

# **Proposed Continued Operation of Vermiculture Facility**

**803 Wood Road, Yenda**

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## **TRAFFIC AND PARKING ASSESSMENT REPORT**

21 November 2023

Ref 23305

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## 1. INTRODUCTION

This report has been prepared to accompany a development application to Council for the *continued operation of vermiculture facility* on the existing site which is to be located at 803 Wood Road, Yenda (Figures 1 and 2).

The subject site is zoned *RU1 Primary Production* pursuant to Griffith Local Environmental Plan 2014, and the proposed development is permissible with a development consent.

The proposed development involves the continued use of the *vermiculture facility* on the site to facilitate a creation of worm castings by processing of non-putrescible wastes combined with pasteurised compost using vermiculture, with acceptance of up to 5,000 tonnes of organic material per year.

The proposed *vermiculture facility* will not be open to the public or visitors.

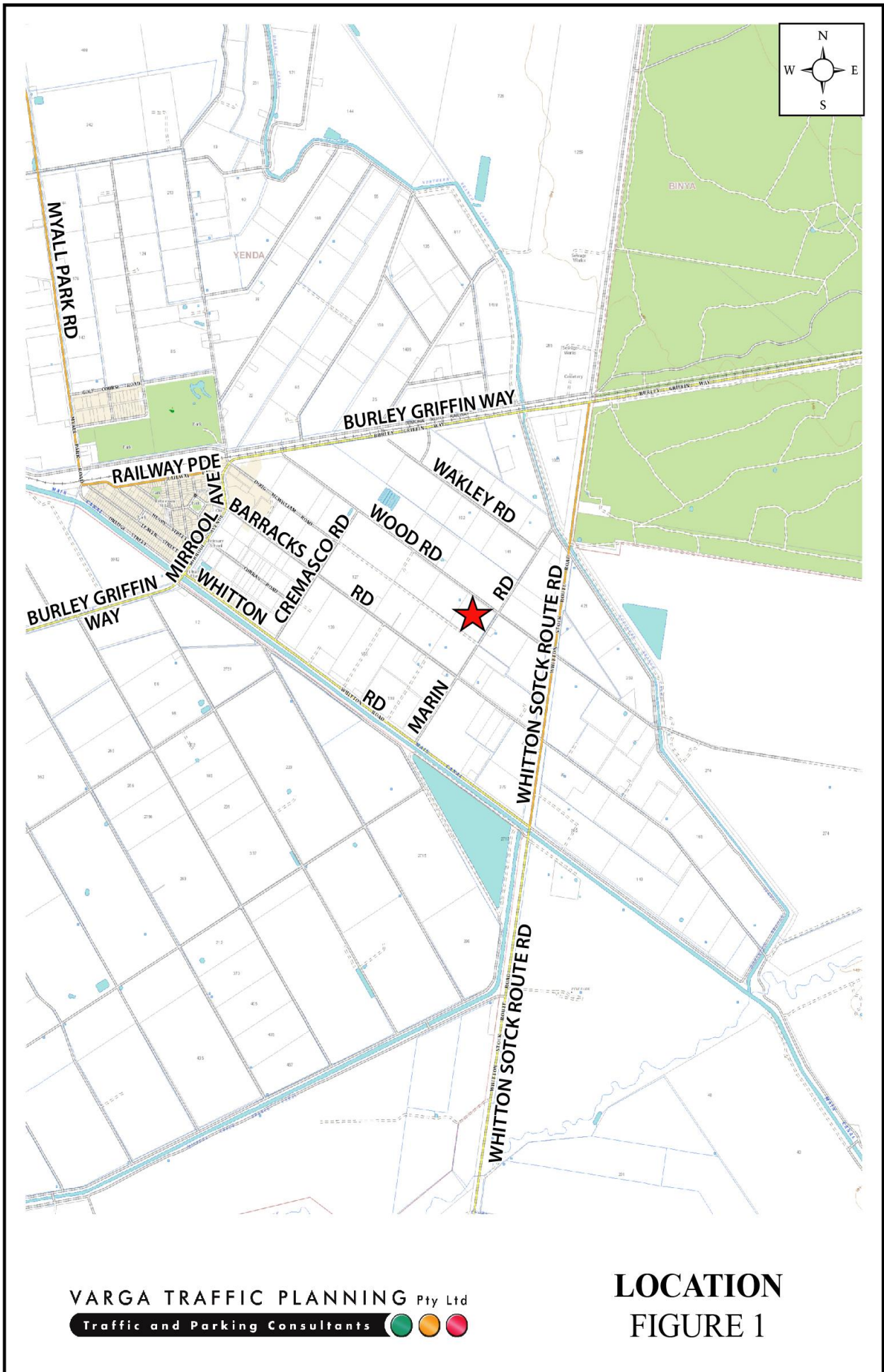
The proposed development will have a maximum of 8 staff members at any given time, with operational time from 7am to 5pm, Monday to Friday.

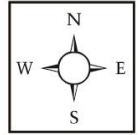
Off-street parking is to be provided in an existing parking area for a total of 12 cars in accordance with the Council's requirements. Vehicular access is to be provided via existing driveways off Wood Road.

The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

- describes the site and provides details of the development proposal
- reviews the road network in the vicinity of the site and the traffic conditions on that road network
- estimates the traffic generation potential of the development proposal and assigns that traffic generation to the road network serving the site

- assesses the traffic implications of the development proposal on the surrounding local and arterial road network in terms of road network capacity
- reviews the geometric design features of the proposed car parking facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street parking provided on the site.







## 2. PROPOSED DEVELOPMENT

### Site

The subject site is located on the western corner between Wood Road and Marin Road in Yenda, approximately 2.5km east of Yenda Town Centre.

The site has a street frontage of 300.17m in length to Wood Road and 292.55m in length to Marin Road, and occupies a site area of approximately 9.5ha.

The site currently operates as an agricultural development, comprising a vermiculture pad, a transportable office, a farm dwelling, amenities and two storage sheds, and has been used as a research and testing facility since 2015 with the goal of optimising the vermiculture process. Off-street parking is provided on site, with vehicular access to the site is provided via existing three entry/exit driveways off Wood Road.

A recent aerial image of the site and its surroundings as well as *Streetview* images are reproduced below.



Source: NearMap





**Site view from Wood Road facing West**



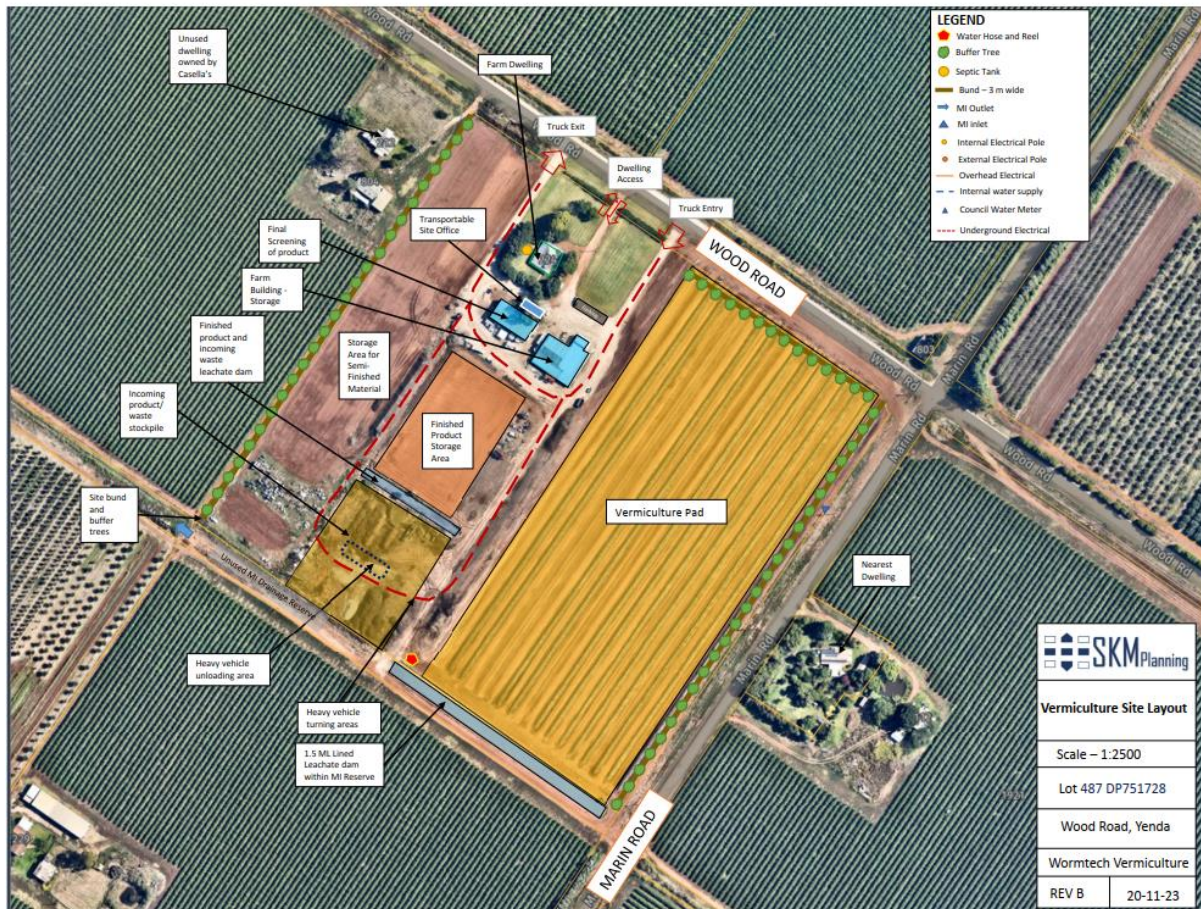
**Site view from Wood Road facing South**



**Existing Off-Street Parking Area**



A site layout demonstrating the existing facilities and truck access route is reproduced below.



## Proposed Development

The proposed development involves the continued use of the *vermiculture facility* on the site to facilitate a creation of worm castings by processing of non-putrescible wastes combined with pasteurised compost using vermiculture.

The waste streams will consist of a mixture of the following waste types up to a total of 5,000 tonnes per year:

Pasteurised compost:	up to 3000 tonnes per year
Rice:	up to 50 tonnes per year
Mulch:	up to 1800 tonnes per year
De-hydrated food waste:	up to 25 tonnes per year
Fabrics and textiles:	up to 100 tonnes per year
<b>TOTAL WASTE:</b>	<b>up to 5000 tonnes per year</b>

The existing *transportable office* currently caters 2 staff members throughout the day.

The existing *farm dwelling* is currently occupied by 2 business owners and used for the amenities for office and outdoor workers. It is expected the *farm dwelling* will be converted to an administration building and staff amenities within a 12 months period.

The proposed *vermiculture facility* will not be open to the public or visitors.

A maximum of 8 staff members will occupy the subject site at any given time, with operational time between 7am and 5pm, Monday to Friday.

Off-street parking is proposed to be provided in an existing parking area for a total of 12 cars to meet the Council's parking requirements.

Vehicular access to the parking facilities is to be provided via an existing entry/exit driveway off Wood Road.

The compost will be transported from the existing Wormtech's site at 50 Conargo Road in Carrathool, with a total of 125 organic deliveries throughout the year, based on B-double trailer combinations. It is expected the similar amount of truck movements will be required to remove the processed products from the site, making the total of 250 truck movements throughout the year or 4-5 truck movements per week.

All trucks involved in the delivery process will approach and depart the site either via Burley Griffin Way or Whitton Stocks Route Road. Trucks will enter and exit the site via existing entry/exit driveways located on Wood Road in a forward direction only. Loading and unloading operations will be accommodated within the loading and turning area provided on the site.

### 3. TRAFFIC ASSESSMENT

#### Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Transport for New South Wales (TfNSW) is illustrated on Figure 3.

Burley Griffin Way is classified by TfNSW as a *State Road* and provides the key east-west road link in the area between Griffith and Ardlethan. It typically carries one traffic lane in each direction. Kerbside parking is not permitted on both sides of the road.

Whitton Road is classified by TfNSW as a *Regional Road* and links Mirrool Avenue and Whitton Stock Route Road in Yenda. It typically carries one traffic lane in each direction. Kerbside parking is generally not permitted on both sides of the road.

Marin Road is local, unclassified road which links Whitton Road and Northern Branch Canal Road, and comprises a two-way rural road with unsealed road shoulders.

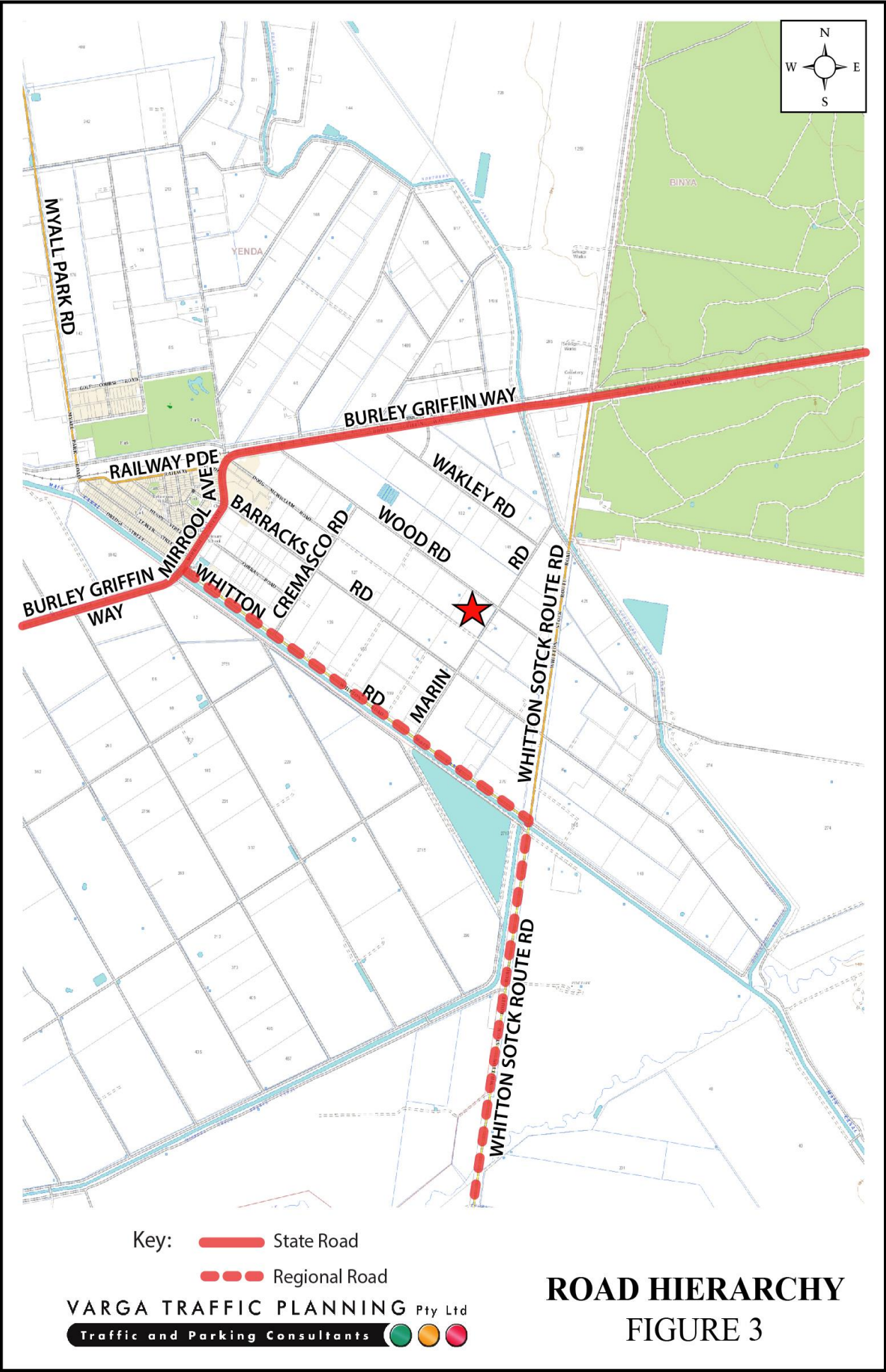
Wood Road is rural, unclassified road which provides a connection between Burley Griffin Way and Northern Branch Canal Road, and comprises a two-way rural road with unsealed road shoulders.

#### Existing Traffic Controls

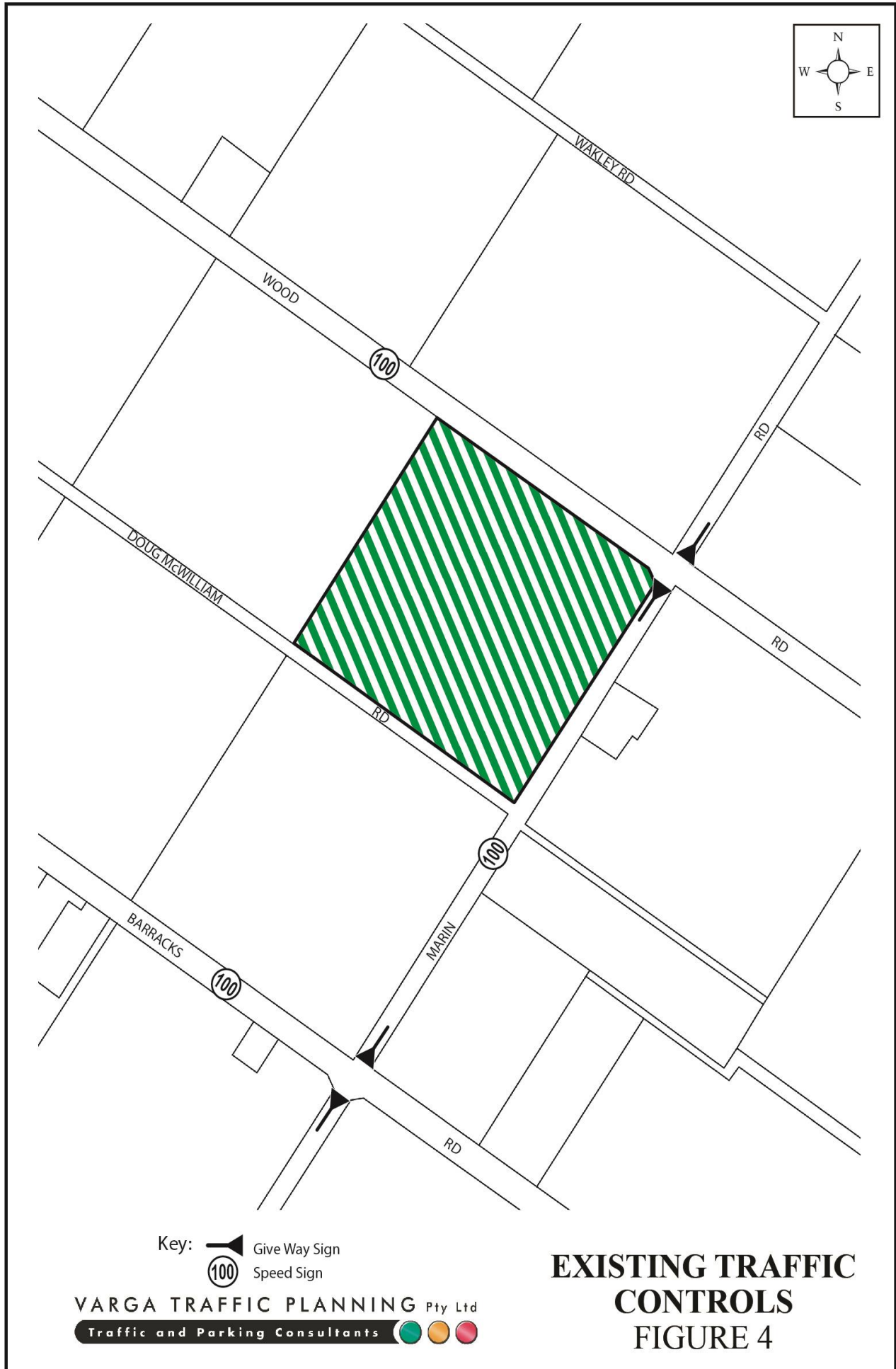
The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 100 km/h SPEED LIMIT which applies to Wood Road, Marin Road and Barracks Road in the vicinity of the site
- GIVE WAY signs on Marin Road where it intersects with Wood Road and Barracks Road.









## **Projected Traffic Generation Potential**

The traffic implications of a development proposal primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network.

The TfNSW *Technical Direction TDT 2013/04* document specifies that it replaces those sections of the TfNSW *Guidelines* indicated and must be followed when TfNSW is undertaking trip generation and/or parking demand assessments.

However, neither the TfNSW *Guidelines* nor the TfNSW *Technical Direction* nominate a traffic generation potential rate for a *vermiculture facility*, thus a “first principles” assessment based on the maximum number of staff at any time has been undertaken to estimate the traffic generation potential.

As noted in Chapter 2 of this report, the *vermiculture facility* will have a maximum of 8 staff at any given time from 7am to 5pm, Monday to Friday, and there will be about 250 delivery truck movements per year.

There will be approximately 4-5 truck deliveries throughout the week to deliver and collect the products to/from the subject site.

For the purposes of this assessment, a maximum amount of 2 truck movements per day has been adopted, where the trucks will deliver and collect the products during peak hours on a single day. This could result in 1 vehicle per hour during both *morning* and *afternoon* peak hours.

If the maximum number of staff in the *vermiculture facility* is achieved, then the development proposal yields a traffic generation potential of 10 vehicles per hour (vph) during both *morning* and *afternoon* peak hours, as set out in the table below.

**Table 1 Projected Peak Hour Traffic Generation Potential (vph)**

<i>Vermiculture Facility</i>	AM Peak Hour			PM Peak Hour		
	IN	OUT	Total	IN	OUT	Total
Transportable Office	2	0	2	0	2	2
Farm dwelling	2	0	2	0	2	2
Other facilities	4	0	4	0	4	4
Truck Delivery	1	0	1	0	1	1
<b>Total</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>9</b>

In practice however, the *actual* traffic generation potential of the proposed development during both the *morning* and *afternoon* peak hours is expected to be slightly less than is set out in the table above because:

- it is unlikely that truck deliveries will coincide with the AM and PM peak hours, and
- it is likely that there will be no truck deliveries in one of the days.

In any event, the projected traffic generation potential set out in the table above has been adopted for the purposes of this assessment.

That projected maximum traffic generation potential of the site of 9 vph as a consequence of the development proposal is minimal, and will clearly not have any unacceptable traffic implications in terms of road network capacity, particularly given that the existing agriculture development has been operating since 2015, and no complaints have been made from nearby residents.

## **4. PARKING IMPLICATIONS**

### **Existing Kerbside Parking Restrictions**

Given the rural nature of the surrounding area at present, there are generally no kerbside parking restrictions which apply in the vicinity of the site, including along the site frontage.

### **Off-Street Car Parking Provisions**

The off-street car parking requirements applicable to the development proposal area are usually specified in the *Griffith Development Control Plan 2011, No. 20: Off-Street Parking* document, however it does not specify a parking rate which is applicable for the *continued operation of the vermiculture facility*.

As noted in the foregoing, the *maximum* number of staff that may be present on the site at any time is 8 staff.

Accordingly, 12 parking spaces have been provided for the staff on the site as part of the development proposal, thus it is clear that the parking demands likely to be generated by the proposed development can be *fully accommodated* on the site, and it is therefore concluded that the proposed development will not have any unacceptable parking implication.

The parking area geometric layout of the proposed development has been designed to comply with the relevant requirements specified in the *AS/NZS 2890.1:2004 Off-Street Car Parking* in respect of parking bay dimensions, gradients, aisle widths, and driveway widths.

### **Servicing Provisions**

Compost deliveries to and from the proposed development are expected to be undertaken by a variety of commercial truck types and sizes, ranging from 19.0m Semi-trailer to B-double trucks, with a total of 250 truck movements throughout the year or 4-5 truck movements per week.



Trucks will enter and exit the site via the existing entry/exit driveways located on Wood Road. The substantial size of the site allows all trucks to turn around on-site, such that all trucks can enter and exit the site travelling in a forward direction only at all times.

## **Conclusion**

The foregoing assessment has found that the proposed development will not have any unacceptable traffic or parking implications, and is therefore recommended for approval.