TRAFFIC & PARKING ASSESSMENT

CHISHOLM SPORTSFIELDS

LOT 3156 DP1267803
15 SUNCROFT STREET
CHISHOLM

PREPARED FOR: MAITLAND CITY COUNCIL

JANUARY 2025

REF: 24/024

TRAFFIC & PARKING ASSESSMENT REPORT
MAITLAND CITY COUNCIL

CHISHOLM SPORTSFIELDS
LOT 3156 DP1267803
15 SUNCROFT STREET, CHISHOLM.

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QUALITY ASSURANCE

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Issue	Date	Description	By
A	06/05/24	Draft	JG
B	14/05/24	Edit	JG
C	24/01/25	Client amendments / Final Proof	JG
D	24/01/25	Approved	JG

This document has been authorised by

Date: - 24th January 2025

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1. INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) has been engaged by DeWitt Consulting on behalf of Maitland City Council to undertake a traffic and parking assessment for the construction of Chisholm Sportsfields and associated on-site car parking on Lot 3156 DP1267803, 15 Suncroft Street, Chisholm. The concept plans for the development are provided in ***Attachment A.***

This traffic and parking assessment is required to support a Review of Environmental Factors (under Part 5 of EP&A Act) for Maitland City Council for the proposed activity. The purpose of this document is to undertake an independent assessment of the likely traffic and parking impacts of the proposal on the local and state road network and associated roadside infrastructure. It will allow Maitland City Council (Council) to assess the merits of the application from a traffic impact perspective.

This report presents the findings of the traffic and parking assessment and includes the following:

- An outline of the existing situation in the vicinity of the site.
- An assessment of the traffic impacts of the proposed development including the predicted traffic generation and its impact on existing road and intersection capacities.
- Reviews the on-site parking provided within the proposed development and assesses it against Council and Australian Standards requirements.
- Presentation of conclusions and recommendations.

2. DEVELOPMENT PROPOSAL

2.1 Site Description

The site is located on the southern side of Suncroft Street, Chisholm immediately north of Raymond Terrace Road. It is located approximately 2 km east of the future Chisholm Shopping Centre and approximately 2.3 km's north-east of the existing Thornton Shopping Centre. The site is bordered to the east, west, north, and south by residential developments. The site is shown in the context of the surrounding areas in ***Figure 1*** below.

Figure 1 - Site Location

The site has the following property descriptors:

- Lot 3156 DP1267803,
- Street address of 15 Suncroft Street, Chisholm,
- Total development site area of approximately 5.1 ha's, and
- Land zoning of R1 General Residential & RU2 Rural Landscape pursuant to the Maitland LEP (MLEP 2011).

The site currently has no existing formal vehicular access. ***Photograph 1*** below shows the site from Suncroft Street and ***Photograph 2*** below shows the site from Arklow Crescent. An indented perpendicular on-street parking bay (20 spaces) is located on Suncroft Street mid-way along the site frontage as shown below in ***Photograph 3***.

Photograph 1 – Existing site from Suncroft Street.

Photograph 2 – Existing site from Arklow Crescent.

Photograph 3 – Existing 20 space indented on-street car parking bay Suncroft Street.

2.2 Development Proposal

The proposed development involves the construction of two standard sportsfields on the site to be owned and maintained by Maitland City Council;

- Earthworks to provide two level football fields or 1 standard cricket field and cricket practice nets.
- Construction of an amenities building
- An ancillary off-street car parking area (83 car spaces including 2 accessible space).
- Drainage to Maitland City Council's requirements; and
- Landscaping.

A future play area is also proposed for the site, which is to be provided by others and not included as part of the currently proposed development works. The development concept plans are shown in ***Attachment A***.

2.3 Existing Road Network

Raymond Terrace Road near the site is a classified main road (MR104) under the care and control of the NSW Roads and Maritime Services (RMS) providing a single travel lane in both directions constructed to a typical rural standard. Additional lanes are provided at major intersections. Lane widths are between 3.2 and 3.5 metres. Raymond Terrace Road performs the function of a sub-arterial road connecting Maitland to Raymond Terrace. On inspection the road was observed to be in good condition with an 80 km/h speed zoning applying near McFarlane's Road. ***Photograph 4*** shows Raymond Terrace Road near McFarlane's Road.

McFarlanes Road near the site connects Chisholm and Berry Park to Morpeth and is a local collector road under a functional road hierarchy classification. As such it is under the care and control of the Maitland City Council providing a single travel lane in both directions constructed to a

typical sealed rural standard. Lane widths are between 3.2 and 3.5 metres with 1.5 to 2.0 metre shoulders. On inspection the road was observed to be in good condition with an 80 km/h speed zoning along the site frontage. With continue development of the Thornton North Urban release area improvements to McFarlane's Road and new public road intersections along its length will occur. ***Photograph 5*** shows McFarlanes Road along the site frontage.

Suncroft Street

Suncroft Street near the site is a sealed urban local road with its primary function to provide vehicular access to properties along its length. It is therefore under the care and control of Maitland City Council. It is a sealed road approximately 9 metres wide with kerb and gutter allowing a single travel lane in each direction and some on-street car parking, though an indented parking bay is provided mid-way along the site frontage.

Suncroft Street was observed to be in good condition as shown in ***Photograph 6*** below and a 50 km/h speed zoning applies to Suncroft Street. Suncroft Street connects to Greystones Drive via a single lane roundabout and Greystones Drive connects to McFarlanes Road via an AUR / AUL give way-controlled T-intersection.

Photograph 4 – Raymond Terrace Road near site.

Photograph 5 – McFarlanes Road near site

Photograph 6 – Suncroft Street along site frontage.

2.4 Existing Traffic

Previously Intersect Traffic undertook manual peak hour traffic counts at the Raymond Terrace Road / McFarlanes Road intersection on Wednesday 1st March 2023 and Thursday the 2nd March 2023 during peak AM (2nd March) and PM (1st March) traffic periods between 8 am and 9 am and between 3.00 pm and 4.00 pm, respectively. To represent the traffic in 2024 the 2023 peak hour count volumes have been increased by a 4.0% estimated traffic growth per annum for 1 year. The traffic count data collected during these counts are shown in ***Attachment B***. The two-way mid-block existing traffic volumes calculated from this data are shown below in ***Table 1.***

The mid-block traffic volumes calculated from these traffic counts have been utilised to represent current 2024 volumes. The predicted 2034 volumes have been calculated using an annual background growth rate factor of 3.1% per annum for Raymond Terrace Road and McFarlane's Road being reflective of the likely levels of residential development in the area over the next 20 years as well as the redistribution of traffic resulting from the signalisation of the Raymond Terrace Road / Government Road intersection and is also shown in ***Table 1*** below. These existing and future traffic volumes have been adopted in this assessment.

It is also noted that Suncroft Street services approximately 100 residential lots when fully developed therefore based on TfNSW maximum traffic generation rates for low density residential would be expected to carry 85 vtph in the AM peak and 90 vtph in the PM peak. These values have been adopted in this assessment.

Table 1 – Mid-block 2024 and 2034 traffic volumes

Road	Section	2024		2034	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
Raymond Terrace Road	West of McFarlanes Road	1068	1065	1449	1445
Raymond Terrace Road	East of McFarlanes Road	989	1013	1342	1375
McFarlanes Road	North of Raymond Terrace Road	259	291	351	395
Suncroft Street	Along site frontage	85	90	115	122

2.5 Traffic Generation

General guidelines on traffic generation are provided within TfNSW's *RTA's Guide to Traffic Generating Developments.* However, the Guide does not provide information on sportsfields, so a first principles traffic generation assessment has been undertaken for the development.

In undertaking this assessment, the following assumptions are made.

- The peak periods for the development will occur during winter sports, during the week in the evening peak when training occurs and, on the weekend, when competition occurs.
- During training it is considered the fields have a capacity for 8 teams to train. If considering siblings in different teams and some alternate transport trip making from residents of Sophia Waters residential estate, then the likely light vehicle traffic generation per team would be in the order of (11/1.2 vehicle occupancy) = 9 vehicle trips per team.
- During competition day there would be a maximum of 4 teams on the fields however there would be an overlap of games so 8 teams could be on site in any one peak hour. However, the 4 visiting teams could generate up to 11 vehicle trips.

Therefore, it is concluded the weekday and weekend peak traffic generation for the sportsfields can be calculated as follows;

Weekday PM peak = 8 x 9 = 72 vtph; and
Weekend peak = 4 x 9 + 4 x11 = 80 vtph.

However, weekend traffic volumes are approximately 75 % of the weekday PM peak therefore in terms of traffic impact the weekday PM peak is the critical assessment period however in terms of the required on-site parking the weekend competition peak is critical.

This traffic associated with the development needs to be distributed through the road network and the likely traffic distribution assumptions adopted for this assessment in the critical weekday PM peak are:

- 50 % of traffic will be internal subdivision traffic from the adjacent Thornton North URA subdivisions and 50 % of traffic will access the site from McFarlanes Road with 75 % of this traffic using Raymond Terrace Road west of McFarlanes Road.
- 50 % of traffic is inbound and 50% of traffic is outbound.

The resulting trip distribution adopted in this assessment is presented diagrammatically in ***Figure 2*** below.

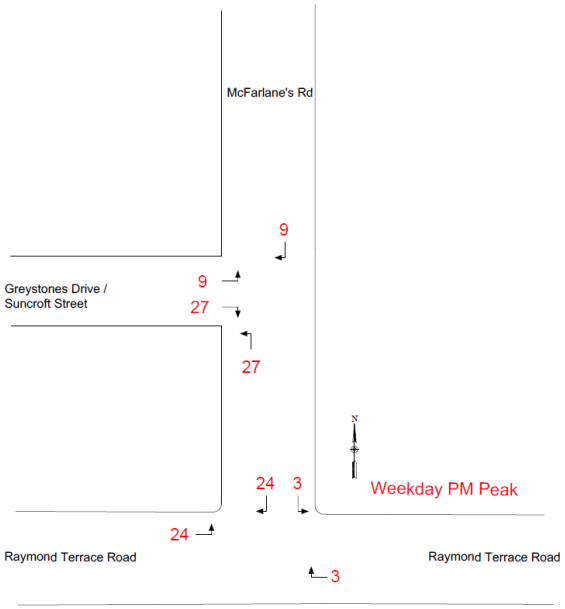


Figure 2 – Development Trip Distributions

2.6 Traffic Impacts and Considerations

2.6.1 Road Network Capacity

The capacity of the road network is generally determined by the capacity of intersections. However, for urban roads *Table 4.3* of the *RTA's Guide to Traffic Generating Developments*, reproduced below, provides some guidance on mid-block capacities for a level of service (LoS) C.

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: - RTA's Guide to Traffic Generating Developments (2002).

Noting that Raymond Terrace Road is an undivided road with little on-street car parking then the one-way capacity is considered to be 1,800 vtph and the two-way mid-block capacity is 3,600 vtph. Therefore, the adopted two-way mid-block capacity for the Raymond Terrace Road for a LoS C is 3,600 vtph. However, as a major sub-arterial road a LoS D is still satisfactory on Raymond Terrace Road with a lane capacity of up to 1,100 vtph with an 80 km/h speed zoning. Therefore, a two-way mid-block capacity (LoS D) for Raymond Terrace Road would be 2,200 vtph.

McFarlanes Road as an undivided two-way two-lane road that with further development of the Thornton URA will also become an urban road with a single lane capacity for a LoS C of 900 vtph. Therefore, the two-way mid-block capacity for McFarlanes Road is 1,800 vtph.

Suncroft Street as a local urban residential road would be subject to assessment of amenity impacts for residents therefore the environmental capacity of the road is the determining capacity for the street. Table 4.6 of the *RTA's Guide to Traffic Generating Developments (2002)* shows the environmental capacity thresholds for urban roads based on function and is reproduced below.

Table 4.6
Environmental capacity performance standards on residential streets

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Note: Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

Source: - RTA's Guide to Traffic Generating Developments (2002).

As a local street the environmental capacity of Suncroft Street is determined from the above table as 300 vtph.

The two-way mid-block road capacities adopted in this assessment are therefore as follows;

- Raymond Terrace Road – 2,200 vtph;
- McFarlanes Road – 1,800 vtph; and
- Suncroft Street – 300 vtph.

As existing traffic volumes on these roads determined in ***Section 2.4***, are below the local road network two-way mid-block capacity determined above it is reasonable to conclude the local and state road network currently has spare capacity to cater for additional development in the area. When distributing the development traffic, as shown in ***Figure 2***, the resulting maximum additional traffic on Raymond Terrace Road, McFarlanes Road and Suncroft Street are not sufficient for the local and state road network to reach its two-way mid-block capacities as shown in ***Table 2*** below. Therefore, it is reasonable to conclude that the development will not adversely impact on the levels of service experienced on the state and local road network near the site.

Table 2 – Capacity and two-way traffic mid-block peak hour traffic volumes post-development

Road	Section	2024		2034		Capacity	Development Traffic	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	(vtph)	AM* (vtph)	PM (vtph)
Raymond Terrace Road	West of McFarlanes Road	1116	1113	1497	1493	2200	48	48
Raymond Terrace Road	East of McFarlanes Road	995	1019	1348	1381	2200	6	6
McFarlanes Road	North of Raymond Terrace Road	313	345	405	449	1800	54	54
Suncroft Street	Along site frontage	157	162	187	194	300	72	72

* For a robust assessment peak development AM traffic is assumed to be equal to the peak development PM traffic.

2.6.2 Intersection Capacity

In assessing intersection performance, the main intersections impacted by the development will be:

- Raymond Terrace Road / Government Road future signalised intersection;
- Raymond Terrace Road / McFarlane's Road CHR / CHL give way T-intersection; and
- McFarlane's Road / Greystones Drive AUR / AUL – give-way T-intersection.

The currently under construction Raymond Terrace Road / Government Road signalised intersection has been designed to cater for traffic generated by the full development of the Thornton North URA which includes the subject sportsfields. The traffic volumes for design were determined from the Traffic Report for the Thornton North URA at proposal stage based on an estimated maximum lot yield. Since development of the URA commenced lot yields being achieved are less than the estimated maximum lot yield due to individual site constraints therefore the modelling undertaken for the Raymond Terrace Road / Government Road signalised intersection is considered robust and therefore it is reasonable to conclude that the proposed sportsfields will not adversely impact on the future operation of the Raymond Terrace Road / Government Road intersection.

The McFarlanes Road / Greystones Drive intersection is currently operating with major / minor leg traffic volumes of 290 vtph and 91 vtph respectively. These are significantly less than the thresholds for uninterrupted flow conditions shown in the following table sourced from *Austroads Guide to Traffic Management – Part 6 Intersections, Interchanges and Crossings (2007).*

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).
2. Major road flow includes all major road traffic with priority over minor road traffic.
3. Minor road design volumes include through and turning volumes.

Source: - Austroads Guide to Traffic Management – Part 6 Intersections, Interchanges and Crossings (2007)

This suggests the intersection would be operating satisfactorily during peak periods with little or no delay and queuing for motorists. This was confirmed by observation during peak periods. With the additional sportsfield traffic the major / minor leg traffic volumes through to 2034 are 449 vtph and 194 vtph which are still below the thresholds for uninterrupted flow conditions shown in the above Austroad table. Therefore, it is reasonable to conclude that the McFarlanes Road / Greystones Drive give way T-intersection will continue to operate satisfactorily with uninterrupted flow conditions post development of the sportsfields through to at least 2034. Therefore, the proposed sportsfields development will not adversely impact on the McFarlanes Road / Greystones Drive intersection.

The impacts of the sportsfield development on the Raymond Terrace Road / McFarlanes Road intersection have been modelled using the SIDRA INTERSECTION modelling software. This software package predicts likely delays, queue lengths and thus levels of service that will occur at intersections. Assessment is then based on the level of service requirements of TfNSW shown below in Table 4.2 below. Assumptions made in this modelling were:

- The intersection layout will remain as per current conditions.
- Baseline traffic volumes used in the modelling were as described in ***Section 2.4*** with the assessment year being 2034.

- Council has previously accepted a background traffic growth of 3.1 % per annum for roads within the Thornton North URA reflecting the level of development occurring in the area. This rate has again been adopted in this modelling to account for cumulative traffic growth due to adjoining developments in the area.
- Traffic generated by the development is distributed as per ***Figure 2.***

Table 4.2
Level of service criteria for intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode

Source: - RTA's Guide to Traffic Generating Developments (2002).

The summarised 'all vehicles' results of the modelling for the worst leg movement in regard to average delay / LoS are provided in ***Table 3*** below. The Sidra Movement Summary Tables of each of the intersections are provided in ***Attachment C***.

Table 3 – Raymond Terrace Road / McFarlane's Road – Sidra Modelling – Results Summary

Modelled Peak	Degree of Saturation (v/c)	Worst Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 AM	0.267	14.7	B	0.7
2024 PM	0.271	15.2	B	0.7
2024 AM + development	0.417	17.5	B	1.0
2024 PM + development	0.271	16.1	B	1.0
2034 AM with development	0.616	34.7	C	3.0
2034 PM with development	0.654	38.7	C	3.2

The modelling shows that the Raymond Terrace Road / McFarlane's Road intersection currently operates satisfactorily during both the AM and PM peak periods and would continue to do so post development in 2024 and with 10 years traffic growth to 2034 even with the continued development of the Thornton North URA. Average delays, LoS and 95% back of queue lengths all remain at acceptable levels based on the RMS assessment criteria listed above. Therefore, no upgrading of the intersection is required resulting from this development.

Overall, it is concluded that the proposed development, does not adversely impact on the local and state road network.

2.6.3 Site Access

The site access is proposed to service a car park with 83 car spaces. Under Table 3.1 of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking* a car park with 25 - 100 spaces accessed via a local road providing short term parking (Class 3A) is required to have a Category 2 access facility. A Category 2 access facility is a combined entry / exit driveway between 6 metres and 9 metres wide. The proposal is to provide a combined entry and exit access to Suncroft Street and to be compliant with the Australian Standard *AS2890.1-2004*

Parking facilities – Part 1 - Off-street car parking requirements it will need to be conditioned on any consent issued for the development to be a minimum 6 metres wide.
Under Figure 3.2 of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking the sight distance* requirements for the access needs to be a minimum of 45 metres for a 50 km/h speed environment. The available sight distance at the proposed accesses to the car park to the site would be compliant with the Standard with the observed sight distance being approximately 50 metres to the west and in excess of 100 metres to the east.

Therefore, it is considered that the proposed access arrangements for the development car park are considered satisfactory and compliant with Council and Australian Standard requirements.

2.6.4 On-site parking and servicing

The Maitland Council Development Control Plan (2011) sets out the requirements for on-site parking to be provided for new developments in Section C11. There is however no guide to parking requirements for sportsfields in the DCP. Section 2.5 above however determined that the maximum number of vehicles expected at the site at any time during a normal competition day would be in the order of 80 vehicles. Therefore, the expected peak parking demand is 80 vehicles. As the site provides an 83-space car park as well as there being indented on-street car parking for 20 vehicles behind the amenities building it is concluded that there is sufficient on-site car parking provided within the development to meet the expected peak parking demand for the development therefore it is compliant with the objectives of the DCP.

Any consent issued for the development will need to be conditioned to ensure the car park is designed to comply with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking.* Current plans do not show the dimensions off the car park however it does appear to be a satisfactory design that could comply with the Australian Standard subject to confirmation prior to issue of a Construction Certificate. It is also considered there is enough room on the site to ensure the car park is compliant with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking.*

Overall, it is concluded that the development provides sufficient and suitable car parking to meet the requirements of both Maitland City Council and Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking.*

2.6.5 Alternative Transport Modes

Currently Hunter Valley Buses run public transport services in the Chisholm area as shown in the bus network map below (***Figure 3***). The nearest service to the site is Route 189 Greenhills Shopping Centre to Thornton via Chisholm which runs along Government Road and Raymond Terrace Road west of Government Road. The nearest bus stops are located on Raymond Terrace Road, immediately west of Government Road approximately 500 metres west of the site. Whilst this is not that convenient to the site it would be expected that bus routes within this area will change in the near future as the residential development in the area progresses and more convenient public transport access may be available to the site in the future. Further, the development would not generate sufficient demand for there to be a nexus for an improved service. No additional public transport services or facilities are considered warranted resulting from this development.

Pedestrian and bicycle facilities around the site are considered excellent with suitable shared pedestrian / bicycle concrete footpaths running along the Suncroft Street (see ***Photograph 7*** below) and Arklow Crescent frontage of the site with this pathway likely to be extended to the Raymond Terrace Road / Government Road intersection in the near future. Pedestrian phases within the new Raymond Terrace Road / Government Road intersection will then allow safe crossing of both roads for pedestrians and connection to similar shared pathways in the Thornton area. Therefore, no additional pedestrian or cycle facilities are considered to be required resulting from this development.

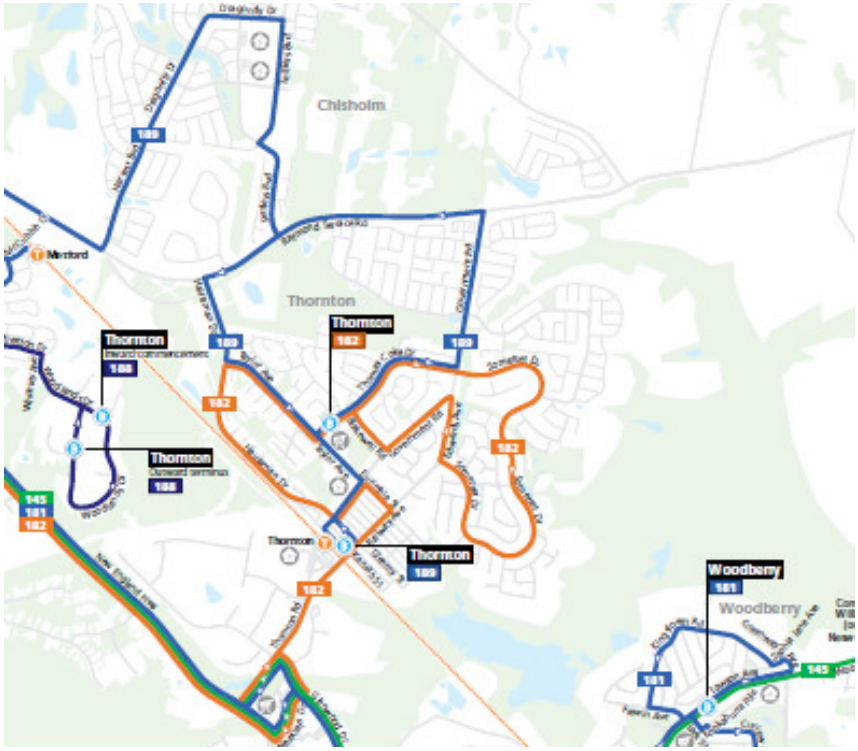


Figure 3 – Hunter Valley Buses routes – Chisholm.

Photograph 7 – Shared Pedestrian / Cycle pathway Suncroft Street.

3. CONCLUSIONS

This traffic and parking assessment for the or the construction of Chisholm Sportsfields and associated on-site car parking on Lot 3156 DP1267803, 15 Suncroft Street, Chisholm has concluded:

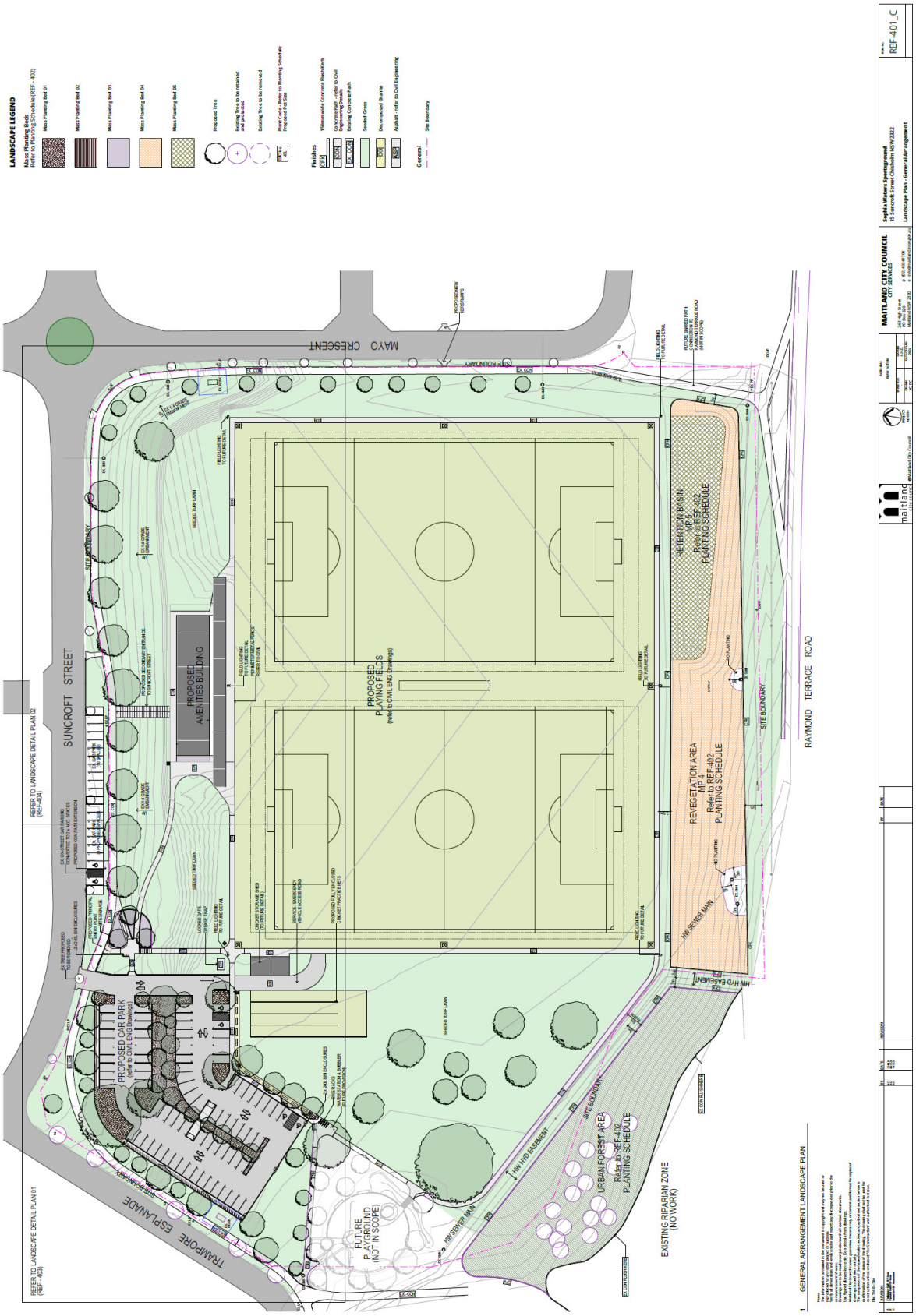
- The local and state road network have sufficient available two-way mid-block capacity to cater for the development without the need to further upgrade the local road network.
- The development is likely to generate an additional approximately 72 vtph during the weekday PM peak traffic period and 80 vtph during the weekend peak traffic period based on first principles assessment of traffic generation for the site.
- The additional traffic on the local and state road network will not adversely impact on the two-way mid-block efficiency of the local and state road network.
- Sidra Intersection modelling has shown the proposed development will not adversely impact on the operation of the Raymond Terrace Road / McFarlanes Road give way T-intersection while the McFarlanes Road / Greystones Drive intersection will continue to operate with uninterrupted flow conditions post development. Therefore, the proposal will not adversely impact on the efficiency and effectiveness of the local and state road network.
- Subject to a minimum 6-metre-wide combined entry / exit driveway being provided to the on-site car parking area off Suncroft Street, the development is compliant with the requirements of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities* in regard to width of the access and sight lines.
- The development provides sufficient on-site car parking to meet the requirements of Maitland City Council and suitably conditioned on any consent issued for the development can comply with the requirements of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking.*
- Hunter Valley buses already provides a public transport (bus) service within 500 metres of the site and the development would not generate sufficient demand for there to be a nexus for an improved service. No additional public transport services or facilities are considered warranted resulting from this development.
- Pedestrian and bicycle facilities around the site are considered excellent with suitable shared pedestrian / bicycle concrete footpaths running along the Suncroft Street and Arklow Crescent frontage of the site with this pathway likely to be extended to the Raymond Terrace Road / Government Road intersection in the near future. Therefore, no additional pedestrian or cycle facilities are considered to be required resulting from this development.

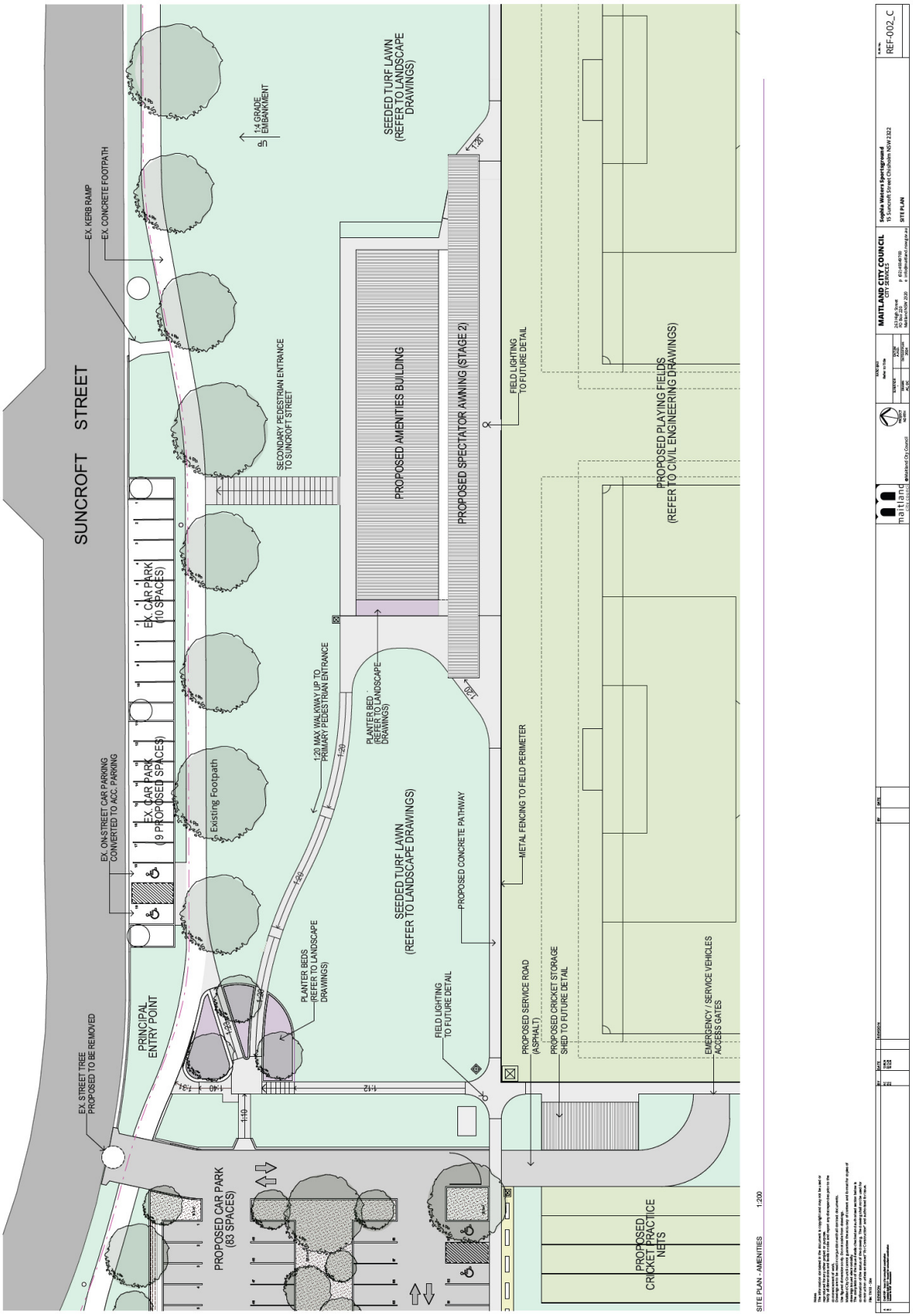
4. RECOMMENDATION

Having carried out this traffic and parking assessment for the construction of Chisholm Sportsfields and associated on-site car parking on Lot 3156 DP1267803, 15 Suncroft Street, Chisholm it is recommended that the proposal can be supported subject to appropriate conditioning of the consent to ensure the car park is constructed to the requirements of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off street car parking facilities*. The development will not adversely impact on the local and state road network and could meet all the requirements of Maitland City Council, TfNSW and Australian Standards.

J.R. Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

ATTACHMENT A
DEVELOPMENT PLANS

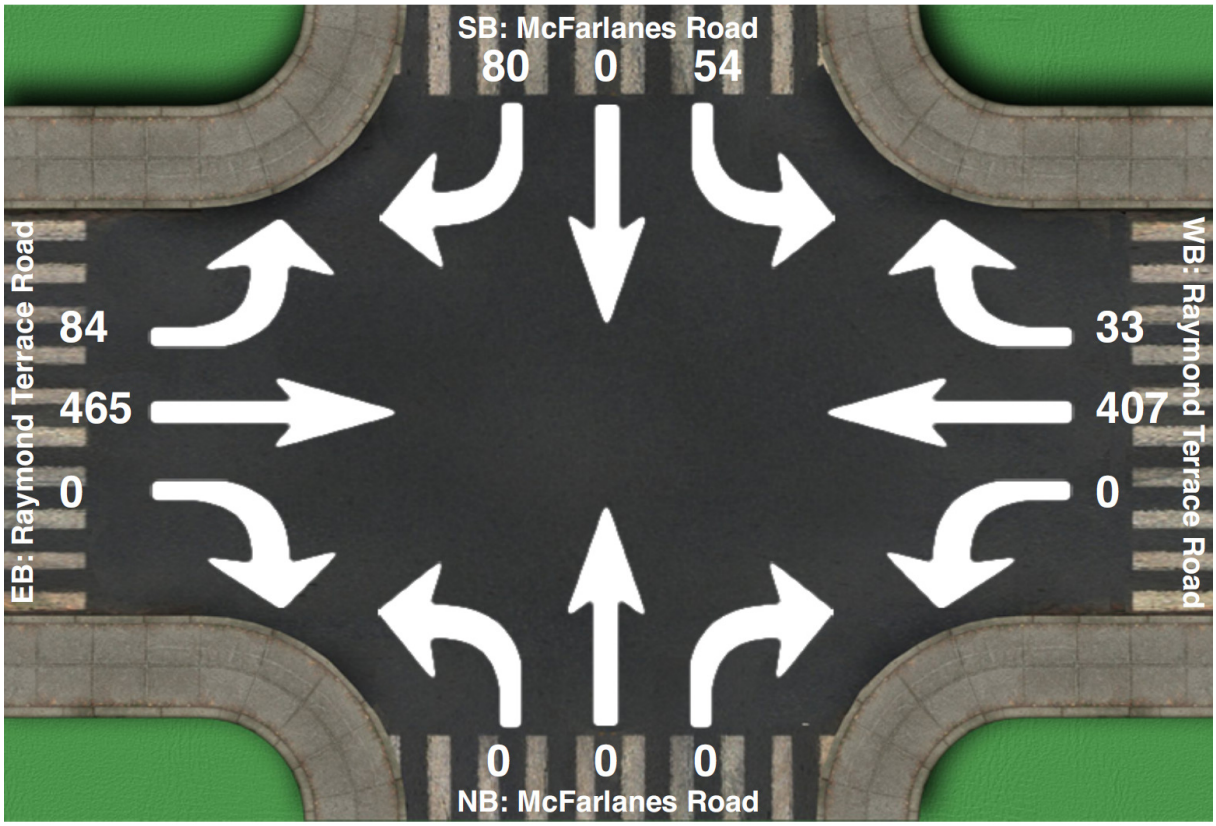

LANDSCAPE LEGEND
Mass Planting Beds
Refer to REF-402 Schedule (REF - 402)
Mass Planting Bed 01
Mass Planting Bed 02
Mass Planting Bed 03
Mass Planting Bed 04
Mass Planting Bed 05
Proposed Tree
Existing Tree to be retained and protected
Existing Tree to be removed
Plant Code - Refer to Planting Schedule Proposed Plant Size
Finishes
Concrete Path - refer to Civil Engineering
Existing Concrete Path
Seeded Grass
Decomposed Granite
Asphalt - refer to Civil Engineering
General
Site Boundary
MAYO CRESCENT
SUNCROFT STREET
PROPOSED AMENITIES BUILDING
PROPOSED PLAYING FIELDS
(refer to CIVIL ENG Drawings)
PROPOSED CAR PARK
(refer to CIVIL ENG Drawings)
FUTURE PLAYGROUND
(NOT IN SCOPE)
TRAMPORE ESPLANADE
RAYMOND TERRACE ROAD
REVEGETATION AREA
Refer to REF-402
PLANTING SCHEDULE
EXISTING RIPARIAN ZONE
(NO WORK)
URBAN FOREST AREA
Refer to REF-402
PLANTING SCHEDULE
SITE BOUNDARY
HW SEWER MAIN
HW HYD EASEMENT
MAITLAND CITY COUNCIL
CITY SERVICES
Sophie Waters Sportsground
15 Suncroft Street Chisholm NSW 2322
Landscape Plan - General Arrangement
REF-401_C
GENERAL ARRANGEMENT LANDSCAPE PLAN


SUNCROFT STREET
EX. KERB RAMP
EX. CONCRETE FOOTPATH
1:4 GRADE EMBANKMENT
SEEDED TURF LAWN (REFER TO LANDSCAPE DRAWINGS)
SECONDARY PEDESTRIAN ENTRANCE TO SUNCROFT STREET
PROPOSED AMENITIES BUILDING
PROPOSED SPECTATOR AWNING (STAGE 2)
FIELD LIGHTING TO FUTURE DETAIL
PROPOSED PLAYING FIELDS (REFER TO CIVIL ENGINEERING DRAWINGS)
EX. CAR PARK (10 SPACES)
EX. ON-STREET CAR PARKING CONVERTED TO ACC. PARKING
EX. CAR PARK (9 PROPOSED SPACES)
Existing Footpath
1:20 MAX WALKWAY UP TO PRIMARY PEDESTRIAN ENTRANCE
PLANTER BED (REFER TO LANDSCAPE DRAWINGS)
SEEDED TURF LAWN (REFER TO LANDSCAPE DRAWINGS)
PROPOSED CONCRETE PATHWAY
METAL FENCING TO FIELD PERIMETER
PLANTER BEDS (REFER TO LANDSCAPE DRAWINGS)
FIELD LIGHTING TO FUTURE DETAIL
PROPOSED SERVICE ROAD (ASPHALT)
PROPOSED CRICKET STORAGE SHED TO FUTURE DETAIL
EMERGENCY / SERVICE VEHICLES ACCESS GATES
EX. STREET TREE PROPOSED TO BE REMOVED
PRINCIPAL ENTRY POINT
PROPOSED CAR PARK (83 SPACES)
PROPOSED CRICKET PRACTICE NETS
SITE PLAN - AMENITIES 1:200
MAITLAND CITY COUNCIL
CITY SERVICES
Sophia Waters Sportsground
15 Suncroft Street Chisholm NSW 2322
SITE PLAN
REF-002_C

ATTACHMENT B
TRAFFIC DATA

Intersection Peak Hour

Location: McFarlanes Road at Raymond Terrace Road, Chisholm
GPS Coordinates: Lat=-32.739095, Lon=151.642150
Date: 2023-03-02
Day of week: Thursday
Weather:
Analyst: Jeff



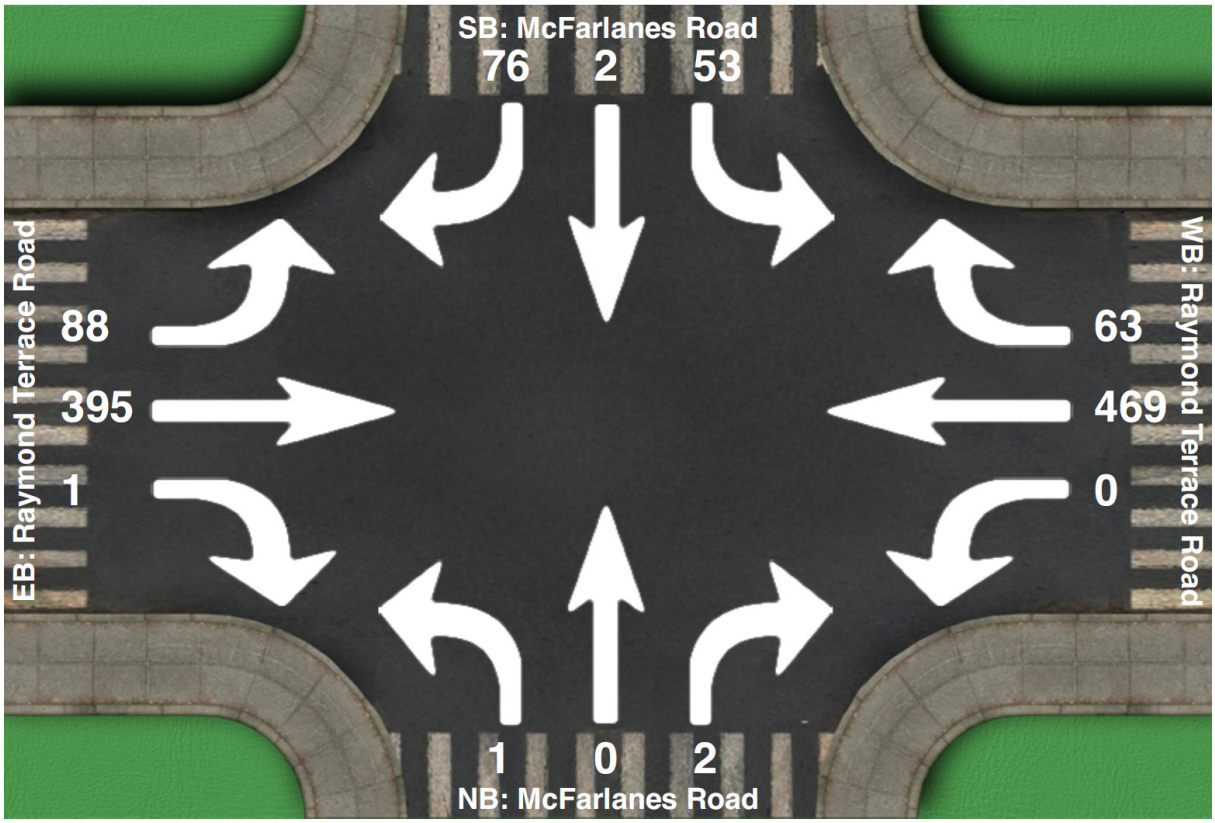
Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	54	0	80	0	407	33	0	0	0	84	465	0	1123
Factor	0.79	0.00	0.87	0.00	0.77	0.92	0.00	0.00	0.00	0.64	0.92	0.00	0.89
Approach Factor	0.88			0.79			0.00			0.95			

Intersection Peak Hour

Location: McFarlanes Road at Raymond Terrace Road, Chisholm
GPS Coordinates: Lat=-32.761903, Lon=151.660669
Date: 2023-03-01
Day of week: Wednesday
Weather:
Analyst: Jeff



Intersection Peak Hour

15:00 - 16:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	53	2	76	0	469	63	1	0	2	88	395	1	1150
Factor	0.78	0.25	0.79	0.00	0.86	0.68	0.25	0.00	0.50	0.65	0.89	0.25	0.92
Approach Factor	0.80			0.85			0.75			0.86			

ATTACHMENT C
SIDRA MOVEMENT SUMMARY TABLES

MOVEMENT SUMMARY

Site: 101 [2024AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	442	5.0	442	5.0	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
6	R2	All MCs	36	5.0	36	5.0	0.036	9.0	LOS A	0.1	1.0	0.51	0.69	0.51	60.7
Approach			478	5.0	478	5.0	0.234	0.7	NA	0.1	1.0	0.04	0.05	0.04	78.0
North: McFarlane's Road															
7	L2	All MCs	59	5.0	59	5.0	0.063	9.3	LOS A	0.2	1.7	0.49	0.72	0.49	60.6
9	R2	All MCs	87	5.0	87	5.0	0.177	14.7	LOS B	0.7	5.2	0.75	0.91	0.75	55.5
Approach			145	5.0	145	5.0	0.177	12.5	LOS A	0.7	5.2	0.65	0.83	0.65	57.4
West: Raymond Terrace Road															
10	L2	All MCs	91	5.0	91	5.0	0.059	7.5	LOS A	0.2	1.8	0.11	0.58	0.11	62.4
11	T1	All MCs	505	5.0	505	5.0	0.267	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach			596	5.0	596	5.0	0.267	1.2	LOS A	0.2	1.8	0.02	0.09	0.02	76.5
All Vehicles			1219	5.0	1219	5.0	0.267	2.4	NA	0.7	5.2	0.10	0.16	0.10	74.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 14 May 2024 10:09:56 AM
Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9

MOVEMENT SUMMARY

Site: 101 [2024PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	511	5.0	511	5.0	0.271	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
6	R2	All MCs	68	5.0	68	5.0	0.062	8.7	LOS A	0.3	1.9	0.48	0.68	0.48	61.0
Approach			580	5.0	580	5.0	0.271	1.1	NA	0.3	1.9	0.06	0.08	0.06	77.0
North: McFarlane's Road															
7	L2	All MCs	58	5.0	58	5.0	0.056	8.8	LOS A	0.2	1.5	0.45	0.68	0.45	61.0
9	R2	All MCs	85	5.0	85	5.0	0.181	15.2	LOS B	0.7	5.3	0.76	0.91	0.76	55.1
Approach			142	5.0	142	5.0	0.181	12.6	LOS A	0.7	5.3	0.64	0.82	0.64	57.4
West: Raymond Terrace Road															
10	L2	All MCs	96	5.0	96	5.0	0.064	7.6	LOS A	0.3	1.9	0.16	0.57	0.16	62.2
11	T1	All MCs	431	5.0	431	5.0	0.228	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach			526	5.0	526	5.0	0.228	1.4	LOS A	0.3	1.9	0.03	0.10	0.03	75.9
All Vehicles			1248	5.0	1248	5.0	0.271	2.5	NA	0.7	5.3	0.11	0.17	0.11	73.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 14 May 2024 10:09:57 AM
Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9

MOVEMENT SUMMARY

Site: 101 [2024AM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	442	5.0	442	5.0	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
6	R2	All MCs	39	5.0	39	5.0	0.039	9.1	LOS A	0.2	1.1	0.51	0.69	0.51	60.7
Approach			481	5.0	481	5.0	0.234	0.8	NA	0.2	1.1	0.04	0.06	0.04	77.9
North: McFarlane's Road															
7	L2	All MCs	62	5.0	62	5.0	0.066	9.3	LOS A	0.2	1.8	0.49	0.72	0.49	60.6
9	R2	All MCs	113	5.0	113	5.0	0.417	17.5	LOS B	1.0	7.5	0.72	0.95	0.97	53.3
Approach			175	5.0	175	5.0	0.417	14.6	LOS B	1.0	7.5	0.64	0.87	0.80	55.6
West: Raymond Terrace Road															
10	L2	All MCs	117	5.0	117	5.0	0.076	7.5	LOS A	0.3	2.3	0.12	0.58	0.12	62.4
11	T1	All MCs	505	5.0	505	5.0	0.267	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach			622	5.0	622	5.0	0.267	1.5	LOS A	0.3	2.3	0.02	0.11	0.02	75.8
All Vehicles			1277	5.0	1277	5.0	0.417	3.0	NA	1.0	7.5	0.11	0.19	0.14	72.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 14 May 2024 10:10:00 AM
Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9

MOVEMENT SUMMARY

▽ Site: 101 [2024PM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	511	5.0	511	5.0	0.271	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
6	R2	All MCs	72	5.0	72	5.0	0.064	8.7	LOS A	0.3	2.0	0.48	0.69	0.48	61.0
Approach			583	5.0	583	5.0	0.271	1.1	NA	0.3	2.0	0.06	0.08	0.06	76.9
North: McFarlane's Road															
7	L2	All MCs	61	5.0	61	5.0	0.059	8.8	LOS A	0.2	1.6	0.45	0.69	0.45	61.0
9	R2	All MCs	111	5.0	111	5.0	0.243	16.1	LOS B	1.0	7.5	0.78	0.94	0.86	54.3
Approach			171	5.0	171	5.0	0.243	13.5	LOS A	1.0	7.5	0.66	0.85	0.71	56.5
West: Raymond Terrace Road															
10	L2	All MCs	122	5.0	122	5.0	0.081	7.6	LOS A	0.3	2.5	0.17	0.57	0.17	62.1
11	T1	All MCs	431	5.0	431	5.0	0.228	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
Approach			552	5.0	552	5.0	0.228	1.7	LOS A	0.3	2.5	0.04	0.13	0.04	75.1
All Vehicles			1307	5.0	1307	5.0	0.271	3.0	NA	1.0	7.5	0.13	0.20	0.14	72.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9

MOVEMENT SUMMARY

Site: 101 [2034AM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 11 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	599	5.0	599	5.0	0.317	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
6	R2	All MCs	53	5.0	53	5.0	0.069	10.6	LOS A	0.3	1.9	0.60	0.80	0.60	59.2
Approach			652	5.0	652	5.0	0.317	0.9	NA	0.3	1.9	0.05	0.06	0.05	77.6
North: McFarlane's Road															
7	L2	All MCs	84	5.0	84	5.0	0.118	10.8	LOS A	0.4	3.1	0.58	0.84	0.58	59.1
9	R2	All MCs	153	5.0	153	5.0	0.616	34.7	LOS C	3.0	21.8	0.94	1.10	1.53	42.6
Approach			237	5.0	237	5.0	0.616	26.2	LOS B	3.0	21.8	0.81	1.01	1.19	47.2
West: Raymond Terrace Road															
10	L2	All MCs	159	5.0	159	5.0	0.104	7.6	LOS A	0.4	3.3	0.14	0.57	0.14	62.2
11	T1	All MCs	685	5.0	685	5.0	0.363	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.7
Approach			844	5.0	844	5.0	0.363	1.5	LOS A	0.4	3.3	0.03	0.11	0.03	75.7
All Vehicles			1733	5.0	1733	5.0	0.616	4.7	NA	3.0	21.8	0.14	0.22	0.19	70.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 14 May 2024 10:10:01 AM
Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9

MOVEMENT SUMMARY

Site: 101 [2034PM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Raymond Terrace Road / McFarlane's Road CHR / CHL
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 11 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raymond Terrace Road															
5	T1	All MCs	694	5.0	694	5.0	0.367	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.7
6	R2	All MCs	97	5.0	97	5.0	0.108	9.8	LOS A	0.4	3.2	0.57	0.78	0.57	60.0
Approach			791	5.0	791	5.0	0.367	1.3	NA	0.4	3.2	0.07	0.10	0.07	76.6
North: McFarlane's Road															
7	L2	All MCs	82	5.0	82	5.0	0.099	9.9	LOS A	0.4	2.7	0.54	0.78	0.54	60.0
9	R2	All MCs	150	5.0	150	5.0	0.654	38.7	LOS C	3.2	23.3	0.95	1.12	1.62	40.6
Approach			233	5.0	233	5.0	0.654	28.5	LOS B	3.2	23.3	0.80	1.00	1.23	45.9
West: Raymond Terrace Road															
10	L2	All MCs	165	5.0	165	5.0	0.113	7.7	LOS A	0.5	3.5	0.20	0.58	0.20	62.0
11	T1	All MCs	585	5.0	585	5.0	0.310	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach			750	5.0	750	5.0	0.310	1.7	LOS A	0.5	3.5	0.04	0.13	0.04	75.0
All Vehicles			1773	5.0	1773	5.0	0.654	5.0	NA	3.2	23.3	0.16	0.23	0.21	69.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 14 May 2024 10:09:59 AM
Project: D:\Work\2024\24.024 - Chisholm Sportsfields\Sidra\RTR_McFarlanes.sip9