for vehicles potentially blocked by the median, a roundabout would be necessary at the intersection of Roseberry Street and Hayes Street. However, the traffic report indicates that there is insufficient space to accommodate a roundabout at this intersection, and implementing this option may lead to increased travel times. This issue requires further discussion in the report, including supporting materials such as figures that illustrate the challenges of installing a mountable roundabout at the intersection, as well as a turning path analysis that could not be performed for the proposed roundabout.
- The consultant explored an alternative for the site's frontage. This option involves removing the parking on the eastern side of Roseberry Street, directly opposite the site, and not marking any queuing lines in the northbound traffic lane on Roseberry Street in front of the McDonald's access. Detailed design plans for the proposed layout should be submitted to the Council for approval before a construction certificate is issued.
- There are bicycle racks for four bicycles. These racks are available for both customers and staff to use.

- Manly DCP does not stipulate motorcycle parking rates for takeaway restaurants. However, the subject DA has proposed two (2) motorcycle parking spaces to facilitate alternate travel modes.
- According to the traffic report, the development will enhance sight lines by incorporating low-level landscaping in the northeastern corner of the site.

Servicing

- As outlined in the Traffic Report, all service vehicles will access the site via Roseberry Street. The development will receive deliveries from vehicles up to 8.8 meters long, classified as medium rigid trucks (MRVs), with an average of two deliveries per day. Waste collection will also be handled by a private contractor using an MRV-sized vehicle. Deliveries will take place outside of peak traffic periods.
- An architectural plan proposes a loading dock that is separate from the car parking area and the drive-through facility. Service vehicles will enter the development in a forward direction and will park in the loading bay by reversing into the designated area. Upon leaving, service vehicles will exit the loading bay and turn onto Roseberry Street in a forward direction. The report includes swept path diagrams showing satisfactory access to and from the loading area.

Traffic Impact

- The new TfNSW guide to Transport Impact Assessment indicates that McDonald's generates an average of 183 vehicle movements per hour during the PM peak on weekdays and 267 vehicle movements per hour during peak times on weekends in Sydney. In regional areas, this figure is 225 vehicle movements per hour during peak times on weekends. These traffic generation rates outlined in the guideline are higher than those used in the traffic report for the development's traffic impact assessment. Therefore, a further review of the development's traffic impacts should be conducted, and the traffic generation, distribution, and model inputs and outputs should be revised accordingly.
- As traffic generation exceeds 200 vehicles per hour, and the site also affects the operation of the State Road signalised intersection at Condamine/Kenneth Street, referral of the application to TfNSW is required.
- The additional traffic generated by the development, as shown in parentheses in Figures 2 and 3, appears to be inaccurate. For example, on weekday afternoons, there were 55 vehicles turning north when exiting the site; however, it seems that only 40 of those vehicles were accounted for as heading northbound. This indicates that 10 vehicles were overlooked in the analysis. Similarly, on Saturday afternoons, out of 70 vehicles turning north on Roseberry Street from the development, only 50 vehicles were noted as travelling north and either turning left, going straight, or turning right at the upstream roundabout. This means that another 20 vehicles were missing from the analysis.
- A network-wide model (Sirda Network Model) has been developed and assessed by the consultant. The analysis includes the intersections of Condamine Street/Kenneth Road, Kenneth Road/Roseberry Street, and Roseberry Street/Hayes Street, focusing on both the Weekday PM peak and Saturday Midday traffic conditions. This model evaluates the backward spread of congestion, where queues in downstream lanes can block upstream lanes (referred to as queue spillback). Additionally, it accounts for capacity constraints in oversaturated upstream lanes, which limits the flow of traffic entering downstream lanes.
- Since the development access location is approximately 30 meters from the Kenneth Road/Roseberry Street roundabout, and due to frequent traffic queues along the entire frontage of the site, the analysis of the site access and all proposed layout changes at this point should also be included in the models.

- a copy of the traffic modelling analysis completed in Sidra is to be submitted to the Council.

Conclusion

The plans and the traffic report in their current form are unacceptable for the reasons outlined above and the requested amendments/ additional information should be provided prior to further assessment of the plans/traffic impact.

The proposal is therefore unsupported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Traffic Engineer Conditions:

Nil.