Traffic Impact Assessment

Proposed Warehouse Unit Development
Interlink Industrial Park Lot 5, Mamre Road, Erskine Park

prepared on behalf of Goodman Property Services (Aust) Pty Ltd by **TRAFFIX** Traffic & Transport Planners

traffix
traffic & transport planners

po box 1061
potts point nsw 1335
t: +61 2 8324 8700
f: +61 2 9380 4481
w: www.traffix.com.au
abn: 66065132961

Ref: 11.346 Report_v2 31 October 2011

contents

Figure List

Appendices

Appendix A: Reduced Plans

Appendix B: Swept Path Analysis

1. Introduction

TRAFFIX has been commissioned by Goodman Property Services (Aust) Pty Ltd to undertake a traffic impact assessment in support of a Section 75W Application to the NSW Department of Planning and Infrastructure for Lots 1, 2 & 5 of the Interlink Industrial Park at Mamre Road, Erskine Park. The development is located within the Penrith City Council LGA and has been assessed under that Council's controls.

The changes proposed as part of the subject Section 75 Application primarily relate to the modifications to Lot 5, however this assessment is to look at the overall development, as approved, which also included Lots 1-2.

This report documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE) prepared separately. The development is considered of a size and nature that will require referral to the RTA under the provisions of SEPP (Infrastructure) 2007.

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing traffic conditions
- Section 4: Describes the proposed development
- Section 5: Assesses the parking requirements
- Section 6: Assesses traffic impacts
- Section 7: Discusses access and internal design aspects
- Section 8: Presents the overall study conclusions.

2. Location and Site

The Interlink Industrial Estate forms part of the Erskine Park Employment Area (EPEA), within the Western Sydney Employment Hub. It is situated approximately 11.5 kilometres to the southeast of Penrith. Lots 1,2 & 5 form the northernmost lots of the Interlink Industrial Estate.

Lots 1 & 2 are currently occupied by industrial warehouse developments (Linfox & Ubeeco, respectively) as previously approved. The overall site comprises a total area of some 181,889m^2. It has a western frontage to Mamre Road and a northern frontage to James Erskine Drive Sarah Andrews Close runs through the subject site and provides all access to the subject development, in addition to the Kimberly-Clarke and Woolworths developments, to the south. Lot 5 is currently vacant with a total site area of 56,192m^2.

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

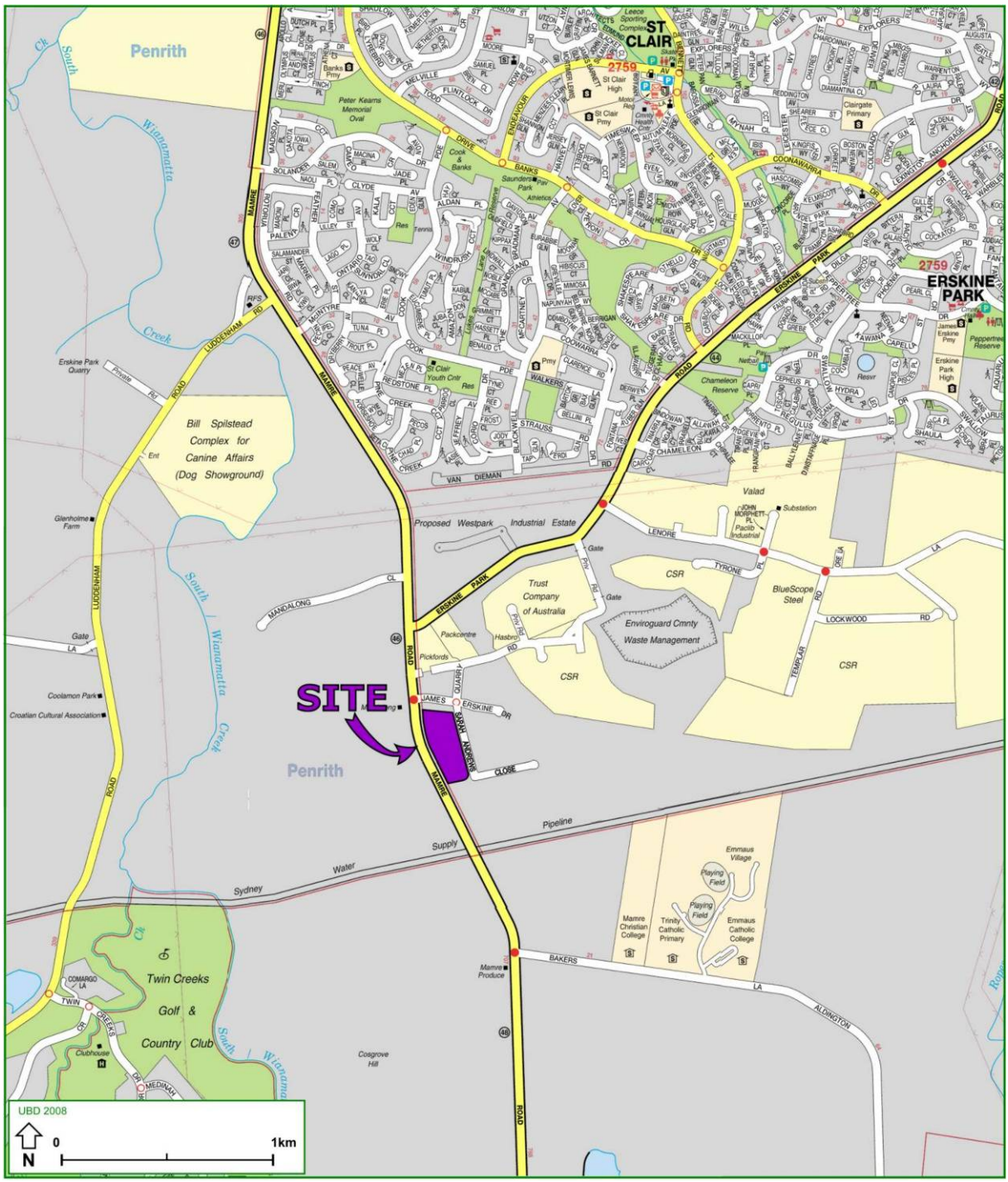


Figure 1: Location

Figure 2: Site

3. Existing Traffic Conditions

3.1 General Description of Road Environment

The existing road hierarchy in the vicinity of the site is shown in ***Figure 3***. Mamre Road is a classified State Road (MR 536) that is under the care and control of the Roads and Traffic Authority. It provides an arterial road function and connects the M4 Motorway to the north of the site (and the Great Western Highway beyond), with Elizabeth Drive to the south of the site, at Mount Vernon. This includes full interchange movements between Mamre Road and the M4 Motorway.

Mamre Road carries single lane traffic flow in each direction to the south of James Erskine Drive and widens on approach to the intersection to provide two through lanes and a dedicated right turn lane into Erskine Park Drive. The northern approach of Mamre Road also incorporates two lanes in each direction with a left turn deceleration for the turn into James Erskine Drive. James Erskine Drive provides two lanes in each direction in the 170 metre long section between Mamre Road and the existing roundabout between James Erskine Drive, Quarry Road and Sarah Andrews Close. The eastern approach to Mamre Road incorporates two right turn lanes, with a short left turn slip lane.

The roundabout has northern and western approaches and these provide single lane traffic flow in each direction, with a short dedicated right turn lane on the northern approach of Quarry Road. Left turn only movements are permitted from the kerbside lane of the western approach of James Erskine Drive. Sarah Andrews Close forms the fourth (southern) leg of this existing intersection, which serves all land in the south-western corner of the EPEA lands, including the Interlink Industrial Park.

Erskine Park Road forms a 'T' junction with Mamre Road, approaching from the east. This intersection is under priority control and incorporates a right turn storage lane for the movement from Mamre Road into Erskine Park Road (south to east). Mamre Road also incorporates a separate right turn bay for the movement from Mamre Road into the private access road that presently serves the EPEA, including the subject site. This intersection is to be upgraded with traffic signal control also provided.

It can be seen from ***Figure 3*** that the Erskine Park Road - Roper Road – Carlisle Avenue route forms part of Main Road 629 and is under the care and control of the Roads and Traffic Authority. This is an arterial route which connects Erskine Park in the south with Mt Druitt in the north. Along this route, to the north of the subject site, MR 629 intersects with the M4 Motorway where east-facing ramps are constructed to facilitate access to/from the east. Carlisle Avenue also intersects the Great Western Highway to the north of the subject site, which provides access to the east and west.

Roper Road continues further south where eastbound on and off ramps are constructed to the M4 Motorway. The on-ramp is via a priority controlled 'T' intersection with Roper Road, which incorporates a right turn storage lane and a left turn deceleration lane. This ramp intersects Roper Road on its western side. The off-ramp intersects Roper Road at a signal controlled 'T' intersection immediately south of the M4 Motorway.

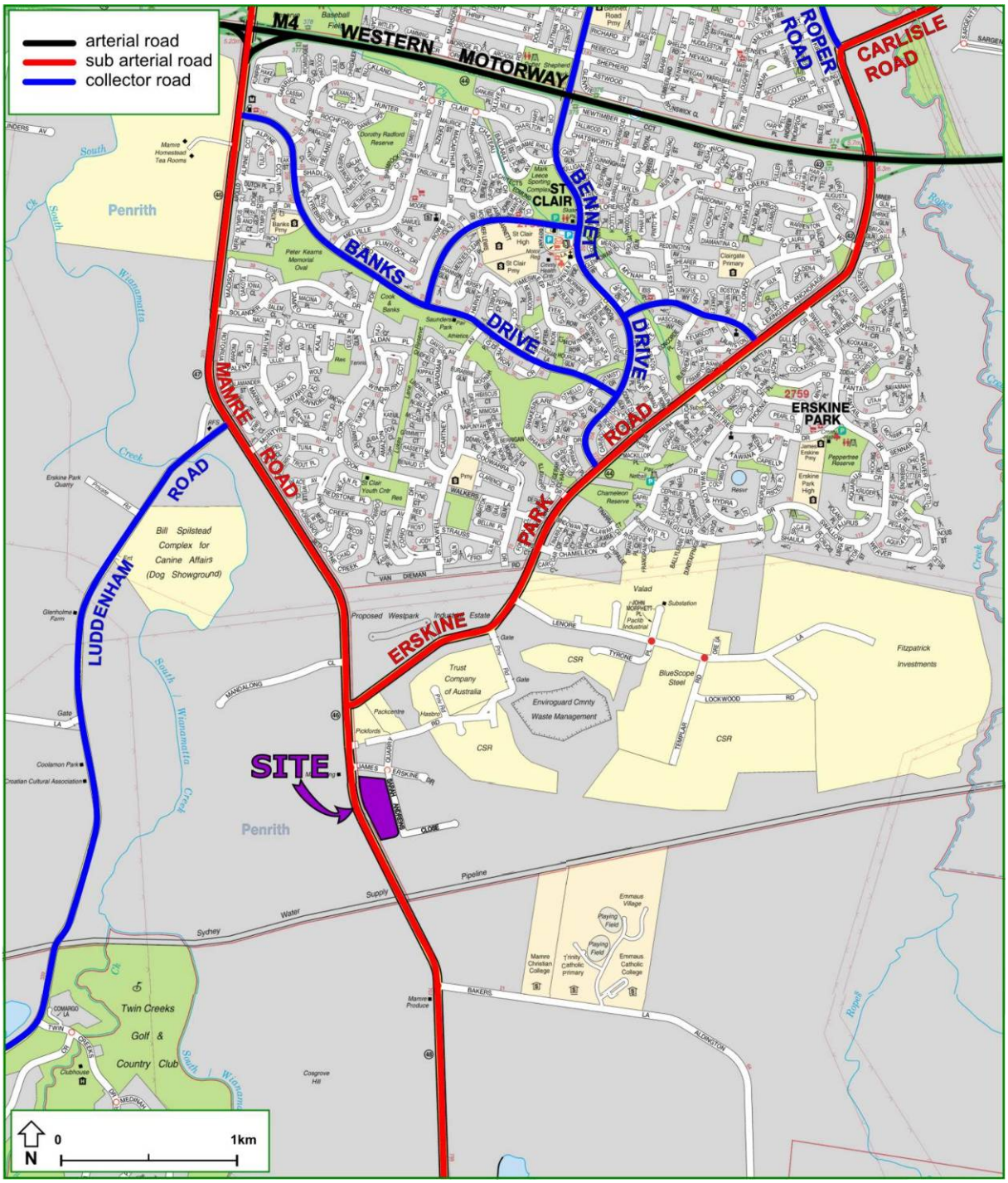


Figure 3: Surrounding Road Hierarchy

3.2 Existing Site Generation

Lot 5 is currently vacant and generates minimal, if any, traffic activity. A previous assessment of Lots 1 & 2, prepared by TEF Consulting dated 13 August 2007, identified a total traffic generation in the order of 219 vehicles per hour during the critical morning peak hour associated with the Linfox (including expansion not constructed) and Ubeeco developments.

3.3 Public Transport

The existing bus services that operate in the locality are shown in **Figure 4**. Existing public transport services in the locality are focussed mainly upon the existing residential catchment to the immediate north of the site that includes Erskine Park and St Clair, with connections to/from the north to St. Marys and Mount Druitt. However, Route 779 connects the site to St Marys Interchange, to the north of the site along Mamre Road.

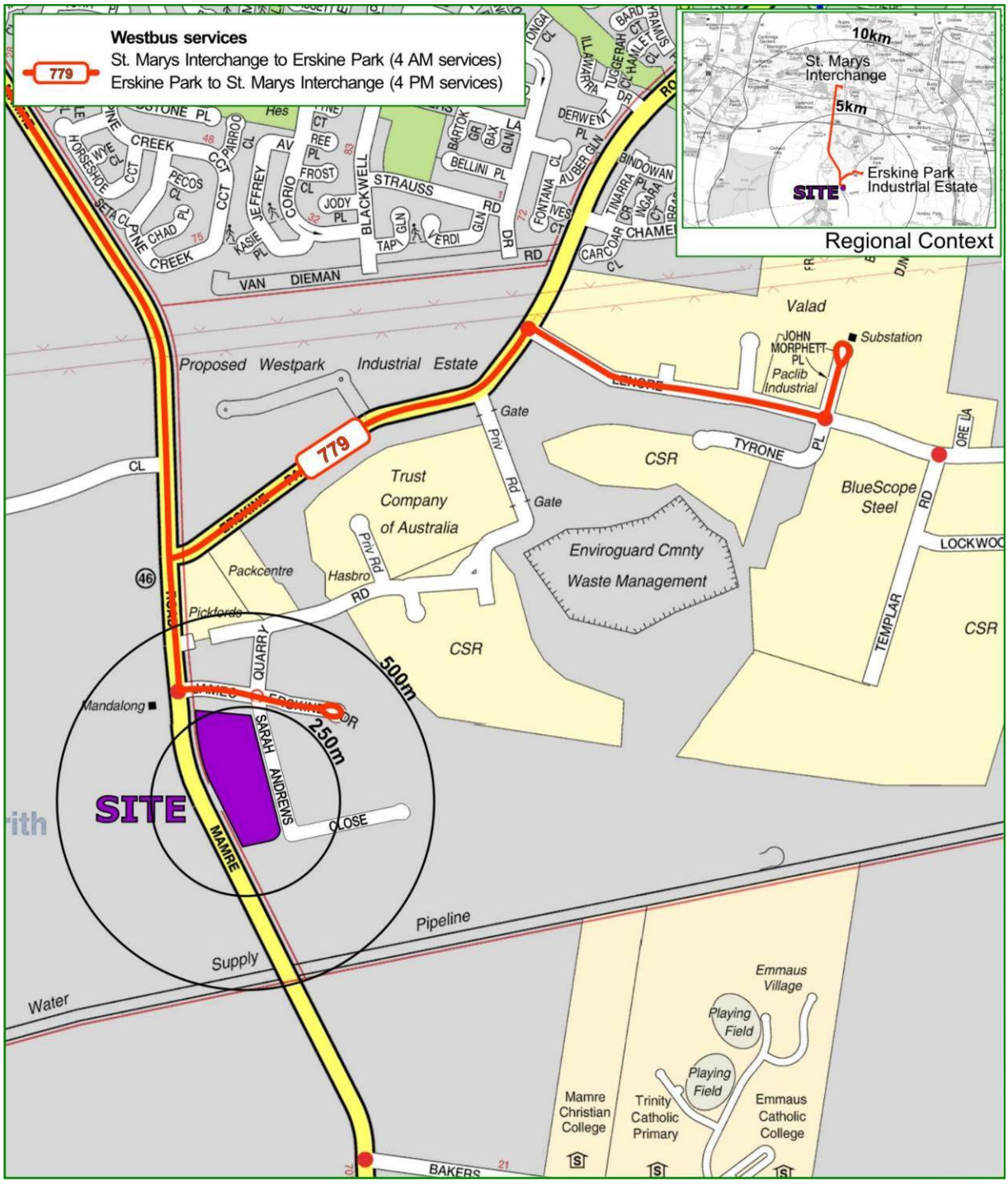


Figure 4: Public Transport Routes

4. Description of Proposed Development

A detailed description of the proposed development is provided in the Environmental Assessment prepared separately by BBC Consulting Planners. In summary, this application seeks to modify the existing consent on the site to reflect changes to the buildings and site layout which are outlined below.

Approved Development:

- Construction of warehouse buildings with a total floor area of 82,970m^2, including:
  - 79,380m^2 of warehouse area
  - 3,590m^2 of ancillary office area
- Provision of a total 534 parking spaces.

Proposed Development:

- Construction of warehouse buildings with a total floor area of 93,172m^2, including:
  - 88,745m^2 of warehouse floor space
  - 4,427m^2 of ancillary office areas
- Provision of a total 612 parking spaces within separate car parking areas.

The parking and traffic impacts arising from the development are discussed in Sections 5 and 6, respectively. Reference should be made to the plans submitted separately to Council which are presented at reduced scale in **Appendix A**.

5. Parking Requirements

Clause 19 (2) (a) of the Penrith Local Environmental Plan 1994 (Erskine Park Employment Area) requires that adequate on-site parking be provided to satisfy the demands generated by developments within the EPEA. In addition, a key objective is to eliminate the need for kerb side parking and congestion on the public road network. To this end, parking rates are provided for specific types of floor space are included in Council's DCP 2010. These can be varied by Council where considered justified. In addition, for major developments the proponent may refer to the parking requirements of the RTA's Guide to Traffic Generating Developments. These RTA rates have been established on the basis of extensive surveys and this research itself predates the recent trend into larger and more efficient facilities, with fewer workers.

In light of these comments the application of Council and RTA parking rates to the proposed Lot 5 Interlink Industrial Park results in the following requirements, as shown in **Table 1**.

Table 1: Comparative Parking Requirements

Land Use	GFA (m^2)	Council DCP Requirement		RTA Guide Requirement	
		Rate	Spaces	Rate[1]	Spaces
Warehouse	88,745	1 / 100m^2 GFA	887	1 / 300m^2	296
Office[1]	4,427	1 / 40m^2 GFA	111	1 / 300m^2	15
Totals	93,172		998		311

Note(s): 2) The RTA Guide considers up office areas to be ancillary to the primary use within industrial developments where the office component does not exceed 20% of the total floor area.

It can be seen that the site requires between 311 and 998 spaces depending upon which rate is applied. In response, 612 parking spaces are proposed which forms a suitable balance between these two nominal requirements. The previously approved development provided a total of 534 spaces for 82,970m^2 GFA which equates to a parking provision rate of 1 space per 155m^2. Application of this 'approved rate' to the subject development with a total floor space of 93,172m^2 would result in a requirement for 600 spaces.

In summary, all proposed Units are provided with parking in excess of that nominally required under the RTA's Guide to Traffic Generating Development and will accommodate all parking demands on-site. Additional car parking is provided to provide a level of flexibility and to provide certainty for Council in the event that a particular tenant may require additional parking.

5.1 Disabled Parking

Council's DCP requires accessible parking spaces be provided at a rate of between 1-4% of the total parking. These spaces are to be located adjacent to building entrances and signposted accordingly.

5.2 Bicycle Facilities

The NSW Government Planning Guidelines for Walking and Cycling, as referred to in Council's DCP, recommends a bicycle parking provision of between 3-5% of staff for industrial and warehousing units for long term use, with a further 5-10% of staff for short term visitor use.

6. Traffic Impacts

6.1 Planning Context

Penrith Council and the Roads and Traffic Authority have agreed the basis upon which the road system should be assessed in 2016, based on the overall EPEA lands at full development potential in 2016. This assessment is based upon the adoption of a trip rate of 15 trips per hectare in the peak period for the majority of the site, including the subject site.

These trip rates thus underpin the strategic assessment of the EPEA undertaken to date. The resulting performance of the road system in 2016 has been the subject of extensive discussion and consultation and the recent construction of traffic signals at the intersection of James Erskine Drive with Mamre Road (and the internal road system serving the subject site) have been founded on an implicit level of traffic generation.

The subject site is contained within the area defined by the RTA as “Site C” which incorporates a total site area of 76.7 hectares and includes all sites accessed via James Erskine Drive. This site was predicted to generate 1,088 trips/hr during peak periods (without the link road to the M7), which therefore represents a worst-case scenario with traffic concentrated at this intersection.

The subject site, with an area of 181.9 hectares, thus generated an implicit 273 veh/hr during peak periods and this level of generation has been taken into account in the strategic traffic investigations undertaken to date. Based on these investigations, the following improvements have been implemented or are proposed:

The intersection of Erskine Park Road with Mamre Road

This intersection has been assessed as a T junction under traffic signal control and operates satisfactorily based on the proposed layout and predicted traffic volumes in 2016.

The intersection of James Erskine Drive with Mamre Road

This is the main access to the EPEA lands from Mamre Road (including the subject site) and has previously been modelled as a T intersection under traffic signal control and operates satisfactorily based on the proposed layout and predicted traffic volumes in 2016.

The generation of 273 veh/hr associated with this site provides a 'base case' against which the proposed Lots 1,2 & 5 development may be assessed.

6.2 Predicted Traffic Generation of Lots 1,2 & 5 Interlink Industrial Park

The Roads and Traffic Authority's Guideline recommends application of the following trip rates for industrial warehouse developments:

- 0.5 peak hourly trips per 100m^2 GFA, and
- 4.0 daily vehicle trips per 100m^2 GFA.

Application of these rates to the subject development with a total of 93,172m^2 GFA results in the following:

- 466 veh/hr during peak periods, and
- 3,727 daily vehicle trips.

However, account needs to be taken of the previously approved development which would have been expected to generate the following trips, were construction to occur under existing consents. Application of the above rates to the approved development yield of 82,970m^2 GFA results in the following traffic generation:

- 415 veh/hr during peak periods, and
- 3,312 daily vehicle trips.

Having regard for the above, the proposed Section 75W modification will result in the following additional vehicle trips:

- 51 veh/hr during peak periods, and
- 415 daily vehicle trips.

The above equates to a net additional traffic flow of 193 vehicles per hour (466 veh/hr proposed less 273 veh/hr previously assumed) above that indicatively assumed within the Precinct modelling undertaken previously on behalf of the RTA.

6.3 Traffic Impacts

It is evident from above that the proposed development will generate up to 193 vehicle trips per hour above that assumed within the strategic modelling for the site. However, account needs to be taken of the Precinct as a whole. In this regard, a previous report prepared by TEF Consulting dated 13 August 2007 identified the following peak hourly trips for other developments within the overall Interlink Industrial Estate during peak periods:

- 36 veh/hr associated with the Woolworths Distribution Centre (Lot 3)
- 20 veh/hr associated with the Kimberly Clark facility (Lot 4)

In this regard, the other developments forming part of the overall Interlink Industrial Estate are expected to generate in the order of 56 veh/hr during the morning peak period. Inclusion of the now proposed development would result in a cumulative traffic generation of 522 vehicles per hour.

The above compares with an adopted 587 vehicles per hour inherent within the strategic modelling undertaken previously for the overall Estate which has a site area of 39.1 hectares.

In summary, the cumulative traffic associated with the Interlink Industrial Estate is less than that included within the strategic planning undertaken by Council and the RTA previously. As such, the

subject development is supportable from a traffic perspective with no change to the previously adopted performance of the surrounding road network.

6.4 Construction Traffic

Details regarding the number of truck movements required during construction are unknown at this stage. However, it is noted that the site is well-removed from the external road system and as a consequence the construction traffic impacts associated with the project will be localised and relatively minor and can be dealt with as a normal consent condition. This approach would also enable detailed input to be provided from the project manager/builder in relation to the specific impacts associated with the various construction phases.

Access will be via the new traffic signals at the intersection of James Erskine Drive with Mamre Road which have been designed to accommodate traffic volumes that are substantially higher than will occur during construction and are based on traffic conditions in 2016. All access to the site will therefore be via the arterial road system with no trucks using residential streets.

7. Access & Internal Design Aspects

7.1 Access

Access arrangements for Lots 1 & 2 are unchanged by this Section 75W Application, with all changes to access related solely to Lot 5.

Access to Lot 5 is proposed via 9 driveway crossings to Sarah Andrews Close which provide separate light and heavy vehicles accesses to each of the three (3) proposed tenancies. This includes separate truck entry and exits to Units 1 & 2. A single truck access is proposed for Unit 3 due to the potential for future vegetation to limit availability of adequate sight distance at the southern end of the site for trucks. In this regard, it is noted that the southernmost (light vehicle) access is located close enough to the corner so that sight distance is acceptable.

Truck access to the hardstand areas is proposed via the first access driveway from the north to facilitate counter-clockwise circulation through the servicing area. This permits access to the proposed docks and roller shutters by the drivers' side of trucks in accordance with Clause 4.3.1 (d) of AS2890.2.

Access to the site by up to 19 metre articulated trucks is demonstrated by the swept paths included in **Appendix B**. The frequency of trucks accessing Unit 3 will be sufficiently low that a combined entry/exit driveway is considered acceptable.

In summary, the proposed site accesses will operate safely and effectively.

7.2 Internal Design

The internal design of Lots 1 & 2 are similarly not changed by the subject application.

The internal car park and truck servicing areas of Lot 5 generally satisfy the requirements of AS 2890.1, AS2890.2 and AS2890.6, with the following characteristics are noteworthy:

- Parking spaces are generally 2.5 metre in width and 5.5 metres in length and satisfy the requirements of AS2890.1.
- Accessible spaces are located adjacent to building entries and provided with an additional 'shared area' in accordance with AS2890.6.
- Car park accesses are a minimum of 6.25 metres in width and therefore satisfy the requirements of AS2890.1 for a Class 2 driveway and are acceptable. A separate entry and exit driveway of 6.5 metres is proposed to the Unit 2 car park. This increased width is beneficial to maintain accessibility of parking spaces in the vicinity of these accesses.
- Pedestrian footpaths 1.5 metres in width are provided between the frontage road and tenancy entries, providing sufficient separation of pedestrian and vehicle movements.
- Access to all loading docks for up to 19 metre articulated trucks can be achieved, with the exception of the southernmost roller shutters as demonstrated by the swept paths in **Appendix B**. These roller doors are limited to access by up to 12.5 metre rigid trucks.
- The development includes a total of 16 small car spaces with a reduced width of 2.3 metres which satisfies the requirements of AS2890.1. This equates to approximately 7.7% of the total parking provision which is considered acceptable. Indeed, the Green Star Industrial Rating Tool encourages provision of up to 25% of total parking spaces as 'small car' spaces.

In summary, the internal design is considered to be satisfactory and will provide an acceptable amenity for future tenants.

8. Conclusions

In summary:

- The proposed Section 75W Application seeks to modify the existing consent to amalgamate the two previous envelopes on Lot 5 to a single industrial building which results in a total development yield of 93,172m^2 for Lots 1, 2 & 5. This represents an increase of 10,202m^2 above that already approved on the site (82,970m^2).

- Previous strategic planning for the Precinct has formed the basis for the existing road network and proposed upgrades to be undertaken in the future. An inherent traffic generation of 273 vehicles per hour was adopted for the subject site within this modelling. Furthermore, a total traffic generation of 587 veh/hr was adopted for the overall Interlink Industrial Estate.

- The proposed development is expected to generate a peak hourly traffic volume of 466 vehicles per hour. Whilst this is more than assumed specifically for the subject site, the overall traffic generation of Interlink Industrial Estate as a whole is well below that included in the modelling undertaken previously.

- Having regard for the above, the traffic impacts associated with the overall Interlink Industrial Estate (including the proposed development) is consistent with previous strategic modelling undertaken by Council and the RTA and is therefore acceptable.

- The proposed changes to the access and internal design aspects of the development are considered acceptable, subject to the comments included in Section 7. Any minor matters are not considered to fundamentally affect the overall development and that any outstanding matters can be readily addressed during subsequent construction documentation and approvals.

It is therefore concluded that the proposed development is supportable on traffic planning grounds and the proposed development will operate satisfactorily.

Appendix A

Reduced Plans

Development Area Schedule	
Site Area	56,192 sqm
Unit 1 Warehouse	12,035 sqm
Office 1 (2 lvls)	1,167 sqm
Dock Office 1	60 sqm
Unit 1 Total Area	13,262 sqm
Unit 2 Warehouse	11,550 sqm
Office 2 (over)	500 sqm
Lobby 2	50 sqm
Unit 2 Total Area	12,100 sqm
Unit 3 Warehouse	5,160 sqm
Office 3 (over)	400 sqm
Lobby 3	50 sqm
Unit 3 Total Area	5,610 sqm
Total Building Area	30,972 sqm

Awning	1,405 sqm
Site Cover (inc. awning)	56 %
Floor Space Ratio	0.55 : 1
Hardstand Area	7,900 sqm
Light Duty Area	5,900 sqm
Grassed Fire Track Area	2,000 sqm
Carparking	208
Provisional Carparking	37

Goodman

Mamre Road

Mamre Road Planting
(To match Mamre Road Planting at Kimberly Clark)
Refer to Landscape Architect's Plan

17340

Grassed Fire Track

Grassed Fire Track

Grassed Fire Track

15000

BBQ

Office
(2 lvls)
1,167 sqm

Indicative office fitout

35690

105725

T

P

T

turning bay

Proposed Unit 3

Warehouse
5,160 sqm

Proposed Unit 2

Warehouse
11,550 sqm

FFL 39.70

Proposed Unit 1

Warehouse
12,035 sqm

71080

30000

6000

indicative office fitout

Office (over)
400 sqm

2 x Recessed Docks

Office (over)
500 sqm

indicative office fitout

2 x Recessed Docks

Dock Office
60 sqm

4 x Recessed Docks

L

L

6m RSD 6m RSD 6m RSD

6m RSD 6m RSD 6m RSD 6m RSD 6m RSD

7m RSD 7m RSD 7m RSD 7m RSD

BBQ

BBQ

26660

Carparking
(46)

PC
(7)

10m awning

PC
(5)

Carparking
(47)

PC
(13)

10m awning

PC
(5)

PC
(5)

10m awning

Carparking (115)

10000

16670

James Erskine Drive

35000

Hardstand

Hardstand

PC
(2)

Hardstand

7500

Car Entry/Exit

Truck Entry/Exit

Car Entry

Car Exit

Truck Exit

Truck Entry

Truck Exit

Truck Entry

Car Entry/Exit

Sarah Andrews Close

64945

115500

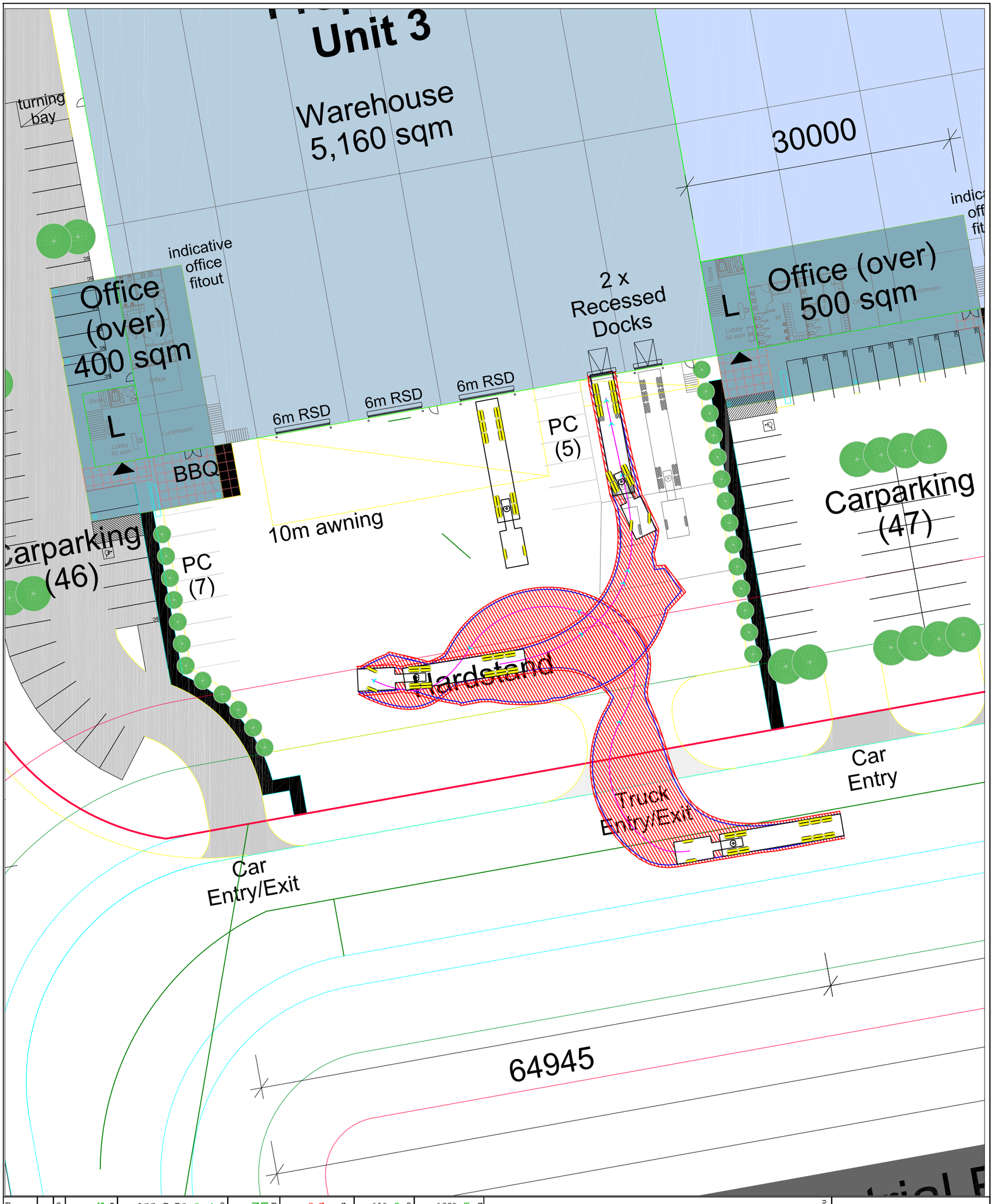
120875

301320

design+	INTERLINK Industrial Estate	Proposed Industrial Development	**Site Plan**	1:500 @ A1 1:1000 @ A3	INT DA501 (C)
	Mamre Road, Erskine Park	s75W Modification to MP 07_0093	0 10 50	26 Oct 11 MO	

Appendix B

Swept Path Analysis



town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a macleay street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 8324 8701
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

project no.	drawing phase	drawing no.	rev
11.346	-	TX.01	-

no.	revision note	by.	date

Unit 3

Warehouse
5,160 sqm

30000

turning bay

indicative office fitout

Office (over) 400 sqm

Office (over) 500 sqm

2 x Recessed Docks

6m RSD

6m RSD

6m RSD

PC (5)

BBQ

10m awning

PC (7)

Carparking (46)

Carparking (47)

Hardstand

Car Entry

Truck Entry/Exit

Car Entry/Exit

64945

town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

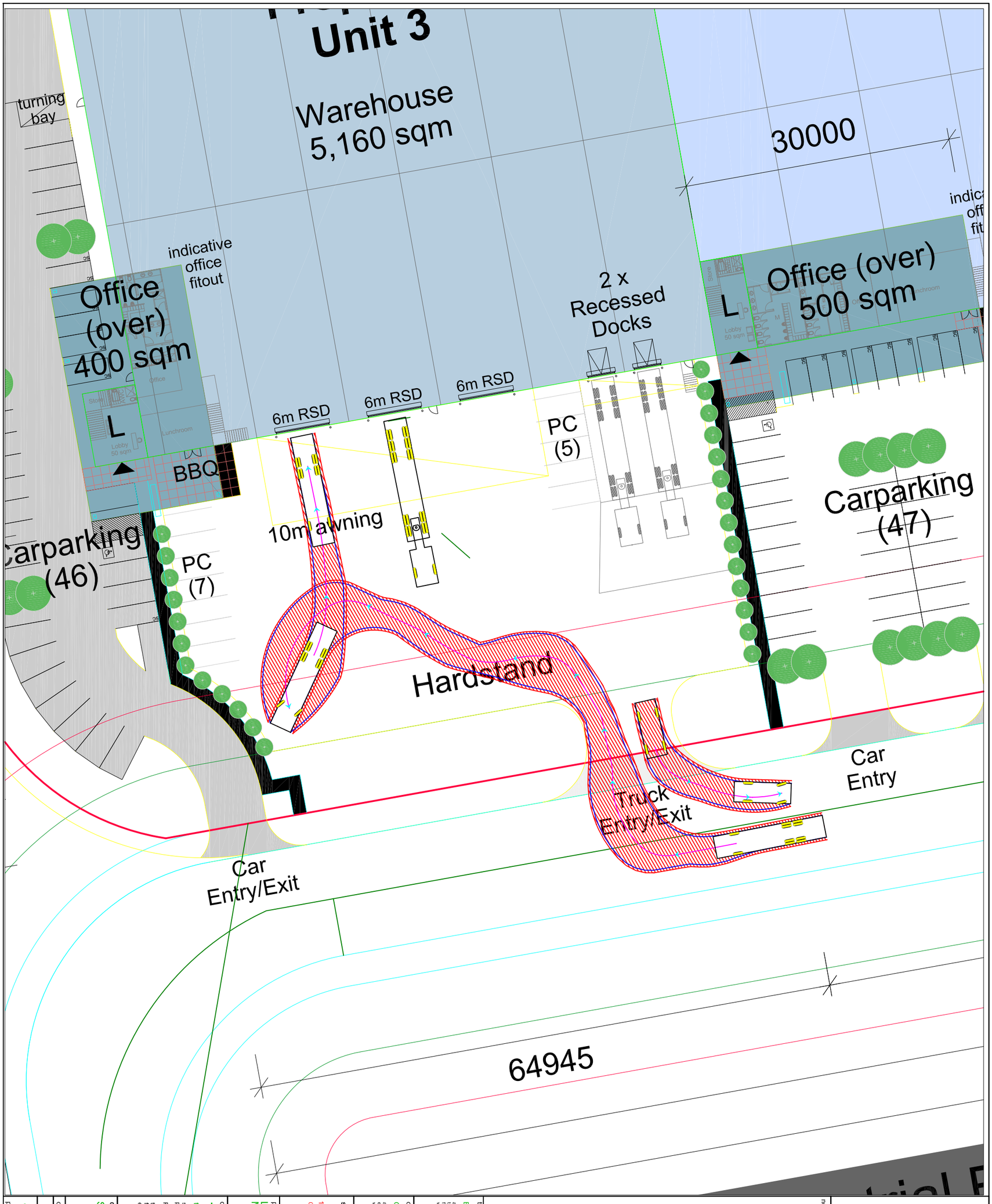
drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a macleay street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 8324 8701
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

project no.	drawing phase	drawing no.	rev
11.346	-	TX.02	-

no.	revision note	by.	date



town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

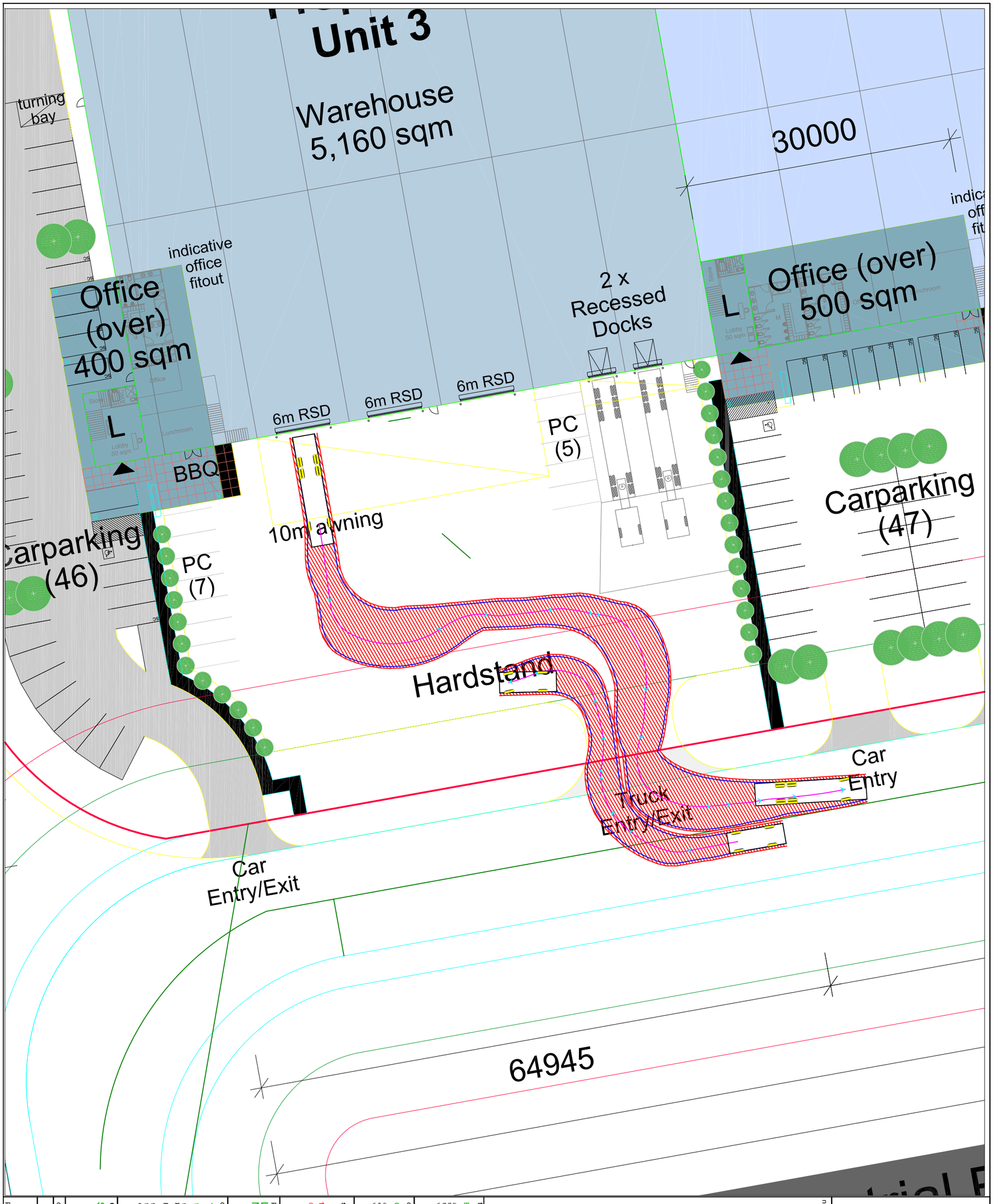
drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a macleay street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 8324 8701
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

project no.	drawing phase	drawing no.	rev
11.346	-	TX.03	-

no.	revision note	by.	date



town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

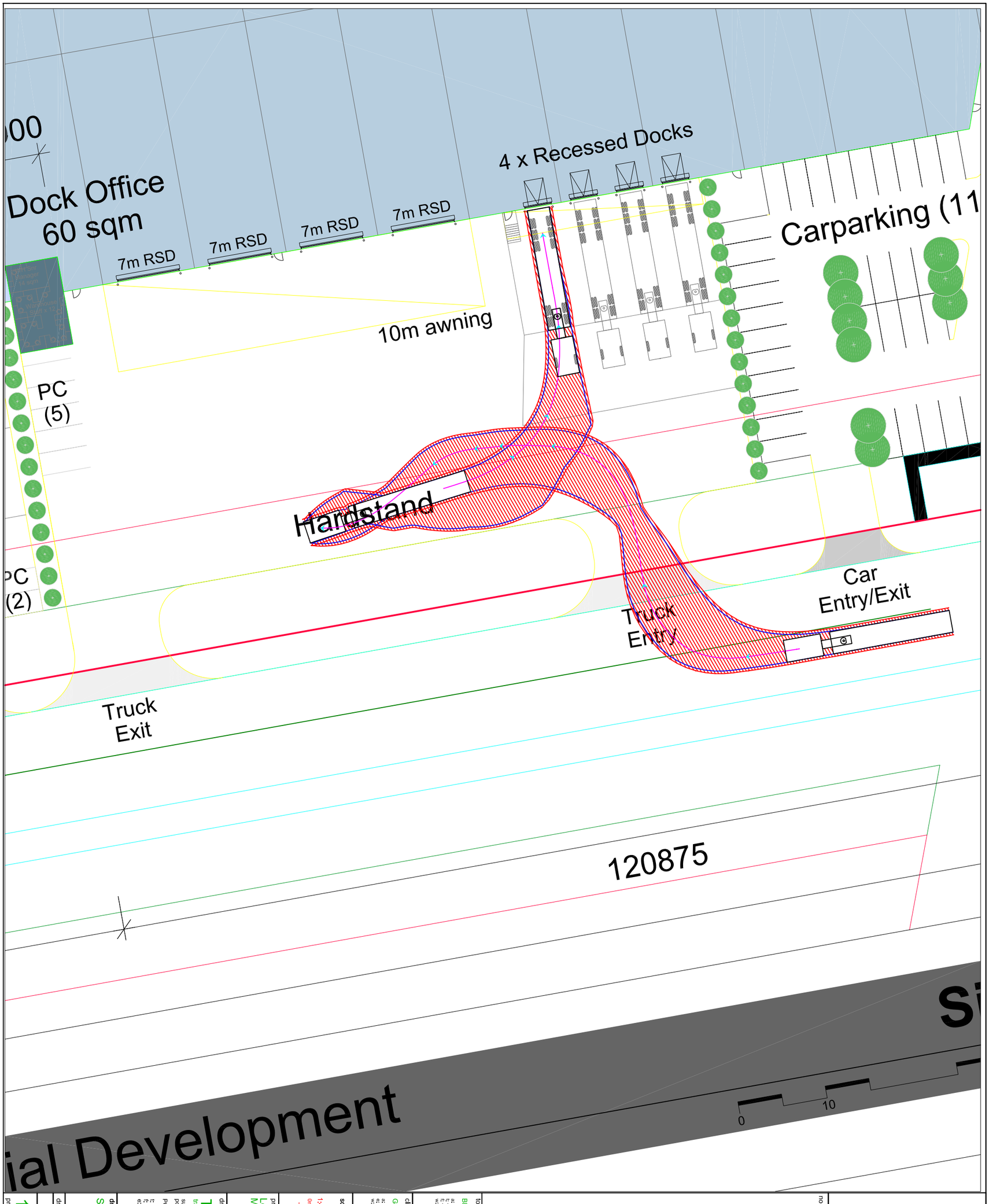
drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a macleay street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 8324 8701
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

project no.	drawing phase	drawing no.	rev
11.346	-	TX.04	-

no.	revision note	by.	date



town planner

BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client

Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-aii@goodman.com
w: www.goodman.com

scale

1:400 @ A3
0m 4 8 12 16

project

Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

drawing prepared by

TRAFFIX
traffic and transport planners
suite 3.08 46a macdaey street
potts point NSW 2011

PO Box 1061 potts point nsw 1035

t: +61 2 8324 8700
f: +61 2 8324 8701
e: info@traffix.com.au

traffix
traffic & transport planners

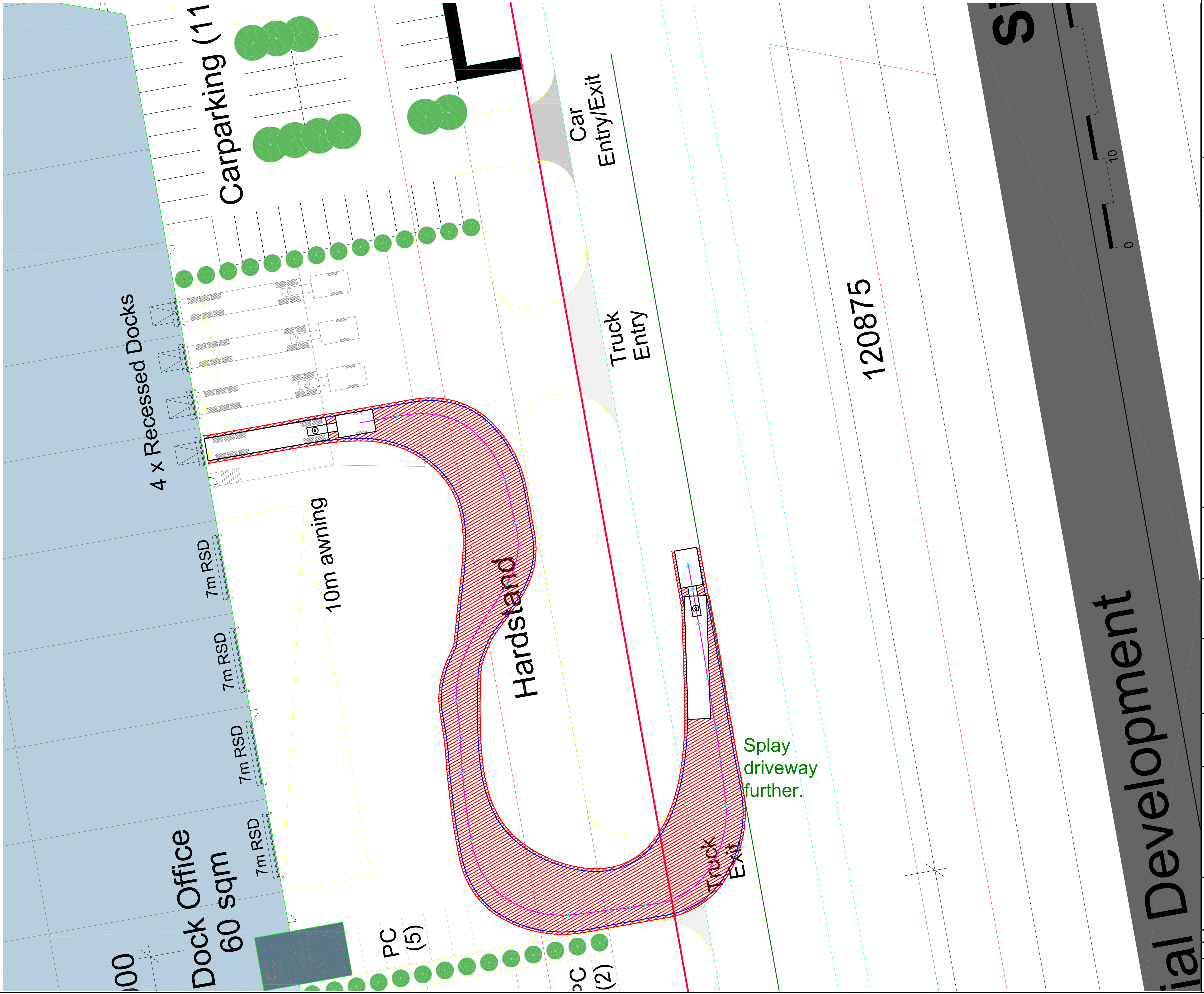
drawing title

Swept Paths

drawn:	checked:	date:
TL	-	28 Oct 2011

project no.	drawing phase.	drawing no.	rev
11.346	-	TX.05	-

no.	revision note	by.	date



no. revision note | by. date

town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

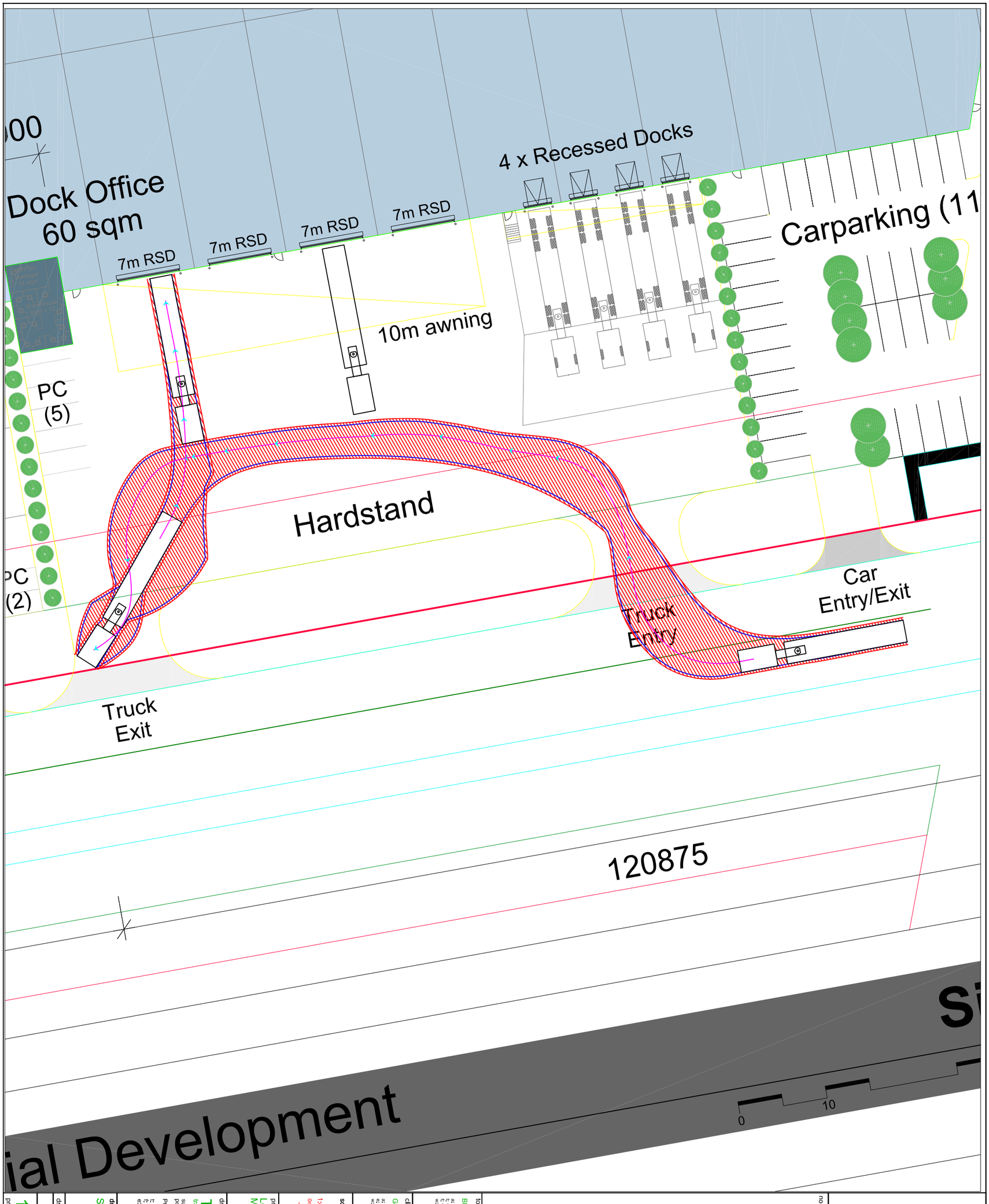
project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a maclaey street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 9380 4481
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn: TL	checked: -	date: 25 Oct 2011

11.346	-	TX.06	-
project no.	drawing phase.	drawing no.	rev



town planner
BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client
Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-aii@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

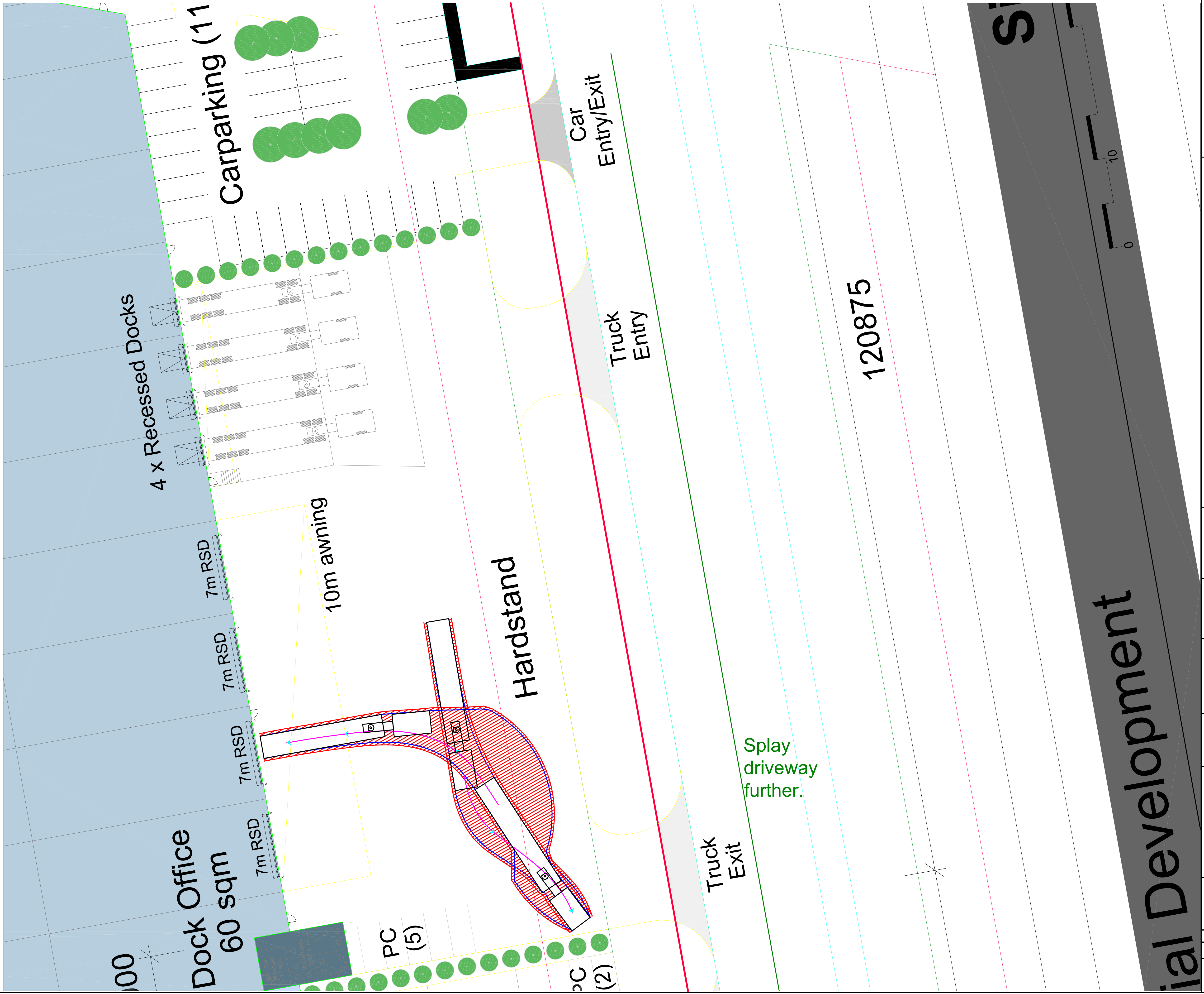
drawing prepared by
TRAFFIX
traffic and transport planners
suite 3.08 46a macleay street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 4700
f: +61 2 8324 4701
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

project no.	drawing phase.	drawing no.	rev
11.346	-	TX.07	-

no.	revision note	by.	date



no. revision note | by. date

town planner

BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client

Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale
1:400 @ A3
0m 4 8 12 16

project
Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

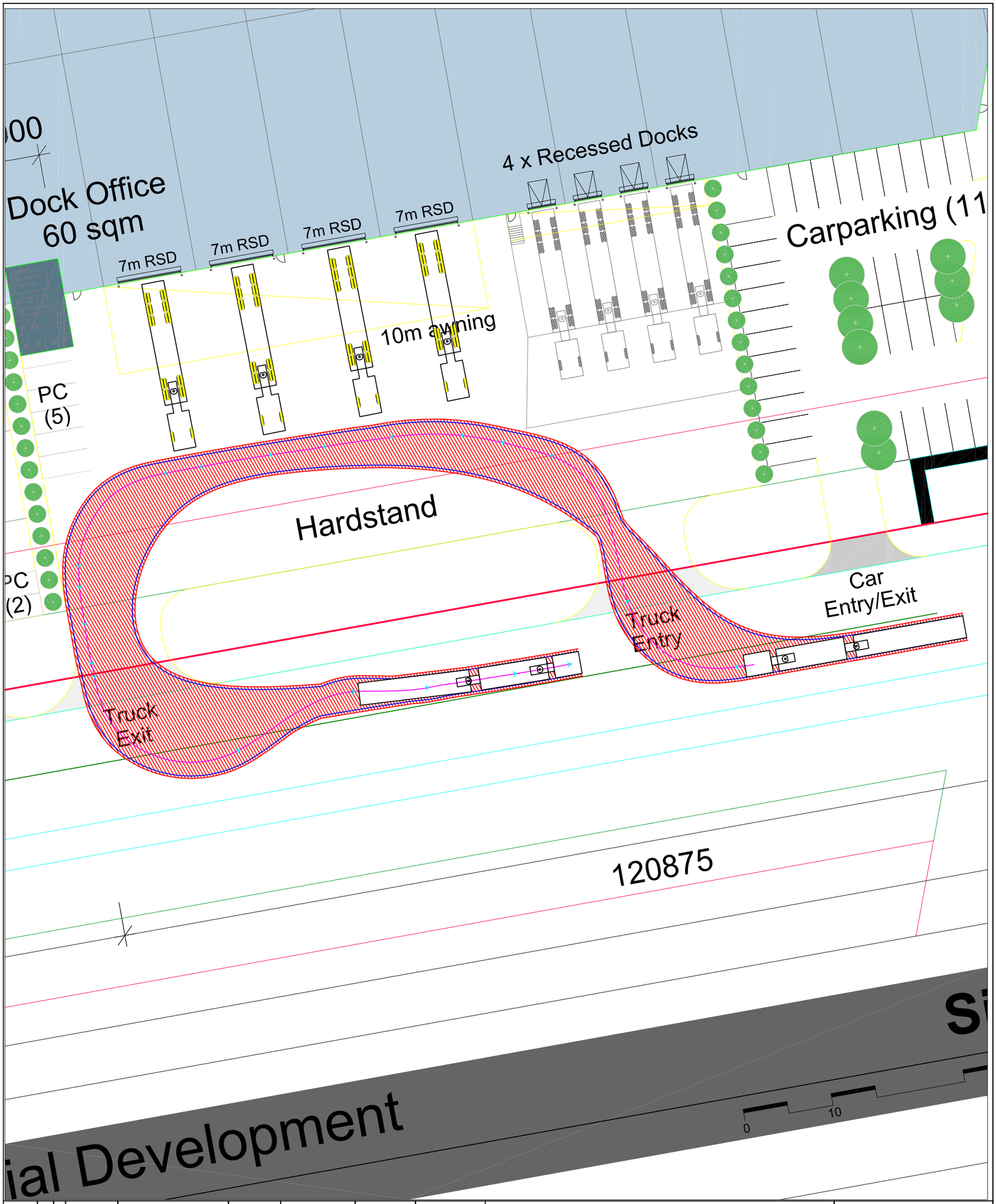
drawing prepared by

TRAFFIX
traffic and transport planners
suite 3.08 46a maclaey street
potts point NSW 2011
PO Box 1061 potts point nsw 1035
t: +61 2 8324 8700
f: +61 2 9380 4481
e: info@traffix.com.au
traffix
traffic & transport planners

drawing title
Swept Paths

drawn: TL | checked: - | date: 25 Oct 2011

11.346 | - | TX.08 | -
project no. | drawing phase. | drawing no. | rev



town planner

BBC Consulting Planners
a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcconsultants.com.au

client

Goodman Property Services (Aust) Pty Ltd
a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale

1:400 @ A3

0m 4 8 12 16

project

Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

drawing prepared by

TRAFFIX
traffic and transport planners
suite 3.09 46a macdawey street
potts point NSW 2011

PO Box 1061 potts point nsw 1035

t: +61 2 8324 8700
f: +61 2 8324 8481
e: info@traffix.com.au

traffix
traffic & transport planners

drawing title

Swept Paths

drawn:	checked:	date:
TL	-	31 Oct 2011

project no.	drawing phase.	drawing no.	rev
11.346	-	TX.09	-

no.	revision note	by.	date

James Erskine Drive

16670

10000

Carparking (115)

Car Entry/Exit

INT DA501 (C)

1:500 @ A1
1:1000 @ A3

no.	revision note	by.	date

town planner

BBC Consulting Planners

a: PO Box 438, Broadway, NSW, 2007
t: +61 2 9211 4099
f: +61 2 9211 2740
w: www.bbcplanners.com.au

client

Goodman Property Services (Aust) Pty Ltd

a: Level 17, 60 Castlereagh Street, Sydney
e: info-au@goodman.com
w: www.goodman.com

scale

1:400 @ A3

0m 4 8 12 16

project

Lot 5, Interlink Industrial Estate
Mamre Road, Erskine Park

drawing prepared by

TRAFFIX
traffic and transport planners

suite 3.08 46a macdaey street
potts point NSW 2011

PO Box 1061 potts point nsw 1035

t: +61 2 8324 8700
f: +61 2 9380 4481
e: info@traffix.com.au

traffix
traffic & transport planners

drawing title

Swept Paths

drawn:	checked:	date:
TL	-	25 Oct 2011

11.346	-	TX.10	-
project no.	drawing phase.	drawing no.	rev