

Clean and Green Organics Pty Ltd  
769 The Northern Road, Bringelly

Statement of Environmental Effects for  
Section 4.55 Modification Application

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## Executive Summary

### *Overview*

This Statement of Environmental Effects supports Clean and Green Recycling Pty Ltd's (CGO) request to modify Development Consent 1726/2000 for their facility at 769 The Northern Road, Bringelly, NSW. The modification focuses solely on amending Condition 6 to increase truck movement numbers.

CGO, an established organic waste recycling company, has operated for a decade and recently changed ownership while retaining its commitment to sustainable practices. They collect materials from over 120 supermarkets, transforming them into high-quality soil conditioner sold to major retailers. CGO also seeks to expand its role in organic waste transfer to meet increasing demand for recycling and landfill reduction.

### *Existing Facility Operations*

The total amount of waste received in the facility is 26,000 tonnes per annum. This limit is further divided into two categories: garden waste, wood waste, natural organic fibrous material, and paper pulp, with a maximum allowance of 15,600 tonnes per annum, and manure, biosolids, and food waste, which should not exceed 10,400 tonnes per annum. The entire site spans approximately 395,500 square meters, with the composting facility occupying about 190,500 square meters of that area.

### *Proposal*

The proposed development entails modifying the existing Consent (DA 1726/2000) in accordance with section 4.55 of the Environmental Planning & Assessment Act 1979. The primary objective of this modification is to expand condition 6 of the consent. Importantly, there will be no alterations to the current operational conditions, ensuring the site's continued normal functioning. Presently, the site is constrained to allowing only 5 truck movements per day, both inbound and outbound, irrespective of truck size or cargo. This limitation has impeded the site's ability to maintain an adequate material supply and achieve full recovery capacity, operating at roughly 42% of its approved tonnage capacity, equivalent to an annual intake of approximately 9,000 tonnes. To reach the annual limit of 26,000 tonnes, an average daily intake of about 83 tonnes is necessary.

To fully harness the site's capacity and meet evolving market demands, CGO is seeking an increase in the daily truck movements to 35 inbound and 35 outbound. Furthermore, due to a rising demand for food and organic waste recycling, CGO has engaged with businesses employing smaller vehicles, such as 2-3 tonne compactors, catering to local restaurants and collecting waste directly at its source. These smaller vehicles, though, necessitate more frequent trips to transport equivalent quantities of material compared to larger trucks, rendering the current truck limit restrictive.

In response, CGO is actively collaborating with these companies to diversify material intake, with an intended split of 50% from larger trucks and 50% from smaller vehicles. Additionally, CGO plans to implement long-term operational enhancements at the site to augment scale and efficiency. The precise details of these upgrades, encompassing increased throughput and modifications to compost processing methods, will be outlined in a separate development application in the near future.

### *Environmental Impact Assessment, Mitigation and Management*

#### *Air quality*

The modification primarily focuses on increasing truck movements at the Site. It's important to note that waste limits remain governed by the Consent and Environmental Protection License (EPL). Therefore, there won't be an increase in material limits onsite, resulting in no heightened potential for dust emissions or odour from composting activities.

Existing impacts and mitigation measures are centred around concerns related to dust, particulate matter, and odour emissions. Environmental harm to sensitive receivers can depend on factors like time of day, weather conditions, and prevailing winds. Current mitigation measures include the use of water sprays, wind shields, dust screens, and bunds, all outlined in the Site Based Management Plan. These measures are presently considered sufficient to address potential impacts such as reduced air aesthetics, potential health impacts to personnel and sensitive receptors, dust emissions from material processing (PM 2.5 and PM 10), dust emissions from unsealed road portions, and odour emissions from compost mismanagement.

Mitigation measures in place include the continued use of collected leachate as a dust suppressant, maintenance of unsealed roads through rolling and compaction, the use of water carts on roads to prevent dust emissions, and the management of stockpiles in accordance with consent and EPL regulations.

#### *Noise and Vibration Assessment*

The Site adheres to noise monitoring and mitigation measures outlined in the Site Based Management Plan, consent, and Environmental Protection License (EPL). It also conducts voluntary annual noise monitoring and is considered compliant with applicable noise criteria. However, the rezoning of the Lowes Creek area, resulting in the construction of residential dwellings within 5 kilometres of the Site, necessitates a consideration of potential noise impacts on future receivers. To address this, a Noise and Vibration Impact Assessment (NVIA) was conducted, following EPA's NSW Noise Policy for Industry (NPfI) guidelines. This assessment involved background noise logging to establish the existing noise environment from August 9th to August 18th, 2023. Operational noise emission criteria were determined based on this background noise data, in line with EPA's Noise Policy for Industry. The results, consistently indicate that predicted noise levels meet applicable criteria under various meteorological conditions.

Existing noise mitigation measures include fitting silencers and mufflers to machinery, using low-noise plant and equipment where possible, regular maintenance, maintaining surfaces in good condition, and exploring options like block walls, shipping containers, or earth mounds to mitigate sound disturbances.

The NVIA confirms that the Site's operation complies with noise criteria at all locations and under all weather conditions. Even with additional truck movements, compliance with NPfI is expected. Therefore, further consideration of noise management and mitigation measures is not deemed necessary. However, the assessment identifies potential noise impacts from future operational road traffic noise, which may exceed noise criteria. These impacts will depend on the location and layout of future developments. To address this, the NVIA proposes using natural buffers like roads and parks, positioning non-sensitive use rooms away from the road, and involving CGO in the maintenance of Maryland's Link Road 2 and collaboration with developers for noise reduction efforts in the Lowes Creek Precinct. Additionally, CGO's planned upgrades to the Site will be further assessed during a proposed application, considering their potential impacts on future receivers.

In conclusion, the NVIA finds no impact on current receivers from the Site's operation. It does suggest potential impacts on future residents of the Lowes Creek Precinct due to increased truck movements, which can be mitigated through good design practices and the outlined measures. Importantly, these potential impacts only affect future residents, not current ones, and the proposed mitigation measures are expected to be effective.

#### *Traffic Assessment*

To address this limitation, a Traffic and Parking Letter of Advice from McLaren Traffic has been completed to support amending the condition and increasing truck movement numbers. The proposed development will result in a slight uptick in truck movements along the existing access routes, namely Maryland Link Road 2 and The Northern Road. Delivery and collection times will remain unchanged, determined by the Consent and EPL. The upgrades associated with the Western Sydney Airport development, including enhancements to the Northern Road and Bringelly Road, are expected to easily accommodate the increased traffic flow from this modification.

The anticipated impact of the proposed development is the generation of a total of 70 truck trips per day, distributed within specified operating hours on weekdays and weekends. Even if a portion of this traffic coincides with peak hours, it represents a minimal percentage of the site's total operating hours and would not significantly affect nearby intersections or traffic flow efficiency.

No changes to current traffic safety levels within the facility or on the local road network are expected as a result of the proposal. Access to the site via Maryland Link Road 2 and The Northern Road meets high design standards, with good visibility at intersections and internal road widths that generally comply with relevant standards for two-way truck traffic. In conclusion, the increase in truck movements is not anticipated to impact the local traffic network, and the proposed number is deemed adequate to achieve the processing limits specified in Condition 19A of the Consent.

#### *Other impacts*

Potential impacts to Soil and water quality, Visual amenity, Fire risk, Biodiversity and social aspects were assessed. Impacts to these matters however were considered to be negligible.

#### *Market Analysis and Justification*

The waste management industry's true value is challenging to assess due to inconsistent data. It derives income from various sources, including waste services, sale of recoverable materials, and energy production from waste. Recycling is a vital aspect, involving collection, sorting, and processing for reuse. In Australia, most recycling facilities are in major cities, with room for growth compared to European countries. Adopting a circular economy model can create new industries and jobs, reduce emissions, and efficiently use resources. Opportunities include cost-effective waste collection, improved sorting, reduced contamination, using underutilized materials, and producing high-quality products.

To meet waste diversion targets, New South Wales (NSW) recognizes the need for waste infrastructure for organics. The discontinuation of Mixed Waste Organics disposal approval underscores the urgency for infrastructure to process Food Organic and Garden Organic (FOGO) waste. A robust recycling sector benefits the economy, environment, and job creation.

Factors like material prices and landfill levies impact recycling's economic viability. Increased landfill levies can encourage recycling. The NSW Waste and Sustainable Materials Strategy 2041 outlines targets to reduce waste, increase recovery, and promote a circular economy. The proposed development aligns with these goals, aiming to increase recycling and improve material quality.

The EPA Strategic Plan 2021-24 focuses on reducing waste's harmful impacts, promoting a circular economy, and investing in waste diversion. The National Waste Policy aims to minimize waste, improve resource recovery, increase recycled material use, and manage material flows. The proposal aligns with these principles, supporting waste reduction, recycling, and circular economy initiatives.

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## 1. Introduction

### 1.1 *Overview of proposed modification*

This Statement of Environmental Effects (SOEE) has been prepared to support the application to modify Development Consent 1726/2000 for Clean and Green Recycling Pty Ltd (CGO) at 769 The Northern Road, Bringelly, 2556, NSW (the Site). 0

No changes are sought to waste receival tonnages, waste types, operation hours/ or existing buildings this modification is solely focused on the amendment of Condition 6 of the Consent to increase the truck movement numbers.

### 1.2 *Proponent*

This Statement of Environmental Effects is submitted on behalf of CGO. CGO is an existing organic waste recycling company located at 769 The Northern Road, Bringelly, 2556, NSW (lot and DP provided in Table 1). The waste is recycled into compost using composting and vermicasting practices. CGO have been operating for 10 years and in the last year, have been bought by new owners who intend to continue to operate the Site as a Composting facility and strive towards efficient and sustainable improvements at the Site.

CGO had successfully implemented and currently operates a system where it collects materials from over 120 supermarket stores located throughout New South Wales. These collected materials are then efficiently composted, resulting in the creation of Australian Standard Soil Conditioner (AS4454). This quality soil conditioner is bagged and subsequently sold back to Woolworth's and Big W. This entire process represents a significant milestone in the establishment of a circular economy, showcasing a sustainable and environmentally conscious approach to business operations.

CGO have undertaken detailed market analyses and have identified an opportunity in the waste and recycling industry to provide organic waste transfer capacity for local councils and business, given the increasing pressure from the public and government to achieve high rates of recycling and landfill diversion and increasing awareness around organic waste management.

## 2. Site description

### 2.1 Site Context Summary

Site overview			
Site common name	Clean & Green Organics Pty Ltd.		
Lot(s) and Street Address	Lot / DP	Street address	
	281/-/DP1043744	769 The Northern Road, Bringelly, 2556, NSW	
Local Government Area	Camden Council		
Zoning	RU1: Primary Production (Camden Local Environmental Plan (2010))		
Current site use	Composting facility		
Landowner	Clean & Green Organics		
Active Approvals			
Active Development Consent(s)	Development consent ID	Date determined	Purpose
	DA 1726/2000	13/07/2001	The establishment of a worm farm, shed and site office.
	DA 1726(2)/2000	25/11/2014	This Section 96 Modification approves the following modifications subject to and specifically referred to in the modified Development Consent Conditions set out below: <ol style="list-style-type: none"> <li>a. Amend the type of waste to be imported on to the site.</li> </ol>
	DA 1726(3)/2000	03/07/2015	This Section 96 Modification approves the following modifications subject to and specifically referred to in the modified Development Consent Conditions set out below: <ol style="list-style-type: none"> <li>b. Modification to ensure consistency with Site Based Management Plan</li> </ol>
DA 1726(3)/2000 is the current consent and is referred to as the 'Consent' throughout this report.			
Environment Protection Licence (EPL)	Environment Protection Licence number: 11539 Scheduled activities: Composting		
Total permitted waste received per annum	The total amount of waste received at the Premises must not exceed 26,000 tonnes per annum made up of the following limits: <ol style="list-style-type: none"> <li>1. Garden waste, wood waste, natural organic fibrous material, paper pulp to a maximum of 15,600 tonnes per annum; and</li> <li>2. Manure, biosolids, food waste, to a maximum of 10,400 tonnes per annum.</li> </ol>		
Total permitted waste at any one time	Waste type	Activity	Maximum permitted to be stored at the premise at any one time
	Biosolids categorised as unrestricted use, or as restricted use 2	Composting	50 T
	Manure	Composting	180m <sup>3</sup>

	Natural organic fibrous materials	Composting	25 T
	Paper pulp	Composting	50 T
	Wood waste	Composting	50 T
	Garden waste	Composting	2000 m <sup>3</sup>
	Food waste (limited to limited to vegetables, fruit and seeds and processing sludges and wastes, winery, brewery and distillery wastes).	Composting	50 T
<b>Site features</b>			
Total site area	Entire Site approximately 395,500 m <sup>2</sup> . Composting facility footprint approximately 190, 500 m <sup>2</sup> .		
Infrastructure on site	Shed and demountable office buildings. Shed located to the north and western pad. Material inspection area. Dome awning.		
Soil landscape	Luddenham: 9030lu		
Underlying geology	This soil landscape is underlain by Wianamatta Group Ashfield Shale and Bringelly Shale formations. The Ashfield Shale consists of laminite and dark grey shale. Bringelly Shale consists of shale, calcareous claystone, and laminite. Between these two shale members is the Minchinbury Sandstone consisting of fine to medium-grained lithic quartz sandstone.		
Watercourse(s) present	No natural water courses on Site but there are unnamed tributaries of Lowes Creek and Bringelly Creek is located on the property to the South. One storm water dam and few manmade Leached and overflow dams are located across the Site (Figure 4).		
Topography	Low rolling to steep low hills. Local relief 50–120 m, slopes 5–20%. Convex narrow (20–300 m) ridges and hillcrests grade into moderately inclined side slopes with narrow concave drainage lines. Moderately inclined slopes of 10–15% are the dominant landform elements.		
Vegetation	Vegetation on Site is mapped as Plant Community Types: Cumberland Shale Hills Woodland, Cumberland Moist Shale Woodland and Cumberland Shale Plains Woodland. The footprint of the composting facility contains no remnant vegetation, while the western portion of the Site contains remnant open forest.		
<b>Constraints</b>			
Heritage	No heritage items identified on Site. Heritage items located closest to the Site is Denbigh Curtilage, which is located at a distance of approximately 3 km from the Site.		
Biodiversity Values	The Site is identified as land that contains significant Biodiversity Value land (refer and Section 3.2).		
<b>Hazards</b>			
Bushfire prone land	The Site is identified as containing: <ul style="list-style-type: none"> <li>• Vegetation Buffer</li> <li>• Vegetation Category 1</li> <li>• Vegetation Category 3</li> </ul> (Figure 9).		

Flood prone land	Not identified on Site. Transitional land identified on neighbouring properties
Landslide risk	Not identified on Site or within 1 km of the Site
Contaminated land	Contaminated land was not identified on Site or within 1 km of the Sites (according to the EPA's Contaminated Land Register).
<b>Protection</b>	
Acid sulphate soil	Not identified on Site or within 1 km of the Site.
Drinking water catchment	Not identified on Site or within 1 km of the Site.
Mineral and resource land	Not identified on Site or within 1 km of the Site.
Riparian land and watercourses	Not identified on Site, located on land approximately 250 m to the East.
Scenic land protection	Not identified on Site or within 1 km of the Site.
Terrestrial biodiversity	Not identified on Site or within 1 km of the Site.
Environmentally sensitive land	Not identified on Site or within 1 km of the Site.
Applicable SEPPs	<ul style="list-style-type: none"> <li>• SEPP (Biodiversity and Conservation) 2021</li> <li>• SEPP (Building Sustainability Index: BASIX) 2004</li> <li>• SEPP (Exempt and Complying Development Codes) 2008</li> <li>• SEPP (Housing) 2021</li> <li>• SEPP (Industry and Employment) 2021</li> <li>• SEPP (Planning Systems) 2021</li> <li>• SEPP (Primary Production) 2021</li> <li>• SEPP (Resilience and Hazards) 2021</li> <li>• SEPP (Resources and Energy) 2021</li> <li>• SEPP (Transport and Infrastructure) 2021</li> <li>• SEPP No 65—Design Quality of Residential Apartment Development</li> </ul>

Table 1: Site overview.

### 3. Environmental Constraints on the Site

#### 3.1 Vegetation

The NSW State Vegetation Type Map was used to determine the Plant Community Types (PCTs) present on Site. The results are provided in Table 2 and Figure 5. It is to be noted that some areas of the Site are mapped as containing vegetation when it is clear from aerial images that there is no vegetation present. Vegetation extent will need to be further assessed as required.

Dominant tree species include *Eucalyptus maculata* (spotted gum) and *E. moluccana* (grey box). Lesser occurrences of *E. fibrosa* (broad-leaved ironbark), *E. crebra* (narrow-leaved ironbark), *E. tereticornis* (forest red gum) and *E. longifolia* (woollybutt) occur. Understorey shrub species include *Bursaria spinosa* (blackthorn), *Breynia oblongifolia* (coffee bush), *Allocasuarina torulosa* (forest oak), *Acacia implexa* (hickory) and *Clerodendrum tomentosum* (hairy clerodendrum). Grasses are commonly *Aristida vagans* (speargrass), *Entolasia marginata* (bordered panic), *Eragrostis leptostachya* (paddock lovegrass) and *Themeda australis* (kangaroo grass).

PCT ID	Vegetation Class	Vegetation Form	PCT name
3319	Coastal Valley Grassy Woodlands	Grassy Woodlands	Cumberland Shale Hills Woodland
3318	Coastal Valley Grassy Woodlands	Grassy Woodlands	Cumberland Moist Shale Woodland
3320	Coastal Valley Grassy Woodlands	Grassy Woodlands	Cumberland Shale Plains Woodland

Table 2: Vegetation formations.

##### 3.1.1 Associated endangered ecological communities.

The Threatened Ecological Communities (TECs) were identified using NSW's Map of Critically Endangered Ecological Communities V6 (last updated May 2021). Cumberland Plain Woodland has been mapped as present on Site (Table 3 and Figure 6).

Name	Listed	Listed status
Cumberland Plain Woodland in the Sydney Basin Bioregion	Biodiversity Conservation Act (NSW)	Critically Endangered
Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest	EPBC Act (Commonwealth)	Critically endangered

Table 3: Threatened Ecological Communities.

#### 3.2 Mapped Biodiversity Value Land

A large portion of the Site is mapped as containing Biodiversity Value (BV) land (*Biodiversity Conservation Act 2016*) (Figure 7). Any clearing of native vegetation for the development will trigger the Biodiversity Offset Scheme (BOS) and will require a Biodiversity Development Assessment Report (BDAR).

#### 3.3 Threatened Species

A review of Bionet Species Sighting data was completed to determine an initial presence of threatened species in the area (Table 4). The Black-striped Wallaby and the Little Lorikeet have both been sighted on the Site.

Class	Scientific Name	Vernacular Name	Country Conservation (EPBC Act 1999)	State Conservation (BC Act 2016)	Migratory Species Agreement	Found on Site?	Found within 1 km of the Site
Aves	<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered	Endangered	No	No	Yes
Aves	<i>Glossopsitta pusilla</i>	Little Lorikeet	Not Listed	Vulnerable	No	Yes	Yes
Gastropoda	<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail	Not Listed	Endangered	No	No	Yes
Mammalia	<i>Macropus dorsalis</i>	Black-striped Wallaby	Not Listed	Endangered	No	Yes	Yes
Mammalia	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	Vulnerable	No	No	Yes

Table 4: Threatened species within 1 km of the Site.

### 3.3.1 Migratory Species

During desktop analysis, no migratory species were identified.

### 3.4 Koala habitat land

In accordance with *SEPP (Biodiversity Conservation) 2021*, the Site does not contain potential koala habitat or core koala habitat land.

### 3.5 Bushfire prone land

The Site is identified as land containing bushfire prone land under the NSW RFS “Planning for Bushfire Protection 2019” and “Guide for bush fire prone land mapping” V5b 2015, development in these areas may require further assessment. The Site contains:

- Vegetation Category 1 - is considered to be the highest risk for bush fire. This vegetation category has the highest combustibility and likelihood of forming fully developed fires including heavy ember production. Vegetation Category 1 consists of: Areas of forest, woodlands, heaths (tall and short), forested wetlands and timber plantations.
  - This is located to the west of the footprint of the facility and patches on the northeastern and south eastern parts of the Site.
- Vegetation Category 3 - Vegetation Category 3 is considered to be medium bush fire risk vegetation. It is higher in bush fire risk than category 2 (and the excluded areas) but lower than Category 1. This category consists of: Grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.
  - One small patch is located along the southern border of the facility footprint.
- Vegetation buffer – These are the areas in which developments and people are most likely to be affected by a bushfire burning in the adjacent land.
  - This is located over the footprint of the Site.



## 4. Existing facility operation

CGO operates a well-established organics processing and composting facility which consists of multiple specialised areas designed to optimise the organic waste management process. These areas include a dedicated receival and blending section, a maturation area for organic matter, vermiculture shed / shipping container for worm farming, site office and a finishing area for compost production (see Figure 4 current site features).

### 4.1 Site Operations

#### 4.1.1 Onsite infrastructure

- Front end loader(s)
- Trommel screen(s) and conveyors
- Excavator(s)
- Water cart
- Dome shelter – machinery storage and maintenance
- Site office
  - Port-a-loos (designated female and male toilet) – sourced from Local Hire or Camden Hire
  - Demountable bathroom block with shower (above ground tank) – sourced from Local Hire or Camden Hire
  - Kitchenette
- Onsite dams - It is to be noted that the Site Based Management Plan references “Stormwater Containment Dam(s)” (SCD), these dams have been altered prior to the CJM’s ownership. Current onsite dams are referred to as “Leachate Containment Dam(s)” (LCD) and are shown in Figure 4. There are three LCDs currently onsite; LCD1, LCD2 and LCD3. There are also Overflow Dams (OD), which capture additional overflow water from rainfall events, there are three ODs onsite; OD1, OD2 and OD3.
- Onsite pads - constructed from crushed sandstone and maintained regularly. Three distinct pad areas are on Site:
  - Northern Pad (Pad A) – Processing and stockpiling area.
  - Southern Pad (Pad B) – dedicated receival area for food waste products and dedicated stockpile area.
  - Green waste Pad (Pad C) – dedicated receival area for green waste only.
- Material storage bays
- Onsite stormwater management – Pads are constructed and maintained in a way that ensures a gradient that directs water to the LCDs is present.
- Wash bay – located next to Pad B to provide clean water for truck wheels / tailgates can be cleaned prior to leaving.
- Internal roads – constructed from crushed sandstone and maintained regularly.
- Soil bund walls are established and maintained around the facility.

#### 4.1.2 Overview of operations

The Site Operator, stationed at the Site Office, is responsible for documentation completion and exchange, they ensure thorough vetting of incoming waste loads. This process safeguards against prohibited materials and discrepancies between documentation and the driver's verbal description.

The below outlines the processes followed to material entering, being processed and leaving the Site.

1. Vehicles undergo a thorough review of documentation by the Site Operator upon arrival at the Site at the Site Office.
2. Visual inspections for contaminants are conducted before the material is permitted to enter into the Site. If materials do not visually meet the criteria, they are rejected from the Site.
3. Once material is accepted – the Site Operator ensures the driver is adequately inducted to the Site.
4. The Site Officer then directs the driver to a specific material drop-off area (Pad A, B or C) to prevent material spreading and tracking.
5. Drivers maintain radio contact with loader operators who ensure trucks are directed to the correct tipping areas via the appropriate route.
  - a. Tipping mostly occurs in Pad C and part of Pad B (see Table 5 for further details). All waste is unloaded in accordance with the standard procedure, *Procedure 2- Reveal and Treatment of Host Plant Material* of the Site Based Management Plan.
    - i. All green waste is directed to Pad C for mulching or chipping.
    - ii. All food and organic waste is directed to the north western portion of Pad B for screening or crushing or blending. Sometimes processing of this material occurs on Pad A as well.
6. The green waste and the organic waste (once processed) are transported via a loader to Pad B and then stockpiled, where they mature or undergo additional processing based on product requirements.
7. All stockpiles are identified and subjected to chemical and physical testing against Australian Standards before leaving the Site.
8. Stockpiles are then transported via a loader to Pad A for additional blending or processing (if required). Here, trommels and conveyors are used to ensure material is homogenous. Material is then stockpiled awaiting removal from the Site.
9. Vehicles collect compost material from designated location.

Waste type	Location
Green waste	Pad C
Food waste	Pad B – specified bays
Manure	Pad B – specified bays
Paper waste	Pad B – specified bays

Table 5: Waste reveal areas.

#### 4.1.3 Vehicle movements

CGO does not have a weighbridge; however they manually record trucks, their weights and material types on Site for both incoming and outgoing material. One years' worth of records has been reviewed. Notes are below:

- Average weight of a vehicle is about 7 tonnes
- Anecdotally – the most common truck on site was a truck (with no dog)

- Trucks tend to stay on site for about 5-10 minutes.

#### 4.1.4 Environmental monitoring and management

##### Noise

4Pillars Environmental Consulting is engaged via an EnviroNow contract to conduct annual noise monitoring at two locations onsite. It is noted that there is no explicit requirement to complete noise monitoring within the Consent or EPL, however, it is completed to ensure good environmental management and practice.

##### Weed management

A vegetation buffer is maintained such that no vegetation is allowed to grow in close proximity to the designed areas for unloading, mixing and composting of material.

##### Water monitoring

4Pillars Environmental Consulting is engaged via an EnviroNow contract to conduct regular water monitoring of the LCDs and stormwater dam. It is noted that there is no explicit requirement to complete water monitoring within the Consent or EPL, however, it is completed to ensure good environmental management and practice.

##### Leachate dam management

LCDs are managed by CGO employees regularly. Treatment is outlined in Table 6.

Product	Amount	Frequency
Ag Lime	5 kg per LCD	2 treatments per week
Liquid manure (BioAktiv)	20 kg per LCD	Up to 3 treatments per month
Aerating		3 hours per day
Odour neutraliser (Bulbeck Enviro)	As needed, dependant on odour	

Table 6: Onsite water treatment.

## 4.2 Site access

The Site is accessible via the local road, Marylands Link Road 2, Bringelly, located off The Northern Road. The Site is easily accessible by road and operates in full compliance with existing development consents.

### 4.2.1 The Northern Road

The Northern Road is classified as a State Road. In the vicinity of the Site, The Northern Road offers a dual carriageway with three lanes of travel in each direction, including one dedicated bus lane in each direction. At the intersection, The Northern Road widens to include dedicated right-turn lanes and left-turn slip lanes onto Marylands Link Road 2 in both directions.

### 4.2.2 Marylands Link Road 2

Marylands Link Road 2 (MLR 2) is currently classified as a local road providing access to a small number of rural properties (Figure 15 and Figure 16). Currently, the road is approximately 6-7 m wide and is constructed from recovered asphalt (rotor mill). The road extends through the CGO Site where it creates a loop to link back into itself (Figure 16). It is to be noted that CGO have been maintaining and improving the road to ensure safe access to the Site and minimise dust emissions.

Under the Lowes Creek Maryland Precinct Plan<sup>1</sup>, the road will be upgraded to function as a sub-arterial road and be reclassified as a regional road. Approximately 200 m of MLR 2 has already been upgraded (west off The Northern Road) (Figure 15). Currently there are two lanes for westbound traffic and four lanes for eastbound traffic. The four lanes include a left turn slip lane, two lanes travelling straight through the intersection, and a right turn only lane. This section of road has been designed to accommodate the turning circle requirements for vehicles up to 26m B-Doubles. It is unknown when the remainder of the road will be upgraded. It should be noted that Site access during this upgrade will need to be reviewed and determined for Site operation.

### 4.3 Site justification

The Site is strategically positioned far away from neighbouring receivers, ensuring minimal disruption to surrounding neighbours and communities. However, its close proximity to the rapidly expanding residential and commercial centres of Sydney's southwest allows Clean and Green Organics to capitalise on the increasing volume of organic waste generated in these regions, contributing to a more sustainable future.

### 4.4 Existing approvals

#### Development Consents

The Site holds an existing Development Consent DA 1726(3)/2000. The most recent modification (DA1726/2000 and S96/2000/1726/3) is referred to as the Consent throughout out this document. *Table 7* shows the Consent , the date it was determined and the purpose of the modification.

Development consent ID	Date determined	Purpose
DA 1726/2000	13/07/2001	The establishment of a worm farm, shed and site office.
DA 1726(2)/2000	25/11/2014	This Section 96 Modification approves the following modifications subject to and specifically referred to in the modified Development Consent Conditions set out below:  c. Amend the type of waste to be imported on to the site.
DA 1726(3)/2000	03/07/2015	This Section 96 Modification approves the following modifications subject to and specifically referred to in the modified Development Consent Conditions set out below:  d. Modification to ensure consistency with Site Based Management Plan

*Table 7: Development consents.*

#### Permitted Waste Materials

Only Category 1 and Category 2 materials as defined in the NSW EPA's Composting Guidelines 2004 are permitted to be received at the Site. These are presented on *Figure 1*.

<sup>1</sup> <https://www.planningportal.nsw.gov.au/lowes-creek-maryland>

Potential to have environmental impact	Organics category	Types of organics permitted in categories <sup>1</sup> (Categories with larger numbers may contain types from classes with smaller numbers.)	
		Type	Examples of organics
Lowest potential environmental impact	Category 1	Garden and landscaping organics	Grass <sup>2</sup> ; leaves; plants; loppings; branches; tree trunks and stumps.
		Untreated timber	Sawdust; shavings; timber offcuts; crates; pallets; wood packaging.
		Natural organic fibrous organics	Peat; seed hulls/husks; straw; bagasse and other natural organic fibrous organics.
		Processed fibrous organics	Paper; cardboard; paper-processing sludge; non-synthetic textiles.
Greater potential environmental impact than Category 1, less potential impact than Category 3.	Category 2	Other natural or processed vegetable organics	Vegetables; fruit and seeds and processing sludges and wastes; winery, brewery and distillery wastes; food organics excluding organics in Category 3.
		Biosolids <sup>3</sup> and manures	Sewage biosolids, animal manure and mixtures of manure and biodegradable animal bedding organics.

Figure 1: Category 1 and 2 for organics NSW EPA's composting Guidelines 2004.

#### Environment Protection Licence

EPL 11539 was issued in 2001 to Volk Holdings Pty Ltd to undertake the Scheduled Activity of Composting at the Site. The EPL was transferred a number of times throughout the following years, until the most recent transfer on 24 June 2019 to Clean & Green Organics Pty Ltd (the Licensee), who are the current operators on the site.

The definition of Composting under Clause 12 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) is as follows (note that only relevant parts of the definition have been reproduced):

*Composting, meaning the aerobic or anaerobic biological conversion of organics into humus-like products –*

- a) by methods such as bioconversion, biodigestion or vermiculture, or*
- b) by size reduction of organics by shredding, chipping, mulching or grinding.*

*The activity to which this clause applies is declared to be a scheduled activity if—*

*(a) where it takes place inside the regulated area, or takes place outside the regulated area but receives organics from inside the regulated area (whether or not it also receives organics from outside the regulated area)—*

- (i) it has on site at any time more than 200 tonnes of organics received from off site, or*
- (ii) it receives from offsite more than 5,000 tonnes per year of non-putrescible organics or more than 200 tonnes per year of putrescible organics, or*

Considering the activities proposed on Site and the processes implemented, we confirm that Composting is still the appropriate Scheduled Activity.

#### 4.5 Surrounding community

The Site is situated within the NSW suburb of Bringelly, located 48 kilometres southwest of Sydney CBD.

##### 4.5.1 Current sensitive receivers

A significant shift has occurred in the number of nearby sensitive receivers surrounding the Site since the original EIS assessment which was conducted in 2008. The EPA has previously been made aware of the fact that the majority of the

sensitive receivers in the immediate vicinity of the Site identified in the 2008 EIS are no longer present. This is due to the purchase of residential properties and adjacent land to the north and east of the site. The Western Sydney Airport Corporation is a new receiver, however, is not considered to be 'sensitive' due to the high-impact construction and development activities currently taking place at that property.

The highest priority receivers are located on adjoining rural zones, which are residential premises which we understand are still occupied at the time of writing, these are outlined in Table 8 and can be viewed in Figure 10.

Receiver number	Street Address	Building Type	Direction from Site	Distance from Site (Km)
1	70 Cheviot Drive, Cobbitty	Residential	NW	0.95
2	164E Coates Park Road, Cobbitty	Residential	W	1.85
3	164B Coates Park Road, Cobbitty	Residential	SW	1.34
4	767 The Northern Road, Bringelly	Rural	S	0.55
5	765 The Northern Road, Bringelly	Rural	SE	0.38
6	765 The Northern Road, Bringelly	Residential / rural	SE	0.59
7	689 The Northern Road, Bringelly	Rural	S	1.23
8	689 The Northern Road, Bringelly	Rural	SE	1.79
9	657-705 The Northern Road, Bringelly	Residential	SE	2.94
10	657-705 The Northern Road, Bringelly	Rural	SE	2.79
11	749 The Northern Road, Bringelly	Residential	SE	2.87
12	749 The Northern Road, Bringelly	Rural	SE	2.73
13	761 The Northern Road, Bringelly	Commercial / Industrial	SE	2.82
14	773 The Northern Road, Bringelly	Residential / Historical	E	1.68
15	773 The Northern Road, Bringelly	Rural	E	1.49
16	85 Cheviot Drive, Cobbitty	Residential	NW	1.26
17	270 Greendale Road, Bringelly	Residential	N	2.67
18	270 Greendale Road, Bringelly	Residential	N	2.86
19	40-40A Greendale Road, Bringelly	Rural	NE	1.83
20	975 The Northern Rad, Bringelly	Commercial / Industrial	NE	2.47
21	The Northern Road, Bringelly	Residential	NE	1.87

22	1015 The Northern Road, Bringelly	Residential	NE	2.65
23	1013 The Northern Road, Bringelly	Residential	NE	2.83
24	1011 The Northern Road, Bringelly	Residential	NE	3.08
25	60 Coates Park Road, Cobbitty	Residential	SW	2.08
26	196 Greendale Road, Bringelly	Residential	N	2.91
27	170 Greendale Road, Bringelly	Residential	N	2.97
28	150 Greendale Road, Bringelly	Rural	N	2.97
29	60 Greendale Road, Bringelly	Commercial / Industrial	NE	3.15
30	166 Coates Park Road, Cobbitty	Residential	W	1.98
31	164A Coates Park Road, Cobbitty	Residential	SW	1.88
32	164C Coates Road, Cobbitty	Residential	SW	1.81
33	164D Coates Park Road, Cobbitty	Residential	SW	1.86

Table 8: Nearest receivers. Yellow cells = < 1 km from the Site.

#### 4.5.2 Future receivers

The Western Sydney Airport Land Use and Infrastructure Implementation Plan (Western Sydney airport LUIIP) identifies the Site as falling within the 'Aerotropolis Core' zone. The LUIIP indicates land immediately adjacent to the Site will likely be zoned industrial (we expect IN1 or IN2), with the nearest residential and mixed-use zoning >1km away. Therefore, we do not expect residential receivers to increase in the immediate area in the future. Therefore, the assessment of impacts focuses on the few current residential receivers, future adjacent business receivers, the airport and the natural receiving environment, more generally.

#### Lowes Creek Maryland Area

The Lowes Creek Maryland Precinct has undergone a significant rezoning process in response to the growing demand for housing and to align with the Government's vision for the Western Parkland City. To facilitate this, amendments have been made to the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP), primarily focusing on rezoning the precinct for urban purposes. A visual representation of the proposed layout plan for Lowes Creek Maryland can be found in Figure 14.

The rezoning of this precinct holds several benefits, including the provision of 7,000 homes and the creation of 2,200 job opportunities. Additionally, it aims to establish a central hub that integrates various social infrastructure elements such as a local centre, open spaces, recreational facilities, and a potential school site. These developments will contribute to the NSW Government's vision of fostering integrated and connected cities, where residents have convenient access to their workplaces, services, educational institutions, health facilities, and green spaces within a 30-minute commute.

#### 4.6 Surrounding facilities

There are only 83 facilities within NSW that have the activity of "composting" on their licence and only approximately 20 are located within the Sydney Region (Figure 11). This makes CGOs location and operation purpose integral for the future of a circular economy.

Sites with active EPL's with 10 km of the Site have been identified and outlined in Table 9 and can be viewed in Figure 13 and Figure 12.

LGA	EPL number	Name	Scheduled activity
Penrith	21189	CPB CONTRACTORS PTY LIMITED	Cement or lime works, Road construction
Camden	21328	BENEDICT RECYCLING PTY LIMITED	Resource Recovery, Waste storage
Camden	13025	ENDEAVOUR ENERGY NETWORK OPERATOR PARTNERSHIP	Waste storage
Camden	3275	KARYATES ENTERPRISE PTY LIMITED	Livestock intensive activities
Camden	2767	LEPPINGTON PASTORAL CO PTY LTD	Extractive activities
Camden	1808	PGH BRICKS & PAVERS PTY LIMITED	Ceramic works, Crushing, grinding or separating, Extractive activities, Mining for minerals
Camden	20944	ROCBOLT RESINS PTY LTD	Chemical production
Camden	21141	THE A2 MILK COMPANY (AUSTRALIA) PTY LTD	Agricultural processing
Camden	11233	VE RESOURCE RECOVERY PTY LTD	Composting, Resource recovery, Waste storage
Liverpool	4625	AUSTRALIAN NATIVE LANDSCAPES PTY LTD	Composting, Waste processing (non-thermal treatment), Waste storage
Liverpool	20498	ELFORD GROUP PTY LTD	Extractive activities, Resource recovery, Waste storage
Liverpool	1254	INGHAMS ENTERPRISES PTY. LIMITED	Livestock intensive activities
Liverpool	11557	LEPPINGTON PASTORAL CO PTY LTD	Livestock intensive activities
Wollondilly	20872	T.J. & R.F. FORDHAM PTY LTD	Crushing, grinding or separating, Extractive activities

Table 9: Surrounding facilities with an EPL. Facilities with composting on their licence are highlighted green.



## 5. Proposal

### 5.1 Overview of proposal

The proposed development includes the modification of the existing Consent (DA 1726/2000) in accordance with section 4.55 of *Environmental Planning & Assessment Act 1979* (EP&A Act). The modification proposed is to increase condition 6 of the consent (this is outlined in Table 10). There is to be no change to any operational conditions as part of this modification and the Site will continue to operate as per usual.

Condition of consent	Current condition	Proposed modification
6	The number of waste truck movements per day must be limited to five (5), that is five (5) in and five (5) out. Any increase in truck movements will require the prior written approval of the Consent Authority.	The number of <u>truck movements</u> per day must be limited to <u>thirty-five (35), that is thirty-five (35), in and thirty-five (35), out</u> . Any increase in truck movements will require the prior written approval of the Consent Authority.

Table 10: Proposed modification overview.

### 5.2 Project need

#### 5.2.1 Limited by tonnage

The Site is currently limited to 5 truck movements in and out per day (regardless of size of truck or amount of material bought loaded), and truck size is at the discretion of customer and suppliers. This often limits the Sites ability to have enough material on Site and reach full recovery capacity. Based on one years' worth of Site recorded material data, the average tonnage of each truck was seven (7) tonnes. Historically, this has meant a maximum intake of about 9,000 T per annum has been able to be completed at the Site, which is about 42% of the approved tonnage capacity. In order to reach the annual limit of 26,000T, an average intake of about 83 T of material per day is necessary.

#### 5.2.2 Changes to truck types

As the need to recycle food and organic waste increases, more customers are approaching CGO wanting to bring in materials. Some of these companies operate smaller vehicles (such as small tipper and FOGO compactors that can carry about 2-3 T). These vehicles service local and city based restaurants and take waste directly from the source (avoids storage of food and organic waste at interim locations in the cities and towns that can become spoiled and attract vermin). More smaller vehicles are required to bring in the same amount of material as a larger truck, hence the truck limit is very restrictive.

CGO are in the processing of engaging with these companies, which will see 50% of the material bought in by larger trucks and 50% bought in by these smaller vehicles.

### 5.3 Determination of truck numbers

Truck numbers were closely determined with advice and feedback from the traffic consultants. The number was based on previous Site-specific material data (one years worth of records of incoming and outgoing material, outlined in Section 4.1.3), future truck types for use and limits outlined in Condition 19(A) (reproduced below).

#### Condition 19(A)

*Waste Input limits – The following limits apply to the quantity of waste received at the Site:*

- *Category 1 waste – 15,600 tonnes per annum*
- *Category 2 waste – 10,400 tonnes per annum*

- TOTAL – 26,000 tonnes per annum.

### Assumptions

These are outlined in section 1 of the traffic report (Appendix 1)

### Proposed numbers

This is outlined in section 1.2 of the traffic report (Appendix 1) and summarised below.

The facility must have the ability to haul an average of 83.33T of material per day in order to achieve the annual 26,000T limit. On average, 83.33T per day would require the following:

- Delivery Trucks (trucks bringing material in):
  - 14 x trucks with a carrying capacity of 3 tonnes.
  - 6 x trucks with a carrying capacity of 7 tonnes.
- Extraction Truck (trucks taking material out):
  - 12 x trucks with a carrying capacity of 7 tonnes.

As shown above, on average the development requires 32 trucks per day (20 delivery trucks, 12 extraction trucks). Given seasonal changes and the life cycle of earthworks projects, the influx of recycled material would not be uniform over the whole year. Some days will have a higher demand than 83.33T per day, and others will have a lower demand. As a result, the maximum daily traffic generation should reflect a peak day, say 35 trucks in a day.

By increasing the truck movements, the Site will be able to operate with efficient and has capacity to prevent materials from unnecessarily going to landfills.

### 5.4 Future development

As part of the long-term future operational strategy of the Site, CGO is intending to complete a range of further upgrades to increase the scale and efficiency at the Site. The specifics of this scale increase have not been determined but are thought to include, increase to throughput and changes to operational conditions such as compost processing methods.

This will be done through a separate suitable development application within the coming years.

## 6. Legislative context

### 6.1 Overview

This section outlines the statutory framework that applies to the proposal. It describes the relevant Commonwealth and NSW legislation, and the regulatory framework under which the proposal would be assessed.

### 6.2 NSW Legislation

#### 6.2.1 Environmental Planning and Assessment Act 1997

The EP&A Act and *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) set the framework for planning and environmental assessment in NSW. Section 4.55 of the EP&A Act provides requirements for modifications.

#### 1) 4.55 modification

(1A) **Modifications involving minimal environmental impact** A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if—

Legislation exert	4Pillars response
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(a) it is satisfied that the proposed modification is of minimal environmental impact, and	Minimal environmental impact determined (this is outlined in this report).
(b) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and	Substantially the same development explanation is outlined in section below.
(c) it has notified the application in accordance with— (i) the regulations, if the regulations so require, or (ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and	Yes
(d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be. Subsections (1), (2) and (5) do not apply to such modification	TBC

### Substantially the same development

The consent authority can approve a modification application if it is satisfied the project as modified would be substantially the same development as the development for which consent was originally granted consent. The NSW Land and Environment Court has established principles to interpret ‘modify’ and ‘substantially the same development’ including:

- the meaning of ‘modify’ is to alter without radical transformation (Transport Action Group Against Motorway Inc v Roads and Traffic Authority 1999); and
- the term “substantially” means “essentially or materially having the same essence” (Moto Projects (No 2) Pty Ltd v North Sydney Council 1999)
- a comparison between the development as originally granted consent and the development as proposed to be modified should include a quantitative and qualitative comparison in their proper context, including the circumstances in which the original development consent was granted (Vacik Pty Ltd v Penrith City Council 1992).
- the section 4.55 modification provision is described as “beneficial and facultative” (North Sydney Council v Michael Standley & Associates Pty Limited 1998), meaning it is designed to assist the modification process rather than to act as an impediment to it. “It is to be construed and applied in a way that is favourable to those who seek to benefit from the provision” (North Sydney Council v Michael Standley & Associates Pty Limited 1998).

The reference point for substantially the same development is the project as approved in the original consent DA 1726(3)/2000. The project as modified would be substantially the same as there is no change to the underlying use of the facility as a composting facility. The additional truck movements are to a quantity that is consistent with the waste limits at the Site and the environmental impacts are minor and can be managed with existing controls, as explained in this modification report.

### 6.2.2 Environmental Planning and Assessment Regulation 2021

Part 5 of the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation 2021) outlines conditions for applications for modifications of development consent.

Part 5 has been considered and this report addresses all conditions.

## 6.3 Environmental Planning Instruments, Policies and Plans

### 6.3.1 Camden Local Environmental Plan 2010

Under the provision of this Plan, the subject land is RU1 – Primary Production. The Land Use Table contains the zone and development control table for this zone, both of which are as follows:

Part 2 Permitted or prohibited development

Land Use Table – Zone RU1 Primary Production

#### 1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To permit non-agricultural uses which support the primary production purposes of the zone.
- To maintain the rural landscape character of the land.

#### 2 Permitted without consent

Extensive agriculture; Forestry; Home occupations

#### 3 Permitted with consent

Bed and breakfast accommodation; Cellar door premises; Dual occupancies (attached); Dwelling houses; Environmental protection works; Extractive industries; Farm buildings; Farm stay accommodation; Garden centres; Home industries; Intensive livestock agriculture; Intensive plant agriculture; Open cut mining; Roads; Roadside stalls; **Rural industries**; Rural supplies; Rural workers' dwellings; Secondary dwellings; Any other development not specified in item 2 or 4.

Composting facilities are defined in the dictionary as a “rural industry”

**rural industry** means the handling, treating, production, processing, storage or packing of animal or plant agricultural products for commercial purposes, and includes any of the following—

- (a) agricultural produce industries,
- (b) livestock processing industries,
- (c) composting facilities and works (including the production of mushroom substrate),
- (d) sawmill or log processing works,
- (e) stock and sale yards,
- (f) the regular servicing or repairing of plant or equipment used for the purposes of a rural enterprise.

Therefore, composting facilities are permissible with consent under RU1.

### 6.3.2 Camden Development Control Plan 2019

Section 2.18 relates to the general traffic management off street parking of developments all relevant conditions have been considered within this proposal.

Section 5.5.11 Parking and Access relates to the management within the industrial zone, all conditions have been considered for this proposal and are considered compliant or not relevant.

### 6.3.3 State Environmental Planning Policy (Biodiversity and Conservation) 2021

(1) This Chapter applies to land in the following land use zones, or an equivalent land use zone, in a local government area specified in Schedule 1 of State Environmental Planning Policy (Koala Habitat Protection) 2021, but not if the local government area is marked with an \* in that Schedule—

- (a) Zone RU1 Primary Production,
- (b) Zone RU2 Rural Landscape,
- (c) Zone RU3 Forestry.

The Policy applies to land in relation to which a Development Application has been made where the area of the land is more than 1 hectare, whether or not the Development Application applies to the whole or any part of the land.

The subject land has an area of approximately 4 hectares and therefore the Policy applies. Clauses 3.6, 3.7 and 3.8 of the Policy provide for a three-step process to determine whether or not a Koala Management Plan must be prepared before development consent can be granted.

Those steps are addressed as follows:

Step 1 – Is the land potential Koala habitat?

To determine whether or not the land is potential Koala habitat, the applicant must obtain information from a person who is qualified and experienced in tree identification.

On the basis of the site inspection, which indicates that there are virtually no habitat trees on the site and given that previous Development Applications have been approved without a Koala Management Plan, it is considered that the land is not potential Koala habitat.

Step 2 – is only triggered if Step 1 is triggered (Step 2 requires the applicant to determine if the land is core Koala habitat) and as this is not the case, Step 3, which requires a Koala Management Plan to be prepared before development consent is granted, is not triggered.

## 6.4 Commonwealth legislation

### 6.4.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is administered by the Commonwealth Department of the Environment (DoE) and provides a legal framework to protect and manage places defined as Matters of National Environmental Significance (MNES). The EPBC Act lists the following places as MNES:

- World Heritage properties;
- National heritage places;
- Wetlands of International Significance (including Ramsar wetlands);
- Listed threatened species and ecological communities;
- Listed Migratory Species protected under international agreements (CAMBA and JAMBA);
- The Great Barrier Reef Marine Park;
- Water resources (relating to coal seam gas development and large coal mining development);
- Protection of the Environment from Nuclear Actions; and
- Marine Environment

The proposal will not have an impact on MNES, and accordingly, approval from the Commonwealth Minister for the Environment is not required.

### 6.4.2 Native Title Act 1993

The Native Title Act provides a national framework for the recognition and protection of native title i.e., the rights and interests, recognised by common law, possessed under traditional laws and customs of Aboriginal and Torres Strait Islander people.

People who hold native title have a right to practice their traditional laws and customs, whilst respecting Australian laws, and have a right to

- a. be consulted with regarding any proposed action on their land
- b. receive compensation for that action. In areas where native title existence has not been determined, a compensation application can be made by a registered native title body corporate or group of people asserting native title rights.

There are no registered claims over the Site.

## 7. Scoping Environmental Impacts and Risk Assessment

It is to be noted that the Site is an operational and compliant composting facility and this proposed modification only relates to the increasing of truck movements to and from the Site. Hence, only proposed impacts deriving from the proposed modification will be assessed as part of this SEE.

### 7.1 Key Environmental Impacts

The key environmental and social impacts associated with the proposed modification and requiring further assessment and reporting were identified through:

- The existing environmental context of the site and surrounding locality (Section 4);
- Legislative and statutory framework (Section 6); and
- Specialist studies undertaken as part of the preparation of this SEE (Section 8).

The key environmental and social impacts identified for the proposed modification, in no particular order, were:

- Traffic and transport;
- Air quality including odour, dust and greenhouse gas;
- Noise and vibration;
- Surface water;
- Groundwater;
- Aboriginal cultural heritage;
- Historic heritage;
- Biodiversity;
- Visual amenity;
- Socio-economic;
- Waste management;
- Fire and incident management; and
- Hazard and offence.

#### 7.1.1 Risk levels

Risk level	Definition of risk
Low	Easily managed and mitigated, impacts generally well understood, some data gap, well understood level of impact.
Medium	May result in harm to the environment or receivers if not adequately assessed and mitigated. Some difficulty to manage and mitigate, impacts not well understood, significant data gaps,
High	Would result in critical impact to the environment or receivers if not dealt with in project design. Difficult to manage and mitigate.

### 7.1.2 Evaluating consequence

Potential impacts from the proposed development include:

Environmental aspect	Status	Addressed in Section
Air quality	The nearest residential receiver is located over 1 km away from the facility. Site operation is considered currently compliant and the proposed development is not thought to increase negative air quality. No detailed air quality impact assessment was considered necessary.	Section 8.1
Noise quality	Traffic noise quality will need to be assessed to determine the impact on current and future receivers along Marylands Link Road 2. This has been outlined in the PAM advice from Council	Section 8.2 Specialist report
Traffic and transport	Traffic and transport will need to be assessed to determine the impact on current and future receivers along Marylands Link Road 2. This has been outlined in the PAM advice from Council	Section 8.3 Specialist report
Soil and water quality	There are no changes to the current operation of the Site. The Site is currently considered compliant with all soil and water quality criteria. As the proposed development is not thought to increase any impacts of soil and water quality – no detailed soil and water quality assessment was considered necessary.	Section 8.4
Aboriginal cultural heritage	No Aboriginal sites have been identified in desktop searches. The proposed development does not involve construction or alteration to any structures or sub surface areas	No further assessment required
Historic heritage	No Historical sites have been identified in desktop searches. The proposed development does not involve construction or alteration to any structures or sub surface areas.	No further assessment required
Visual amenity	The Site is located on a relatively secluded property with minimal surrounding residents. Visual amenity impacts through increased truck movements will need to be assessed.	Section 8.5
Fire risk	The Site is identified as containing a bushfire risk, however the increase of truck movements will not exacerbate this risk. The risks and impact	Section 8.6

	associated with this is generally well understood and can be easily managed and mitigated.	
Biodiversity	The Site contains areas of biodiverse land. The Site is footprint largely cleared of vegetation and contains limited habitat value. Biodiversity considerations as part of this assessment include increased risk of vehicle strikes	Section 8.7
Social impact	The proposed activities serve to benefit the local community through resource recovery, increased local employment and the provision of compost in the local circular economy. The proposal would generate positive social impacts through increased local, long-term employment and indirect environmental benefits to the community.	Section 8.8
Cumulative impacts	No cumulative impacts identified.	Section 8.9

*Table 11: Potential impact scoping. Orange cells indicate a potential impact is consider likely as a result of the modification and detailed assessment is to be completed.*

Where the individual risks were deemed unacceptable, or where a knowledge gap was identified, specialist technical studies were undertaken and additional mitigation measures and or management responses proposed. The following sections provide a detailed assessment of the key environmental and social impacts for the Project as identified above.



## 8. Environmental Impact Assessment, Mitigation and Management

### 8.1 Air quality (incl. odour) assessment

#### 8.1.1 Overview

The modification focuses on an increase in truck movements on the Site. It's important to note that waste limits are still governed by the Consent and Environmental Protection License (EPL). Consequently, there will be no escalation of material onsite limits, and thus, no rise in potential dust emissions or odour from the composting activities.

#### 8.1.2 Existing impacts and mitigation measures

Dust and particulates are considered the main potential pollutants; however, odour could also be problematic if not properly managed. Time of day, climatic condition, including prevailing wind conditions all play a major role in weather or not the Site will result in environmental harm to sensitive receivers.

The environmental impacts that may result from the use of the Site as a composting facility are listed below. The Site currently operates with mitigation measures as listed in the Site Based Management Plan such as water sprays, wind shields, dust screens, and bunds. Current mitigation measures are further outlined below. At present, the below mitigation is considered to be adequate to negate the potential impacts outlined below.

#### Existing impacts

- Potential reduction in the aesthetics of the air environment at the location of a sensitive receptor.
- Potential health impacts(s) to onsite personnel or at the location of a sensitive receptor.
- Potential dust particle emission from material processing (PM 2.5 and PM 10).
- Potential dust emissions from unsealed portions of the road.
- Odour emissions from improper management of compost.
- Greenhouse Gas Emissions such as carbon dioxide, methane and nitrous

#### Mitigation measures currently implemented.

- Continued use of collected leachate as a dust suppressant.
- Continued maintenance of unsealed roads via rolling / compaction.
- Use of water cart on roads to ensure dust is not emitted from roads.
- Stockpile management in accordance with consent and EPL.

#### 8.1.3 Impacts from proposed development and proposed mitigation

Impact	Location	Receiver(s)	Description / explanation	Mitigation	Residual impact
Increase in dust from unsealed roads within the Site	Processing area	CGO workers Residents within 1 km Future residents of Lowes Creek.	dust emissions from unsealed roads could potentially be heightened due to the amplified	Increased water truck movements. Continual road maintenance and improvements	Nil - minor

			vehicular movement		
Increase in dust along Marylands Link Road 2	Marylands Link Road 2	Residents within 1 km Future residents of Lowes Creek.	Road is a sealed (rotor mill) road has potential to get dusty.	Continual road maintenance and improvements Water trucks as needed	Nil – minor

Table 12: Proposed air quality impacts and mitigation measures.

#### 8.1.4 Air quality impact assessment conclusion

The Site will continue to operate as per the conditions of the Consent and EPL, the only change is an increase in vehicle movements per day. The air quality impact from this is considered to be extremely minor in nature, proposed mitigation measures will adequately control any of the potential impacts.

## 8.2 Noise and Vibration Assessment

### 8.2.1 Overview

The Site currently operates as a composting facility, noise sources on Site is limited to machinery and equipment use. The Site currently monitors and mitigates noise in accordance with the Site Based Management Plan, the consent and EPL and conducts voluntary annual noise monitoring. There are very few receivers located around the Site and operations are currently considered compliant with relevant noise criteria.

The rezoning within the Lowes Creek area will see many residential dwellings being constructed within 5 km of the Site. Hence, the proposed development needs to consider the noise quality impact on these future receivers.

A Noise and Vibration Impact Assessment (NVIA) was conducted by Pulse While Noise Acoustics (Appendix 2), in accordance with the EPA's NSW Noise Policy for Industry (NPfI) guidelines. Background noise logging was conducted at a single location from August 9th to August 18th, 2023, to establish the existing noise environment.

Operational noise emission criteria have been determined based on the background noise logging data, aligning with the EPA's Noise Policy for Industry. An operational noise model, created using Sound PLAN v8.2, was used to evaluate the primary noise sources generated by the Site's operation. The results indicate that the predicted noise levels consistently meet the applicable noise criteria under various meteorological conditions.

### 8.2.2 Existing mitigation measures

The Site currently implements noise mitigation measures in accordance with the Site Based Management Plan. Mitigation measures include:

- Silencers and mufflers are fitted to all plants and machinery use;
- Low noise models of plant and equipment have been purchased for the site wherever practicable and this especially is case when purchasing replacement plant items
- Plant and equipment are regularly maintained
- All surfaces where plant, equipment operate and truck run are maintained in good condition and free of potholes;
- Various options such as block walls, shipping containers, or earth mounds have been explored to mitigate sound disturbances from equipment.

### 8.2.3 On site operational impacts

The Site currently implements noise mitigation measures in accordance with the Site Based Management Plan. The NVIA determined that the operation of the Site is compliant with the noise criteria is achieved at all locations under all weather conditions. While the additional truck movements visiting site will increase, compliance with the NPfl will be achieved. Further consideration of noise management and mitigation measures is not required.

#### 8.2.4 Potential noise impacts of the proposed development (operational road traffic noise)

The predicted noise levels in the NIVA identify that road traffic noise levels are predicted to exceed the noise criterion in the future. The noise impacts presented here are indicative and would depend on the location and layout of the future development. Noise impacts from the road should be carefully considered in the development of future sensitive receivers.

#### 8.2.5 Proposed mitigation

The NVIA proposes good development principles, including using roads and parks to create natural buffers and locating non-sensitive use rooms such as bathrooms, kitchens and laundry's towards the road and bedrooms away from the road would provide suitable noise attenuation.

Additionally, 4Pillars suggests that:

- CGO continually monitor and maintain Maryland's Link Road 2
- CGO reach out the developers of the Lowes Creek Precinct area to provide comment and a commitment to work together to minimise noise to the residents.
- That when the Lowes Creek Precinct are finalised and made public, they are reviewed and appropriate mitigation such as noise walls and vegetation be installed along Maryland's Link Road 2.
- It is also noted that CGO intended to further upgrades to the Site which will require a new DA, impact on the future receives will also be looked at in detail during this proposed application.

#### 8.2.6 Noise and vibration assessment conclusions

The NVIA conclude that there was no impact to the current receivers from the operation of the Site. The NVIA also concluded that the proposed increase in truck movements would like impact the future residents of the Lowes Creek Precinct. The extent of the impact was unable to be determined due to the plans not being finalised. However, the NVIA suggests good design practice will effectively mitigate these potential impacts. It is worth highlighting the fact that there are only potential impacts to the future residents (ie current residents are unimpacted by the proposed development) and the mitigation measures outlined above will allow effective mitigation of the impacts.

### 8.3 Traffic Assessment

#### 8.3.1 Overview

The Site currently operates as a composting facility, traffic movements are limited to the movement of truck vehicles for material transport and light vehicles for staff. Truck movements are currently limited under Condition 6 of the Consent which states:

*"The number of waste truck movements per day must be limited to five (5), that is five (5) in and five (5) out."*

This number is not considered adequate to allow for CGO to accept and remove material from the Site to reach their processing limits.

A Traffic and Parking Letter of Advice has been completed by McLaren Traffic to support the application to amend the above-mentioned condition and increase the truck movement numbers.

The proposed development will see a small increase in truck movements along the existing Site access routes Maryland Link Road 2 and The Northern Road. There will be no change to delivery and collection times, and this is still determined by the Consent and EPL (Table 1). It is anticipated that the upgrades associated with the development of the Western Sydney Airport, including the Northern Road upgrade and Bringelly Road upgrade, will easily accommodate the increase of traffic flow associated with this modification.

### *8.3.2 Impact of the proposed development*

The current site access is through the signalized intersection of The Northern Road and Maryland Link Road 2. The area, including Bringelly, is part of a larger growth precinct known as the 'Loves Creek Maryland Precinct.' According to AUSTRROADS Guide to Traffic Management, for "Low Impact" developments (generating fewer than 10 trips during peak hours), no specific transport information is typically required.

The proposed development is expected to generate a total of 70 truck trips per day (35 inbound and 35 outbound), distributed within the site's operating hours from 6:00 AM to 6:00 PM on weekdays and from 7:00 AM to 1:00 PM on weekends and public holidays. Even if 30% of this traffic were concentrated during peak hours, which represent only 14% of the site's total operating hours, it would result in 10 truck trips (5 inbound and 5 outbound) during peak periods.

This level of traffic is not anticipated to adversely impact nearby intersections and can be accommodated within the existing road network with minimal effects on traffic flow efficiency and road safety. Computer models used to assess such impacts are not sensitive to such small changes, indicating that the road network's service levels will likely remain unchanged. Therefore, the proposed use of the site constitutes a low-impact traffic use, and the development appears to be supportable in terms of its traffic impact.

### *8.3.3 Management and mitigation measures*

There would be no change to current levels of traffic safety within the facility or on the local road network as a result of the proposal. This is because access to the site is via Maryland Link Road 2 and The Northern Road, which is to a high design standard in comparison to the current usage and the speed limit, with good intersection sight distance for visibility. The internal road widths generally comply with relevant standards for two way truck traffic movements.

### *8.3.4 Traffic assessment conclusion*

The increase of truck movements will not have any impact of the local traffic network. The proposed number is considered adequate to achieve the processing limits outlined in Condition 19A of the Consent.

## 8.4 Soil and water quality

### 8.4.1 Overview

The Site is an existing composting facility with potential soil and water impacts being currently managed and considered compliant. Soil and water impacts that can arise from use of the Site as a composting facility have been listed below along with the existing mitigation measures that control them.

The proposed modification focuses on the increase in truck movements at the Site. Potential surface water impacts caused from this proposed development will be negligible as there is no change to onsite operation. Hence, no additional surface water impact is expected from this modification.

### 8.4.2 Existing potential environmental impacts

Potential impacts of the composting facility to surrounding soil and water quality, if left unmanaged, can include:

- Run off and erosion impacts.
- Nutrient loading to waterways leading to algal blooms and harm to aquatic life.
- Chemical contamination through prior treatment of wastes with chemicals such as pesticides or herbicides (impacts to both soils and waters).
- Temperature effects through the potential discharge of heated waters.
- Contamination of surface soils.
- Contamination of ground water.

### 8.4.3 Management and mitigation measures

The potential impacts of the current operations on Site are managed via several existing controls. The following controls are already established at the Site and will continue:

- Establishment and maintenance of onsite pads with sandstone to ensure pathway for soil and groundwater contamination is limited.
- Establishment and maintenance of onsite pads to ensure gradient is sufficient to direct surface water from the pad to the stormwater dams for containment.
- Dams are to be constructed to contain the water generated 1 in 10-year 24 hours rainfall event (143.23 mm over a 24-hour period).
  - In the event of an exceedance of a 1-in-10-year 24-hour rainfall event, the water from the containment dams will progressively fill up the bunding around the stormwater containment dams and back-up on to the Composting Pad until such time waters would release over the bund and enter the adjacent Farm Dam. It should be noted that in such an event the concentration of contaminants in the released waters will be minimal due to the dilution effect of the surrounding environment entering the said farm dam.
- Two detention basins retain sediment-impacted surface water run-off.
- Surface water from undeveloped areas will be diverted from impacted areas.
- Water sourced from the sedimentation basin will be used for irrigation and dust suppression within the impacted catchment, reducing the likelihood of discharge to receiving waters.
- Water from the dams is to be treated prior to discharge.
- Treatment of these dams currently includes the use of:
  - Ag Lime

- Liquid Manure
- Aerating
- Odour neutraliser
- Quarterly surface water testing of dams.
- Establishment and maintenance of a 500 mm freeboard at all times.
- Wastewater sourced from site amenities shall be treated for sub-surface dispersion within the impacted catchment.

#### *8.4.4 Impacts from proposed development and proposed mitigation*

The proposed development, will not have any additional impact on the soil and water quality of the Site as there is no changes to operation, only an increase in vehicles movements. Continued implementation of the above listed mitigation are considered adequate to control the soil and water quality on and off Site.

#### *8.4.5 Soil and water quality impact assessment conclusion*

The Site will continue to operate as per the conditions of the Consent and EPL, the only change is an increase in vehicle movements per day. The proposed development will result in negligible impacts on the soil and water quality on Site and offsite.

### *8.5 Visual amenity*

#### *8.5.1 Overview*

The Site is an existing composting facility with potential visual amenity impacts being currently managed and considered compliant. Visual amenity impacts that can arise from use of the Site as a composting facility have been listed below along with the existing mitigation measures that control them.

The proposed modification focuses on the increase in truck movements at the Site. Potential visual amenity impacts caused from this proposed development will be negligible as there is no change to onsite operation. Hence, no additional visual amenity impacts is expected from this modification.

#### *8.5.2 Existing environmental impacts and mitigation*

Composting facilities have potential to negatively impact the visual amenity of an area through the following:

- Use of Site as a composting facility – impacting the visual amenity of the area for nearby receivers
- Stockpiles of materials – impacting the visual amenity of the area for nearby receivers
- Onsite machinery – impacting the visual amenity of the area for nearby receivers
- Vehicle movements along Marylands Link Road 2 – impacting the visual amenity of the area for nearby receivers

#### *8.5.3 Management and mitigation measures*

Due to the following reasons and implemented mitigation measures, the Site currently has no impact on the visual amenity within the area:

- There are limited receivers who have view of the Site (limited to certain rural properties). This is due to the Site location and topography of the area.
- The Site is set back kilometres from the main road, on a rural property.
- The Site maintains bunding around the Site which prevents visibility.
- The Site maintains specified stockpile heights.

- Vehicular access to the Site is completed via one road, which has vegetation along the majority to block view to receivers

#### 8.5.4 *Impacts from proposed development and proposed mitigation*

There is no change to the operation of the Site and the above listed mitigation measures are to continue to be implemented.

Impacts from the proposed development are limited to the visual impact of increased vehicle movement along Marylands Link Road 2. Currently – as there are very few receivers along this road, topography and vegetation block the majority of this impact resulting in a negligible impact to current receivers.

Impacts of the increased vehicle movement on the future receivers of the Lowlands Creek Precinct are unknown as locations of residents have not been determined. It is recommended that when these plans are determined, a review of both visual amenity and noise impacts be reviewed and appropriate mitigation such as noise and amenity walls be installed at appropriate locations along Marylands Link Road 2. It is also noted that the Client intends to complete further upgrades at the Site in the near future, these will be reviewed in further detail and addressed during this proposed development aswell.

#### 8.5.5 *Visual amenity impact assessment conclusion*

The proposed development will result in negligible impacts on the visual amenity on the current receivers. It is hard to quantify the visual impact on future receivers as plans have not been determined. It is recommended that a thorough review is completed when plans are finalised, made public and when future works are proposed at the Site.

### 8.6 *Fire Risk Assessment*

#### 8.6.1 *Overview*

The Site is an existing composting facility with potential fire impacts being currently managed and considered compliant. Fire risk impacts that can arise from use of the Site as a composting facility have been listed below along with the existing mitigation measures that control them.

The proposed modification focuses on the increase in truck movements at the Site. Potential fire risk impacts caused from this proposed development will be negligible as there is no change to onsite operation / quantities of materials on Site.

#### 8.6.2 *Existing potential environmental Impacts*

The Site is mapped as containing Bushfire prone land that contains Vegetation Buffer, Vegetation Category 1 and Vegetation category 3. Potential aspects of the composting facility that cause an increase to fire risks if left unmanaged include:

- Temperature of stockpiles causing spontaneous combustion.
- Storage of combustible materials.
- Site location within a bushfire prone area.
- In the case of a fire, impacts include:
  - Fire spread and control.
  - Release of smoke, particulate matter and toxic gases.
  - Release of contaminated water to extinguish the fire.

#### 8.6.3 *Existing management and mitigation measures*

These potential impacts are mitigated in accordance with the Site Based Management Plan and are outlined below:

- Clearing of area around the composting facility to create a fire break.

- Temperature monitoring of the stockpiles.
- Equipment and associated signage installed and maintained as specified in fire management strategy.
- Trained staff in the maintain ace procedure and firefighting techniques outlined in the fire management strategy.

In accordance with the *NSW EPA Environmental Guidelines for Composting and Related Organics Processing Facilities*, the operator must demonstrate the existing facility is not a fire risk and that the facility is adequately prepared in the event of fire. To address this requirement the operator of the compost facility has prepared a Fire Management Strategy that will include the following:

- the potential causes of fire at the composting facility
- the procedure to follow, persons responsible, and equipment to be used in the event of a fire. This will include on-site resources and external resources (such as the Bush Fire Brigade), and details of how the procedure will operate on a 24-hour-a-day basis.
- the maintenance schedules for all fire-fighting equipment and facilities. At a minimum, all equipment and facilities should be visually checked for damage on a weekly basis, and test-operated on a quarterly basis.
- details of all the fire-fighting equipment that will be installed at the flammable store and at site buildings.
- how all fire-fighting equipment will be clearly signposted and how access to it will be ensured at all times
- details of the firebreaks to be constructed and maintained around all filled areas, stockpiles of combustibles, gas extraction equipment and site buildings
- training of facility staff in fire-fighting techniques.

#### 8.6.4 Impacts from proposed development and proposed mitigation

There is no change to the operation of the Site and the above listed mitigation measures are to continue to be implemented.

Impacts from the proposed development are limited to the increase of vehicle movement, there are no foreseeable increase to the risk of fire by increasing vehicle movements at the Site.

#### 8.6.5 Fire Risk impact assessment conclusion

The proposed development will result in negligible impacts on the fire risk of the current Site.

### 8.7 Biodiversity Impact Assessment

#### 8.7.1 Overview

The Sites footprint has been historically cleared of vegetation. However, the broader Site contains areas of mapped biodiverse value land (Figure 7) and critically endangered Cumberland Plain Woodland (Figure 6) (further details on the environmental context of the Site is included in Section 3. Although spatial mapping of these overlaps the footprint of the composting facility, there is no native vegetation located within footprint of the Site or along the access route (Marylands Link Road 2). A preliminary review of the biodiversity context of the Site was completed for this proposed modification. The impacts of the existing Site are considered to be separate to that of the proposed development, as there is no changes proposed to the existing site operation / footprint. Due to this no formal biodiversity assessment has been completed as part of this proposed development.

#### 8.7.2 Existing potential environmental Impacts

Potential impacts at the Site include:

- Vehicle strikes to threatened fauna species
- Destruction of CPW



- Impacts to vegetation through water run-off.
- Impacts to aquatic life through nutrient loading.
- Increase frequency and spread of weeds
- Increase in pests such as flies, rodents and insects

### 8.7.3 Existing management and mitigation measures

These potential impacts are mitigated in accordance with the Site Based Management Plan and are outlined below:

- Speed limits enforced along the access road and on the Site.
- Maintenance of vegetation along the access roads to ensure adequate visibility.
- Vehicles movements and operation only during approved times (which coincide with day light hours)
- Works only occur within the approved areas.
- Maintenance of onsite dams.
- Water monitoring of dams and farm dams to ensure no impact to aquatic life.
- Immediate processing of food waste to ensure pests are not attracted.

### 8.7.4 Biodiversity legislation

Legislation	Requirement / description	Requires further consideration		
<i>Camden Council Local Development Plan 2010 (LEP)</i> <i>Camden Council Development Control Plan 2019 (DCP)</i>	The relevant provisions of the Camden Council LEP have been addressed in this Report. The relevant provisions of the Camden Council DCP have been addressed in this Report.	Complete during report		
<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>	<p><u>Chapter 3 Koala habitat protection 2020</u></p> <p>The Site has an area of more than 1 hectare, but the LGA is not listed in schedule 1 of Koala SEPP 2020, hence the Provision of this Part doesn't apply.</p> <p>In accordance with SEPP (<i>Biodiversity Conservation</i>) 2021, the Site doesn't contain potential koala habitat or core koala habitat land.</p> <p><u>Chapter 4 Koala habitat protection 2021</u></p> <p>The Site is located in the LGA Camden of Macarthur Tablelands which doesn't fall into the koala management area, hence the Provision of this Part doesn't apply.</p>	No		
<i>Biodiversity Conservation Act 2016 and its Regulation 2017</i>	<table border="1"> <tr> <td>clearing high biodiversity value vegetation</td> <td>No clearing involved</td> </tr> </table>	clearing high biodiversity value vegetation	No clearing involved	No
clearing high biodiversity value vegetation	No clearing involved			

	<p>exceeding the relevant offset scheme clearing threshold</p> <p>by an activity that is likely to significantly affect a threatened species or ecological community (test of significance)</p>	<p>No clearing involved</p> <p>The Site is an existing facility, in which onsite operation will not change. The proposed development to increase vehicle movements is not likely to affect threat species or ecological communities</p>	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Obligations under the EPBC Act have been considered and the proposed development will not result in a significant impact on any MNES		No

Table 13: Biodiversity legislation.

#### 8.7.5 Impacts from proposed development and proposed mitigation

Impacts of the proposed development can be divided into two categories: impacts on flora and impacts on fauna

##### Impacts on flora:

- There is no clearing of any vegetation proposed as part of this proposed development.

##### Impacts on fauna:

- Increasing the truck movement does have potential to increase the risk of vehicles strikes along Marylands Link Road 2. Specially on mammals and gastropods.
  - Of the threatened species found within 1 km of the Site (Table 4), increasing the risk of vehicles strikes will only impact the Cumberland Plain Land Snail and the Black Striped Wallaby.

It is believed that these potential impacts are generally well understood at the Site and can be easily mitigated through existing safeguards. Additional safe guard to implement include Site staff training in fauna spotting along the road and regular checks, training of staff in species that are likely to be in the area and additional 'caution fauna' signage along the road,

Scientific name	Vernacular name	Habitat and ecology	Presence within the proposed development	Potential impact	mitigation	Residual impact
<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail	Primarily inhabits Cumberland Plain Woodland (a critically endangered ecological community). This community is a grassy, open woodland with occasional dense patches of shrub. Lives under litter of bark, leaves and logs, or shelters in loose	Habitat along the Marylands Link Road 2 and internal Site routes are not considered adequate habitat for the snail and hence they are considered unlikely to inhabit these areas	Increased risk of death through vehicle strikes	Staff training and awareness. Regular spotting along the road area	Minor

		soil around grass clumps. Occasionally shelters under rubbish.				
<i>Macropus dorsalis</i>	Black-striped Wallaby	Preferred habitat is characterised by dense woody or shrubby vegetation within three metres of the ground. This dense vegetation must occur near a more open, grassy area to provide suitable feeding habitat.	Habitat along the Marylands Link Road 2 is considered adequate. The internal Site is not considered adequate habitat.	Increased risk of death through vehicles strikes	Enforced speed limit Regular spotting along the road area Fauna signage	Minor

Table 14: Threatened species impact of the proposed development review.

#### 8.7.6 Biodiversity impact assessment conclusion

Due to the fact no clearing is involved, no change to existing operation is involved and the proposed development is only an increase in vehicle movements along an existing route, there is not thought to be any signification impact to any threatened species or non-threatened species. Existing and proposed mitigation will ensure the safety of the biodiversity within the area.

### 8.8 Social Impact Assessment

An understanding of the social context of the proposed development ensures that proposal planning considers the surrounding social conditions and that it would integrate, both physically and socially. This section presents an overview of the social context of the area and how it would be affected by the proposed site development.

The socio-economic impacts of operation of the site have been assessed to evaluate key issues for the proposal:

- Net economic gains to the local community through the provision of jobs to Southwestern Sydney;
- Changes to local demographic and local economic impacts; and
- Regional economic impacts.

#### 8.8.1 Impact assessment

It is considered that the increase in traffic volume would have a net positive effect on the socioeconomic environment of the Camden LGA and the Western Sydney City District. The development has provided opportunities for employment of up to 10 full-time operational staff members to work at the transfer station facility. Plus, with increase in volumes in the site the establishment will certainly look forward in hiring more staff in new future.

Indirectly, the operation would also provide continued local employment for locally sourced support services such as

- products and equipment suppliers,
- specialist contractors,
- maintenance personnel,
- business services and
- retail trades.

Socio-economic benefits derived from organics recycling activities consequentially provide an advantage to society and the region as a whole, through:

- Recovery of valuable resources and generation of material for the greater productive economy;
- Introduction and/ or addition to the local circular economy, closing the loop with regards to resource recovery;
- Reduction in waste transferred to landfill;
- Assistance with achievement of state waste diversion and recovery targets; and
- Continued employment for the local community in the way of jobs.

As described in previous sections, the effects of traffic, dust, odour, noise and visual amenity would be minimal and are not likely to have any impact on the surrounding population. The proposed activities serve to benefit the local community through resource recovery, increased local employment and the provision of compost in the local circular economy. The proposal would generate positive social impacts through increased local, long-term employment and indirect environmental benefits to the community.

### *8.9 Cumulative impacts*

The Site is located kilometres from the next nearest facility, cumulative impacts on air, noise, soils and water, social, visual and biodiversity are considered to be negligible.

The traffic report states that the increase in truck movements is small enough that the computer models are not sensitive enough to be able to assess the impacts of this increase and it may be concluded that the road network will operate with no change in the existing levels of service. In this regard, the proposed use of the site is a low-order traffic use, and the proposed development is supportable in terms of its traffic impacts.

Hence, there is not thought to be any cumulative impacts from the proposed development.

## 9. Market analysis and Justification

The waste management industry's true value is difficult to determine accurately due to the lack of comprehensive and consistent data. This industry derives its income from various sources, including revenue from waste services, the sale of recoverable materials, and other sources like revenue generated from the energy produced by waste.

One significant aspect of waste management is the recycling sector, which involves companies engaged in collecting, transporting, sorting, and processing materials for reuse as raw materials in the production of non-waste products. This sector encompasses not only recycling companies but also businesses involved in waste management and manufacturing.

In Australia, while recyclable materials are collected and transferred throughout the country, most recycling facilities are concentrated in major cities along the east coast, where the majority of the population and industries are located. Despite an increase in recycling rates from 7% in 1996 to 58% in 2016/17, there is still ample room for growth when compared to European countries, where recycling rates often exceed 90%.

There are opportunities for growth in the Australian recycling industry, especially considering the increasing levels of food waste. Adopting a circular economy model, which emphasises waste management, reuse, recycling, and responsible manufacturing, can help create new industries and jobs, reduce emissions, and efficiently use natural resources.

Several opportunities for growth in the recycling industry include making waste collection more cost-effective, improving sorting processes, reducing contamination rates, utilising underutilised or low-value materials, and producing high-quality products that can compete in terms of price and quality with virgin materials. To achieve the state waste diversion targets, the New South Wales (NSW) government has recognised the need for additional waste infrastructure that can receive, process, and convert organics for beneficial use. A significant development in this regard is the decision by the NSW Environmental Protection Authority (EPA) to discontinue approval for applications related to Mixed Waste Organics disposal to land. This decision will have a substantial impact on waste management practices, further underscoring the urgency of developing infrastructure capable of processing FOGO (Food Organic and Garden Organic) waste from council kerbside collections, as well as General Organics (GO) and Food Organics (FO). It highlights the critical need for investments and initiatives to address the changing landscape of waste management and align with the state's waste diversion objectives.

A sustainable and robust recycling sector is vital for Australia's economy and society as it allows for the efficient use of resources and maximises the value extracted from materials. Unlike waste management methods such as landfill disposal, recycling provides resources and inputs to various industries without depleting natural resources. Additionally, the recycling industry generates more jobs per tonne of waste recycled compared to per tonne of waste sent to landfill.

The economic viability of the recycling sector is influenced by factors like material prices and the cost structure of landfill disposal. The sale of recovered materials is a significant source of revenue for the industry, but this income is highly dependent on volatile commodity markets. Introducing and increasing landfill levies may contribute to the economic sustainability of the recycling sector by making disposal in landfills less attractive and encouraging recycling efforts.

### 9.1 Strategic Need

#### 9.1.1 NSW Waste and Sustainable Materials Strategy 2041

The NSW government has outlined a set of targets as part of the National Waste Policy which are set out in the NSW Waste and Sustainable Materials Strategy 2041 (WSM Strategy).

The targets are to:

- reduce total waste generated by 10% per person by 2030;
- have an 80% average recovery rate from all waste streams by 2030;
- significantly increase the use of recycled content by governments and industry;
- halve the amount of organic waste sent to landfill by 2030; and

- improve on data recovery and reporting.

The NSW Waste and Sustainable Materials Strategy 2041 model of production is a circular economy model which aims to eliminate waste and reduce the continual use of new resources. Circular systems employ reuse, share, repair, refurbishment, remanufacturing and recycling to use resources efficiently and minimise the creation of waste, pollution, and carbon emissions.

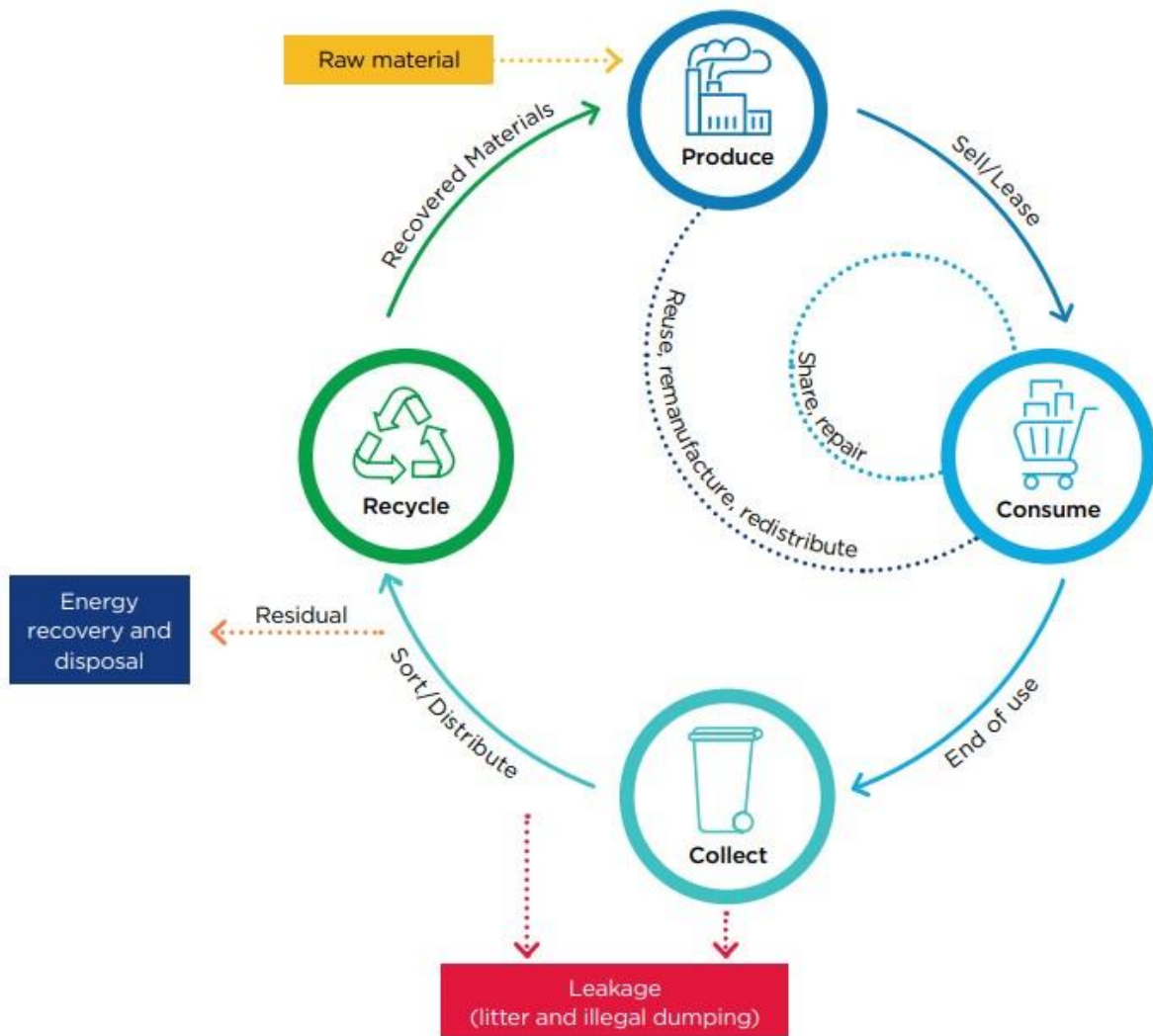


Figure 2: Circular Economy. Source: NSW Waste and Sustainable Materials Strategy 2041.

The NSW Waste and Sustainable Materials Strategy 2041 is a major component of the government’s priority to meet community expectations of an efficient waste management system by increasing recycling, recovery and reuse and with a vision to transition towards:

*“a circular economy aims to eliminate waste and reduce the continual use of new resources. Circular systems employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to use resources efficiently and minimise the creation*

*of waste, pollution and carbon emissions. The circular economy aims to keep products, equipment and infrastructure in use for longer.”*

The NSW Waste and Sustainable Materials Strategy 2041 identifies key targets for waste management and resource recovery in NSW relevant to the proposed development, including:

- an 80% average recovery rate from all waste streams by 2030.
- significantly increase the use of recycled content by governments and industry.

The proposed development would be in alignment with meeting the above-mentioned targets by increasing the downstream use of recycled paper, cardboard, and e-waste to improve the quality of input for use in tertiary manufacturing and thus, increasing the amount of material retained within the circular economy.

#### *9.1.2 NSW Waste and Sustainable Materials Strategy – A guide to future infrastructure needs*

The NSW Waste and Sustainable Materials Strategy 2041 identifies that new facilities are required in Greater Sydney areas to process combined food and organics (FOGO) and includes specific reference to new organics waste transfer stations which are required in high population and industry centres to move material outside urban areas for processing. This facility would support this requirement and provide a necessary link to meeting strategic targets set by the State Government.

At present, a limited number of Sydney councils have a food and garden organics collections, either in trial or full service. Whilst the majority of Sydney councils have a garden waste bin, food waste has limited options under current service arrangements. The guide indicates that highly urbanised areas account for the majority of organics waste and the biggest demand for new infrastructure and that transfer stations are likely to be needed to bulk and transport organics to suitable locations for processing.

Key limitations for the widespread introduction of food waste collection services for Councils is the availability of nearby facilities to take mixed food and garden waste. The identified additional need is for up to 250,000 tpa of transfer stations to transfer Sydney organics to regional processing by 2030. A waste facility situated in the central west of Sydney would provide a strategically located transfer option for many of the surrounding councils, providing incentive to uptake food waste collection services and facilitating essential infrastructure.

#### *9.1.3 EPA Strategic Plan 2021-24*

On July 1st, 2021, the NSW EPA released its ‘Strategic Plan 2021-24’. This document sets out the EPA’s vision, purpose and focus over the next three years, and outlines how the EPA would achieve their ambition to be a world class regulator, through a learning mindset, being outcomes focused, responsive and adaptive, purpose and people centred, and service orientated.

The EPA has identified five key areas of focus, to achieve their vision ‘Best living on the planet, forever’ and purpose statement ‘healthy environments, economies and communities’, being:

- Ecologically sustainable development
- Waste
- Water quality
- Legacy and emerging contaminants
- Climate change

The key focus area of waste is most relevant to the proposal. The EPA seeks to take action to ensure harmful impacts of waste are reduced and minimised, and that community and industry are actively contributing to a circular economy. Moreover, there is an aim to ensure systems and markets are available to keep waste materials circulating. This proposal aligns with these outcomes, supporting the diversion of waste from landfill and investing in the circular economy.

#### *9.1.4 National Waste Policy (2022)*

The National Waste Policy supports a coherent, efficient and environmentally responsible approach to waste management in Australia. The policy, released in December 2018, sets Australia's waste management and resource recovery direction to 2030.

The aims of the National Waste Policy are to:

1. Avoid waste:

- Prioritise waste avoidance, encourage efficient use, reuse and repair.
- Design products so waste is minimised, they are made to last, and we can more easily recover materials.

2. Improve resource recovery:

- Improve material collection systems and processes for recycling.
- Improve the quality of recycled material we produce.

3. Increased use of recycled material and build demand and markets for recycled products.

4. Better manage material flows to benefit human health, the environment and the economy.

5. Improve information to support innovation, guide investment and enable informed consumer decisions.

The policy uses the five key principles to identify 14 priority strategies that would benefit from a national and/or coordinated approach. These strategies provide focus to the work across individual jurisdictions, on current directions and complement existing activities. They also provide clarity and certainty for business and the community. The National Waste Policy supports the proposal through the five key directives.

## 10. Conclusion

The increase of truck movements at the Site will not have any impact or intensification of impacts on current or future receivers with regard to:

- Air quality.
- Traffic quality.
- Soil and water quality.
- Visual amenity.
- Fire risk.
- Biodiversity impacts.
- Social impacts.
- Cumulative impacts

It is noted that road noise is predicted to potentially exceed the criteria for the future residents of the Lowes Creek Precinct area, but as plans for this are not finalise, impacts are not able to be quantified. The NVIA suggests that good building practices will adequately negate the impact and 4Pillars have suggested further mitigation measures that will ensure good environmental and social outcomes are achieved.

Ultimately, the proposed development is minor of nature and will not have any significant impact.



## 11. Appendices

- Appendix 1. Traffic and Parking Advice Letter
- Appendix 2. Noise and Vibration Impact Assessment
- Appendix 3. Figures and Photos



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Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

8 September 2023

Reference: 230561.01FA

Clean and Green Organics  
c/- 4Pillars Environmental Consulting  
Level 1, 5 George Street, North Strathfield NSW 2137  
Attention: Sophie Burke

### **TRAFFIC AND PARKING LETTER OF ADVICE FOR THE EXISTING COMPOSTING FACILITY AT 769 THE NORTHERN ROAD, BRINGELLY**

Dear Sophie,

Reference is made to your request to provide a Traffic and Parking Letter of Advice for the existing Composting Facility at 769 The Northern Road, Bringelly. This letter specifically evaluates Condition 6 of the existing consent (DA1726/2000 and S96/2000/1726/3), which is reproduced below:

#### Condition 6

*The number of waste truck movements per day must be limited to five (5), that is five (5) in and five (5) out.*

Consideration to Condition 19A is made for the purpose of this assessment, which is reproduced below:

#### Condition 19(A)

*Waste Input limits – The following limits apply to the quantity of waste received at the Site:*

- *Category 1 waste – 15,600 tonnes per annum*
- *Category 2 waste – 10,400 tonnes per annum*
- *TOTAL – 26,000 tonnes per annum.*

## 1 Traffic Generation Assessment

The following assumptions have been made for the purpose of this assessment:

- Limit of 26,000 tonnes per annum.
- 260 working weekdays per year (12-hour days).
- 52 working weekend days per year:
  - this assumption is considered with the understanding that on Saturdays and Sundays the site is only open for six (6) hours (rather than 12). Assuming 52 Saturdays and 52 Sundays, this results in the equivalent of 52 working weekend days a year.
- Delivery Trucks (trucks bringing material in) – 50% of trucks have a 3 tonne carrying capacity, 50% of trucks have a 7 tonne carrying capacity.
- Extraction Trucks (trucks taking material out) – 100% of trucks have a 7 tonne carrying capacity.

An assessment of the existing and proposed truck vehicle movements is summarised in the sub-sections below.

### 1.1 Existing Operations

Under the existing consent, the development is approved for five (5) inbound and five (5) outbound truck movements per day. The existing development is limited to receiving 35 tonnes of waste per day or 10,920 tonnes per annum based on the above assumptions.

Condition 6 of severely limits the facility's capacity well below the annual tonnage limit outlined in Condition 19A. Specifically, the existing facility can only operate at 42% of the approved tonnage capacity.

### 1.2 Proposed Operations

The proposal is to amend Condition 6 to allow the facility to operate at full capacity. The facility must have the ability to haul an average of 83.33T of material per day in order to achieve the annual 26,000T limit. On average, 83.33T per day would require the following:

- Delivery Trucks (trucks bringing material in):
  - **14** x trucks with a carrying capacity of 3 tonnes.
  - **6** x trucks with a carrying capacity of 7 tonnes.
- Extraction Truck (trucks taking material out):
  - **12** x trucks with a carrying capacity of 7 tonnes.

As shown above, on average the development requires **32** trucks per day (20 delivery trucks, 12 extraction trucks).

Given seasonal changes and the life cycle of earthworks projects, the influx of recycled material would not be uniform over the whole year. Some days will have a higher demand than 83.33T per day, and others will have a lower demand. As a result, the maximum daily traffic generation should reflect a peak day, say **35** trucks in a day. In any case, the facility is limited to 26,000T per year, such that the facility would be unable to operate with the maximum rate of **35** trucks per day each day of the year. However, the limit of **35** trucks in any given day will account for the variability of demand throughout the year whilst still having a mechanism to maintain compliance with the maximum annual tonnage capacity (Condition 19A). Therefore, the proposal is to amend Condition 6 to reflect a maximum of "**35 trucks per day, that is 35 in and 35 out**".

## **2 Traffic Impacts**

All vehicular access to the site is currently made via the signalised intersection of The Northern Road / Maryland Link Road 2. It is understood that Bringelly is part of a larger growth precinct, notably the 'Loves Creek Maryland Precinct'.

Reference is made to *AUSTROADS Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments – Section 5.2.2: Criteria for Traffic Impact Assessment* which outlines that for “Low Impact” developments (i.e. fewer than 10 trips in the subdivision or development’s peak hour) “no transport information normally required”.

The proposed development, on average, is expected to generate a total of **32** trucks per day resulting in **64** truck trips (32 inbound, 32 out) per day. This traffic is expected to be spread throughout the site’s operating hours, which are 6:00<sub>AM</sub> to 6:00<sub>PM</sub> Monday to Friday, 7:00<sub>AM</sub> to 1:00<sub>PM</sub> Saturday, Sunday and Public Holidays. On a typical weekday with 12 operating hours (6:00<sub>AM</sub> to 6:00<sub>PM</sub>), this is the equivalent of five (**5**) to six (**6**) truck trips per hour (3 in, 3 out) if it were to be spread uniformly throughout the day.

It is noted, however, that the traffic generation may not be spread uniformly throughout the day. As a conservative estimate, it is assumed that ten (**10**) trucks or **20** total movements (10 in, 10 out) would occur during the operational peak hour. This represents 30% of the daily traffic in a single hour, which is three to four times as many as the site would expect on average.

This level of traffic will have no adverse impact on any nearby intersections and can be readily accommodated within the existing road network with minimal impact in terms of traffic flow efficiency and road safety considerations.

Indeed, the computer models that are available to assess these impacts are not sensitive to such small changes and it may be concluded that the road network will operate with no change in the existing levels of service. In this regard, the proposed use of the site is a low-order traffic use, and the proposed development is supportable in terms of its traffic impacts.

### 3 Conclusions

In view of the foregoing, the proposed increase in truck movements for the Composting Facility at 769 The Northern Road, Bringelly is fully supportable in terms of its traffic impacts. The following outcomes of this traffic and parking impact assessment are relevant to note:

- a) The site can only operate at 42% peak capacity (10,920T per annum) under Condition 6.
- b) The development requires a total of **32** trucks per day, resulting in **64** truck trips (32 in, 32 out) per day on average.
- c) **64** truck trips per day (32 inbound, 32 outbound) on average would achieve peak capacity according to Condition 19A. This assumes an average carrying capacity of 83.33T per day.
- d) The influx of recycled materials is expected to not be consistent each day throughout the whole year. As a result, the maximum daily traffic generation should reflect a peak day, say **35** trucks in a day. In any case, the facility is limited to 26,000T per year, such that the facility would be unable to operate with the maximum rate of **35** trucks per day each day of the year. However, the limit of **35** trucks per day will account for the variability of demand throughout the year whilst still having a mechanism to maintain compliance with the maximum annual tonnage capacity (Condition 19A). Therefore, the proposal is to amend Condition 6 to reflect a maximum of **35** trucks per day, that is 35 inbound and 35 outbound.
- e) The proposed development is expected to generate a total of **64** truck trips (32 inbound, 32 out) per day. If 30% of the traffic generated by the site was concentrated in the AM and PM peak hour periods, this would result in **20** truck trips (10 inbound, 10 outbound) during the peak hour periods. This level of traffic will have no adverse impact on any nearby intersections and can be readily accommodated within the existing road network with minimal impact in terms of traffic flow efficiency and road safety considerations.

Please contact Mr Stanley Indraya or the undersigned on 9521 7199 should you require further information or assistance.

Yours faithfully,

**M<sup>c</sup>Laren Traffic Engineering**



**Daniel Fonken**

**Senior Traffic Engineer**

Bachelor of Science Civil Engineering

TfNSW Accredited Level 1 Road Safety Auditor

TfNSW Accredited Traffic Management Plan Designer (Cert No. TCT0016942)









769 The Northern Road, Bringelly

# Noise and Vibration Impact Assessment

**4 Pillars Environmental Consulting Pty Ltd**

Level 1, 5 George Street,  
North Strathfield, NSW, 2137

Report Reference: 230415 – 769 The Northern Road, Bringelly – Noise and Vibration Impact Assessment – R0

Date: 18 September 2023

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This report has been prepared by Pulse White Noise Acoustics Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with 4 Pillars Environmental Consulting Pty Ltd.

Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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# 1 INTRODUCTION

## 1.1 Background

Clean and Green Organics (CGO) are currently operating a composting facility at 769 The Northern Road, Bringelly. The site has an active consent and EPL and are seeking to increase the currently approved scale of operations at the facility.

The site currently has typically 10 truck movements per day, 5 in and 5 out. CGO are seeking to increase the proposed movement to 70 movements per day (35 in and 35 out).

4Pillars Environmental Consulting Pty Ltd (4Pillars) has held meetings with the council. The council has identified that road traffic noise needs to be considered, particularly around future plans for residential development within the Lowes Creek Maryland rezoned area.

## 1.2 Scope of this report

Pulse White Noise Acoustics (PWNA) has been engaged to undertake a Noise and Vibration Impact Assessment (NVIA) for the increase in truck movements at the CGO facility in Bringelly. This NVIA is required as part of the modification of the Development Application to address noise and vibration impacts that have the potential to be generated by the proposal.

This report:

- Identifies the existing noise sensitive receivers,
- Presents details about existing noise environment,
- Identifies the applicable NSW noise and vibration policies and applicable construction and operational design criteria,
- Predict noise impacts from the proposed operations of the site, both on-site and from additional road traffic; and
- Where applicable recommend operational noise management and mitigation measures.

## 2 EXISTING AMBIENT NOISE ENVIRONMENT

### 2.1 Land uses

The existing CGO facility is located approximately 2,800 m west of The Northern Road in Bringelly, north of the Oran Park town centre. The current area is predominantly rural farming and some light industrial throughout the area. While ambient noise is predominantly rural and natural noise with local road traffic providing the greatest contribution to short term noise levels, background noise is controlled by The Northern Road, which transports an appreciable proportion of heavy vehicles.

**Figure 1 Lowes Creek Maryland rezoning plan**



Note: The existing site is identified with a red polygon

Existing residential receivers are located to the east, illustrated in Figure 2. Development applications for residential houses are currently not approved for the Lowes Creek Maryland area, so they do not need to be considered. However the Camden Council has specifically requested that the road traffic noise impacts from Maryland Link Road 2 be considered for future development.

**Table 1 Noise sensitive receivers**

ID	Address	Noise Catchment Area	Use
R1	85 Cheviot Drive, Cobbitty	NCA1	Residential
R2	70 Cheviot Drive, Cobbitty	NCA1	Residential
R3	164D Coates Park Road, Cobbitty	NCA1	Residential
R4	164B Coates Park Road, Cobbitty	NCA1	Residential

ID	Address	Noise Catchment Area	Use
R5	164C Coates Park Road, Cobbitty	NCA1	Residential
R6	164A Coates Park Road, Cobbitty	NCA1	Residential

## 2.2 Noise survey

Background noise logging was undertaken at one location from 9 August and 18 August 2023 to establish the existing noise environment in the area.

The noise logger location illustrated below in Figure 2 has been selected to measure the existing noise environment representative of the future residential receivers and the school.

**Figure 2 Noise logger and receiver locations**



The Rating Background Noise Level (RBL) is the background noise level used for assessment purposes at the nearest potentially affected receiver. It is the 90<sup>th</sup> percentile of the daily background noise levels during each assessment period, being day, evening and night. The  $L_{Aeq}$  is the ambient noise level (logarithmically averaged) over the period.

The standard measurement periods used in NSW for site noise impacts are:



- Daytime – 7 am to 6 pm
- Evening – 6 pm to 10 pm
- Night-time – 10 pm to 7 am

Presented in Table 2 is a summary of the ambient and RBL noise levels measured over the entire measurement period. Noise logging charts are presented in Appendix B. These noise levels are used throughout the assessment to determine the existing noise environment and establish appropriate site-specific noise criteria.

**Table 2: Measured ambient noise levels, dB(A)**

ID	Address	Rating background level			Ambient noise level, $L_{Aeq,period}$		
		Daytime	Evening	Night	Daytime	Evening	Night
L1	Maryland Link Road 2	32	29	28	55	40	46



### 3 NOISE AND VIBRATION CRITERIA

#### 3.1 Operational facility noise criteria

Responsibility for the control of noise emissions in New South Wales is vested in Local Government and the NSW Environment Protection Authority (EPA).

The EPAs NSW Noise Policy for Industry (NPfI) provides guidance on appropriate noise levels for external noise emissions from fixed facilities on surrounding sensitive receivers. The NPfI criteria for industrial noise sources have two components:

- Controlling the intrusive noise impacts for residents and other sensitive receivers in the short term; and
- Maintaining noise level amenity of defined land uses for residents and sensitive receivers in other land uses.

The intrusiveness noise level protects against significant changes in noise, while the amenity noise level seeks to protect against cumulative noise impacts from industry. Together, these levels are used to assess the potential impact of noise and assess reasonable and feasible noise mitigation measures. Project noise trigger levels are developed through this process. They are not used directly as regulatory limits.

The NPfI requires a project to take consideration of other industrial noise sources in setting amenity noise objectives. In cases of a new development where there are no existing industrial sources, the NPfI accepts a default of the amenity noise level minus 5dB to take account of future industrial sources.

For this project, the default amenity noise level minus 5dB adjustment will be used to account for cumulative noise sources.

##### 3.1.1 Intrusive noise impacts – residential receivers

The intrusiveness noise level protects against significant changes in noise levels and is applicable to existing residential receivers only. The criterion is defined by the formula below:

$$L_{Aeq,15min} = \text{rating background noise level} + 5 \text{ dB}$$

The RBL is the average background noise level over a measurement period of at least one week. Using the RBL results in the intrusiveness criterion being met for 90% of the time. Adjustments are to be applied to the level of noise produced by the source that is received at the assessment point where the noise source contains annoying characteristics such as tonality or impulsiveness.

Presented below in Table 3 is a summary of the measured RBL and corresponding intrusiveness level for each time period.

**Table 3 Intrusive noise criteria, dB(A)**

Location	Rating background level			Intrusive noise level, $L_{Aeq,15min}$		
	Daytime	Evening	Night-time	Daytime	Evening	Night-time
NCA1	32	30	30	37	35	35

Note 1: The NPfI identifies that the project intrusiveness level for the night-time should be no greater than the evening. Likewise the evening should be no greater than the day. The intrusive noise levels presented here have been adjusted to achieve this requirement.





### 3.1.2 Protecting noise amenity

The amenity noise level seeks to protect against cumulative noise impacts from industry.

The NPfI uses project noise trigger levels measured over a 15-minute time period, assessed as an  $L_{Aeq,15min}$ . To account for converting  $L_{Aeq,period}$  to  $L_{Aeq,15min}$ , the NPfI accepts a default conversion factor of  $L_{Aeq,15min} = L_{Aeq,period} + 3$  dB.

To ensure industrial noise levels do not gradually increase with new developments, a minus 5 dB correction is applied to the amenity noise level. The amenity noise levels have been presented in Table 4.

**Table 4 Amenity noise levels, dB(A)**

Receiver	Noise amenity area	Time of day	Recommended amenity noise level
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks	5 dB(A) above the recommended amenity noise level for a residence for the relevant noise amenity area and time of day		
School classroom	All	Noisiest 1-hour period	35 internal
Hospital ward	All	Noisiest 1-hour period	35 internal 50 external
Place of worship	All	When in use	40
Passive recreation	All	When in use	50
Active recreation	All	When in use	55
Commercial	All	When in use	65
Industrial	All	When in use	70
Industrial interface	Add 5 dB(A) to recommended noise amenity area		

### 3.1.3 Corrections for annoying noise characteristics

Table C1 of the NPfI provides corrections for tonality, intermittency, irregularity or dominant low-frequency content. These corrections are to be added to the measured or predicted noise levels at the receiver before



comparison with the project noise trigger levels. NPfI also provides adjustments for duration that can increase the project noise criterion for unusual or one-off high-noise level events.

### 3.1.4 Low frequency noise correction

A difference of 15 dB or more between the C- and A-weighted noise measurements, identifies the potential for an unbalanced spectrum and an increased likelihood of low frequency noise annoyance.

The difference between C- and A-weighted noise levels is used as a screening tool to determine if further investigation is required. Where further investigation confirms significant low frequency content, a low frequency noise correction is applied to the predicted or measured noise levels.

The NPfI identifies that the corrections should “reflect external assessment locations”, or sensitive receiver locations so the existing noise environment should be considered.

### 3.1.5 Project specific noise trigger levels

The local area could be considered to be a rural classification based on the measured noise levels and proximity to the adjacent motorway and major arterials.

The NPI characterises the rural residential area noise environment as an area with an acoustical environment that is:

*an area with an acoustical environment that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels. Settlement patterns would be typically sparse.*

The NPfI also identifies that a Rural residential classification has RBL noise levels less than 40 dB(A) during the daytime, 35 dB(A) during the evening, and less than 30 dB(A) during the night-time.

Attended measurements identified that the area is dominated a typical rural soundscape, with natural sounds and traffic noise having little impact on the measured RBLs, and the measurements were characterised by RBLs generally less than those listed above.

Presented below in Table 5 is a summary of the project specific noise trigger levels.

**Table 5 Project specific noise trigger level,  $L_{Aeq,15minute}$  dB(A)**

Receiver	Time period	RBL	Intrusiveness	Amenity <sup>1</sup>	Overall <sup>2</sup>
Residential NCA1	Daytime	32	37	48	37
	Evening	30	35	43	35
	Night-time	30	35	38	35

Note 1 The amenity noise level has been reduced by 5 dB(A) to account for other industrial noise sources and increased by 3 dB(A) to convert from  $L_{Aeq,period}$  to  $L_{Aeq,15minute}$

Note 2 The overall PNTL is the more stringent of the intrusiveness and amenity criteria



### 3.2 Operational road traffic noise

Industrial developments have the potential to generate additional road traffic and associated noise impacts from the vehicles accessing the site. The EPA's Road Noise Policy provides guidance on appropriate noise criteria which should be considered.

Presented below are the applicable noise criteria for road traffic on arterial roads. Access routes for vehicles accessing the site will be along Maryland Link Road 2, which is a local road.

**Table 6 Road noise criteria**

Road category	Type of project / land use	Assessment criteria, dB(A)	
		Daytime 7am-10pm	Night-time 10pm-7am
Freeway /arterial / sub-arterial roads	Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments	L <sub>Aeq,15hour</sub> 60 (external)	L <sub>Aeq,9hour</sub> 55 (external)
Local roads	Existing residences affected by additional traffic on existing local roads generated by land use developments	L <sub>Aeq,1hour</sub> 55 (external)	L <sub>Aeq,1hour</sub> 50 (external)

Where the predicted noise levels with the project indicate likelihood to exceed the noise criteria presented in Table 6, it is considered not reasonable and feasible to provide noise mitigation measures if the project does not increase noise by greater than 2.0 dB. A change of 2 dB to 3 dB in road traffic noise is often considered to be indiscernible.



## 4 OPERATIONAL NOISE IMPACTS

### 4.1 Modelling methodology

Site operational noise emissions have been calculated using the CONCAWE algorithm. The CONCAWE algorithm has been selected to ensure that noise enhancing weather conditions including temperature inversions and downwind conditions have been appropriately considered in the noise assessment. These effects are particularly important for this site. The nearest sensitive receivers will be shielded from most impacts by the adjacent industrial buildings, however with temperature inversions the shielding effects may be reduced for receivers further away from the site.

The following weather conditions have been included in the assessment, in accordance with the requirements of the NPfI.

#### Standard meteorological conditions:

- 0.5 m/s wind speeds; and
- Stability category D.

This is equivalent to CONCAWE Meteorological Category 4

#### Daytime noise enhancing properties:

- 3 m/s wind speeds; and
- Stability category D.

This is equivalent to CONCAW3E Meteorological Category 5

### 4.2 Operational site noise emissions

The CSGO operations on site currently involve the processing of material into composting and worm farming soils. This process involves trucks arriving, raising the tipper and emptying the material. The material is then processed with the grinder and trommel as required. Presented below is a more detailed description of the process.

1. Vehicles undergo a thorough review of documentation by the Site Operator upon arrival at the Site at the Site Office.
2. Visual inspections for contaminants are conducted before the material is permitted to enter into the Site. If materials do not visually meet the criteria, they are rejected from the Site.
3. Once material is accepted – the Site Operator ensures the driver is adequately inducted to the Site.
4. The Site Officer then directs the driver to a specific material drop-off area (Pad A, B or C) to prevent material spreading and tracking.
5. Drivers maintain radio contact with loader operators who ensure trucks are directed to the correct tipping areas via the appropriate route.
  - a. Tipping mostly occurs in Pad C and part of Pad B
    - i. All green waste is directed to Pad C for mulching or chipping.
    - ii. All food and organic waste is directed to the north western portion of Pad B for screening or crushing or blending. Sometimes processing of this material occurs on Pad A aswell.
6. The green waste and the organic waste (once processed) are transported via a loader to Pad B and then stockpiled, where they mature or undergo additional processing based on product requirements.
7. All stockpiles are identified and subjected to chemical and physical testing against Australian Standards before leaving the Site.



8. Stockpiles are then transported via a loader to Pad A for additional blending or processing (if required). Here, trommels and conveyors are used to ensure material is homogenous. Material is then stockpiled awaiting removal from the Site.
9. Vehicles collect compost material from designated location.

Attended noise measurements of the individual equipment was undertaken on 9 August 2023. Presented in Table 7 are the measured sound power levels (SWL) of the equipment, which have been incorporated in this assessment. The SWL represents a single movement and corrected for the number of vehicles movements in a 15-minute period.

**Table 7 Single event source noise levels, LAeq SWL**

Source	63 Hz	125 Hz	250 Hz	500 Hz	1kHz	2kHz	4 kHz	8 kHz	Overall, dB(A)
Front end loader	107	106	105	105	112	110	103	97	115
Grinder	98	112	122	118	113	115	112	112	119
Trommel	100	105	114	105	104	101	98	100	114
Tipper truck	103	110	113	113	109	106	102	100	118
Water cart	109	110	95	100	99	102	101	94maps	104

Note 1 Octave band data is presented unweighted, overall level is presented A-weighted.

### 4.3 Annoying characteristics of noise

The NPfI requires annoying characteristics of noise to be taken into consideration in the assessment of noise. Annoying characteristics include:

- Tonal noise – noise containing a prominent frequency and characterised by a defined pitch.
- Low frequency noise – where a source has a significant component of noise in the 10 – 160 Hz range
- Intermittent noise – where the noise source at the receiver varies by more than 5 dB(A)

For the characteristics to be relevant, they must be assessed at the receiver location, so the propagation characteristics of noise and existing ambient noise level should be taken into consideration.

A review of receiver noise levels identified that while the reversing beepers may be audible, they are not elevated above the existing ambient noise levels to be classified as tonal, in accordance with the requirements of the NPfI.

### 4.4 Predicted site operational noise impacts

Presented below in Table 8 is a summary of the predicted noise levels for each scenario and the applicable noise criteria. Noise contours of these scenarios are presented in Appendix C.



**Table 8 Predicted operational noise impacts,  $L_{Aeq,15minute}$ , dB(A)**

Receiver	PSNTL	Standard meteorology <sup>1</sup>	Exceedance	Noise enhancing meteorology	Exceedance
<b>Peak daytime operations</b>					
R1 - Residential	37	33	-	36	-
R2 – Residential	37	35	-	37	-
R3 - Residential	37	29	-	32	-
R4 - Residential	37	31	-	34	-
R5 - Educational	37	29	-	33	-
R6 - Residential	37	29	-	32	-

The results in Table 8 indicate that compliance with the noise criteria is achieved at all locations under all weather conditions. While the additional truck movements visiting site will increase, compliance with the NPfI will be achieved. Further consideration of noise management and mitigation measures is not required.

### 4.5 Operational road traffic noise

Currently five heavy vehicles travel to and from the site per day. In addition to these movements there is typically about eight light vehicle movements. The traffic report prepared by McLaren Traffic Engineering identifies that the proposal will increase these movements to 70 (35 in each direction) per day. A maximum of 20 peak hour movements (10 in each direction) has been forecast.

The operational hours of the site is 9am to 5pm, which falls within the daytime periods (7am to 10pm). There are no traffic movements to or from the site during the night-time period.

The noise propagation algorithm Calculation of Road Traffic Noise (CoRTN) has been proven to effectively calculate road traffic noise from free-flowing traffic throughout Australia. Noise levels have been predicted for sensitive receivers in the future Lowes Creek Maryland rezoning area. The specific locations of lots are currently not known. It is assumed that the nearest residential receiver is 30 m from Maryland Link Road 2.

Presented in Table 9 are the predicted existing and future noise impacts, assessed against the applicable criteria.

**Table 9 Maryland Link Road 2 traffic noise impacts**

Period	Criteria	Existing, dB(A)	Future, dB(A)	Change in noise, dB
Daytime	$L_{Aeq(15hour)}$ 55 dB(A)	54	60	6

The predicted noise levels in Table 9 identify that road traffic noise levels are predicted to exceed the noise criterion in the future. The noise impacts presented here are indicative and would depend on the location and layout of the future development. Noise impacts from the road should be carefully considered in the development of future sensitive receivers. Good development principles, including using roads and parks to create natural buffers and locating non-sensitive use rooms such as bathrooms, kitchens and laundry’s towards the road and bedrooms away from the road would provide suitable noise attenuation.

## 5 CONCLUSION

Clean and Green Organics (CGO) are currently operating a composting facility at 769 The Northern Road, Bringelly. The site has an active consent and EPL and are seeking to increase the currently approved scale of operations at the facility. This NVIA is required as part of the modification of the Development Application to address noise and vibration impacts that have the potential to be generated by the proposal.

The existing CGO facility is located approximately 2,800 m west of The Northern Road in Bringelly, north of the Oran Park town centre. The current area is predominantly rural farming and some light industrial throughout the area.

Background noise logging was undertaken at one location from 9 August and 18 August 2023 to establish the existing noise environment in the area. The ambient noise environment is controlled by general rural noise.

Operational noise emission criteria have been derived from the background noise logging in accordance with the EPAs Noise Policy for Industry and background noise logging undertaken for this project.

An operational noise model has been developed using SoundPLAN v8.2. The noise model assessed the dominant noise sources generated from the operation of the site. The predicted noise levels identified compliance with the applicable noise criteria is achieved during all meteorological conditions.

Operational road noise criteria have been derived from the EPAs Road Noise Policy. The predicted operational road traffic noise levels identify that road traffic noise levels would exceed the RNP noise criteria at the assessed location. Good development principles, including using roads and parks to create natural buffers and locating non-sensitive use rooms such as bathrooms, kitchens and laundry's towards the road and bedrooms away from the road would provide suitable noise attenuation for future development.

This report has identified that with the inclusion of appropriate noise management and mitigation measures, compliance with appropriate noise criteria would be achieved.



## APPENDIX A. ACOUSTIC TERMINOLOGY

The following is a brief description of the acoustic terminology used in this report:

Ambient Sound	The totally encompassing sound in a given situation at a given time, usually composed of sound from all sources near and far.
Audible Range	The limits of frequency which are audible or heard as sound. The normal ear in young adults detects sound having frequencies in the region 20 Hz to 20 kHz, although it is possible for some people to detect frequencies outside these limits.
Character, acoustic	The total of the qualities making up the individuality of the noise. The pitch or shape of a sound's frequency content (spectrum) dictate a sound's character.
Decibel [dB]	The level of noise is measured objectively using a Sound Level Meter. The following are examples of the decibel readings of every day sounds; 0dB the faintest sound we can hear 30dB a quiet library or in a quiet location in the country 45dB typical office space. Ambience in the city at night 60dB Martin Place at lunch time 70dB the sound of a car passing on the street 80dB loud music played at home 90dB the sound of a truck passing on the street 100dB the sound of a rock band 115dB limit of sound permitted in industry 120dB deafening
dB <sub>A</sub>	<i>A-weighted decibels</i> The ear is not as effective in hearing low frequency sounds as it is hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB <sub>A</sub> . Practically all noise is measured using the A filter. The sound pressure level in dB <sub>A</sub> gives a close indication of the subjective loudness of the noise.
Frequency	Frequency is synonymous to <i>pitch</i> . Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on
L <sub>max</sub>	The maximum sound pressure level measured over a given period.
L <sub>min</sub>	The minimum sound pressure level measured over a given period.
L <sub>1</sub>	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L <sub>10</sub>	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L <sub>90</sub>	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L <sub>90</sub> noise level expressed in units of dB <sub>A</sub> .
L <sub>eq</sub>	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time.
Sound Pressure Level, LP dB	A measurement obtained directly using a microphone and sound level meter. Sound pressure level varies with distance from a source and with changes to the measuring environment. Sound pressure level equals 20 times the logarithm to the base 10 of the ratio of the rms sound pressure to the reference sound pressure of 20 micro Pascals.
Sound Power Level, Lw dB	Sound power level is a measure of the sound energy emitted by a source, does not change with distance, and cannot be directly measured. Sound power level of a machine may vary depending on the actual operating load and is calculated from sound pressure level measurements with appropriate corrections for distance and/or environmental conditions. Sound power levels is equal to 10 times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 picoWatt.



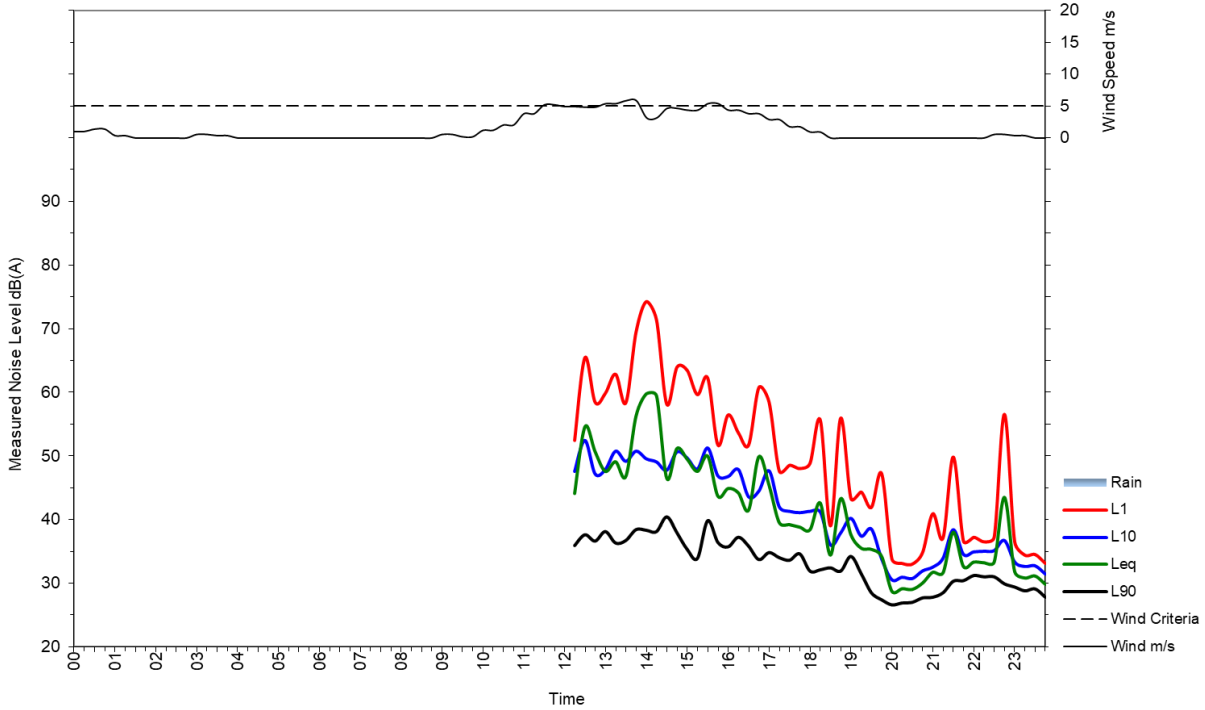


## APPENDIX B. NOISE LOGGING DATA



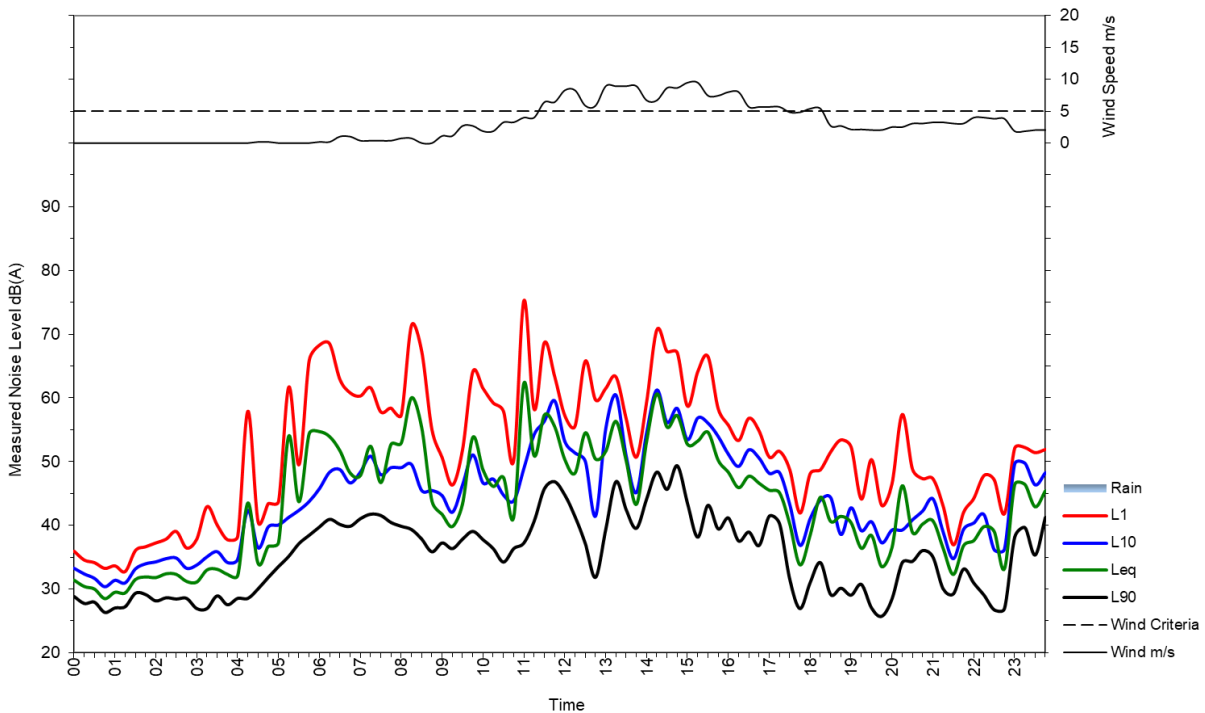
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Wednesday 09 August 2023



729 The Northern Road, Bringelly

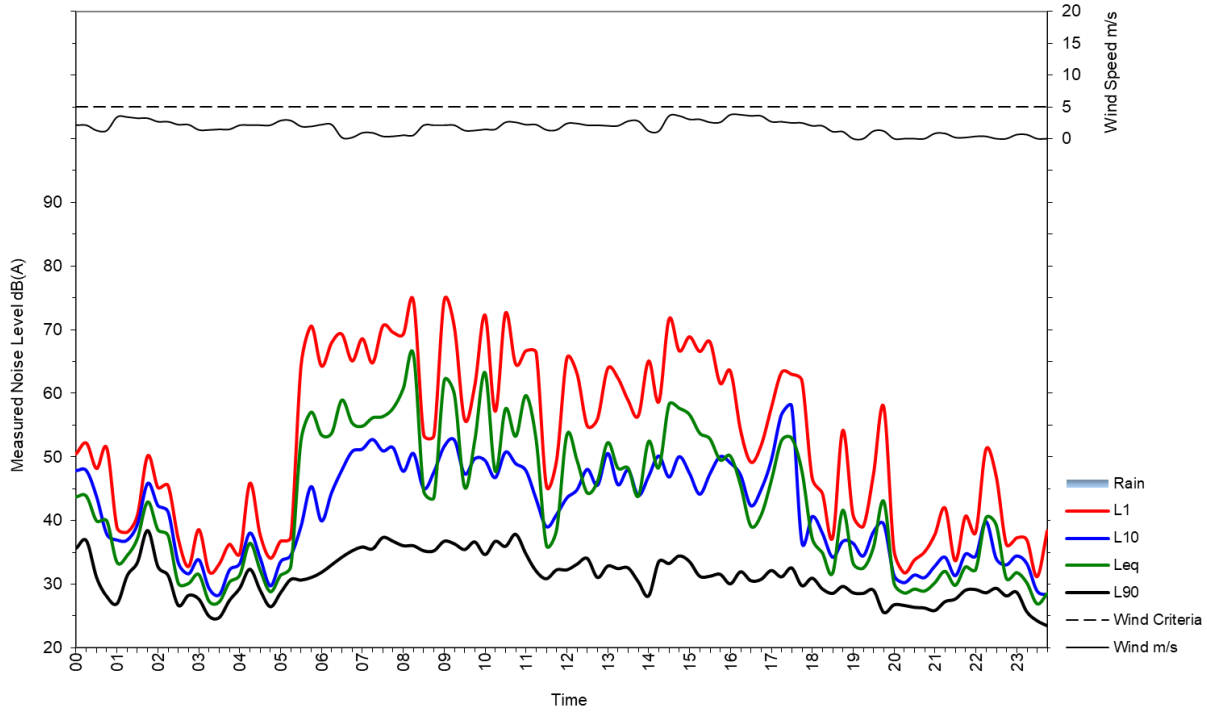
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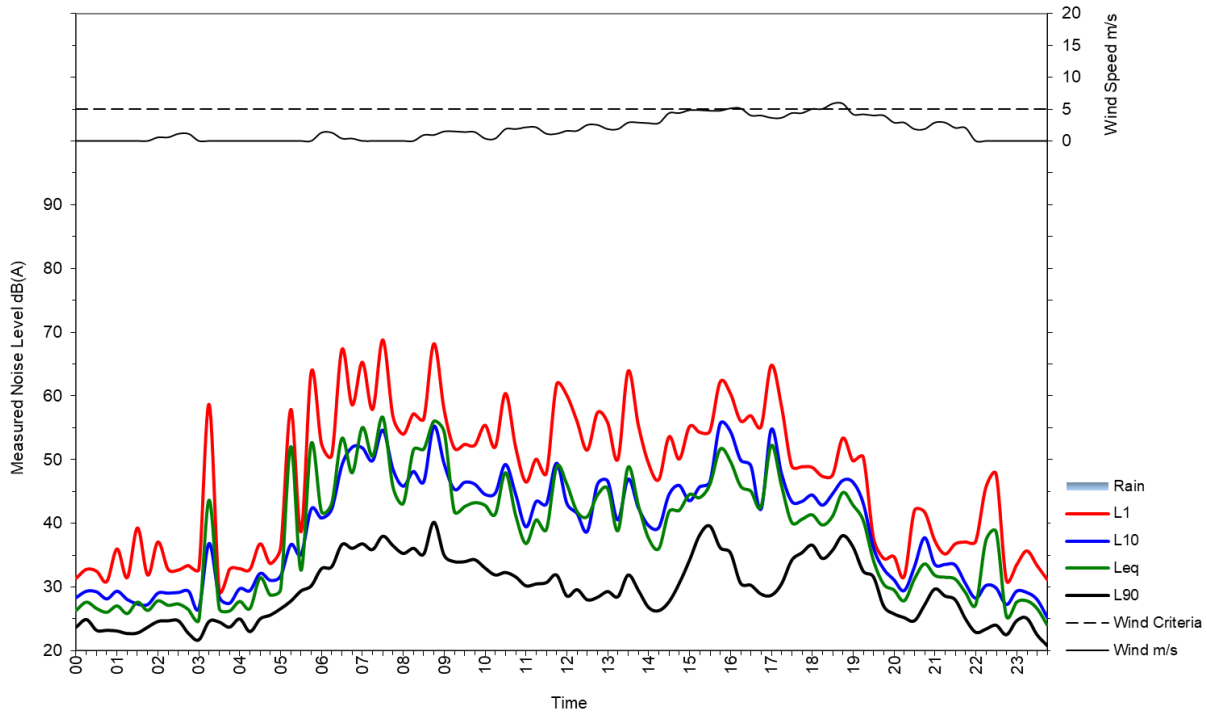
### 729 The Northern Road, Bringelly

Friday 11 August 2023



### 729 The Northern Road, Bringelly

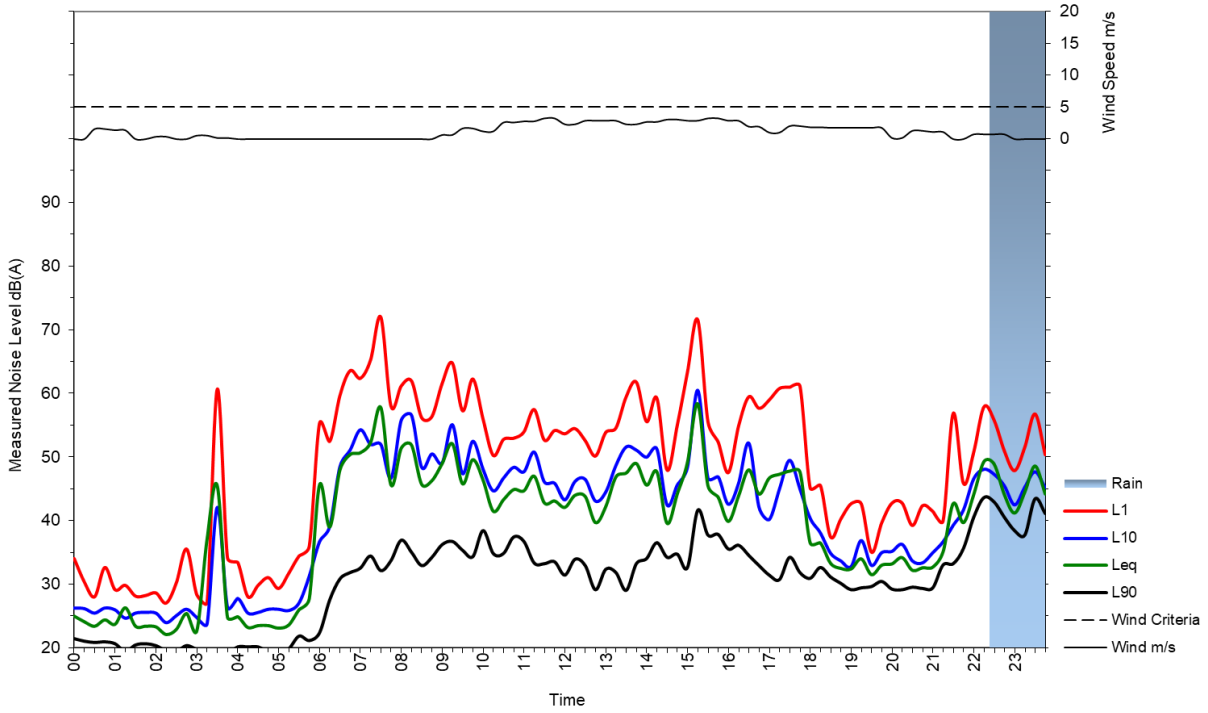
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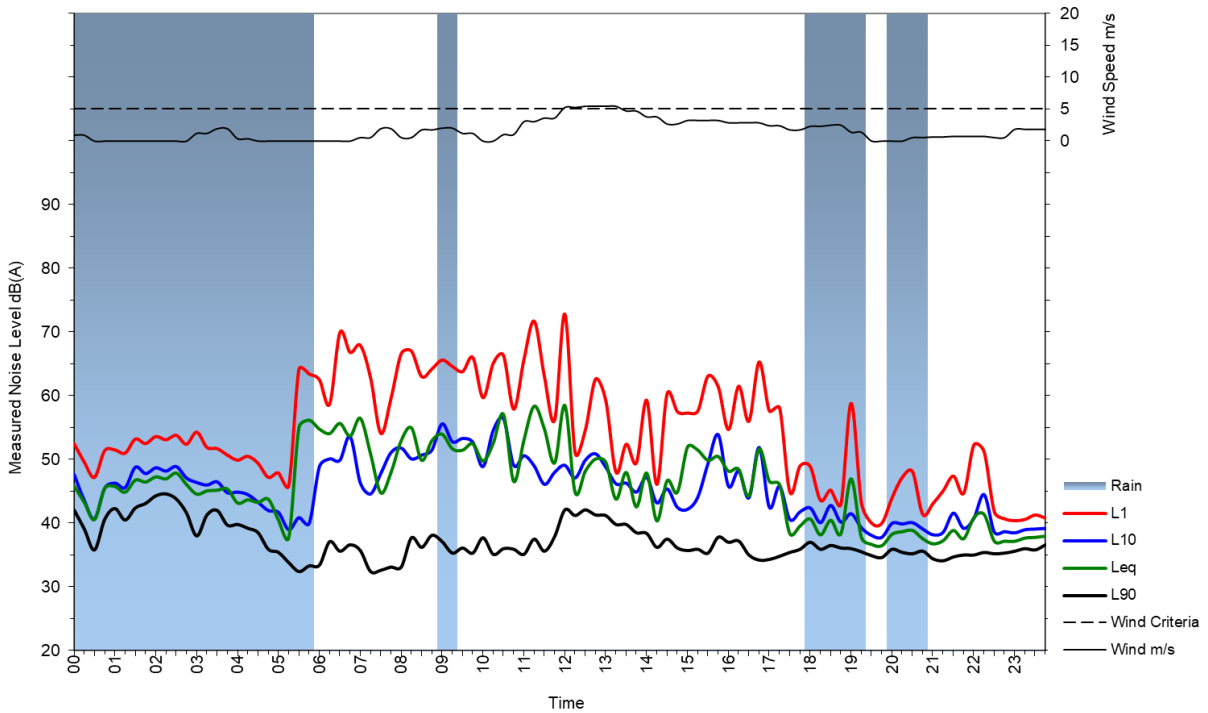
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Sunday 13 August 2023



### 729 The Northern Road, Bringelly

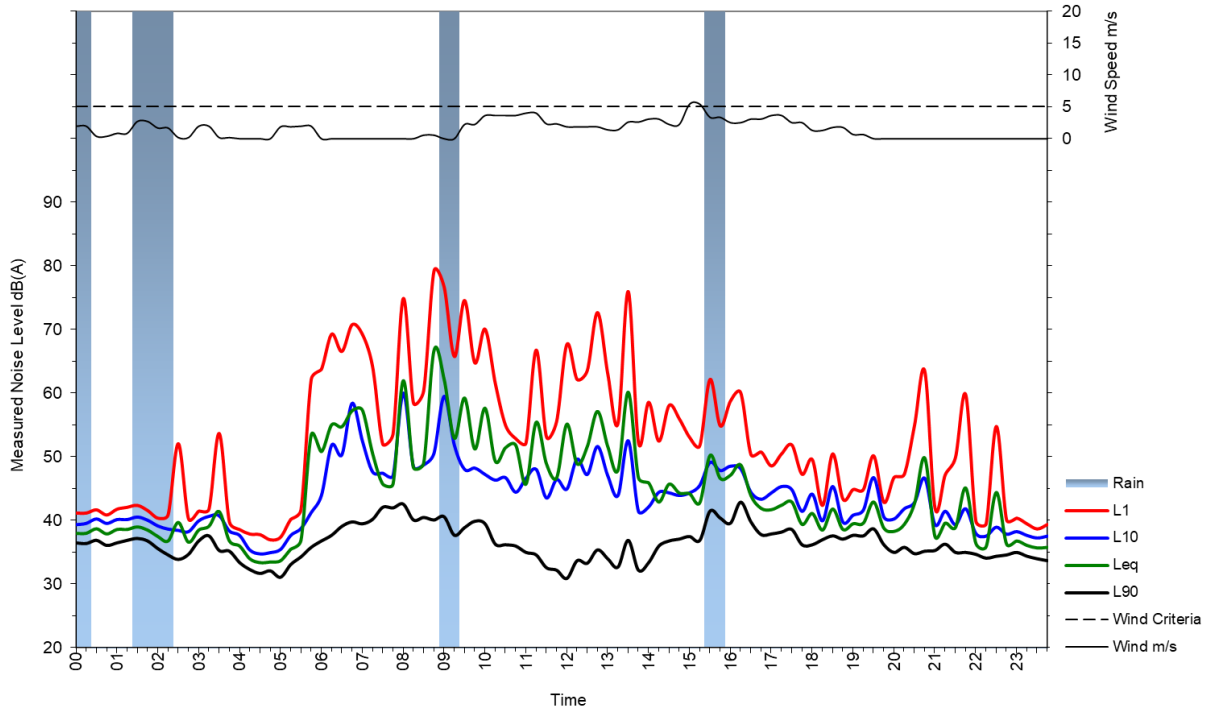
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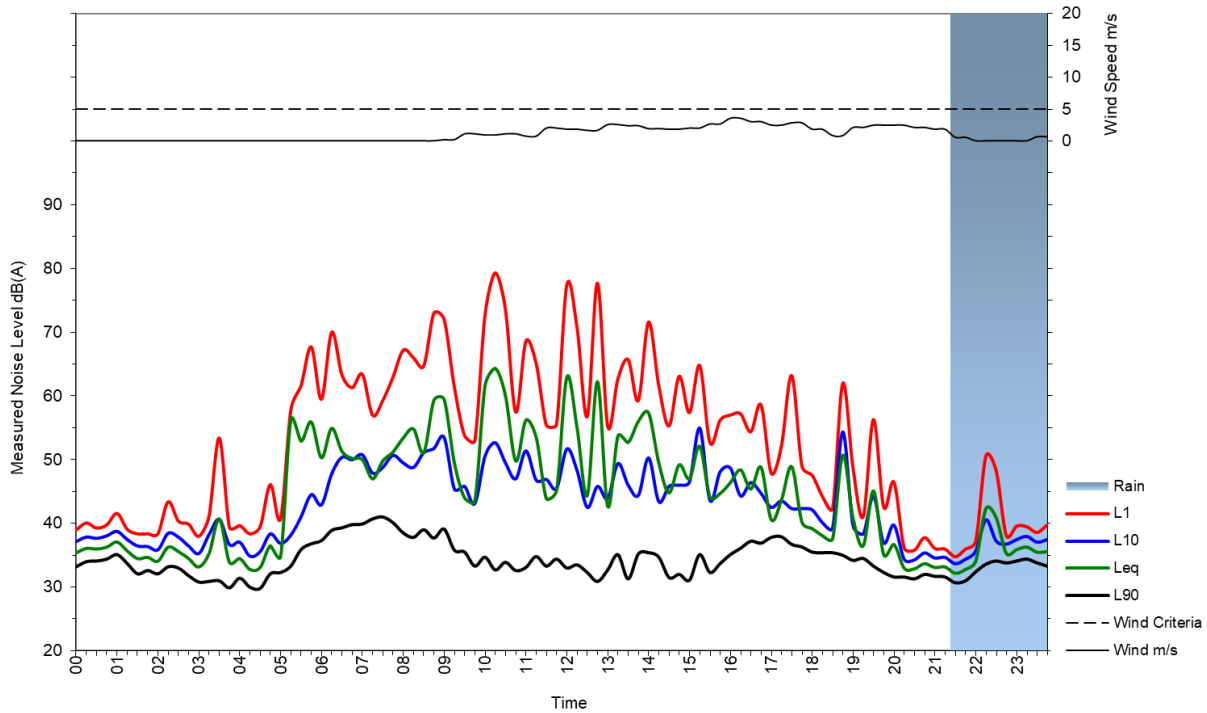
729 The Northern Road, Bringelly

Tuesday 15 August 2023



729 The Northern Road, Bringelly

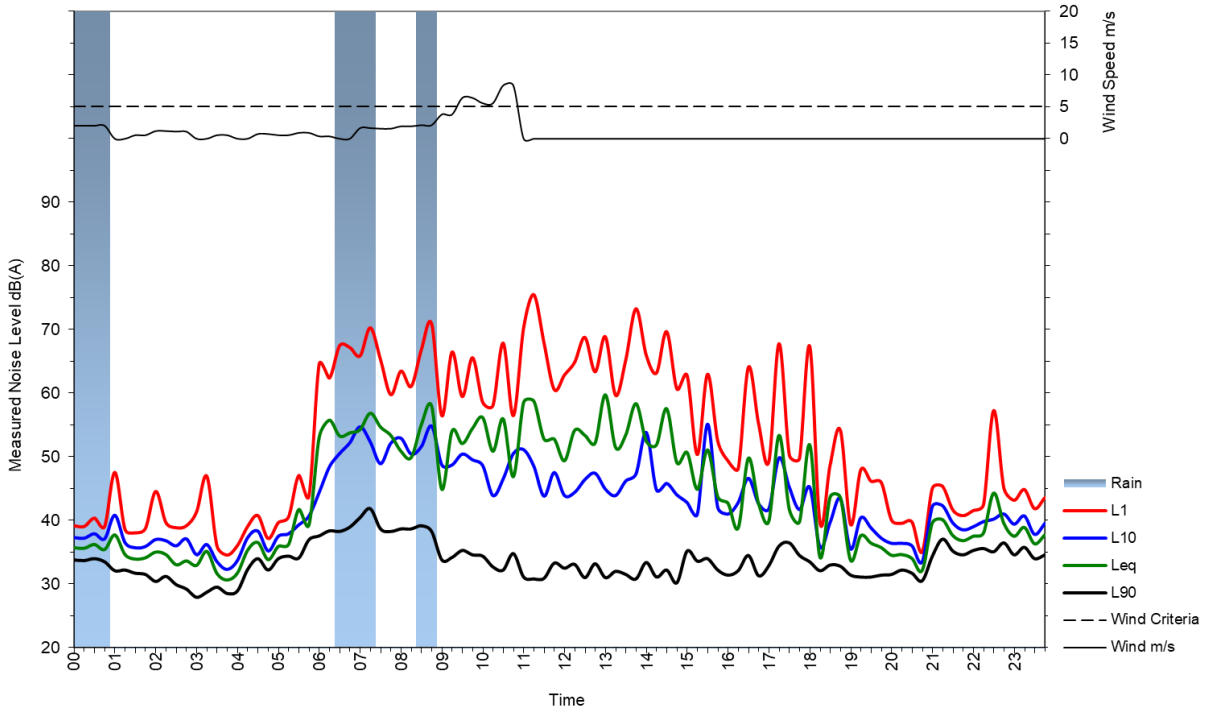
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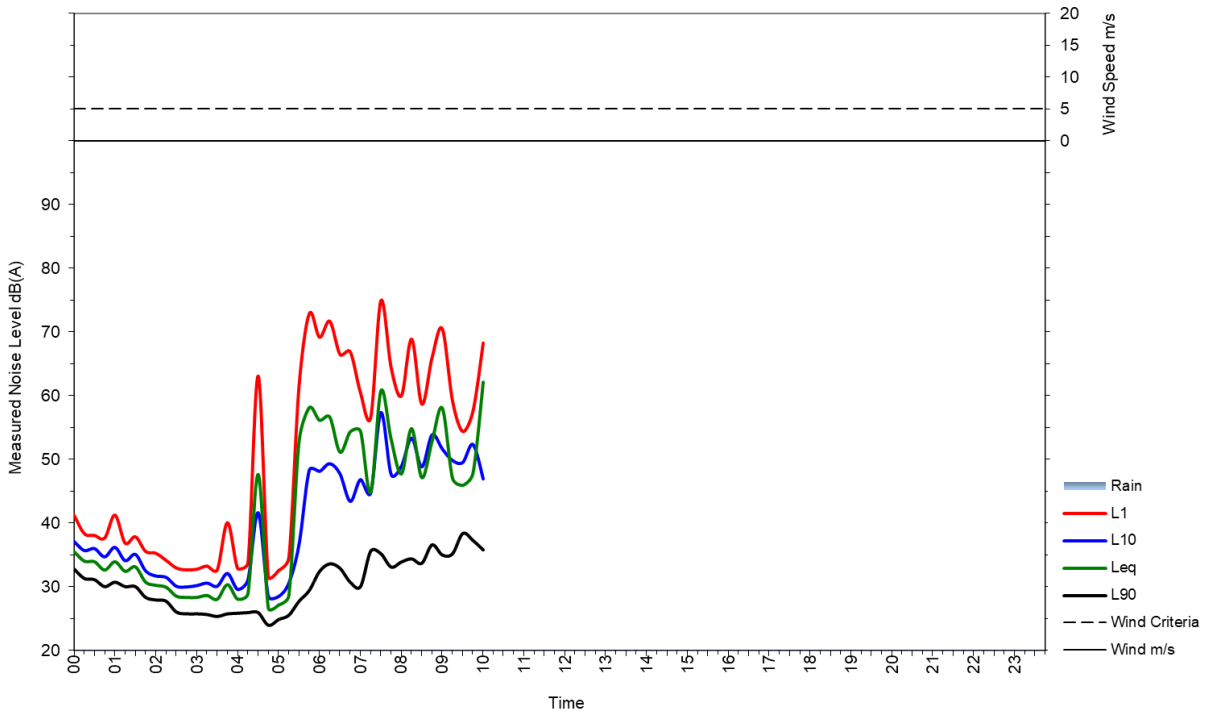
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Thursday 17 August 2023

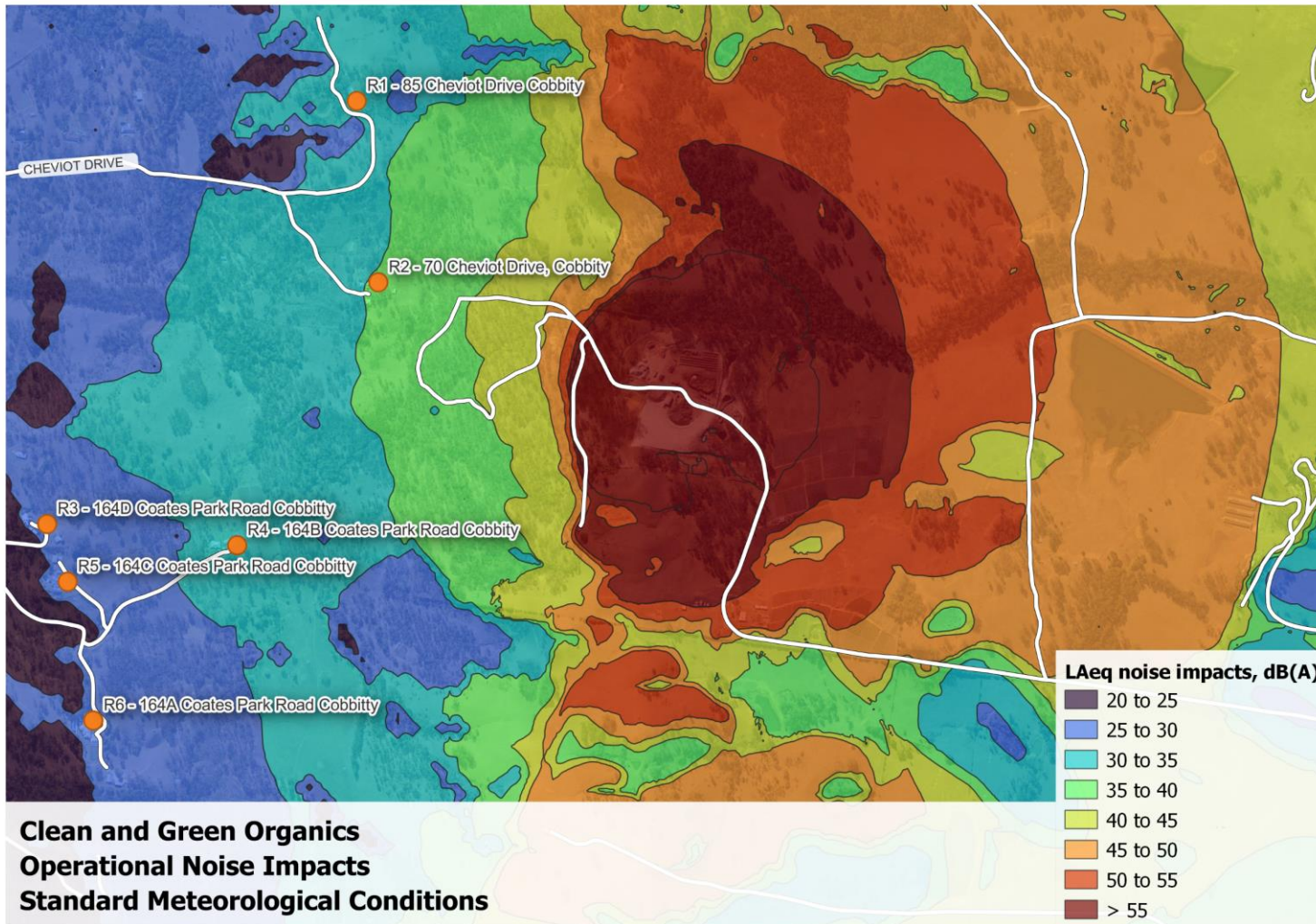


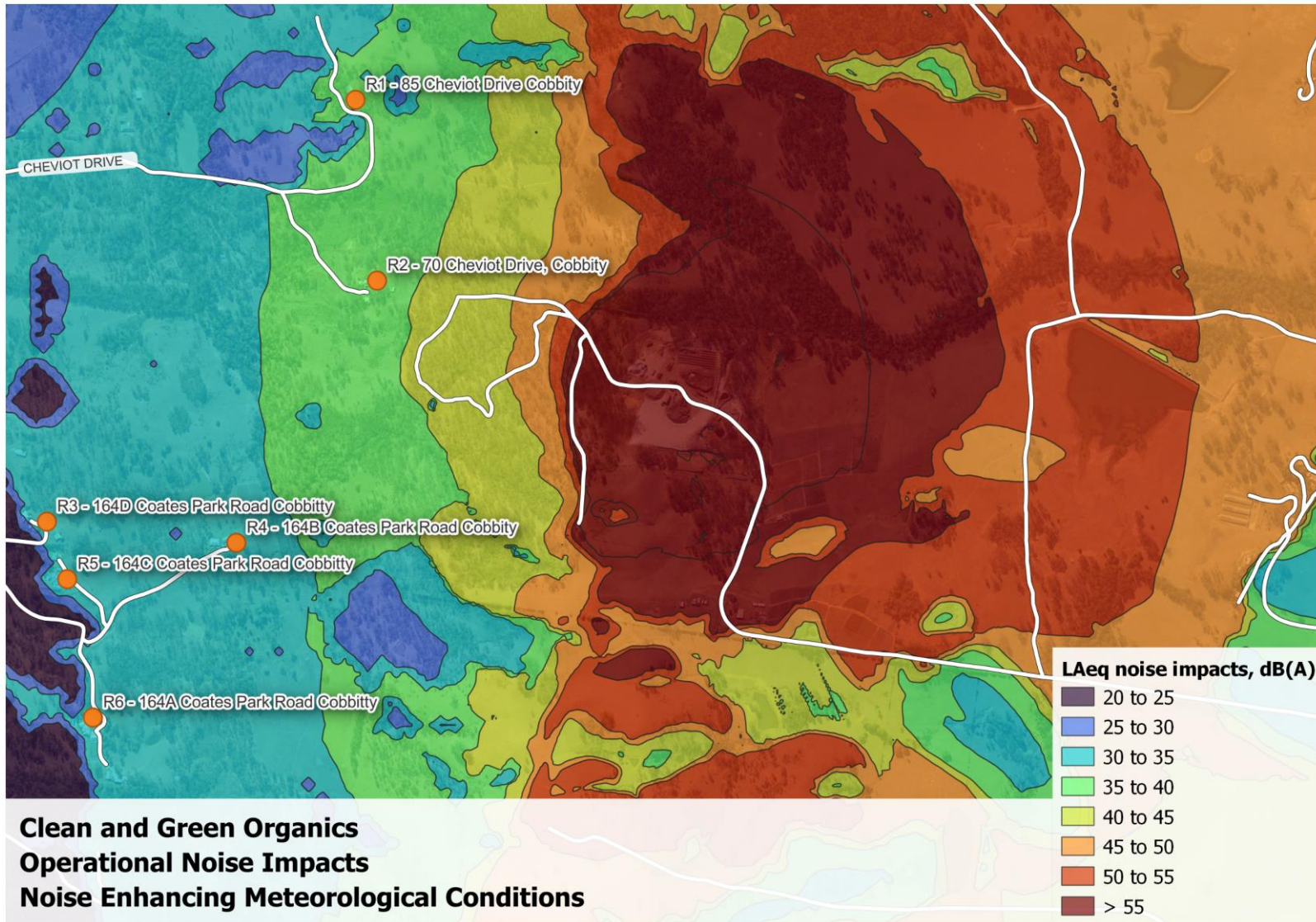
### 729 The Northern Road, Bringelly

Friday 18 August 2023



## APPENDIX C. OPERATIONAL NOISE IMPACT CONTOURS





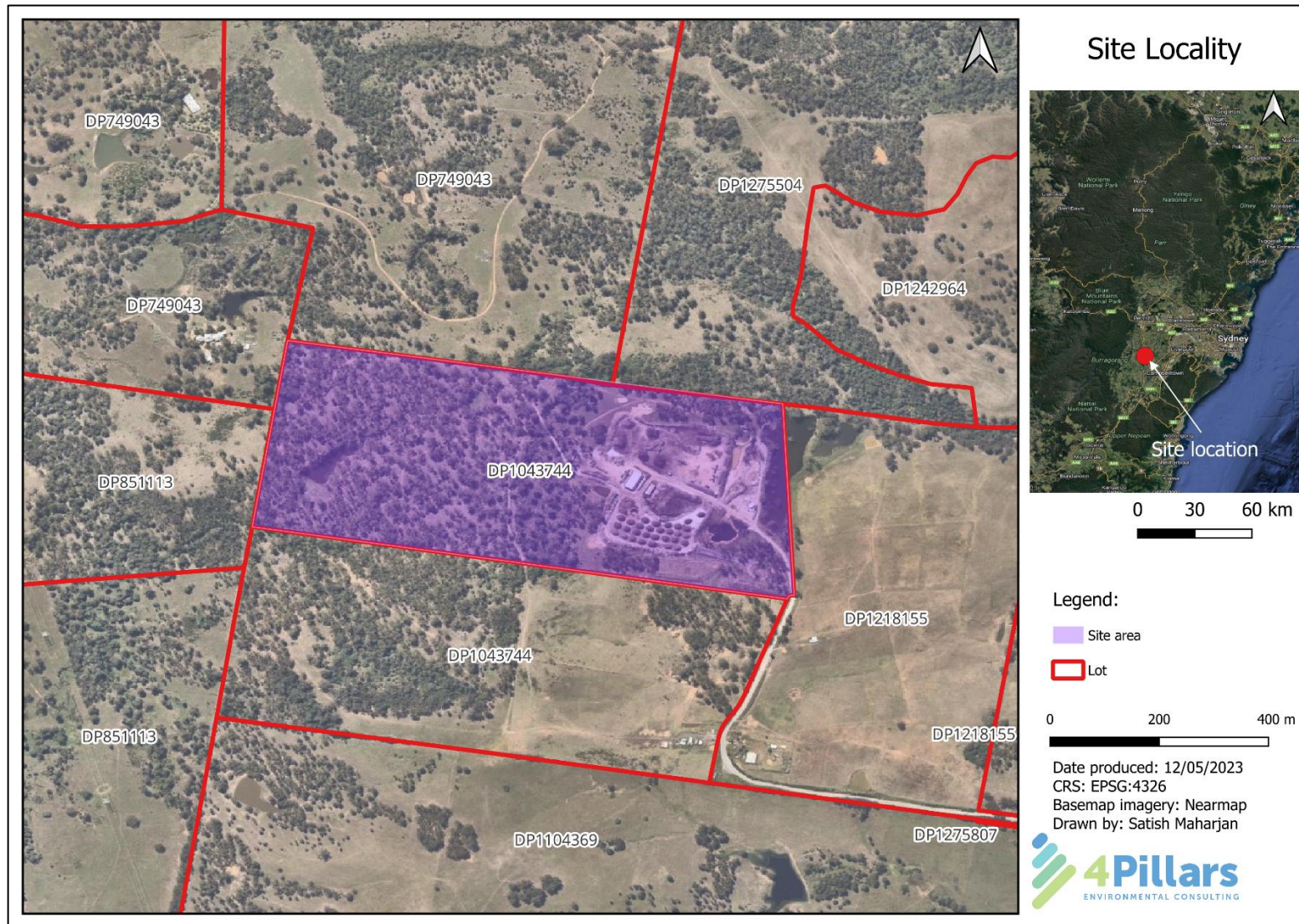


Figure 3: Figure with Lot boundary and surrounding Lots.



## Current Site Features



### Legend:

Check Dam	Overflow Dam-1 (OD-1)	Legacy Stockpile	Stockpile area
Lecheate Dam-1 (LCD-1)	Overflow Dam-2 (OD-2)	Shed	Road
Lecheate Dam-2 (LCD-2)	Overflow Dam-3 (OD-3)	Site Office	Site boundary
Lecheate Dam-3 (LCD-3)	Stormwater Dam	Storage Dome	

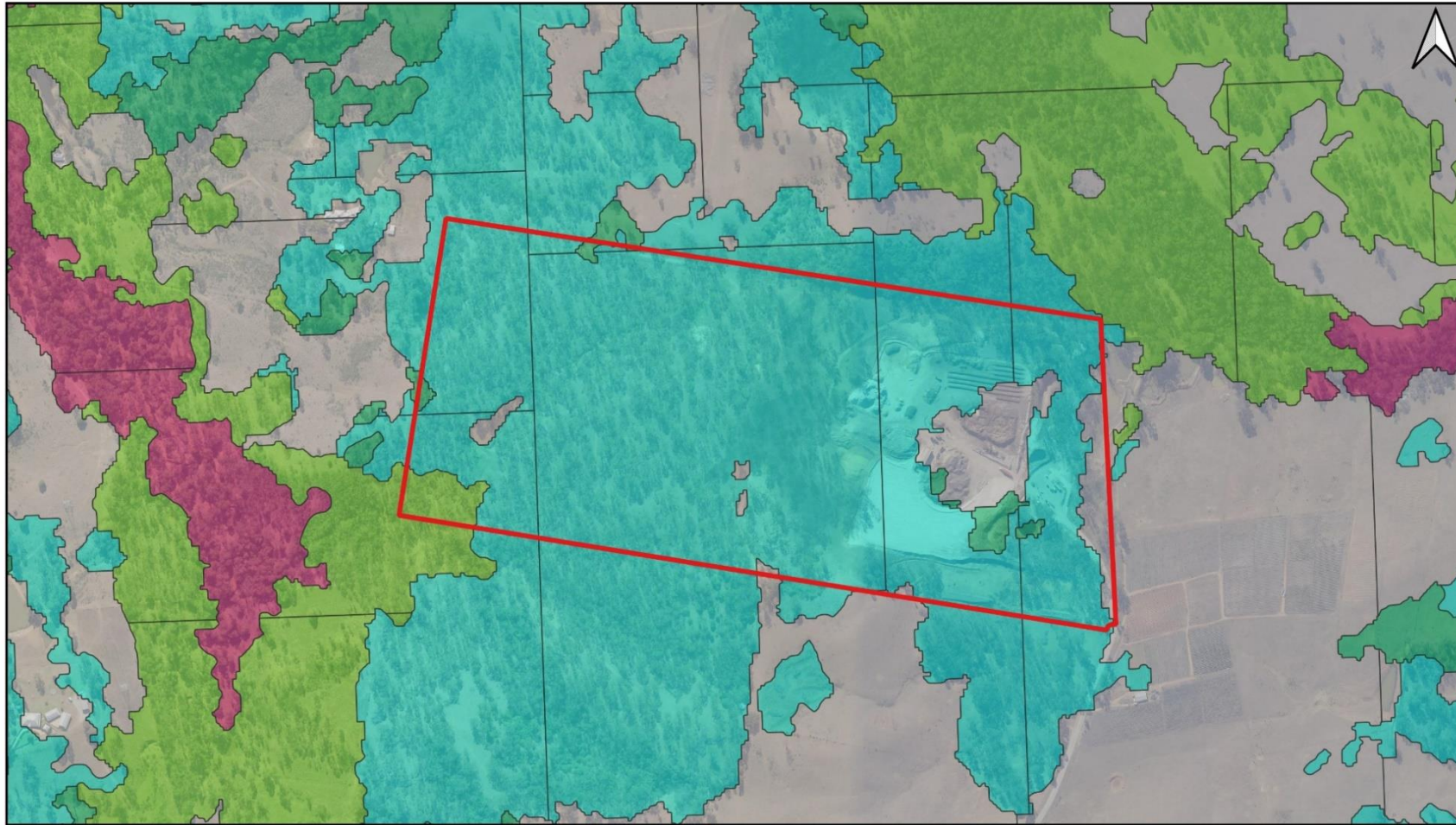
0 40 80 m



Date produced: 25/05/2023  
 CRS: EPSG:4326  
 Basemap imagery: Nearmap  
 Drawn by: Satish Maharjan

Figure 4: Site features.

# Vegetation formations



**Legend:**

Site Boundary  
lot boundary

Biodiversity

Plant Community Types

(Forested Wetlands) Cumberland Red Gum Riverflat Forest

(Grassy Woodlands) Cumberland Moist Shale Woodland

(Grassy Woodlands) Cumberland Shale Hills Woodland

(Grassy Woodlands) Cumberland Shale Plains Woodland

(Not classified) Not classified

0 100 200 m



Date produced: 04/05/2023

CRS: EPSG:3857

Basemap imagery: Nearmap

Drawn by: Sophie Burke

Figure 5: Vegetation formations.

# Threatened Ecological Communities



**Legend:**

- Site Boundary
- lot boundary
- Biodiversity
- Critically Endangered Ecological Communities
- Cumberland Plain Woodland in the Sydney Basin Bioregion

0 100 200 m

Date produced: 04/05/2023  
CRS: EPSG:3857  
Basemap imagery: Nearmap  
Drawn by: Sophie Burke

Figure 6: Threatened Ecological Communities.

# Biodiversity Values



Legend:

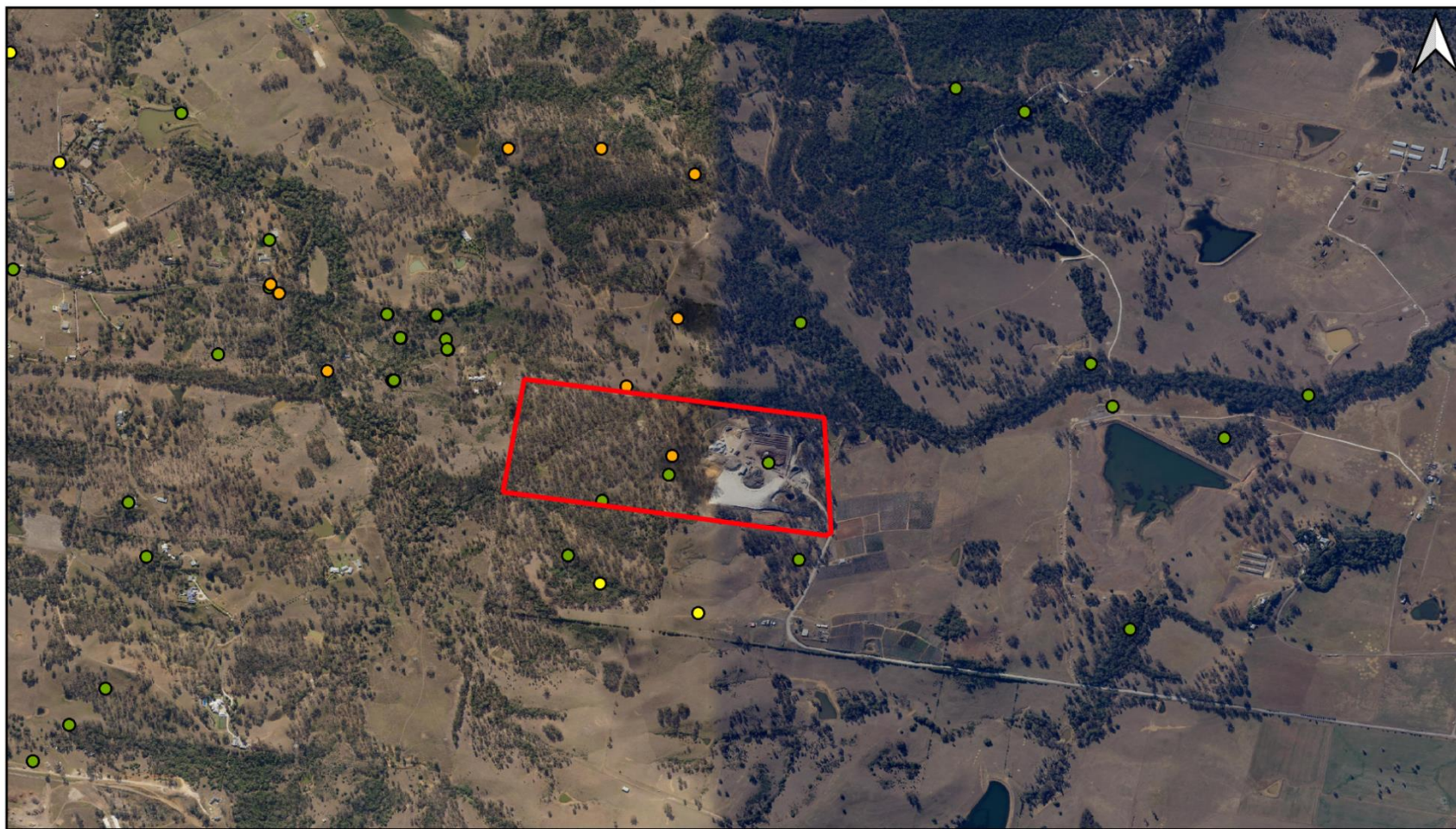
- Site Boundary
- lot boundary
- Biodiversity Values



Date produced: 04/05/2023  
CRS: EPSG:3857  
Basemap imagery: Nearmap  
Drawn by: Sophie Burke

Figure 7: Biodiversity values.

# Bionet Species Sighting Map



### Legend:

Site boundary

### Status - Threatened Species Conservation Act 1995

- Critically Endangered
- Endangered
- Endangered Population
- Endangered Population, Vulnerable
- Presumed Extinct
- Vulnerable

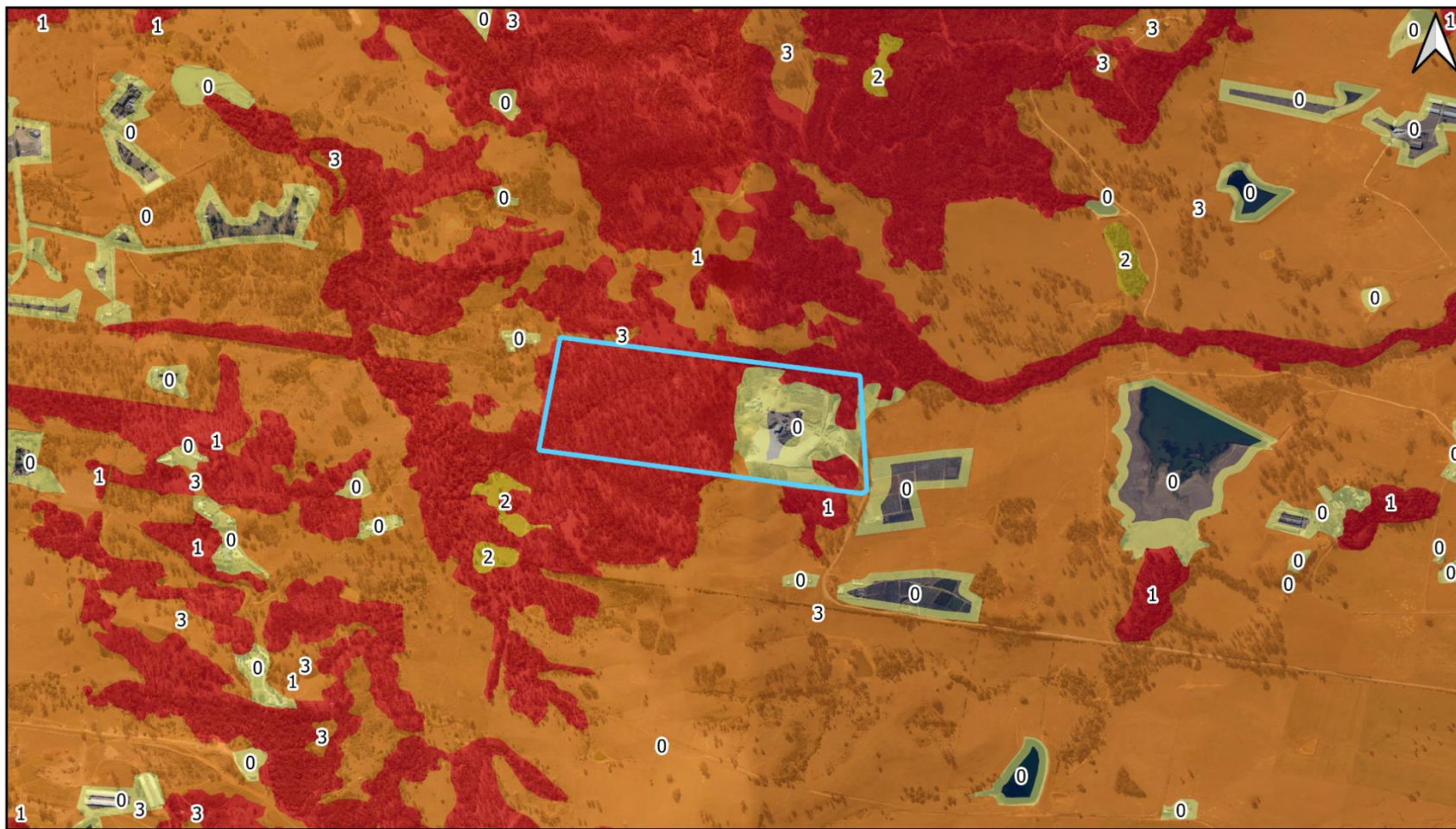
0 300 600 m



Date produced: 21/04/2023  
CRS: EPSG:4326  
Basemap imagery: NSW Six map  
Drawn by: Satish Maharjan

Figure 8 Bionet species sighting map.

### Bushfire zoning around the Site



- Legend:
- Site boundary
  - Vegetation Buffer
  - Vegetation Category 1
  - Vegetation Category 2
  - Vegetation Category 3



Date produced: 21/04/2023  
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Basemap imagery: NSW Six Map  
Drawn by: Satish Maharjan

Figure 9 Bushfire zoning around the Site.

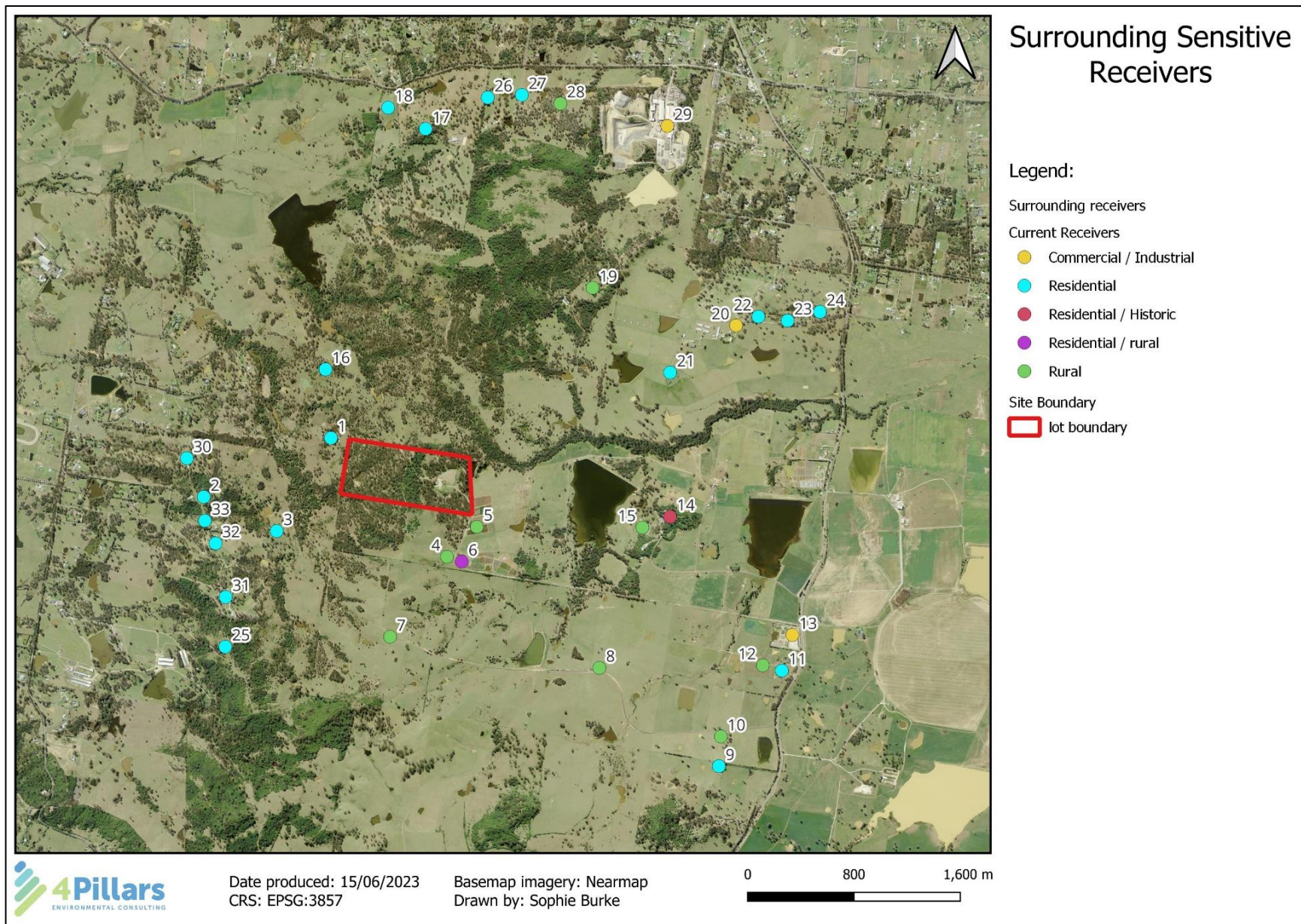


Figure 10: Surrounding sensitive receivers.

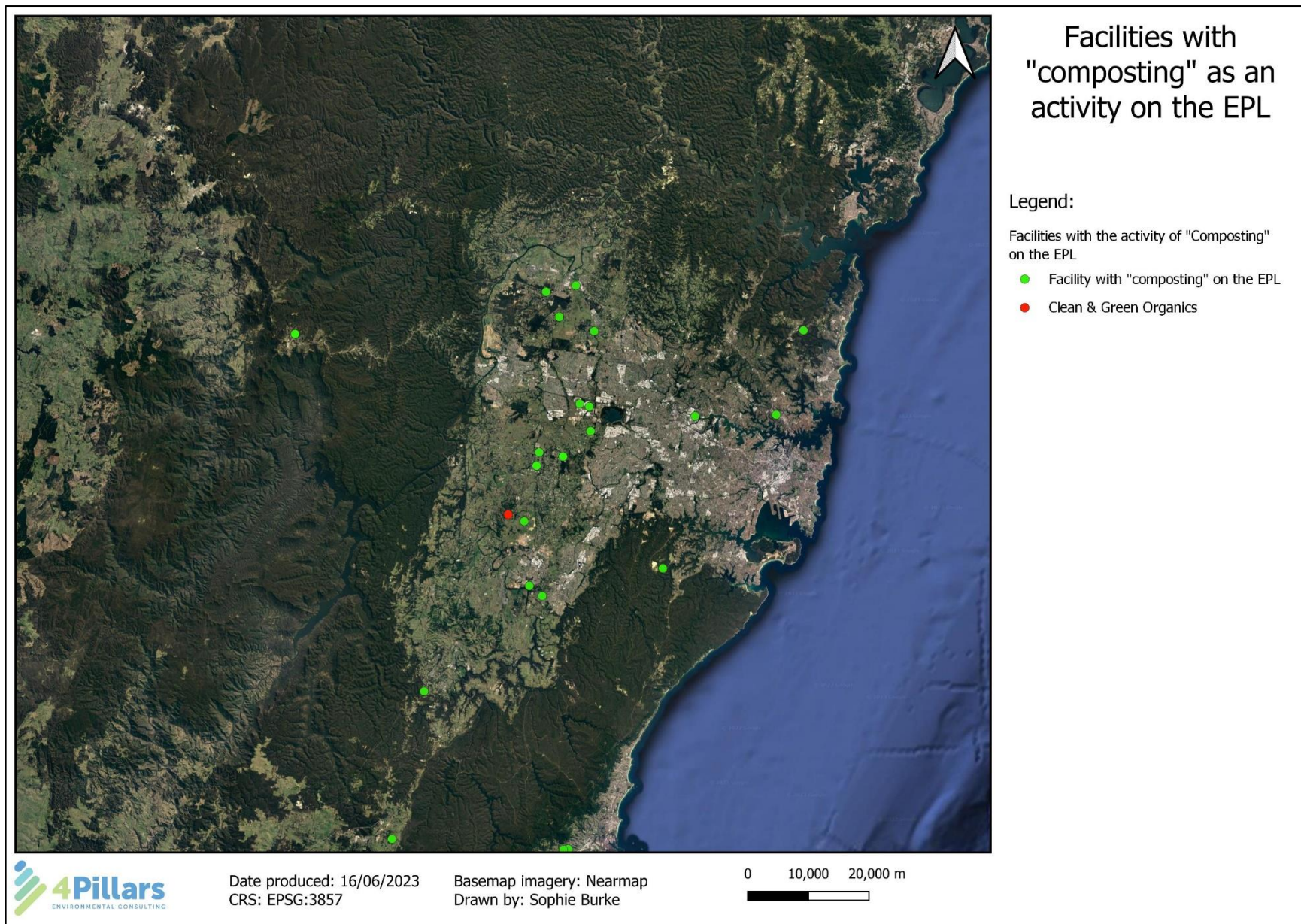


Figure 11: Facilities with composting on the EPL in the Sydney Region.



## Composting facilities close to the Site

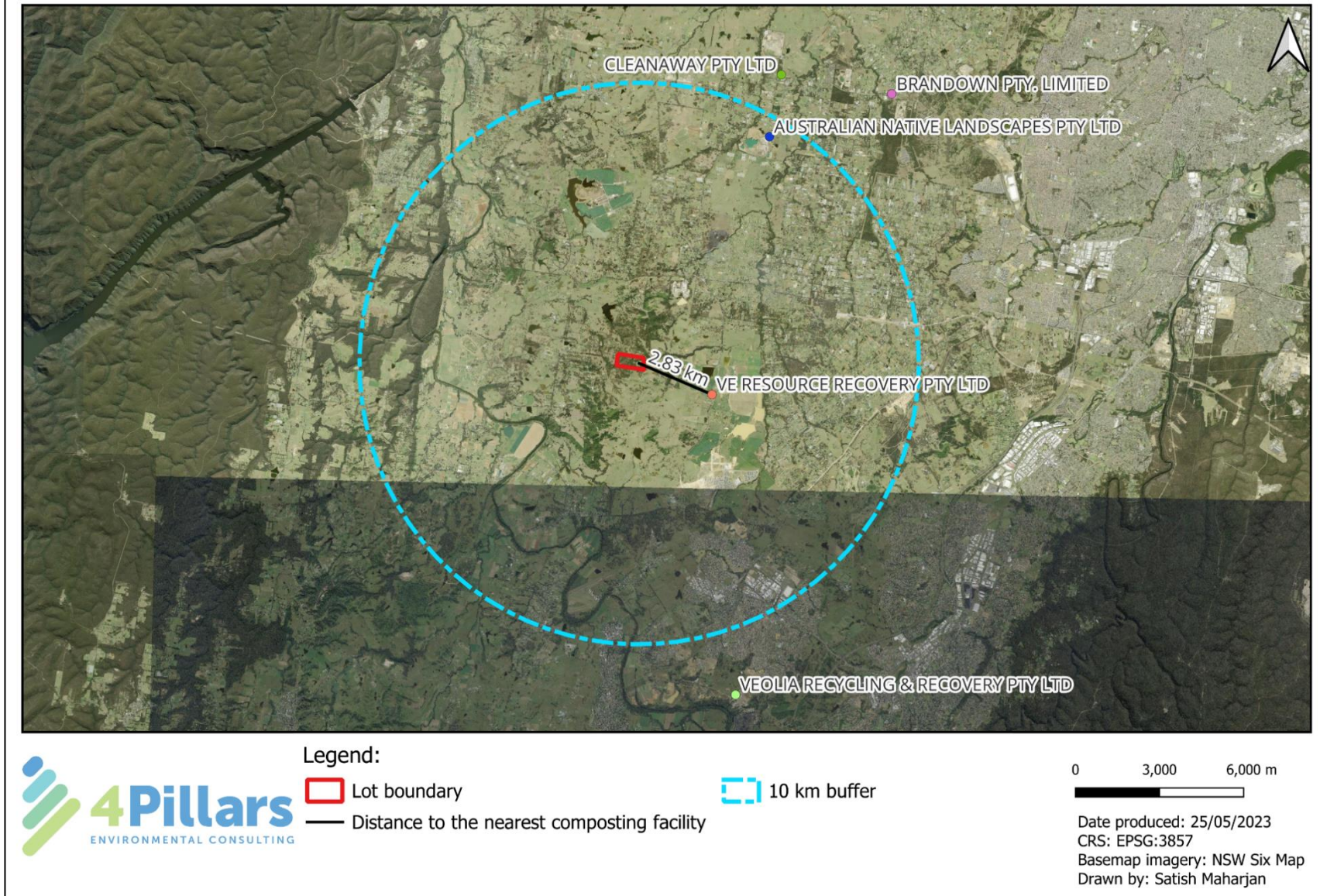
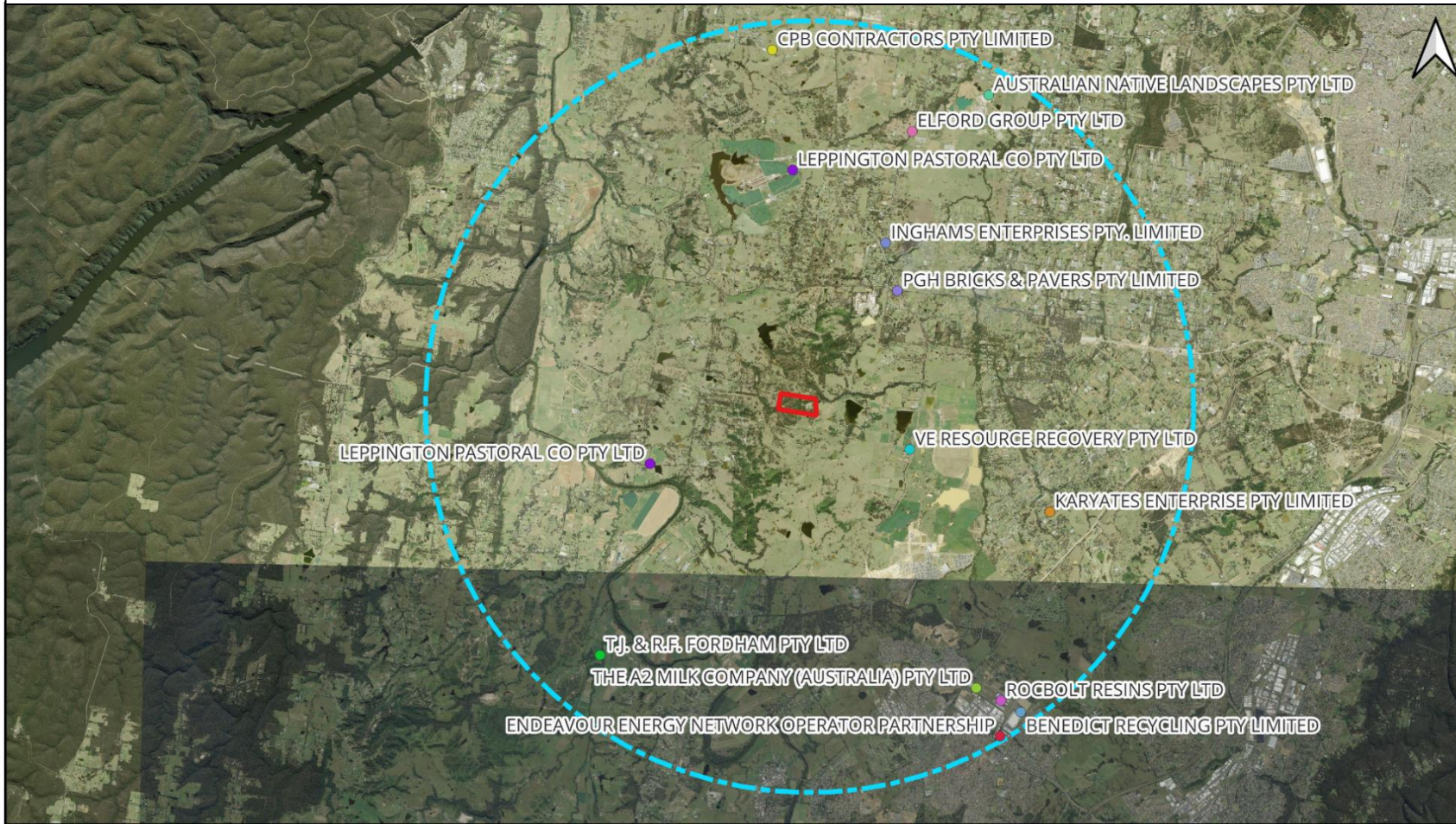


Figure 12: Composting facilities around the Site. There are only two other composting facilities within the 10 Km buffer. VE Resource Recovery facility is at a distance of approximately 3 km.

Facilities with a EPL within 10 km of the Site



Legend:

Lot boundary 10 km buffer



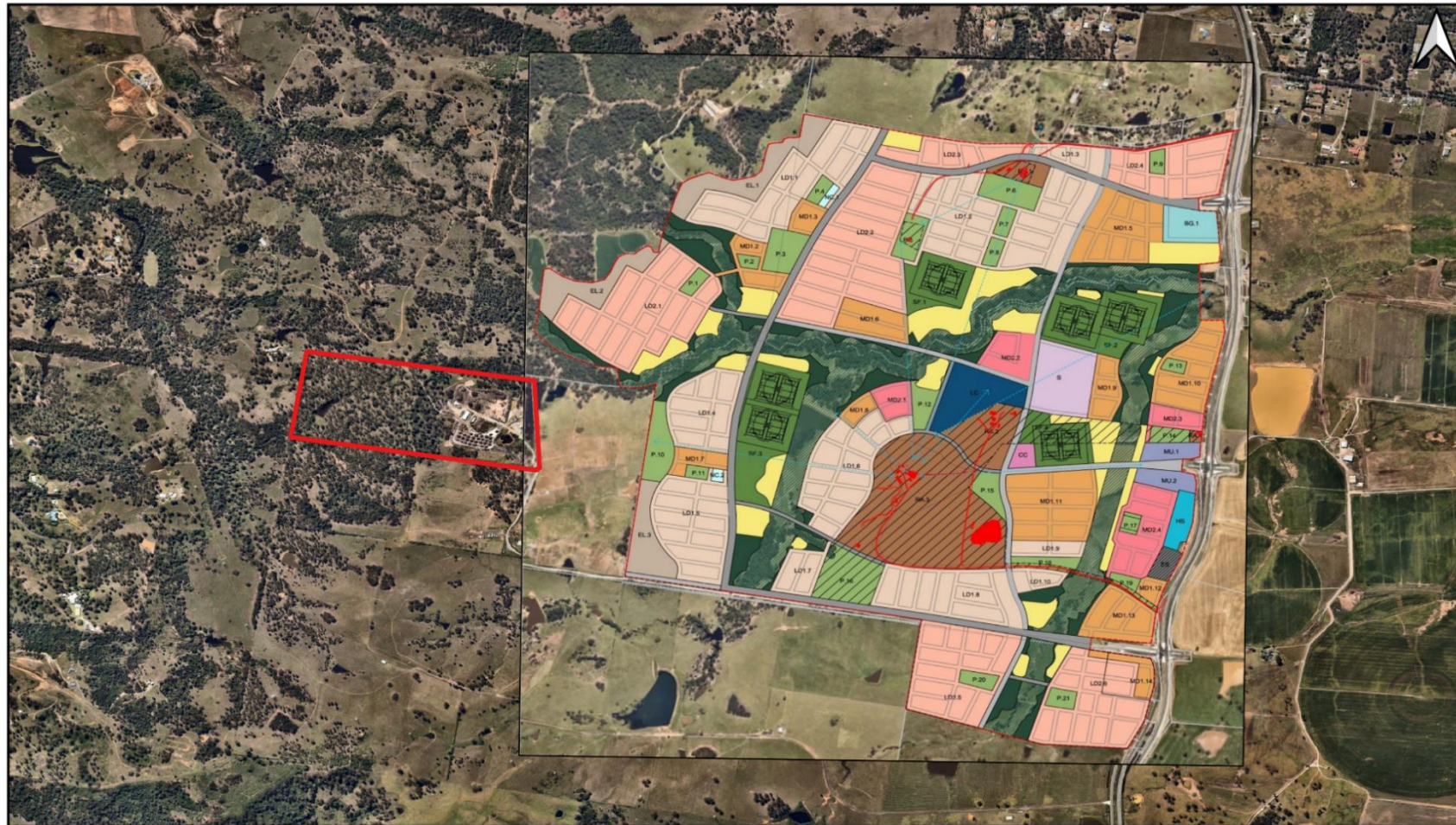
0 3,000 6,000 m



Date produced: 24/05/2023  
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Drawn by: Satish Maharjan

Figure 13: Facilities with a EPL with in the 10 km of the Site.

# Lowes Creek Maryland Re-Zoning Plan



Legend:  
 LCM indicative future land use plan  
 Site boundary

0 500 1,000 m

Date produced: 18/05/2023  
 CRS: EPSG:4326  
 Basemap imagery: Nearmap  
 Drawn by: Satish Maharjan

Figure 14 Lowes creek Marylands Indicative Layout plan.



Figure 15: Maryland's Link Road 2.



Figure 16: Marylands Link road 2.