

DOCUMENT TITLE

Traffic Impact Assessment

CLIENT

Manildra Group

PROJECT

Alterations and Additions to the Manildra Group Grain Handling Facility
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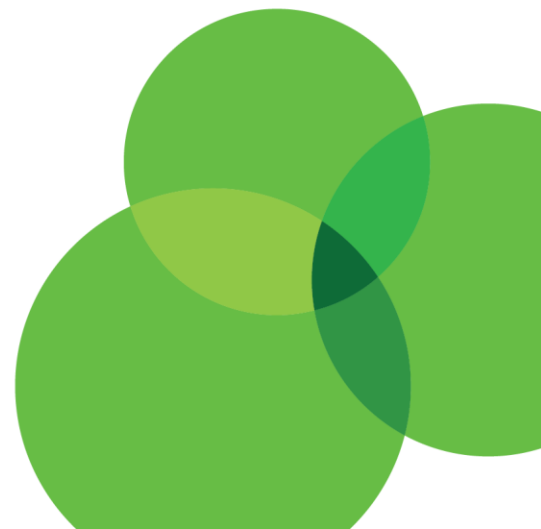


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1. Introduction

1.1. Overview

Currajong Pty Ltd (Currajong) have been engaged by the Manildra Group to prepare a Traffic Impact Assessment (TIA) to support a Development Application (DA) for the proposed alterations and additions to their existing Grain Handling Facility at Lot 3 DP 1220512, Tysons Road, Tabbita.

The TIA has been carried out to provide details on the construction and operational phases of the proposed development and examine the potential traffic impacts of these phases of development. It also provides an assessment of the relevant standards to be applied to road access and traffic management features of the proposed subdivision, including assessment against State Environmental Planning Policy (Transport and Infrastructure) 2021, TfNSW Guide to Traffic Generating Developments and the AUSTRROADS Guide to Intersection Design.

1.2. Application Particulars

Applicant	Manildra Group
Landowner	Manildra Group
Site	Lot 3 DP 1220512
Proposal	Alterations and additions to existing Grain Handling Facility
Zoning	RU1 Primary Production
Road Access	Tysons Road
Consent Authority	Carrathool Shire Council
Road Authority	Carrathool Shire Council

1.3. Purpose of this Report

This report presents the following considerations in relation to traffic generation and associated impacts relating to proposed alterations and additions to the Manildra Group Grain Handling Facility at Tabbita. The TIA has been prepared as a single document of several sections as follows:

Section 1	Introduces the project
Section 2	Provides a description of the development site
Section 3	Provides a description of development proposal
Section 4	Details the existing transport network and services within the locality of the development site
Section 5	Describes the traffic generation and movements from the proposal
Section 6	Assesses the traffic impacts of the proposal against relevant standards
Section 7	Provides the conclusion for the assessment of traffic matters



2. DEVELOPMENT SITE DESCRIPTION

2.1. Site Description

The Manildra Group Grain Handling Facility is located on Lot 3 DP 1220512, Tysons Road, Tabbita. The site has access to Tysons Road which is a local road managed by Carrathool Shire Council. Tyson Road links to the Kidman Way (approximately 550m west of the site), which is a State Road managed by TfNSW. The Temora Roto Railway is also located to the west of the site, with a level crossing of Tysons Road located approximately 400m west of the Manildra Group Grain Handling Facility and a further 150m north-east of the Kidman Way. Key features of the site and its existing environs are as follows:

- The total area of the site is approximately 14.85ha.
- The site is generally cleared of native vegetation.
- The land is fenced along all boundaries with standard post and wire fencing.
- There are existing grain storage bunkers, weighbridge, sample stand, toilet amenities and an onsite wastewater management system (septic tank) on the site.
- There is one access / exit servicing the site from Tysons Road, located towards the eastern of the site. Tysons Road is a two-way bitumen sealed local road with a railway level crossing approximately 150 north-east of Kidman Way and formed table drains and native vegetation within the road reserve.
- The land is not shown as flood affected or bushfire prone on available mapping.
- The sign-posted speed limit along Tysons Road and the Kidman Way is 100km/hr.

Figure 1 shows the location of the Manildra Group Grain Handling Facility in relation to roads and railways and Tabbita.

Figure 1 – Site Locality Map



2.2. Surrounding Land Use

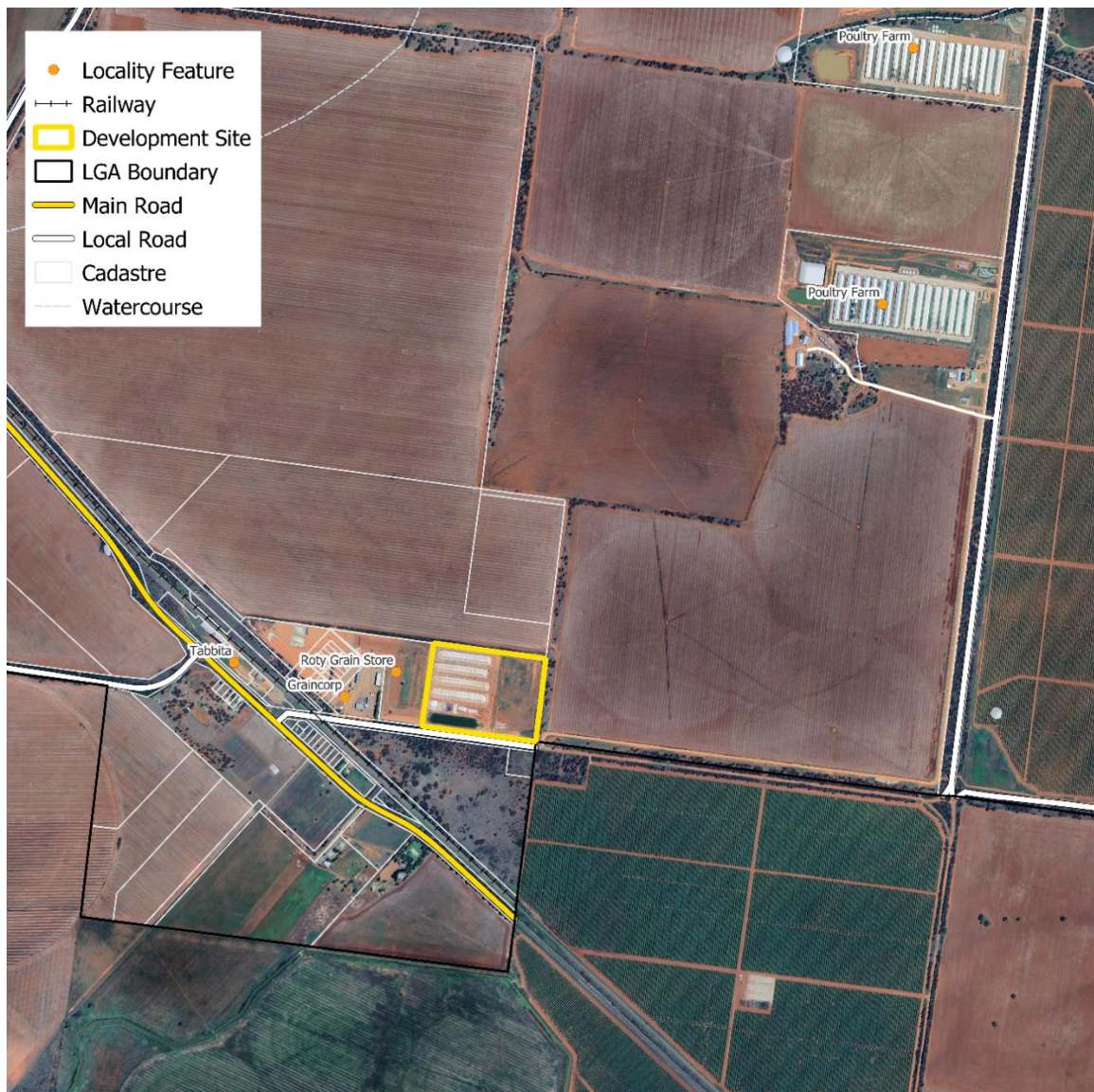
The Manildra Group Grain Handling Facility is located in a rural precinct made up of agricultural produce industries, intensive agricultural facilities and broad-acre farming businesses that rely on Tysons Road for practical and legal access.

Along Tysons Road (from its intersection with The Kidman Way) is a Graincorp Grain Handling Facility, Roty Grain Store, Manildra Group Grain Handling Facility and several poultry farms further to the east.

Further afield is the historic settlement of Tabbita comprising isolated dwellings, broad-acre farms and several poultry farms and a cattle feedlot with access to Tabbita Lane.

Figure 2 shows the location of the Manildra Group Grain Handling Facility in relation to surrounding land-uses.

Figure 2 – Adjoining Land-uses Map



3. DESCRIPTION OF THE PROPOSAL

3.1. Overview of the Proposal

The development proposal involves proposed alterations and additions to the Manildra Group Grain Handling Facility at Lot 3 DP 1220512, Tysons Road, Tabbita. The existing Grain Handling Facility comprises five (5) bunker storages, 10 megalitre (ML) retention pond, weighbridge, sample stand, toilet amenities and septic tank and an existing entry / exit towards the eastern end of the site on Tysons Road. The proposed alterations and additions to the Grain Handling Facility are as follows:

Stage 1 Work:

- Slight reconfiguration of Bunkers B1 to B5 approximately 15m to north to make way for an expansion of the existing detention pond.
- Enlargement of the existing 10ML detention pond to provide 19ML stormwater retention capacity.
- Construction of new internal roads to minimise traffic impacts on Tysons Road.
- Erection of a new workshop (container / awning structure) and staff amenities building (crib room) as well as the installation of new water storage tanks, car park and septic system.
- Upgrading of the existing driveway access onto Tysons Road located towards the eastern end of the site to function as the entry into the grain handling facility.
- Construction of a new driveway access onto Tysons Road towards the western end of the site to function as the exit from the grain handling facility. Roadside vegetation clearing of approximately 200m² of native vegetation would be required to accommodate the proposed new exit.
- Upgrading of culverts adjacent to the site entrance and exit under Tysons Road.
- Closure of the existing pipe draining stormwater from Lot 2 DP 1220512 into the Manildra Group site (Lot 2 DP 1220512) to allow implementation of the above.
- Maintenance of the existing weighbridge, sample stand, toilets and septic system.

Stage 2 Work:

- Installation of two new grain bunkers B6 and B7 towards the eastern portion of the site.
- Construction of new internal roads to integrate bunkers B6 and B7 with other facilities on the site.

3.2. Proposed Practical and Legal Access Arrangements

A detailed description of the proposed access arrangements is as follows:

- No direct access to be gained from The Kidman Way.
- Road access to continue from Tysons Road, which is a bitumen sealed local road travelling east of the Kidman Way.
- Upgrading of the existing driveway access onto Tysons Road located towards the eastern end of the site to function as the entry into the grain handling facility.
- Construction of a new driveway access onto Tysons Road towards the western end of the site to function as the exit from the grain handling facility. Roadside vegetation clearing of approximately 200m² of native vegetation would be required to accommodate the proposed new exit.
- Operation of grain receivals on a seasonal basis, whereby the majority of activity is conducted for approximately 10 weeks each year by semitrailers, B-doubles and Road Trains.
- Dispatch of grain by B-doubles west of the site via Tysons Road and then southwards along The Kidman Way.



4. DESCRIPTION OF TRANSPORT NETWORKS

4.1. Road Network

The provision of roads within an urban area provides four main functions:

1. To cater for moving vehicles.
2. To cater for parked vehicles.
3. To cater for pedestrians and bicycle traffic.
4. To allow for development and provide access to adjoining property.

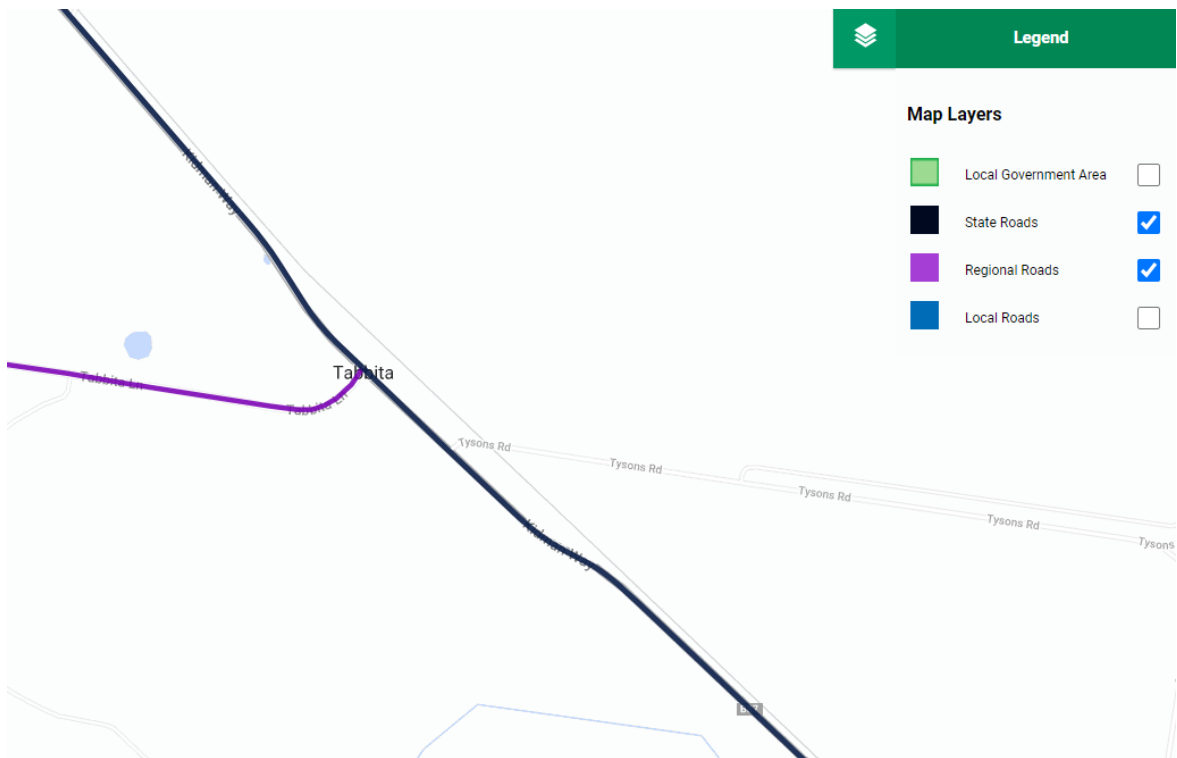
In carrying out the above functions, a road must also be capable of handling the traffic demands placed on it. Roads have varying capacities dependent on the classified function they are performing. The NSW administrative road hierarchy comprises the following road classifications:

- State Roads (TfNSW managed).
- Regional Roads (Council managed, with part funding by the State).
- Local Roads (Council managed).

The Manildra Group Grain Handling Facility is located near the settlement of Tabbita, with existing access to Tysons Road which is a Local Road managed by Carrathool Shire Council. A level crossing of the Temora Roto Railway is located on Tysons Road, approximately 400m west of the site. The Kidman Way is located approximately 550m west of the site, which is a State Road managed by TfNSW. All other roads in the immediate area of the site are local roads.

A map showing the road network in relation to Tabbita and the Manildra Group site is provided in Figure 3 below:

Figure 3 – NSW Road Hierarchy (TfNSW NSW Road Network Classification)



A description of the main road and local road networks available to the site is presented in Tables 1 and 2.

Table 1 – The State Road Network (The Kidman Way)

Road Characteristics	Design Requirement	Observations
Road classification	State Road	The Kidman Way is a State Road managed by TfNSW. No direct access onto The Kidman Way is proposed. The Kidman Way is located approximately 550m west of the site.
Alignment	East / West	The Kidman Way has a north-westerly / south-easterly alignment at its intersection with Tysons Road.
Number of lanes	One (1) each way	The Kidman Way has two lanes, one lane heading in a northerly direction and one southbound lane.
Carriageway type	Divided	The Kidman Way includes formal line marking with a broken centreline at its intersection with Tysons Road.
Carriageway width	9m	Measured from edge of seal to edge of seal, the road carriageway is average 13m wide. The road shoulder at and around the intersection of Tysons Road varies between 1m to 2m wide.
Speed limit	80km/hr (west) 50km/h (east)	The sign-posted speed limit along The Kidman Way is 100km/h, including through the intersection of The Kidman Way and Tysons Road.
Load limit	Class 1	As per the NSW Class 1 Load Carrying Vehicle Operator's Guide 2023
Kerb	No	Formed tabled drains are located on each side of The Kidman Way.
School zone	No	There are no school zones along The Kidman Way near Tabbita.
Parking controls	Unrestricted	There are no signposts limiting parking along The Kidman Way near Tabbita.
Footpaths	No	There are no formed footpaths on The Kidman Way near Tabbita.
Intersections	Yes	The Kidman Way intersects with Tysons Road is the nearest intersection to the Manildra Group site to the east. The sight distance at this intersection is in excess of 500m.
Forms site frontage	No	The Manildra Group site does not adjoin The Kidman Way.
Annual Average Daily Traffic (AADT)	972	Traffic count data obtained from the NSW Traffic Volume Viewer 2009 shows an average of 6,111 vehicles per day along John Street, split roughly equal between northbound and southbound traffic. No data was available for either
% Heavy Vehicles	14.66%	Traffic count data obtained from the NSW Traffic Volume Viewer shows approximately 14.5% of all vehicle movements are trucks.



Table 2 – Local Road Network

Road Characteristics	Design Requirement	Observations
Road classification	Local Roads	The local road network servicing the site comprises Tysons Road.
Alignment	North-west / South-east	Tysons Road follows an east-west alignment in close proximity to the development site.
Number of lanes	One (1) each way	Two-way roads with varying lane widths.
Carriageway type	Divided	No formal line markings.
Carriageway width	9m	Measured from edge of seal to edge of seal, roads average 7m in width.
Speed limit	50km/hr	Tyson Road is sign-posted 100km/h. Design speed is estimated at 70km/h at the development site.
Load limit	N/A	No sign-posted load limits apply on local roads.
Kerb	No	Tysons Road has shallow formed tabled drains.
School zone	No	The development is not adjacent or within a school zone.
Parking controls	50km/h	There are no signposts limiting parking along local roads.
Footpaths	No	There are no formed footpaths along local roads.
Intersections	Yes	The Kidman Way intersects with Tysons Road, approximately 550m west of the Manildra Group Tabbita Grain Handling Facility. The sight distance at the intersection of The Kidman Way and Tysons Road is in excess of 500m north and south of the intersection. There are no auxiliary lanes at this intersection.
Forms site frontage	Yes	The site has frontage to Tysons Road.
Annual Average Daily Traffic (AADT)	N/A	Traffic count data is not available from Carrathool Shire Council for Tysons Road. The Manildra Group kept a record of all grain receipts for the 2023/24 harvest. Traffic count data has been estimated along Tysons Road at approximately 75 vehicles per day.
% Heavy Vehicles	5.3%	It is estimated that 60% of all vehicle movements are from trucks.

4.2. Road Accident History

The accident history of Tabbita was researched to determine whether there were any issues in and around the locality (including The Kidman Way) such as crashes involving fatalities or serious injury or crash clusters. Data from the TfNSW Centre for Road Safety was reviewed to determine crash history.

A map showing the crash history in the locality is shown in Figure 4. Fatal crashes are recorded as an orange circle on the map, with serious crashes shown as a green circle on the map, moderate crashes shown as a blue circle on the map and minor crashes as a purple circle on the map.



Figure 4 – Tabbita Crash History 2017 to 2023



Source: TfNSW – Centre for Road Safety: Crashes Map

During the period from 2017 to 2023 no traffic accidents are recorded on Tysons Road on the TfNSW crash history map. The nearest recorded accident (being a serious injury accident at night) was recorded at the corner of Kidman Way and Tabbita Lane, approximately 1km west of the site.

4.3. Bus Services

There are no routine public bus services directly available to the site.

4.4. Railway Network and Train Services

The Temora Roto Railway is located on Tysons Road, approximately 400m west of the site and 150m east of The Kidman Way. The Temora Roto Railway operates between Temora and Hillston, primarily for grain haulage. Train movements are estimated to average one (1) train per week.



5. TRAFFIC GENERATION AND MOVEMENT

The potential traffic generation associated with the proposed development has been estimated with reference to the following:

- TfNSW Guide to Traffic Generating Developments 2002.
- TfNSW Technical Direction 2013.
- Available traffic counts.
- Site inspection and general observation of traffic movements in and around the development site.

5.1. Existing Daily Traffic Volumes

NSW Traffic Volume Viewer for The Kidman Way 2011-12 at Tabbita shows an average of 972 vehicles per day, split roughly equal between northbound and southbound traffic. Estimated traffic data has been rounded up to 1,000 vehicles per day to account for likely increased traffic volumes in 2024.

Carrathool Shire Council advises they keep no record of the existing daily traffic data for Tysons Road. An estimation of traffic volumes has been undertaken, based on known land-uses serviced by Tysons Road and observation of road conditions.

The existing daily traffic volumes is summarised in Table 3 below, including an estimate of traffic on Tysons Road.

Table 3 – Counted and Estimated Existing Daily Traffic Volumes

Road / Intersection	Existing AADT	Location
The Kidman Way	972	Tabbita
Tysons Road	75	Tabbita

A total of 94,000 tonnes of grain was received at the Manildra Group Grain Handling Facility at Tabbita during the 2023/24 harvest. The Manildra Group kept a record of all traffic received at their weighbridge during the 2023/24 harvest. The total volume of grain receipts and traffic movements are shown in Table 4.

Table 4 – Existing Traffic Generation at the Manildra Group Grain Handling Facility, Tabbita

Grain receipts / deliveries	Receival trucks trips (in and out movements)	Average delivery of grain per vehicle	Total grain storage
Total truck movements to achieve 94,000 tonnes over 10 weeks, as per 2023/24 harvest	4,080	43+ tonnes per truck	94,000 tonnes
Total grain delivery movements to Manildra Flour Mills, over 250 days (8 hours)	4,372	43 tonnes per truck	94,000 tonnes

5.2. Estimated Development Traffic Generation

The proposed alterations and additions to the Manildra Group Grain Handling Facility is expected to generate traffic during the construction of the alterations and additions and the operation of the facility, especially during the harvest season. A breakdown of estimated traffic generation from the various phases of development is as follows:

1.3.1. Estimated Traffic Generation during Construction Phase

A preliminary Construction Program Schedule (CPS) has been drafted for the project, which provides an indication of the program of works, including the duration of the construction phase, key milestones and opportunities for overlapping of scheduled works.

The CPS is a conservative estimation of the timeframe of the main aspects of works.



Completion of the works is estimated to take up to 100 working days (20 weeks), with key components of the construction activities scheduled as follows:

- Weeks 1 to 3 – Obtain all relevant approvals to commence construction works.
- Week 3 – Installation of traffic, environmental and site safety controls (i.e. sediment fences, traffic control measures).
- Weeks 3 to 18 – Preparation of bulk earthworks, drainage formation works, access upgrades to Tysons Road, erection of building and internal road works.
- Week 20 – Two coat bitumen seal of new road accesses and final miscellaneous works.

For the purposes of assessing the impacts of construction traffic, it is assumed that all traffic will enter and leave the development site via The Kidman Way and then east along Tysons Road.

The estimated construction traffic is detailed as shown in Table 5.

Table 5 – Estimated Daily Traffic Generation (Construction Phase)

Vehicle Type	Average Daily Trips	Construction timeframe	Total Trips
Gravel trucks (predominantly truck and dog configurations)	7	75 days	525
Concrete trucks (rigid trucks)	2	15 days	30
Miscellaneous truck delivery of plant and equipment (predominantly semitrailers)	2	15 days	30
Light vehicles / workers	5	100 days	500
Total CPS vehicle trips			1,085
Total average daily trips			10.85

The figures are considered to be conservative, based on most plant and equipment being operated / stored on the property over several weeks and some sharing of trips between workers.

1.3.2. Estimated Traffic Generation (harvest period)

The trip generation from the operation of the Manildra Group Grain Handling Facility post construction has been calculated using the traffic count data undertaken by the Manildra Group during the 2023/24 harvest. An estimation of the additional traffic generated from the facility at its intended 150,000 tonnes of grain storage is provided in Table 6 and 7.

Table 6 – Estimated Traffic Generation (harvest)

Grain receivals / deliveries	Receival trucks trips (in and out movements)	Average delivery of grain per vehicle	Total grain storage
Total truck receival movements estimated to achieve 150,000 tonnes per annum	6,976	43+ tonnes per truck	150,000 tonnes
Total increase in truck movements from existing	2,896	43+ tonnes per truck	56,000 tonnes
Total operational vehicle trips per day			100
Peak hour vehicle trips			10
Peak hour additional vehicle trips			5



1.3.3. Estimated Traffic Generation (dispatch period)

The trip generation from the dispatch of B-doubles from the Manildra Group Grain Handling Facility at Tabbita to Flour Mills is estimated Table 7.

Table 7 – Estimated Traffic Generation (dispatch)

Grain receipts / deliveries	Receival trucks trips (in and out movements)	Average delivery of grain per vehicle	Total grain storage
Total truck delivery of 150,000 tonnes per annum to Manildra Flour Mills, over 250 days (8 hours)	6,976	43+ tonnes per truck	150,000 tonnes
Total operational vehicle movements per day			28
Peak hour vehicle movements			5



6. TRAFFIC IMPACT ASSESSMENT

The following section presents an assessment of the proposed development with reference to the requirements of the Transport and Infrastructure SEPP 2021.

6.1. Statutory Compliance Assessment

Subdivision 2 of Division 17 of the Transport and Infrastructure SEPP 2021 sets the parameters for developments in or adjacent to road corridors and road reservations, including:

- Developments with frontage to classified roads.
- Impacts of road noise on new developments.
- Proposals that constitute traffic generating development the process for notification to TfNSW.
- The relevant matters the consent authority must take into consideration.

The following is an assessment of the relevant Clauses under Subdivision 2, Division 17 of the Transport and Infrastructure SEPP 2021.

Development with Frontage to Classified Road

The subject land does not have frontage to The Kidman Way. Detailed assessment of the proposal against the requirements of Section 2.119 of the Transport and Infrastructure SEPP 2021 is not necessary in the circumstances .

Impact of Road Noise or Vibration on Non-Road Development

Section 2.120 of the Transport and Infrastructure SEPP 2021 requires consideration of noise and vibration impacts from proposed new roads on the operation of residential accommodation, places of public worship, hospitals and educational establishments or centre-based childcare facilities.

The proposed development is for alterations and additions to an existing grain handling facility. There are no dwellings, schools or other sensitive land-uses in close proximity of the development site.

The NSW Road Noise Policy 2011 (RNP) sets out noise criteria that provide for a degree of amenity appropriate for the land use and road category. Assessment of the RNP criteria indicates noise emissions and vibration associated with traffic along Tysons Road and The Kidman Way are unlikely to have a significant noise impact on sensitive land-uses due to traffic generation levels and the separation between sensitive land-uses and traffic.

Excavation in or Immediately Adjacent to Road Corridors

Section 2.121 of the Transport and Infrastructure SEPP 2021 requires notice of a DA be provided to TfNSW if penetration of the ground to a depth of at least 3m below ground level (existing) is proposed adjacent to the listed classified roads. No deep excavation works on The Kidman Way are to occur on this roadway.

Infrastructure Railways

Section 2.97 of the Transport and Infrastructure SEPP 2021 requires consideration of development adjacent to rail corridors. The Manildra Group Grain Handling Facility does not adjoin the Temora Roto Railway.

Section 2.98 of the Transport and Infrastructure SEPP 2021 requires consideration of any excavation proposed in, above, below or adjacent to a rail corridor. The Manildra Group Grain Handling Facility does not adjoin the Temora Roto Railway and no works are proposed on railway land.

Section 2.100 of the Transport and Infrastructure SEPP 2021 requires consideration of development within or adjacent to interim rail corridors. The Manildra Group Grain Handling Facility does not adjoin any interim rail corridors.

Traffic Generating Development

Section 2.122 of the Transport and Infrastructure SEPP 2021 requires notice of a DA be provided to TfNSW if the proposed development is listed in Column 1 of Schedule 3 of the Transport and Infrastructure SEPP 2021 and is of a size of capacity that is detailed in Column 2 or 3 of the table. The proposed development does not constitute any activity in Column 1 of Schedule 3 that meets the size or capacity thresholds listed in Columns 2 or 3.

6.2. Intersection Assessment (Kidman Way and Tysons Road)

The following criteria determines the standards for intersection design.

- AUSTRROADS Guide to Road Design – Part 4: Intersections and Crossings (AGRD Part 4).
- AUSTRROADS Guide to Road Design – Part 4A: Intersections and Crossings: General (AGRD Part 4A).
- Austroads Guide to Traffic Management Part 6 (AGTM Part 6).

According to Section 2.2 of AGRD Part 4, the types of right-turn and left-turn treatments provided in a design usually define the type of intersection. There are essentially three types of turn treatments available, namely:

- A basic turn treatment (BA) where turning vehicles may share the lane with through traffic movements.
- An auxiliary lane turn treatment (AU) where a separate lane is provided to enable the turn to be performed in an additional lane.
- A channelised turn treatment (CH) which provides a traffic island to enhance the safety of right-turning or left-turning vehicles.

The intersection of The Kidman Way / Tysons Road is configured as a basic un-signalised intersection controlled by give way signage with no auxiliary lanes or channelisation. For the purposes of estimating existing / proposed traffic generation impacts on this intersection, the following assumptions have been made:

- Construction traffic volumes are very low.
- Both the existing and proposed traffic volumes have been assessed.
- 90% of all traffic is assessed to enter and leave the site via Tysons Road and then onto The Kidman Way, west of the site. Only 10% of traffic will travel along Tysons Road to the east of the site.
- The split of truck movements received during harvest is 50/50 north and south along The Kidman Way.
- The split of truck deliveries post-harvest is 100% south along The Kidman Way.

Accounting for existing traffic volumes described in Section 5.1 as well as the likely increases in traffic volumes generated by the proposed development described in Section 5.3, an assessment has been undertaken to determine the suitability of the intersection design for The Kidman Way and Tysons Road.

The traffic data is detailed in Table 8 below.

Table 8 – The Kidman Way / Tysons Road Intersection Assessment

Item	Item Name	Count	Calculation	Note(s)
Existing Trips				
A	Total AADT	972	Table 3	
B	Total Traffic Flow (Q ^m) - vehicles per hour	77.7	Item A x 8%	Formula as per Figure 3.25 of s3.3.6 of AGTM Part 06. As no peak hour percentages are available from traffic count data, assume 8% of the AADT at Item A.
C	Turn Volume (Q ^L) – vehicles per hour	38.85	Item B x 50%	Traffic count data not available. Calculation assumes 50% of traffic at intersection of The Kidman Way and Tysons Road.
D	Turn Volume (Q ^R) – vehicles per hour	38.85	Item B x 50%	Traffic count data not available. Calculation assumes 50% of traffic at intersection of The Kidman Way and Tysons Road.
New Trips				

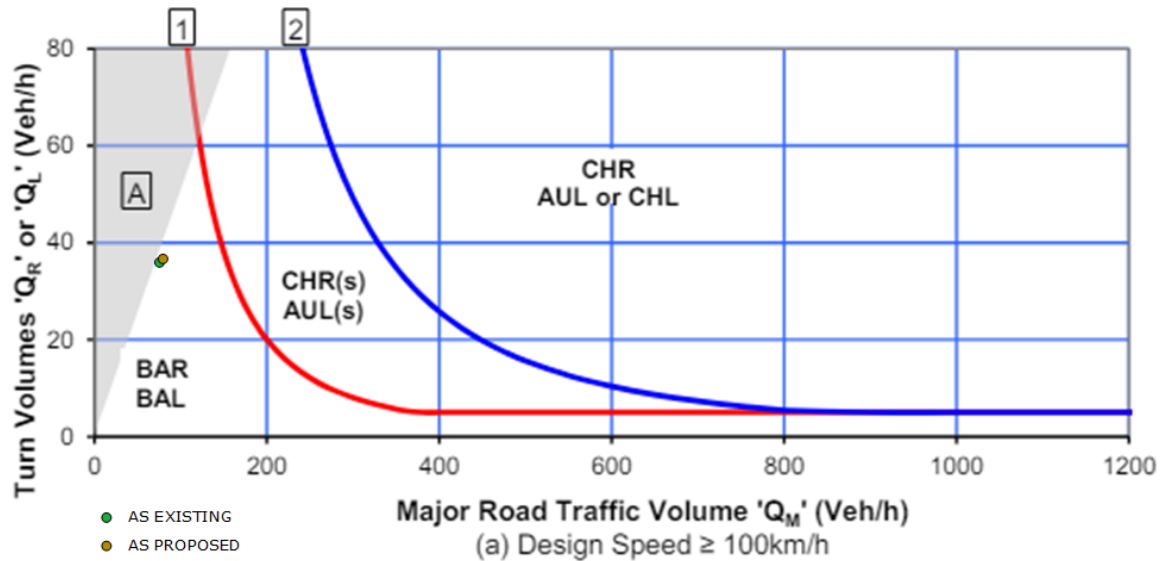


Item	Item Name	Count	Calculation	Note(s)
E	Total AADT	16.08	(Table 6, Item D) x 75%	The calculation assumes that 75% of all new trip movements will utilise this intersection.
F	Total Traffic Flow (Q ^m) - vehicles per hour	1.2	Item E x 8%	Formula as per Figure 3.25 of s3.3.6 of AGTM Part 06. As no peak hour percentages are available from traffic count data, assume 8% of the AADT at Item E.
G	Turn Volume (Q ^L) – vehicles per hour	0.6	Item F x 50%	Traffic count data not available. The calculation assumes that 50% of all new trip movements into Tysons Road would originate from the north.
H	Turn Volume (Q ^R) – vehicles per hour	0.6	Item F x 50%	Traffic count data not available. The calculation assumes that 50% of all new trip movements into Tysons Road would originate from the south.
Proposed Conditions (Existing + new)				
I	Total AADT	988.08	Item A + Item E	
J	Total Traffic Flow (Q ^m) - vehicles per hour	78.9	Item B + Item F	
K	Turn Volume (Q ^L) – vehicles per hour	39.45	Item C + Item G	
L	Turn Volume (Q ^R) – vehicles per hour	39.45	Item D + Item H	

Section 3.3.6 of the AGTM Part 6 provides the methodology for determining the warrants for BA, AU and CH turn treatments based on the design speed of the road, expected traffic and turn volumes and other specific characteristics of the road environment. Based on this methodology, the existing and proposed traffic loads for The Kidman Way / Tysons Road intersection have been plotted on the relevant graph for a major road with a design speed of 100km/h and this is shown in Figure 5.



Figure 5 – The Kidman Way / Tysons Road Warrants for Turn Treatments on Major Roads



Source: Section 3.3.6 of the AGTM Part 6

Based on the work presented in Table 6 and Figure 8, the following conclusions are made with respect to the intersection of The Kidman Way and Tysons Road:

- The proposed development is expected to generate an additional 41 daily trip movements during the 10-week peak harvest period.
- Assuming 75% of the trip movements utilise The Kidman Way / Tysons Road intersection, the development can be expected to increase the traffic flow at this intersection by 16.08 daily trips, or 1.2 peak hour trips.
- The existing intersection configuration is suitable for existing and proposed traffic loads. No auxiliary lane turn treatments or channelised turn treatments are warranted.

6.3. Level Crossing Assessment

The Temora Roto Railway is located on Tysons Road, which passes through the railway level crossing located approximately 400m west of the development site, with over 90% of all traffic to pass through this crossing. The intersection of The Kidman Way and Tysons Road is located approximately 150m east of the Tysons Road railway level crossing. The existing railway level crossing has a stop sign, with no lights or gates.

The Temora Roto Railway branches from Temora and travels west and north-west through the Western Riverina to the towns of Griffith and Hillston. The line is used for goods haulage (mainly grain) and there are no rail passenger services. The railway station at Tabbita closed in 1975.

There may be stopping / queuing of motor vehicles at the level crossing on the Tysons Road to allow passing of trains travelling along the Temora Roto Railway. However, train movements are assessed to be very low and would generally occupy the level crossing for less than three minutes once or twice per week.

An assessment of a grain train crossing Tysons Road has been carried out under peak hour traffic conditions. There is adequate capacity in Tysons Road (west of the level crossing and east of The Kidman Way) to store peak hour vehicles east and west of the railway level crossing without impacting on traffic functionality, including the potential for queuing of vehicles into the intersection of The Kidman Way and Tysons Road. The potential for vehicle queuing impacting on the operation of the intersection of The Kidman Way and Tysons Road is assessed to be low.

No upgrades to level crossing facilities are considered warranted.



6.4. Local Road Network Assessment

As described in Section 6.2.1, all traffic is required to enter and leave the site via Tysons Road.

Traffic Count data is not available for Tysons Road. Observation of the road during harvest and post-harvest periods indicate existing daily traffic volumes are low and within the capacity of the surrounding local road network.

Tysons Road is owned and maintained by Carrathool Shire Council to a bitumen sealed standard. The shire road is assessed to have capacity to accommodate the modest increases in daily trip movements that can be attributed to the proposed alterations and additions – calculated to be in order of 21 trips. An inspection of Tysons Road has not identified any significant traffic safety concerns. It is assessed that the proposed development is generally within the capacity of the local road network.

The following specific upgrades are proposed:

- Construction of new internal roads to minimise traffic impacts on Tysons Road.
- Upgrading of the existing driveway access onto Tysons Road located towards the eastern end of the site to function as the entry into the grain handling facility in accordance with Figure 7.4 of AUSTRROADS Guide to Road Design – Part 4: Intersections and Crossings (AGR Part 4).
- Construction of a new driveway access onto Tysons Road towards the western end of the site to function as the exit from the grain handling facility in accordance with AUSTRROADS Guide to Road Design – Part 4: Intersections and Crossings (AGR Part 4). Roadside vegetation clearing of approximately 200m² of native vegetation would be required to accommodate the proposed new exit.
- Upgrading of culverts adjacent to the site entrance and exit under Tysons Road.

Details of the proposed road upgrades have been shown on the design drawings prepared by Calare Civil and submitted in support of the DA.

6.5. Internal Roads and Parking Assessment

Internal road works and parking areas have been designed by Tahlee Consulting Services in accordance State Environmental Planning Policy (Transport and Infrastructure) 2021 and the TfNSW Guide to Traffic Generating Development to provide the following:

- Upgraded access (eastern end of site) for ingress only.
- All-weather internal roads for efficient / safe unloading and loading of trucks.
- New access (western end of site) for exit only.
- New carpark for staff and visitors near the proposed new office / crib room, including one concrete surface disabled access space and concrete walkway / ramp to the crib room.



7. CONCLUSION

Currajong Pty Ltd have been engaged by the Manildra Group to prepare a Traffic Impact Assessment to provide additional information relating to a Development Application that is intended to be lodged with Carrathool Shire Council for proposed alterations and additions to their existing Grain Handling Facility at Tabbita.

The traffic assessment has found that the proposed development can be accommodated at Tysons Road, The Kidman Way and surrounding local road network, with upgrades to driveway accesses and road drainage infrastructure proposed to ensure the Manildra Group Grain Handling Facility continues to operate successfully during season harvests and post-harvest delivery phases.

No upgrades to the intersections of The Kidman Way and Tysons Road and the railway level crossing of Tysons Road are warranted.

No significant traffic generation, sight distance, speed, active transport or railway issues have been identified as significant impacts from the proposed development.

Regarding driveways, internal roads, parking and access provision, all requirements of State Environmental Planning Policy (Transport and Infrastructure) 2021 and the TfNSW Guide to Traffic Generating Development can be met on proposed new allotments.





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