# South Cell at Woy Woy Waste Management Facility

## Technical Report 6 – Traffic Assessment

Central Coast Council

6 December 2023

→ **The Power of Commitment**

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|---|---|---|---|---|---|---|---|
| **Project name** | | Detailed Design and Documentation for South Landfill Cell at Woy Woy | | | | | |
| **Document title** | | South Cell at Woy Woy Waste Management Facility \| Technical Report 6 – Traffic Assessment | | | | | |
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| **File name** | | 12595244-REP_Traffic Assessment.docx | | | | | |
| **Status Code** | **Revision** | **Author** | **Reviewer** | | **Approved for issue** | | |
| | | | **Name** | **Signature** | **Name** | **Signature** | **Date** |
| S4 | 0 | M Lucas | C Steinbach | On-file | D Gamble |  | 06/12/23 |
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# Executive summary

## The project

Central Coast Council (Council) is proposing to develop a new 'South Cell' at the existing Woy Woy Waste Management Facility (WMF) ('the project'). The project would optimise the remaining landfill air space at the WMF and ensure that the WMF remains open for as long as possible to accept putrescible waste from the Local Government Area (LGA). The construction of the proposed new South Cell is required to be completed and able to receive waste when the current tipping area reaches capacity in mid to late 2024.

The project is deemed regionally significant development and is subject to approval by the Hunter and Central Coast Regional Planning Panel under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

## This report

This traffic assessment report has been prepared on behalf of Council to support the environmental impact statement (EIS) for the project and responds to the Secretary's Environmental Assessment Requirements (SEARs) for traffic.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 1.4 and the assumptions and qualifications contained throughout the report.

## Existing environment

All vehicles currently access the WMF via Nagari Road.

A review of weighbridge data provided by Council indicates:

– Approximately 2,000 vehicles access/egress the WMF per week, and weekday vehicle activity is higher than weekend vehicle activity.
– The peak hour of activity on a weekday occurs between 1:00 pm – 2:00 pm with approximately 45 inbound and outbound vehicles.
– The peak hour of activity on a weekend occurs between 10:00 am – 11:00 am with approximately 30 inbound and outbound vehicles.
– Nagari Road is operating well within its mid-block capacity.

The available information indicates that the roads in proximity to the WMF are operating with a good Level of Service during peak periods of road network activity.

## Impacts from the project

There would be no change to the overall operational workforce at the WMF due to the project.

The project and the broader growth of the WMF is expected to generate up to:

– An additional five inbound and five outbound vehicles per hour on a weekday
– An additional three inbound and three outbound vehicles per hour on the weekend.

The vehicle activity associated with the construction of the project would be minor, with up to 14 vehicles in a single hour. This corresponds, on average, to a vehicle every four minutes. Additionally, the construction period would be relatively short (completed by mid to late 2024).

Accordingly, the traffic impacts of the project are expected to be negligible and fall within daily fluctuations of the adjoining road network.

There are no active transport or public transport facilities in proximity to the project site.

The crash review outlined in Section 2.3 shows there have been no recorded crashes in proximity to the project site. The impacts of project construction and operational vehicles on road safety is expected to be negligible.

Accordingly, the impacts of on-street parking associated with the construction and operation of the project are expected to be negligible.

## Mitigation and management measures

As impacts are expected to be negligible, no additional mitigation measures are proposed.

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# 1. Introduction

## 1.1 Overview

Central Coast Council (Council) owns and operates the existing Woy Woy Waste Management Facility (WMF) located on Nagari Road, Woy Woy. The WMF is the primary waste disposal facility for the southern Central Coast community and has operated since 1974. The WMF operates in accordance with Environment Protection Licence (EPL) No. 6053. The EPL permits resource recovery, waste disposal (application to land) and waste storage and authorises landfilling of up to 100,000 tonnes per year of putrescible and non-putrescible general solid waste, tyres and asbestos.

Key components of the existing WMF include:

– Weighbridge and office/education centre
– Current active landfill cell and tipping area
– Transfer station
– Garden organics (GO) facility
– Excavation and stockpiling area
– Stormwater, leachate and gas management infrastructure

In 2020 Council commissioned the *Woy Woy Waste Management Facility – Development Strategy* (SMEC, 2020) (the 'Development Strategy') to guide the future use and development of the WMF. The Development Strategy identified the existing excavation and stockpile area at the southern end of the WMF site as the location for the next waste cell (known as the new 'South Cell').

Council is now proposing to develop the new South Cell to optimise the remaining landfill air space at the WMF and ensure that the WMF remains open for as long as possible to accept putrescible waste from the Local Government Area (LGA).

The construction of the proposed new South Cell is required to be completed and able to receive waste when the current tipping area reaches capacity in mid to late 2024. Construction would commence following receipt of planning approval and be completed in two stages. Each stage is expected to take four to six months.

The project is deemed regionally significant development (RSD) and is subject to approval by the Hunter and Central Coast Regional Planning Panel under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

This report has been prepared by GHD Pty Ltd (GHD) as part of the environmental impact statement (EIS) for the project. The EIS has been prepared to support the application for approval of the project and address the environmental assessment requirements of the Secretary of the NSW Department of Planning and Environment (the SEARs) dated 24th August 2023.

The SEARs relating to traffic and transport and the location within the report they have been addressed are provided in Table 1.1.

***Table 1.1 SEARs – traffic and transport***

| SEARs | Response |
|---|---|
| Details of road transport routes and access to the site | The roads on proximity to the project site is provided in Section 2.2.<br>Key freight routes are detailed in Section 2.5. |
| Road traffic predictions for the development during construction and operation | The expected construction and operational traffic volumes associated with the project are detailed in Section 3.1. |
| An assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development. | The impacts of the project on traffic, road safety and parking are detailed in Section 3.3. |

## 1.2 The project

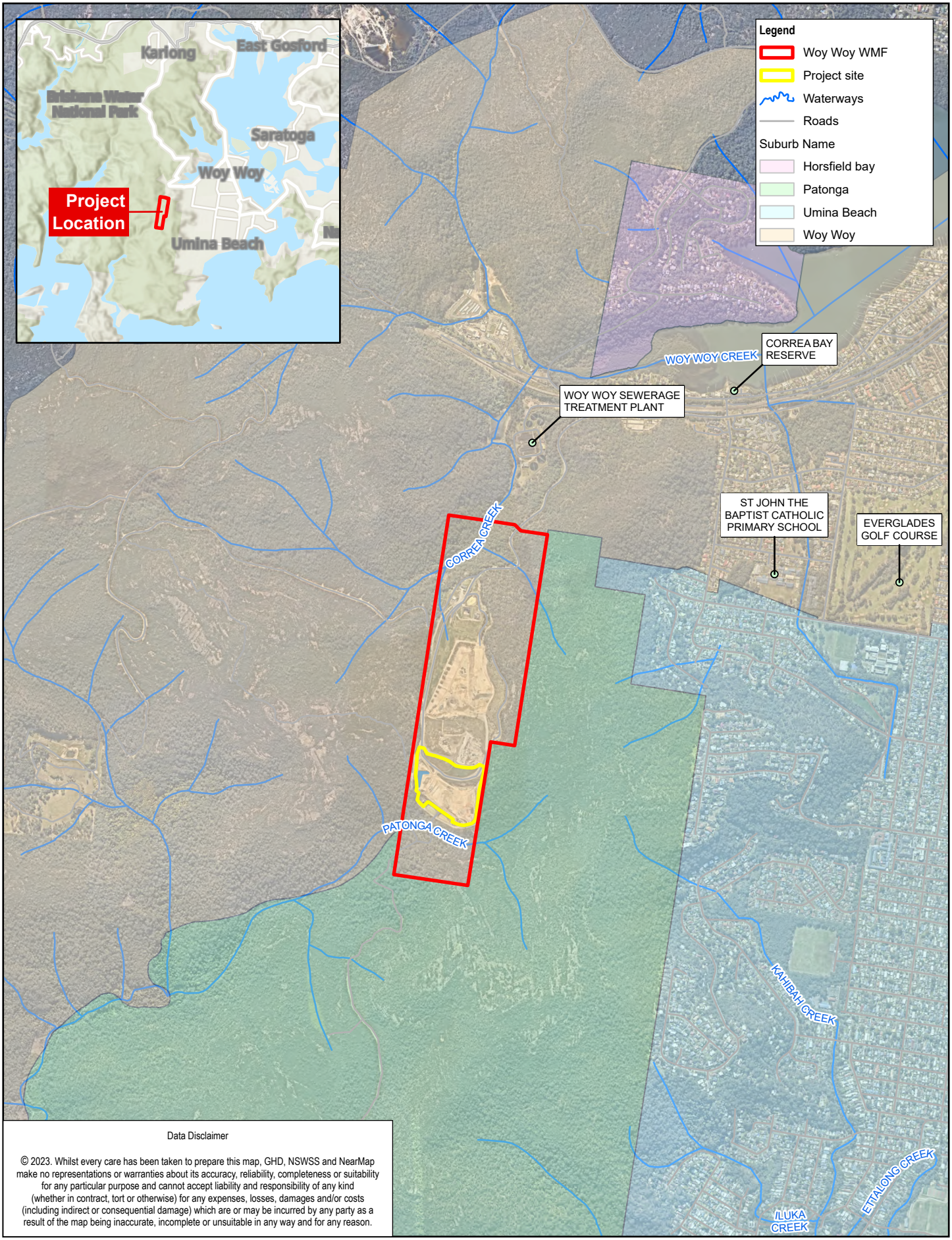
### 1.2.1 Location

The project would be located within the existing WMF. The WMF is about 10 kilometres south of Gosford across Brisbane Water, within the Central Coast LGA (refer Figure 1.1).

The WMF site consists of:

– Lot 110 DP 755251
– Lot 1 DP 126813
– Lot 1 DP 654885

The project site is about five hectares in area and located on the southern portion of the WMF. It comprises part of Lot 110 DP 755251.



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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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**Central Coast Council**
**South Cell at Woy Woy WMF**
**Traffic Impact Assessment**

Project No. **12595244**
Revision No. **0**
Date **4/09/2023**

## Site location

# FIGURE 1.1

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Print date: 11 Oct 2023 - 10:11

Data source: GHD: Site Boundary (2023), Survey Data (2023). World Topographic Map: Esri, HERE, Garmin, Foursquare, METI/NASA, USGS
World Hillshade: Esri, Geoscience Australia, NASA, NGA, USGS
Nearmap WMS Server: . Created by: dbbanatin

### 1.2.2 Key features

Key features of the project include:

– Cell construction, including excavation and earthworks to form the base of the cell and lining installation
– Development of associated access, stormwater and leachate management infrastructure
– Continuation of current landfilling operations in the new cell location
– Capping, closure and rehabilitation

The project is expected to provide up to approximately an additional 920,000 cubic metres of airspace or 7.7 years of filling capacity (based on current filling rates). It is also expected to generate additional cell construction and cover materials for the ongoing landfilling operations.

No change is proposed to the existing approved annual disposal capacity or waste types as per EPL 6053.

The other existing operations (weighbridge and office/education centre, transfer station, GO facility etc) at the WMF would continue to be operated in conjunction with the project.

Further information on the project is provided in the EIS.

The project site layout is shown in Figure 1.2.

### 1.2.3 Construction overview

Construction of the project would be subject to the methods proposed by the construction contractor, but is expected to involve the following:

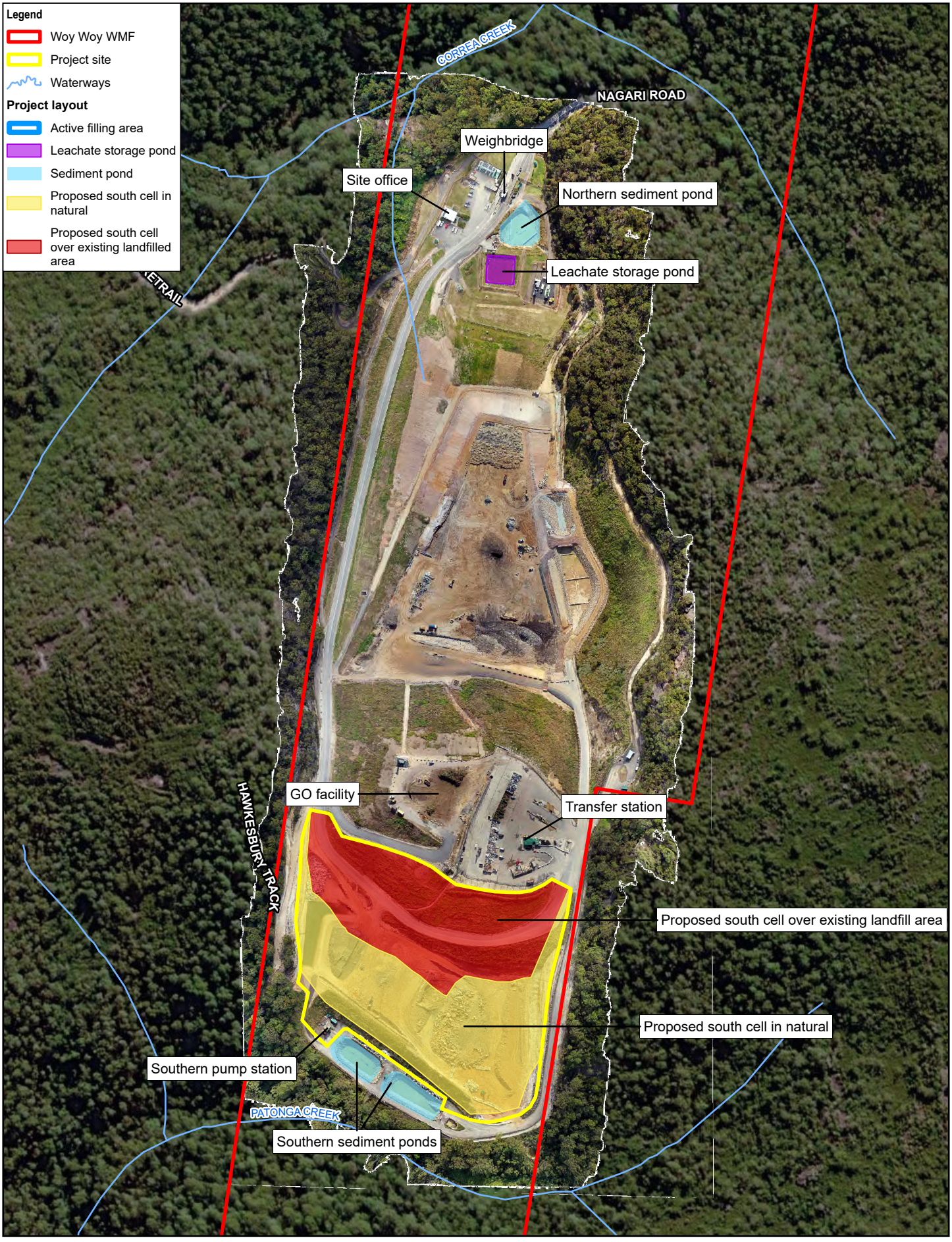
– Site establishment: establishment of site environmental controls, including sediment and erosion controls
– Earthworks: excavation and grading along the base of the landfill cell in accordance with the requirements of the *Environmental Guidelines: Solid waste landfills* (NSW EPA, 2016)
– Lining and gravel placement: installation of basal, batter and sidewall liners systems
– Development of ancillary infrastructure, including access roads, leachate and water management infrastructure

Construction is expected to take about three months to complete.

– The construction activities would be carried out during the following hours, consistent with the recommended standard hours of the *Interim Construction Noise Guideline* (NSW EPA, 2009):
– 7:00 am to 6:00 pm Monday to Friday
– 8:00 am to 1:00 pm Saturdays
– No work on Sundays or Public Holidays

The construction workforce is expected to range between five and ten workers per day.

Further information on the construction of the project is provided in the EIS.

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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**Central Coast Council**
**South Cell at Woy Woy WMF**
**Traffic Impact Assessment**

Project No. **12595244**
Revision No. **0**
Date **11/10/2023**

## Project layout

# FIGURE 1.2

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Print date: 11 Oct 2023 - 17:36

Data source: LPI: DCDB / DTDB, 2023; Aerial Imagery: World Imagery: Maxar. Created by: dbbanatin

## 1.3 Purpose of this report

The purpose of this report is to identify the traffic and transport impacts of the proposed South Cell on the adjoining road network. The report:

– Addresses the SEARs listed in Table 1.1
– Assesses the impacts from construction and operation of the project
– Recommends measures to mitigate and manage the potential impacts identified.

The specific SEARs addressed in this report are summarised in Table 1.1.

## 1.4 Scope and limitations

### 1.4.1 Scope

The scope of this traffic assessment included:

– Review available information (including weighbridge data) and traffic and transport infrastructure in proximity to the project site.
– Determine the operational and construction vehicle activity associated with the project, based on information provided by Council.
– Undertake a qualitative assessment of the potential vehicle impacts on the adjoining road network.
– Assess operational and construction impacts on public transport, pedestrians and cyclists.
– Identify if traffic management/mitigation measures are required and, if applicable, provide high-level recommendations.

### 1.4.2 Limitations

This report: has been prepared by GHD for Central Coast Council and may only be used and relied on by Central Coast Council for the purpose agreed between GHD and Central Coast Council as set out in Section 1.3 of this report.

GHD otherwise disclaims responsibility to any person other than Central Coast Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer Section 1.5 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

**Accessibility of documents**

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

## 1.5 Assumptions

This report is based on the following:

– The current vehicle activity at the WMF was based on weighbridge data provided by Council.
– No traffic surveys or intersection modelling has been undertaken.
– It is assumed all vehicles will access/egress the WMF via Nagari Road and Woy Woy Road or Railway Street.

- The expected growth in vehicle activity at the WMF (accounting for the project) has been based upon the expected increase in population within the Central Coast Local Government Area.
- The development of the project is not expected to result in any increase in operational staff at the WMF.
- During the construction of the project, up to 10 workers would be employed, and up to five heavy vehicles would access/egress the project site per day.

# 2. Existing environment

## 2.1 Current operation

### 2.1.1 Waste acceptance

The WMF is currently licensed to dispose of (by application to land) up to 100,000 tonnes per year of the following landfill waste types (as per EPL 6053):

– General solid waste (putrescible)
– General solid waste (non-putrescible)
– Special waste (asbestos waste and waste tyres)

The WMF currently accepts asbestos waste but does not accept hazardous materials, contaminated soil or immobilised materials.

EPL 6053 also permits ‘recovery of general waste’ and ‘waste storage – other types of waste’ (no limit).

No change to the current approved waste types or annual disposal capacity is proposed.

### 2.1.2 Hours of operation

The existing WMF operational hours are as follows:

– 7:00 am to 5:00 pm Monday to Friday
– 8:00 am to 4:00 pm Saturday and Sunday
– No work on Christmas Day, Good Friday and New Year’s Day

The WMF operational hours would remain unchanged with operation of the proposed South Cell.

### 2.1.3 Operational workforce

There are currently fifteen operational staff at the WMF, including a landfill supervisor, gatehouse personnel, plant operators, labourers, and spotters. There is also contractor staff onsite from time to time as well.

It is noted that:

– Staff associated with the operation of the current landfill cell would transfer to the new South Cell.
– There would be no change to the overall operational workforce at the WMF due to the South Cell.

## 2.2 Functional hierarchy

Functional road classification involves the relative balance of mobility and access functions. Transport for NSW (TfNSW) defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility to high accessibility and low mobility. These road classes are:

– **Arterial Roads:** generally controlled by TfNSW. They typically have no limit in flow and are designed to carry vehicles long distances between regional centres.
– **Sub-Arterial Roads:** can be managed by either TfNSW or the local council. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub-region or provide connectivity from arterial road routes (regional links).
– **Collector Roads:** provide connectivity between local roads and the arterial road network and typically carry between 2,000 and 10,000 vehicles per day.
– **Local Roads:** provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

### 2.2.1 Nagari Road

Nagari Road (refer to Figure 2.1 - Figure 2.3) is a local road providing direct access/egress to and from the WMF. A gate is located on Nagari Road approximately 500 metres to the west of the railway underpass to control access/egress to and from the WMF. To the east of the rail underpass, Nagari Road changes into Railway Street

*Figure 2.1 Nagari Road, looking east from access gate*


*Figure 2.2 Nagari Road, looking west from access gate*


*Figure 2.3 Gate on Nagari Road at the WMF*

The key features of Nagari Road are described in Table 2.1.

*Table 2.1 Nagari Road key features*

| Feature | Description |
|---|---|
| Carriageway | Carriageway is sealed without kerb and gutters and one travel lane in each direction, and a width of approximately eight metres. Central line markings are provided to the west of the access gate but not to the east. |
| Parking | No parking available. |
| Speed Limit | 50 km/h and 40 km/h |
| Pedestrian Facilities | None provided. |
| Bicycle Facilities | None provided. |
| Public Transport | None provided. |

### 2.2.2 Railway Street

Railway Street (refer to Figure 2.4) is a local road that connects Nagari Road in the west to Brisbane Water Drive in the north-east. A rail underpass connects Railway Street to Woy Woy Road to the north.


*Figure 2.4 Railway Street, looking east*

*Image Source: Google Street View*


*Figure 2.5 Rail underpass between Railway Street and Woy Woy Road*

The key features of Railway Street in proximity to the project site are described in Table 2.2.

*Table 2.2 Railway Street key features*

| Feature | Description |
|---|---|
| Carriageway | Carriageway is sealed without kerb and gutters and one travel lane in each direction and a width of approximately eight metres and central line markings. |
| Parking | No parking available. |
| Speed Limit | 50 km/h |
| Pedestrian Facilities | A footpath is provided on the southern side of Railway Street at the frontage to residential dwellings. |
| Bicycle Facilities | None provided. |
| Public Transport | Bus stops are located on Railway Street, approximately 650 metres east of the rail underpass. The bus service 57 Umina Beach West to Woy Woy operates from these bus stops. |

## 2.3 Crash data

A review of crash data from the Transport for NSW Road Centre for Road Safety has been undertaken based on the last five years of data (2017 – 2021).

The data indicates that there have been no recorded crashes on Nagari Road.

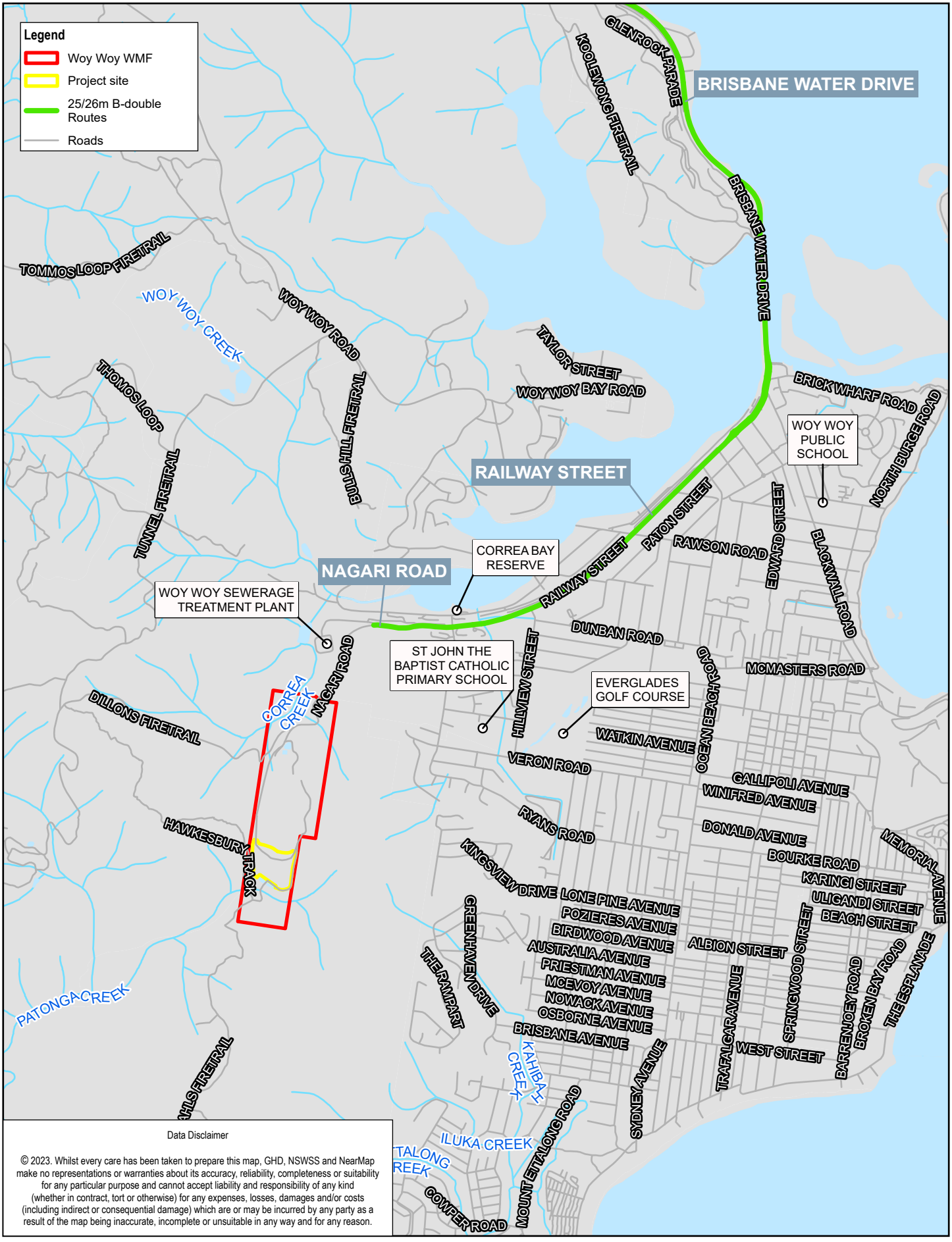
## 2.4 Active and public transport

With respect to active and public transport:

– There are no active transport paths on Nagari Road.
– A small section of footpath (approximately 170 metres) is provided on the southern side of Railway Street.
– The bus stops on Railway Street are located approximately two kilometres from the WMF. This exceeds acceptable walking distances for bus services, which are usually in the order of 400 metres.
– For the purposes of analysis, it is assumed all trips to and from the WMF occur by vehicles (cars and trucks).

## 2.5 Freight route

The TfNSW Restricted Access Vehicle (RAV) Map (refer to Figure 2.6) indicates that Brisbane Water Drive, Railway Street and Nagari Road (between the rail underpass and the WMF access gate) are authorised to accommodate vehicles up to the size of 26-metre B-double vehicles.




Data Disclaimer



Paper Size ISO A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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**Central Coast Council**
**South Cell at Woy Woy WMF**
**Traffic Impact Assessment**

Project No. **12595244**
Revision No. **0**
Date **11/10/2023**

## Freight routes

**FIGURE 2.6**



Data source: GHD: Site Boundary (2023), Survey Data (2023). MetroMap: Imagery (Date Extracted: 28 Feb 2023; Imagery Date: 12 Sept 2022).. Created by: dbbanatin

## 2.6 Weighbridge data

Vehicles depositing waste at the WMF are required to traverse a weighbridge when entering and exiting the WMF (refer to Figure 2.7).


*Figure 2.7 WMF Weighbridge*

Weighbridge data for a typical week between Monday 7 November 2022 and Sunday 13 November 2022 is presented in Table 2.3.

*Table 2.3 WMF Weighbridge data (vehicles)*

| Hours | 7/11/22 Monday | 8/11/22 Tuesday | 9/11/22 Wednesday | 10/11/22 Thursday | 11/11/22 Friday | 12/11/22 Saturday | 13/11/22 Sunday | Total |
|---|---|---|---|---|---|---|---|---|
| 7:00 – 8:00 | 30 | 37 | 32 | 24 | 34 | 1 | - | 158 |
| 8:00 – 9:00 | 41 | 27 | 26 | 24 | 25 | 26 | 24 | 193 |
| 9:00 – 10:00 | 38 | 30 | 23 | 25 | 37 | 31 | 27 | 211 |
| 10:00 – 11:00 | 45 | 40 | 42 | 30 | 42 | 31 | 32 | 262 |
| 11:00 – 12:00 | 35 | 39 | 35 | 37 | 46 | 32 | 29 | 253 |
| 12:00 – 13:00 | 31 | 29 | 32 | 45 | 47 | 34 | 16 | 234 |
| 13:00 – 14:00 | 42 | 51 | 34 | 39 | 52 | 29 | 16 | 263 |
| 14:00 – 15:00 | 36 | 37 | 41 | 43 | 34 | 36 | 24 | 251 |
| 15:00 – 16:00 | 45 | 39 | 31 | 29 | 33 | 13 | 11 | 201 |
| 16:00 – 17:00 | 2 | 6 | 1 | 4 | 2 | 1 | - | 16 |
| **Total** | **345** | **335** | **297** | **300** | **354** | **234** | **179** | **2044** |

The data in Table 2.3 indicates that approximately 2,000 vehicles access/egress the WMF per week, and weekday vehicle activity is higher than weekend vehicle activity.

The average weekday and average weekend traffic volumes at the WMF are displayed in Figure 2.8.

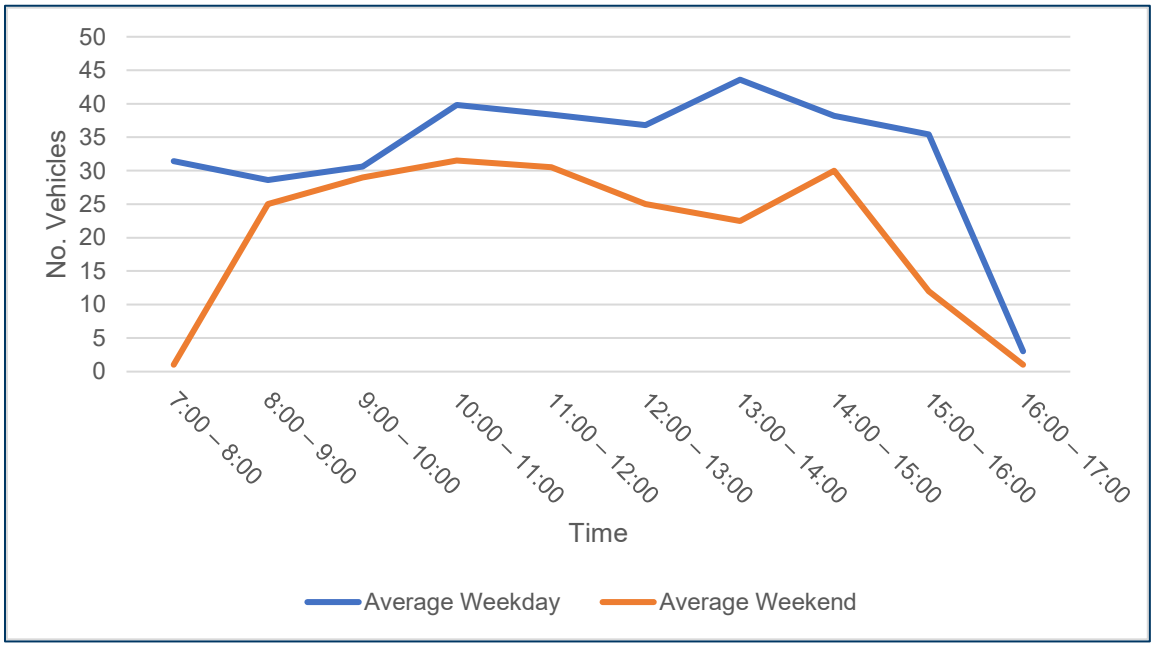



***Figure 2.8 WMF weighbridge data***

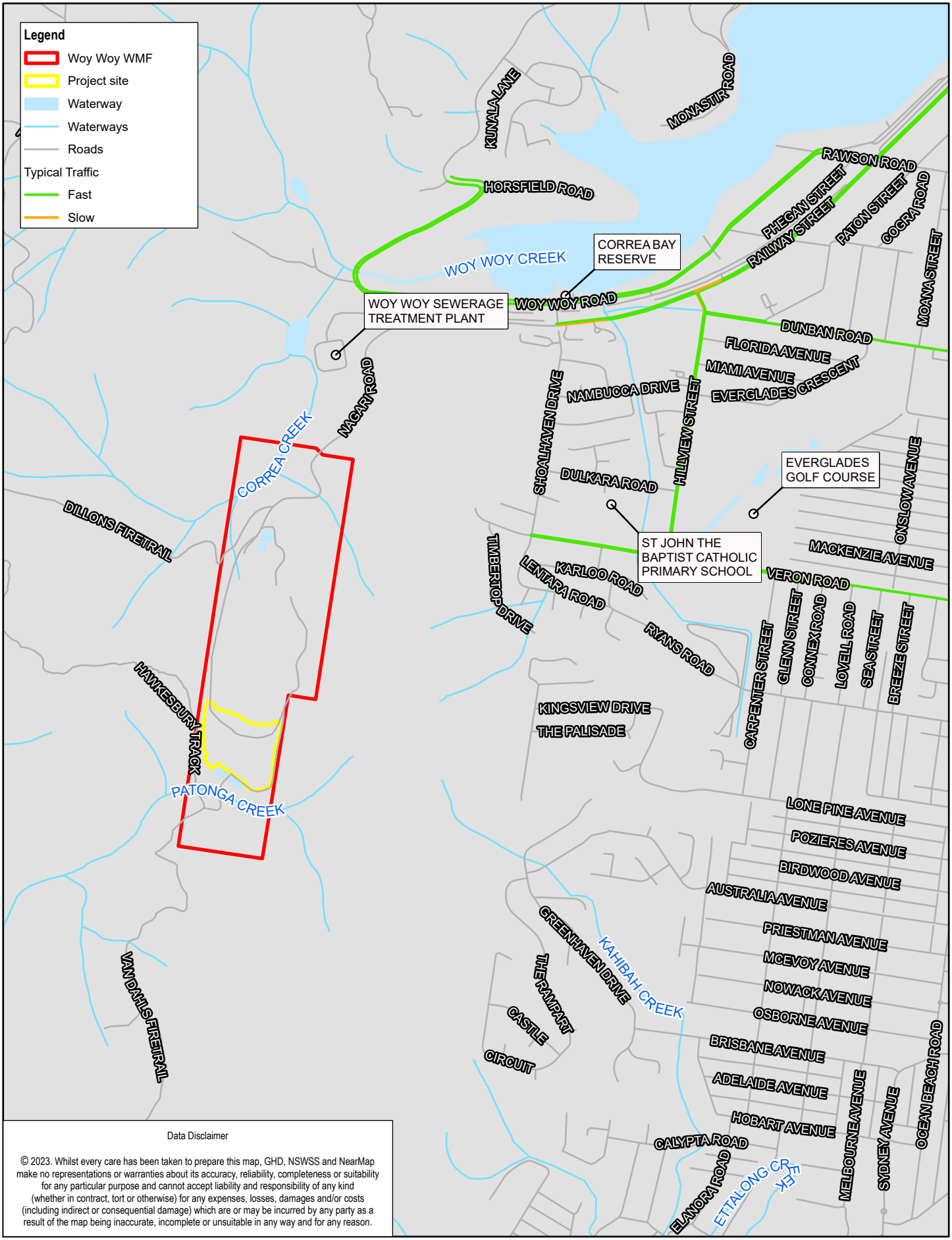
The data in Figure 2.8 indicates that:

– Activity at the WMF currently consists of approximately:
  - 330 inbound and 330 outbound vehicles on a weekday
  - 200 inbound and 200 outbound vehicles on a weekend
– The peak hour of activity on a weekday occurs between 1:00 pm – 2:00 pm with approximately 45 inbound and outbound vehicles.
– The peak hour of activity on a weekend occurs between 10:00 am – 11:00 am with approximately 30 inbound and outbound vehicles.

## 2.7 Traffic performance

The TfNSW Guide to Traffic Generating Developments (RTA, 2002) indicates that urban roads have a capacity of 900 vehicles/hour/lane (corresponding to a Level of Service D). The weighbridge data in Figure 2.8 indicates that Nagari Road is operating well within its mid-block capacity.

Outputs from Google Maps indicate that other roads in proximity to the WMF typically operate under free flow conditions during peak periods of road network activity (refer to Figure 2.9).




Data Disclaimer



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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**Central Coast Council**
**South Cell at Woy Woy WMF**
**Traffic Impact Assessment**

**Localised traffic conditions (typical Thursday at 5:00pm)**

Project No. **12595244**
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Date **11/10/2023**

# FIGURE 2.9

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Print date: 06 Dec 2023 - 22:30

Data source: GHD: Site Boundary (2023), Survey Data (2023). MetroMap: Imagery (Date Extracted: 28 Feb 2023; Imagery Date: 12 Sept 2022).. Created by: dbbanatin

# 3. Impact assessment

## 3.1 Traffic generation

### 3.1.1 Operation

Waste received at the WMF is expected to grow in line with the projected population increase in the Central Coast. The quantity of waste projected to be received at the WMF is shown in Figure 3.1. It is noted that the data accounts for the landfill-related vehicle activity at the project site (including waste to be disposed and operational materials), as well as the expected increases in organics reprocessing and recyclable materials associated with other WMF activities.

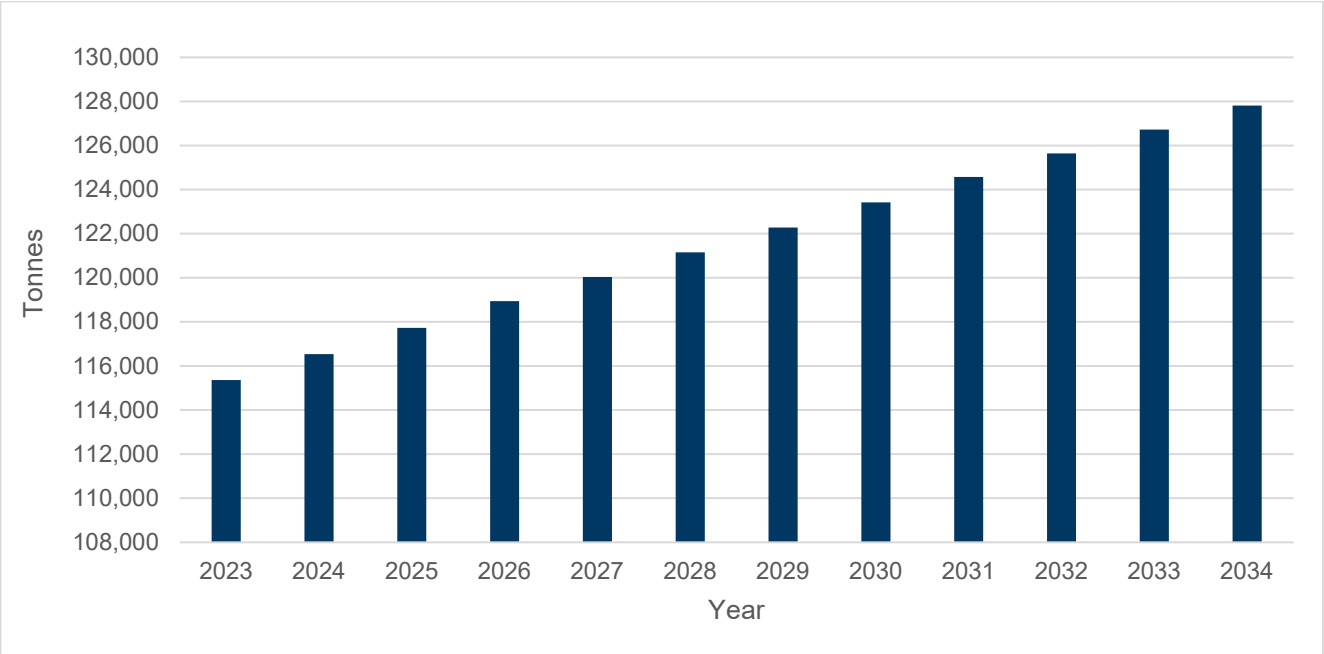


*Figure 3.1 Projected tonnages of waste (and operational material) received at the WMF*

The data in Figure 3.1 indicates that between 2023 and 2034, the quantity of material received at the WMF is expected to increase from 115,350 tpa to 127,800 tpa, corresponding to a total growth of approximately 11 percent.

Applying this 11 percent growth rate to the existing weighbridge data (detailed in Section 2.6), the **additional** heavy vehicle activity associated with the proposed South Cell and the wider WMF (to 2034) is displayed in Table 3.1 (daily profile) and Figure 3.2 (hourly profile).

*Table 3.1 Future additional daily heavy vehicle activity*

| Hours | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday | Total |
|---|---|---|---|---|---|---|---|---|
| 7:00 – 8:00 | 3 | 4 | 4 | 3 | 4 | 0 | 0 | 17 |
| 8:00 – 9:00 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 21 |
| 9:00 – 10:00 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 23 |
| 10:00 – 11:00 | 5 | 4 | 5 | 3 | 5 | 3 | 4 | 29 |
| 11:00 – 12:00 | 4 | 4 | 4 | 4 | 5 | 4 | 3 | 28 |
| 12:00 – 13:00 | 3 | 3 | 4 | 5 | 5 | 4 | 2 | 26 |
| 13:00 – 14:00 | 5 | 6 | 4 | 4 | 6 | 3 | 2 | 29 |
| 14:00 – 15:00 | 4 | 4 | 5 | 5 | 4 | 4 | 3 | 28 |
| 15:00 – 16:00 | 5 | 4 | 3 | 3 | 4 | 1 | 1 | 22 |
| 16:00 – 17:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| **Total** | **38** | **37** | **33** | **33** | **39** | **26** | **20** | **225** |

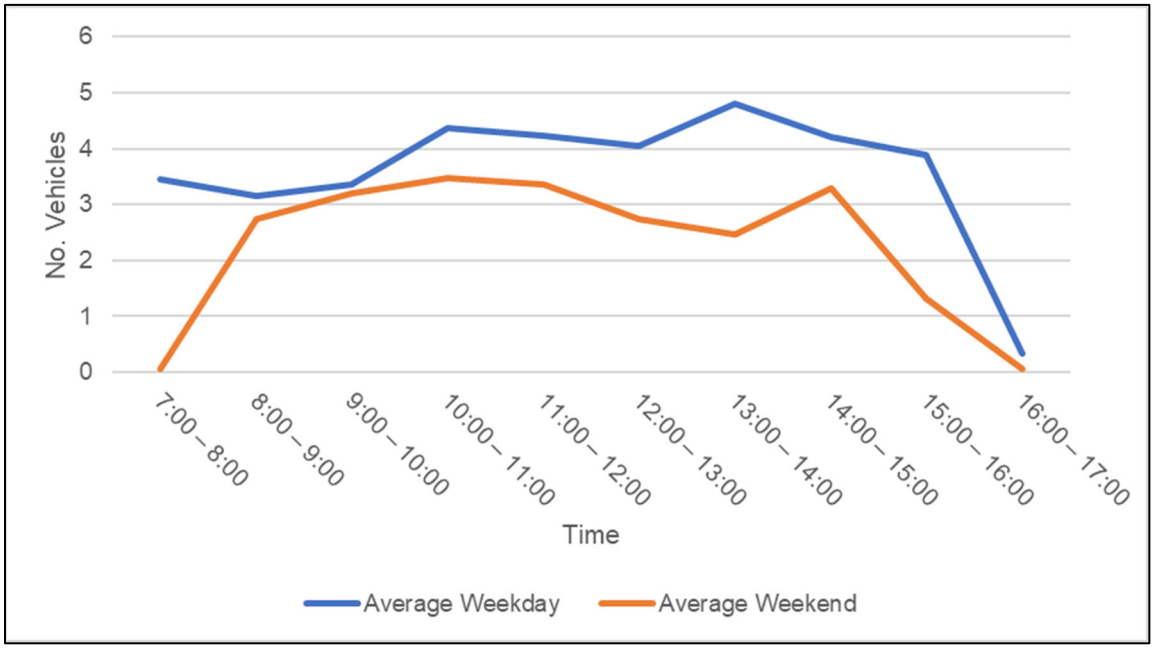


*Figure 3.2 Future additional hourly heavy vehicle activity*

The data in Table 3.1 and Figure 3.2 indicates that by 2034, the project and wider growth at the WMF is expected to generate:

- An additional 33 – 39 inbound and outbound vehicles on a weekday.
- An additional 20 – 26 inbound and outbound vehicles on a weekend.
- Up to an additional five inbound and five outbound vehicles per hour on a weekday.
- Up to an additional three inbound and three outbound vehicles per hour on a weekend.

### 3.1.2 Construction

The peak hour construction vehicle activity has been undertaken on first principles basis in accordance with the expected volumes of workers and heavy vehicles, as follows:

- During construction of the project, up to 10 workers would be employed

– It is expected that workers would typically access the project site in the morning and depart the project site in the afternoon.
– Additionally, it has been assumed that all construction workers would drive to the project site with a car occupancy of one, i.e., no carpooling.
– It is expected that up to approximately five trucks would access/egress the project site per day. Assuming a typical (weekday) workday occurs between 7:00 am and 6:00 pm, on average, this equates to less than one truck per hour.
– To be conservative, it has been assumed that two construction trucks would access/egress the project site in a single hour.

For the purposes of this assessment, the highest hourly traffic generation for the project under the peak construction scenario is assumed to be up to 14 vehicle trips in total, which will consist of the following:

– AM peak hour:
  - Two inbound heavy vehicle movements
  - Two outbound heavy vehicle movements
  - Ten inbound light vehicle trips.
– PM peak hour:
  - Two inbound heavy vehicle movements
  - Two outbound heavy vehicle movements
  - Ten outbound light vehicle trips.

## 3.2 Traffic distribution

It is assumed all vehicles would access/egress the project site via Nagari Road and Woy Woy Road or Railway Street.

## 3.3 South Cell impacts

### 3.3.1 Impacts to traffic

With respect to the traffic impacts of the project, the following is noted:

– The available information indicates that the roads in proximity to the WMF are operating with a good Level of Service during peak periods of road network activity.
– There would be no change to the overall operational workforce at the WMF due to the project.
– The project and wider growth of the WMF is expected to generate up to:
  - An additional five inbound and five outbound vehicles per hour on a weekday
  - An additional three inbound and three outbound vehicles per hour on weekend.
– The vehicle activity associated with the construction of the project would be minor, up to 14 vehicles in a single hour. This corresponds, on average, to a vehicle every four minutes. Additionally, the construction period would be relatively short (completed by mid to late 2024).

Accordingly, the traffic impacts of the project are expected to be negligible and fall within daily fluctuations of the adjoining road network.

### 3.3.2 Impacts to active transport and public transport

There are no active transport or public transport facilities in proximity to the project site.

### 3.3.3 Impacts to road safety

With respect to impacts to road safety:

– The crash review outlined in Section 2.3 shows there have been no recorded crashes in proximity to the project site.
– Appropriate traffic control measures in the vicinity of the project site should be adopted to ensure that the safety of all road users is not impacted by construction-related vehicles travelling to and from the project site.
– The construction/operational volumes generated by the project and the wider growth at the WMF are minor.

Accordingly, the impacts of project construction and operational vehicles on road safety is expected to be negligible.

### 3.3.4 Impacts to parking

With respect to impacts to parking, the following is noted:

– Due to on-street parking not being permitted on Nagari Road in proximity to the WMF, there is not expected to be any impact to on street parking.
– No additional operational staff are expected as part of the project.
– Parking for workers would be provided within the WMF.

Accordingly, the impacts on parking associated with the construction and operation of the project are expected to be negligible.

# 4. Evaluation and conclusions

## 4.1 Summary

In summary:

- Council is proposing to develop a new 'South Cell' at the existing WMF. The project would optimise the remaining landfill air space at the WMF and ensure that the WMF remains open for as long as possible to accept putrescible waste from the LGA.
- Key features of the project include:
  - Cell construction, including excavation and earthworks to form the base of the cell and lining installation
  - Development of associated access, stormwater and leachate management infrastructure
  - Continuation of current landfilling operations in the new cell location
  - Capping, closure and rehabilitation.
- A review of weighbridge data provided by Council indicates:
  - The peak hour of activity on a weekday occurs between 1:00 pm – 2:00 pm with approximately 45 inbound and outbound vehicles.
  - The peak hour of activity on a weekend occurs between 10:00 am – 11:00 am with approximately 30 inbound and outbound vehicles.
- The project and wider growth at the WMF is expected to generate:
  - Up to an additional five inbound and five outbound vehicles per hour on a weekday.
  - Up to an additional three inbound and three outbound vehicles per hour on a weekend.

The highest hourly traffic generation for the project under the peak construction scenario is assumed to be up to 14 vehicle trips in total, which will consist of the following:

- AM peak hour:
  - Two inbound heavy vehicle movements
  - Two outbound heavy vehicle movements
  - Ten inbound light vehicle trips.
- PM peak hour:
  - Two inbound heavy vehicle movements
  - Two outbound heavy vehicle movements
  - Ten outbound light vehicle trips.
- The traffic impacts of the South Cell are expected to be negligible and fall within daily fluctuations of the adjoining road network.
- There are no active transport or public transport facilities in proximity to the project site.
- The crash review outlined in Section 2.3 shows there have been no recorded crashes in proximity to the project site.
- The impacts of project construction and operational vehicles on road safety are expected to be negligible.
- Accordingly, the impacts on parking associated with the construction and operation of the project are expected to be negligible.

## 4.2 Conclusion

In summary, the impacts of the construction and operation of the project on the adjoining traffic and transport networks are expected to be negligible. As potential traffic and transport impacts are expected to be negligible, no additional mitigation measures are proposed.

# 5. References

NSW EPA, 2016. *Environmental Guidelines: Solid waste landfills,* Sydney: NSW EPA.

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