



133-145 Lenore Lane, Erskine Park Proposed Warehouse Development Transport Impact Assessment

Client //	Erskine Park Development No.1 Pty. Ltd.
Office //	NSW
Reference //	16S1264000
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133-145 Lenore Lane, Erskine Park

Proposed Warehouse Development

Transport Impact Assessment

Issue: A 16/12/15

Client: Erskine Park Development No.1 Pty. Ltd.

Reference: 16S1264000

GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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1. Introduction

1.1 Background

A Section 75W Modification Application is to be lodged with the Department of Planning and Environment (DPE) for a proposed modification to the approved warehouse on the site located at 133-145 Lenore Lane, Erskine Park.

Consent was granted in July 2010 by the DPE (MP 08_0016) for the development of printing, warehouse and distribution facilities on the consolidated allotment described as Lot 62 in DP 1090695. A subsequently submitted and approved S75W sought deletion of the printing use and consolidation of warehouses 2 and 3 for single tenant SRG. Layout and design for Warehouse 1, which was to occupy the subject site, was retained as part of the modified scheme.

The SRG warehouse construction works are now complete and occupied while the Warehouse 1 site is cleared. Moving forward, it is proposed to submit a S75W application to seek the following traffic and parking modifications to originally approved Warehouse 1:

- composition of gross floor area
- vehicle access arrangements
- loading dock arrangements
- car parking.

Erskine Park Development No.1 Pty. Ltd. commissioned GTA Consultants to undertake a transport impact assessment to accompany the Section 75W Modification submission.

1.2 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- i existing traffic conditions surrounding the site
- ii heavy vehicle requirements
- iii suitability of the proposed access arrangements for the site
- iv the traffic generating characteristics of the proposed development
- v the transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- An inspection of the site and its surrounds
- Penrith City Council Development Control Plan (DCP) 2014
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- plans for the proposed development prepared by Logos, Drawing Number ERSK-DA-100, Revision ?, dated ? December 2015
- other documents and data as referenced in this report.

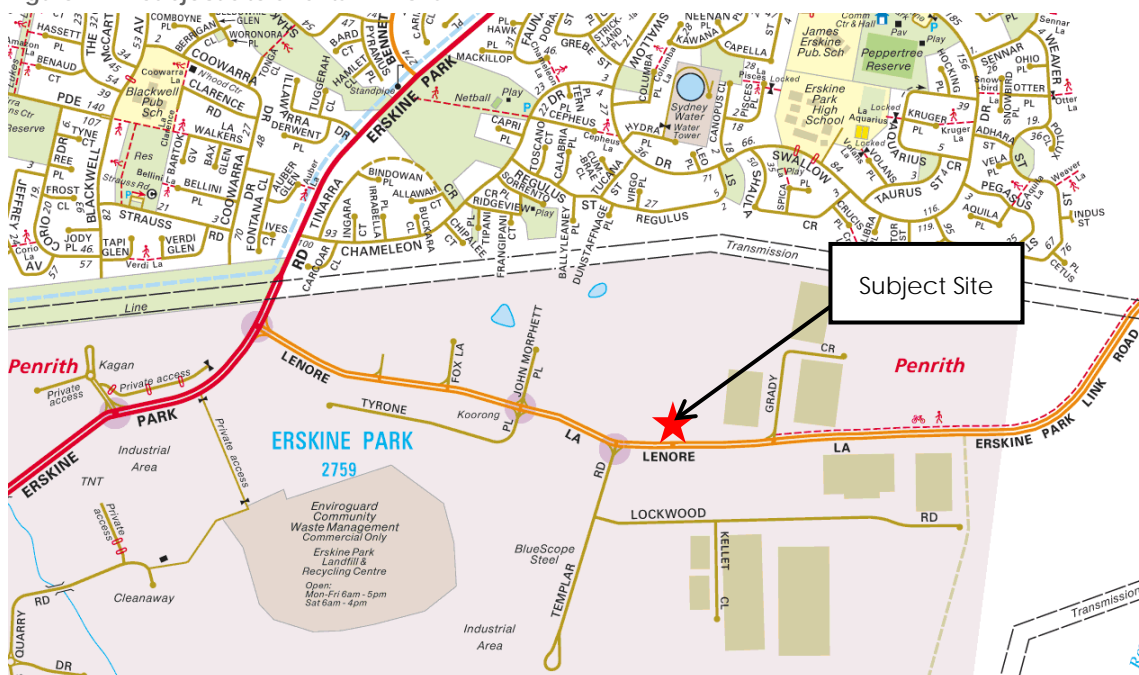
2. Existing Conditions

2.1 Subject Site

The subject site is legally described as Lot 2 in DP 1090695 and is known as 133-145 Lenore Lane, Erskine Park. The site, which is now cleared and vacant, occupies a generally rectangular area of 15,985 m² with a frontage of approximately 120 metres to the northern side of Lenore Lane.

The site falls within the planned 327 Ha Erskine Park Employment Area (EPEA) and is surrounded by various recently completed industrial and warehouse uses together with a number of vacant lots that are to be developed in accordance with the LEP provisions. The subject site forms part of the original approved development scheme (MP08_0016) which comprises the now completed SRG Warehouse adjoining to the north and a separate warehouse (Warehouse 1) which was to occupy the subject site. Details of the approved scheme are discussed further in Section 3.1 while the location of the subject site and its surrounding environs are shown in Figure 2.1.

Figure 2.1: Subject Site and Its Environs



Source: Sydway Publishing Pty Ltd

2.1.1 Site Access

The approved vehicle accesses to the site are located on the Lenore Drive frontage near the western boundary and off the Estate Access Road. The Lenore Drive access crossover and Estate Access Road are both completed and are shown in Figure 2.2 and Figure 2.3.

Figure 2.2: Lenore Drive Access Crossover (Looking East)

Source: Google Maps

Figure 2.3: Estate Access Road Crossover (Looking East)



Source: Google Maps

2.2 Road Network

Adjacent Roads

Lenore Drive is classified as a Regional Road (RMS No. 629) and is aligned in an east-west direction in the vicinity of the site. It is a two-way road configured with a four-lane, 21m wide carriageway (including 6.5m wide central median), set within an approximately 30 metre wide road reserve.

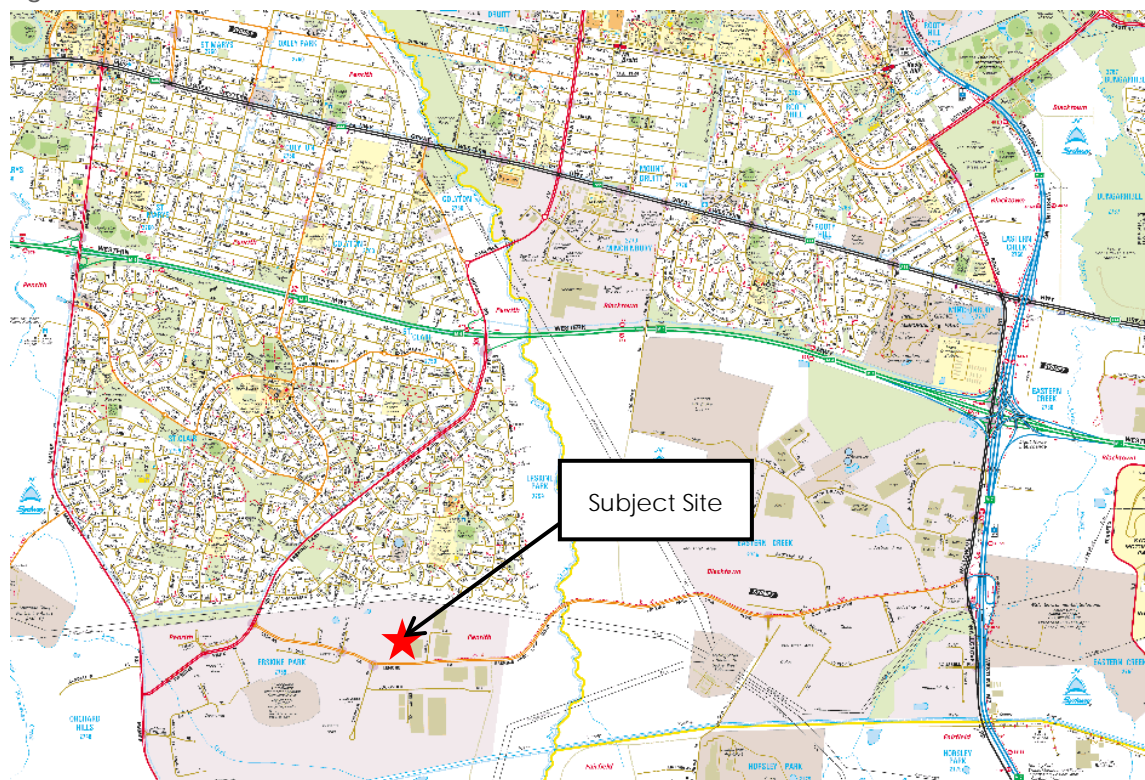
Just to the west, Lenore Drive intersects with Templar Road via a signalised T-intersection. Templar Road is a local road that functions as an industrial collector and is aligned in a north-south direction in the vicinity of the site. It is a two-way road configured with a two-lane, 15 metre wide carriageway, set within an approximately 24 metre wide road reserve.

Broader Arterial Road Network

Lenore Drive links Erskine Park with the broader arterial network as shown in Figure 2.4. Access to the Westlink M7 Motorway is provided via a fully directional interchange with Old Wallgrove Road (an extension of Lenore Drive) approximately 5km east of the site.

Access to the M4 Western Motorway and Great Western Highway is provided from Lenore Drive via either Erskine Park Road or Mamre Road. Mamre Road provides a full interchange (all vehicle movements/ directions) with the M4, whilst Erskine Park Road provides movements to the east only to the M4.

Figure 2.4: Broader Arterial Road Network

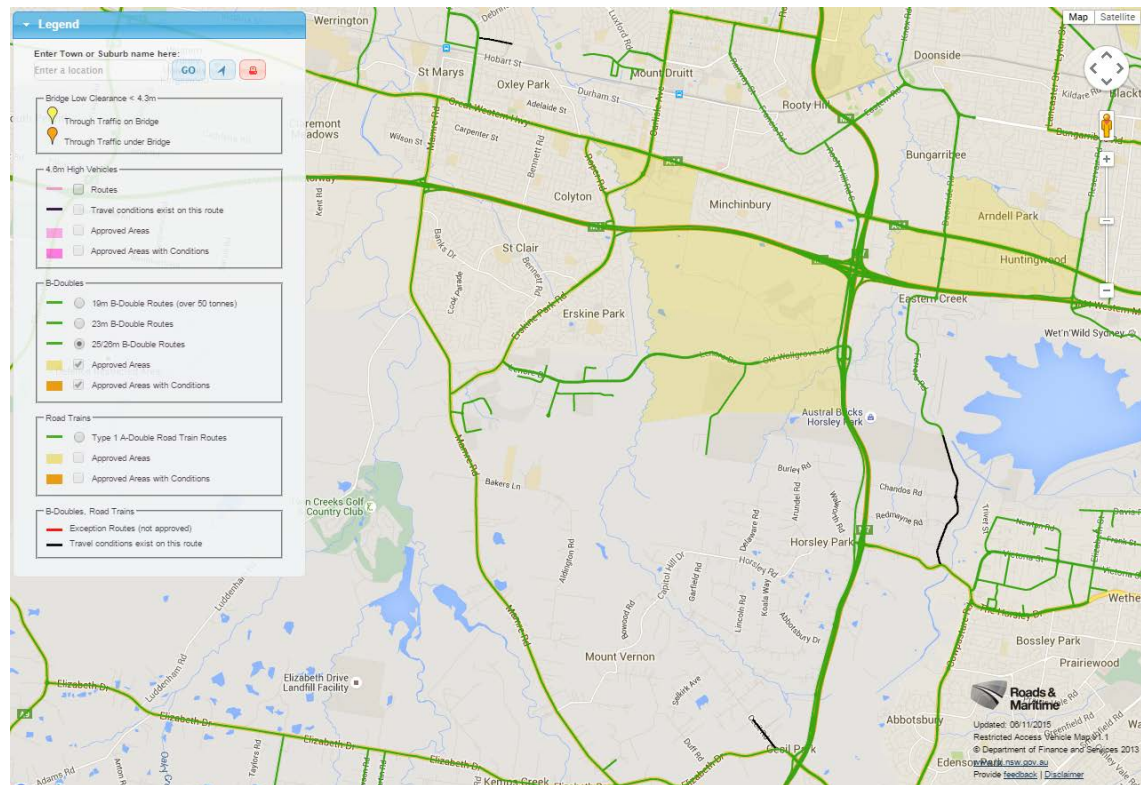


Source: Sydway Publishing Pty Ltd

2.3 Restricted Access Vehicles Road Network

The road network within the Erskine Business Park precinct (including Lenore Drive), as well as the key arterial roads linking the Business Park to the motorway network, are a part of the existing 26m B-double approved routes as shown in Figure 2.5.

Figure 2.5: Existing 26m B-Double Approved Routes



3. Development Proposal

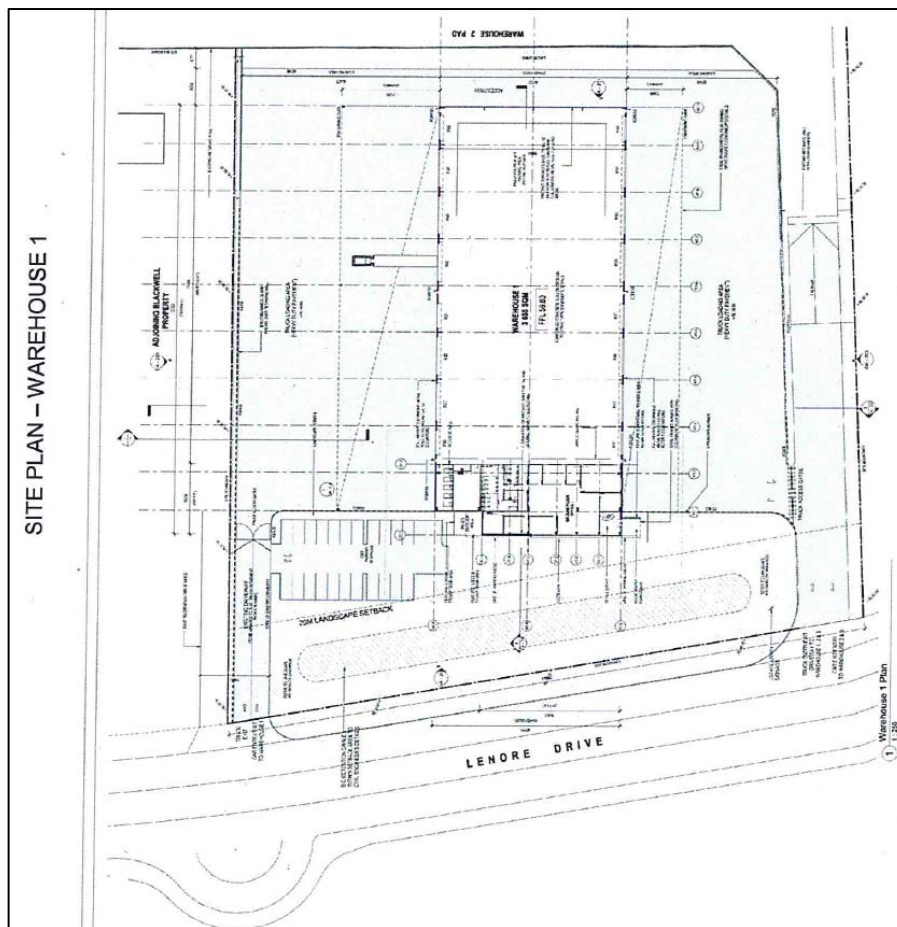
3.1 Approved Development

Consent was granted in July 2010 by the DPE (MP 08_0016) for the development of printing, warehouse and distribution facilities on the consolidated site of approximately 13.5 Ha, legally described as Lot 62 in DP 1090695. The approved development scheme involves the staged construction of three warehouses as follows:

- Warehouse 1 – to be located on area fronting and accessed via northern side of Lenore Drive (i.e. subject site) involving warehousing and ancillary administrative floor space with GFA of 3,655 m².
- Warehouses 2 & 3 – to be located north of Warehouse 1 and accessed via a battle-axe arrangement involving printing, warehousing and ancillary administrative floor space with GFA of 55,621 m².

A subsequently submitted and approved S75W sought deletion of the printing use associated with Warehouse 2 & 3 and consolidation of the two warehouses for a single tenant SRG. Warehouse 1, which is to occupy the subject site, was retained as part of that application. Details of the approved Warehouse 1 scheme are shown in Figure 3.1.

Figure 3.1: Approved Warehouse 1 Site Layout



Source: NSW Department of Planning, MP 08_0016

3.2 Proposed Development

It is noted that the SRG warehouse construction works are now complete and occupied. Moving forward, it is proposed to submit a S75W to seek modifications to the originally approved Warehouse 1 in the following:

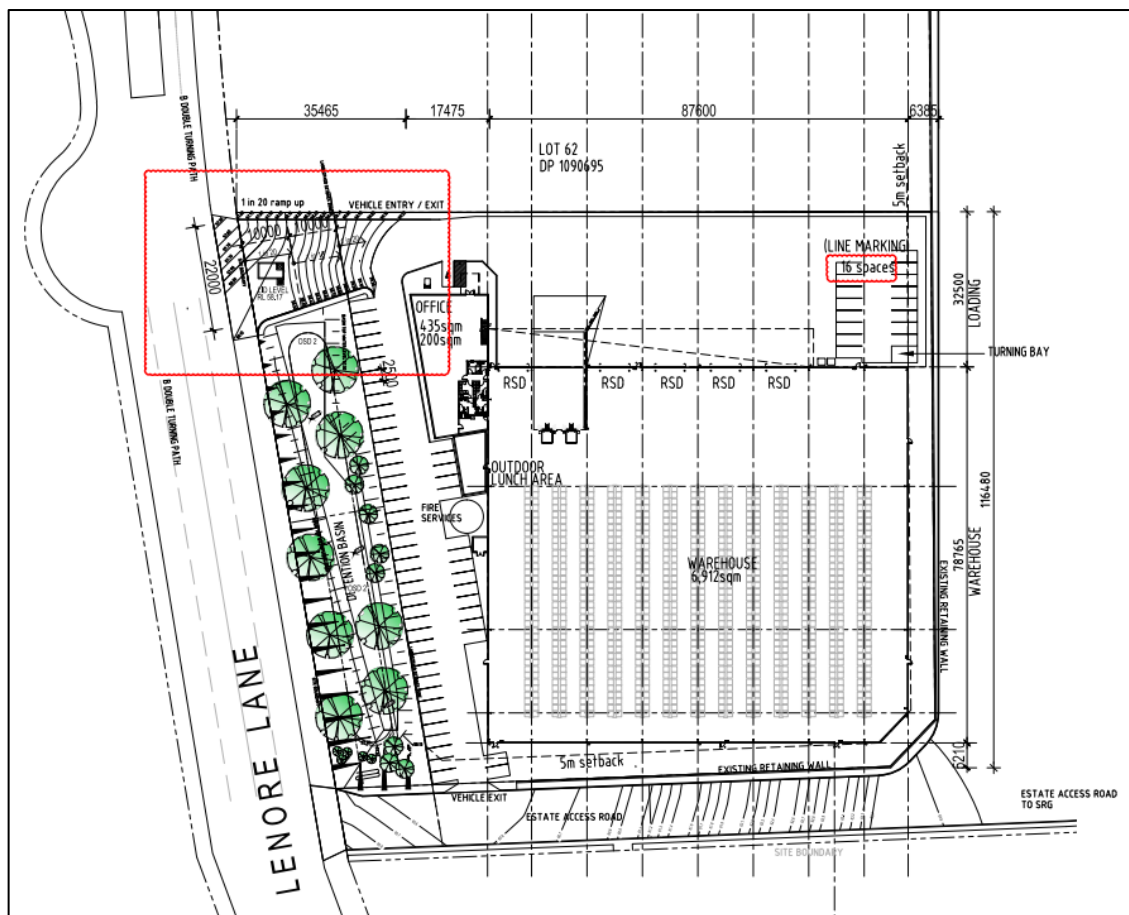
- composition of gross floor area
- vehicle access arrangements
- loading dock arrangements
- car parking.

Details of the proposed site layout are shown in Figure 3.2 while the proposed changes over that previously approved are summarised in Table 3.1.

Table 3.1: Warehouse 1 Development Proposal

Component	Approved	Proposal
Warehouse (GFA)	3,095 m ²	6,912 m ²
Office (GFA)	560 m ²	635 m ²
Total	3,655 m ²	7,547 m ²
Loading Dock (No.)	8	7
Carpark (No.)	24	75

Figure 3.2: Proposed Warehouse 1 Site Layout



Source: Logos Property Group

3.3 Vehicle Access

The approved Warehouse 1 scheme involved the following access arrangements:

- A combined ingress and egress driveway (cars and trucks) on the western edge of the site
- A heavy vehicle ingress only driveway connecting to the Estate Access Road along the eastern boundary

The proposed vehicle access arrangements to/from the warehouse will involve the following:

- A combined ingress and egress access (cars and trucks) on the western edge of the site
- A light vehicle egress only driveway (6 m wide) connecting to the Estate Access Road along the eastern boundary

3.4 Car Parking

Onsite car parking for 75 cars including one suitable for disabled access will be provided for visitors and staff.

4. Parking

Requirements for on-site car parking relevant to the proposed development are specified in the Penrith DCP 2014. The DCP specifies a requirement of 1 space per 100m² GFA of warehousing including any ancillary office/administrative spaces and application of that criteria to the total proposed 7,547m² GFA would indicate a requirement of 75 spaces.

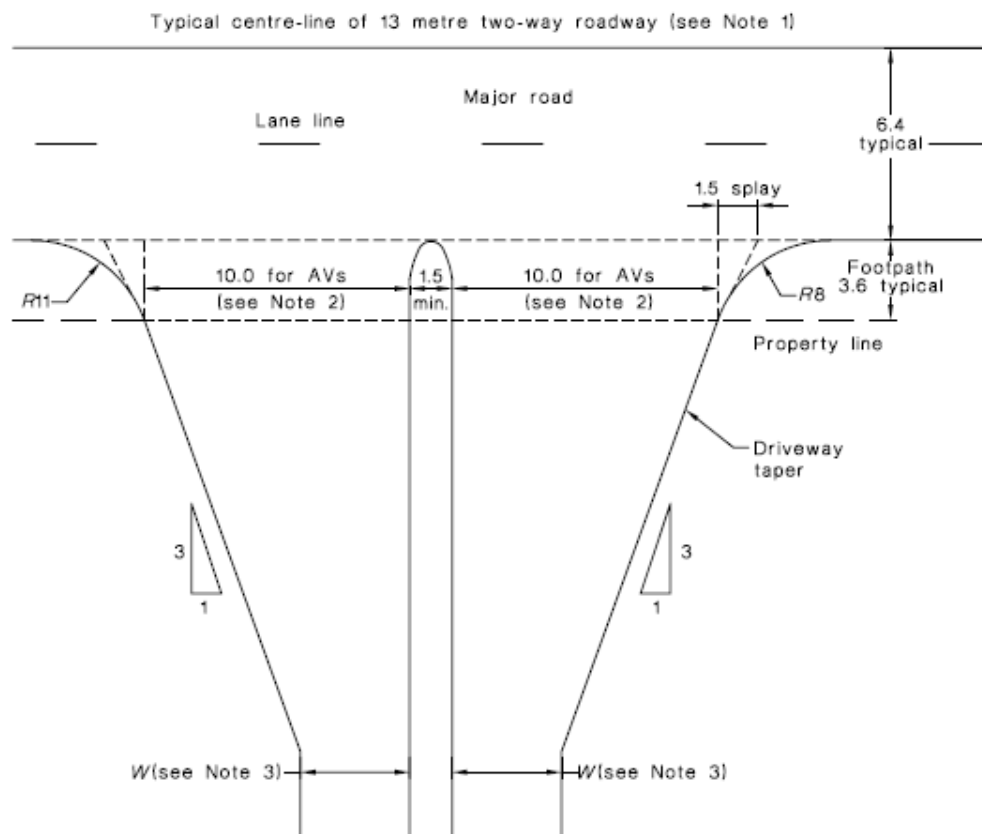
Accordingly it is proposed to provide 75 spaces in satisfaction of the DCP requirements.

5. Site Layout

5.1 Vehicle Access

The minimum driveway dimensions for a vehicle access servicing articulated vehicles are detailed in Clause 3.4 of AS2890.2:2002, with Figure 3.2 of the Standards reproduced in Figure 5.1.

Figure 5.1: Minimum Design for a Major Access Driveway Catering for Articulated Vehicles



NOTES:

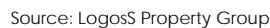
- 1 In the case illustrated, the HRV can turn left into the driveway entirely from the left lane and can turn out without encroaching over the public roadway centre-line. AVs up to 17 m in length, likewise, can turn in from the left lane and can turn out without encroaching over the centre-line. The design (19.0 m long) AV specified in this Standard can turn into the driveway by using the second lane out from the kerb as permitted by the Australian Road Rules 2000.
- 2 The corresponding dimensions for the MRV and SRV are 7 m and 5 m respectively. Larger vehicles may be able to use these narrower driveways depending on the width of public road available for manoeuvring in or out.
- 3 W = width of circulation roadway (see Table 3.1).
- 4 The access driveway median should be either fully- or semi-mountable kerb.

DIMENSIONS IN METRES

FIGURE 3.2 MINIMUM DESIGN FOR A MAJOR ACCESS DRIVEWAY CATERING FOR HRVs AND AVs

(reproduced from Figure 3.2 of AS2890.2:2002)

Figure 5.2: Proposed Heavy Vehicle Access Arrangement



The facility has been reviewed against the requirements of the Penrith City Council's 'E6 Erskine Business Park' and the Australian Standard for Off Street Commercial Vehicle Facility (AS/NZS2890.2:2002).

Details of the turning assessment indicating satisfactory provisions in this regards are provided in Appendix A.

6. Traffic Impact Assessment

6.1 Traffic Generation

6.1.1 RMS Guide to Traffic Generating Developments

The RMS Guide to Traffic Generating Developments provides an indication of typical traffic generation rates for industrial/warehouse uses. Application of the relevant criteria provides an estimate of the peak hour and daily traffic generation as summarised in Table 6.1.

Table 6.1: Subject Site Traffic Generation Rate

Use	Size	Traffic generation Rate (movements per 100m ² GFA)		Traffic Generation	
		Peak Hour	Daily	Peak Hour	Daily
Warehouse	6,912m ²	0.5	4 vph	35 vph	280 vph
Office	635m ²	2	10 vph	13 vph	64 vph

The above assessment indicates that the proposed warehouse would generate approximately 48 vehicle movements during the busiest peak hour while it is advised that the operation associated with the warehouse is also likely to generate approximately 20 truck movements per day. If it is assumed that the warehouse is operational over a 10 hour period (typical) then this would be equivalent to 2 truck movements per hour, resulting in a total of 50 vehicle movements per hour.

Comparatively, the approved Warehouse 1 development scheme which comprises 3,095m² of warehousing and 560m² administrative floor space is expected to generate some 30 vehicle movements per hour (including trucks).

6.2 Traffic Impact

The future road network and traffic upgrades as identified in the Erskine Park Employment Area (EPEA) are largely completed and provide ample spare capacities to accommodate any additional traffic activities which arise from the envisaged uses.

The proposed warehouse development, which is expected to have a net additional traffic generation of some 20 vehicle movements per hour (including trucks) over that approved will have imperceptible implications on the upgraded road network. Notwithstanding, light vehicle traffic resultant from the warehouse development will also be distributed between the two accesses (as opposed to previously approved i.e. one point of light vehicle access). As a result of this, access traffic movements will be more evenly distributed along Lenore Lane.

7. Conclusion

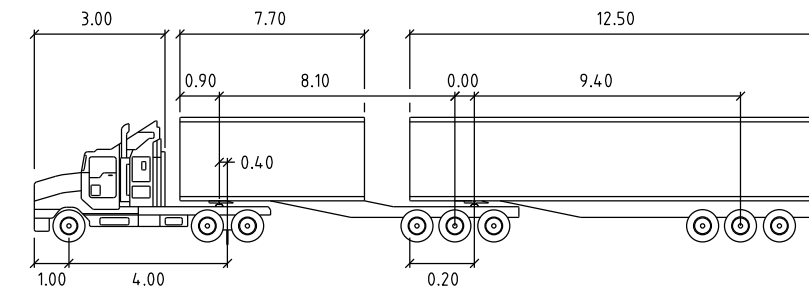
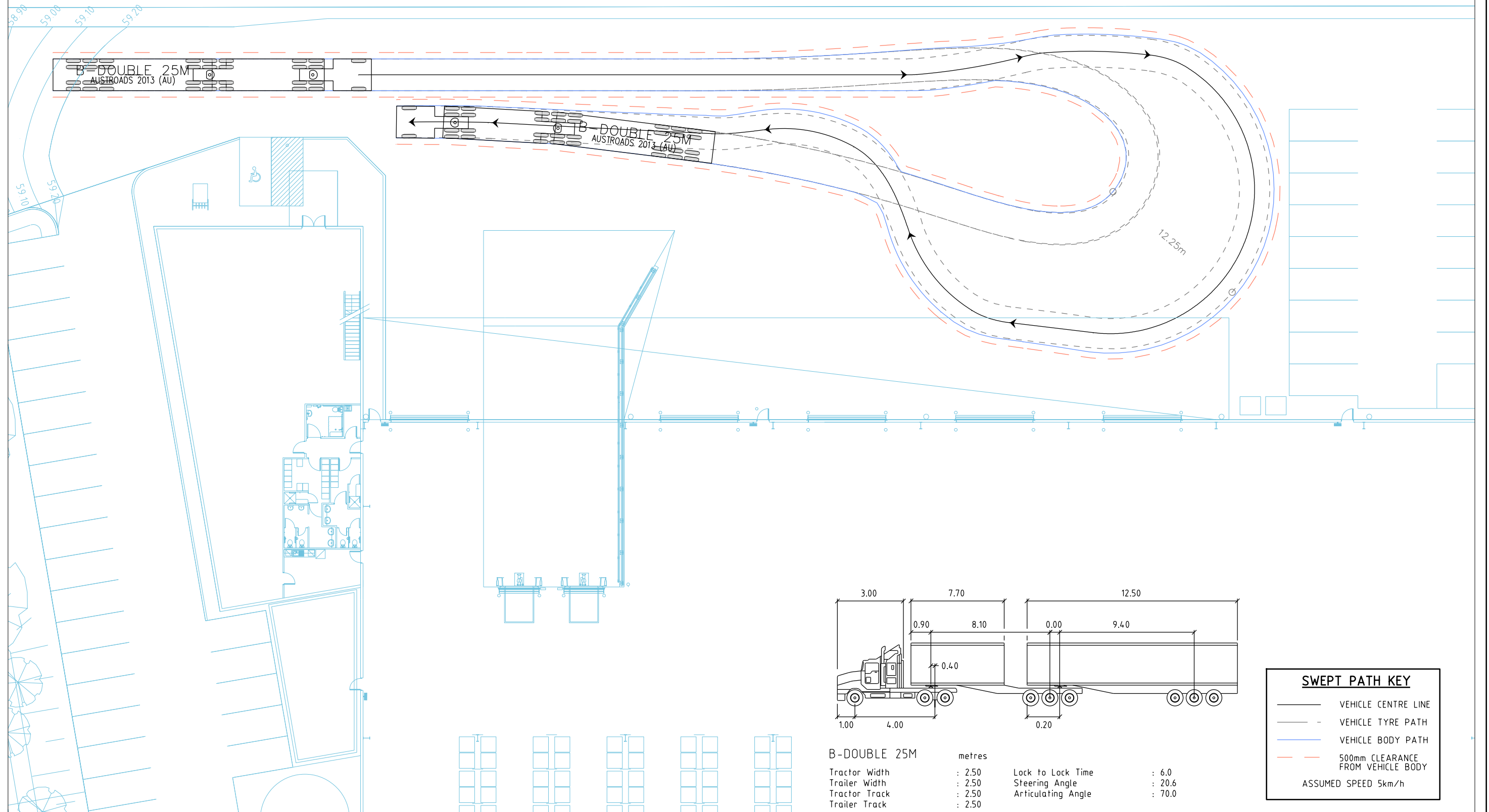
Based on the analysis and discussions presented within this report, the following conclusions are made:

- i It is proposed to modify existing approved warehouse at Lot 2 in 133-145 Lenore Lane in Erskine Park to provide a warehouse facility incorporating additional warehousing (6,912m²) and administrative floor area (635m²).
- ii The modified warehouse will have 75 car parking spaces and 7 loading docks.
- iii The proposed site access and carparking layouts are generally consistent with the requirements and criteria of the Australian Standard for Off Street Commercial Vehicle Facilities (AS2890.2:2002).
- iv The circulation area has been designed to accommodate for a 26m B-double to stop along the western boundary and turnaround.
- v The loading docks will accommodate up to 19m semi-trailers.
- vi The RMS Guidelines indicate that the proposed warehouse is likely to generate approximately 50 vehicle movements during the busiest peak hour.
- vii There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.

Appendix A

Swept Path Assessment

PLOTTED BY: brendan.kirkko ON 16/12/2015 AT 2:48:09 PM 16S1264000-01-P2.dgn



B-DOUBLE 25M metres

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 20.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

Melbourne 03 9851 9600
Sydney 02 8448 1800
Brisbane 07 3113 5000
Canberra 02 6243 9400
Adelaide 08 8334 3600
Gold Coast 07 5510 4814
Townsville 07 4722 2765
Perth 08 6316 4634



PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
SUBJECT TO CHANGE WITHOUT
NOTIFICATION

133-145 LENORE LANE, ERSKINE PARK
SWEPT PATH ASSESSMENT
B-DOUBLE TRUCK

DATE: 16.12.2015

SCALE: 1:300@A3



APPROVED: BLO

DRAWING NO. 16S1264000-01-01-P2

SHEET: 01 OF 04

PLOTTED BY: brendan.kirkko ON 16/12/2015 AT 2:54:57 PM 16S1264000-01-P2.dgn

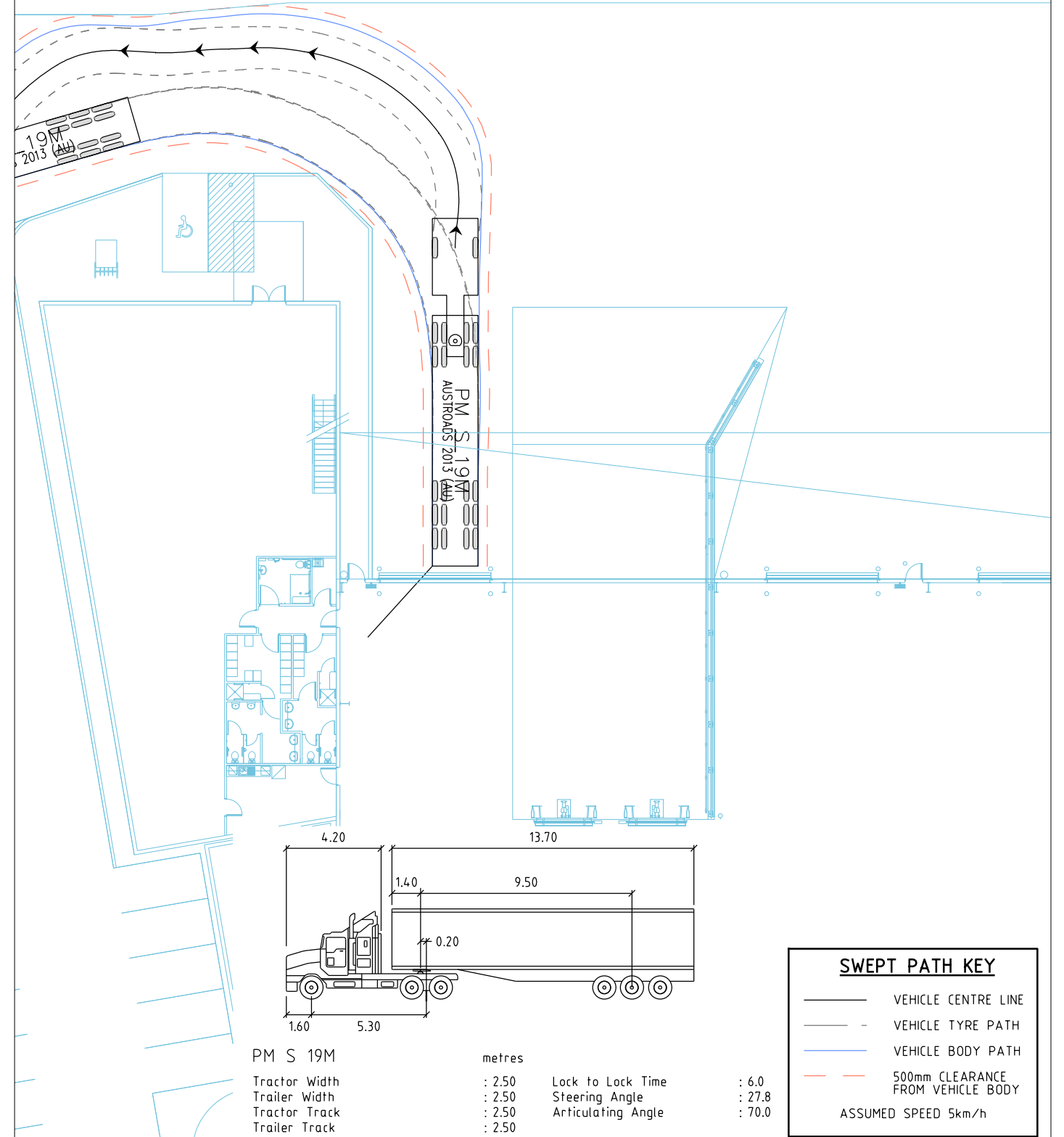
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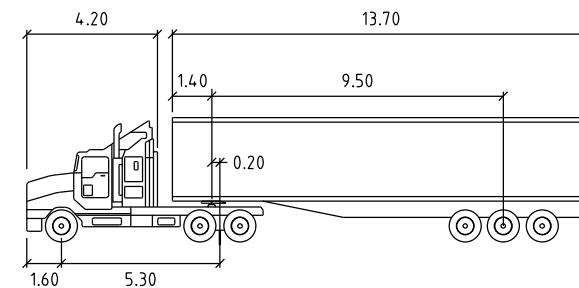
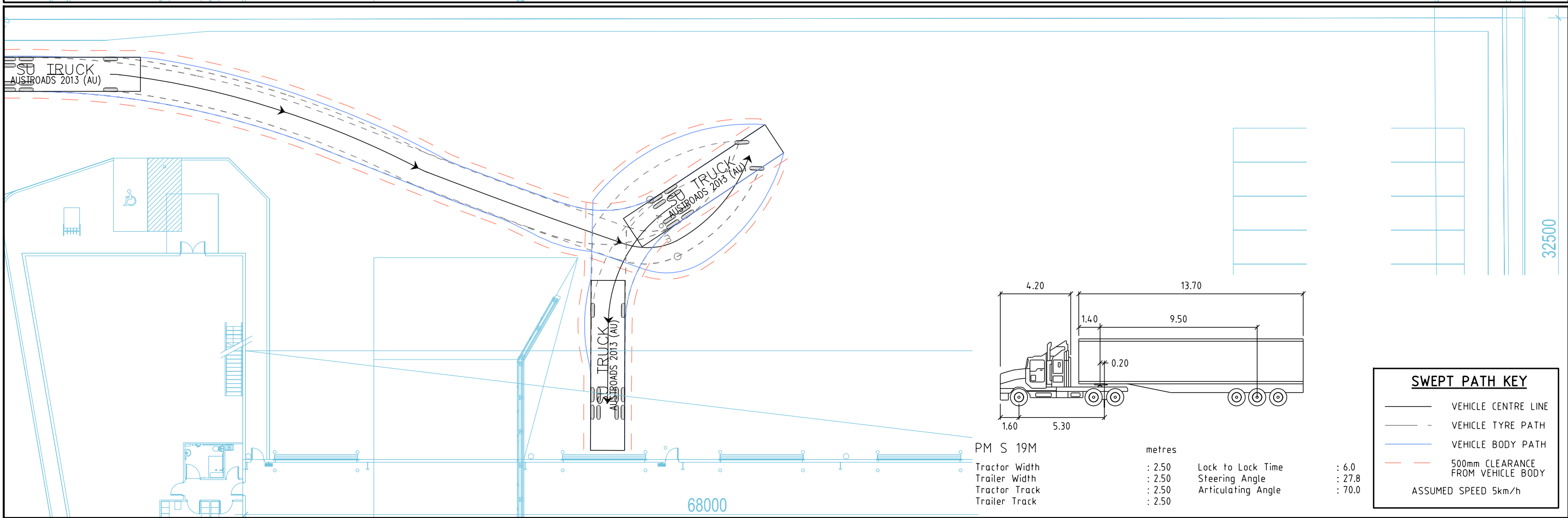
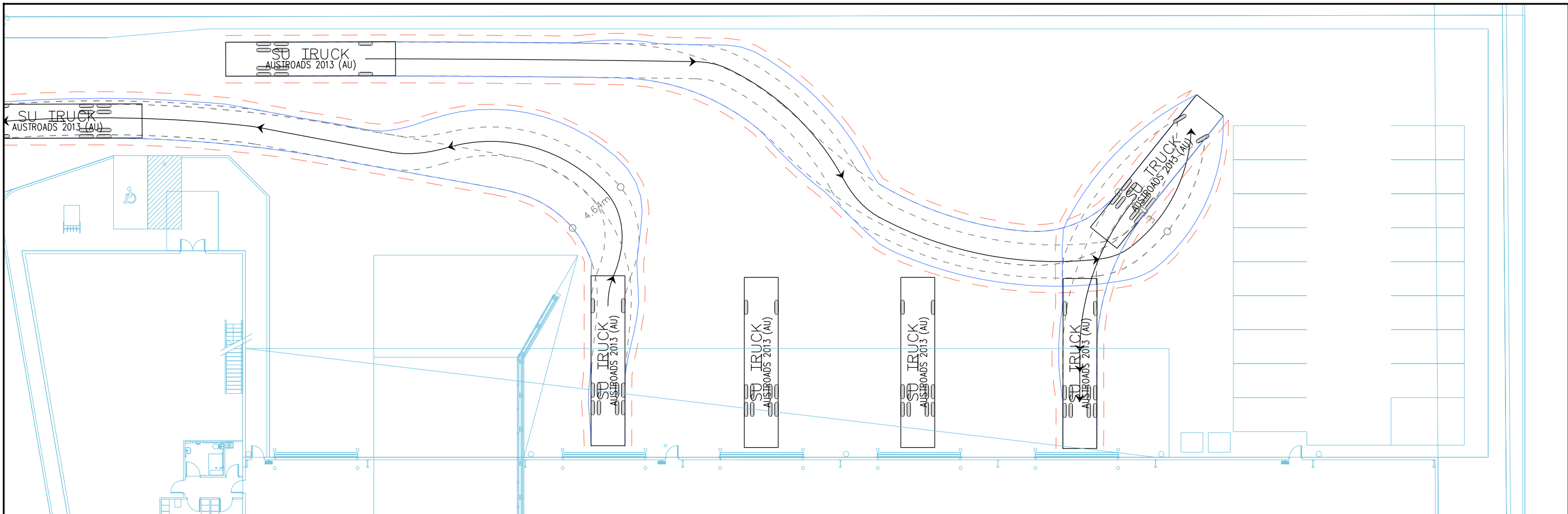


PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
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133-145 LENORE LANE, ERSKINE PARK
SWEEP PATH ASSESSMENT
19.0m SEMI RIGID VEHICLE

DATE: 16.12.2015
SCALE: 1:300@A3
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DRAWING NO. 16S1264000-01-02-P2
SHEET: 02 OF 04





PM S 19M	metres		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h

Melbourne 03 9851 9600
Sydney 02 8448 1800
Brisbane 07 3113 5000
Canberra 02 6243 9400
Adelaide 08 8334 3600
Gold Coast 07 5510 4814
Townsville 07 4722 2765
Perth 08 6316 4634



PRELIMINARY PLAN
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133-145 LENORE LANE, ERSKINE PARK
SWEPT PATH ASSESSMENT
19.0m SEMI RIGID VEHICLE

DATE: 16.12.2015
SCALE: 1:300@A3

APPROVED: BLO

DRAWING NO. 16S1264000-01-03-P2

SHEET: 03 OF 04

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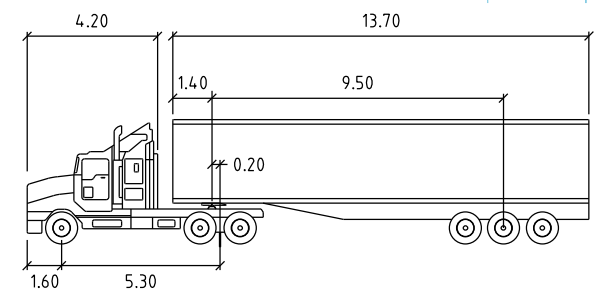
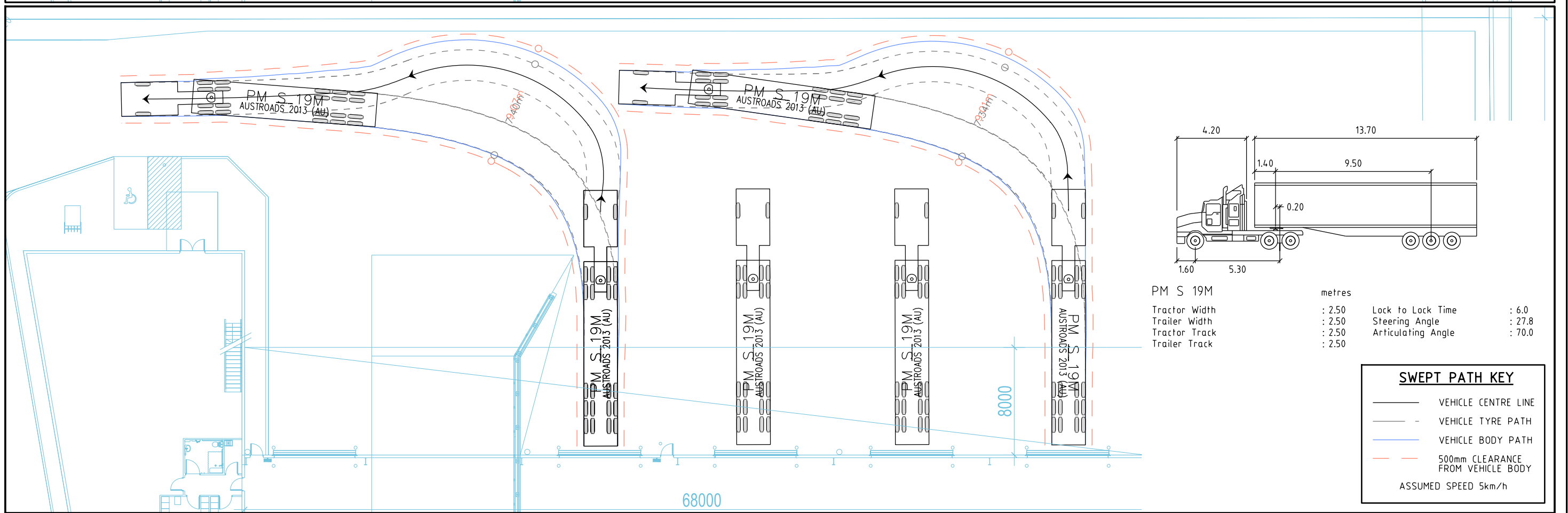
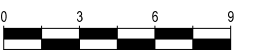


PRELIMINARY PLAN
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133-145 LENORE LANE, ERSKINE PARK
SWEEP PATH ASSESSMENT
19.0m SEMI RIGID VEHICLE

DATE: 16.12.2015
SCALE: 1:300@A3

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