



# TRAFFIC IMPACT ASSESSMENT

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## Landfill Airspace Expansion Quarry Road, Erskine Park

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## DOCUMENT VERIFICATION

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<b>Project</b>	Quarry Road, Erskine Park			
<b>Client</b>	Enviroguard Pty Ltd			
<b>Revision</b>	Date	Prepared By	Checked By	Signed
v02	07/04/2020	Hayden Dimitrovski	Vince Doan	



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# 1. INTRODUCTION

TRAFFIX has been commissioned by Enviroguard Pty Ltd to undertake a traffic impact assessment (TIA) in support of a Section 4.55 (2) Modification relating to a landfill site at Quarry Road, Erskine Park. The development is located within the Penrith City Council LGA and has been assessed under that Council's controls.

The existing development was approved under DA05/1740 by Penrith City Council. This report refers to the approved Environmental Impact Statement (EIS) for the existing development prepared by National Environmental Consulting Services and dated 17 October 2005.

This report documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE) prepared separately. The development is a minor development and does not require referral to the Roads and Maritime Services (RMS) under the provisions of SEPP (Infrastructure) 2007.

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing road network
- Section 4: Describes the proposal
- Section 5: Assesses traffic impacts
- Section 6: Presents the overall study conclusions



## 2. LOCATION AND SITE

The subject site is located at 4 Quarry Road, Erskine Park and is legally identified as Lot 4 in DP1094504. It is located on the eastern side of Quarry Road, about 6.3 kilometres southeast of St Marys Railway Station and 40.0 kilometres west of Sydney Central Business District.

The site is irregular in shape and has a total site area of approximately 21.94 hectares. It is surrounded by neighbouring industrial and warehouse developments. Vehicular access to the site is currently provided through 85 -87 Quarry Road via an access driveway to Quarry Road on the western frontage. The existing site is currently operating and is used as landfill for disposing dry waste meeting EPA Licence 4865.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**.



Figure 1: Location Plan

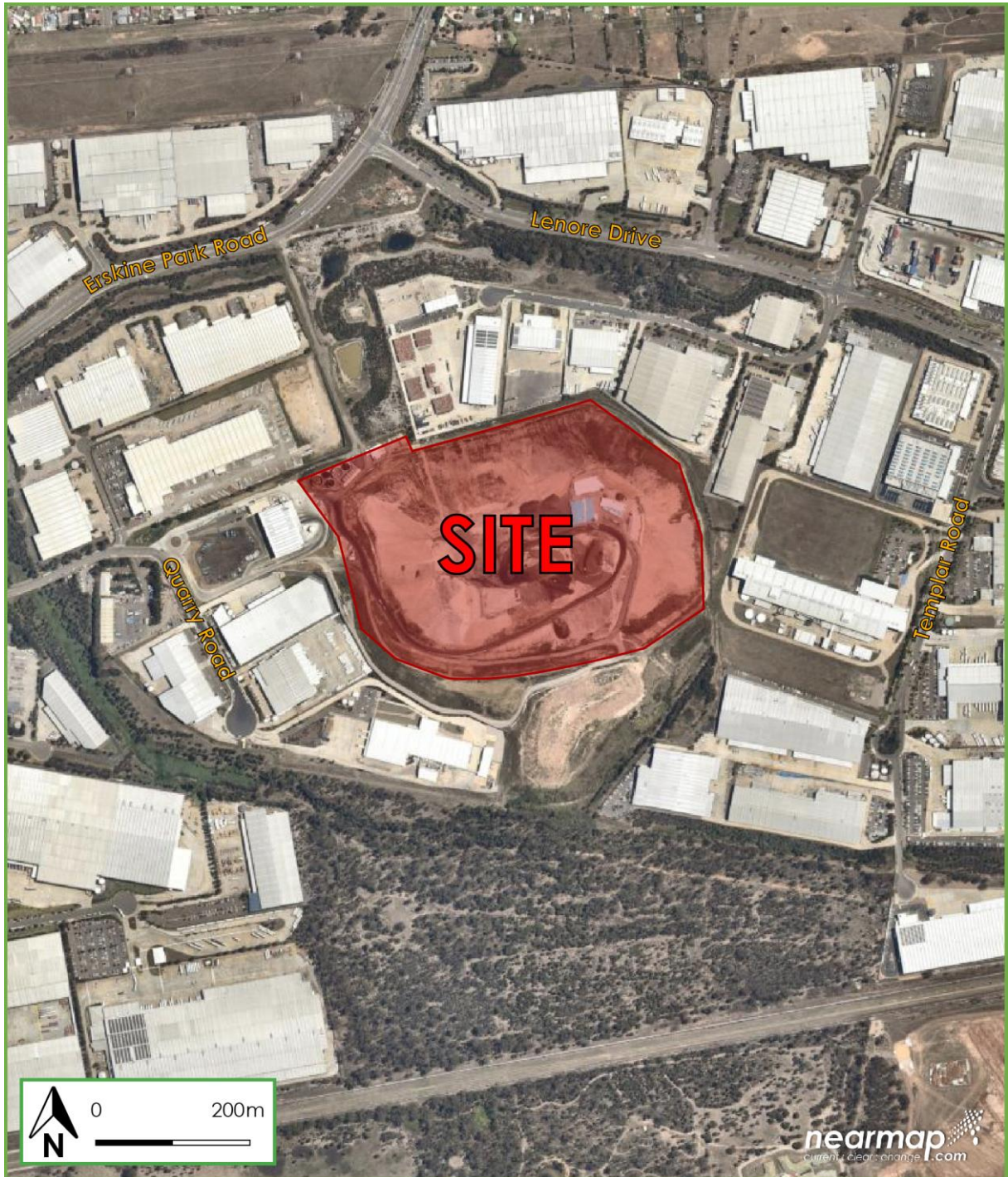


Figure 2: Site Plan



### 3. EXISTING ROAD NETWORK

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- Mamre Road: an RMS Main Road (MR 536) that generally runs in a north-south direction between Great Western Highway in the north and Elizabeth Drive in the south. Mamre Road generally accommodates a single lane of traffic in each direction, is subject to an 80km/h speed zoning and parking is not permitted along either kerbside.
- Erskine Park Road: an RMS Main Road (MR 629) that generally runs in a northeast-southwest direction between Roper Road in the northeast and Mamre Road in the southwest. In the vicinity of the site Erskine Park Road accommodates two (2) lanes of traffic in each direction, is subject to 80km/h speed zoning. Parking is not permitted along either kerbside of Erskine Park Road.
- James Erskine Drive: a local road that generally runs in an east-west direction forming a cul-de-sac in the east and connects to Mamre Road in the west. James Erskine Drive accommodates two (2) lanes of traffic in each direction. It is subject to 50km/h speed zoning and kerbside parking is generally permitted along both sides of James Erskine Drive.
- Quarry Road: a local road that generally runs in an east-west direction between a cul-de-sac in the east and James Erskine Drive in the west. Quarry Road accommodates a single lane of traffic in each direction, is subject to 50km/h speed zoning and parking is generally permitted along both kerbsides.

It can be seen from **Figure 3** that the site is conveniently located with respect to the surrounding arterial road network servicing the region. It should be noted that due to the high industrial use of the area, all above roads are identified by the Roads and Maritime Services (RMS) as approved 26.0m B-Double routes.



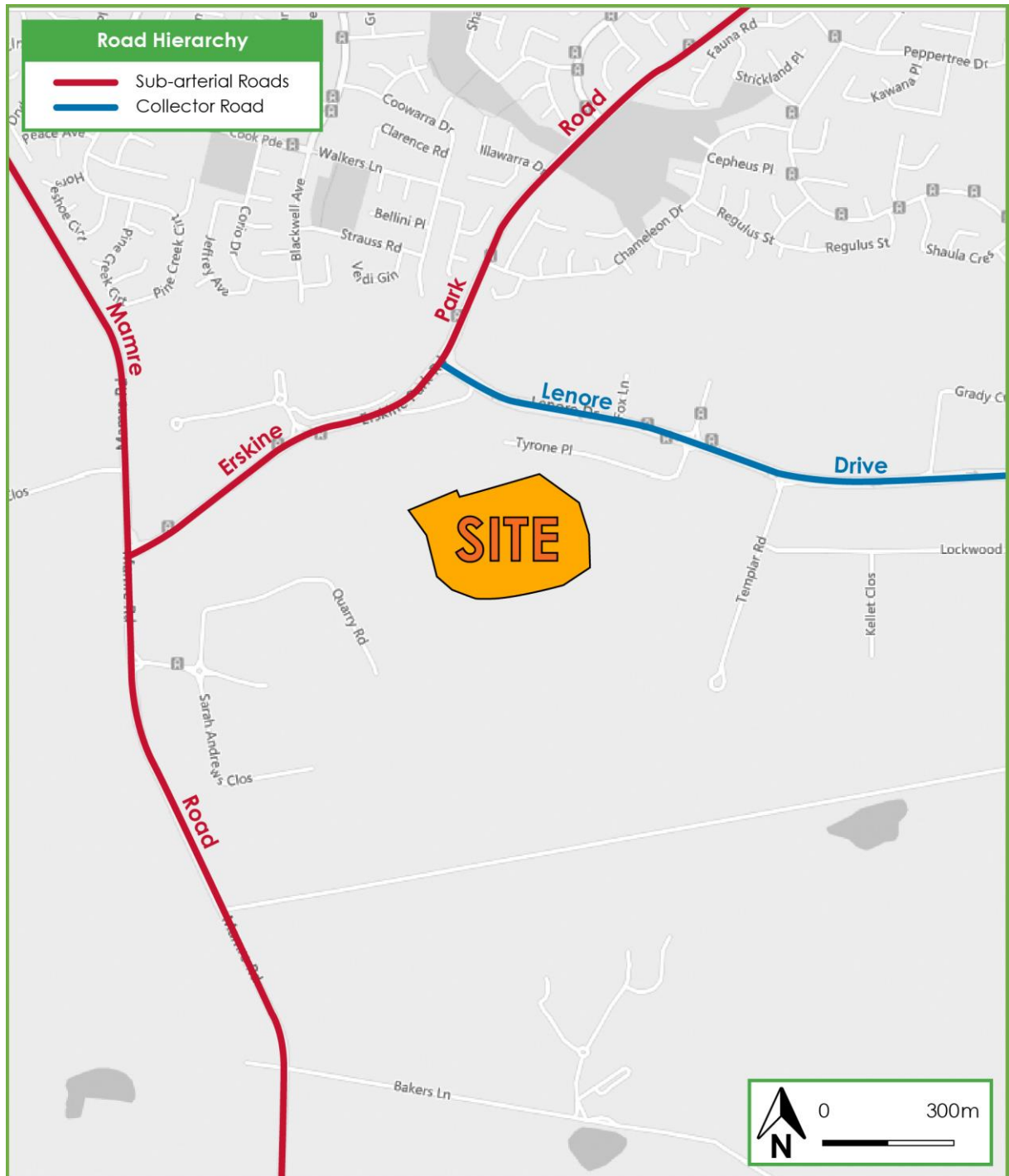


Figure 3: Road Hierarchy



## 4. DESCRIPTION OF PROPOSAL

The proposal involves the construction of retaining wall to increase the available air space for landfill to extend the operations of the existing development. The following sections detail the construction and operation of the proposal.

### 4.1 Description of Proposed Development

A detailed description of the proposed development is provided in the SEE prepared separately. In summary, the development for which approval is sought is a landfill airspace expansion comprising a 920 metre long mechanically stabilised earthen wall along the western, southern and eastern perimeter of the existing landfill. As a result, providing approximately 400,000m<sup>3</sup> of additional landfill airspace to boost capacity of the landfill. This is to extend the existing operations and will not intensify the use of the development once operational. Reference should be made to the plans submitted separately to Council which are presented at reduced scale in **Appendix A**.

### 4.2 Description of Construction Program

The total construction period is expected to occur for approximately 12 months. The proposed stages of construction are summarised below.

#### 4.2.1 Bulk Excavation Stage

This stage will occur during a two-month period, commencing 1 December 2020 and will involve an average of 25 people on site over the stage including the operational workforce with a maximum construction workforce of 10 people on-site. The maximum sized vehicles to be utilised during this stage will be 19.6m truck and dogs and 19.0 articulated vehicles (AV). It is proposed that all bulk excavation works will occur within the site, with access provided via the existing access on Quarry Road.

#### 4.2.2 Structure Stage

This stage will occur during a 11-month period, commencing 1 January 2021 and will involve an average of 40 people on site over the stage including the operational workforce with a



maximum construction workforce of 30 people on-site. The maximum sized vehicles to be utilised during this stage will be 19.6m truck and dogs and 19.0 articulated vehicles (AV). It is proposed that all structure works will occur within the site, with access provided via the existing access on Quarry Road.

#### **4.2.3 Parking Arrangements**

Parking for all construction vehicles will be provided within the development with no impact to on-street parking.

#### **4.2.4 Vehicle Access and Circulation Arrangements**

**Figure 4** shows the approved heavy vehicles route for vehicles up to the size of a 26.0m long B-Double as detailed in the NSW Combined Higher Mass Limits and Restricted Access Vehicle Map from Transport for NSW. It is evident that from Erskine Park Road, Mamre Road to Quarry Road and the site access is an approved heavy vehicle route for up to B-Doubles. As such, all construction vehicles, which are significantly smaller than the B-Double vehicle, can access the site via the existing road network.

With regards to internal circulation, **Figure 5** details how construction and operational vehicles will circulate around the site from entry to exit. In addition, weighbridges, wheel wash, the site office, plant, materials laydown and car park are also shown in **Figure 5**.

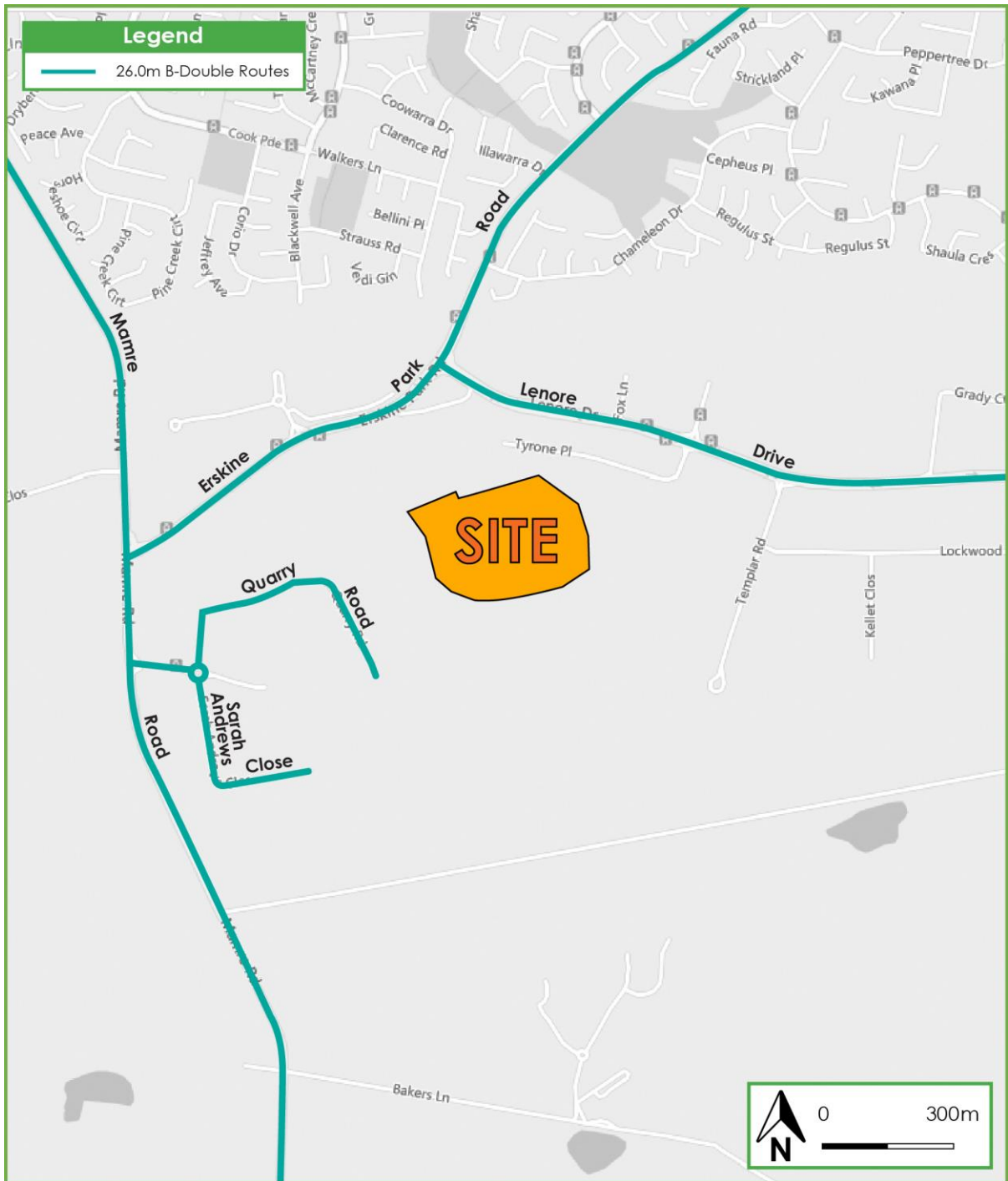


Figure 4: B-Double Routes

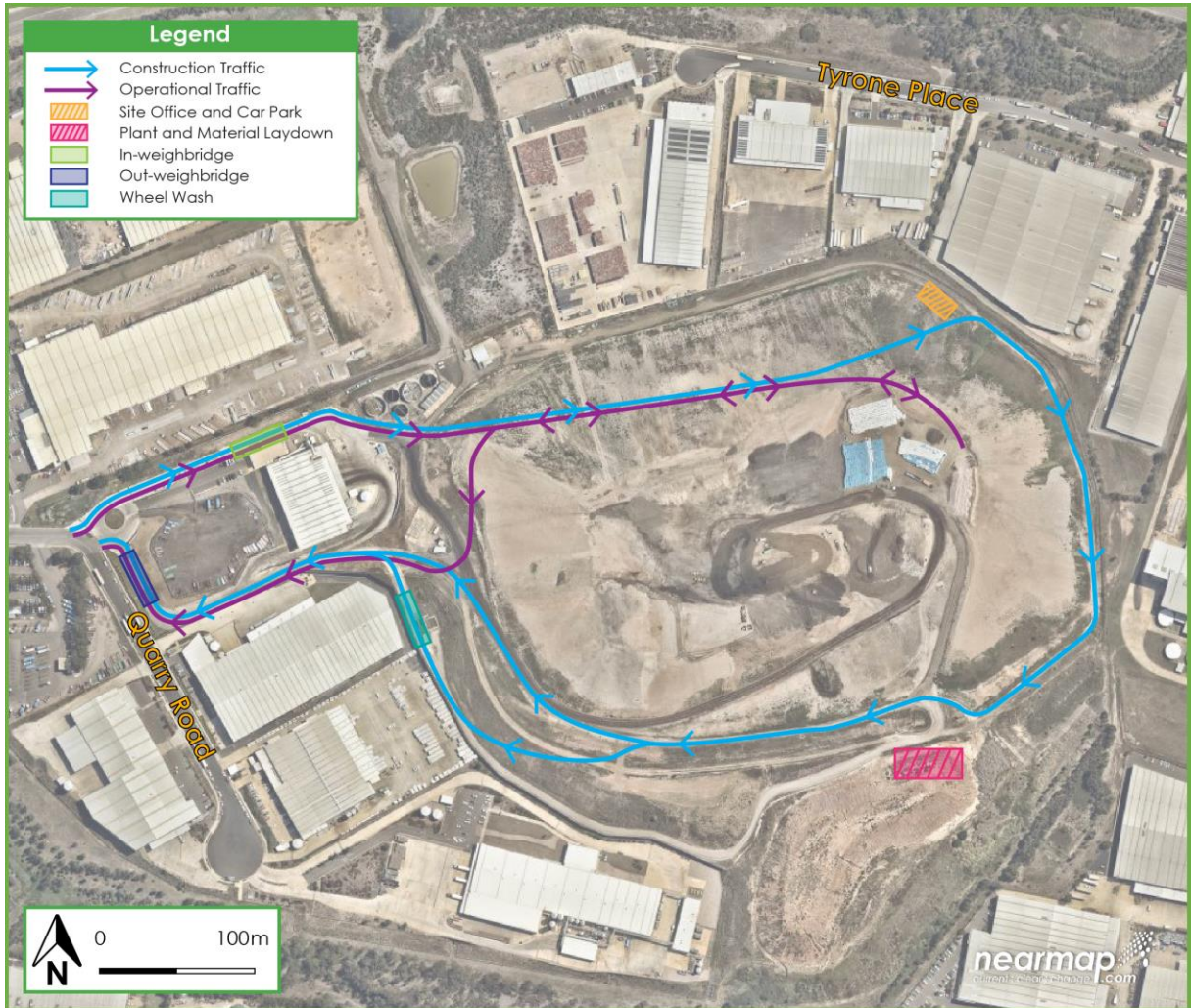


Figure 5: Truck Circulation through the Site



## 5. TRAFFIC AND TRANSPORT IMPACTS

### 5.1 Approved and Existing Site Generation

The 2005 EIS specified a trip generation of 288 truck arrivals per day on average. The site currently has 44,478 truck arrivals annually over the past 12 months. This equates to approximately 122 truck arrivals per day, which is significantly less than the existing approval permits.

### 5.2 Construction Trip Generation

During construction of the proposed development will have an additional 100 truck arrivals per day. This will result in a total of 222 truck arrivals per day during construction when including the existing operational traffic. As the site is approved for up to 288 truck arrivals per day this is considered acceptable based on the previously approved EIS. As such, the proposed increase in truck arrivals during construction is considered acceptable and supportable based on existing approvals with no amendments required.

### 5.3 Operational Trip Generation

The proposed increase in landfill is to allow for an extension in the use of the site. The proposal will not intensify the use of the site and is estimated to be consistent with the existing site generation being 122 trucks arrivals per day.



## 6. CONCLUSIONS

The following matters are noteworthy:

- The proposal seeks approval to increase the available airspace for landfill by constructing a 920 metre long mechanically stabilised earthen wall along the western, southern and eastern perimeter of the existing landfill site.
- The existing development is approved to accommodate 288 truck arrivals per day based on the 2005 EIS.
- The existing development currently generates approximately 122 truck arrivals per day on average, which is significantly below the existing approved traffic generation.
- Construction will occur over a 12-month period including bulk excavation and structure works. The works will be contained within the site including parking of all construction vehicles during the entire construction period. All construction vehicles accessing the site can use the existing road network which is approved for 26.0m long B-Double vehicles.
- The traffic generation arising from construction of the development has been assessed as a net increase over existing conditions, and equates to an additional 100 truck arrivals per day. As such, the site will generate a total of 222 truck arrivals per day during construction, which is below the approved EIS. As such, the increased construction traffic can be accommodated within the existing approval with no amendments required.
- The proposed development will not intensify the use of the site and therefore no increase in operational traffic generation is proposed as part of this application.

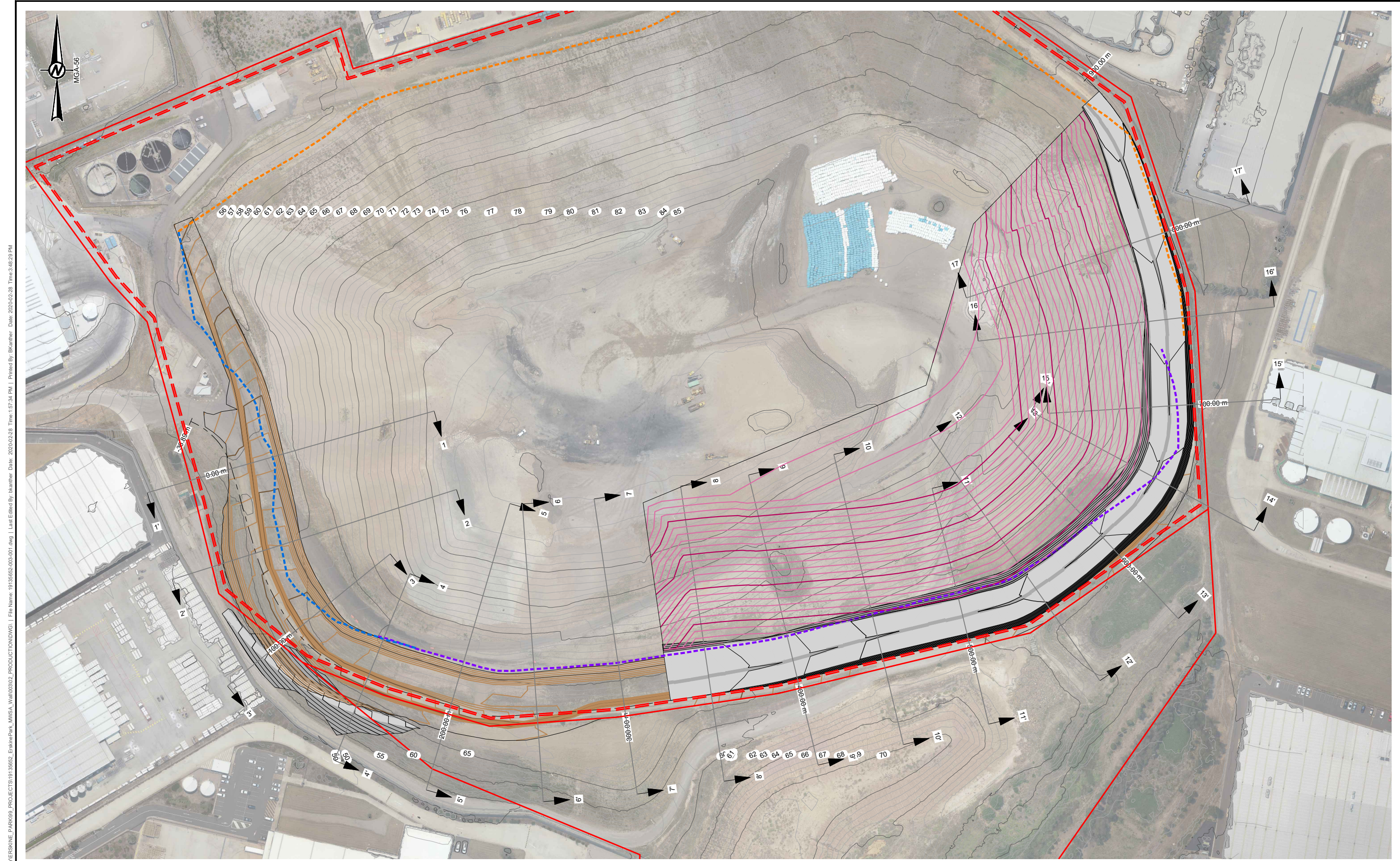
This traffic impact assessment therefore demonstrates that the subject application is supportable on traffic planning grounds. TRAFFIX anticipates an ongoing involvement during the development approval process.

# APPENDIX A

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## Reduced Plans



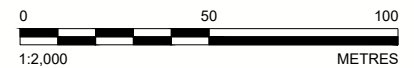


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**PLAN LEGEND**

	GOLDER MSE WALL CONTOURS (STAGE 1)
	CEC WALL CONTOURS
	EXISTING GROUND CONTOURS
	GOLDER MSE WASTE CONTOURS

NOT FOR CONSTRUCTION  
**DRAFT**



CLIENT  
CLEANAWAY

CONSULTANT



YYYY-MM-DD	2020-02-21
DESIGNED	BGK
PREPARED	BGK
REVIEWED	-
APPROVED	-

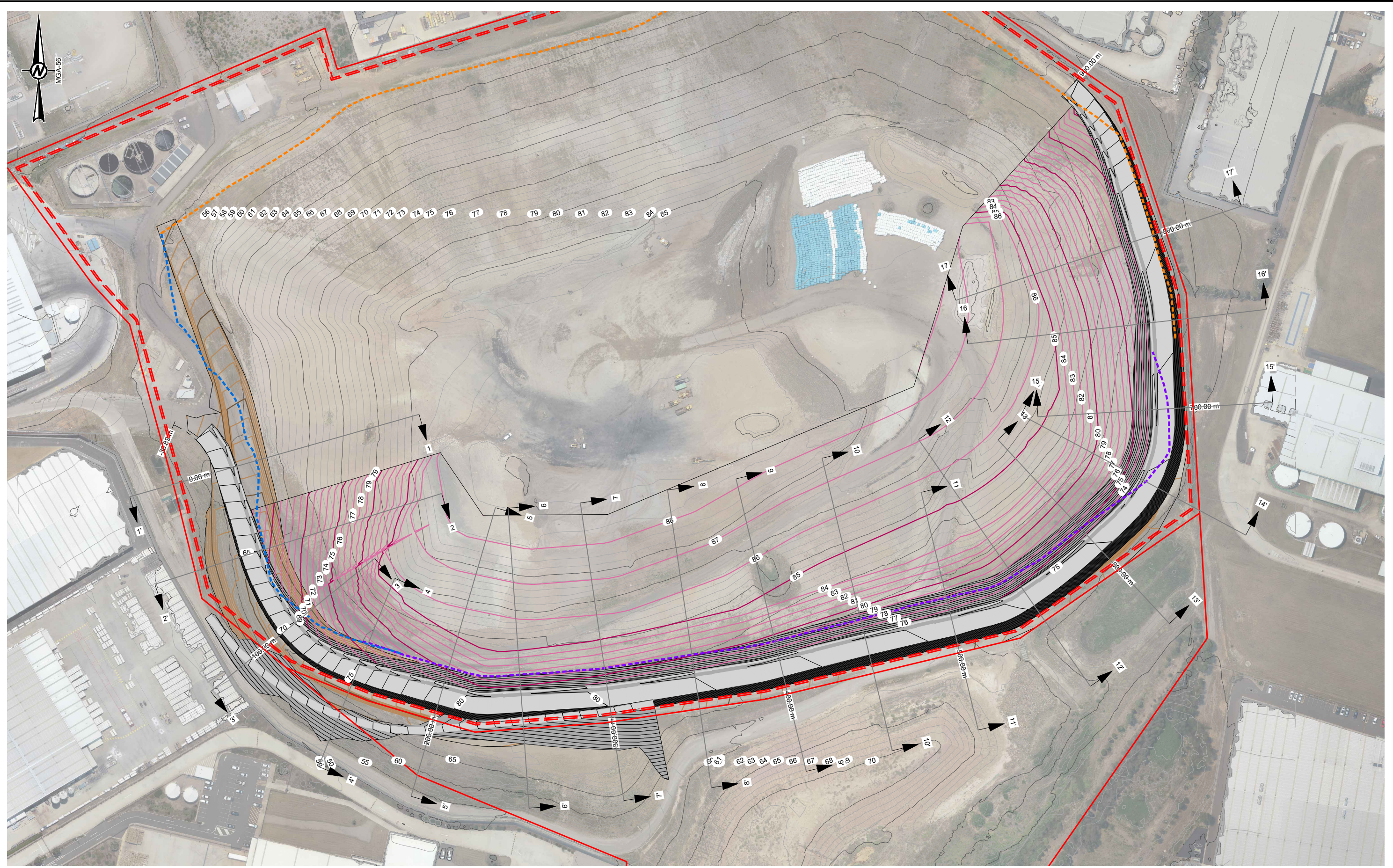
PROJECT  
ERSKINE LANDFILL  
MWSA

TITLE  
**GENERAL ARRANGMENT - STAGE 1**

PROJECT NO. 19135652	CONTROL SK01	REV. B	FIGURE 001
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**PLAN LEGEND**

	GOLDER MSE WALL CONTOURS
	CEC WALL CONTOURS
	EXISTING GROUND CONTOURS
	GOLDER MSE WASTE CONTOURS

NOT FOR CONSTRUCTION  
**DRAFT**  
  
 1:2,000 METRES

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CLEANAWAY

CONSULTANT



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PROJECT  
ERSKINE LANDFILL  
MWSA

TITLE  
**GENERAL ARRANGMENT**

PROJECT NO. 19135652	CONTROL SK01	REV. B	FIGURE 002
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