



LEAP

Livestock Environmental and Planning

Traffic Impact Statement: Koorani Piggery



Windridge Farms Pty Ltd

Private Bag 260 (110 Natimuk Road) Horsham Vic 3401

Phone: 0419 787 137

robyn@leap-consulting.com.au www.leap-consulting.com.au ABN: 48 557 393 171

Document Status Record

Client: Windridge Farms Pty Ltd
Document Title: Traffic Impact Statement: Koorani Piggery Windridge Farms Pty Ltd
Job No: 68
Document File Name: 68 Traffic Impact Statement final.docx

Version No	Date of Issue	Description	Signatures		
			Author	Checked	Approved
1	11 th April 2024	Draft	RWT	AR	RWT
2	26 th July 2024	Final	RWT	AR	RWT

Notes:

Version 1 This is a draft report for client comment.

Version 2 This is a final version.

Disclaimer:

1. Livestock Environmental and Planning has taken all reasonable steps to ensure that the information contained in this publication is accurate at the time of production. In some cases, Livestock Environmental and Planning has relied on information supplied by the client.
2. This report has been prepared in accordance with good professional practice. No other warranty, expressed or implied, is made as to the professional advice given in this report.
3. Livestock Environmental and Planning maintains **NO** responsibility for the misrepresentation of results due to incorrect use of information contained within this report.
4. This report should remain together and be read as a whole.
5. This report has been prepared solely for the benefit of the client listed above. No liability is accepted by Livestock Environmental and Planning with respect to the use of this report by third parties without prior written approval.
6. Where soil testing has been undertaken, it should be noted that soil conditions can vary significantly even over relatively short distances. Under no circumstances will any claim be considered because of lack of description of the strata and site conditions as shown in the report. In addition, the client or contractor shall be responsible for satisfying themselves as to the nature and extent of any proposed works and the physical and legal conditions under which the work would be carried out, including means of access, type and size of mechanical plant required, location and suitability of water supply for construction and testing purposes and any other matters affecting the construction of the works.

This document should be cited as follows: Livestock Environmental and Planning, 2024, Traffic Impact Statement: Koorani Piggery Windridge Farms Pty Ltd, Livestock Environmental and Planning, Horsham, VIC, 3400.

Copyright: © Livestock Environmental and Planning, Private Bag 260, Horsham, Vic, 3400

Table of Contents

1. Introduction.....	4
2. Objective.....	4
3. Scope	4
4. Description of Proposed Activity	5
5. Site Location	8
6. Site Access.....	11
7. Existing Road Conditions.....	16
8. Road Impacts	22
9. Parking	23
10. Conclusion	23
References	24

List of Figures

Figure 1: Location of Site and Key Roads (Old Forbes Road, Henry Lawson Way)	8
Figure 2: Cadastral Details	10
Figure 3: Site Aerial Photo	10
Figure 4: Property Entrance off Old Forbes Road.....	11
Figure 5: Site Access.....	12
Figure 6: Site Entry and Access.....	15
Figure 8: Strategic Freight Network for Hilltops.....	16
Figure 9: Sight Lines for Old Forbes Road-Henry Lawson Way Intersection.....	19
Figure 10 – Warrants for turn treatments on major roads at unsignalised intersections (Austroads, 2019)..	21

List of Tables

Table 1 – Weekly and Annual Vehicle Movements Currently.....	7
Table 2 – Weekly and Annual Vehicle Movements Post-Expansion	7
Table 3 – Increase in Weekly and Annual Vehicle Movements Post-Expansion	7
Table 4– Real Property Description for Koorani.....	9

List of Photographs

Photograph 1: Road Sign at Junction of Henry Lawson Way and Old Forbes Road.....	9
Photograph 2: Looking southeast along Old Forbes Road past the Koorani Entrance (~100 m)	12
Photograph 3: Looking north east along Old Forbes Road past the Koorani Entrance (~100 m)	13
Photograph 4: Property Entrance from Old Forbes Road.....	14
Photograph 5: Property Entrance Looking onto Old Forbes Road.....	14
Photograph 6: Wear on Edge of Pavement at Junction of Property Access and Old Forbes Road	15
Photograph 7: Old Forbes Road Looking Towards Intersection with Henry Lawson Way.....	18
Photograph 8: Old Forbes Road Looking Towards Intersection with Henry Lawson Way from ~100 m Down Road.....	18
Photograph 9: Looking North Down Henry Lawson Way from the Intersection with Old Forbes Road.....	20
Photograph 10: Looking South Down Henry Lawson Way from the Intersection with Old Forbes Road	20

1. Introduction

This traffic impact statement has been prepared to support a development application by Windridge Farms Pty Ltd for the expansion of Koorani piggery from 9,600 pigs to 16,221 grower pigs or 23,284 standard pig units (SPU).

Mr Cam O’Kane of Transport NSW was consulted in relation to this assessment (pers. comm. 7 March 2024). Based on the expected relatively low numbers (~1,040 trucks/year including existing movements) he suggested that a traffic impact statement could be more appropriate than a traffic impact study. He confirmed that the assessment needs to follow section 2 of the “Guide to Traffic Generating Developments”.

Hence, a traffic impact statement has been prepared in accordance with section 2 of the “Guide to Traffic Generating Developments. Key issues to be addressed include:

- Description of proposed activity
- Site location
- Site access
- Existing road conditions
- Road Impacts
- Parking

2. Objective

The objective of this study is to evaluate the effect of the increased number of traffic movements associated with the piggery expansion on the road network.

3. Scope

The proposal involves the expansion in capacity of the existing Koorani piggery from 9,600 pigs to 16,221 grower pigs or 23,284 standard pig units (SPU). The assessment is limited to effects related to the increase in traffic numbers resulting from the expansion.

Koorani piggery is located at 345 Old Forbes Road, Young. All access to the site is off Old Forbes Road. Piggery traffic will access Old Forbes Road from the south via Henry Lawson Way. The roads that are the subject of this report are the section of Old Forbes Road south of 345 Old Forbes Road, Young to the intersection with Henry Lawson Way, the intersection of Old Forbes Road and Henry Lawson Way, Young and Henry Lawson Way in the vicinity of that intersection.

4. Description of Proposed Activity

Windridge Farms Pty Ltd are currently operating a 9,600 head grower piggery on their Koorani property. The pigs are housed in ten deep litter sheds and nine conventional sheds that are under construction. It is proposed to expand the piggery capacity to 16,221 pigs or 23,284 SPU. The additional pigs will be housed in six conventional sheds. It is proposed that the expansion of the piggery will be undertaken in a single stage. The projected life of the operation is 20 years.

Trucks will need to transport pigs and prepared feed to the site. Finished pigs, some of the spent bedding and SEPS solids will need to be transported from the property. On average, there will be about 20 heavy vehicle movements in and out per week. The property entry point will be off Old Forbes Road with all traffic turning left to enter the property and turning right to exit the property. Weaner pigs and feed will come from the Wonga piggery located to the south of Young. Finished pigs will also head south to an abattoir located in Lavington North in Melbourne. It is expected that spent bedding and SEPS solids going off-farm will mostly go onto farms managed by the applicants and will stay within the district.

Trucks will need to transport prepared feed and incoming pigs to the site and finished pigs and manure (spent bedding ex-deep litter shelters and sludge / SEPS solids) from the site. Current and projected truck movements are:

- The annual feed usage is expected to be: ~13,860 t/yr. All pig feed comes from the Windridge Farms Pty Ltd Wonga feedmill at 3,081 Moppity Road, Young. Currently there are four trucks a week delivering feed to Koorani property. With the increase in piggery size, truck numbers will rise to eight trucks per week (~33 t loads).
- Weaned pigs will be transported to the property from Wonga. These are transported in B-doubles. Currently one truck per week transports the pigs to the site. Hence, post-expansion there will be two trucks in and out per week.
- Sale pigs are transported weekly to the Diamond Valley Abattoir at Laverton North in Melbourne Victoria. Currently the piggery fills four B-doubles per week. After the expansion, there would be eight B-doubles per week.
- The annual mass of aged spent bedding (ex-deep litter housing) post expansion is estimated at 1,385 t/yr or 2,308 m³/yr. If all of this goes off-farm in 26 t loads, this equates to 53 trucks per year. (This should be considered a maximum as some spent bedding may be spread on-farm). Since the number of pigs kept on deep litter will not increase, the number of trucks from this activity will not increase.
- Annually there will be some ~1,260 t of sludge / SEPS solids for transport post-expansion. If all this goes off-farm, and it is carried in 26 t loads, this equates to 49 trucks per year. Sludge / SEPS solids are only produced by pigs in conventional housing. The number of pigs in conventional housing at Koorani will increase from ~6,676 SPU currently to 17,915.6 SPU post-expansion. Hence, current movements would be ~18 trucks in and out per year.

Table 1 provides an estimate of current vehicle movements. On average, about 10 trucks would service the property weekly.

Table 2 shows estimated vehicle movements post-expansion. On average, there will be up to about 20 trucks going in and out each week.

Table 3 summarises the increase in vehicle movements associated with the expansion. On average, truck numbers will increase by about 10 per week and car numbers by 12 per week.

It could be expected that feed and stock truck movements would occur regularly throughout the year. However, there will be more demand for spent bedding and SEPS solids in the late summer / early Autumn when land is being prepared for planting. If these trucks all occur over a three month period, there will be an average of 26 trucks per week over that time (18 trucks for stock and feed and up to eight trucks for spent bedding and SEPS solids). This means an increase in average truck numbers at peak times of 2.4 per week.

Staff will access the site using cars or utility vehicles. It is likely that there will be limited car-pooling. Post-expansion, it is planned that there will be six staff on weekdays and three staff on weekends. It is estimated that on weekdays this will generate about six car trips in and out of the site per day. On weekends, there would be say three staff in three cars per day. Total staff car movements are therefore estimated to be 36 vehicles in and out per week.

The estimated total traffic numbers resulting from the proposed change in use can be considered small at 10 trucks and 12 cars in and out per week. During the peak period in late summer / early autumn, it is expected that truck movements would increase by a further 2.4 trucks in and out per week.

Table 1 – Weekly and Annual Vehicle Movements Currently

Type	Vehicle type	Av. no. trips/wk (in and out)	Av. no. trips/yr (in and out)	Destination
Staff	Car/utility	24	1251	Local / Young
Feed in	B-double	4	208	Ex-Wonga Piggery
Stock In	B-double	1	52	Ex-Wonga Piggery
Stock Out	B-double	4	208	Laverton North, Melbourne
Spent bedding Out	Semi-trailer	1	53	Young/District
SEPS Out	Semi-trailer	0.3	18	Local
Total trucks		10	539	

Table 2 – Weekly and Annual Vehicle Movements Post-Expansion

Type	Vehicle type	Av. no. trips/wk (in and out)	Av. no. trips/yr (in and out)	Destination
Staff	Car/utility	36	1877	Local / Young
Feed In	B-double	8	417	Ex-Wonga Piggery
Stock In	B-double	2	104	Ex-Wonga Piggery
Stock Out	B-double	8	417	Laverton North
Spent bedding Out	Semi-trailer	1	53	District
SEPS Out	Semi-trailer	1	49	Local
Total trucks		20	1,040	

Table 3 – Increase in Weekly and Annual Vehicle Movements Post-Expansion

Type	Vehicle type	Av. no. trips/wk (in and out)	Av. no. trips/yr (in and out)	Destination
Staff	Car/utility	12	470	Local / Young
Feed Trucks	B-double	4	209	Ex-Wonga Piggery
Stock In	B-double	1	52	Ex-Wonga Piggery
Stock Out	B-double	4	209	Laverton North
Spent bedding Out	Semi-trailer	0	0	District
SEPS Out	Semi-trailer	0.6	31	Local
Total trucks		10	501	

5. Site Location

The location of the site in relation to key roads and the town of Young is shown on Figure 1.

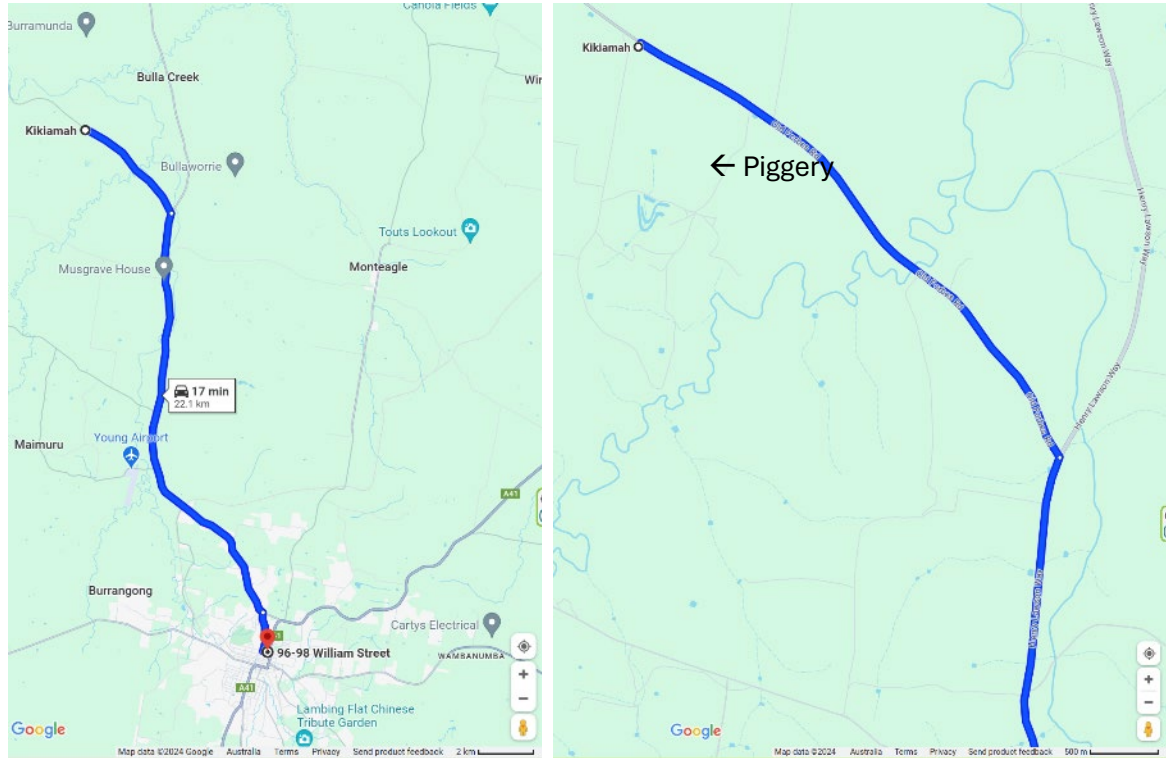


Figure 1: Location of Site and Key Roads (Old Forbes Road, Henry Lawson Way)

The property is approximately 22 km from the town of Young. The property entrance is about 3.5 km along the Old Forbes Road from its junction with Henry Lawson Way and on the western side of Old Forbes Road. It is approximately 19 km from the intersection of Old-Forbes Road and Henry Lawson Way to the town of Young (see Photograph 1).



Photograph 1: Road Sign at Junction of Henry Lawson Way and Old Forbes Road

Real property details for the property “Koorani” are provided in Table 4. The existing piggery is located on Lot 2 DP1049163. The proposed sheds will extend onto Lot B DP372950. The total area of the property is approximately 623.38 ha. Figure 2 shows cadastral details. Figure 3 shows an aerial photo of Koorani.

Table 4– Real Property Description for Koorani

Title Reference	Parcel	Parish	County	Shire	Area (ha)
Folio 1/217627	Lot 1 DP217627	Barramunda	Monteagle	Hilltops	101.18
Folio B/372950	Lot B DP372950	Barramunda	Monteagle	Hilltops	259.01
Auto Consol 1435-39	Lot 3 DP754581	Barramunda	Monteagle	Hilltops	20.24
	Lot 34 DP 754581	Barramunda	Monteagle	Hilltops	5.02
	Lots 1, 2 & 3 DP 1049163	Barramunda	Monteagle	Hilltops	237.94
Total					623.38

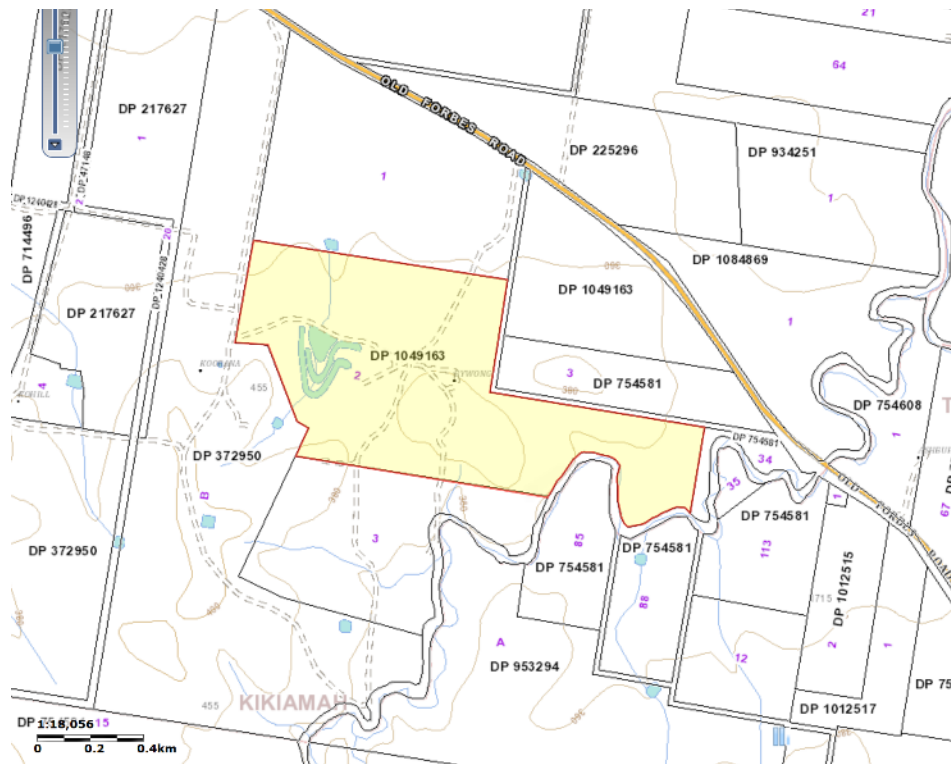


Figure 2: Cadastral Details

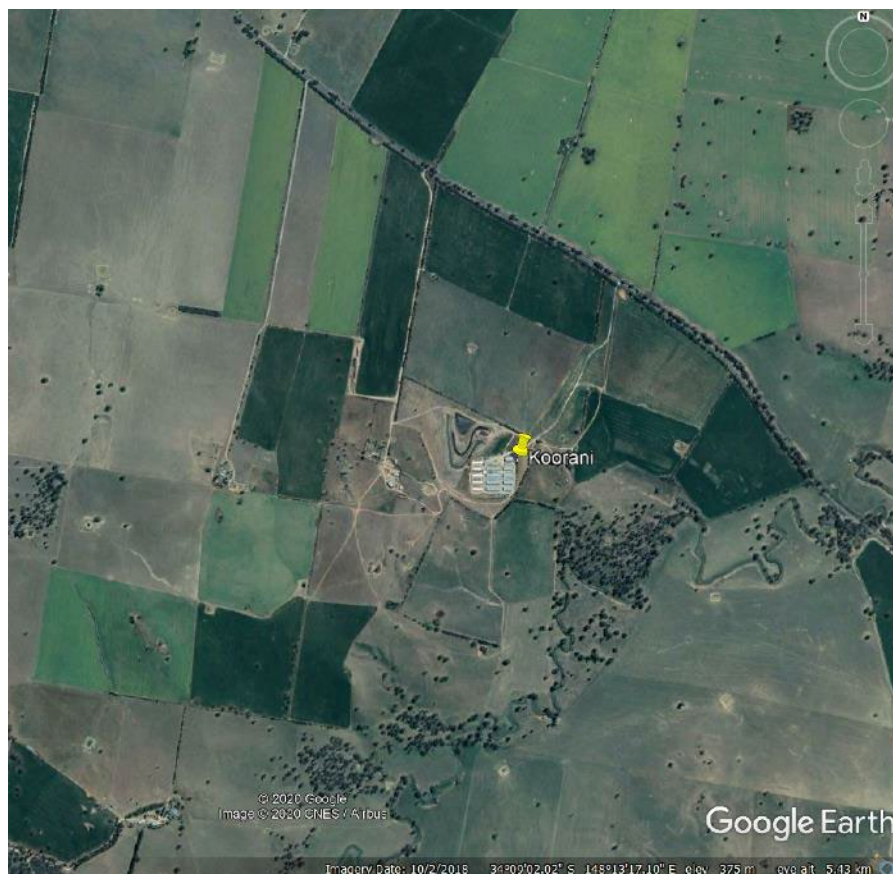


Figure 3: Site Aerial Photo

6. Site Access

A dedicated entrance to the existing piggery development is located off Old Forbes Road some 3.5 km to the north-west of its intersection with Henry Lawson Way. This entrance, as shown on Figure 4, is currently used by staff and heavy vehicles up to B-double configuration. This entrance will continue to be used for the expanded piggery.

The property also has a second entrance located approximately 1.1km north of the piggery entrance to allow direct access to a house on the farm. This entrance can be utilised by piggery generated traffic for emergency situations.



Figure 4: Property Entrance off Old Forbes Road

The existing piggery entrance is located on a straight downhill section of road with a speed limit of 100 km/hr. Figure 5 shows there is sight visibility of over 300m in both directions at the entrance. This exceeds the Austroads Guide to Road Design Part 3 (2019) sight distance requirements for a B-double assuming a design speed of 100 kph. Section 5.3.2 of the guide gives sight distances for a B-double of 191-205 m for a flat road + 12 m for a -2% slope and -11 m for a +2% slope). Photograph 2 and Photograph 3 show the sight lines for a distance of ~100 m to the southeast and to the northwest, respectively.



Figure 5: Site Access



Photograph 2: Looking southeast along Old Forbes Road past the Koorani Entrance (~100 m)



Photograph 3: Looking north east along Old Forbes Road past the Koorani Entrance (~100 m)

The entry to the existing piggery and the on-farm access road is shown on Photograph 4 and Photograph 5, Photograph 6 and on Figure 6. As these photos and the figure show, turning treatments have been applied to the intersection of the on-farm access road and Old Forbes Road. These have allowed B-double sized vehicles to turn in and out of the property. There is limited pavement wear on the Old Forbes Road at its junction with the on-farm access road (see Photograph 6). Otherwise, Old Forbes Road is in reasonable condition in the vicinity of the property. The on-farm access road is an all-weather gravel road in good condition.



Photograph 4: Property Entrance from Old Forbes Road



Photograph 5: Property Entrance Looking onto Old Forbes Road



Figure 6: Site Entry and Access



Photograph 6: Wear on Edge of Pavement at Junction of Property Access and Old Forbes Road

7. Existing Road Conditions

The two roads of interest to this study are Old Forbes Road from the property to its intersection with Henry Lawson Way and Henry Lawson Way south to Young. The intersection of Old Forbes Road and Henry Lawson Way is of particular interest since this is where the piggery traffic will merge with significantly greater traffic volumes.

From PSA Consulting Australia (2019), the strategic freight network within the Hilltops Shire comprises of three different priority levels. These are:

- Priority 1 – state roads that provide for inter-regional and inter-state movements and connections;
- Priority 2 – regional and local roads that provide for inter-regional movements and connections to priority 1 roads; and
- Priority 3 – regional and local roads that provide for intra-regional movements and connections.

Henry Lawson Way (priority 2) and the part of Old Forbes Road that goes past the piggery entrance to the intersection with Henry Lawson Way (priority 3) are considered of strategic importance for freight (see Figure 7 taken from PSA Consulting Australia (2019)).

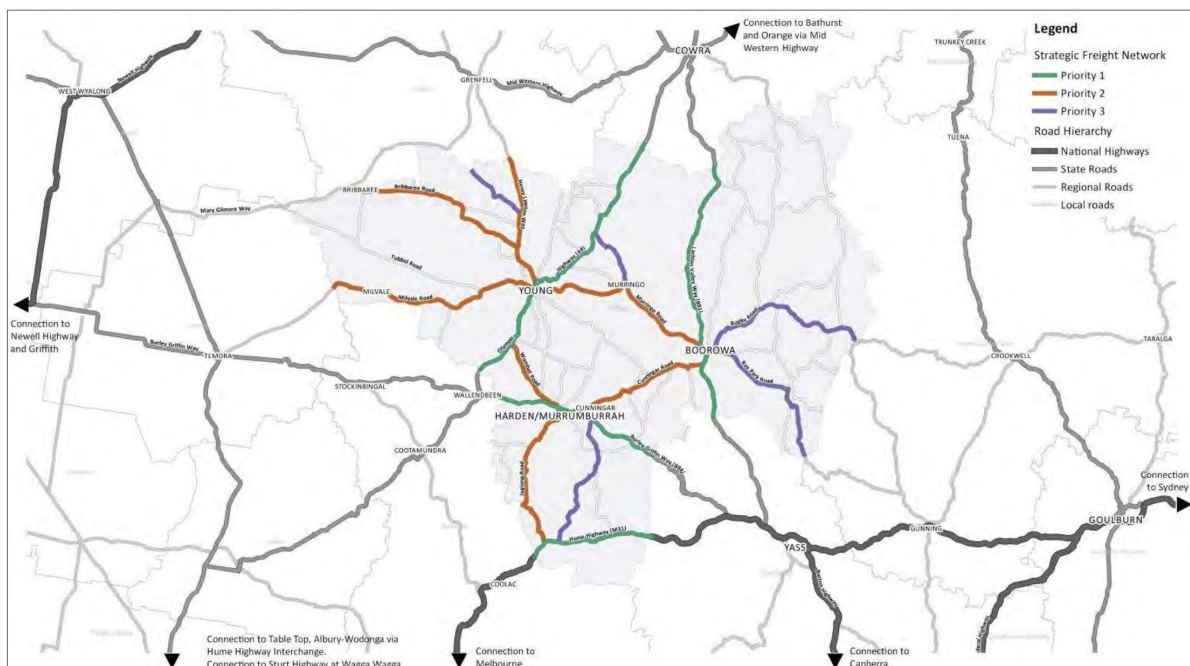


Figure 7: Strategic Freight Network for Hilltops

Old Forbes Road in the vicinity of the property is shown on Photograph 2 and Photograph 3. It is a sealed, dual lane road with centre line marking. Old Forbes Road is in reasonable condition. The road is greater mass limit (GML) and concessional mass limit (CML) approved (25 m B-double) except on school days between 7:15 AM to 8:00 AM and 4:00 PM to 4:45 PM. It is not higher mass limit (HML) approved (PSA Consulting Australia, 2019).

Henry Lawson Way is a gazetted main road between Young and Grenfell. From <https://www.transport.nsw.gov.au/system/files/media/documents/2023/classified-roads-schedule.pdf> it is a regional road (main road 239) (most recent government gazette: 184 27/11/09). Henry Lawson Way is a two-lane single carriage way that supports heavy vehicle movements (B-doubles). The road is in good condition.

The intersection providing access from Old Forbes Road onto Henry Lawson Way can be seen on Photograph 7 and Photograph 10. Old Forbes Way forms a T-intersection with Henry Lawson Way with Old Forbes Road the terminating leg. The Henry Lawson Way/Old Forbes Way intersection is a priority sign-controlled T-intersection and is shown in Photograph 7, Photograph 8, Photograph 9 and Photograph 10. The intersection has the following properties:

- give way signage on the Old Forbes Way approach;
- the intersection has adequate visibility of ~350m to the north (see Figure 8) and ~250 m to the south (see Figure 8);
- the intersection currently has centre line marking and edge line marking;
- there is a Channelised Left -turn Treatment (CHL) northbound and Channelised right-turn Treatment (CHR) southbound at the intersection.

Figure 8 shows sight lines in both directions. When looking to the north-east the road is straight for over 350 m from the intersection. The road is relatively flat. With a 3.5m lane width, a suitable turning radius is provided to allow long trucks to turn from Old Forbes Road right onto Henry Lawson Way. When looking to the south-west the road is straight for about 250 m from the site. The road is relatively flat with sight limited by the left hand horizontal curve. These distances exceed the Austroads Guide to Road Design Part 3 (2019) sight distance requirements for a B-double assuming a design speed of 110 kph. Section 5.3.2 of the guide gives sight distances for a B-double of 225-141 m for a flat road +12 m for a -2% slope and -12 m for a +2% slope).



Photograph 7: Old Forbes Road Looking Towards Intersection with Henry Lawson Way



Photograph 8: Old Forbes Road Looking Towards Intersection with Henry Lawson Way from ~100 m Down Road



Figure 8: Sight Lines for Old Forbes Road-Henry Lawson Way Intersection

The intersection providing access from Henry Lawson Way onto Old Forbes Road can be seen on Photograph 9 and Photograph 10. In both directions, a turning lane provides access from Henry Lawson Way onto Old Forbes Road. This provides for safe access onto Old Forbes Road for all sized vehicles.



Photograph 9: Looking North Down Henry Lawson Way from the Intersection with Old Forbes Road



Photograph 10: Looking South Down Henry Lawson Way from the Intersection with Old Forbes Road

From Figure 9, the CHR and CHL are high order treatments from a safety perspective.

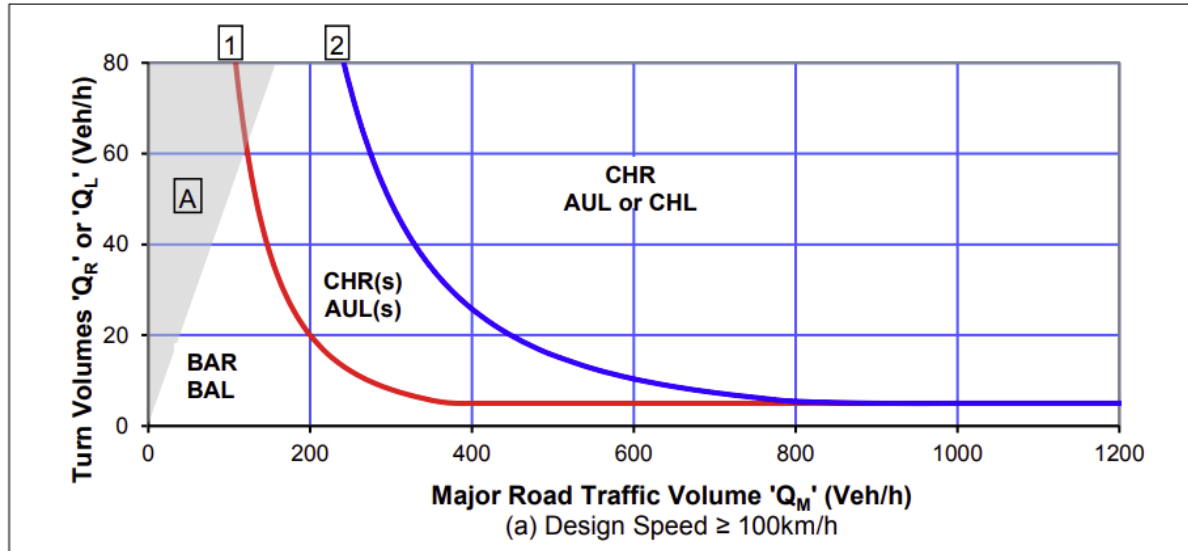


Figure 9 – Warrants for turn treatments on major roads at unsignalised intersections (Austroads, 2019)

8. Road Impacts

No traffic count data is available for Old Forbes Road to its intersection with Henry Lawson Way. However, the road is recognised as Priority 3 being a regional or local road that provides for intra-regional movements and connections. As the road is sealed, an increase in heavy vehicle numbers is unlikely to significantly increase maintenance requirements.

Traffic count data for Henry Lawson Way west of Chillingworks Road Young for 2018 is available from the PSA Report (PSA Consulting Australia, 2019). The AADT was 2,050 vehicles and growing by 4% per year which equates to 2,494 AADT in 2023. Some 10% of these vehicles were heavy vehicles or ~250 heavy vehicles per day. To put this in perspective, the additional traffic generated by the proposed piggery expansion is about six movements per day and comprising three heavy vehicles. This represents an increase of 0.24% in all vehicles. If all the additional piggery trucks (20 movements per week) used Henry Lawson Way, the increase in heavy vehicle numbers on that road would be ~1.1%. This represents an insignificant increase in truck movements along this road.

Given that the heavy vehicles (semi-trailers/B-Doubles) to be used are permissible on Henry Lawson Way and Old Forbes Road and currently use the roads to service the existing piggery, the roads and intersections can be considered to be at a suitable standard and no significant road impacts are expected.

9. Parking

On-site parking will be provided for the maximum number and type of vehicles visiting the site. There will be no need for trucks to queue or park on Old Forbes Road. All vehicles will enter and exit the site in forward direction as there are suitable manoeuvring areas within the piggery complex itself.

10. Conclusion

The existing road network is suitable for handling the increased number of traffic movements associated with the proposed piggery expansion.

References

Austroads, 2023, *Austroads Design Vehicles and Turning Path Templates*, Austroads, Sydney, NSW.

Austroads, 2019, *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management*, Austroads, Sydney, NSW.

Austroads, 2021, *Guide to Road Design Part 3: Geometric Design*, Austroads, Sydney, NSW. PSA Consulting Australia. (2019). *Hilltops Freight and Transport Study: Final Report*. Brisbane: PSA Consulting Australia.