Address:-
StreetWise Road Safety & Traffic Services Pty Ltd
PO BOX 1395
Port Macquarie NSW 2444
Contact:-
Craig Nethery 0412 009 558
craig@streetwisersa.com.au
Andy Davis 0422 011 353
andy@streetwisersa.com.au

OUTLINE PLANNING CONSULTANTS PTY LTD
Suite 2301, Level 3, Quattro Building
No. 4 Daydream Street
WARRIEWOOD NSW 2102

Attention: Gary Peacock

20 July 2022

StreetWise response to TfNSW comments in regard to proposed Recycling & Resource Recovery Facility, Torrens Road, Gunnedah

Dear Gary,

I refer to the recent comments from Transport for New South Wales, in regard to the previous Traffic Impact Assessment (TIA) prepared by StreetWise for the proposed Recycling & Resource Recovery Facility at Torrens Road, Gunnedah.

Transport for NSW Response

'It is understood that the proposal was for a waste facility to handle up to 250,000 tonnes of waste per annum and likely include transport of material by up to 126 laden truck/dog trips/week and 90 laden B-Double trips/week (section 11.2 of the TIA). The development is a State Significant Development and being defined under ISEPP as 'Waste or resource management facilities' it is Traffic Generating Development.

TfNSW has reviewed the documents provided, including the Traffic Impact Assessment (TIA) and while this Agency has no objection to the development, we have identified a number of traffic/transport matters needing further investigation or clarification. These are summarised below to assist the consent authority in determining the application.

1. *Traffic assumptions in the TIA appear to produce an underestimation in traffic generation numbers including:*
   - *The payload of B-Double used in the document is 53 tonnes and this is significantly higher than average payload of a B-Double even at HML;*
   - *The proponent assumes the majority of material will be hauled to/from the site by only truck & dog at 38 tonne payload and B-Double at 53 tonne payload. It is noted that the proponent also identifies in the TIA that other types of trucks such as rigid and light vehicles will be entering/exiting the site.*

   It is requested that the proponent confirm traffic generation numbers, addressing the matters raised and as based on the submitted information. This will lead to an assumption of 20 incoming heavy vehicle trips per day. If the majority of traffic is via

rigid trucks, the number of trips would be significantly higher. It is suggested that once numbers are confirmed, weekly and hourly HV generation rates be referenced in any approval granted.'

StreetWise Response:

At the time of preparing the traffic assessment for the original project (as exhibited), it was expected that a range of different vehicle types would be utilised to deliver unprocessed waste to the Torrens Road facility, while the haulage of processed waste from the site would generally be done by truck & dogs, as currently owned by the applicant, and semi-trailers.

At this time, it is unlikely that Tri-tri B-doubles, with a maximum payload of 53.5 tonnes, will be used, and the largest vehicle will be a B-double, with a payload of 43.5 tonnes. However, the majority of trips are likely to be undertaken by truck & dogs. It is also likely that many of the truck & dogs bringing unprocessed waste INTO the facility will also be used to haul processed waste OUT of the site. If this is the case, then heavy vehicle volumes will be reduced significantly. It is also likely that some waste will be transported by 10m tipper trucks to the facility as well as a small number of light vehicles (i.e. utilities and car & trailers).

The break-up of future haulage vehicles is unknown at this stage. However, for the purposes of this assessment, StreetWise have adopted the following:

Unprocessed waste in:

Semi- trailer (15%), Truck & dog (65%), 10m tipper (15%), Utes & trailers (5%)

Therefore, to determine the number of trips required to haul revised 200,000 tonnes of unprocessed waste to the site, the following has been adopted:

200,000 tonnes per annum = 3846 tonnes per week = 700 tonnes per day (10 hrs)

Vehicle	Max payload (tonnes)	% use	Total Tonnes per day	Laden Trips per day	Return Trips per day	Return Trips per hour
Semi trailer	42.5	15	105	3	6	1
Truck & dog	33	65	455	14	28	3
10m tipper	12.5	15	105	8	17	2
Light vehicles	1	5	35	35	70	7
		100	**700**	**60**	**120**	**12**

As can be seen from the table above, the adopted mix of haulage vehicles will generate approximately 25 laden heavy vehicle trips a day, and a total of 120 trips per day.

Processed waste out:

Semi-trailer (15%), Truck & dog (85%)

200,000 tonnes per annum = 3846 tonnes per week = 700 tonnes per day (10 hrs)

Vehicle	Max payload (tonnes)	% use	Total Tonnes per day	Laden Trips per day	Return Trips per day	Return Trips per hour
Semi trailer	42.5	15	105	3	6	0.6
Truck & dog	33	85	595	18	36	3.6
		100	**700**	**21**	**42**	**5**

As can be seen from the table above, the adopted mix of haulage vehicles will generate approximately 42 heavy vehicle trips a day to haul processed waste from the site, and approximately 5 trips per hour.

Total trip generation

The updated trip generation from the proposed Recycling & Resource Recovery Facility in Torrens Road is shown in the table below.

	Daily (7am -6pm)		AM Peak Hr		PM Peak Hr	
	Light	***HV***	***Light***	***HV***	***Light***	***HV***
Staff Commute	80	0	6	0	3	0
Unproccessed Waste In	70	50	7	5	7	5
Processed Waste Out	0	42	0	5	0	5
Sub total	***150***	***92***	***13***	***10***	***10***	***10***
Total	**242**		**23**		**20**	

As can be seen from the table above, the estimated total number of trips per day to be generated by the proposed Recycling & Resource Recovery Facility is 242 trips per day, which includes 92 heavy vehicle movements (of which 46 are laden), 80 staff commuter trips and 70 other light vehicle movements. From the above table, heavy vehicles account for only 38% of all future traffic movements to be generated. If the same heavy vehicles are utilised to bring waste in and also haul waste out, the total number of heavy vehicle movements will be further reduced.

The number of additional peak hour trips will be approximately 23 in the morning (10 HV) and 20 in the afternoon (10 HV), which is between 43 – 50% of future generated movements, and almost identical to the volumes estimated in the original StreetWise traffic assessment. Therefore, the number of additional trips shown distributed through the local road network in the previous StreetWise report are still valid.

It should be noted that the volumes shown above are a 'worst case' scenario, and the numbers are likely to be significantly lower, given:

- The trip generation rates are based on processing the maximum annual tonnage of waste per year (200,000 tonnes)
- The trip generation rates are based on ALL heavy vehicles entering the site laden with unprocessed waste, and exiting empty; or entering the site empty and hauling away processed waste
- The applicant owns a fleet of truck & dogs, and plans to utilise these vehicles , as well as other contractor trucks, to haul waste to and from the proposed Recycling & Resource Recovery Facility. It is likely that these trips will be scheduled for maximum efficiency i.e. laden in and laden out, resulting in a significant reduction in the number of heavy vehicle trips to & from the site.
- A maximum of 8 contracted truck drivers utilised on the one day

The following compares the estimated number of heavy vehicle haulage movements (semi-trailers and truck & dogs) generated by the original proposal (250,000 tonnes p.a.) and the current proposal (200,000 tonnes p.a.). As can be seen from the table, the proposed 20% reduction waste processed will result in a 20% reduction in HV trips generated. It should be noted that the worst case shown above involves haulage in one direction, with the HV empty for the return trip. The right hand columns are the more likely scenario, with efficient scheduling of truck movements i.e. ensuring at least 50% of heavy vehicle return trips are also used for hauling waste.

Annual (tonnes)	Empty one-way			Empty one-way			50% re-use		
	250,000			200,000			200,000		
	In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Semi trailer	8	8	16	6	6	12	4	4	8
Truck & dog	18	18	36	14	14	28	7	7	14
Total			**52**			**40**			**22**

Comparison of estimated daily heavy vehicle movements generated by proposal

2. *'Site Access from Torrens Road (the main site access) only allows general access vehicles. TfNSW's road access team identifies that Torrens Road is not on either the PBS 2A or the 25/26 m RAV B-double network.*

   In order for the proponent to legally operate the larger vehicles, a permit from the Heavy Vehicle Regulator (NHVR) will be required. The proponent will need to work and consult with Gunnedah Shire Council to provide their consent for heavy vehicle access on this road.'

   StreetWise Response:

   The original traffic assessment by StreetWise assumed that B-doubles were permitted to use Torrens Road, based on the quality of the road and that Torrens Road provided access to an industrial precinct. TfNSW may not be aware that Torrens Road was approved as a haul route (for B-doubles) for the Namoi Mining's 'Sunnyside Coal Project', approved by the Minister for Planning on 24 September 2008. This approval included the intersection of Torrens Rod and Quia Road, which was upgraded to facilitate these truck movements. This consent is still active.

The existing status of Torrens Road should be clarified, and if the B-double status is not current, StreetWise understands that an application, supported by Gunnedah Shire Council, should be submitted to TfNSW.

3. *'There are discrepancies in regards to staff numbers throughout EIS and TIA. This anomaly should be addressed.'*

   StreetWise Response:

   The original traffic assessment was prepared 3 years ago, with preliminary staff numbers. The proposed number of staff has since been amended to 18 on-site staff, which includes existing workshop and admin. The future staff at the site will likely comprise:

   Weighbridge: 4 staff on split shift. (Each shift: 1 to weigh in/weigh out, 1 do visual inspections/paperwork)
   Admin: 2 staff (invoicing, reporting, compliance)
   Enviro: 1 (Compliance, reporting)
   Trommel: 2 staff on split shift (Early start/early finish, late start/late finish)
   Loaders: 2
   Shed staff: 4 staff on split shirt (Early start/early finish, late start/late finish)
   Yard staff: 2
   Shed Supervisor: 1

   As noted above, a number of the future positions will require split shifts (i.e. early shift 7:00 – 1:00pm & late shift 12:00 – 6:00pm), while other roles may be performed by existing staff. A total of 12 additional staff has been adopted for this assessment, plus up to 12 extra truck drivers. The estimated start and finish times (i.e. commute times) of the future Recycling & Resource Recovery Facility staff are:

   7:00am 8 operational staff in + 12 truck drivers in

   8:00am 2 admin staff in + 2 operational staff in

   12:00pm 4 operational staff in (late shift)

   1:00pm 4 operational staff out (early shift)

   3:00pm 1 admin staff out

   4:00pm 1 admin staff out + 2 operational staff out

   5:00pm 4 operational staff + 6 truck drivers out

   6:00pm 4 operational staff out + 6 truck drivers out

   The estimated number of staff commuter movements above include 28 movements in and 28 movements out, for a total of 56 (generally light vehicle) trips. If we also allow additional staff trips for lunch and other activities, and include trips generated by couriers and other deliveries, the total number of staff movements will be approximately 80 per day, or an average of 8 per hour (4 in and 4 out).

   StreetWise on-site manual traffic counts undertaken for the previous traffic assessment indicated peak hour traffic in the local road network occurred at 7:45 – 8:45am and 2:45 – 3:45pm on weekdays. As can be seen from the estimated trips to

be generated by the Recycling & Resource Recovery Facility (above), the majority of commuter (light vehicle) trips will not conflict with existing peak hours. Allowing for an average of 1 courier or delivery per hour, the estimated number of staff commuter trips and other 'non-haulage' movements at peak times are:

8:00 – 9:00am 5 in & 1 out

2:45 – 3:45pm 1 in & 2 out

Therefore, the estimated number of staff commuter movements during peak hours to be generated by the proposed Recycling & Resource Recovery Facility are higher than those adopted in the original traffic report, but the am & pm peak hour movements are similar.

4. *'Allgayer Dr (industrial area) also has a connection to the Kamilaroi Hwy at Matthias Rd. There appear to be no separate left and right-turn lanes. The intersection would need upgrading if it is to be used by the development (possibly to a BAR). If it is not proposed for access, HVs should be restricted from using this route.'*

   StreetWise Response:

   The applicant does not intend to utilise the existing intersection of the Kamilaroi Hwy at Matthias Rd. It is proposed that ALL heavy vehicle movements in and out of the future Recycling & Resource Recovery Facility will be via Torrens Road / Quia Road intersection.

   Section 8.1.3 of the StreetWise TIA describes the existing intersection layout and states: *"It is not proposed that any heavy vehicle movements generated by the future Recycling & Resource Recovery Facility will utilise this intersection."* It should be noted that the EIS also describes that all waste haulage by heavy vehicles will be via Torrens Road.

5. *'The TIA claims that a through vehicle can pass a right-turning vehicle at the intersection of Quia and Torrens Rd. The widths are not quantified and it appears that a BAR does not exist. It might be the case for 2 light vehicles (LV) but not for articulated heavy vehicles (HV) with greater swept paths. The existing guardrail would not comply with BAL requirements. This should be further investigated and addressed by provision of swept paths to demonstrate the safety impacts for increased turning traffic.'*

   StreetWise Response:

   A swept path diagram is attached below, which indicates the existing layout is suitable for a B-double turning right in and out of Torrens Road from Quia Road. However, the following should be noted:

   - Quia Road (westbound), does not currently have adequate width to permit a westbound vehicle to pass a heavy vehicle queuing or turning right into Torrens Road i.e. the existing intersection and entry to the Torrens Road industrial precinct does not currently meet the requirements of an Austroads BAR layout.
   - The existing guardfence on the northern side of the intersection is relatively close to the edge of the traffic lane, and it is agreed that the intersection does not currently meet the requirements of an Austroads BAR layout. However, as can be seen from the aerial photo below, the tyre marks on Torrens Road

indicate that existing heavy vehicle movements are regularly undertaken with adequate clearance from the guardfence.

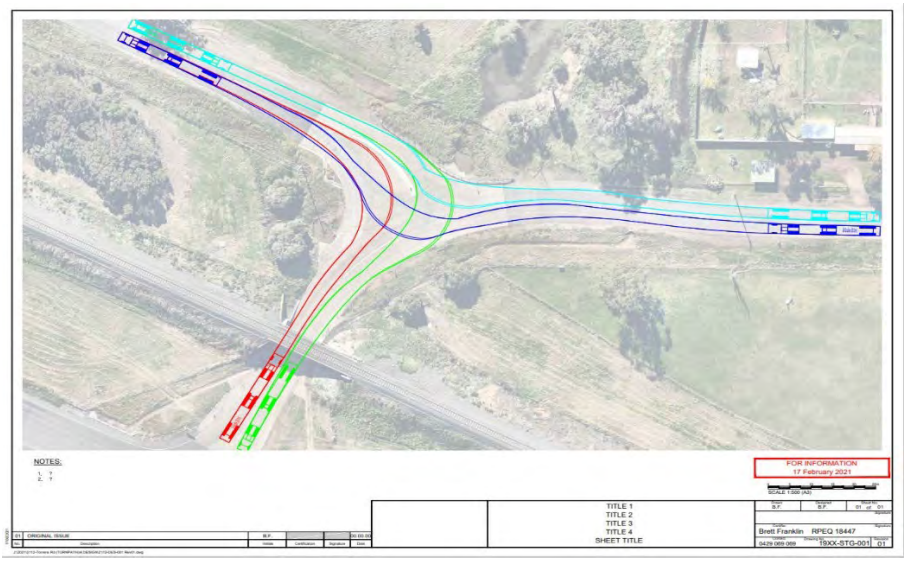
- The existing Torrens Road industrial precinct currently generates many heavy vehicle movements each day, including semi-trailers and truck & dog trailers.
- This intersection layout has been accepted by Gunnedah Council as the main access to the recently approved industrial sub-division at Torrens Road & Allgayer Drive
- This intersection layout has previously been assessed as part of the haul route for the Namoi Mining's 'Sunnyside Coal Project'. This project was approved by the Minister for Planning on 24 September 2008. The RTA comments included:

  Roads & Traffic Authority (RTA) does not oppose the project. It offered the following comments:
  - *any roadworks on the Oxley Highway would need to be designed to AUSTROADS standards;*
  - *adequate funding should be provided for the maintenance of roads on the coal transport route through an agreement with Gunnedah Shire Council; and Namoi Mining should upgrade the intersection of Quia Road and Torrens Road to improve safety for southbound right-turning traffic.*

It is understood the intersection of Quia Road & Torrens Road was upgraded at the time to the satisfaction of both Gunnedah Shire Council and the RTA.

Aerial photo – Quia Rd intersection (12 Dec 2021)

The only upgrade of the existing intersection upgrade that may need to be considered is the relocation of the concrete centre median in Torrens Road to better suit the turnpaths of heavy vehicles. As can be seen from the aerial photo above, re-locating the median island further south and providing a larger radius median island would improve the lane width available for turning vehicles through the intersection.

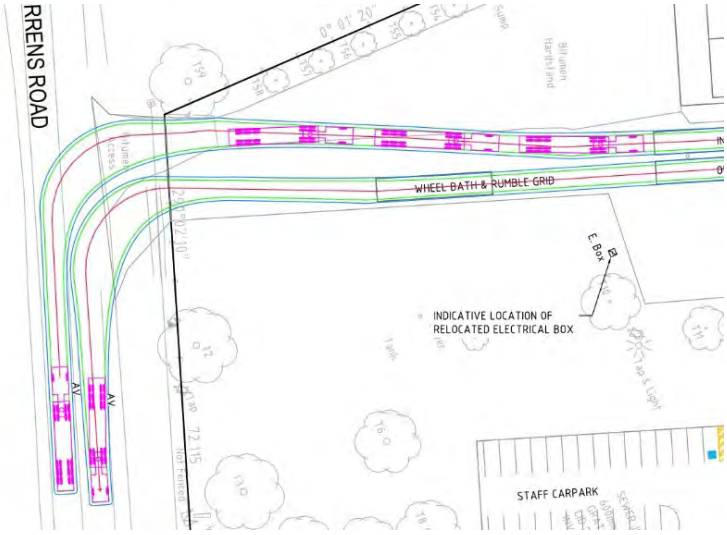


B-double turnpath assessment – Quia Rd intersection

6. *'MEX Depot access details were not quantified in the TIA and therefore it is no possible to check if they meet AS2890 requirements. Swept paths appear to indicate that a B-Double cannot exit onto the correct side of the road. This should be reviewed.'*

   StreetWise Response:

   The design plans for the future Recycling & Resource Recovery Facility have been updated. The amended plans show details of the upgraded driveway / access from Torrens Road into the site, as well as turnpaths for B-double vehicles. As can be seen from the image below, and the swept-paths provided by Martens & Associates, the widened driveway provides adequate width for all heavy vehicles to turn safely in and out of the site, without the need to cross the Torrens Road centreline.



B-double turnpath assessment – Upgraded Torrens Rd access (Martens & Assoc)

7. *'The consent authority needs to be satisfied that the safety impacts of the development have been considered at all relevant intersections, not just the capacity issues. Any mitigation measures should be clearly identified and specified in the conditions of any consent issued.'*

StreetWise Response:

The proposed Recycling & Resource Recovery Facility will generate an estimated maximum 242 vehicle trip per day, of which 92 will be heavy vehicle movements (46 laden). This equates to approximately 23 peak hour trips, with only 10 of these being heavy vehicles. As discussed previously, the above volumes are a 'worst case' scenario, and the volumes are likely to be significantly less.

The 96 heavy vehicle movements a day equates to approximately 10 trips per hour (5 laden). It is expected that the majority of the truck & dog (or B-double) movements to and the from the Recycling & Resource Recovery Facility will utilise the Oxley Highway or Kamiliaroi Highway, both of which are designated heavy vehicle routes. Smaller trucks (10 tonne tippers) are also likely to utilise the same routes, or be generated by industrial sites around the Gunnedah region. The previous traffic report by StreetWise describes the distribution of (a maximum) 10 heavy vehicle trips an hour generated by the Recycling & Resource Recovery Facility will quickly spread throughout the area, with no significant increase on individual roads outside of the Torrens Road precinct.

Similarly, the majority of the 80 light vehicle (commuter) movements generated by the future Recycling & Resource Recovery Facility will likely travel between the Gunnedah township and the Torrens Road site, utilising high quality local roads. The majority of commuter trips will be outside of peak periods on the local road network, with minimal impact on the overall efficiency or safety of these roads.

The applicant currently requires all drivers employed by the company to comply with a Driver Code of Conduct. It is expected that all drivers contracted to drive heavy vehicles to haul waste material to and from the future Recycling & Resource Recovery Facility will also be required to comply with the same document, which results in a high standard of road safety.

In summary, the proposed development will generate a relatively low volume of laden heavy vehicle movements (average of 5 per hour), and a low number of staff commuter movements. The majority of these movements will be undertaken outside of peak times within the local road network. The roads impacted by the majority of trips generated by the development are either high standard urban roads, or designated heavy vehicle routes.

StreetWise consider the relatively low number of heavy vehicle and commuter trips to be generated by the development will not have significant impact on the efficiency or safety of the existing road network.

Regards,

Andy Davis *(Director)*
Director - StreetWise Road Safety & Traffic Services
Level 3 Auditor # RSA-02-678