Proposed Tyre Recycling Facility

Rutherford Tyre Recyclers

Traffic Impact Assessment and Traffic Management Plan

May 2024

SECA solution

Proposed Tyre Recycling Facility
9 Burlington Place, Rutherford, NSW

Traffic Impact Assessment and Management Plan

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Quality Traffic Advice

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Chapter 1 Introduction

1.1 Background

Seca Solution Pty Ltd has been commissioned by Jackson Environment and Planning Pty Ltd on behalf of Rutherford Tyre Recyclers to prepare a traffic, access and parking assessment for the proposed change of use to the existing industrial shed located at 9 Burlington Place, Rutherford, NSW as shown in Figure 1 and Figure 2 following.

Figure 1 Subject site in the context of the local road network

1.2 The proposed project

Rutherford Tyre Recyclers Pty Ltd are seeking approval to establish a tyre recycling facility within an existing shed located at 9 Burlington Place, Rutherford (Lot 3005 / DP1040568) (the Proposal). The operation can be defined as a 'resource recovery facility'. The materials produced will be crumb rubber, recovered steel, recovered cotton, rubber pavers and rubber matting.

The Site covers an area of 1,655m^2, with a ~290m^2 existing shed on the site that has a ~35m^2 office attached on the eastern side of the shed. The Site is supported by an outdoor concrete hardstand area with access to the Site from Burlington Place via a driveway. The driveway provides access to the outdoor hardstand which has access to the shed, open awning and office. The office contains staff amenities and is located on the western side of the Site, near the Site entrance.

Prior to operations, minor infrastructure changes to the industrial shed and Site are proposed to enable the fit-out and use of the Site as a best practice tyre recycling facility. This will involve enclosing the existing open awning at the back of shed, removing the dividing wall and installing two roller doors, creating a larger, fully enclosed industrial shed on Site. The total area of the new shed will be ~638m^2. The two new roller doors will allow access into the

industrial shed. A 9m above ground weighbridge will be installed on the hardstand area close to the access point of the Site. The Site will have new markings to show the loading bay area and five car spaces for staff.

The Site will receive an average of 15 tonnes of used whole tyres per day, approximately 4,500 tonnes per annum. No other material will be received on-site. All incoming whole tyre deliveries are delivered into the Site by a 7.5 tonnes medium rigid vehicle (MRV), with access onto Site from Burlington Place. There will be four (4) deliveries of tyres per day. The MRV will proceed to the 9m above ground weighbridge to be weighed before proceeding to the loading area. The loading area is located outside the roller doors to the industrial shed and tyres will be unloaded by hand and immediately stacked in the Whole Tyre Storage Area. The MRV will be backloaded with products produced onsite before exiting the Site by proceeding further onto site, reversing back through the industrial building roller doors and turning right onto the weighbridge. The MRV will be weighed on the weighbridge to track the amount of product being removed from Site and will then exit the Site via the driveway access onto Bulington Place. An average of 18 vehicle movements (9 inbound and 9 outbound) will be generated by the Site per day. This includes up to five (5) staff vehicles and two trips by two 7.5 tonnes medium rigid vehicle (MRV) trucks. There will be one weekly waste collection on site.

All tyre recycling activities will occur inside the shed, including storage of all materials. No tyres or residual materials will be stored outside on the hardstand area. The used whole tyres are turned into crumb rubber on the Waste Tyre Recycling Production Line, which has a 98% efficiency. The first step involves the tyre de-beader to remove the metal wiring from inside the tyre. The tyre is then cut into a long rubber strip using the tyre strip cutter before being placed onto a conveyor belt and loaded into the whole tyre shredder. The next stage involves crushing the rubber blocks into mesh rubber powder using the double roller rubber breaker. A vibration screen is then used to separate the different sized pieces of crumb rubber. The Waste Tyre Recycling Production Line produces crumb rubber, residual steel and residual cotton from the whole tyres.

Some of the crumb rubber produced on-site will be used to produce rubber tiles and rubber mats in the Rubber Tiles Production area. This involves a small thermal-moulding process that coverts crumb rubber into rubber matting or rubber tiles. The first step involves mixing the rubber crumb with glue to create the bottom of the rubber tile. The top part of the rubber tile involves mixing rubber crumb, pigment and glue together in a barrel mixer. A vulcanizing machine is used to create vulcanized rubber tiles by compressing the rubber into dense, ultra durable, non-porous rubber tiles. The production of tiles or mats depends on the size of the mould used.

The facility will have two storage areas, both located on the eastern side of the industrial building. The Whole Tyre Storage Area will be used to stack the whole tyres after they have been delivered to the Site. The area capacity is 24m^3 with a maximum height of 3.5m. The Crumb Rubber Storage Area is used to store materials produced on site, including crumb rubber, recovered steel and cotton from the tyre recycling process and rubber tiles and mats produced on site. The rubber tiles and mats will be stored on pallets. The area capacity is 24m^3 with a maximum height of 3.5m. The storage areas will be marked on the concrete floor using hard wearing paint.

The tyre recycling facility will operate 6 days a week, with times varying for deliveries and recycling operations. A breakdown of the weekly operation is as follows:

- Crumb Rubber Production
  - Monday – Friday: 5am – 6pm
  - Saturday: 8am – 1pm
  - Sunday & Public Holidays – Closed
- Tyre Delivery
  - Monday – Friday: 7am – 6pm
  - Saturday: 8am – 1pm
  - Sunday & Public Holidays – Closed

Figure 2 Road layout surrounding the subject site

1.3 Planning Context

In preparing this document, the following guides and publications were used:

- The Guide to Traffic Generating Developments, Version 2.2 Dated October 2002 published by TfNSW;
- Austroads Guide to Traffic Management Part 12
- Maitland Development Control Plan 2011;
- Australian / New Zealand Standard – Parking Facilities Part 1: off-street car parking (AS2890.1:2004);

1.4 SEARS Issued

Planning Secretary's Environmental Assessment Requirements have been issued for the project in accordance with Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*. Schedule 3 of the Environmental Planning and Assessment Regulation 2021.

ISSUE	RESPONSE
details of road transport routes and access to the site	Item 2.2.1 Road Hierarchy Item 3.2 Access
road traffic predictions for the development during construction and operation	Item 4.1 Traffic Generation
an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development.	Item 4.4 Impact of Generated Traffic

1.5 Authority Requirements – Transport for NSW

The TIA should be tailored to the scope of the proposed development and include, but not necessarily be limited to, consideration of the following;

ISSUE	RESPONSE
A map of the proposed transport route/s identifying all public roads proposed to obtain access from the classified (State) road/s to the development site.	Figure 1 – Road Network Figure 8 & 9– Haul Routes
The total impact of existing and proposed development on the road network with consideration for a 10 year horizon. This should include; Identify Annual Average Daily Traffic (AADT) volumes with percentage heavy vehicles along the transport route/s and diagrammatically demonstrate AM and PM peak hour movements at key intersections.	Item 2 – Existing Situation Item 4.4 Impact of Generated Traffic Chapter 3 – Sidra Assessment
Background traffic data from published sources and/or recent survey data. The source of data and any assumptions are to be clearly explained and justified, including the growth rate applied to the future horizon.	Item 2.3 Traffic Flows Figure 3 and 4
The volume and distribution of proposed trips to be generated by the construction, operational and decommission phases of the development. This should identify the maximum daily and hourly demands generated by the development, particularly where they coincide with the network peak hour.	Item 4.2 Trip Distribution (Operational) Item 4.4.3 Impact of Construction Traffic
The type and frequency of design vehicles accessing the development site.	Item 3.2.3 Service Vehicle Access
Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, intersection treatments and any identified hazards. This should include; available sight distances at intersections along the proposed transport routes and any constraint to achieving the required sight distance for the posted speed limit.	Item 2 Road Hierarchy Item 3.2.2 Sight Distances
An assessment of turn treatment warrants in accordance with the Austroads Guide to Traffic Management Part 6 and Austroads Guide to Road Design Part 4A for intersections along the identified transport route/s, identifying the existence of the minimum basic turn treatments and addressing the need for any warranted higher order treatments.	Item 4.4.2 Peak Hour Impact on intersections Comment: Existing industrial roads with low traffic volumes.
Swept path analysis demonstrating the largest design vehicle entering and leaving the development, and moving in each direction through intersections along the proposed transport route/s.	Item 2.2.1 Road Hierarchy – Roads are nominated as B-Double routes and so no swept paths are required to suit the nominated design vehicle.

ISSUE	RESPONSE
Capacity analysis using SIDRA or other relevant application, to identify an acceptable Level of Service (LOS) at intersections with the classified (State) road/s, and where relevant, analysis of any other intersections along the proposed transport route/s.	Chapter 3 Sidra Assessment Item 4.4.2 Peak Hour Impact on intersections
A review of crash data along the identified transport route/s for the most recent 5 year reporting period and an assessment of road safety along the proposed transport route/s considering the safe systems principles adopted under Future Transport 2056.	Item 2.4 Road safety and Accident History Item 4.3 Impact on Road Safety
Strategic (2D) design drawings of all proposed road works and the site access demonstrating scope, estimated cost and constructability of works required to mitigate the impacts of the development on road safety, traffic efficiency and the integrity of transport infrastructure. Works must be appropriately designed for the existing posted speed limit.	No road works required
Site plan demonstrating site access, internal manoeuvring, servicing and parking areas consistent with the relevant parts of AS2890 and Council requirements.	Appendix A – Site Plan
Details of measures to address impacts and/or provide connections for public transport services and active transport modes, such as, public and school bus services, walking and cycling.	Item 4.5 Public Transport
Details of measures to ameliorate the impacts of road traffic noise, dust, and/or glare generated along the proposed transport route/s.	Chapter 5 Traffic Management Plan specifically Drivers Code of Conduct
Details of any Traffic Management Plan (TMP) proposed to address the construction and operation phases of the proposed development. The TMP should be prepared and implemented in accordance with *Australian Standard 1742.3* and the *Work Health and Safety Regulation 2017*. It is recommended that any TMP include, but not necessarily limited to, the following; A map of the primary transport route/s highlighting critical locations. An induction process for vehicle operators and regular toolbox meetings. Procedures for travel through residential areas, school zones and/or bus route/s. any proposed temporary measures such a Traffic Guidance Scheme (TGS) A Driver Code of Conduct for heavy vehicle operators. A complaint resolution and disciplinary procedure.	Chapter 5 Traffic Management Plan
Community consultation measures proposed for peak periods.	Prior to commencement of operations the applicant will engage with neighbours located in Burlington Place to discuss the proposed vehicle movements and timing to ensure that the proposal does not interfere with local operations during peak periods.

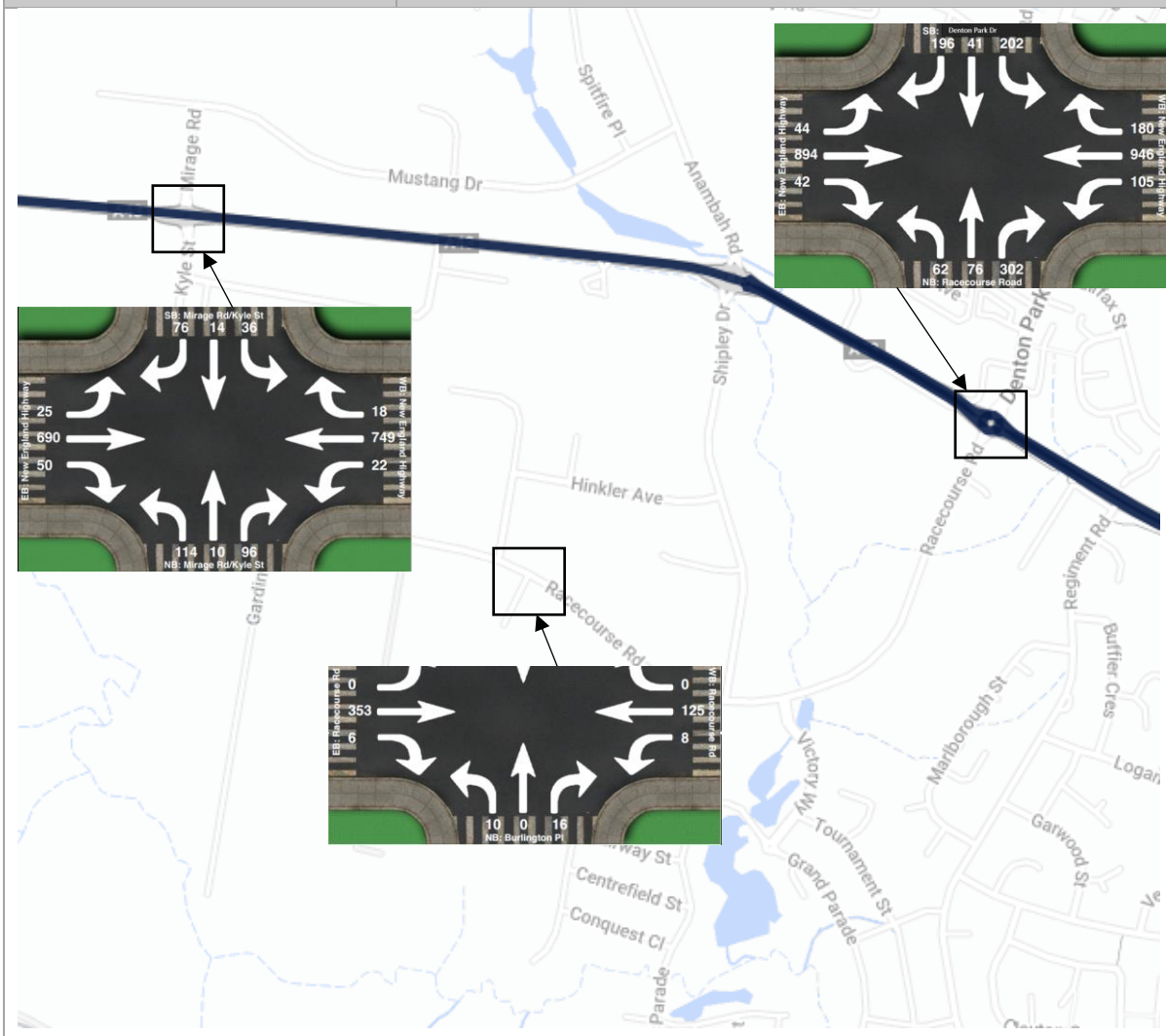
Chapter 2 Traffic Impact Assessment

Item	Comment
2.0 Existing Situation	
2.1.1 Site Location and Access	The subject site is located at the end of Burlington Place, a cul de sac with access from Racecourse Road within the industrial area in Rutherford south of the New England Highway.
2.2.1 Road Hierarchy	The major road through the locality is the **New England Highway** to the north of the industrial area. This road forms part of the State Road network and runs predominantly in an east-west-south direction. It acts as a local road for connections between the various towns along its length to connect to Maitland to the east and through to Newcastle, as well as a connection to the west to the Hunter Expressway and up to the Hunter Valley. In the general vicinity of the subject site, it provides two lanes of travel in both directions with the key intersections controlled by roundabouts in this location. Further east the key intersections are controlled by traffic signals to maintain capacity and reduce delays. The New England Highway connects with **Racecourse Road** via a 4-way dual lane roundabout controlled intersection, with Denton Park Drive on the north providing the 4th leg. Racecourse Road provides a single lane of travel in both directions and permits kerb side parking for the majority of its length, it provides an overall road width in the order of 12.5 metres and has street lighting provided along its length. It operates under a posted speed limit of 60km/hr. To the west the New England Highway connects with **Kyle Street** via a 4-way roundabout controlled intersection, with Mirage Road/Mustang Drive on the north providing the 4th leg. Kyle Street provides a single lane of travel in both directions and permits kerb side parking for the majority of its length, it provides an overall road width in the order of 11.5 metres and has street lighting provided along its length. It has a 90 degree bend to the west of the subject site that significantly reduces vehicle speeds past the subject site. Kyle Street continues east to connect with Racecourse Road. Racecourse Road connects with **Burlington Place** via a simple give way controlled intersection, with Racecourse Road being the priority road. Burlington Place, a cul de sac with turning head provides an overall road width of 12.5 metres, with a single lane of travel in both directions and kerb side parking for much of its length. These roads are all located within the Rutherford industrial area and are under the care and control of Maitland City Council. They are nominated as B-Double routes and suitable for 4.6m High Vehicles (subject to travel conditions along the New England Highway).

Item	Comment
2.2.2 Current and Proposed Roadworks, Traffic Management Works and Bikeways	A review of the Council website indicates that there is currently no roadworks planned in the immediately locality of the subject site. The length of the New England Highway has been upgraded in this location with the roundabouts and additional lanes provided to ensure traffic delays and congestion are controlled and minimised. The length of Kyle Street to the north of the subject site has also been upgraded, with kerb side widening provided in late 2021 to allow for a marked parking lane along the western side of the road. During site work there were changes being undertaken to a site access on the highway. Given the current traffic flows in this location, it is considered that no further upgrades are required for increased capacity and that the only works would be maintenance works in accordance with Council's maintenance program. There are no cycling facilities provided in this industrial area and no footpaths for pedestrians.
2.3 Traffic Flows	There is no current traffic data published in the general locality of the subject site with the most recent being 2007 prior to the opening of the Hunter Expressway. As part of the project work, traffic data was collected at the intersections of: • New England Highway and Racecourse Road/Denton Park Drive • Racecourse Road and Burlington Place • New England Highway and Kyle Street This data was collected in the AM and PM peaks (Tuesday 19th March 2024 and Tuesday 21st March 2023) and is shown below in Figure 3 and 4 and Appendix B. Flows are primarily inbound towards the industrial precinct in the AM and outbound in the PM with flows on Burlington Place much lower but similar in destination. The traffic flows on the New England Highway are high, reflective of the importance of this road. Allowing for peak hour flows to typically be 10% of daily flows the daily traffic flows east of the Racecourse Road roundabout could be in the order of 25,300 vehicles per day (vpd) 2-way. Racecourse Road carries daily flows east of Burlington Place of 4300 vpd 2-way.

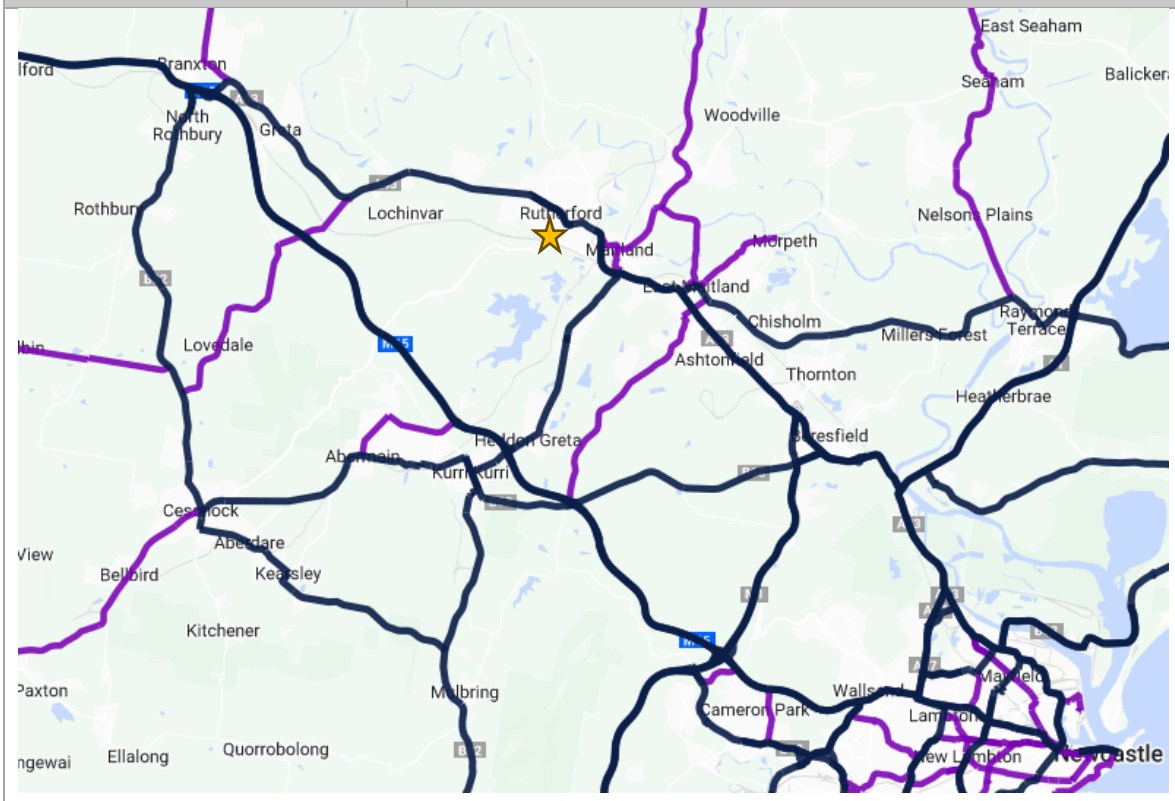
Item	Comment

Figure 3 - AM traffic counts

Item	Comment
 *Figure 4 – PM Traffic Counts*	
2.3.2 AADT	There is no current AADT data available for this area from TfNSW.
2.3.3 Daily Traffic Flow Distribution	Traffic flows would be reasonably balanced across the day on these local roads, with higher inbound traffic flows to the industrial area in the morning period and the reverse trend in the afternoon, as per the data from the traffic surveys.
2.3.4 Vehicle Speeds	No speed surveys were completed as part of the site work, however based on site observations it is considered that through the working day drivers do not speed in this location. The interaction of driveways and parked cars along with heavy vehicle movements generally sees motorist driving within the speed limit of 60 km/h.
2.3.5 Existing Site Flows	The Site holds an existing development consent no. DA03/1383 for an individual storage shed. The shed covers an area of approximately 640m^2, inclusive of an industrial area, awning area and office area.

Item	Comment
	The Guide to Traffic Generating Developments provides the following standard rates for warehouse use: • 4 trips per 100 m^2 GFA per day • 0.5 trip per 100 m^2 GFA for morning peak. This would indicate the PM peak is lower than this value. For the floor area of the existing shed this gives trip values of 26 trips per day and 3.2 (4) during the AM peak period.
2.3.6 Heavy Vehicle Flows	The existing industrial estate generates some heavy vehicle demands associated with the various users in this location. The traffic surveys show 6-9% heavy vehicles in the peak periods.
2.3.7 Current Road Network Operation	Observations on site indicate that the local road network operates very well, with little to no delays for traffic entering and exiting the site off Burlington Place as well as the general road network operating well. The roundabout controlled intersection of Racecourse Road and the New England Highway operates well with low delays / congestion as does Kyle Street and the New England Highway with these intersections designed and constructed to accommodate the on-going development in this location. It is also noted that the New England Highway, prior to the opening of the Hunter Expressway in 2014, carried significant regional and interstate traffic, with demands now being local demands through the Maitland LGA.
2.4 Traffic Safety and Accident History	Traffic crash data available from the TfNSW web page for the five years 2018-2022 shows there has been no recorded accidents in the immediate vicinity of the subject site nor on Racecourse Road. East of the site there have been two accidents on Racecourse Road, both resulting in a moderate injury, one being a runoff road and the other involving a parked car. There have also been two accidents at the roundabout with the New England Highway, one being a tow-away and the other resulting in a serious injury. Overall, the road network is well laid out with good visibility along the roads towards the various intersections and the width of the road allows for 2-way traffic movements and parking as required. It is considered that the local road network provides an acceptable level of overall road safety.
2.5 Parking Supply and Demand	
2.5.1 On-street Parking Provision	On street parking is available on the local roads surrounding the subject site.
2.5.2 Off-street Parking Provision	There is no public off-street parking provided in the locality of the site.
2.5.3 Current Parking Demand and Utilisation	On-street parking demands observed adjacent to the subject site are high associated with staff from the RSPCA Animal Shelter on Burlington Place, opposite the subject site.
2.5.4 Short term set down or pick up areas	None

Item	Comment
2.7 Public Transport	
2.7.1 Rail Station Locations	The site is not serviced by trains.
2.7.2 Bus Stops and Associated Facilities	There are no buses directly servicing the site with the closest bus stops on Racecourse Road 750 metres to the east.
2.7.3 Transport Services	None provided.
2.8 Pedestrians Network	There are limited pedestrian footpaths in this location, reflective of the historic industrial development in this location.
2.9 Other Proposed Developments	No other major developments noted in the immediate vicinity of the subject site.
Sec 3 The Development	
3.1.1 Nature of Development	The industrial shed will be used for a tyre recycling production line, tyre storage area, crumb rubber storage area and rubber tile press production. The existing shed will require some alterations as part of the proposed development, including the enclosing of a covered area, removal of a dividing wall and the installation of two roller doors. Waste tyres will be picked up from Tyres & More to the east of the site at 14 Racecourse Road, as well as other retailers in the area, and brought to site. The tyres will be stored in the tyre storage space for recycling. The output materials are expected to be 92% crumb rubber, 6% steel and 2% cotton.
3.1.2 Access and Circulation Requirements	There is no change proposed to the site access with the existing driveway continuing to provide for the site.
3.2 Access	The site is accessed via the New England Highway, a state classified road to the north of the site. This provides connection to the broader area through to Newcastle and the M1 Motorway to the east and west to the Hunter Expressway and beyond to the Queensland border.

Item	Comment
 *Figure 5 Site (★) showing connectivity to classified road network*	
3.2.1 Driveway Location	The driveway is located on the eastern side of the turn head of the cul de sac allowing visibility along the road to the north.
3.2.2 Sight Distances	Burlington Place is a 60 km/h speed zone. AS2890.2 provides sight distance requirements for a commercial access of 83 metres (5 sec gap). The sight distances have been checked on site and to the right (north) from the existing driveway the sight distance available exceeds 90 metres. The sight lines can be impacted by the temporary parking of vehicles with sight lines generally achievable by a vehicle edging forward. Given the location of the driveway in the turn head vehicles approaching this location are typically travelling below the posted speed limit to either enter a driveway or undertake a U-turn. For the intersection of Racecourse Road with Burlington Place, the sight lines meet the Austroads requirements of 123 metres desirable (114m minimum) to the right and exceed 150 metres to the left. With a high portion of the traffic associated with the project accessing the New England Highway via the roundabout controlled intersection of Racecourse Road with this highway, this intersection allows for a 2 lane circulating roundabout and straight road alignment on each approach. Sight distances to this roundabout ensure good road safety for all users.

Item	Comment
3.2.3 Service Vehicle Access	The servicing requirements shall be a medium rigid vehicle associated with the delivery of tyres and the backloading of recycled product. The truck will enter the site and manoeuvre within the site to then exit in a forward direction. Swept paths prepared by others have demonstrated the movement of up to a HRV within the site to exit in a forward direction. (Appendix C – Swept Paths). Waste demands will be minimal and in conjunction with recycling waste shall be removed from the site weekly. There shall be the occasional delivery of glue to the site as well as machinery maintenance and office deliveries.
3.2.4 Queuing at entrance to site	No queues at entrance to the site. The site shall see vehicle entering, turning left in off Burlington Place with no delays from opposing traffic.
3.2.5 Comparison with existing site access	There is no change proposed to the existing single driveway access to the subject site.
3.2.6 Access to Public Transport	It is considered that the site will not be a major attractor for users of public transport. Bus services are available to the east along Racecourse Road and Shipley Drive.
3.3 Circulation	
3.3.1 Pattern of circulation	All vehicles will be able to enter and exit the site in a forward direction. Circulation within the site will see MRVs using the large hardstand as well as the loading area within the building to manoeuvre within the site. This has been reviewed with the swept paths demonstrating the movement of HRVs in the site.
3.3.2 Internal Road Widths	There are no roads within the site.
3.3.3 Internal Bus Movements	No requirement for buses to access the development.
3.3.4 Service Area Layout	Adjacent to the shed there is a hardstand area that allows for the movement of vehicles within the site.
3.4 Parking	
3.4.1 Proposed Supply	The site provides existing parking with five spaces on site.
3.4.2 Authority Parking	The Maitland DCP allows the following parking rate for Industry: 1 space per 75m2 GFA or 1 space per 2 employees WHICHEVER IS THE GREATER
3.4.3 Parking Layout	Parallel parking for 4 vehicles is provided on site along with a single 90 degree parking space.

Item	Comment
3.4.4 Parking Demand	Applying the DCP rate to the 640m2 would require parking for 8.5 spaces. This compares with the historical provision of five spaces. Applying the rate of 1 space per 2 employees would require 2 spaces. Given there are 5 staff on site the provision of 5 parking spaces is therefore considered appropriate for the change of use.
3.4.5 Service Vehicle Parking	There is space for two heavy vehicles to park on site overnight. This will allow for the 2 x MRV to be stored within the site.
3.4.6 Pedestrian and Bicycle Facilities	No dedicated pedestrian or cyclists facilities will be provided within the site. Limited pedestrian demand required for the site given its location out of the urban area and lack of footpaths in this industrial area. Cyclists accessing the site shall be able to park their bikes within the shed as required.
Traffic Assessment	
4.1 Traffic Generation	Vehicles entering the Site will include staff vehicles and a medium rigid vehicle (MRV) for tyre and finished product deliveries each day. The same MRV will load out recycled products to market, including crumb rubber, rubber pavers and mats, recycled cotton and recovered steel. There will be 5 employees onsite each day, 3x onsite and 2x truck driver. Daily vehicle movements are as follows: • A maximum of 4,500 tonnes of tyres delivered to site each year; • The facility shall operate 6 days per week, 51 weeks per year = 299 days per year (allowing for public holidays/Christmas break); • Average MRV (inbound used tyres and backload out of finished products) load weight of 15 tonnes per day anticipated; • Allowing for less than full loads this equates to 4 truck deliveries per day (4 movements inbound and 4 outbound); • Plus five staff vehicle movements (in) per day; • Total vehicle movements (in and out) are therefore 18 per day (10 of which are staff vehicles and 8 are MRV's) plus one weekly general waste collection. Allowing for the local road peak at Racecourse Road/New England Highway of 7.45AM-8.45AM and 3.45-4.45PM the peak operational demands of the site occur outside of this. To provide a robust assessment the following movements have been applied to the local road peak: • AM Peak 2 lights inbound /1 MRV outbound • PM Peak 3 lights outbound • Daily 18 trips (5 lights inbound/5 outbound and MRV 4 inbound/4outbound) plus 2 HRV movements per week for general waste collection

Item	Comment
	Existing site traffic as detailed above could be in the order of 26 trips per day and 3.2 (4) during the AM peak period. The proposed change of use would therefore generate **less** traffic than would have historically operated on site.
4.1.1 Daily and Seasonal Factors	Traffic demands Monday – Saturday. Limited seasonal factors.
4.1.2 Pedestrian Movements	It is considered that there would be no pedestrian movements associated with the project site.
4.2 Hourly distribution of trips	Hourly distribution of trips as shown below.

		Monday - Friday		Monday - Friday			
Time Period	Time of day	Employees		Incoming waste	Outgoing sorted material	Incoming Residual Waste Vehicle	Outgoing Residual Waste Vehicle
		Cars (inbound)	Cars (outbound)	MRV (7.5 tonne load)	MRV (7.5 tonne load)	HRV	HRV
Night	5:00am to 6:00am	2					
	6:00am to 7:00am						
Day	7:00am to 8:00am	3			1		
	8:00am to 9:00am			1	1		
	9:00am to 10:00am					0.20	0.20
	10:00am to 11:00am						
	11:00am to 12:00pm			1			
	12:00pm to 1:00pm				1		
	1:00pm to 2:00pm						
	2:00pm to 3:00pm		1		1		
	3:00pm to 4:00pm			1			
	4:00pm to 5:00pm						
	5:00pm to 6:00pm		4	1			
	Totals	5	5	4	4	0.20	0.20
	5 Day totals	25	25	20	20	1.00	1.00
				TOTAL vehicle movements per day inclusive of staff cars			18.40

		Saturday		Saturday			
Time Period	Time of day	Employees		Incoming waste	Outgoing Product	Incoming Residual Waste Vehicle	Outgoing Residual Waste Vehicle
		Cars (inbound)	Cars (outbound)	MRV (7.5 tonne load)	MRV (7.5 tonne load)	HRV	HRV
Day	8:00am to 9:00am	2		1			
	9:00am to 10:00am	2			1		
	10:00am to 11:00am			1			
	11:00am to 12:00pm				1		
	12:00pm to 1:00pm		4				
	Totals	4	4	2	2	0	0
				TOTAL vehicle movements per day inclusive of staff cars			12.00

Figure 6 – Trip distribution (Source: Jackson Environment and Planning Pty Ltd Operational Analysis)

4.2.1 Origin / destinations assignment	Inbound tyres are delivered to site from Tyres and More located at 14 Racecourse Road to the east of the site and other tyre outlets in the area, both from the east and west. Crumb rubber will be transported mainly to asphalt batching plants in the local area, and possibly further afield. Rubber tiles will be to a number of mainly local distributors. The trucks will be backloaded and so having delivered tyres shall fill with recycled product for delivery to the end users. Following the delivery they will then pick up tyres from retailers for return to the recycling facility. These vehicles may travel either east or west along the New England Highway connecting at the roundabout at Racecourse Road and the New England Highway.

Item	Comment
	Vehicles with a destination to the west may also travel west along Racecourse Road/Kyle Street to connect with the New England Highway at this intersection. Trip distribution as shown below in Figure 7 with haul routes to the arterial road network shown in Figures 9 and 10.

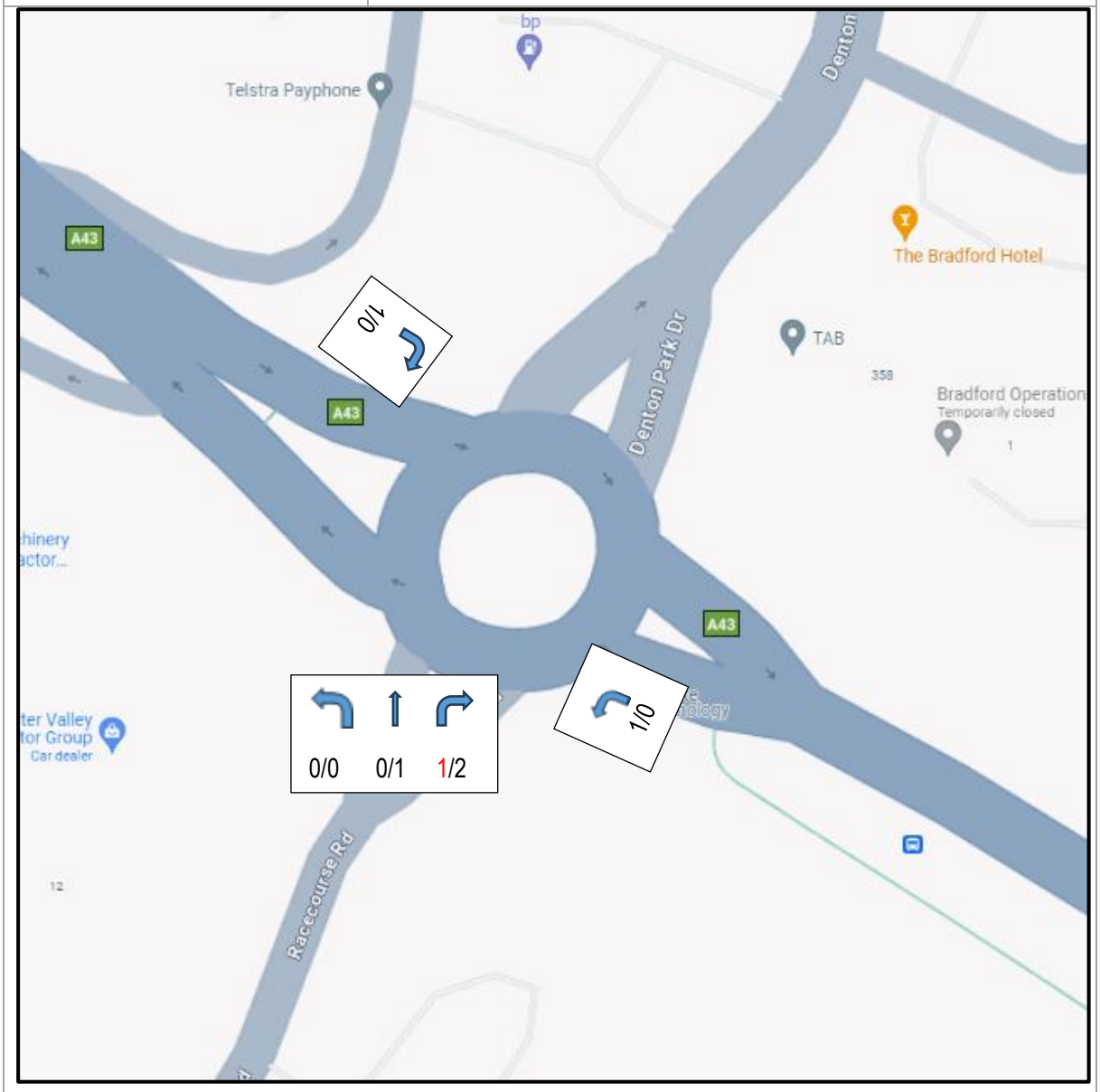


Figure 7 – AM/PM Trip Distribution (Light /Heavy Vehicles)

Item	Comment

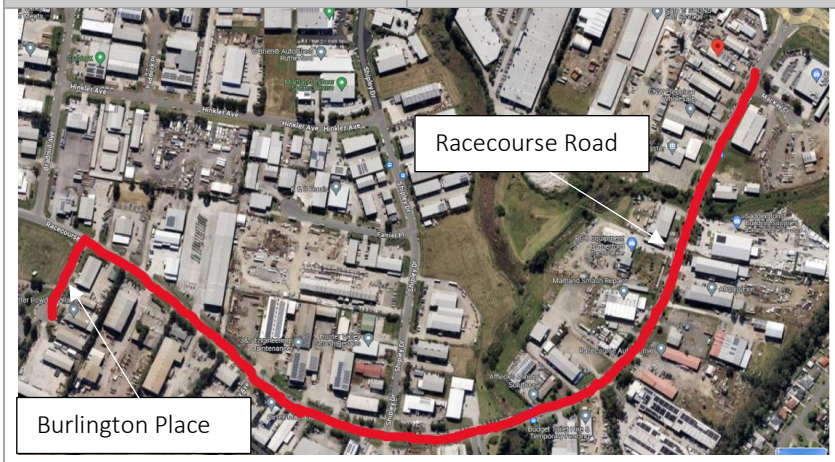


Figure 8 –Racecourse Road haul route for whole tyres from Tyres & More at 14 Racecourse Road

Figure 9 – Haul route for finished/recycled product and whole tyres inbound

Item	Comment
 *Figure 10 – Haul route option for westbound vehicles for finished/recycled product and whole tyres inbound*	
4.3 Impact on Road Safety	The traffic flows associated with the proposed development are low and are considered to have a minor and acceptable impact upon traffic safety in this location. The key impacts shall be at the site access point /Burlington Place and the intersection of the New England Highway with Racecourse Road as well as Racecourse Road with Burlington Place. The access to the site is located at the end of the no-through road with vehicles typically travelling at lower speeds with adequate visibility for all road users. The key intersection of Racecourse Road and the New England Highway currently operates in a safe manner, with minimal delays and only two accidents in the past five years. It is considered that with the traffic demands associated with the project this intersection can continue to operate in a safe manner. Based on the site observations and the accident data, it is considered that the development shall not have a noticeable impact upon road safety in this location.
4.4 Impact of Generated Traffic	
4.4.1 Impact on Daily Traffic Flows	The daily traffic flows associated with the project are less than the site historically may have generated, being in the order of 12-13 vehicles per day split equally inbound and outbound. As an urban road, guidelines from TfNSW indicate that the flows can be up to 900 vehicles per hour per direction on a road such as Racecourse Road with acceptable impacts. The current 2-way flows on Racecourse Road south of the New England Highway are 532 in the AM peak and 628

Item	Comment
	in the PM peak 2-way. East of the intersection with Burlington Place flows are lower being 350 2-way in the AM and 502 in the PM. The additional traffic during the peaks, including the inbound truck movement between the two sites along Racecourse Road, could be in the order of 4 vehicles 2-way (3 inbound/1 outbound) in the AM and 3 outbound in the PM. Thus, the total future traffic flows in the peaks will remain well within the acceptable limits provided by the TfNSW guidelines. It is considered that with the flows being acceptable during the peak hour on Racecourse Road, outside of the peak hour when the flows are lower the impact would also be acceptable and would be so across the day. The impact of this traffic distributed across the broader road network, primarily to the east and west along the State classified New England Highway will be negligible.
4.4.2 Peak Hour Impacts on Intersections	The additional traffic flows associated with the project shall have a minor and acceptable impact upon the base level of operation for the roundabout controlled intersection of Racecourse Road with the New England Highway. Sidra modelling (Chapter 3) shows that the impact of the development traffic upon the operation of the roundabout is minimal and acceptable with no change to queue lengths or Level of Service, for both the current (2024) year as well as the future 2034 design year (+2% growth on all movements). The intersection of Racecourse Road and Burlington Place also operates well with no delays / queues and as such the additional traffic movements associated with the project shall have an acceptable impact. Based on the AUSTROADS Guide to Traffic Management, given that the volumes on Racecourse Road are below 500vph and on Burlington Place are less than 50, including development, a detailed analysis to demonstrate adequate capacity in not necessary.

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

Notes:

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

Item	Comment
4.4.3 Impact of Construction Traffic	The construction work associated with the project shall involve internal modifications to the existing shed along with the installation of the weighbridge. The impact of this shall be minimal and similar to the proposed demands for the operations on site (being 5 staff and four trucks accessing and departing the site per day). As part of the construction work, staff parking can be accommodated with a mixture of on-site and on the local roads with minor impacts. Overall, the construction traffic movements shall be low and within the capacity of the local road network and shall thus have an acceptable impact.
4.4.4 Other Developments	No other significant developments noted.
4.5 Public Transport	
4.5.1 Options for improving services	The site will not generate any demand for public transport therefore no improvements are required.
4.5.2 Pedestrian Access to Bus Stops	None required. Pedestrians can walk on the grass verges in this area.
4.6 Recommended Works	
4.6.1 Improvements to Access and Circulation	No alterations required.
4.6.2 Improvements to External Road Network	No external road upgrades are required to accommodate the traffic flows associated with the project.
4.6.3 Improvements to Pedestrian Facilities	None required.
4.6.4 Effect of Recommended Works on Adjacent Developments	No works proposed that will impact on adjacent developments.
4.6.5 Effect of Recommended Works on Public Transport Services	None.
4.6.6 Provision of LATM Measures	None required.
4.6.7 Funding	All works on site and those associated shall be funded by the developer.

Chapter 3 Sidra Intersection Analysis

Table 3-0-1 2024 AM / PM base (existing) traffic demands

Approach	Degree of saturation	Average delay (seconds)	LoS	Back of queue (metres)
Racecourse Road south	0.248 / 0.480	12.6 / 13.0	A / A	10.1 / 21.4
NEH east	0.654 / 0.584	7.7 / 6.5	A / A	47.1 / 34.9
Denton Park Road	0.364 / 0.397	9.6 / 11.2	A / A	13.2 / 15.1
NEH west	0.419 / 0.554	5.3 / 7.0	A / A	17.1 / 26.9

NOTE : AM / PM results

Table 3-0-2 2024 AM / PM base (existing) traffic demands plus development traffic

Approach	Degree of saturation	Average delay (seconds)	LoS	Back of queue (metres)
Racecourse Road south	0.250 / 0.483	12.6 / 13.0	A / A	10.1 / 21.6
NEH east	0.655 / 0.584	7.7 / 6.5	A / A	47.1 / 34.9
Denton Park Road	0.364 / 0.398	9.6 / 11.2	A / A	13.3 / 15.2
NEH west	0.420 / 0.555	5.3 / 7.1	A / A	17.1 / 27.0

NOTE : AM / PM results

Table 3-0-3 2034 AM /PM future base flows (assumed 2% growth on all movements)

Approach	Degree of saturation	Average delay (seconds)	LoS	Back of queue (metres)
Racecourse Road south	0.408 / 0.746	15.6 / 20.0	B / B	19.5 / 45.3
NEH east	0.843 / 0.743	13.3 / 9.2	A / A	102.6 / 67.1
Denton Park Road	0.496 / 0.611	11.5 / 15.6	A / B	21.7 / 28.2
NEH west	0.527 / 0.727	6.0 / 9.5	A / A	25.1 / 46.6

NOTE : AM / PM results

Table 3-4 2034 AM /PM future base flows (assumed 2% growth on all movements) plus development traffic

Approach	Degree of saturation	Average delay (seconds)	LoS	Back of queue (metres)
Racecourse Road south	0.411 / 0.751	15.6 / 20.1	B / B	19.7 / 45.9
NEH east	0.844 / 0.743	13.4 / 9.2	A / A	103.4 / 67.1
Denton Park Road	0.497 / 0.613	11.5 / 15.6	A / B	21.8 / 28.3
NEH west	0.529 / 0.729	6.0 / 9.6	A / A	25.2 / 46.9

NOTE : AM / PM results

The above Sidra modelling shows that the impact of the development traffic upon the operation of the roundabout is minimal and acceptable, for both the current 2024 year as well as the future 2034 design year, allowing for 2% growth in traffic movements on all approaches to the roundabout.

Chapter 4 Site Photos

Photo 1 – Cross section looking north along Burlingon Place with subject site to background

Photo 2 – Sight lines out of existing site exit driveway looking north

Photo 3 – Sight lines out of existing site exit driveway looking left being the adjacent driveways in the turn head

Photo 4 – Intersection of Burlington Place and Racecourse Road

Chapter 5 Traffic Management Plan

- Project Overview

Seca Solution Pty Ltd has been commissioned to prepare a draft construction and operational traffic management plan for works associated with the proposed Tyre Recycling Centre at 9 Burlington Place, Rutherford shown in Figure 5-1 below.

Figure 5-1 – Site Location (Source: Near map)

- Purpose and Scope

The purpose of this report is to detail the necessary traffic management for the safe and efficient movement of equipment and materials associated with the construction works as well as the movement of materials associated with the operation of the site.

In providing this, consideration has been given to factors including, but not limited to vehicle speeds, construction plant and material requirements, and the operational movement of raw product (tyres) to the site and the export of recycled product to the end users, interactions with traffic on Burlington Place and Racecourse Road and on the surrounding road network, including bus facilities, pedestrians and cyclists.

- Project Objectives

The project objectives are to provide for the safe transportation of plant and materials associated with construction and operation at 9 Burlington Place, Rutherford whilst:

- Minimising the potential impacts to traffic and road safety on the surrounding road network;
- Ensuring that plant and workers can safely enter and exit the site off Burlington Place;
- Allowing for the safe movement of pedestrians and cyclists;

- Minimising potential disruptions and impacts to surrounding businesses; and
- Enabling construction to be completed in a timely and efficient manner.

- Responsibilities

Title	Role
Project Manager	Management of project as a whole. Focus on program, budget and procurement.
Works Supervisor	Onsite construction management, dealing directly with trades and suppliers. Plans works for the day provides OHS and quality management.
Team Leader	Works specific leader to guide trades for the construction of specific elements. Ensures materials are ordered, OHS issues are reported
Traffic Control	Provide safe access and egress from works site, ensure management of traffic past site. Ensure traffic signage is maintained.

- Project Representative's and Contact Details

Title	Name and Contact Details
Emergency Services	000
Project Manager	TBA
Project Engineer	TBA
Works Supervisor	TBA
Traffic Control	TBA

- Site Location and Context

The subject site is located with access via a driveway to the turnhead of Burlington Place, a cul-de-sac in the Rutherford Industrial Area. It comprises one lot, including an existing shed which will require minimal alterations as part of the proposed development. The industrial shed has an open awning towards the back. This will be enclosed, the dividing wall removed, and two roller doors installed to create a larger fully enclosed industrial shed on site.

These works do not require the implementation of a construction traffic management plan.

The surrounding land use is primarily industrial uses. The RSPCA has its Hunter Animal Shelter located on Burlington Place, opposite the subject site.

Outbound product will be loaded into a Medium Rigid Vehicle and delivered to the end users:

- Crumb rubber will be transported mainly to asphalt batching plants in the local area, and possibly further afield.
- Rubber tiles will be delivered to a number of mainly local distributors.

These vehicles may travel either east or west along the New England Highway, a State road, connecting at the roundabout at Racecourse Road and the New England Highway with some westbound being via Kyle Street to the New England Highway.

Raw material (whole tyres) for recycling are picked up from retailers in the area and transported to the site in the empty truck. This includes transfers from a site within the industrial estate at 14 Racecourse Road, Rutherford. These trucks approach the site from the State Road being the New England Highway and then along Racecourse Road, or Kyle Street, to Burlington Place (the reverse of the outbound route).

This sees two Medium Rigid Vehicles twice per day transferring product along this route.

Racecourse Road and Burlington Place are industrial roads designed to carry heavy vehicles including oversized and overmass vehicles. These roads are therefore suitable to accommodate the MRVs associated with this project.

Figure 5-2 Haul Route for raw product (tyres) along Rutherford Road to Burlington Place

Figure 5-3 Haul Route for whole tyre and finished product between subject site and the arterial road network

Figure 5-4 Westbound haul route option via Racecourse Road/Kyle Street to New England Highway

Vehicles with a destination to the west may also travel west along Racecourse Road/Kyle Street to connect with the New England Highway at this intersection.

The routes are all designated to carry Oversized/Overmass vehicles and so are suitable to accommodate the four additional MRV movements outbound per day.

Vehicles will enter and exit sites in a forward direction.

- Site Constraints

No constraints identified to allow for the movement of these vehicles. The impact of these has been assessed in the Traffic Impact Assessment with only a minimal impact to the local road network.

The layout of the intersections are appropriate to accommodate these movements.

Sight lines at the intersection of Burlington Place and Racecourse Road have been reviewed and meet the Austroads requirements.

The approved access at 14 Racecourse Road is on a straight and level length of road which allows for the safe movement of vehicles into and out of the site.

No impact to bus services.

No impact to pedestrians or cyclists.

No impact to emergency services.

- Operational Schedule

Time Period	Time of day	Monday - Friday Employees Cars (inbound)	Monday - Friday Employees Cars (outbound)	Monday - Friday Incoming waste MRV (7.5 tonne load)	Monday - Friday Outgoing sorted material MRV (7.5 tonne load)	Monday - Friday Incoming Residual Waste Vehicle HRV	Monday - Friday Outgoing Residual Waste Vehicle HRV
Night	5:00am to 6:00am	2					
	6:00am to 7:00am						
Day	7:00am to 8:00am	3			1		
	8:00am to 9:00am			1	1		
	9:00am to 10:00am					0.20	0.20
	10:00am to 11:00am						
	11:00am to 12:00pm			1			
	12:00pm to 1:00pm				1		
	1:00pm to 2:00pm						
	2:00pm to 3:00pm		1		1		
	3:00pm to 4:00pm			1			
	4:00pm to 5:00pm						
	5:00pm to 6:00pm		4	1			
	Totals	5	5	4	4	0.20	0.20
	5 Day totals	25	25	20	20	1.00	1.00
				TOTAL vehicle movements per day inclusive of staff cars			18.40

Time Period	Time of day	Saturday Employees Cars (inbound)	Saturday Employees Cars (outbound)	Saturday Incoming waste MRV (7.5 tonne load)	Saturday Outgoing Product MRV (7.5 tonne load)	Saturday Incoming Residual Waste Vehicle HRV	Saturday Outgoing Residual Waste Vehicle HRV
Day	8:00am to 9:00am	2		1			
	9:00am to 10:00am	2			1		
	10:00am to 11:00am			1			
	11:00am to 12:00pm				1		
	12:00pm to 1:00pm		4				
	Totals	4	4	2	2	0	0
				TOTAL vehicle movements per day inclusive of staff cars			12.00

- Permits & Road Occupancy Licenses

ROL – None anticipated.

Change to Speed Zone – No change in speed zone anticipated.

Any approvals required for the transport of wide loads or oversized loads shall be gained from National Heavy Vehicle Regulator. As of the 1 June 2020, all heavy vehicle permit applications must be submitted to the NHVR via the NHVR Portal: https://www.service.nhvr.gov.au/

- TGS Approval

No TGS is anticipated to be necessary.

Subject to the contractors requirements, if a TGS is required it is to be submitted to the road authority for review and approval.

Details for lodging a TGS and the Construction Traffic Management Plan are:

Maitland City Council:

285-287 High Street
PO Box 220
Maitland NSW 2320
Phone: (02) 4934 9700

Transport for NSW:

Regional Office	Email Address	Phone Number
Hunter	rol.hunter@rms.nsw.gov.au	02 8874 6806

Incident Procedures

In the case of a traffic incident the emergency services will be contacted as appropriate. In consultation with emergency services traffic management will be implemented to direct traffic around the incident until it is resolved.

In the case of an incident on site, emergency services will be notified and given priority access to the site as required.

Review Process

The TMP will be monitored at regular intervals, including during daily / weekly toolbox talks to ensure effectiveness and applicability.

The Induction process for vehicle operators shall be in accordance with the *Australian Standard 1742.3* and the *Work Health and Safety Regulation 2017* and will include, but not be limited to, site specific requirements including exclusions zones, pedestrian containment, loading requirements and emergency management plans. These shall be in accordance with the company's standard operating procedures and Driver's Code of Conduct.

These shall be discussed at toolbox talks and procedures updated accordingly.

Compliance Documentation

Refer to Legislative and Jurisdiction compliance requirements, company policy & procedure documentation as appropriate.

The Drivers Code of Conduct outlines requirements for travel on public roads including residential areas, school zones and/or bus routes. At all times drivers are to follow road rules and appropriate signage including posted speed and school speed zones. The use of compression brakes are to be limited in areas where residents may be disturbed along routes.

No requirement for a Traffic Guidance Scheme (TGS) has been determined in conjunction with this project based on the information available at the time of preparation of the TMP.

- Drivers Code of Conduct

This Drivers Code of Conduct has been established to minimise the impact on the environment and the local community whilst providing our customers with a high quality, reliable and safe service.

All delivery personnel traveling to and from the subject site at 9 Burlington Place, Rutherford must adhere to the rules detailed in this document.

Please ensure all persons attending the site read, understand and sign this document and return it to client's representative._____

Times	Daily operations and maintenance by site staff would be undertaken during standard working hours: • Monday to Friday: 5am to 6pm • Saturday: 8am – 1pm • Sunday and Public holidays: No work During normal operations, all vehicle movements shall be undertaken during the standard operating hours (or just before to allow workers to get to site). There may be a requirement for vehicles to access the site after hours during an emergency however these would be infrequent.
Access	ALL heavy vehicles (including MRVs) must adhere to the designated heavy vehicle routes as far as practical with arrival to the site via the New England Highway and Racecourse Road or Kyle Street to Burlington Place.
Illegal and Unsafe Truck Parking	No truck parking is available within the local roads. All trucks must enter and stand within the subject site as advised.
Heavy Vehicle Compression Braking	Compression braking by heavy vehicles is a source of irritation to the community. Brakes must be applied so as not to create excessive noise that could disturb residents along routes approaching the site. Compression braking approaching the site should only be used if required for safety reasons.
Load Covering and Restraint (as per NHVL and CoR Regulations)	All trucks arriving to or departing the site are required to have an effective cover over their load for the duration of the trip. Drivers must ensure that following loading or unloading that all gates and tailgates are secured and locked before leaving the site. Drivers are to ensure that their loads are secured as per the NTC Load Restraint Guide 2018 and that checks are completed on restraint equipment such as tailgates, chains, straps, ratchet dogs, tarps etc on a regular basis to ensure they are functioning correctly. Drivers must exit their vehicle to inspect the above every time they are loaded, prior to arrival at the site and following unloading at the site, prior to departure. The security of your load, your life and the life of others relies upon proper load restraint practices.
Mass and Dimension (as per NHVL and CoR Regulations)	Drivers should be aware that: • Adhering to legal axle and gross weight limits are their responsibility. • Trucks accessing the site must adhere to any weight and dimension limit/restrictions that apply along the approach routes. These include those load limits applicable to roads and bridges that must be complied with.

Fatigue and License Requirements (as per NHVL and CoR Regulations)	All drivers should be aware that: • a person must not drive a heavy vehicle on a road while impaired by fatigue • managing driver fatigue is a shared responsibility by all parties in the chain • parties must take all reasonable steps to ensure a person does not drive the heavy vehicle on a road while impaired by fatigue. Drivers shall not be permitted to operate a vehicle or plant equipment when impaired by fatigue. If you suspect that you or someone else is experiencing fatigue, please inform your supervisor. Operators of heavy vehicles shall be aware of the requirements relating to fatigue as outlined in the Heavy Vehicle National Law. Drivers shall also be aware of their adopted fatigue management scheme (shown below) and ensure that they are operating within its requirements. i) Standard Hours of Operation ii) Basic Fatigue Management (BFM) iii) Advanced Fatigue Management (AFM) All drivers accessing the site must be registered and hold a valid driver's licence for the class of vehicle being operated
Vehicle Speeds	Drivers shall observe the posted speed limit along the designated transport route and adjust their vehicle speed as required to suit the road environment and prevailing weather conditions. Vehicle speeds must be appropriate to ensure the safe movements of the vehicle with consideration to the vehicle configuration and to comply with Australian Road Rules.
Signs	Comply with the directions of authorised personnel when operating within the site and obey any relevant signage installed along the approaching roads.
Personal Protective Equipment (PPE)	The mandatory Protective Clothing requirement on this site is: • Hard hats, • steel caps, • high visibility clothing. • Must carry gloves & safety glasses
No Access	Trucks and light vehicles must: • be in road worthy condition • trucks are to have a working UHF Radio No inappropriate or offensive language is ever to be broadcasted on the UHF • Be operated in a safe and appropriate manner whilst travelling to / from the site or when operating within the site. This includes obeying all New South Wales state road rules. • Must always wear a seatbelt when operating any vehicle. All vehicles must enter and exit the site in a forward direction. Vehicles are to in a clean condition upon exiting the site to prevent dirt being tracked onto the public road network.
Mobile Phone Usage	A mobile phone is not to be used while operating any vehicle.

	The use of a mobile phone while operating machinery or undertaking site activities is STRICTLY PROHIBITED. Driving, operating or undertaking high risk activities must be temporarily stopped to take a call. When a call or text message is received while driving and a hands-free kit is not available or the hands free kit is not voice activated, the driver MUST pull to the side of the road when safe to do so prior to taking the call or checking the message. Where a conversation is complex, technical or requires notes to be taken is mandatory to pullover when safe to do so to continue the conversation. Any person contravening this Policy will be subject to the Company's disciplinary procedure which may include termination of Employment/Contractor contract.
Alcohol and Drug Policy	All persons are to be in a "fit for work" state. This means must not be affected by alcohol or other drugs, (including prescription medication if inhibiting ability to operate plant and equipment safely) whilst at work. It is prohibited for any person to possess, use, sell or work under the influence of Alcohol or other Drugs.
Contacts	TfNSW Transport Management Centre 131 700 Site Supervisor _____ Emergency 000

Transport Route

Heavy vehicle access for the delivery of whole tyres will be via the New England Highway, Racecourse Road and Burlington Place.

For delivery of recycled product access to the New England Highway is via Racecourse Road and/or Kyle Street (to/from the west).

Light vehicles can transit to or from the New England Highway via Racecourse Road, Shipley Drive or Kyle Street subject to origin/destination.

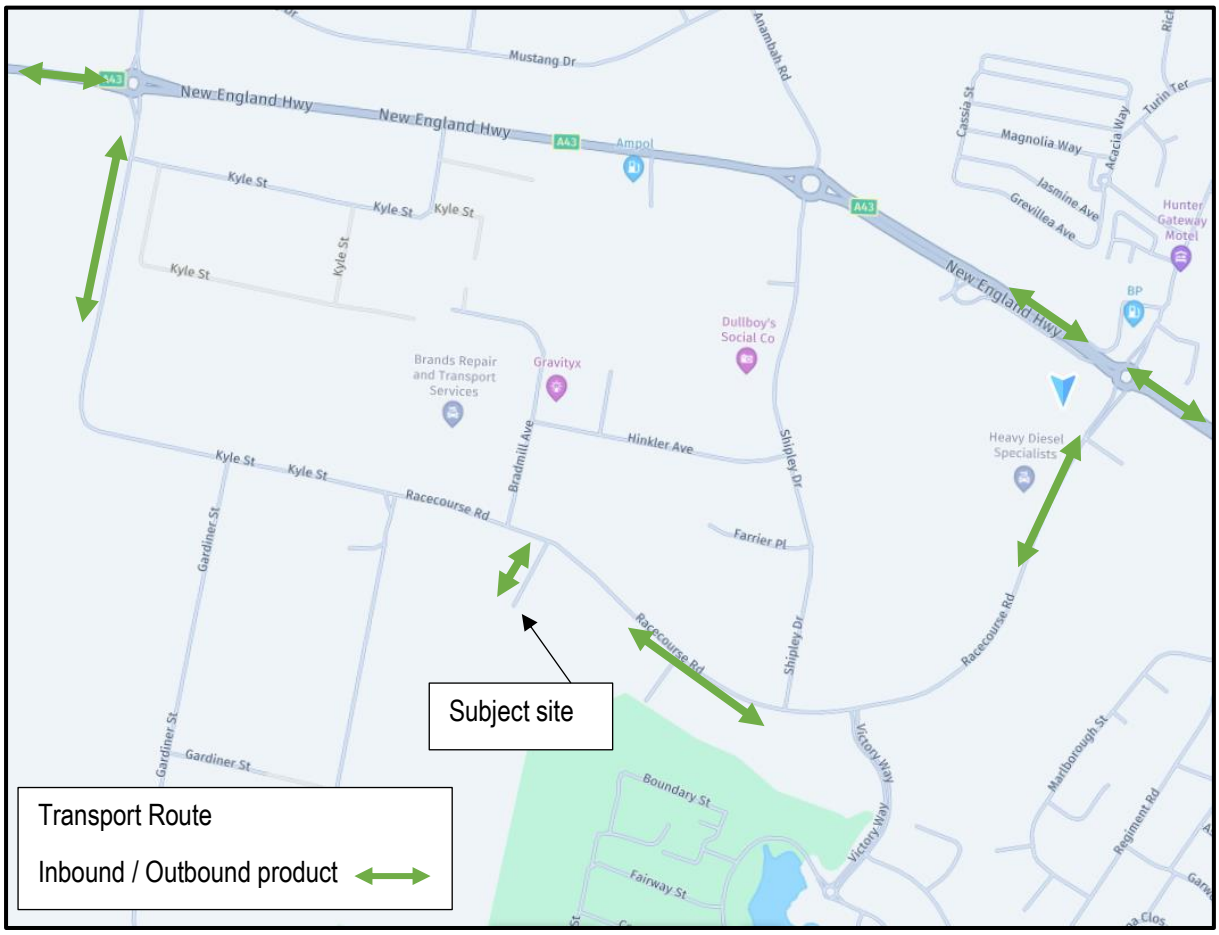


Figure 5 – Transport access to/from the site

Driver Declaration

I, the undersigned, hereby agree to abide by this Driver Code of Conduct for the transport of equipment, product or personnel to / from the Burlington Place site at Rutherford. I have read and understand the requirements outlined in the attached document and will, to the best of my ability, comply and assist with their implementation, requirements or ongoing administration.

I, the undersigned, understand that breaching this code of conduct result in disciplinary action in accordance with **(Company name)** policies and procedures.

The subject document to which this declaration relates is included as part of this overall document and signing of this declaration confirms that the signee has read and understood their requirements as outlined throughout.

Driver Details

Full Name	
Organisation	
Signature	
Date	

Representative of:

Full Name	
Signature	
Date	

Disciplinary action will be taken against drivers who do not adhere to this Code of Conduct.

Chapter 6 Conclusion

From the site work undertaken and the review of the development proposal and associated plans against the requirements of the Guide to Traffic Generating Developments published by TfNSW, it is considered that the proposed development will have minimal impact upon the surrounding road network.

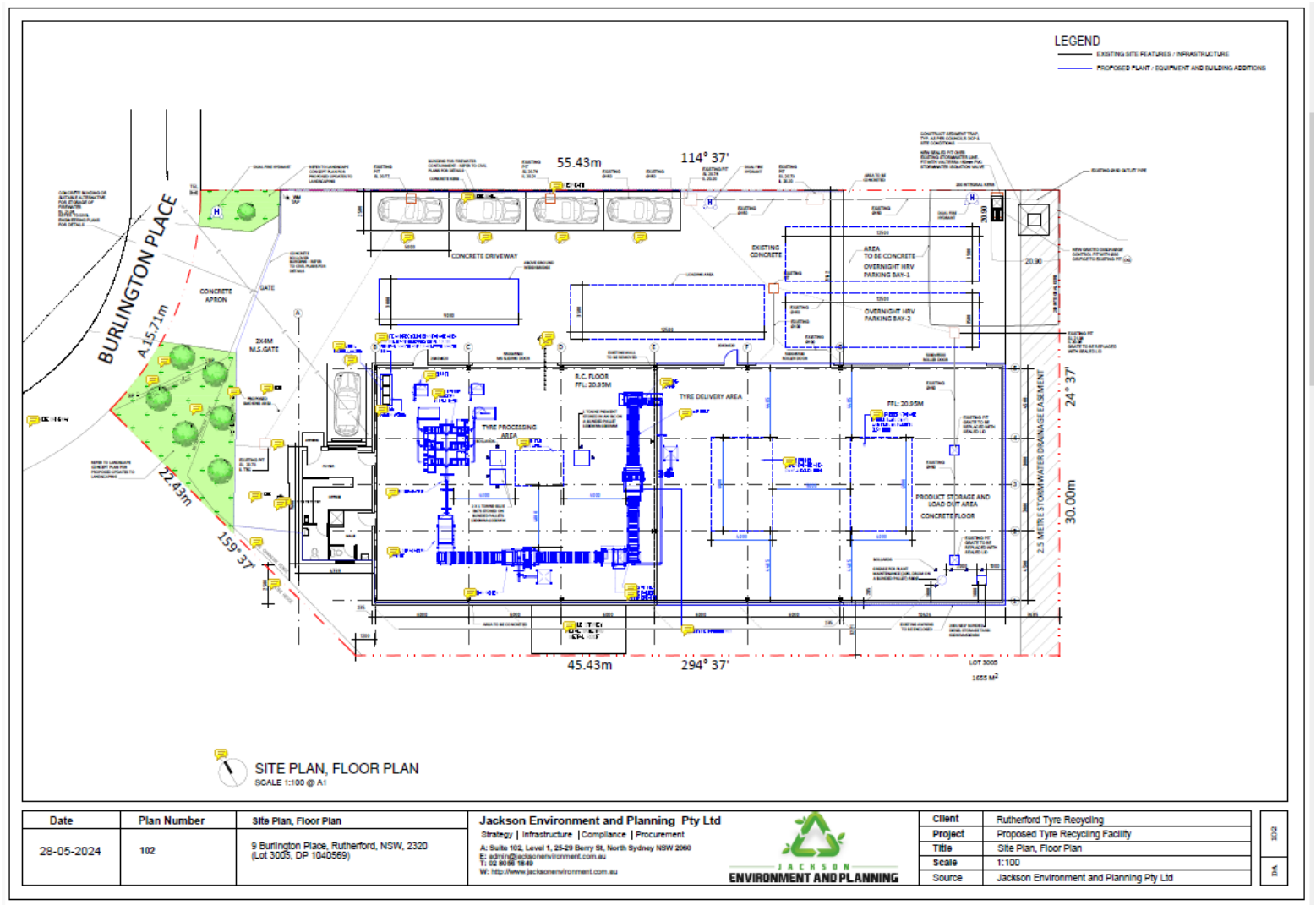
There are typically four heavy vehicle deliveries (MRV) per day with the empty delivery trucks picking up whole tyres from retailers on the return trip to the site. This backfill of trucks reduces overall trip numbers with the outbound truck movement connecting to the arterial road network (New England Highway) being 4 trucks per day.

Staff numbers are low with 5 light vehicles approaching or departing the site across two hours in the morning or afternoon.

The impact of this traffic on the local and regional road network is minimal and well within the capacity of the road network.

The existing parking provision is sufficient to cater for the proposed use. Access and circulation for the site is appropriate for the development, providing for the swept paths of heavy vehicles with manoeuvring within the site ensuring they can enter and exit in a forward direction.

Appendix A – Site Plan



Date	Plan Number	Site Plan, Floor Plan
28-05-2024	102	9 Burlington Place, Rutherford, NSW, 2320 (Lot 3005, DP 1040569)

Jackson Environment and Planning Pty Ltd
Strategy | Infrastructure | Compliance | Procurement
A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060
E: admin@jacksonenvironment.com.au
T: 02 8090 1649
W: http://www.jacksonenvironment.com.au

JACKSON ENVIRONMENT AND PLANNING

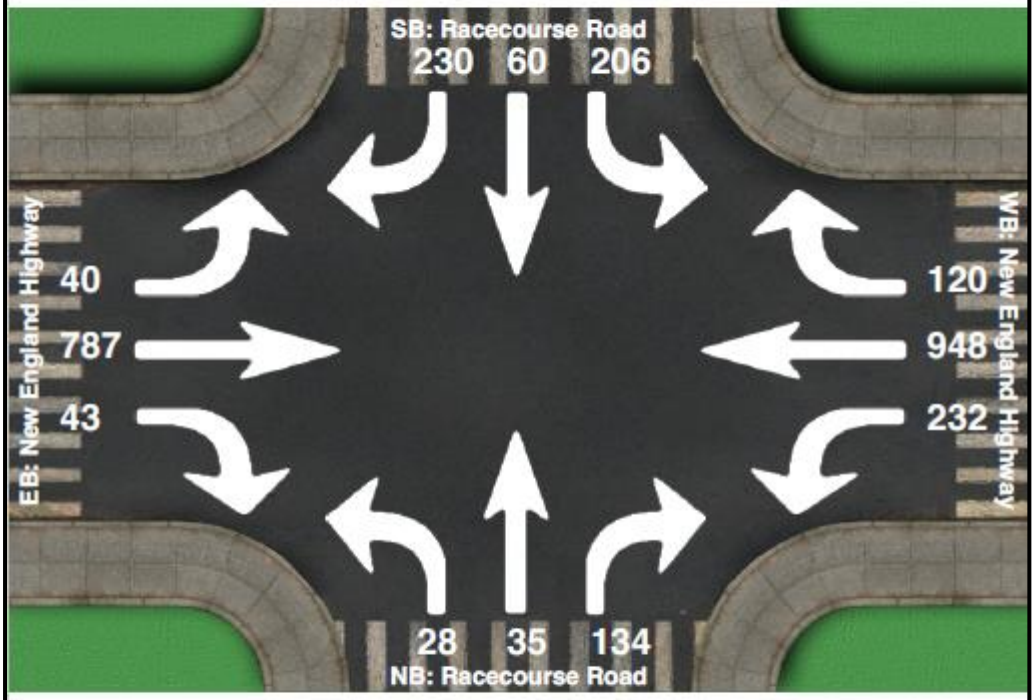
Client	Rutherford Tyre Recycling
Project	Proposed Tyre Recycling Facility
Title	Site Plan, Floor Plan
Scale	1:100
Source	Jackson Environment and Planning Pty Ltd

302
DA

Appendix B – Traffic Surveys

Intersection Peak Hour

Location: Racecourse Road at New England Highway, Rutherford
GPS Coordinates:
Date: 2024-03-19
Day of week: Tuesday
Weather: Cloudy
Analyst: KS



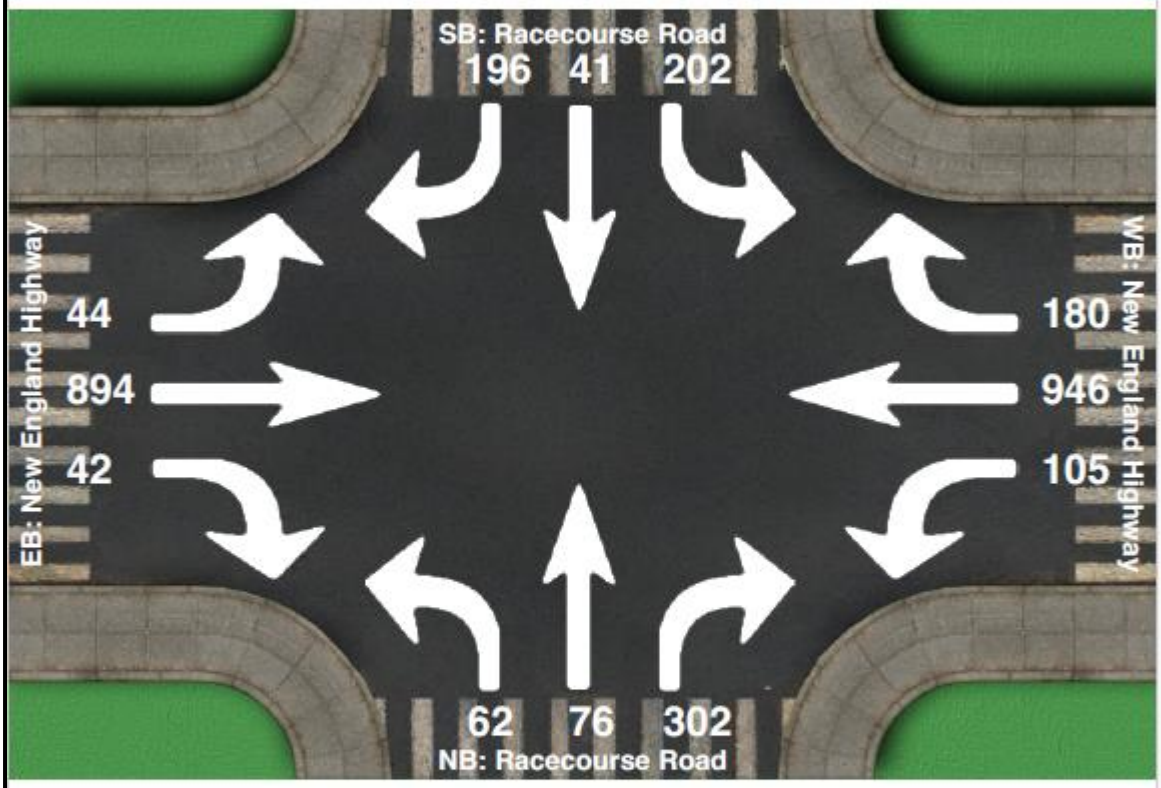
Intersection Peak Hour

07:45 - 08:45

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	206	60	230	232	948	120	28	35	134	40	787	43	2863
Factor	0.89	0.65	0.87	0.73	0.96	0.86	0.78	0.80	0.84	0.83	0.95	0.83	0.97
Approach Factor	0.86			0.98			0.82			0.95			

Intersection Peak Hour

Location: Racecourse Road at New England Highway, Rutherford
GPS Coordinates:
Date: 2024-03-19
Day of week: Tuesday
Weather: Sunny
Analyst: KS



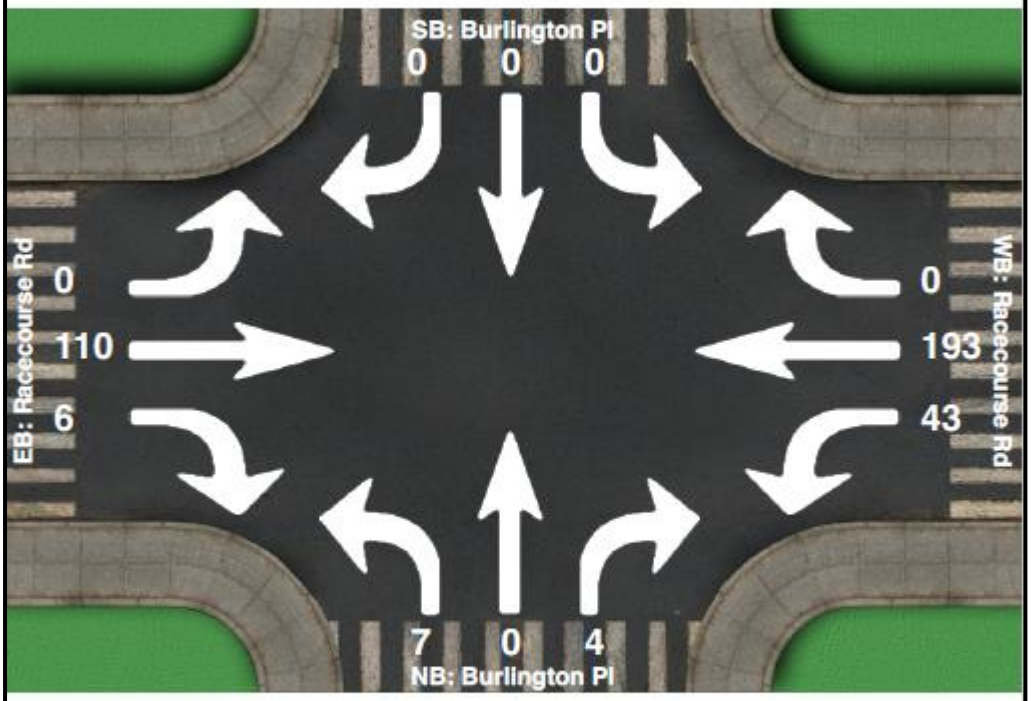
Intersection Peak Hour

15:45 - 16:45

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	202	41	196	105	946	180	62	76	302	44	894	42	3090
Factor	0.74	0.85	0.78	0.82	0.97	0.78	0.74	0.90	0.78	0.85	0.87	0.66	0.95
Approach Factor	0.78			0.92			0.81			0.88			

Intersection Peak Hour

Location: Burlington Pl at Racecourse Rd,
GPS Coordinates:
Date: 2024-03-19
Day of week: Tuesday
Weather:
Analyst: CT



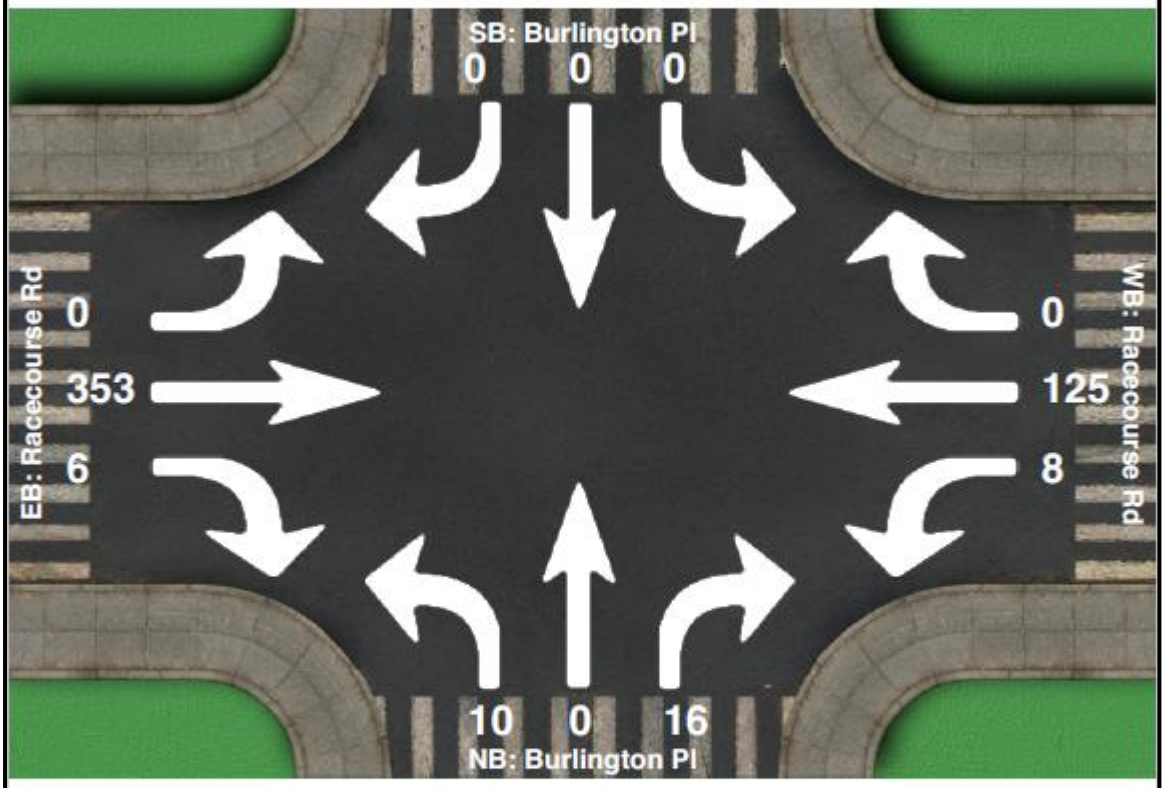
Intersection Peak Hour

07:15 - 08:15

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	43	193	0	7	0	4	0	110	6	363
Factor	0.00	0.00	0.00	0.54	0.85	0.00	0.58	0.00	0.50	0.00	0.79	0.50	0.82
Approach Factor	0.00			0.81			0.55			0.78			

Intersection Peak Hour

Location: Burlington Pl at Racecourse Rd,
GPS Coordinates: Lat=-32.714007, Lon=151.505735
Date: 2024-03-19
Day of week: Tuesday
Weather:
Analyst: CT



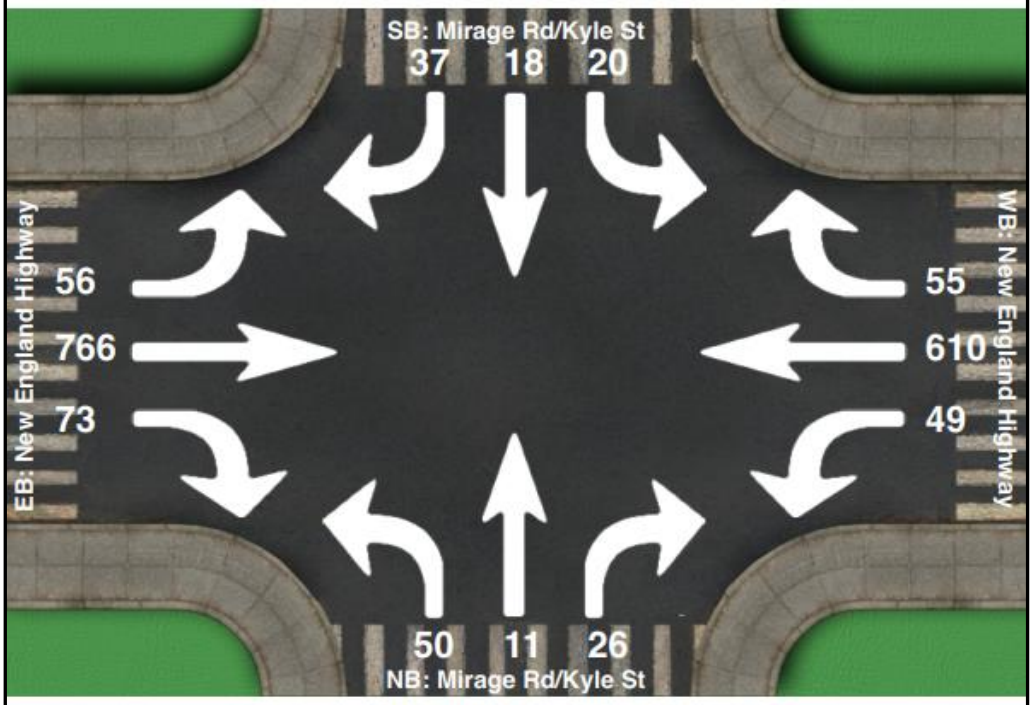
Intersection Peak Hour

15:00 - 16:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	8	125	0	10	0	16	0	353	6	518
Factor	0.00	0.00	0.00	0.67	0.78	0.00	0.83	0.00	0.57	0.00	0.66	0.75	0.72
Approach Factor	0.00			0.79			0.65			0.66			

Intersection Peak Hour

Location: Mirage Rd/Kyle St at New England Highway , Rutherford
GPS Coordinates: Lat=-32.924402, Lon=151.654631
Date: 2023-03-21
Day of week: Tuesday
Weather: Overcast
Analyst: KS

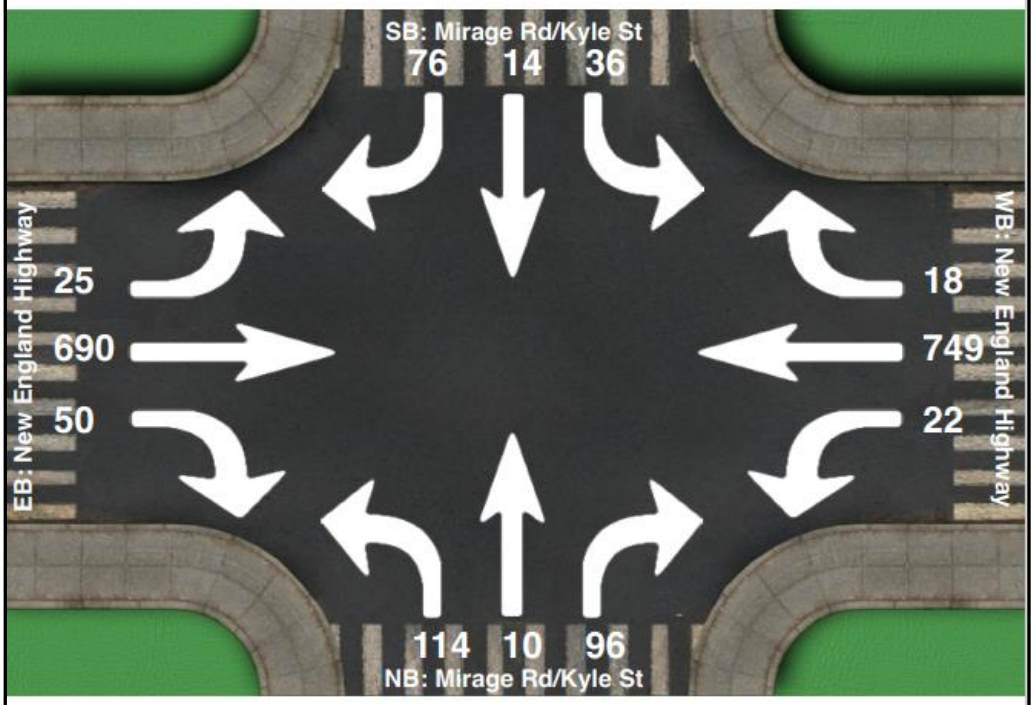


Intersection Peak Hour

08:00 - 09:00

Intersection Peak Hour

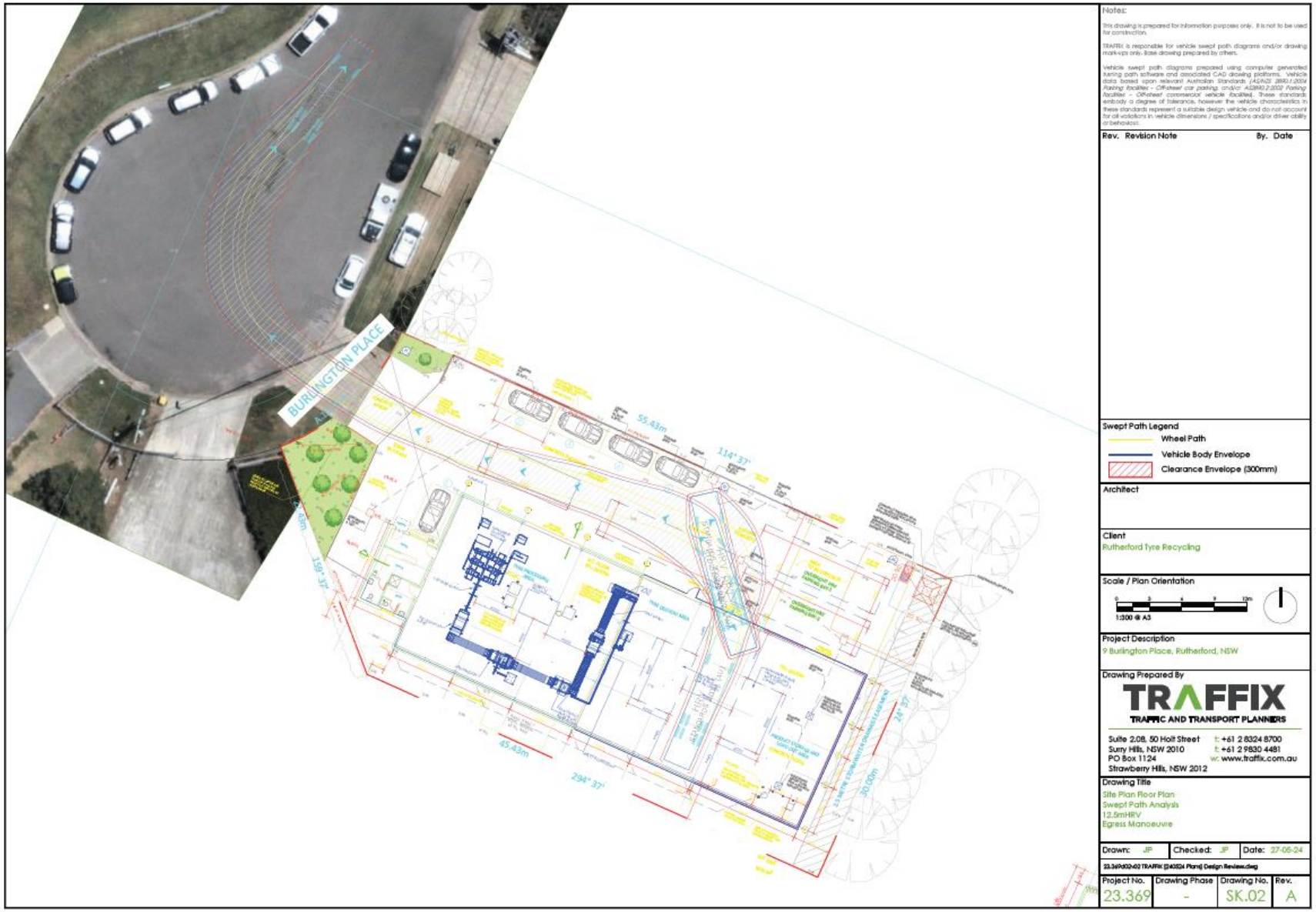
Location: Mirage Rd/Kyle St at New England Highway , Rutherford
GPS Coordinates: Lat=-32.924402, Lon=151.654631
Date: 2023-03-21
Day of week: Tuesday
Weather: Overcast
Analyst: KS



Intersection Peak Hour

16:00 - 17:00

Appendix C – Swept Paths


BURLINGTON PLACE
55.43m
114° 37'
45.43m
294° 37'
159° 37'
24° 37'
30.00m
Notes:
This drawing is prepared for information purposes only. It is not to be used for construction.
TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.
Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1:2004 Parking facilities - Off-street car parking and/or AS2890.2:2002 Parking facilities - Off-street commercial vehicle facilities). These standards embody a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.
Rev. Revision Note By. Date
Swept Path Legend
Wheel Path
Vehicle Body Envelope
Clearance Envelope (300mm)
Architect
Client
Rutherford Tyre Recycling
Scale / Plan Orientation
1:300 @ A3
Project Description
9 Burlington Place, Rutherford, NSW
Drawing Prepared By
TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS
Suite 2.08, 50 Holt Street
Surry Hills, NSW 2010
PO Box 1124
Strawberry Hills, NSW 2012
t: +61 2 8324 8700
f: +61 2 9830 4481
w: www.traffix.com.au
Drawing Title
Site Plan Floor Plan
Swept Path Analysis
12.5mHRV
Egress Manoeuvre
Drawn: JP
Checked: JP
Date: 27-06-24
23.369-002-r02 TRAFFIX [240524 Plans] Design Review.dwg
Project No. 23.369
Drawing Phase -
Drawing No. SK.02
Rev. A