

Traffic Impact Assessment Report

# Proposed Bairnsdale Composting Facility

Prepared for: East Gippsland Shire Council  
25 February 2026  
Client Reference No. 30049148



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# 1. Introduction

SMEC has been commissioned by East Gippsland Shire Council (EGSC) to undertake a Traffic Impact Assessment (TIA) for the proposed Bairnsdale Composting Facility.

## 1.1 Proposed Bairnsdale Composting Facility

The proposed Bairnsdale Composting Facility is to be located within the existing landholding at the Bairnsdale Regional Landfill, located immediately west of the existing landfill and waste transfer station site, accessed via Johnstons Road (see Figure 1-1).

The facility is expected to process 25,000 tonnes per year of Garden Organics (GO) and mixed Food Organics and Garden Organics (FOGO) through aerobic composting. The public will be able to access and deliver garden waste to the facility.



Figure 1-1: Site location (source: [Community Info Sheet](#) from East Gippsland Shire Council)

## 1.2 Traffic Impact Assessment scope

The scope of this TIA report is to:

- Develop an understanding of the existing transport network
- Outline the development proposal
- Undertake a Traffic Impact Assessment for the site and determine required site access provisions
- Outline the proposed site layout and transport provisions
- Conclusions from the TIA study and any recommendations to be considered at subsequent project phases

## 1.3 References

The following have been referenced or consulted in the preparation of this report:

- Austroads Guidelines:
  - Guide to Road Safety Part 3 – Safe Speed Management, 2025.
  - Guide to Traffic Management Part 6 – Intersections, Interchanges and Crossings Management, 2020.
- SMEC documents:
  - EGSC Composting Facility – Basis of Design – IFT, 23 August 2024.
  - EGSC Composting Facility – Detailed Pavement Design (100%), Technical Memorandum, 20 August 2024.
  - EGSC Composting Facility – Design Layout – Civil Works Plan and Vehicle Turning Movements – 30049148\_250526\_EGCF\_OPT1\_REV3\_MN
- EGSC Planning Scheme: Clause 52.06 Car Parking.
- EGSC - Bairnsdale Landfill 2025 Material Transactions Excel Sheet.
- Metro Count Survey Data (speed and volume), conducted between Thursday 9 March, 2023 until Thursday 23 March, 2023, provided by EGSC.
- Victoria Road Crash Data – source: [Victoria road crash data - Data Collection - Open Data - Transport Victoria](#).
- Site location and layout plans sourced from [Community Info Sheet](#) from East Gippsland Shire Council.

## 2. Existing Transport Conditions

### 2.1 Existing road network

Table 2-1 summaries the existing conditions of key roads to and from the proposed Bairnsdale Compost Facility.

Table 2-1: Existing road network conditions

Transport Element	Johnstons Road (Asset ID 100676)
Speed limit (km/h)	80km/h for 100m upon entry from Forge Creek Road (End 80 sign present) Default Rural Speed Limit Applies = 100km/h
Class	Rural Access Road
Managed by	East Gippsland Shire Council
Carriageway width (m)	6-7m (approx.)
Total number of traffic lanes	Two (one in each direction)
Traffic control	Forms the following intersections: <ul style="list-style-type: none"> <li>- West end: Four-way priority-controlled intersection with Forge Creek Road and Humphreys Road (mainline north-south road is Forge Creek Road which has dedicated right turn traffic lanes)</li> <li>- East end: Four-way priority-controlled intersection with Bairnsdale Landfill Access</li> </ul>
Bicycle facilities	None provided
Pedestrian facilities	None provided
Bus routes / facilities	None provided
B-Double / Higher Mass Limits approved route?	Yes. Approved route continues west to Forge Creek Road, where route continues north to Bairnsdale.
On-Street car parking facilities?	None provided

### 2.2 Traffic survey data and analysis

A metro traffic count (speed and volume) was conducted on Johnstons Road between Thursday 9 March until Thursday 23 March in 2023. The survey data was analysed with the following key findings:

- Traffic demands:
  - Figure 2-1 provides a summary of the traffic demands over a week with the 5-day average also provided. Following analysis the following was found:
    - The AM peak was between 11 am to 12pm with a two-way total of 84 vehicles.
    - The PM peak was between 2pm to 3pm with a two-way total of 99 vehicles.
    - 39.5% of recorded vehicles were heavy vehicle types.
    - For the purposes of subsequent assessments, it is assumed that bi-directional traffic demands are equal along Johnstons Road.

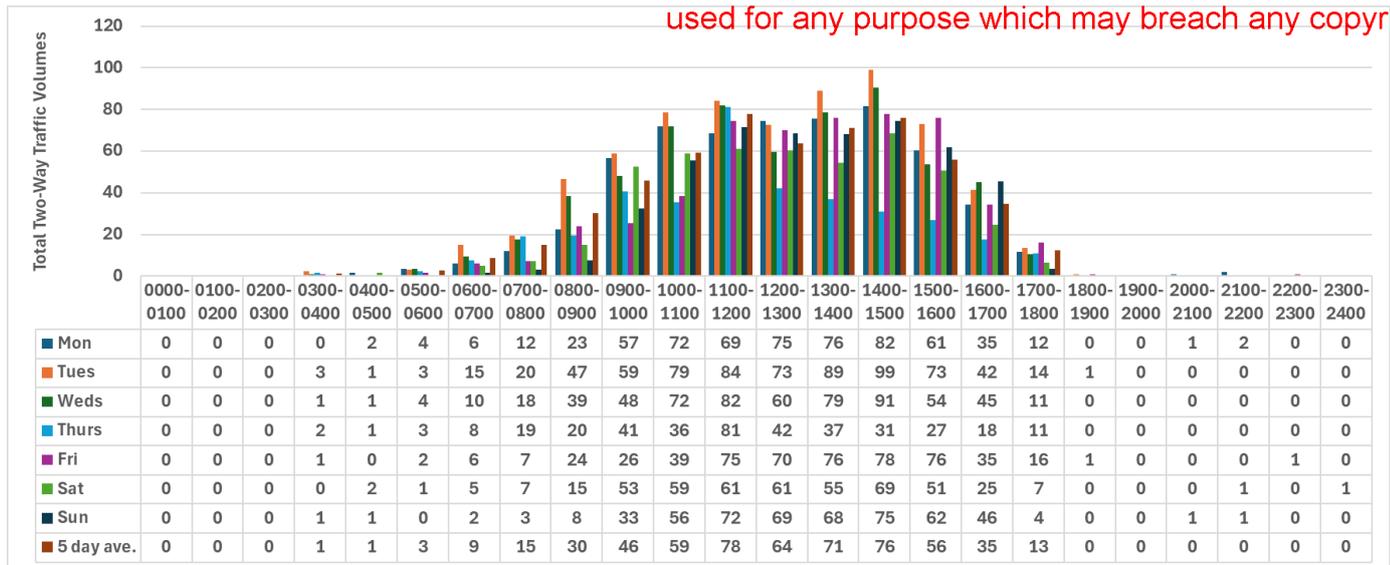


Figure 2-1: Johnstons Road – Weekly Traffic Demand Survey – Two-Way Traffic Totals

- Traffic speeds:
  - Table 2-2 provides a summary of the traffic speed survey, with the following noted:
    - Upon entry from Forge Creek Road, Johnstons Road is 80km/h for 100m where an End 80 sign is present, from which point the default rural speed limit applies of 100km/h.
    - A total of 7,437 vehicles were surveyed with the following speeds recorded:
      - Maximum speed of 156.4km/h.
      - Minimum speed of 13.6km/h.
      - 85<sup>th</sup> percentile speed of 97.02km/h.
    - 89% of recorded vehicles were recorded to be travelling at or below the default speed limit of 100km/h.
    - 11% of recorded vehicles were recorded to be travelling above the default speed limit of 100km/h.

Table 2-2: Speed Survey Results

Recorded Speed (km/h)	Total Recorded Vehicles (veh)	% of Total Vehicles Recorded
0 to 10	0	0%
10 to 20	2	0%
20 to 30	2	0%
30 to 40	11	0%
40 to 50	46	1%
50 to 60	152	2%
60 to 70	933	13%
70 to 80	2,165	29%
80 to 90	1,996	27%
90 to 100	1,290	17%
100 to 110	548	7%

Recorded Speed (km/h)	Total Recorded Vehicles (Ven)	% of Total Vehicles Recorded
110 to 120	225	3%
<b>Total</b>	<b>7,437</b>	<b>100%</b>

## 2.3 Crash data

A review of the Victorian Road Crash Data was undertaken for Johnstons Road, with crashes recorded from 2012 onwards. As shown on Figure 2-2, only a single crash has been recorded on this road. The recorded crash occurred in January 2016 during dark / no street light conditions and resulted in a vehicle collision with a fixed Object (DCA 123 – Run Off Road). The severity was classed as Other Injury.

No recorded crashes were found to occur in the vicinity of the development site or its proposed site access location.



Figure 2-2: Johnstons Road – Recorded Crashes (source: [Victoria road crash data - Data Collection - Open Data - Transport Victoria](#))

### 3. Proposed Bairnsdale Composting Facility

A composting facility located at 200 Johnstons Road, Bairnsdale (the Site) is proposed to be constructed for East Gippsland Shire Council (Council). The facility is expected to process 25,000 tonnes per year of Garden Organics (GO) and mixed Food Organics and Garden Organics (FOGO) through aerobic composting. This new facility is proposed to assist East Gippsland in a smooth transition to kerbside FOGO collection and significantly reduce the amount of waste sent to the Bairnsdale Regional Landfill.

The facility is shown in Figure 3–1 (design layouts provided in Appendix A) with the following proposed:

- New priority site access intersection with Johnstons Road and new site access road into the site.
- Site entry/exit includes:
  - Single bi-directional weighbridge with a site office and amenities/lunchroom.
  - 15 angled parking spaces.
- Composting facility containing:
  - Clean Water Dam and Contact Water Dam.
  - Drop Off Station and Sorting Facility.
  - Compost Maturation Pads and Wind Rows.
  - Screening and Product Storing Area.
  - Process Control Area.

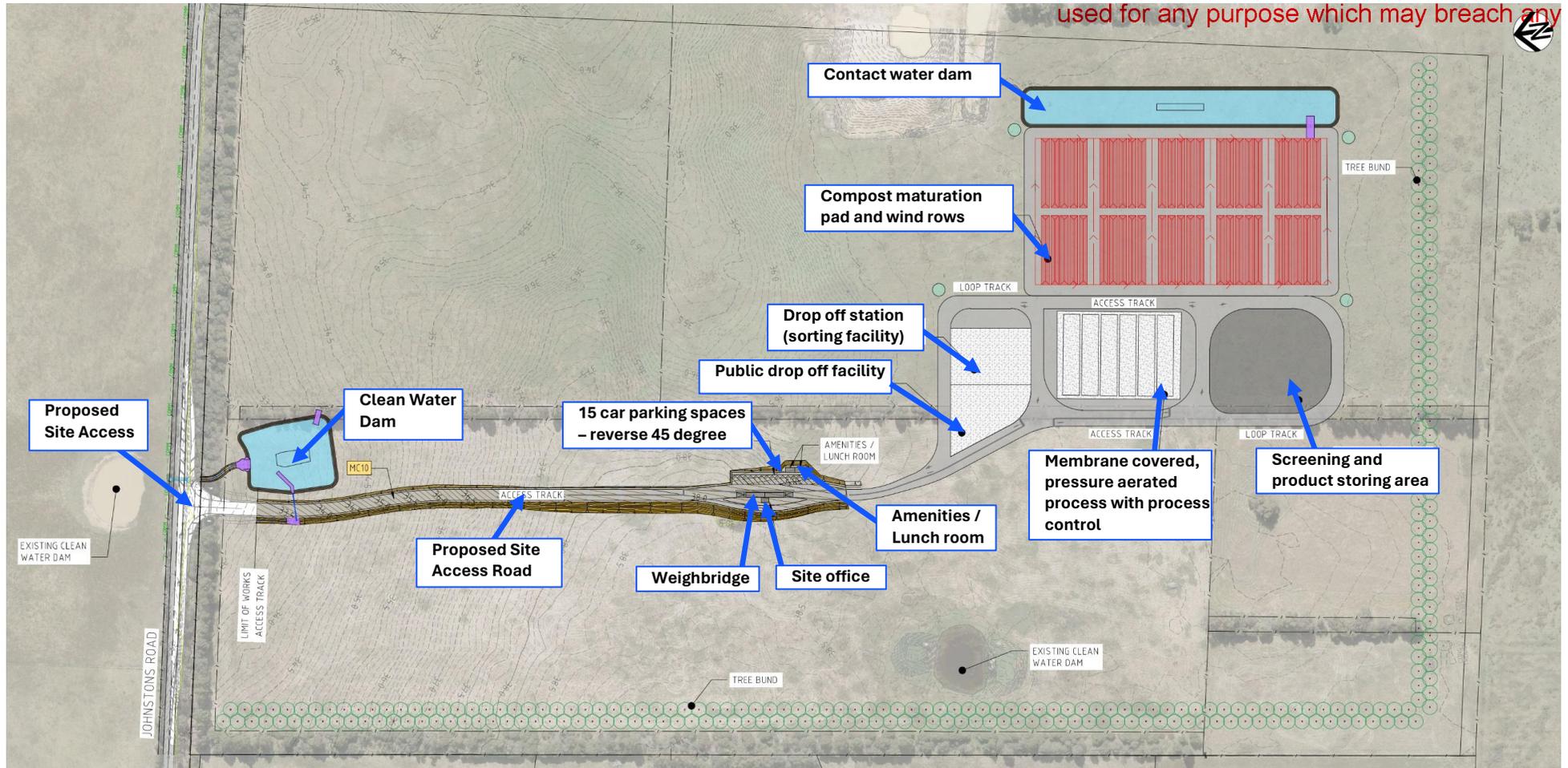


Figure 3-1: Final General Layout

## 4. Traffic Impact Assessment

### 4.1 Traffic Generation

#### 4.1.1 Proposed site operations

The site is proposed to operate typically:

- 7 days per week, with operating hours between:
  - Monday to Friday 8am to 5pm
  - Saturday and Sunday 9am to 5pm

The following vehicle types are proposed to access the facility:

- Private vehicles (5.2m long).
- Private vehicles with trailers (7 to 14.9m long).
- Kerbside collection trucks (10.2m long).
- Truck and Dog Trucks (22.3m long).
- Design vehicle – 25m B-Double allowed to enter/exit the facility.

#### 4.1.2 Site traffic generation

##### 4.1.2.1 Public green waste traffic demands

EGSC provided transaction data for all materials received at the Bairnsdale Landfill for the full 2025 calendar year. EGSC noted that Council offers a 'no-fee' green waste disposal period during November each year, this therefore coincides with a higher arrival rate of green waste to the facility.

The data was analysed to extract the green waste transaction demands only with the following provided:

- Table 4–1 shows the monthly and maximum daily green waste traffic volumes for 2025, with Figure 4–1 showing the monthly totals graphically. The following is noted from the data:
  - Excluding November (peak period) an average of 1,485 vehicles is processed per month with regards to green waste. November had a total of 2,522 green waste vehicle arrivals.
  - Excluding November (peak period) an average of 73 vehicles is processed per day. November had a total of 138 green waste vehicle arrivals over the peak day.
- Table 4–1 shows the maximum hourly green waste traffic arrivals for each month in 2025, with the start time of each of these identified peak periods, Figure 4–2 shows the peak hour traffic arrivals graphically. The following is noted from the data:
  - Excluding November (peak period) an average of 17 green waste vehicles arrived per hour (based on the peaks per month). November had a peak hour total of 27 green waste vehicle arrivals, occurring between 1415 and 1515.
- A future year of 2036 has been adopted (traffic assessments typically assess 10 years post opening). For green waste projected arrivals, the population growth rate of Bairnsdale was applied from census data between 2016 to 2021. This showed a population growth of 6% (1.1% per year), therefore a 13% growth rate was applied to the 2025 green waste peak traffic demands. The subsequent 2036 projected demands are also shown in Table 4–1 and Figure 4–2.
  - Based on the uplifted demands, a peak hour total of 30 green waste vehicle arrivals has been calculated.

Table 4-1: Existing 2025 (Monthly, Daily and Peak) and Projected 2036 (Hourly Green Waste Traffic Arrivals - One-Way) Arrivals

Month	Green Waste Traffic Arrivals - 2025				Green Waste Traffic Arrivals - 2036
	Monthly Total (veh)	Maximum Daily Volume (veh)	Max Hourly Arrival		Max Hourly Arrival
			Volume	Start Time	Volume
January	1,820	88	18	11:00	20
February	1,435	80	16	13:00	18
March	1,890	84	21	14:00	24
April	1,648	88	19	9:30	21
May	1,600	72	16	11:30	18
June	1,310	63	16	14:15	18
July	1,198	61	17	11:15	19
August	1,357	72	16	11:30	18
September	1,117	56	13	13:45	15
October	1,274	60	13	11:15	17
November	2,522	138	27	14:15	30
December	1,684	78	18	12:15	20
Average (excluding Nov)	1,485	73	17		19
Peak (November)	2,522	138	27		30

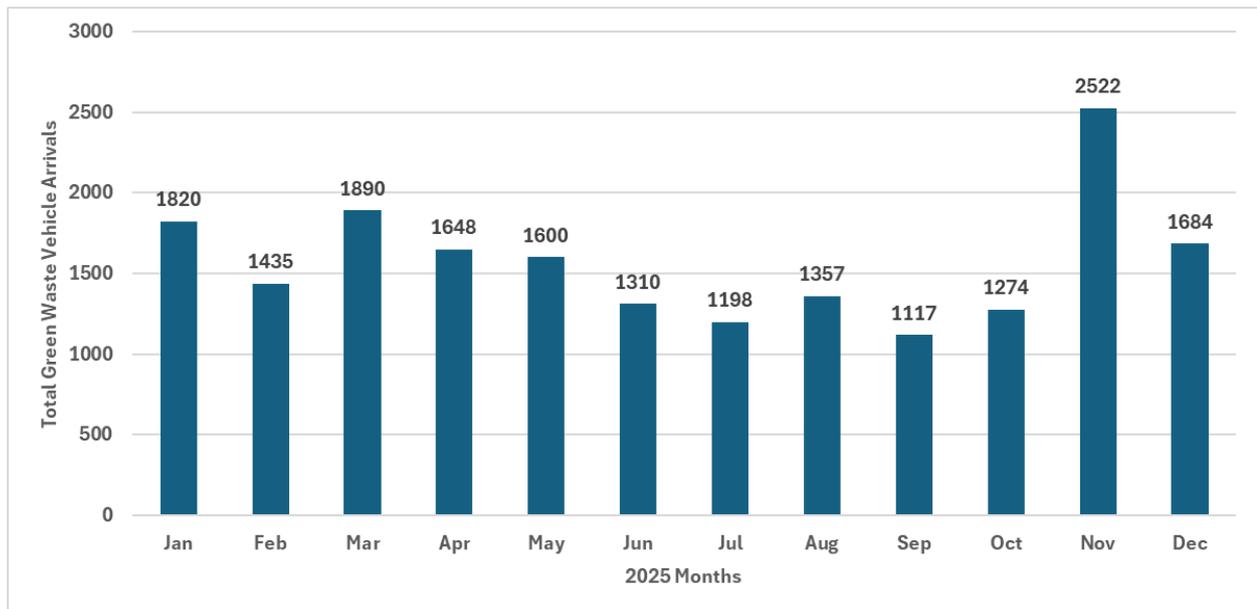


Figure 4-1: Green Waste Monthly Traffic Volume Arrivals

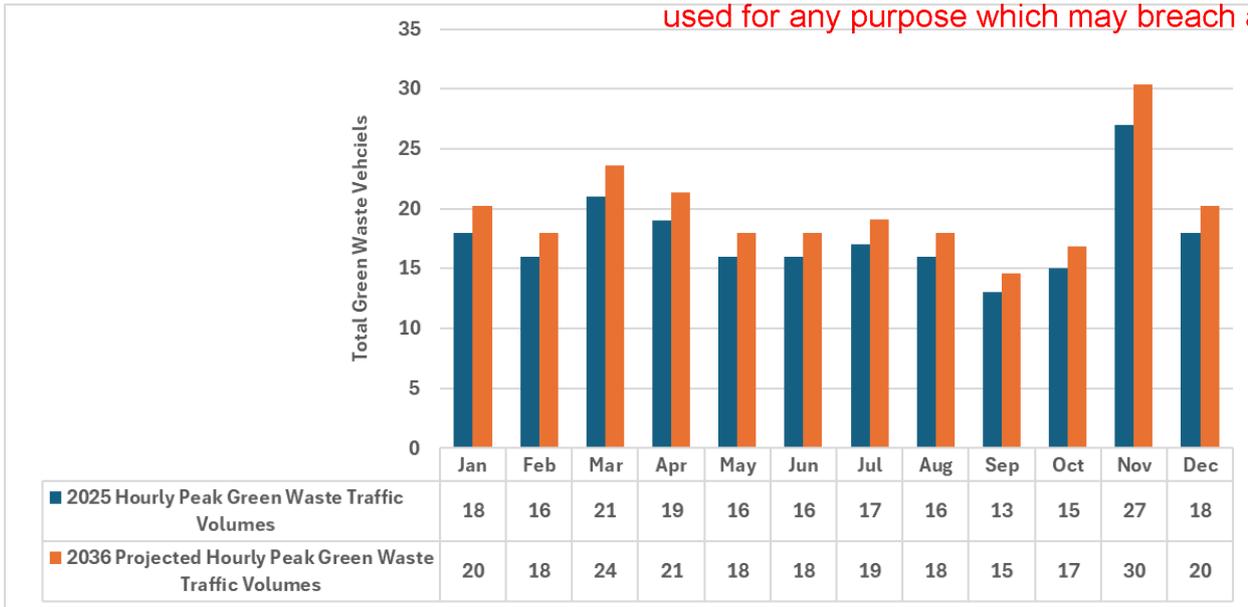


Figure 4–2: 2025 and Projected 2036 Green Waste Hourly Traffic Volume Arrivals

4.1.2.2 Typical site traffic generation

The typical site traffic generation for the proposed development has been informed from the following sources and is summarised in Table 4–2:

- EGSC provided existing green waste vehicle arrivals from 2025 and analysed in Section 4.1.2.1.
- Pavement demand calculations (conducted by SMEC). Noting B-Double truck demands were used as they represented a worse case vehicle type loading, during operations truck and dog trucks are expected / designed to access the facility. Therefore B-Double trucks have been combined with truck and dog vehicles from the pavement assessment undertaken.

In summary, during a typical workday the following traffic demands are forecasted to enter and exit the facility:

- Typical working day a total of three (3) staff is on-site, arriving between 7-8am and departing between 6-7pm.
- On a typical day a total of 73 public visits to the site are estimated.
- On a typical day a total of 11 operational vehicles (trucks) are estimated to visit the site.

Table 4–2: Typical Site Traffic Generation

Operations Type	Vehicle Types	Vehicle Length (m)	Operational Movements	Movement Timing (subject to final site operations plan)	Traffic Demands One-Way		
					Per Year	Per Month	Per Day
Staff	Private Vehicle	5.2	Entry and Exit	Arrive between 7-8am. Depart between 5-6pm	1080	90	3
Public	Private Vehicle with Trailer	7 to 14.9	Loaded on Entry / Unloaded on Exit	Mon-Fri 8am to 5pm Sat/Sun 9am to 5pm	18,855	1,485	73
Operations - External	Kerbside Collection Truck	10.2	Loaded on Entry /		3140	262	9

Operations Type	Vehicle Types	Vehicle Length (m)	Operational Movements	Movement Timing (subject to final site operations plan)	Traffic Demands		
					One-Way		
					Per Year	Per Month	Per Day
			Unloaded on Exit				
	Truck and Dog	22.3	Loaded on Entry and Exit		512	43	2
Operations - Internal	Backhoe Loader	n/a	Internal on-site only	7am to 6pm	n/a		

### 4.1.3 Overall projected traffic volumes

The overall forecast future traffic demands have been developed as follows to aid in subsequent site access arrangement and impact analysis:

- Although any traffic growth on Johnstons Road is likely to be influenced by local development, an annual growth rate of 3% has been applied to the base survey (2023) data to derive the future 2036 background traffic demands (10 years post opening).
- As noted in Section 2.2, the peak traffic demands surveyed in 2023 on Johnstons Road were found to occur during the PM peak (2pm to 3pm) with a two-way total of 99 vehicles (39.5% of recorded vehicles were heavy vehicle types).
- The following two-way / one-way traffic demands were derived along Johnstons Road for 2036:
  - 138 total two-way vehicles (83 light and 52 heavy vehicles).
  - 69 total two-way vehicles (42 light and 27 heavy vehicles).
- For a robust assessment the following development related trips were adopted to ensure consideration of any seasonal or peak operational requirements outside of typical days:
  - Assumed all typical operational (heavy) vehicles arrive / depart in the peak hour.
  - Assumed a total of five (5) heavy vehicles enter from the east (misdirection/transfer from existing landfill site). Including five (5) light vehicles from this direction.
  - Assumed a total of 30 public light vehicles entering from / exiting to the west (i.e. as projected for peak November operations in 2036, as detailed in Section 4.1.2.1.

The resultant 2036 volumes with development turning movement diagram for the peak period is shown in Figure 4-3.

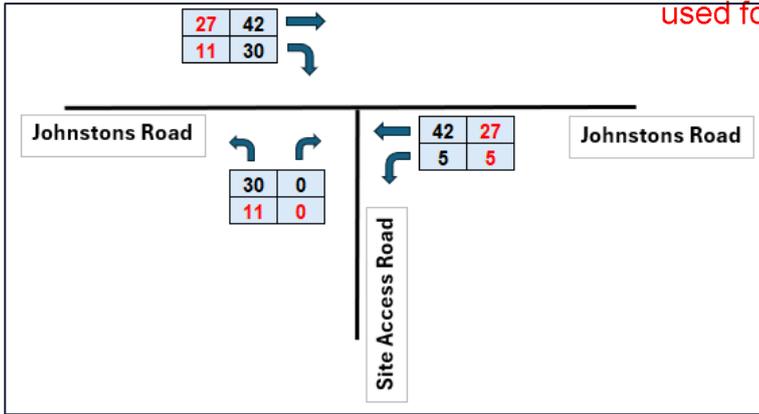


Figure 4-3: Proposed Johnstons Road and Site Access Road Intersection - 2036 anticipated traffic volumes

## 4.2 Site Access Arrangement

The Austroads ‘Guide to Traffic Management Part 6: Intersections, Interchanges and Crossing Management (2020)’ outlines guidance on the need for auxiliary traffic turning lanes at priority intersections. In determining the need for turning lanes many factors must be considered including, traffic speeds, traffic volumes, capacity, type of road, service provided, traffic control and crash history.

The proposed intersection arrangement has been reviewed against the above Austroads design factors with the following noted:

- **Traffic speeds:** As noted in Section 2.2, default traffic speed (100km/h) on Johnstons Road is being exceeded with
  - 85<sup>th</sup> percentile speeds of 97.02km/h and a maximum speed of 156.4km/h.

With high traffic speeds the risk of rear end / loss of control type crashes are increased on rural roads.

- **Traffic volumes / turning warrants:** As detailed in section 4.1.3 and summarised in Figure 4-3, the intersection traffic volumes are low.

The warrants for BA, AU and CH turning treatments are specified in the Austroads Part 6 Guide, with Table 3.25 (a), rural road 100km/h or more graph adopted for review. The right turn and left turn traffic demands for the access intersection are shown in Figure 4-4. As shown based on traffic projections a CHR(s) / BAL intersection has been identified based on the demand / design speed only.

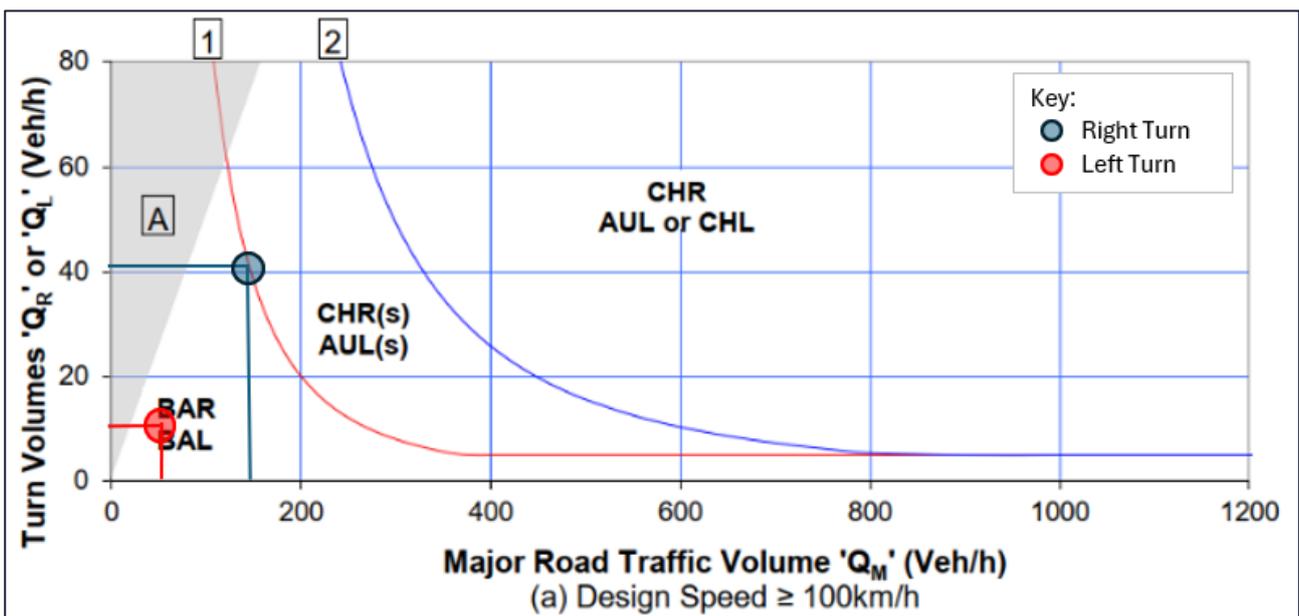


Figure 4-4: Proposed Johnstons Road and Site Access Road Intersection - 2036 future with development traffic demands

- Traffic capacity:** The proposed Johnstons Road and Site Access Road priority intersection (see model layout in Figure 4-5) was developed in SIDRA intersection (v9.1) and the 2036 with development traffic demands (PM peak) assessed. With the low traffic demands the intersection is predicted to work well within capacity metrics with low delays and level of service A operations, as shown in Table 4-3. The SIDRA outputs are provided in Appendix B.

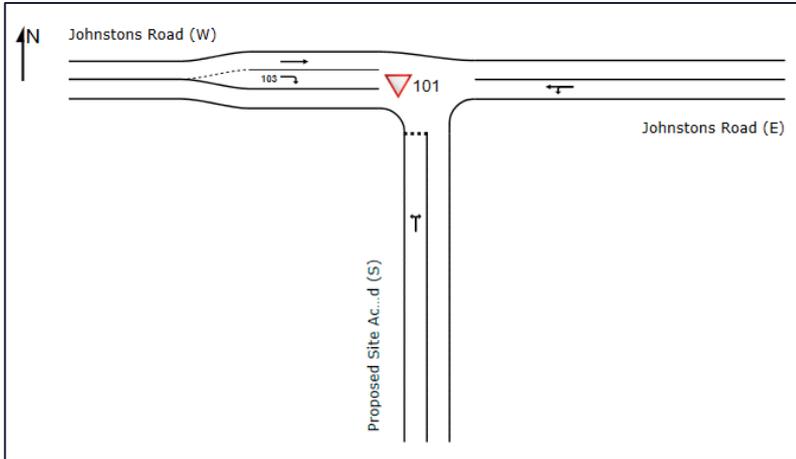


Figure 4-5: Proposed Johnstons Road and Site Access Road Intersection – SIDRA layout

Table 4-3: Proposed Johnstons Road and Site Access Road Intersection –2036 with Development PM Peak –SIDRA Summary Outputs

Control and Configuration		SIDRA Model - 2036 Proposed Priority - PM Peak 2-3				
Approach	Lane configuration	Total Traffic Demands 2041	Model 95th percentile queues (metres)	Degree of Saturation no more than 0.8	Average Delay (Seconds)	Level of service D or less (overall)
South - Proposed Site Access Road	Lane 1 - All Movement (Left and Right Out)	44	1	0.03	3.8	LOS A
	Approach	44	1	0.03	3.8	LOS A
East - Johnstons Road	Lane 1 - Through and Left Turn Lane	83	0	0.05	1.0	LOS A
	Approach	83	0	0.05	1.0	LOS A
West - Johnstons Road	Lane 1 - Through Lane	73	0	0.05	0.0	LOS A
	Lane 2 - Short Right Turn Lane	43	1	0.02	8.1	LOS A
	Approach	116	1	0.05	3.0	LOS A
Overall		243	1	0.05	2.5	LOS A

- Type of road / service provided:** Johnstons Road is a rural road with limited site access points. The proposed compost facility will require private and heavy vehicles to be turning to/from Johnstons Road at a mid-block location.
- Traffic control:** The rural road network typically provides priority-controlled intersections, with turning lane provided on the major road connections. With the low traffic volumes, the intersection control is deemed to be satisfactory.
- Crash history:** As noted in Section 2.3, no recorded crashes were found to occur in the direct vicinity of the development site or its proposed site access location.

Following the above review the Johnstons Road and Site Access is proposed to be a priority intersection with a CHR(s) and BAL turn treatments provided to ensure safe access for road users, with the intersection design detailed in Section 5.1.

# 5. Proposed Site Layout and Transport Provisions

## 5.1 Proposed Site Access Intersection Layout

The proposed functional design layout of the Johnstons Road and Site Access Road Priority intersection has been developed based on the following:

- Providing the following lane configurations:
  - Johnstons Road:
    - Single through traffic lane eastbound with a channelised right-turn treatment CHR(S).
    - Single through traffic lane westbound with a rural basic left turn (BAL), with 2.5m pavement widening.
  - Site Access Road:
    - Two-way side access road with give-way to Johnstons Road.
    - Pavement widening with hatched areas to permit design vehicle movements.
- Keeping the works inside the Title Boundary and existing farm fence.
- Mostly maintaining the existing surface along the eastbound lane.

The proposed layout is shown in Figure 5–1 with the design drawings and vehicle swept paths for the proposed design attached in Appendix C.

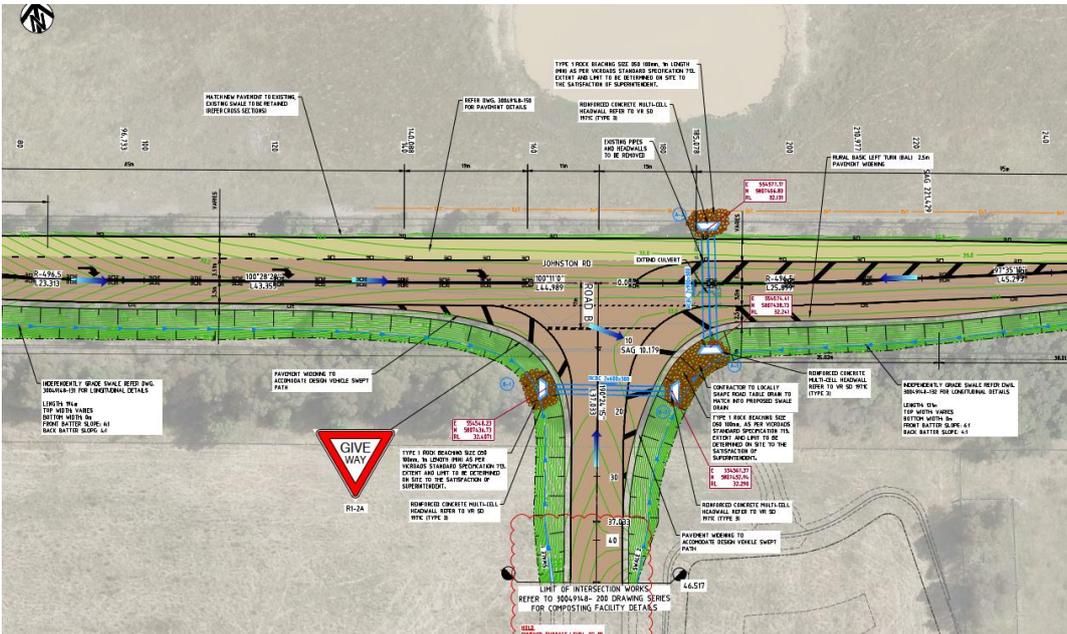


Figure 5–1: Proposed Johnstons Road and Site Access Road Intersection Design

The following is noted with regards to the developed design:

- Design has been developed with reference to Austroads design guide.
- The following are the key assumptions and constraints in developing the design:
  - Existing culvert RLs across Johnston Rd (assumed can be upgraded and realigned).
  - Removal of existing vegetation and trees to provide clear required intersection sight distance is acceptable.

- Existing flat road longitudinal grade.
- Adopted design and check vehicles:
  - 19.0m semi-trailer, radius 15m (design vehicle). 500mm clearances to roadside furniture,
  - 26.0m B-double, radius 15m (check vehicle). Permitted to run over kerbs and encroach into adjacent lanes.

## 5.2 Site Layout

### 5.2.1 Design layout and swept paths

The proposed site layout design and swept path checks are provided in Appendix A. In summary the following was adopted:

- Design speed of 50km/h adopted for internal circulatory road network and inform geometric provisions.
- Road geometry designed in accordance with AGRD Part 3.
- Typical geometrics adopted include:
  - Two (2) traffic lanes in both directions for the site access road. The internal site access road in the facility has a mixture of two and one-way roads, with final way-finding to be finalised during subsequent design phases.
  - Width of traffic lanes, min. 3.5m wide.
  - Shoulder/verges of 1m.
  - Footpaths of 1.5m width where provided.
- Line marking and signage plans have yet to be developed and completed.
- The following vehicles were designed for within the design layout of the facility (subject to further design phases and checks):
  - 10.2m refuse vehicle and 25m B-Double vehicle for design vehicle checks (noting typical larger vehicle access will likely be via Tipper and Tri-Dog, 22.3m in length).
  - Screening and Product Storage Area loadout
    - Backhoe Loader
      - Maturation Pad entry and exit
      - Maturation Pad windrow gaps and corners
    - Passenger Vehicle and Trailer (14.9m)
      - Public Drop-off Facility (note internal layout to be finalised at subsequent design stages).

### 5.2.2 Transport provisions review

A review of the on-site transport provisions has been undertaken, the locations considered are shown in Figure 3–1.

#### 5.2.2.1 Proposed Site Access Road

##### *Design Provisions*

The proposed site access road has 4m wide traffic lanes which taper down to 3.5m in both directions onwards to the access weighbridge. The access road is approximately 290m long with no footpaths on either side.

##### *Recommended Design Improvement Considerations*

With regards to the site access road and entry to the facility the following is noted for review:

- There is no nominated posted speed limit upon entry to the access road, therefore road users may travel at excessive speeds onwards to the site access (default rural speed limit of 100km/h from Johnstons Road). A nominated posted speed limit should be installed; it is suggested that this could be 50km/h with intermittent traffic control devices or speed repeater signs/road markings given the length of the access road.

### 5.2.2.2 Weighbridge Access

#### **Design Provisions**

As shown on Figure 3–1 (and design drawings in Appendix A) the weighbridge access to the facility has the following provisions:

- Single access lane with stop-line, with vehicles to process as follows:
  - Staff / visitor vehicles proceed in left slip lane and either park / continue into facility.
  - Visitor or operational vehicles continue onto weighbridge after receiving clearance to proceed (either by traffic light or manual on-site supervisor), weighed and cleared to enter facility.
- Single exit lane with stop-line, with vehicles to process as follows:
  - Staff / visitor vehicles proceed in left slip lane and continue out of the facility
  - Operational vehicles continue onto weighbridge after receiving clearance to proceed (either by traffic light or manual on-site supervisor), weighed then cleared to exit facility.
- A detailed facility traffic management / operations plan will need to be developed. It is considered that:
  - Based on the number of entering trucks over a typical day that these can be processed will not queue back onto Johnstons Road. A peak daily total of 11 trucks is forecasted over a day.
  - Any vehicles that are rejected from entry will have to enter under guidance by site staff and circulate and exit the facility.

#### **Recommended Design Improvement Considerations**

The following could be considered to improve access/safety:

- Formally advise if vehicles will be stopping at a signal or if these will be manually controlled upon site entry. There is a risk of head-on collisions if this arrangement is not formally managed.
- The line marking for the diverge and entry lane arrangements could be shortened to better direct drivers through this arrangement.
- Review if vehicles re-entering from the slip lanes should formally stop rather than give-way, noting that through movements will be larger trucks (although in frequent in movement). In addition, consider associated give-way or stop-signs to better instruct drivers of the access arrangement.
- There is no formal footpath route/connection from the amenities/lunchroom/parking area and the site office. For site safety, designating a pedestrian route should be considered.
- Wayfinding signage will be required on approach and exit through this area.
- Following approach and entry to the site there are no nominated posted speeds, users may drive at excessive speeds within the facility, and this poses safety issues. Nominated internal speeds for the access loop track and work areas should be nominated and posted.

### 5.2.2.3 Car Parking Area

#### **Design Provisions**

To the east of the site access weighbridge a total of 15 (45 degree angle) car parking spaces is provided.

EGSC have confirmed that this provision will facilitate the number of staff and visitors to the facility (noting that planning Clause 52.06 Car Parking, does not specify car parking provisions for a compost waste facility).

The car parking space have been designed as follows:

- Accessway width of 3.9m and car space length 5.4m and width 2.4m. Wheel stops are proposed with a 1.5m wide footpath to the east of the car parking spaces, provided pedestrian access onwards to the amenities/lunchroom, and south into the facility.
- Noted Clause 52.06 Car Parking, specifies in Table 2 the minimum dimensions of car parking spaces and accessways, the following dimensions are noted for 45-degree angle parking
  - Min. accessway width of 3.5m, and car space dimensions of length 4.9m and width 2.6m

Although the planning scheme notes design of spaces against the planning scheme in preference to the Australian standard, the designed spaces are adequate.

#### **Recommended Design Improvement Considerations**

- Pathway for vehicles exiting the facility is not clear, are they permitted to U-turn into the exit slip lane opposite, or will they have to travel around the site to exit via the one-way loop. If the former then a formal stop-line, sign and directional signage may be beneficial to direct drivers out of the facility. A swept path accessibility check should also be undertaken.
- No posted speed limit for this area this should be reviewed.

#### **5.2.2.4 Internal Site Circulation and Access**

##### **Design Provisions**

Upon entry from the weighbridge vehicles are to access the various end points of the compost facility via the proposed one-way / two-way tracks. Access to and from the internal site areas has not been finalised at this concept design stage and is subject to further design refinement in terms of site entry/exit points to the internal destinations, wayfinding/traffic signage and internal road line marking. The design intent at this stage would be as follows:

- Public drop-off facility – vehicles enter from north and turn left into this area, drop off, and then exit to south of this area and travel back out of the facility (therefore keeping public vehicles away from the screening and process control areas and associated vehicle movements).
- The drop off sorting facility – vehicles enter from the north and exit south, as per the public drop off vehicles will not need to mix with internal screening and process control areas and associated vehicle movements.
- The compost area is accessed to the east of the access track which is one-way southbound in terms of site orientation. The design at this stage as this as an open access area, therefore some further review of vehicle movements will be required.
- The screening and product storage area is located to the south of the site. The initial way-finding premise is that vehicles can enter southbound on the access loop track to this area and travel in a one-way loop anticlockwise to exit.
- A washdown area (22.4m by 3.05m) is located upon exit from the loop track.

##### **Recommended Design Improvement Considerations**

The following internal site circulation and access improvement considerations are outlined below:

- No way-finding signage is shown for users of the facility.
- Repeater signage and on-road arrow markings showing to users where two-way / one-way vehicle movements are permitted. There is little or no guidance on this from a facility user perspective.
- The access track mainline at this concept stage shows stop-lines on the western track, with vehicles expected to stop and give-way to other internal access track movements. This is a not a typical arrangement for road users and will need to be revisited. It is suggested that any minor roads give-way (or stop) to mainline loop road traffic movements.
- The access to the compost maturation pad and wind rows is open with no defined entry/exit points for workers.

- The footpath from the amenities / lunch room / parking area does not continue in the concept design into the facility. This will require further consideration as to where this links to within the site. Given the size of the site the potential usage of on-site work buggy's or similar vehicles could be considered to restrict on foot movements. If this was considered additional areas for parking and footpaths for pedestrians should be further reviewed and allowed for.
- There are no nominated posted speeds within the facility, users may drive at excessive speeds within the facility, and this poses safety issues. Nominated internal speeds for the access loop track and work areas should be nominated and posted. Any additional traffic control measures for excessively long access tracks should also be reviewed.

## 6. Conclusions and Recommendations

### 6.1 Conclusions

SMEC has been commissioned by EGSC to undertake a Traffic Impact Assessment (TIA) to support the a planning application for the proposed Bairnsdale Composting Facility.

The proposed Bairnsdale Composting Facility is to be located within the existing landholding at the Bairnsdale Regional Landfill, located immediately west of the existing landfill and waste transfer station site.

In summary, during a typical workday the following traffic demands are forecasted to enter and exit the facility:

- Typical working day a total of three (3) staff is on-site, arriving between 7-8am and departing between 6-7pm.
- On a typical day a total of 73 public visits to the site are estimated.
- On a typical day a total of 11 operational vehicles (trucks) is estimated to visit the site.

The facility is proposed to provide the following which was reviewed against standards:

- New priority site access intersection with Johnstons Road and new site access road into the site.
  - Following review against the projected traffic demands and turning lane requirements a CHR(s)/BAL priority intersection was determined.
  - SIDRA intersection modelling of the proposed access intersection and projected worst case traffic demands showed it to operate well within capacity.
- The internal site layout has been designed to facilitate the design vehicles. In addition, on-site parking provisions are adequate for operations. It is noted that the internal design layout is subject to further design refinement and finalisation.

It is noted that this TIA does not consider the traffic impact during the construction stage of the project and this will need to be addressed as part of a subsequent Traffic Management Plan (TMP).

Accordingly, based on the findings of this TIA, the proposed development will have no adverse traffic impacts on the local road network. Some recommendations are made in the subsequent subsection to be considered at the subsequent project stages by the project team and stakeholders.

### 6.2 Recommendations

The following recommendations are made to be considered at subsequent project stages by the project team and stakeholders.

- Undertake a Road Safety Audit (RSA) of the proposed access intersection and internal development site layout. An independent RSA will identify any additional road safety issues which may need to be addressed to ensure a safe transport environment for all road users.
- External road network / site access:
  - Consider review of the posted speed limit (posted reduction from rural default speed limit) on Johnstons Road on the approach to the access intersection to the facility to facilitate safer movements of vehicles.
- Internal site layout:
  - Section 5.2.2 of this TIA provided some recommendations for review with regards to the internal site layout developed during finalising of the layout; these are summarised in Table 6-1.
- Produce an integrated Traffic Management and Operations Plan for the facility. This should cover a range of potential operational issues and establish control protocols. The plan can be a live document which monitors and records operational outcomes of the facility and identifies risks and mitigation measures over time.

Conclusions and Recommendations

Table 6-1: Internal Site Layout Recommendations

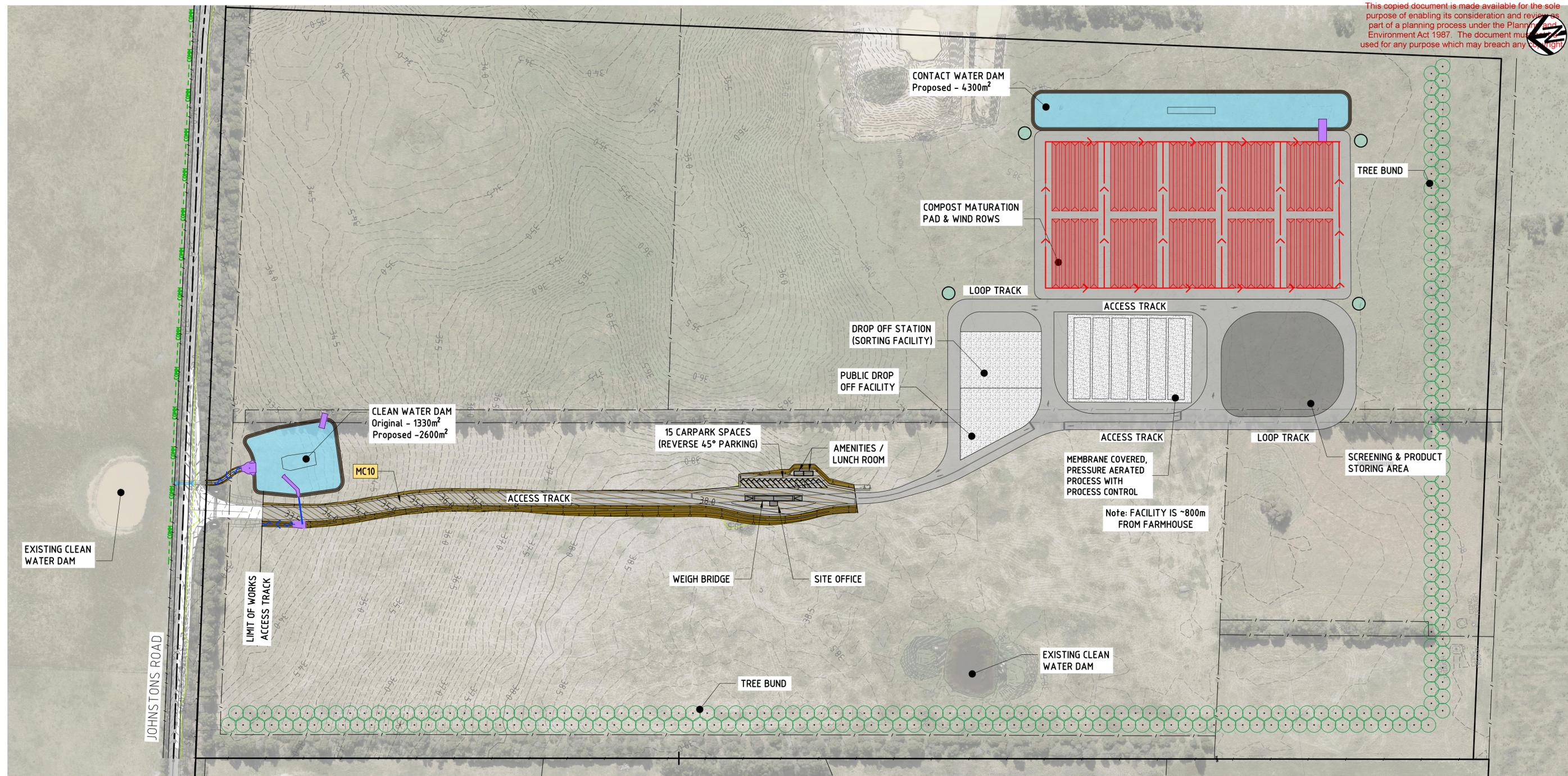
Area No.	Internal Site Area	Recommendation
1	Proposed Site Access Road	<ul style="list-style-type: none"> <li>There is no nominated posted speed limit upon entry to the access road, therefore road users may travel at excessive speeds onwards to the site access (default rural speed limit of 100km/h from Johnstons Road). A nominated posted speed limit should be installed; it is suggested that this could be 50km/h with intermittent traffic control devices or speed repeater signs/road markings given the length of the access road.</li> </ul>
2	Weighbridge Access	<ul style="list-style-type: none"> <li>Formally advise if vehicles will be stopping at a signal or if these will be manually controlled upon site entry. There is a risk of head-on collisions if this arrangement is not formally managed.</li> <li>The line marking for the diverge and entry lane arrangements could be shortened to better direct drivers through this arrangement.</li> <li>Review if vehicles re-entering from the slip lanes should formally stop rather than give-way, noting that through movements will be larger trucks (although in frequent in movement). In addition, consider associated give-way or stop-signs to better instruct drivers of the access arrangement.</li> <li>There is no formal footpath route/connection from the amenities/lunch room/parking area and the site office. For site safety, designating a pedestrian route should be considered.</li> <li>Wayfinding signage will be required on approach and exit through this area.</li> <li>Following approach and entry to the site there are no nominated posted speeds, users may drive at excessive speeds within the facility, and this poses safety issues. Nominated internal speeds for the access loop track and work areas should be nominated and posted.</li> </ul>
3	Car Parking Area	<ul style="list-style-type: none"> <li>Pathway for vehicles exiting the facility is not clear, are they permitted to u-turn into the exit slip lane opposite, or will they have to travel around the site to exit via the one-way loop. If the former then a formal stop-line, sign and directional signage may be beneficial to direct drivers out of the facility. A swept path accessibility check should also be undertaken.</li> <li>No posted speed limit for this area this should be reviewed.</li> </ul>
4	Internal Site Circulation and Access	<ul style="list-style-type: none"> <li>No way-finding signage is shown for users of the facility.</li> <li>Repeater signage and on-road arrow markings should be used to indicate to users where two-way / one-way vehicle movements are permitted. There is little or no guidance on this from a facility user perspective.</li> <li>The access track mainline at this concept stage shows stop-lines on the western track, with vehicles expected to stop and give-way to other internal access track movements. This is not a typical arrangement for road users and will need to be revisited. It is suggested that any minor roads give-way (or stop) to mainline loop road traffic movements.</li> <li>The access to the compost maturation pad and wind rows is open with no defined entry/exit points for workers.</li> <li>The footpath from the amenities / lunch room / parking area does not continue in the concept design into the facility. This will require further consideration as to where this links to within the site. Given the size of the site the potential usage of on-site work buggy's or similar vehicles could be considered to restrict movement of workers. If this was</li> </ul>

Conclusions and Recommendations

Area No.	Internal Site Area	Recommendation
		<p>considered additional areas for parking and footpaths for pedestrians should be further reviewed and allowed for.</p> <ul style="list-style-type: none"> <li>There are no nominated posted speeds within the facility, users may drive at excessive speeds within the facility, and this poses safety issues. Nominated internal speeds for the access loop track and work areas should be nominated and posted. Any additional traffic control measures for excessively long access tracks should also be reviewed.</li> </ul>

## Appendix A

# Civil Drawings Package



LEGEND		EXISTING	
<b>DESIGN</b>		CLEAN WATER SWALE DRAIN	MAJOR CONTOURS (0.5m INTERVAL)
MC10 CONTROL ALIGNMENT		STORMWATER CULVERTS & HEADWALLS	MINOR CONTOURS (0.1m INTERVAL)
MAJOR CONTOURS (0.5m INTERVAL)		LINE MARKING	
MINOR CONTOURS (0.1m INTERVAL)		FIRE WATER TANKS BY OTHERS	
PAVEMENT AREAS		WIND ROWS	
CONCRETE HARDSTAND AREAS		INDICATIVE DRAINAGE FLOWS	
RIP-RAP AREAS (FOR DETAILS REFER DRG'S 241 TO 244)		TREE	

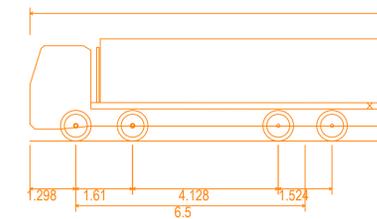
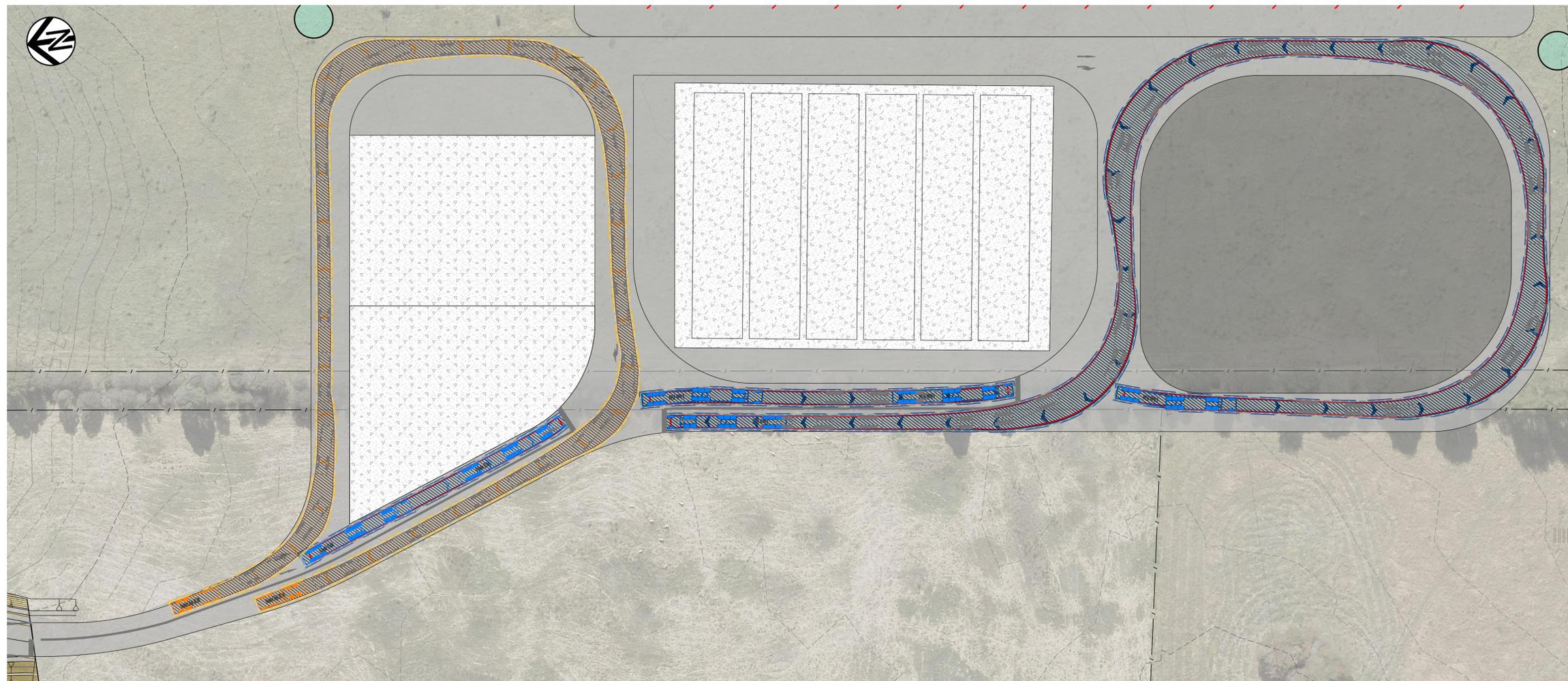
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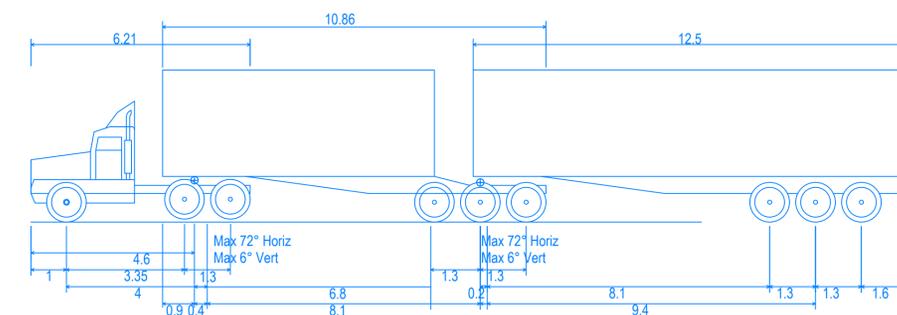
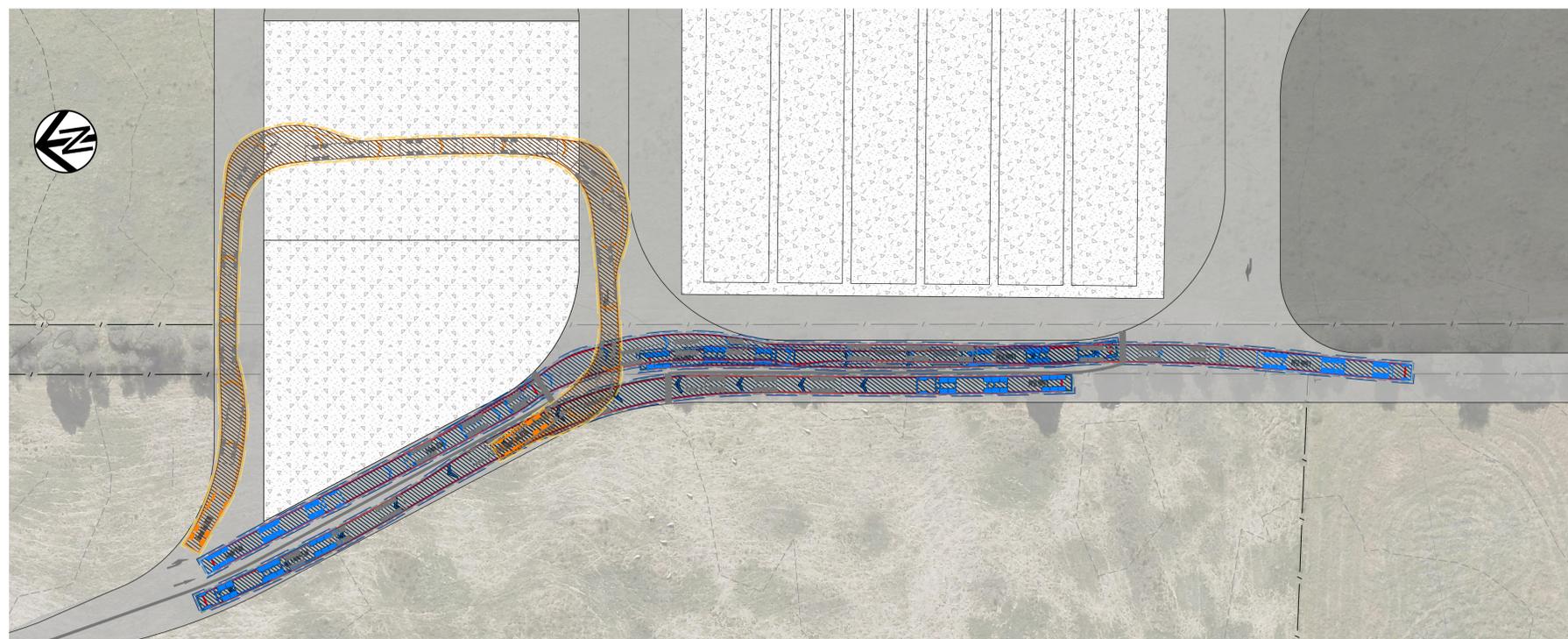
**EAST GIPPSLAND COMPOST FACILITY  
 DESIGN LAYOUT  
 CIVIL WORKS PLAN**

**INFORMATION DOCUMENT**  
 30049148\_250526\_EGCF\_OPT1\_REV3\_MN





Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	11.550m



B-Double (25 m)	
Overall Length	25.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

**NOT FOR CONSTRUCTION**

SCALE 1:500

AT A1 SIZE DRAWING

DRAWING FILE LOCATION / NAME  
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**EAST GIPPSLAND COMPOST FACILITY  
 DESIGN LAYOUT  
 VEHICLE TURNING MOVEMENTS**

**INFORMATION DOCUMENT**

30049148\_250526\_EGCF\_OPT1\_REV3\_MN



an smec company

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TOWNSHIP OF DOCKLANDS VIC 3008

## Appendix B

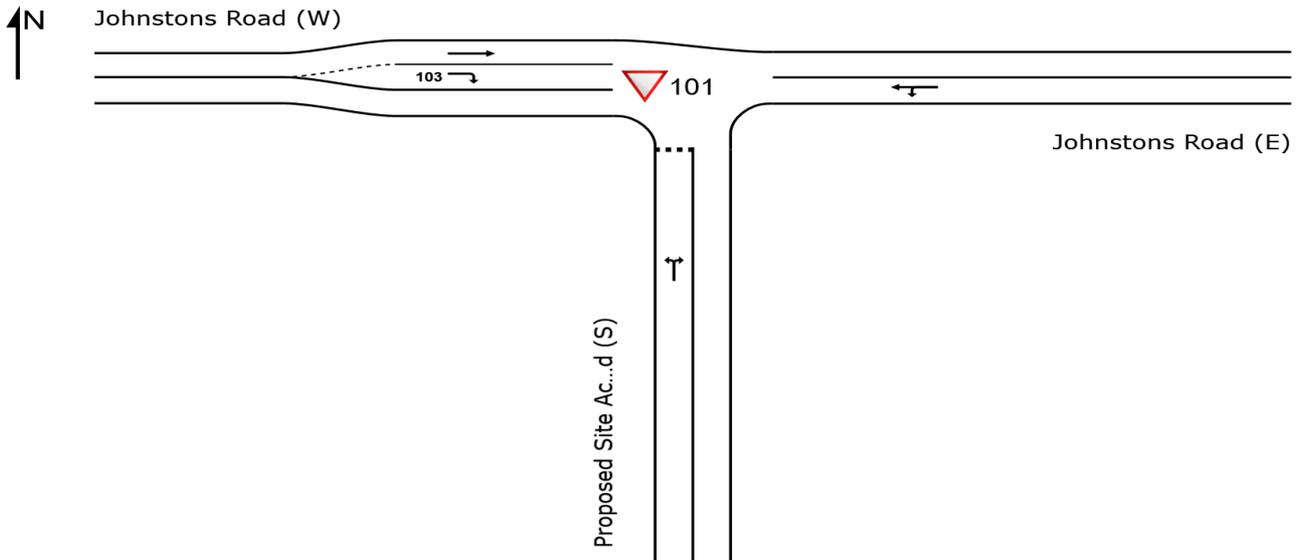
# SIDRA Outputs

# SITE LAYOUT

▽ Site: 101 [Proposed Johnstons Road and Site Access Road Priority Intersection\_36 PM with Dev (Site Folder: Proposed Bairnsdale Compost Facility)]

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SIDRA INTERSECTION 9.1 | Copyright © 2000-2023 Akcelik and Associates Pty Ltd | sidrasolutions.com  
Organisation: SMEC AUSTRALIA | Licence: NETWORK / Enterprise Level 2 | Created: Monday, 9 February 2026 4:00:33 PM  
Project: \\filer.nasuni.local\smecanz\Projects\300491\30049148 - EGSC Composting Facility\04 Technical\TPA\TIA - Planning App\Calcs & SIDRA\SIDRA\_Prop Site Acc BCF\_05-02-26.sip9

## LANE SUMMARY

Site: 101 [Proposed Johnstons Road and Site Access Road Priority Intersection\_36 PM with Dev (Site Folder: Proposed Bairnsdale Compost Facility)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

New Site  
 Site Category: (None)  
 Give-Way (Two-Way)

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
	[ Total veh/h ]	[ HV % ]	[ Total veh/h ]	[ HV % ]						[ Veh ]	[ Dist ] m				
South: Proposed Site Access Road (S)															
Lane 1	44	26.2	44	26.2	1710	0.026	100	3.8	LOS A	0.1	1.0	Full	100	0.0	0.0
Approach	44	26.2	44	26.2		0.026		3.8	LOS A	0.1	1.0				
East: Johnstons Road (E)															
Lane 1	83	40.5	83	40.5	1544	0.054	100	1.0	LOS A	0.0	0.0	Full	477	0.0	0.0
Approach	83	40.5	83	40.5		0.054		1.0	NA	0.0	0.0				
West: Johnstons Road (W)															
Lane 1	73	39.1	73	39.1	1547	0.047	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	43	26.8	43	26.8	1927	0.022	100	8.1	LOS A	0.1	1.0	Short	103	0.0	NA
Approach	116	34.5	116	34.5		0.047		3.0	NA	0.1	1.0				
All Vehicles	243	35.1	243	35.1		0.054		2.5	NA	0.1	1.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Lane LOS values are based on average delay per lane.  
 Minor Road Approach LOS values are based on average delay for all lanes.  
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
 Two-Way Sign Control Capacity Model: SIDRA Standard.  
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
South: Proposed Site Access Road (S)										
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From S To Exit:	W	E								
Lane 1	43	1	44	26.2	1710	0.026	100	NA	NA	
Approach	43	1	44	26.2		0.026				
East: Johnstons Road (E)										
Mov.	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From E To Exit:	S	W								
Lane 1	11	73	83	40.5	1544	0.054	100	NA	NA	
Approach	11	73	83	40.5		0.054				
West: Johnstons Road (W)										
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From W										

To Exit:	E	S								
Lane 1	73	-	73	39.1	1547	0.047	100	NA	NA	
Lane 2	-	43	43	26.8	1927	0.022	100	0.0	1	
Approach	73	43	116	34.5	0.047					
Total %HV Deg.Satn (v/c)										
All Vehicles	243	35.1	0.054							

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Proposed Site Access Road (S)				
Lane 1	0.0	0.0	0.0	0.0
East: Johnstons Road (E)				
Lane 1	0.0	0.0	0.0	0.0
West: Johnstons Road (W)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

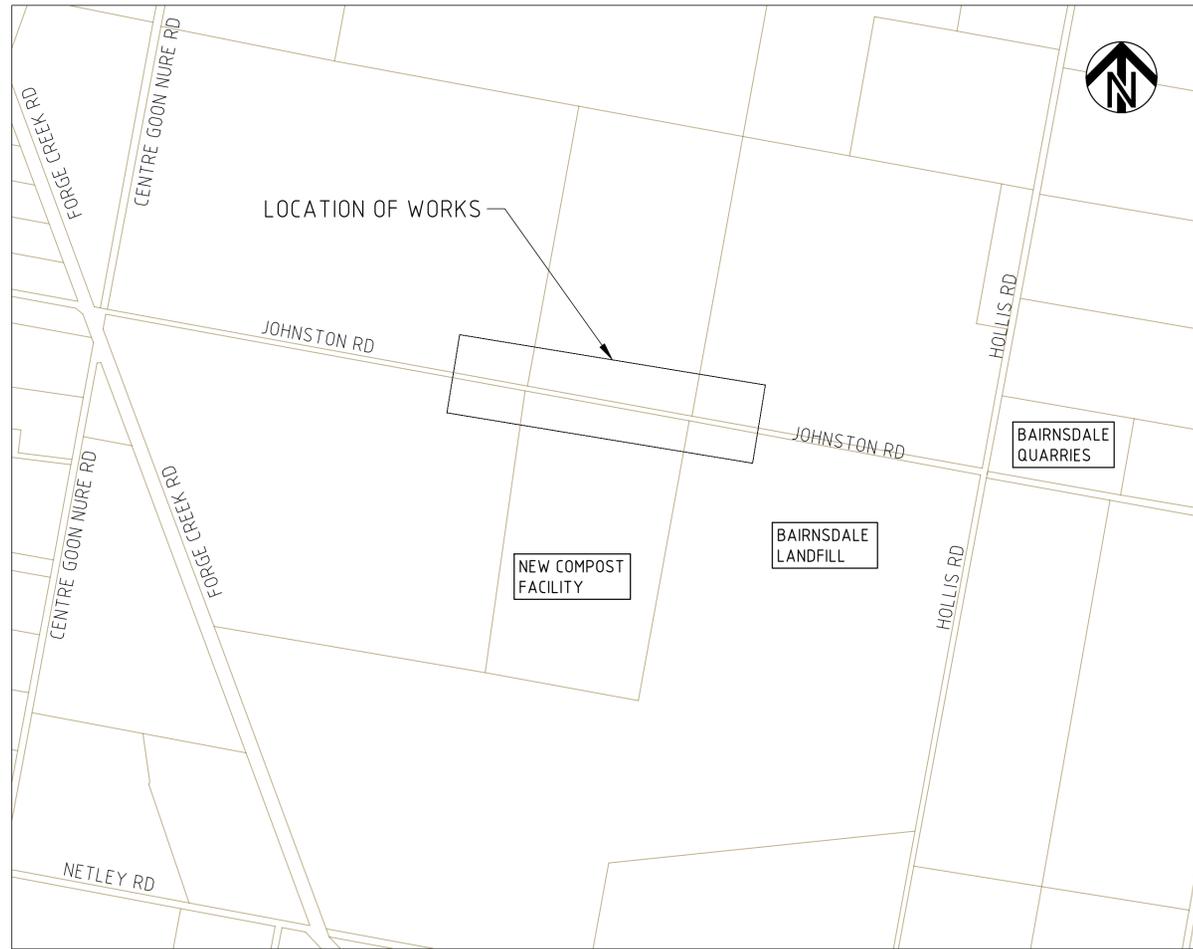
## Appendix C

# Access Intersection Design and Swept Paths

# DETAILED DESIGN

## JOHNSTON RD INTERSECTION

### EAST GIPPSLAND SHIRE COUNCIL



**LOCALITY PLAN**  
NOT TO SCALE

DRAWING INDEX		
DRAWING NUMBER	DESCRIPTION	REVISION
3004.914.8-101	COVER PAGE	A
3004.914.8-102	GENERAL NOTES & TYPICAL SECTIONS	A
3004.914.8-120	OVERALL ALIGNMENT PLAN	A
3004.914.8-121	ALIGNMENT PLAN SHEET 1 OF 2	A
3004.914.8-122	ALIGNMENT PLAN SHEET 2 OF 2	A
3004.914.8-130	LONGITUDINAL SECTIONS JOHNSTON ROAD & ROAD B	A
3004.914.8-131	LONGITUDINAL SECTIONS SWALE 1	A
3004.914.8-132	LONGITUDINAL SECTIONS SWALE 2	A
3004.914.8-140	JOHNSTON ROAD CROSS SECTIONS CH 0.000 - CH 140.000	A
3004.914.8-141	JOHNSTON ROAD CROSS SECTIONS CH 160.000 - CH 280.14.9	A
3004.914.8-142	ROAD B CROSS SECTIONS CH 20.000 - CH 46.500	A
3004.914.8-150	DRAINAGE LONGITUDINAL SECTIONS	A

**WARNING**  
**BWARE OF UNDERGROUND SERVICES**  
The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
www.1100.com.au

150 mm ON ORIGINAL  
A1

DRAWING FILE LOCATION / NAME V:\_Vault\Projects\3004\3004.914.8\110_CADD\CAD\DWG\Detail Design\3004.914.8-101.dwg		PLOT DATE 06 Aug 2024		TIME 13:52:54	
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	01	6.08.2024	ISSUED TO CLIENT FOR REVIEW	001	B.Q
					DRAFTER <i>M. VICENTE</i>
					DRAFTING CHECK <i>N. KHAMCHOM</i>
					DESIGNER <i>N. KHAMCHOM</i>
					DESIGN CHECK <i>A. ROBERTSON</i>
					PROJECT MANAGER <i>B. QUILL</i>
					PROJECT DIRECTOR <i>W. MOSSE</i>

DESIGNER	 an  company © SMEC AUSTRALIA PTY LTD (ABN 47 065 475 149) TOWER 4, LEVEL 20, 727 COLLINS STREET DOCKLANDS VIC 3008 SMEC PROJECT No 30049148
CLIENT	 EAST GIPPSLAND SHIRE COUNCIL

## DETAILED DESIGN

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE COVER PAGE		SCALE AS NOTED	PHASE DETAILED DESIGN	PROJECT / DRAWING No. 3004.914.8-101	REVISION A
		Printed 26/02/2026		Page 36 of 50	

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**GENERAL NOTES**

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER SUCH WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- EAST GIPPSLAND SHIRE COUNCIL (EGSC) EXTERNAL WORKS COMPLIANCE OFFICER, REQUIRES A HOLD POINT MEETING WITH CONTRACTOR BEFORE AND AFTER THE SUBBASE COURSE, IN ADDITIONAL TO THE OTHER AGREED HOLD POINTS REQUIRED BY EGSC EXTERNAL WORKS COMPLIANCE OFFICER.
- EGSC APPROVED DETAIL DRAWINGS MUST BE ADHERED TO UNLESS APPROVED IN WRITING BY EGSC.
- ALL WORK SHALL BE IN ACCORDANCE WITH INFRASTRUCTURE DESIGN MANUAL (IDM) AND DEPARTMENT OF TRANSPORT (DTP) STANDARD SPECIFICATION FOR ROADWORKS AND OTHER PUBLISHED IDM AND DTP SPECIFICATIONS, STANDARD, GUIDELINES AND PRACTICES.
- DO NOT OBTAIN DIMENSIONS BY SCALING FROM DRAWINGS.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- ALL COORDINATES ARE IN METRES TO THE MAP GRID OF AUSTRALIA ZONE 55 (GDA2020).
- ALL REDUCED LEVELS ARE IN METRES TO THE AUSTRALIAN HEIGHT DATUM (AHD).
- THE CONTRACTOR SHALL SET OUT THE WORKS PRIOR TO EXCAVATION. WHERE A CONFLICT OR INCONSISTENCY BECOMES APPARENT, THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT IMMEDIATELY.
- THE LOCATIONS OF THE EXISTING SERVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE LOCATION OF ALL EXISTING SERVICES SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF ANY WORKS ON SITE.
- ALL DISTURBED SURFACES SHALL BE REINSTATED TO ORIGINAL CONDITION UNLESS NOTED OTHERWISE.
- NO TREE OR NATIVE VEGETATION SHALL BE DISTURBED OR REMOVED WITHOUT PRIOR APPROVAL FROM THE COUNCIL. ALL TREES AND VEGETATION THAT SHALL BE RETAINED WILL BE PROTECTED AS PER AS4790 REQUIREMENTS.

**UTILITIES**

- THE LOCATIONS OF UTILITY SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THEIR EXACT LOCATION ON SITE PRIOR TO ANY CONSTRUCTION WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITY SERVICES DURING CONSTRUCTION.
- SINGLE LINES DENOTING UTILITY SERVICES ON THESE DRAWINGS MAY REPRESENT MULTIPLE PIPES/CABLES/ CONDUITS.
- ALL SERVICES SHALL BE TREATED AS LIVE UNTIL REMOVED.

**KERBS AND ROAD FURNITURE**

- ALL KERBS SHALL BE VICROADS TYPE KERBS AS NOTED ON THE KERB DETAIL PLANS. ALL KERBS ARE SET OUT ACCORDING TO THE KERB LIP.
- ALL KERB TRANSITIONS SHALL BE CONSTRUCTED OVER A LONGITUDINAL LENGTH OF 1m.
- VEHICLE CROSSOVERS SHALL BE IN ACCORDANCE WITH IDM STANDARD DRAWINGS
- ALL SAFETY BARRIERS AND TERMINALS SHALL BE MASH TL3 VICROADS APPROVED PRODUCTS AS PER VICROADS RDN 06-04 AND SHALL INCLUDE A CONCRETE MAINTENANCE STRIP CONSTRUCTED IN ACCORDANCE WITH VICROADS SD 3503.

**SIGNAGE AND LINEMARKING**

- ALL SIGNS, LINEMARKING AND RPPMS SHALL BE PLACED IN ACCORDANCE WITH AS1742.1, AS1742.2, AS1742.15, AS 1742.4, AS1742.7 AND DTP TRAFFIC ENGINEERING MANUAL AND RELEVANT DTP SUPPLEMENTS
- ALL DIMENSIONS ARE TO LINE OF KERB AND CHANNEL UNLESS OTHERWISE SPECIFIED.

**UNDERGROUND STORMWATER DRAINAGE**

- ALL STORMWATER DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE DRAWINGS AND DTP STANDARD SPECIFICATIONS 701 & 705.
- UNLESS OTHERWISE SPECIFIED, ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS 3 AND SHALL BE RUBBER RING JOINTED.

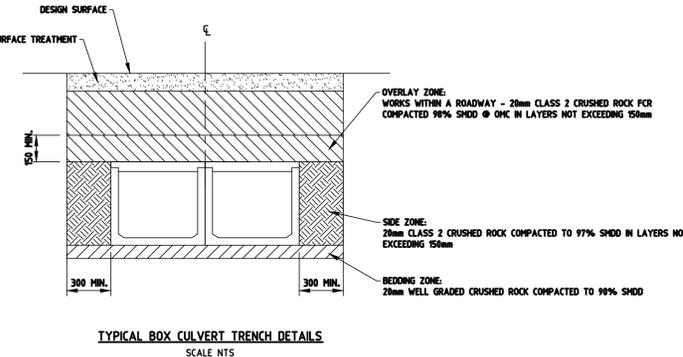
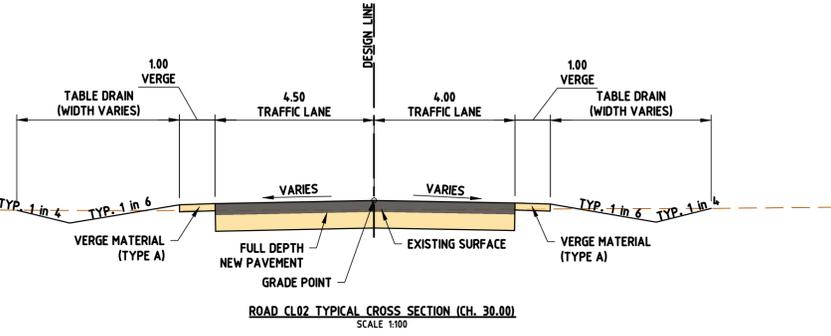
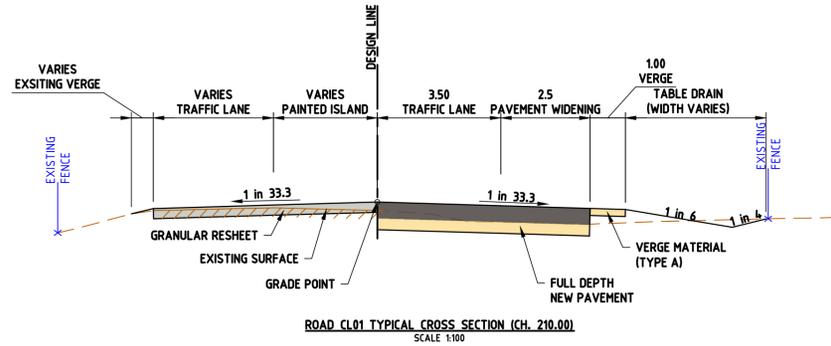
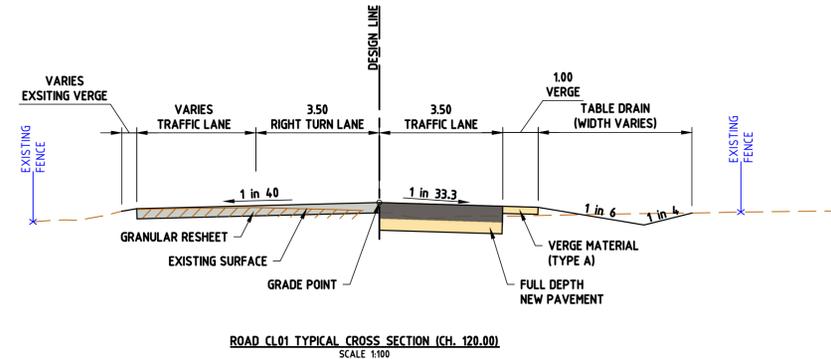
**EXCAVATION & EARTHWORKS**

- ALL EARTHWORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DTP STANDARD SPECIFICATION SECTION 204.
- TYPE A MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 204.041 AND SHALL BE FREE OF TOPSOIL, DELETERIOUS AND/OR PERISHABLE MATTER.

LOCATION AND USE OF TYPE A MATERIAL	PHYSICAL PROPERTIES			LIMITS OF GRADING (1% PASSING BY MASS) POST COMPACTION SIEVE SIZE AS (mm)					PI RANGE POST COMPACTION	
	ASSIGNED CBR (MIN) % (1)	SWELL % (1)	PERMEABILITY (MAX) m/s (2)	75.0	37.5	4.75	0.425	0.075		
CAPPING LAYER	10	≤1.5	5 x 10 <sup>-9</sup>	100		4.0-8.0		10-4.0	1000	6-25
SELECTED MATERIAL	6	≤1.5	NOT APPLICABLE	100		4.0-8.0		10-4.0	1000	6-25
VERGE MATERIAL	6	≤1.0	5 x 10 <sup>-9</sup>	100		4.0-8.0		10-4.0	1000	6-25
STRUCTURAL MATERIAL	6	≤1.5	NOT APPLICABLE	100		4.0-8.0		10-4.0	1000	6-25
OTHER TYPE A MATERIAL	6	≤1.5	5 x 10 <sup>-9</sup>	100		4.0-8.0		10-4.0	1000	6-25
#										

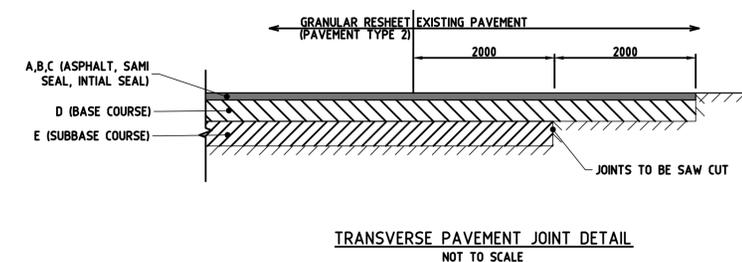
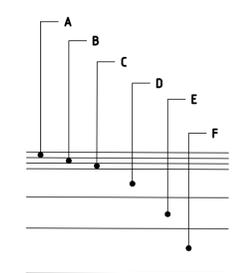
- NOTES: (1) THE ASSIGNED CBR AND PERCENTAGE SWELL VALUES ARE TO BE DETERMINED IN ACCORDANCE WITH VICROADS CODE OF PRACTICE RC 500.20. SAMPLING FOR CBR TESTING SHALL BE UNDERTAKEN AFTER FIELD COMPACTION.
- (2) THE PERMEABILITY VALUE IS TO BE DETERMINED IN ACCORDANCE WITH VICROADS CODE OF PRACTICE RC 500.16. THE PERMEABILITY VALUE IS TO BE DETERMINED ON SPECIMENS MANUFACTURED FROM THAT FRACTION OF MATERIAL WHICH PASSES A 19.0MM AS SIEVE, COMPACTED AT OPTIMUM MOISTURE CONTENT AND 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY TESTING USING STANDARD COMPACTIVE EFFORT FOR CBR AND SWELL.

- TYPE B MATERIAL SHALL HAVE MINIMUM ASSIGNED CBR OF 3%, AND ASSIGNED PERCENT SWELL LESS THAN 2.5% WHICH HAS BEEN DETERMINED IN ACCORDANCE WITH DTP CODE OF PRACTICE RC 500.20.
- VEGETATION AND TOP SOIL SHALL BE REMOVED AND SEPARATED FROM THE EXCAVATED MATERIAL.
- SUITABLE MATERIAL FROM THE REQUIRED EXCAVATION SHALL BE USED IN THE PERMANENT WORKS.
- EXCAVATION NEAR STRUCTURES TO BE RETAINED SHALL BE CARRIED OUT BY METHODS DESIGNED TO MINIMISE THE RISK OF DAMAGE TO THE STRUCTURES. DAMAGE CAUSED TO THESE STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR.
- IF ANY AREA ON CUT BATTERS BECOMES UNSTABLE OR UNSAFE, THE CONTRACTOR SHALL INSTALL SUITABLE MEASURES TO RESTRICT ACCESS TO THE AREA, E.G. THE ERECTION OF WARNING SIGNS AND FENCING. THE AFFECTED AREA SHALL BE INSPECTED AND ASSESSED BY A GEOTECHNICAL ENGINEER, AND MADE SAFE PRIOR TO EXCAVATION PROCEEDING IN THE AFFECTED AREA.
- AREAS UPON WHICH FILLS ARE TO BE CONSTRUCTED SHALL BE PREPARED FOR TEST ROLLING BY THE CONTRACTOR. THE SURFACE OF THE PREPARED AREA SHALL BE TEST ROLLED IN ACCORDANCE WITH CLAUSE 204.12. ANY UNSTABLE AREAS DETECTED BY TEST ROLLING SHALL BE RECTIFIED.
- WHERE A FILL IS TO BE CONSTRUCTED ON STEEP SIDELING GROUND OR AGAINST AN EXISTING EMBANKMENT WITH SIDE SLOPE STEEPER THAN 4 HORIZONTALLY TO 1 VERTICALLY, BENCHES SHALL BE PROGRESSIVELY CUT OVER THE FULL AREA TO BE COVERED BY NEW FILL. THE WIDTH OF EACH BENCH SHALL BE SUCH AS TO PERMIT SAFE AND EFFECTIVE OPERATION OF PLANT BUT SHALL BE NOT LESS THAN 1m.



PAVEMENT TYPE 1: FULL DEPTH PAVEMENT		
PAVEMENT LAYER	THICKNESS (mm)	MATERIAL
A ASPHALT (WEARING)	40	SIZE 40 mm TYPE HP PMB (WITH A10E) ASPHALT
B SAMI SEAL	-	SMI (STRAIN ALLEVIATING MEMBRANE INTERLAYER): SIZE 10mm S2SE (POLYMER MODIFIED BINDER) AT 1.5L/m2 SPRAY RATE AND 160m3/m2
C INITIAL SEAL	-	SIZE 7 mm BITUMEN EMULSION INITIAL SEAL (NOT EXCEEDING 60% BITUMEN CONTENT), MINIMUM RATE OF APPLICATION OF RESIDUAL BINDER OF 0.9 L/m2
D BASE COURSE	100	SIZE 20 mm CLASS 1 CRUSHED ROCK, SIZE 20 mm CLASS 1 RECYCLED MATERIAL IN ACCORDANCE WITH DTP TN 107 OR LOCALLY SOURCED MATERIAL WITH A HISTORY OF GOOD PERFORMANCE (MINIMUM CBR 100%)
D BASE COURSE	100	SIZE 20 mm CLASS 3 CRUSHED ROCK, SIZE 20 mm CLASS 3 RECYCLED MATERIAL IN ACCORDANCE WITH DTP TN 107 OR LOCALLY SOURCED MATERIAL WITH A HISTORY OF GOOD PERFORMANCE (MINIMUM CBR 100%)
E SUBBASE COURSE	220	SIZE 20 mm CLASS 4 CRUSHED ROCK, SIZE 20 mm CLASS 4 RECYCLED MATERIAL IN ACCORDANCE WITH DTP TN 107 OR LOCALLY SOURCED MATERIAL WITH A HISTORY OF GOOD PERFORMANCE (MINIMUM CBR 20%)
F SUBGRADE PROTECTION	320	TYPE A MATERIAL (MINIMUM CBR 8%, SWELL ≤ 1.5%)
SUBGRADE	-	DESIGN SUBGRADE CBR 2%
TOTAL DEPTH	740	EXCLUDING THE WEARING COURSE THICKNESS mm

PAVEMENT TYPE 2: GRANULAR RESHEET		
PAVEMENT LAYER	THICKNESS (mm)	MATERIAL
A ASPHALT (WEARING)	40	SIZE 40 mm TYPE N TYPE C320 ASPHALT
B SAMI SEAL	-	SMI (STRAIN ALLEVIATING MEMBRANE INTERLAYER): SIZE 10mm S2SE (POLYMER MODIFIED BINDER) AT 1.5L/m2 SPRAY RATE AND 160m3/m2
C INITIAL SEAL	-	SIZE 7 mm BITUMEN EMULSION INITIAL SEAL (NOT EXCEEDING 60% BITUMEN CONTENT), MINIMUM RATE OF APPLICATION OF RESIDUAL BINDER OF 0.9 L/m2
D BASE COURSE	100	SIZE 20 mm CLASS 1 CRUSHED ROCK, SIZE 20 mm CLASS 1 RECYCLED MATERIAL IN ACCORDANCE WITH DTP TN 107 OR LOCALLY SOURCED MATERIAL WITH A HISTORY OF GOOD PERFORMANCE (MINIMUM CBR 100%)
E SUBBASE COURSE	150	SIZE 20 mm CLASS 3 CRUSHED ROCK, SIZE 20 mm CLASS 3 RECYCLED MATERIAL IN ACCORDANCE WITH DTP TN 107 OR LOCALLY SOURCED MATERIAL WITH A HISTORY OF GOOD PERFORMANCE (MINIMUM CBR 100%)
TOTAL DEPTH	250	EXCLUDING THE WEARING COURSE THICKNESS mm



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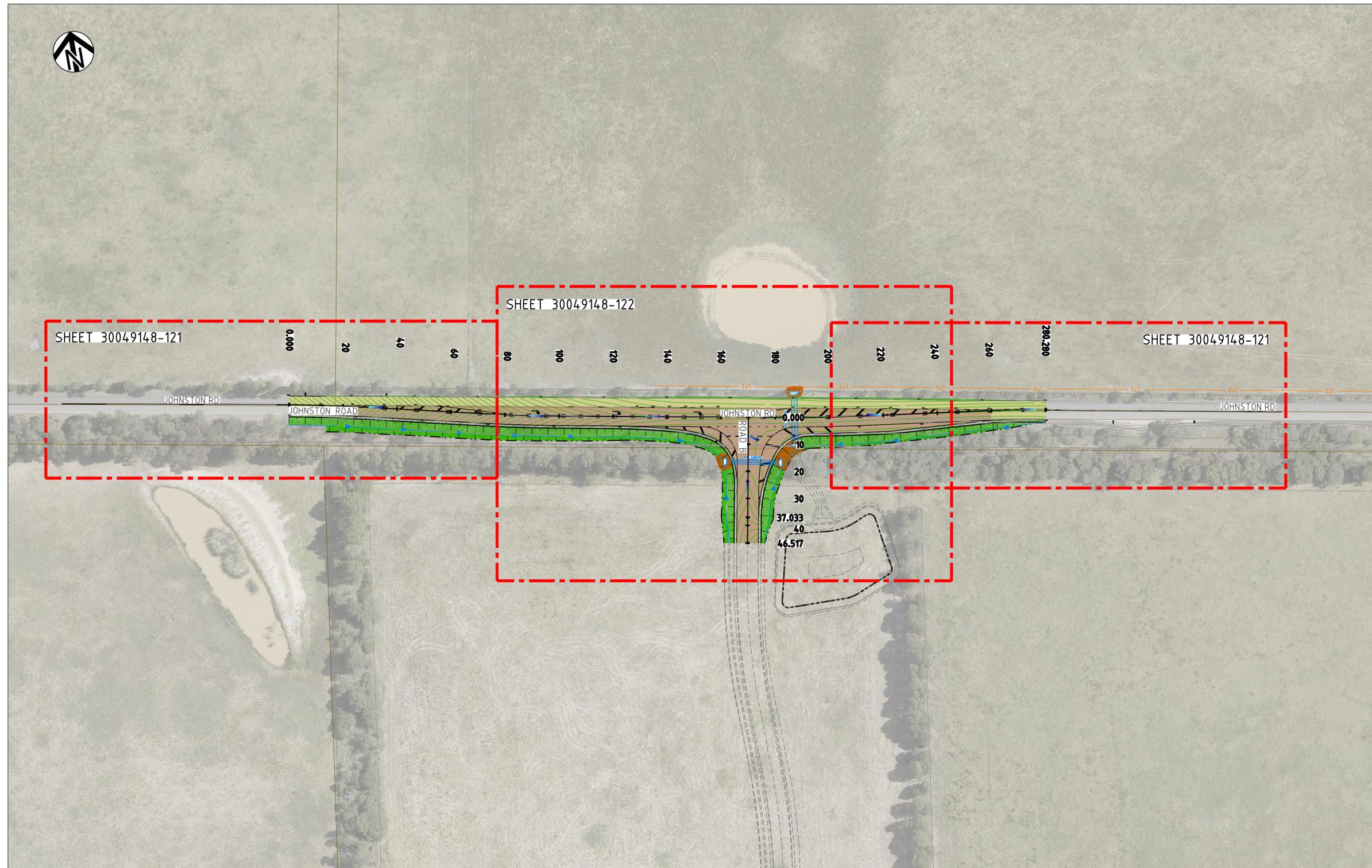
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		DRAFTING CHECK		N. KHAMCHOM	
		DESIGNER		N. KHAMCHOM	
		DESIGN CHECK		A. ROBERTSON	
		PROJECT MANAGER		B. QUILL	
		PROJECT DIRECTOR		W. MOSSE	
DESIGNER		CLIENT		PROJECT TITLE	
smec an es company © SMEC AUSTRALIA PTY LTD (ABN 47 065 475 149) TOWER 4, LEVEL 20, 727 COLLINS STREET DOCKLANDS VIC 3008 SMEC PROJECT No 30049148		EAST GIPPSLAND SHIRE COUNCIL		EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE GENERAL NOTES & TYPICAL SECTIONS	
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		Printed 26/02/2026		PROJECT / DRAWING No. 30049148-102	
		30049148-102		REVISION A	

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LEGEND	
	STORMWATER DRAIN, PIT & PROPERTY INLET
	MAIN DRAIN
	SWALE DRAIN
	SEWER & MAINTENANCE STRUCTURES
	ELECTRICITY (U.GROUND)
	ELECTRICITY (O.HEAD)
	GAS
	TELSTRA
	OPTIC FIBRE
	WATER
	RECYCLE WATER
	AG. DRAIN
	SERVICE CONDUITS
	EXISTING STORMWATER DRAIN
	EXISTING MAIN DRAIN
	EXISTING SWALE DRAIN
	EXISTING SEWER & MAINTENANCE STRUCTURES
	EXISTING HOUSE DRAIN
	EXISTING ELECTRICITY (UNDER GROUND)
	EXISTING ELECTRICITY OVERHEAD
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING OPTIC FIBRE
	EXISTING WATER
	EXISTING RECYCLED WATER
	EXISTING AG. DRAIN
	EXISTING SERVICE CONDUITS
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	FUTURE STORMWATER DRAIN
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	FINISHED DESIGN LEVEL
	CHAINAGE
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	OVERLAND FLOW
	EXISTING TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED
	PERMANENT SURVEY MARK
	TEMPORARY BENCH MARK
	PROPOSED FULL DEPTH ROAD PAVING
	EDGE PROFILE AND RESHEET EXISTING ROAD
	EXISTING ROAD PAVING



LEGEND FOR SUBSURFACE DRAIN	
	CORRUGATED PIPE
	SMOOTH PIPE
	CORRUGATED PIPE (NFC)
	SUBSURFACE DRAIN TERMINAL
	FLUSHOUT RISER
	PIT TYPE S1

CONTRACTOR TO UNDERTAKE ADDITIONAL SURVEYS TO COLLECT SIGNIFICANT TREES BEFORE COMMENCEMENT OF CONSTRUCTION. TREES TO BE REMOVED WILL NEED TO BE APPROVED BY EAST GIPPSLAND SHIRE COUNCIL.

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APPROVAL	TITLE	NAME
	DRAFTER	M. VICENTE
	DRAFTING CHECK	N. KHAMCHOM
	DESIGNER	N. KHAMCHOM
	DESIGN CHECK	A. ROBERTSON
	PROJECT MANAGER	B. QUILL
	PROJECT DIRECTOR	W. MOSSE

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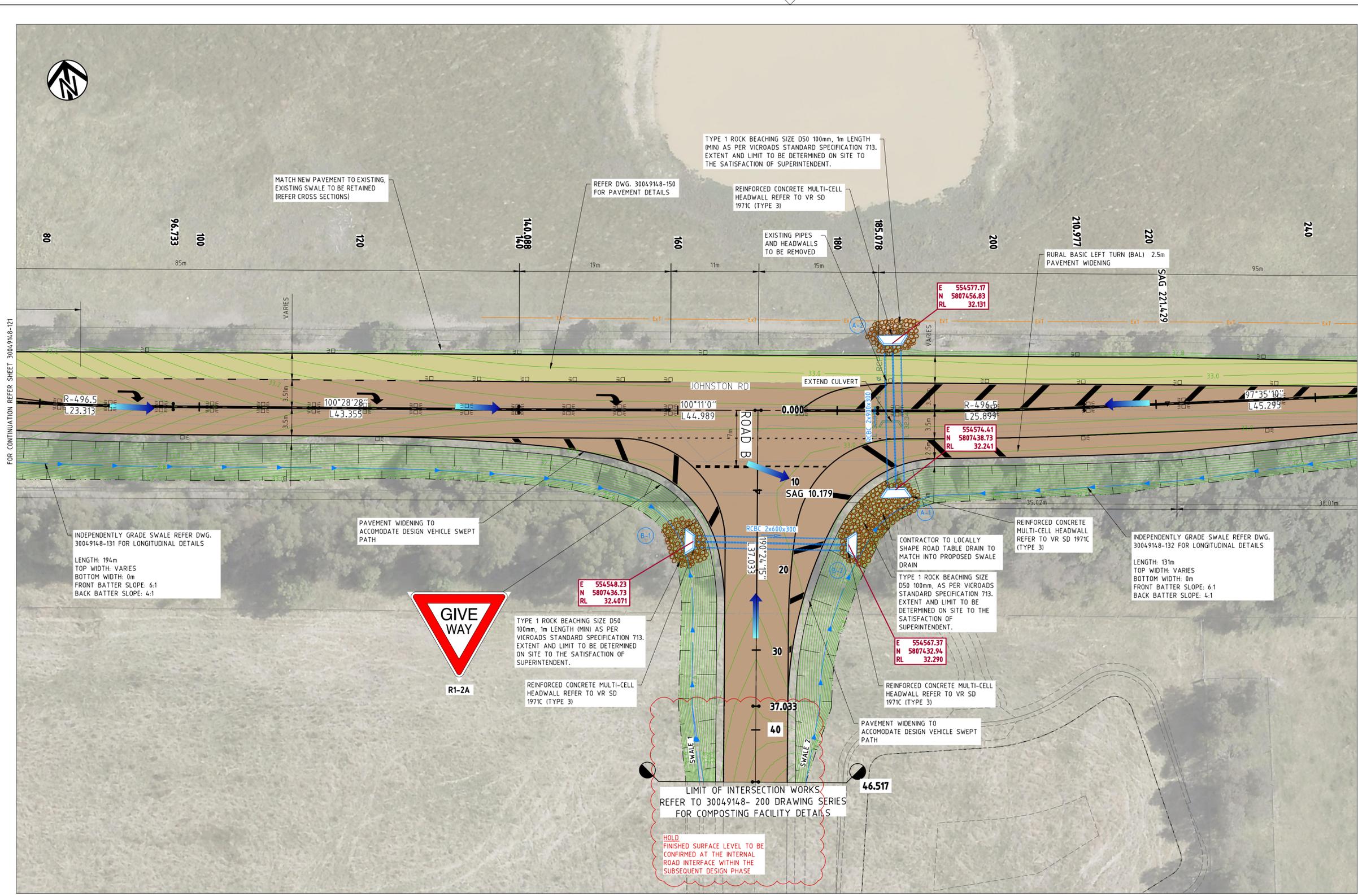
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 DOCKLANDS VIC 3008  
 SMEC PROJECT No 30049148

**CLIENT**  
  
 EAST GIPPSLAND SHIRE COUNCIL

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE OVERALL ALIGNMENT PLAN		SCALE AS NOTED	PHASE DETAILED DESIGN	PROJECT / DRAWING No. 30049148-120	REVISION A
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	EXISTING SERVICE CONDUITS
	EXISTING TACTILE PAVERS
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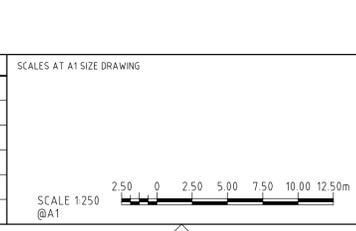
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		DESIGNER		N. KHAMCHOM	
		DESIGN CHECK		A. ROBERTSON	
		PROJECT MANAGER		B. QUILL	
		PROJECT DIRECTOR		W. MOSSE	

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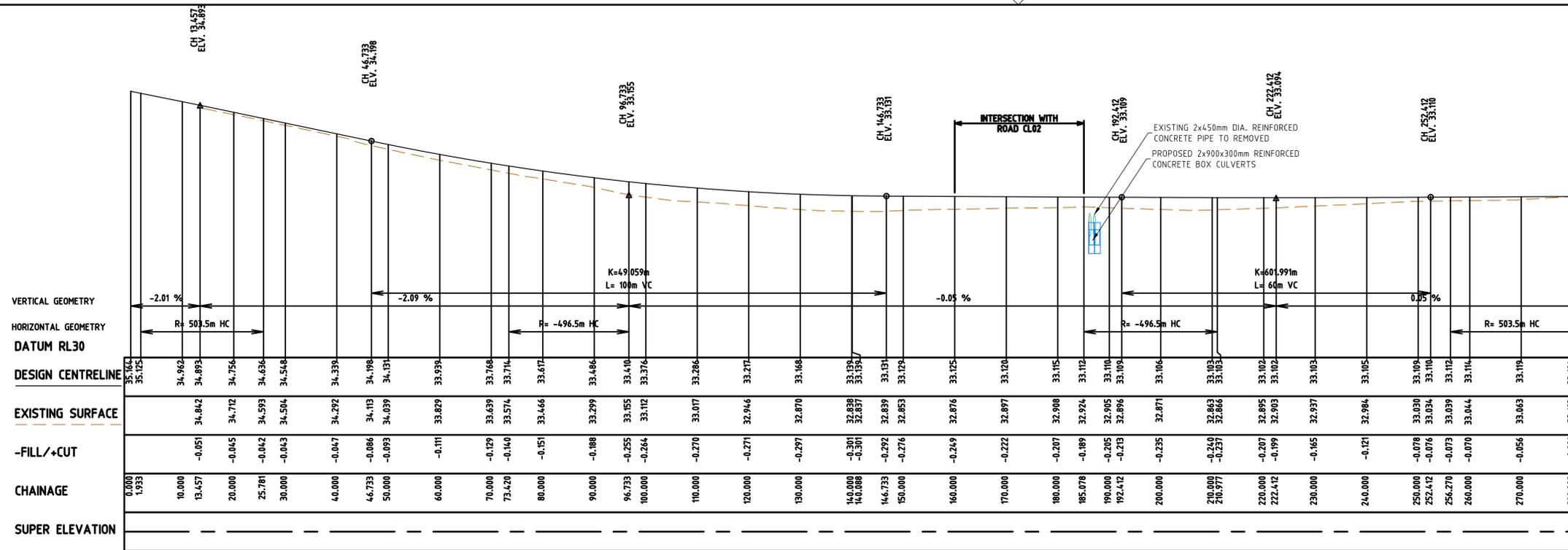
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PROJECT TITLE			
EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION			
ROAD & DRAINAGE ALIGNMENT PLAN			
SHEET 2 OF 2			
Printed 26/02/2026			
SCALE	PHASE	PROJECT / DRAWING No.	REVISION
AS NOTED	DETAILED DESIGN	30049148-122	A

**DETAILED DESIGN**

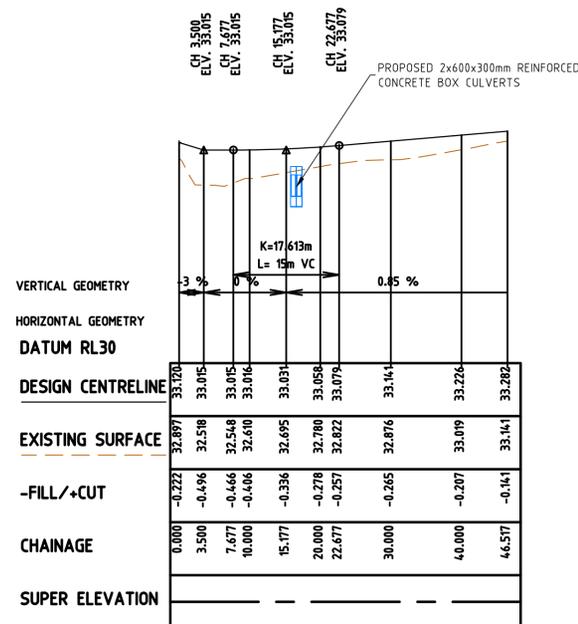
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IP	CHAINAGE	X COORD	Y COORD	Z COORD	TYPE	BEARING	LENGTH	RADIUS
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3	85.077	554475.499	5807480.305	34.636	CT	103°09'53.21"		
4	140.088	554486.963	5807466.799	33.548	IP	100°28'28.07"	23.313	-496.500
5	185.078	554529.596	5807456.798	33.139	IP			
6	198.027	554573.876	5807448.844	33.113	IP		25.899	-496.500
7	210.977	554586.609	5807446.467	33.107	IP	97°35'10.17"		
8	268.210	554656.182	5807437.201	33.118	IP	97°35'10.17"	23.880	503.500
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JOHNSTON ROAD LONGITUDINAL SECTION

SCALE H 1:500  
SCALE V 1:50



ROAD B LONGITUDINAL SECTION

SCALE H 1:500  
SCALE V 1:50

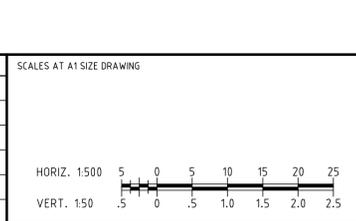
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					DESIGNER <i>N. KHAMCHOM</i>
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					PROJECT MANAGER <i>B. QUILL</i>
					PROJECT DIRECTOR <i>W. MOSSE</i>

DESIGNER	
CLIENT	



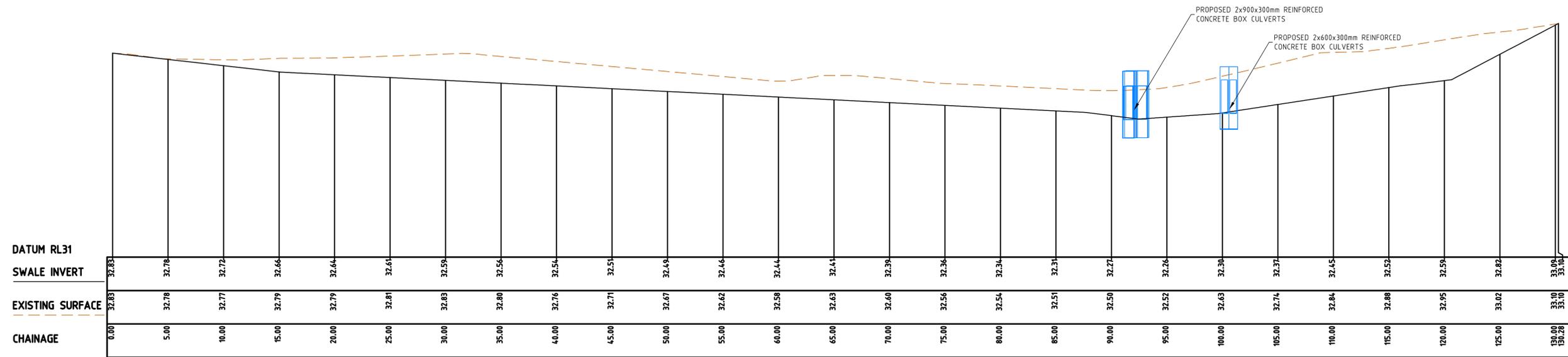
© SMEC AUSTRALIA PTY LTD (ABN 47 065 475 149)  
TOWER 4, LEVEL 20, 727 COLLINS STREET  
DOCKLANDS VIC 3008  
SMEC PROJECT No 30049148

**DETAILED DESIGN**

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE LONGITUDINAL SECTIONS JOHNSTON ROAD & ROAD B		SCALE AS NOTED		PHASE DETAILED DESIGN		PROJECT / DRAWING No. 30049148-130		REVISION A	
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Printed 28/02/2026  
Page 1 of 50





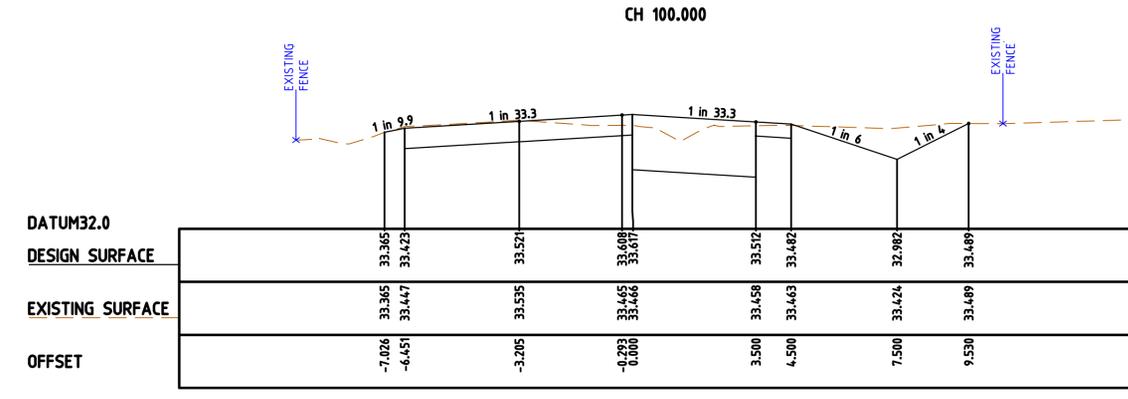
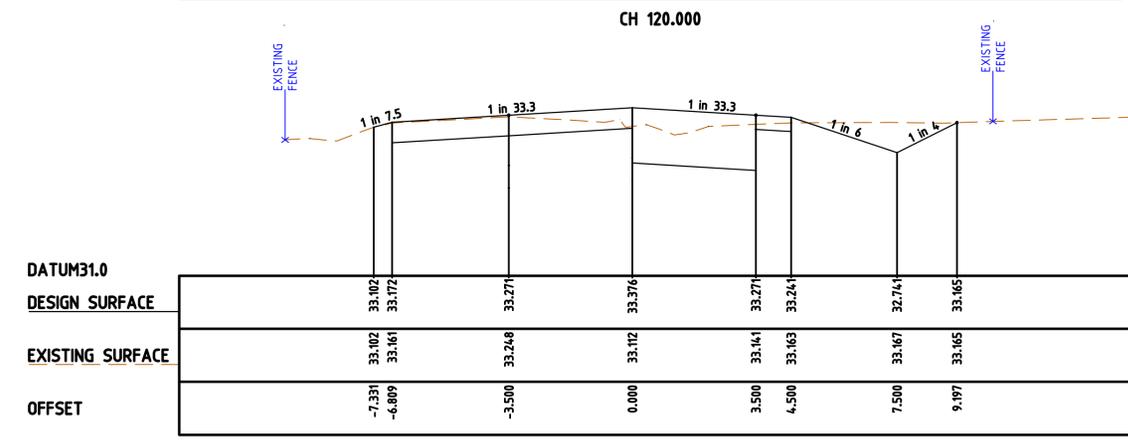
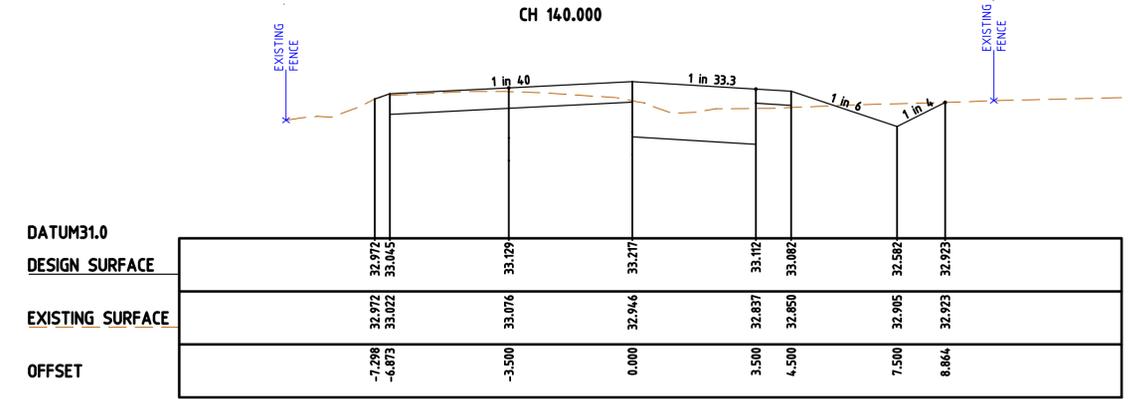
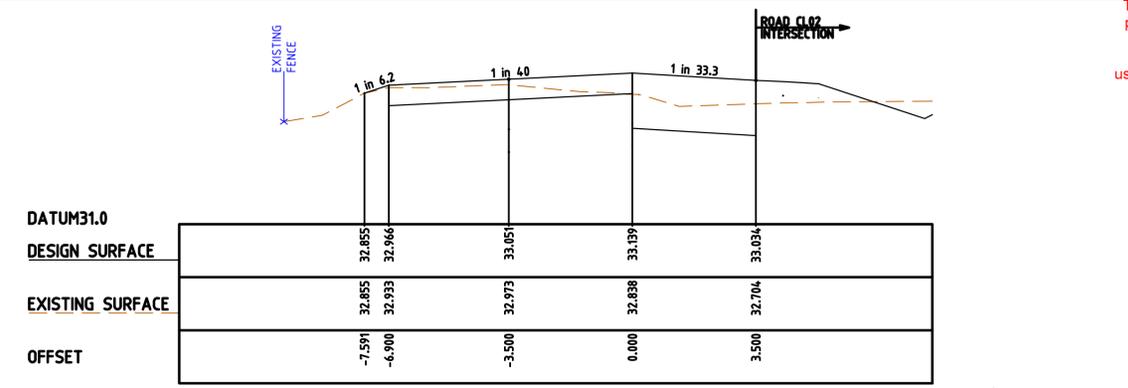
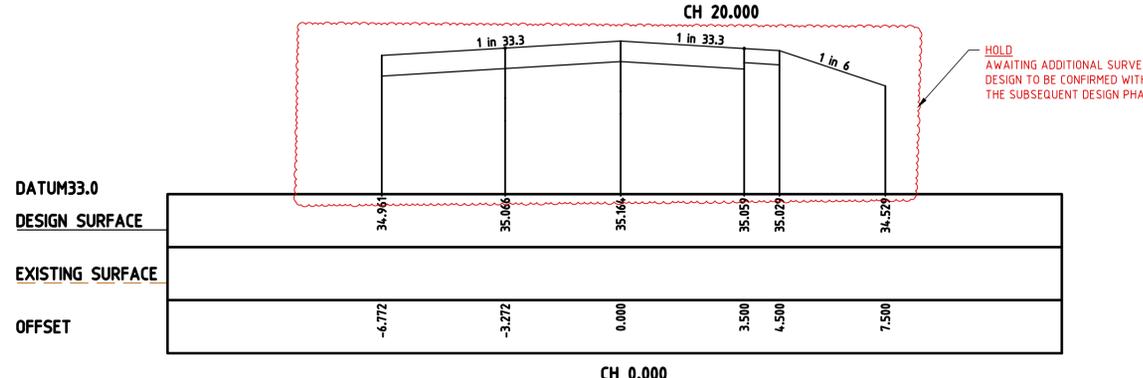
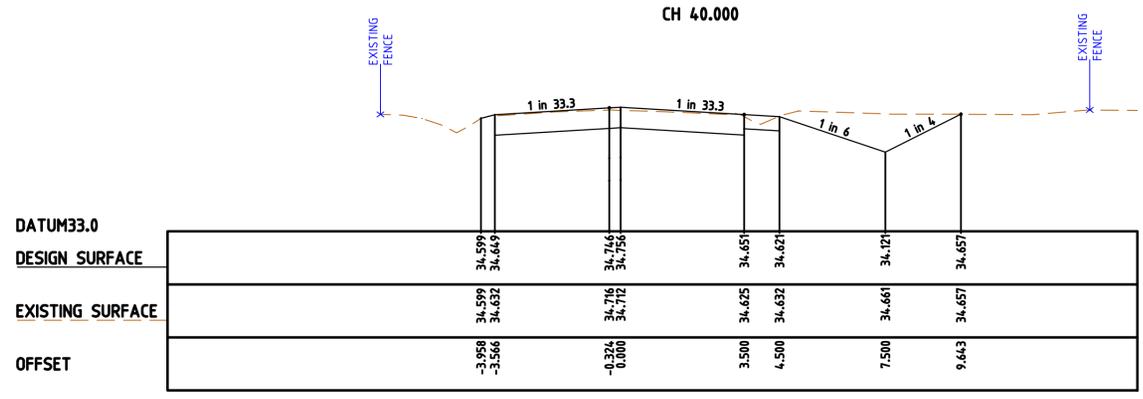
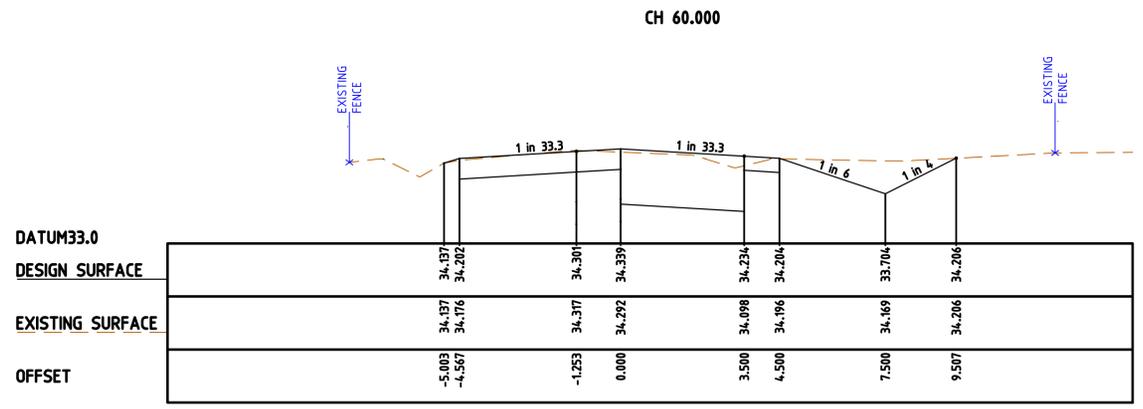
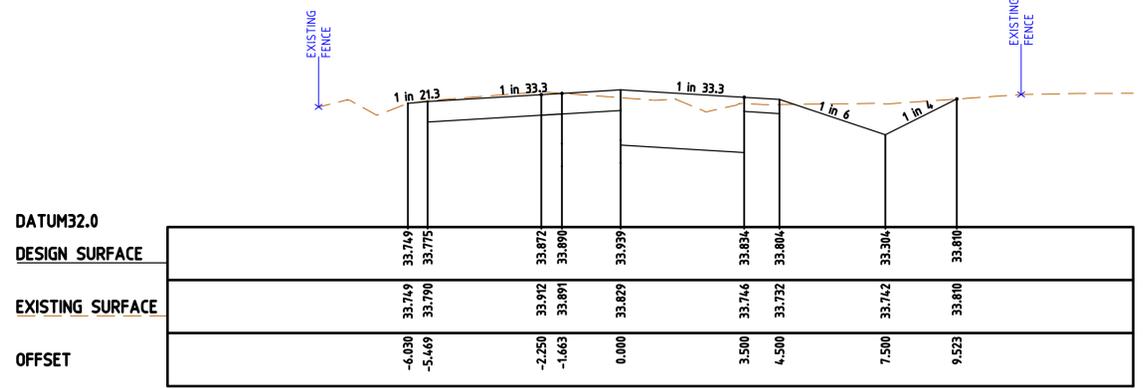
SWALE 2 LONGITUDINAL SECTION

**WARNING**  
**BWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
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150 mm ON ORIGINAL  
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			DRAFTER: <i>M. VICENTE</i> DRAFTING CHECK: <i>N. KHAMCHOM</i> DESIGNER: <i>N. KHAMCHOM</i> DESIGN CHECK: <i>A. ROBERTSON</i> PROJECT MANAGER: <i>B. QUILL</i> PROJECT DIRECTOR: <i>W. MOSSE</i>		
SCALES AT A1 SIZE DRAWING HORIZ: 1:200 VERT: 1:20					
DESIGNER © SMEC AUSTRALIA PTY LTD (ABN 47 065 475 149) TOWER 4, LEVEL 20, 727 COLLINS STREET DOCKLANDS VIC 3008 SMEC PROJECT No 30049148		CLIENT EAST GIPPSLAND SHIRE COUNCIL		PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE LONGITUDINAL SECTIONS SWALE 2 Printed 26/02/2026 Page 43 of 50	
SCALE AS NOTED	PHASE DETAILED DESIGN	PROJECT / DRAWING No. 30049148-132	REVISION A		

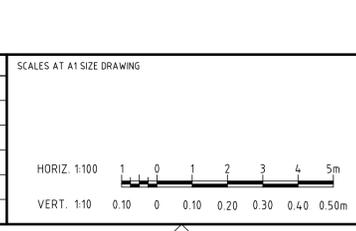
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	01	6.08.2024	ISSUED TO CLIENT FOR REVIEW	001	B.Q

APPROVAL	TITLE	NAME
DRAFTER		M. VICENTE
DRAFTING CHECK		N. KHAMCHOM
DESIGNER		N. KHAMCHOM
DESIGN CHECK		A. ROBERTSON
PROJECT MANAGER		B. QUILL
PROJECT DIRECTOR		W. MOSSE



DESIGNER

an company

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 DOCKLANDS VIC 3008  
 SMEC PROJECT No 30049148

CLIENT

EAST GIPPSLAND SHIRE COUNCIL

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE JOHNSTON ROAD CROSS SECTIONS CH 0.000 - CH 140.000		PROJECT / DRAWING No. 30049148-140		REVISION A	
SCALE AS NOTED	PHASE DETAILED DESIGN	Printed 26/02/2026 Page 44 of 50			

**DETAILED DESIGN**

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DATUM31.0

DESIGN SURFACE	32.790	32.720	33.028	33.102	32.997	32.920	32.890	32.538	32.597
EXISTING SURFACE	32.790	32.868	32.955	32.895	32.560	32.539	32.539	32.597	32.597
OFFSET	-6.484	-5.885	-2.451	0.000	3.500	6.075	7.075	9.784	10.418

CH 220.000

DATUM31.0

DESIGN SURFACE	32.780	32.925	33.077	33.106	33.001	32.927	32.897	32.337	32.556
EXISTING SURFACE	32.780	32.869	32.952	32.871	32.464	32.435	32.459	32.537	32.556
OFFSET	-7.323	-6.711	-3.317	0.000	3.500	5.970	6.970	10.328	11.203

CH 200.000

DATUM31.0

DESIGN SURFACE	32.856	32.942	33.027	33.115	33.010
EXISTING SURFACE	32.856	32.901	32.997	32.918	32.506
OFFSET	-7.530	-6.906	-3.500	0.000	3.500

CH 180.000

DATUM31.0

DESIGN SURFACE	32.823	32.952	33.037	33.125	33.020
EXISTING SURFACE	32.823	32.931	32.998	32.876	32.503
OFFSET	-7.582	-6.899	-3.500	0.000	3.500

CH 160.000

DATUM31.0

DESIGN SURFACE	32.917	32.966	33.124	33.025	33.016	32.833
EXISTING SURFACE	32.917	32.966	33.124	33.022	33.043	32.833
OFFSET	-3.589	-3.201	0.000	3.320	3.620	4.520

CH 280.149

DATUM31.0

DESIGN SURFACE	32.916	32.966	33.124	33.024	33.015	32.831
EXISTING SURFACE	32.916	32.965	33.123	33.032	33.041	32.833
OFFSET	-3.588	-3.202	0.000	3.322	3.629	4.539

CH 280.000

DATUM31.0

DESIGN SURFACE	32.852	32.950	33.100	33.114	33.008	32.718	32.639	32.821
EXISTING SURFACE	32.852	32.921	33.054	33.044	32.887	32.883	32.721	32.821
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CH 260.000

DATUM31.0

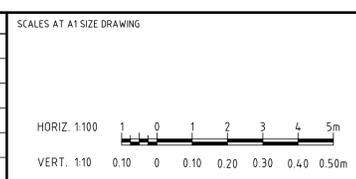
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EXISTING SURFACE	32.819	32.917	33.018	32.984	32.678	32.720	32.748	32.758	32.770
OFFSET	-5.370	-4.690	-1.449	0.000	3.500	4.886	5.886	8.224	9.151

CH 240.000

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DESIGNER M. VICENTE		PROJECT MANAGER B. QUILL		PROJECT DIRECTOR W. MOSSE	



DESIGNER

an company

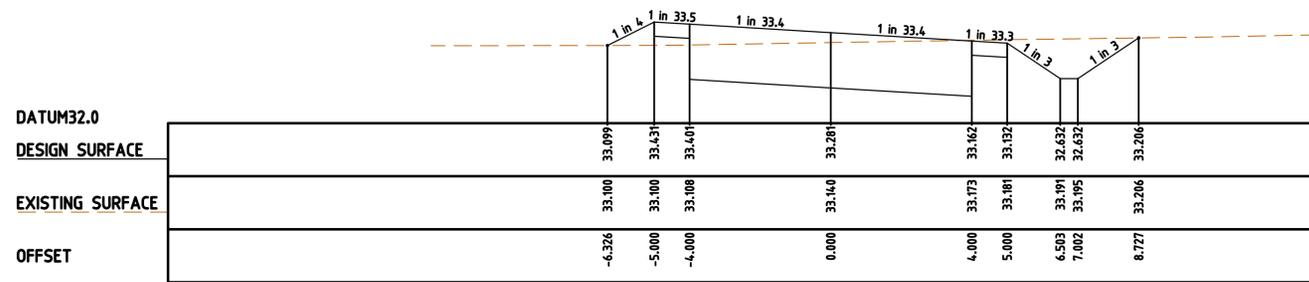
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 DOCKLANDS VIC 3008  
 SMEC PROJECT No 30049148

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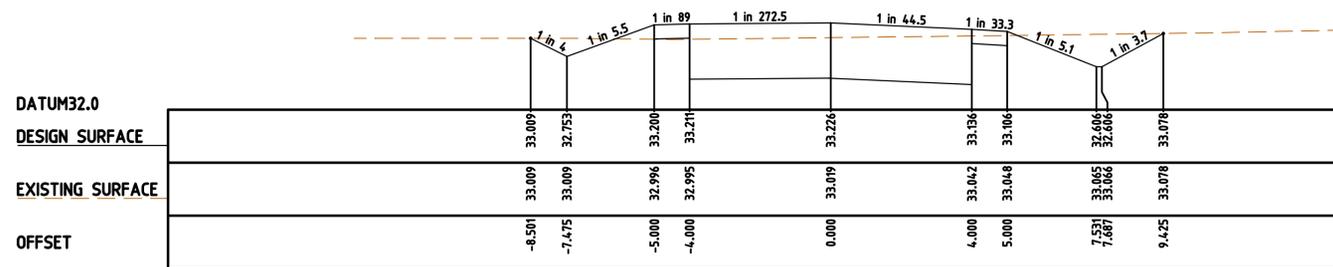
EAST GIPPSLAND SHIRE COUNCIL

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE JOHNSTON ROAD CROSS SECTIONS CH 160.000 CH 280.149		SCALE AS NOTED	PHASE DETAILED DESIGN	PROJECT / DRAWING No. 30049148-141	REVISION A
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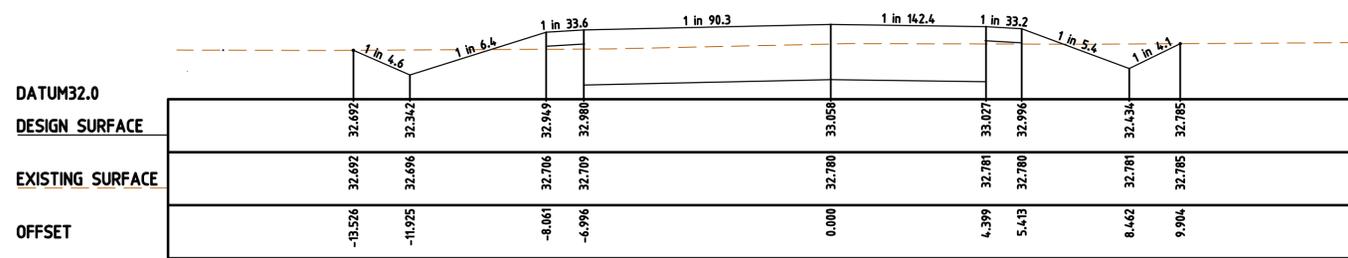
DETAILED DESIGN



CH 46.500



CH 40.000

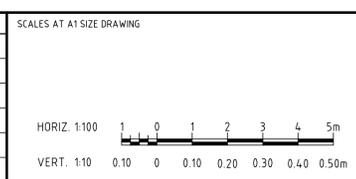


CH 20.000

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150 mm ON ORIGINAL  
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	01	6.08.2024	ISSUED TO CLIENT FOR REVIEW	001	B.Q		M. VICENTE
							N. KHAMCHOM
							N. KHAMCHOM
							A. ROBERTSON
							B. QUILL
							W. MOSSE



**DETAILED DESIGN**

DESIGNER

an company

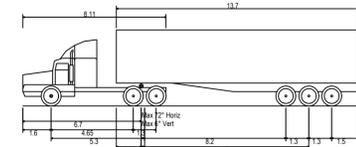
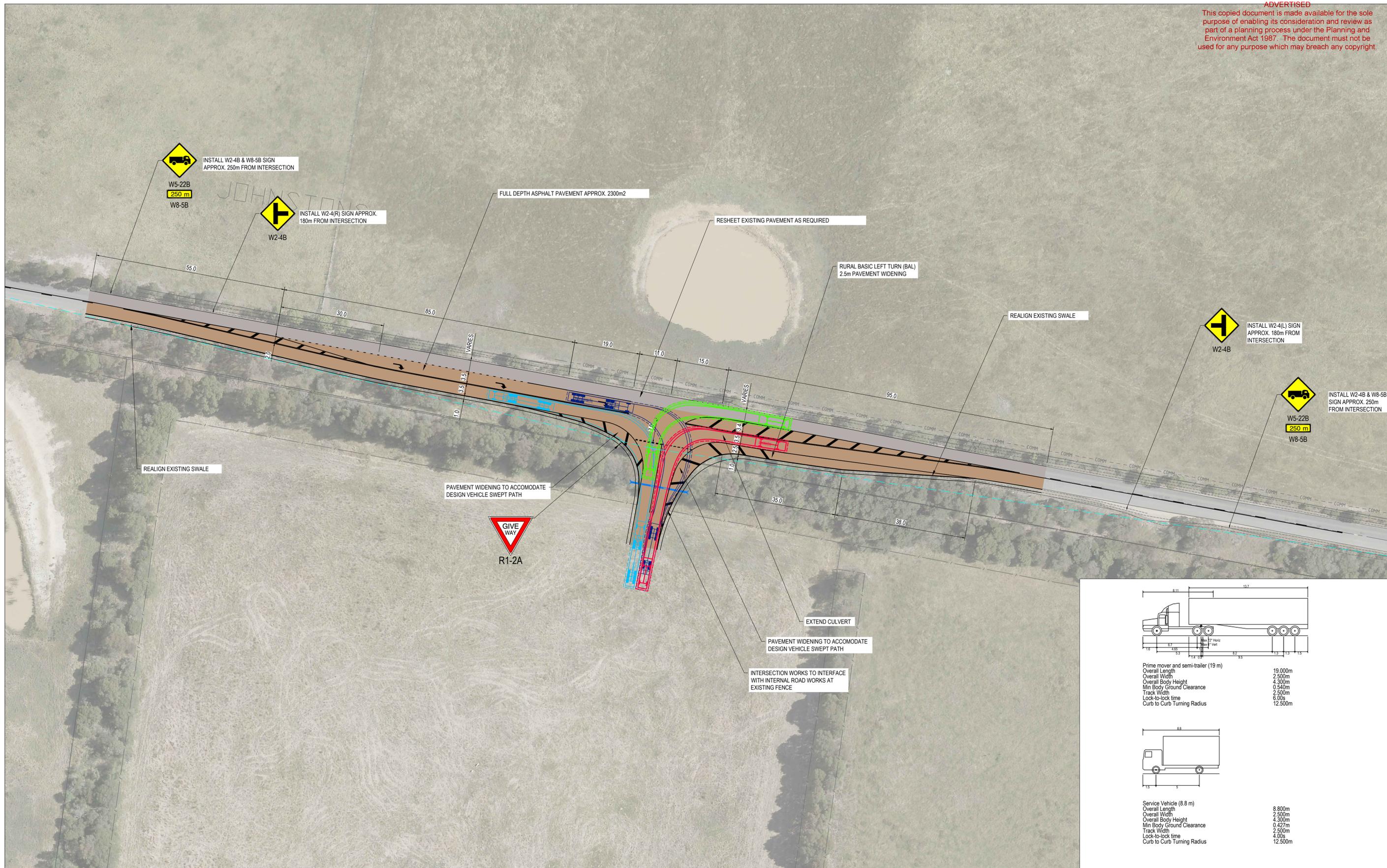
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 DOCKLANDS VIC 3008  
 SMEC PROJECT No 30049148

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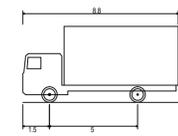
EAST GIPPSLAND SHIRE COUNCIL

PROJECT TITLE EAST GIPPSLAND SHIRE COUNCIL COMPOST FACILITY - JOHNSTONS RD INTERSECTION ROAD & DRAINAGE ROAD B CROSS SECTIONS CH 20.000				PROJECT / DRAWING No. 30049148-142		REVISION A	
SCALE AS NOTED	PHASE DETAILED DESIGN	Printed: 26/02/2026 Page 46 of 50					





Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m



Service Vehicle (8.8 m)	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.427m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	12.500m

# 30049148 - EGSC COMPOSTING FACILITY

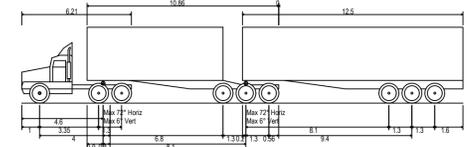
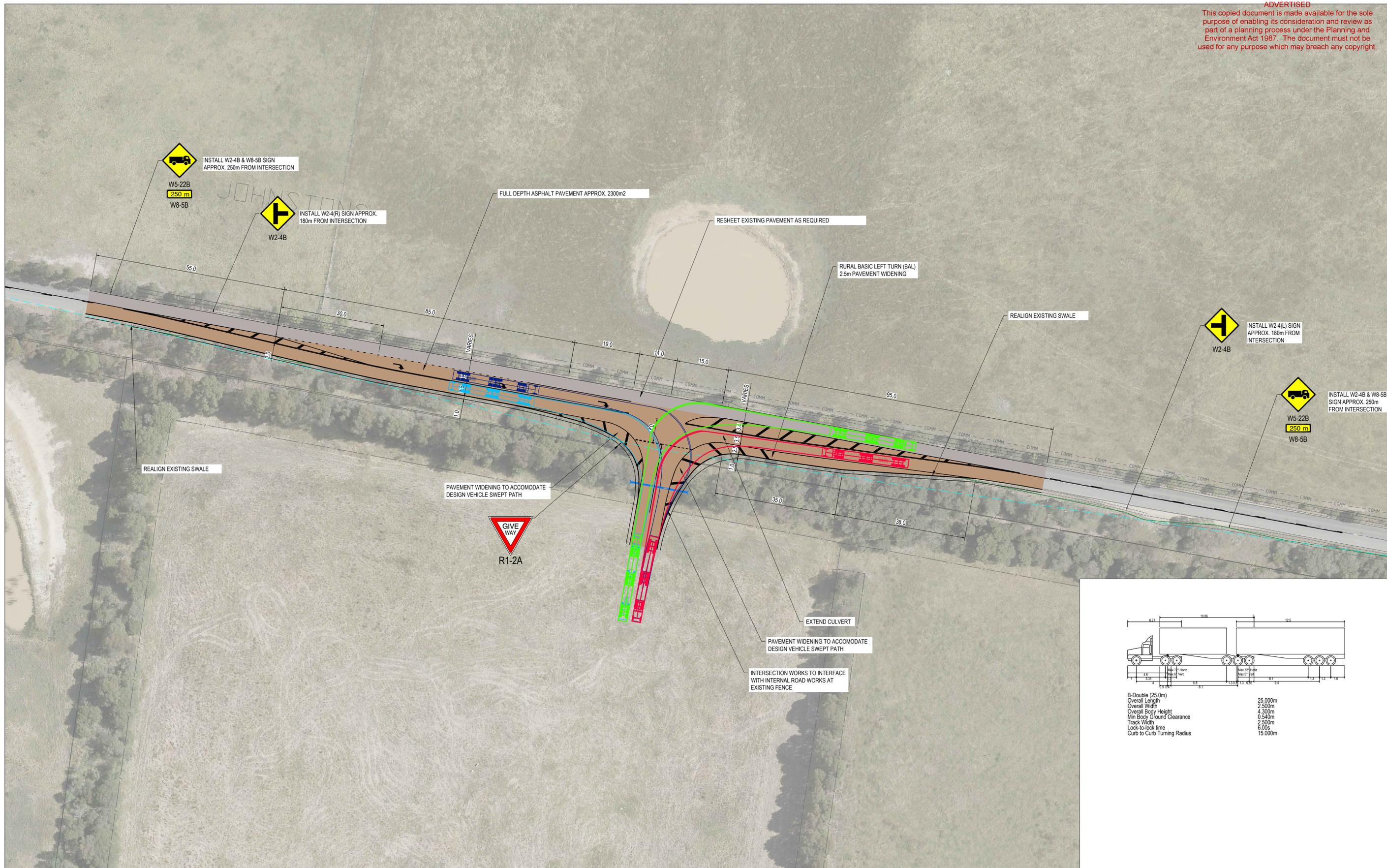
## JOHNSTON RD INTERSECTION - DESIGN VEHICLE SWEEP PATHS

Date Issued: 15/03/2024 | Revision: A  
 SMEC Drawing Number: 30049148-CIV-SK-001  
 Drawn by: NK



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Printed 26/02/2026  
 Page 48 of 50



B-Double (25.0m)	
Overall Length	25.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

# 30049148 - EGSC COMPOSTING FACILITY

## JOHNSTON RD INTERSECTION - CHECK VEHICLE SWEEP PATHS

Date Issued: 15/03/2024 | Revision: A  
 SMEC Drawing Number: 30049148-CIV-SK-001  
 Drawn by: NK



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