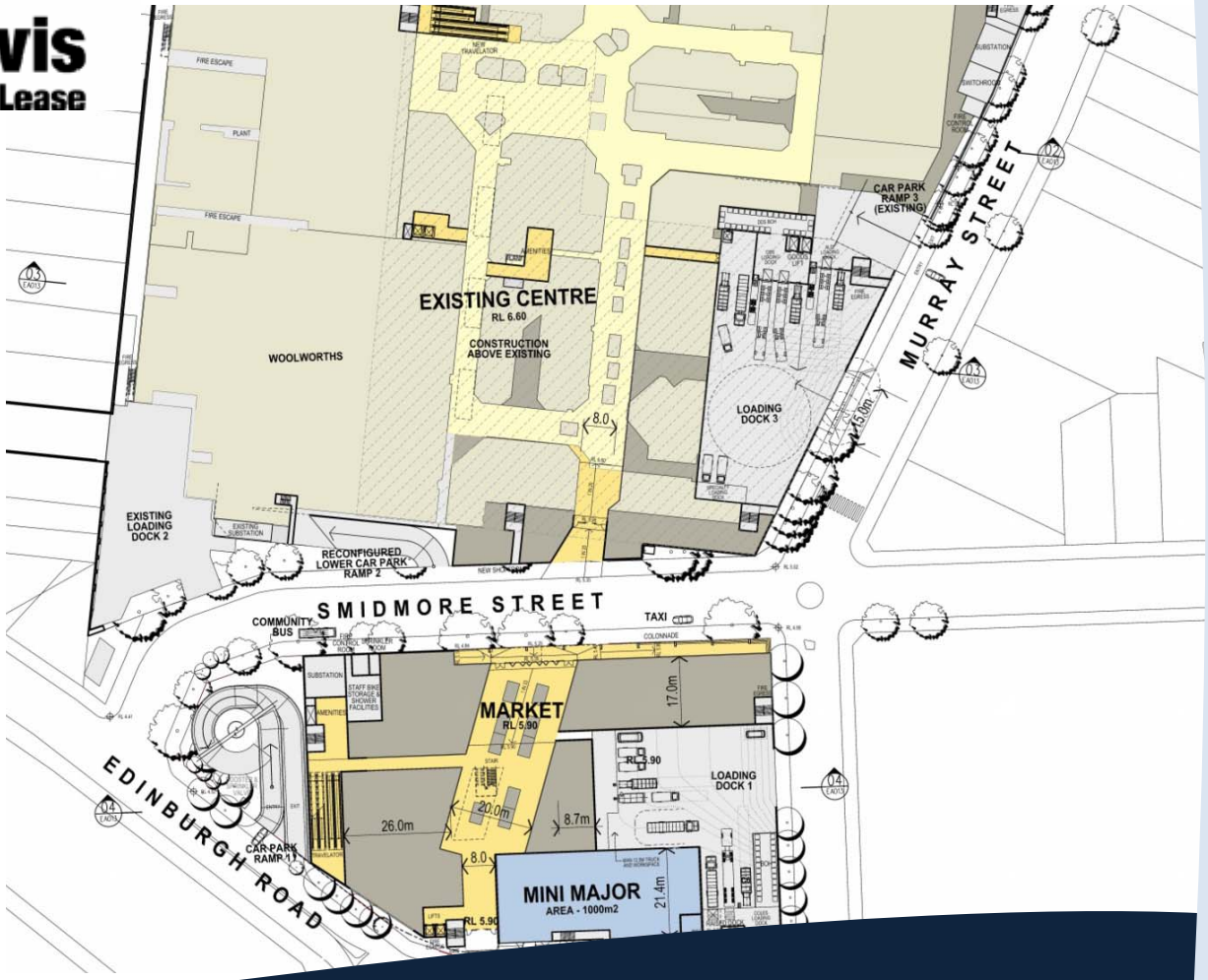


CIVIL ENGINEERING ASSESSMENT
Marrickville Metro
Shopping Centre

YN210026 - 10 - 0109

Prepared for AMP Capital Investors

November 2010

Cardno (NSW) Pty Ltd
ABN 95 001 145 035
Level 3, 910 Pacific Highway
Gordon NSW 2072
Australia
Telephone: 02 9496 7700
Facsimile: 02 9499 3033
International: +61 2 9496 7700
sydney@cardno.com.au
www.cardno.com.au

Document Control – 10-0109

Version	Status	Date	Author		Reviewer	
1	Draft	10/05/10	Michael Hodges	MKH		
2	Final	15/05/10	Michael Hodges	MKH	Chris Gantt	CWG
3	Final	21/05/10	Michael Hodges	MKH	Chris Gantt	CWG
4	Layout amended	15/10/10	Rob Lenferna	RPL	Michael Hodges	MKH
5	Final	22/10/10	Rob Lenferna	RPL	Michael Hodges	MKH
6	Layouts updated	04/11/10	Rob Lenferna	RPL	Michael Hodges	MKH
7	For Approvals	05/11/10	Rob Lenferna	RPL	Michael Hodges	MKH
8	For Approvals	08/11/10	Rob Lenferna	RPL	Michael Hodges	MKH

Table of Contents

List of Figures

Appendices

1 Background

This report forms part of a Preferred Project Report (PPR) prepared on behalf of AMP Capital Investors (AMPCI) in respect to the *Concept Plan Application under Part 3A of the NSW Environmental Planning and Assessment Act 1979 for the proposed redevelopment of the Marrickville Metro Shopping Centre*.

This report has been prepared in response to the letter from the Department of Planning (DOP) dated 14 October 2010 requesting that a Preferred Project Report (PPR) be prepared. The letter requests that the proponent respond to the issues raised by the submissions and for the PPR to identify how the issues raised by the submissions including those of the DOP have been addressed and how the PPR minimises the environmental impacts of the proposal.

The Preferred Project includes the following key amendments to the original proposal:

- The adoption of the "alternative proposal" for Smidmore Street as outlined in section 5.6 of the Environmental Assessment Report, meaning that all proposed development within the Smidmore Street road reserve has been deleted from the proposal and the road will remain open to vehicle traffic.
- Removal of the draft VPA from the PPR following Marrickville Council's decision not to grant owner's consent for the inclusion of Smidmore Street in the application.
- Accompanying refinements to the design of the buildings fronting Smidmore Street to address the existing street interface, optimise pedestrian access between the two buildings and maximise street front retail activation and pedestrian amenity.
- A reduction in the gross leasable floor space of the new development from 21,470sqm to 16,767sqm (a reduction of 22% in floor area).
- A reduction in the number of new car parking spaces from 715 to 528.
- A significant reduction in the new building footprint above the existing shopping centre within the north-east section of the site, including the removal the spiral ramp near the corner of Victoria Road and Murray Street.
- Retention of the existing vehicle ramp location within Murray Street and the relocation of the access from Murray Street to the new loading dock 3 further to the south.
- A public domain 'concept vision' for Smidmore Street which will be subject to the further agreement of Marrickville Council.
- Retention of all existing mature Lemon Scented Gums in Smidmore Street.
- Revised Statement of Commitments.

1.1 Introduction

Marrickville Metro Shopping Centre is located at 34 Victoria Road, Marrickville and fronts Victoria Road to the north, Murray Street to the east, Smidmore Street to the south and single storey residential dwellings to the west. The shopping centre is predominantly a single level retail building and comprises major tenants being Kmart, Woolworths and Aldi as well as a range of speciality stores. Car parking is located at the roof top level with existing vehicular ramp access via Smidmore Street and Murray Street. The site location is shown below in **Figure 1-1.**

The land at 13-55 Edinburgh Road is located to the south of Smidmore Street and is bounded by Edinburgh Road and Murray Street. This site is currently used as a warehouse with associated ground level car parking.

The shopping centre is located within an established residential and industrial precinct surrounded by small lot residential housing to the north and west, and predominantly industrial land comprising larger allotments and larger scale buildings to the south and east.

Figure 1-1 – Location plan

AMP Capital Investors (AMPCI) are the owners of the Marrickville Metro Shopping Centre and the land to the immediate south at 13-55 Edinburgh Road, Marrickville.

Cardno (NSW/ACT) has been engaged by AMPCI to prepare a report to accompany a Concept Plan Application under Part 3A of the Environmental Planning and Assessment Act 1979 for the proposed redevelopment of the Marrickville Metro Shopping Centre. The development is being considered under Part 3A of the Act as it satisfies the criteria described in Schedule 1 of the Major Projects State Environmental Planning Policy (Major Projects SEPP).

AMPCI proposes to upgrade and expand Marrickville Metro Shopping Centre to accommodate additional retail floor space, improved facilities and services, as well as enhance convenience and accessibility for the community.

The proposal has four key elements:

- An extension of retail floor area at first floor level above the existing shopping centre building with further additional roof top parking;
- Redevelopment of the existing industrial land south of Smidmore Street (13-55 Edinburgh Road) to create a two level retail addition to the shopping centre with car parking above;
- The retention of Smidmore Street between Edinburgh Road and Murray Street; and
- Road network and intersection upgrades to the perimeter of the development site.

The additional retail floor area will primarily accommodate a discount department store, supermarket, mini major and specialty retail space. The development will incorporate additional car parking as well as improved vehicle access and loading facilities.

The proposal will create a new streetscape in Smidmore Street and will be complimentary to an enhanced public space fronting Victoria Road. The proposal will include works to the public domain in order to improve the pedestrian, cycling and public transport connections to and from the site and enhance pedestrian and patron safety.

1.2 Construction Staging Details

Owing to the scale of the project and the need to undertake the development whilst maintaining a safe and functional retail centre, it is proposed that construction will occur over at least two discrete stages.

Stage 1 will involve the redevelopment of the industrial site at 13-55 Edinburgh Road to accommodate the new two level retail centre including car parking above. This work will also incorporate the streetscape improvements to Smidmore Street along the development frontage and the refurbishment of the existing shopping centre building fronting the northern side of Smidmore Street.

Stage 2 will involve the first floor level retail extension over the existing shopping centre building with the proposed additional car parking at roof top level and reconfiguration of lower Smidmore Street ramp.

2 Civil Engineering

2.1 Introduction

This Civil Engineering Assessment has been prepared to identify and provide a framework detailing measures relating to the detailed design phase:

- Erosion and sediment controls during construction activities;
- Bulk earthworks associated with the reshaping of the site;
- Vehicular access to carpark and loading dock facilities;
- Vehicular and pedestrian access to public transport facilities, and
- Infrastructure development, including road and intersection upgrades to the perimeter of the development site.

2.2 Erosion and Sediment Control

The objectives of the erosion and sediment controls proposed for the development site are to ensure:

- Adequate erosion and sediment control measures are implemented prior to the commencement of construction and are maintained during the construction stage,
- Developed site run-off is appropriately treated in accordance with the requirements of Marrickville Council and the Department of Environment, Climate Changes and Water (DECCW) requirements.

As part of the works, erosion and sedimentation controls shall be constructed generally in accordance with the drawings, Council requirements and the NSW Department of Housing Manual, “Managing Urban Stormwater Soils & Construction” 2004 prior to any earthworks commencing on site. Concept erosion and sediment controls are detailed on drawing **SK-050** in **Appendix A**.

Erosion and sediment controls to minimise potential water quality impacts are discussed below.

2.2.1 Sediment Basin

It is recommended that a sediment basin be designed as required in accordance with the NSW Department of Housing Manual, “Managing Urban Stormwater - Soils & Construction” 2004 to control potential sediment and surface flows from the development area south of Smidmore Street during earthwork operations. The sediment basin should be located to coincide with low points at the outlet end of temporary drainage paths and at sag points along Edinburgh Road.

Initial calculations have been based on proposed undeveloped catchments and available geotechnical information regarding soil types.

The sediment basin as indicated on drawing **SK-050** in **Appendix A** would need to be maintained on site throughout the bulk of the construction works ensuring that it operates effectively in accordance with NSW Department of Housing Manual, “Managing Urban Stormwater - Soils & Construction” 2004. The water in the sediment basin shall be lowered by pumping to maintain the minimum storage volume at the lower level of the settling zone identified by pegs to clearly show the level at which design storage capacity is available.

Water pumped from the sediment basin could be utilised to irrigate areas of hydromulch and for dust control or discharged to the existing drainage network once testing has been undertaken to ensure it meets the requirements specified by Marrickville Council and the DECCW.

A weir designed in accordance with Section 6 of the NSW Department of Housing Manual, "Managing Urban Stormwater - Soils & Construction" 2004 would need to be provided at to control overland flows for rainfall events in excess of the design criteria. Sediment basin sizing and calculation shall form part of the detailed design phase.

2.2.2 Construction Measures

Prior to any earthworks commencing on site, all erosion and sediment control measures will need to be implemented generally in accordance with the above specifications. These measures shall include:

- Installation of a perimeter wind and security fence;
- Installation of a sediment basin;
- Installation of sediment fencing around disturbed areas including any topsoil stockpiles;
- Installation of silt arrestors to collect site runoff and retain suspended particles; and
- Placement of hay bales around and along proposed catch drains and stormwater drainage pits.

2.3 Bulk Earthworks

2.3.1 General

It is anticipated that there will be minimal excavation or filling of the site in preparation for the construction of the proposed building based on the current proposal to construct the structure as suspended. In the event that filling is required to achieve a building platform, it is anticipated that approximately 6,000m3 would be required.

2.3.2 Construction Sequence

The sequence of work for the bulk earthworks will generally include:

- Provision of erosion and sediment control measures typically as outlined above in Section 2.2;
- Clearing of vegetation and demolition of proposed structures from the proposed development site;
- Stripping and removing from site topsoil;
- Inspection of exposed natural material to ensure conformity with design assumptions;
- Placement of cut to fill and imported material in layers not greater than 250mm in thickness and compacted to not less than 95% SMDD, subject to construction methodology.

2.3.3 Tree Removal and Protection

Trees to remain shall be protected to ensure no damage to the tree including the trunk. Trees to be removed as a consequence of earthwork levels and road alignments shall be marked on site and approval obtained prior to removal.

2.4 Roadworks

2.4.1 General

An analysis of proposed road network upgrades to the perimeter of the development has been undertaken based on concept architectural documentation. The ultimate configuration and extent of kerb alignments is subject to detailed survey and services locations along with a traffic analysis to determine possible queue lengths based on traffic generation forecasts resulting from the proposed development. Refer to drawing **SK-000** in **Appendix B** for an overall layout of the proposed road network upgrades to the perimeter of the development.

2.4.2 Road and Intersection Upgrades

Road and intersection upgrades are proposed at the following locations to facilitate increased traffic and pedestrian volumes and to provide a functional connection from the proposed development to public transport and taxi facilities.

2.4.2.1 Edinburgh Road and Smidmore Street Intersection

The Smidmore Street link from Edinburgh Road to Murray Street will be maintained. Some minor amendments would be required to the intersection geometry to allow 14.5m long buses to access Edinburgh Road from Smidmore Street. The location of the existing access ramps to the roof top car parking and loading dock in the western section of Smidmore Road will be maintained, with a reconfiguration to the car parking ramp at Smidmore Street. The base of the ramp will be regraded, with the upper section of ramp retained. Horizontal and vertical geometry shall be checked to meet the requirements of AS2890.1 (2004). Refer to drawing **SK-001** in **Appendix B** for details.

Loading dock access will continue to service 19.0m semi-trailers in accordance with AS2890.2 (2002).

2.4.2.2 Edinburgh Road Carpark Entry and Exit

It is proposed to provide vehicular entry and exit points to roof top parking from Edinburgh Road between the Smidmore Street traffic signals and the proposed intersection works at Sydney Steel Road. Due to the proximity of the entry and exit driveway it is recommended the access driveway be limited to left in/left out movements by introducing a central median within Edinburgh Road. The northern kerb will require relocation to ensure a minimum lane configuration consisting of two westbound lanes (3.3m and 3.0m) and two east bound lanes (3.3m and 3.0m) separated by a 0.6m central median. The east bound kerb side lane will terminate to form one lane into the proposed roundabout. To discourage pedestrian movements in this location a safety fence meeting the Roads and Traffic Authority requirements could be installed. Refer to drawing **SK001 and SK-002a** in **Appendix B** for details.

2.4.2.3 Edinburgh Road and Sydney Steel Road Intersection

It is proposed to construct a roundabout at the intersection of Edinburgh Road and Sydney Steel Street to allow a 10.1m long rigid emergency vehicle (and hence 8.8m typical Council garbage trucks) to undertake a U turn. This is consistent with the existing roundabouts at the intersection of Murray Street with Smidmore Street and Edinburgh Road respectively. The roundabout will allow movement of 19.0m long semi-trailers eastbound and westbound along Edinburgh Road. This will also allow 12.5m and 14.5m long rigid buses to access the bus terminal from the west. The proposed bus terminus is located on the northern side of Edinburgh Road between Sydney Steel Street and Murray Street. The northern kerb alignment will require

relocation to ensure adequate carriageway width to accommodate bus layover and turning movements entering and departing the terminus.

The roundabout shall generally meet the requirements of Austroad's Guide to Road Design, Part 4B: Roundabouts published in 2009. The centre island shall be designed as a mountable island to allow the 10.1m rigid vehicle to undertake a U turn and for the 19.0m articulated vehicle to travel both east and west along Edinburgh Road. U turns for vehicles larger than the 10.1m rigid vehicle shall not be permitted.

Possible service adjustments will be required to facilitate these works. Refer to drawing **SK-002a** in **Appendix B** for the 14.5m bus movements, **SK-002b** for the 19.0m semi-trailer movements and **SK-002c** for the 10.1m emergency vehicle movements.

2.4.2.4 Smidmore Street and Murray Street Intersection

The existing roundabout at Smidmore Street and Murray Street will be retained in its current format. It is proposed to adjust the kerb alignment to provide adequate carriageway width for a 14.5m bus turning from Murray Street (north bound) left into Smidmore Street (west bound). Refer to drawing **SK-002d** in **Appendix B** for details.

2.4.2.5 Edinburgh Road and Murray Street Intersection

The existing roundabout at Edinburgh Road and Murray Street will require a minor modification to the north-western kerb return to allow a 14.5m bus to turn left from Edinburgh Road into Murray Street. This turning movement would need to be accommodated due to the relocation of the bus terminus from Smidmore Street to Edinburgh Road. Refer to drawing **SK-002b** in **Appendix B** for details.

2.5 Carpark Access and Loading Docks

2.5.1 General

A review of turning path movements and car park access ramp gradients has been undertaken based on concept architectural documentation.

2.5.1.1 Smidmore Street Carpark Access Ramp

Access to the rooftop carpark will be retained, with the existing ramp being reconfigured. Entry to the ramp from Smidmore Street will be left-in only and controlled by "No Right Turn" signage. A median island in Smidmore Street will further reinforce the banning of the right turn movement. Refer to drawing **SK-001** in **Appendix B** for details.

2.5.1.2 Murray Street (South) Loading Dock

The proposed loading dock facility is located near the intersection of Murray Street and Edinburgh Road. Access to the facility will be provided from Murray Street with access from both north and south bound vehicles.

Given the constraints of the local road and intersection geometry, it has been assumed that all service vehicles larger than the Austroads 8.8m long rigid vehicle will approach this loading dock from the east along Edinburgh Road. Entry to this loading dock is thus limited to the northbound approach along Murray Street. Likewise, large service vehicles exiting this loading dock will be limited to travelling southbound along Murray Street, and then westbound along Edinburgh Road.

All entry and exit movements shall be in a forward direction via a proposed vehicular crossing. Initial analysis of ramp levels indicate that manoeuvring and loading areas will meet the requirements of AS2890.2 (2002) however; this will be confirmed in the detailed design phase. Refer to drawing **SK-002b** in **Appendix B.**

2.5.1.3 New Consolidated Murray Street Majors and Specialty Loading Dock

In numerous locations along Murray Street there are existing loading docks associated with the Aldi store, fruit and vegetable and miscellaneous specialty shops. It is proposed to replace these facilities with a single consolidated dock facility.

All entry and exit movements for the consolidated loading dock facility shall be in a forward direction via a proposed vehicular crossing. Given the constraints of the local road and intersection geometry, it has been assumed that all service vehicles larger than the Austroads 8.8m long rigid service vehicle will approach this loading dock from the east along Edinburgh Road. Entry to this loading dock is thus limited to the northbound approach along Murray Street. Likewise, large service vehicles exiting this loading dock will be limited to travelling southbound along Murray Street, and then westbound along Edinburgh Road.

Initial analysis of ramp levels indicate that manoeuvring and loading areas will meet the requirements of AS2890.2 (2002) however; this will be confirmed in the detailed design phase. Refer to drawing **SK-004a** in **Appendix B** for 19.0m semi trailer movements entering the loading dock and **SK-004b** for 19.0m semi trailer movements exiting the loading dock.

2.5.1.4 Murray Street Carpark Access Ramp

The existing ramp to the rooftop carpark will be retained. Refer to drawing **SK-004a** in **Appendix B** for 5.2m car movements entering the access ramp and **SK-004b** for 5.2m car movements exiting the access ramp.

2.5.1.5 Existing Major Tenant, Smidmore Street Loading Dock

It is proposed to maintain the existing loading dock facility located in the south western corner of the existing shopping centre. No amendments are being considered to this loading dock facility. Refer drawing **SK-001** in **Appendix B**.

Given the constraints of the local road and intersection geometry, it has been assumed that all service vehicles larger than the Austroads 8.8m long rigid service vehicle will approach this loading dock from the east along Edinburgh Road. Entry to this loading dock is thus limited to the northbound approach along Smidmore Street. Likewise, large service vehicles exiting this loading dock will be limited to travelling southbound along Smidmore Street, and then westbound along Edinburgh Road.

2.6 Bus Terminus

A bus terminus is proposed along the northern kerbline of Edinburgh Road, between Sydney Steel Road and Murray Street. The terminus will be required to accommodate three buses at any one time.

This terminus will service the Sydney Buses routes 308, 352 and 355. Refer drawing **SK-009** in **Appendix B**.

2.7 Services

2.7.1 General

A services search has been undertaken and based on documentation provided by the relevant service providers, it is evident that the majority of service providers have assets located within the road network surrounding the development. The proposed works associated with intersection and road upgrades could affect services however, this will be subject to detailed design.

The location of proposed street trees and associated landscape elements may also affect existing services and further investigation by test pits excavated by hand within the existing footways is recommended to determine the full extent of possible service relocations or adjustments.

2.7.2 Water supply services

2.7.2.1 Existing Water Supply Services

The approximate location and size of existing potable water mains have been obtained from Sydney Water Corporation documentation. This information indicates the following services are present in the surrounding road network;

- 150mm DICL main is located on the northern verge of Smidmore Street;
- 150mm CICL main is located in the northern verge of Edinburgh Road;
- 150mm CICL main is located in the eastern verge of Murray Street;

2.7.2.2 Proposed Water Supply Services and adjustments

Proposed potable water connection opportunities exist in both Smidmore Street and Edinburgh Road. Existing services within Edinburgh Road will require adjustments to facilitate proposed kerb alignments.

Proposed water supply services, connections and adjustments have been investigated by Golder Associates and are discussed in the Infrastructure and Hydrology Study.

2.7.3 Sewerage services

2.7.3.1 Existing Sewerage Services

The approximate location and size of the existing sewerage infrastructure has been obtained from Sydney Water Corporation documentation. This information indicates the following services are present within and surrounding road network;

- 300mm sewer main is located within the existing shopping centre site, located along the Murray Street boundary;
- 300mm sewer main in located with Smidmore Street from Murray Street joining into a 300mm sewer main traversing the proposed development site south of Smidmore Street;
- Varying size sewer mains also exist with Edinburgh Road, Victoria Road and Edgeware Road.

The exact location and depth of the sewer mains will need to be confirmed prior to formalising the proposed connection point.

Proposed sewer services, connections and adjustments have been investigated by Golder Associates and are discussed in the Infrastructure and Hydrology Study.

2.7.4 Electricity supply services

2.7.4.1 Existing Electricity Infrastructure

Based on the current existing electrical documentation, electrical services are present in both Murray and Smidmore Streets. Both aerial and underground services are present.

2.7.4.2 Proposed Electricity Connection and adjustments

It is proposed to provide an electrical substation within the development, located adjacent to the loading and service area accessible from Smidmore Street.

It is noted that existing services within Edinburgh Road will require adjustments to facilitate proposed kerb alignments.

2.7.5 Telecommunications services

2.7.5.1 Existing Infrastructure

The approximate location of major communication network connections and optic fibre services has been determined from drawings provided by the relevant service authorities. Conduits containing these cables area located within the verges around the site, with access chambers at the intersection of Murray Street and Smidmore Street and Murray Street and Edinburgh Road.

No evidence of PowerTel/AAPT or other telecommunication providers where present at the time this report was prepared.

2.7.6 Proposed telecommunications connection and adjustments

It is not expected that road works associated with the development will affect telecommunication services; subject to further investigation and detailed design. Liaison with telecommunications services providers will be required as more detailed design of the development proceeds.

It is noted that existing services within Edinburgh Road will require adjustments to facilitate proposed kerb alignments.

2.7.7 Gas supply services

2.7.7.1 Existing Gas Infrastructure

The approximate location of natural gas supply mains has been determined from drawings provided by AGL.

Gas mains for distributing gas to consumers at normal supply pressure run along the northern verge of Edinburgh Road and the western verge of Murray Street.

2.7.7.2 Proposed Gas Connection and adjustments

Opportunities for connection to the gas supply exist along the full length of the Murray Street and Edinburgh Street frontage.

Liaison with gas providers will be required as the project advances into the detailed design phase and the demand requirements have been determined.

It is noted that existing services within Edinburgh Road will require adjustments to facilitate proposed kerb alignments.

2.7.8 Stormwater drainage

Inground stormwater drainage is present within the surrounding road network and through the proposed development site. This report is not intended to discuss stormwater drainage and it is understood a separate Infrastructure and Hydrology report has been prepared by Golder Associates addressing existing and proposed stormwater drainage systems and requirements, along with existing and future flood modelling.

It is noted that existing stormwater drainage pit locations within Edinburgh Road will require adjustments to facilitate proposed kerb alignments.

3 Conclusion

This report has been prepared to accompany a Concept Plan Application under Part 3A of the Environmental Planning and Assessment Act 1979 for the proposed redevelopment of the Marrickville Metro Shopping Centre. The development is being considered under Part 3A of the Act as it satisfies the criteria described in Schedule 1 of the Major Projects State Environmental Planning Policy (Major Projects SEPP).

AMPCI proposes to upgrade and expand Marrickville Metro Shopping Centre to accommodate additional retail floor space, improved facilities and services, as well as enhance convenience and accessibility for the community.

Based on available architectural, traffic and services information, an assessment of the civil engineering aspects of the proposed development has been undertaken. Proposed car park and loading dock facilities have be assessed to determine compliance with the necessary Australian Standards. Intersection and road network upgrades have been identified to accommodate potential increased traffic likely to be generated by the proposed shopping centre extension. These recommendations have been assessed to determine the possible impacts on services and also to determine whether adequate lane widths and turning facilities are provided to accommodate service vehicles.

Based on initial assessments and subject to further design and consultation with the relevant authorities and stakeholders, the proposed works within and surrounding the development site will provide the necessary facilities to improve accessibility and safety within the surrounding road network along with a safe environment for vehicular and pedestrian access within the development.

4 References

4.1 Infrastructure and Hydrology

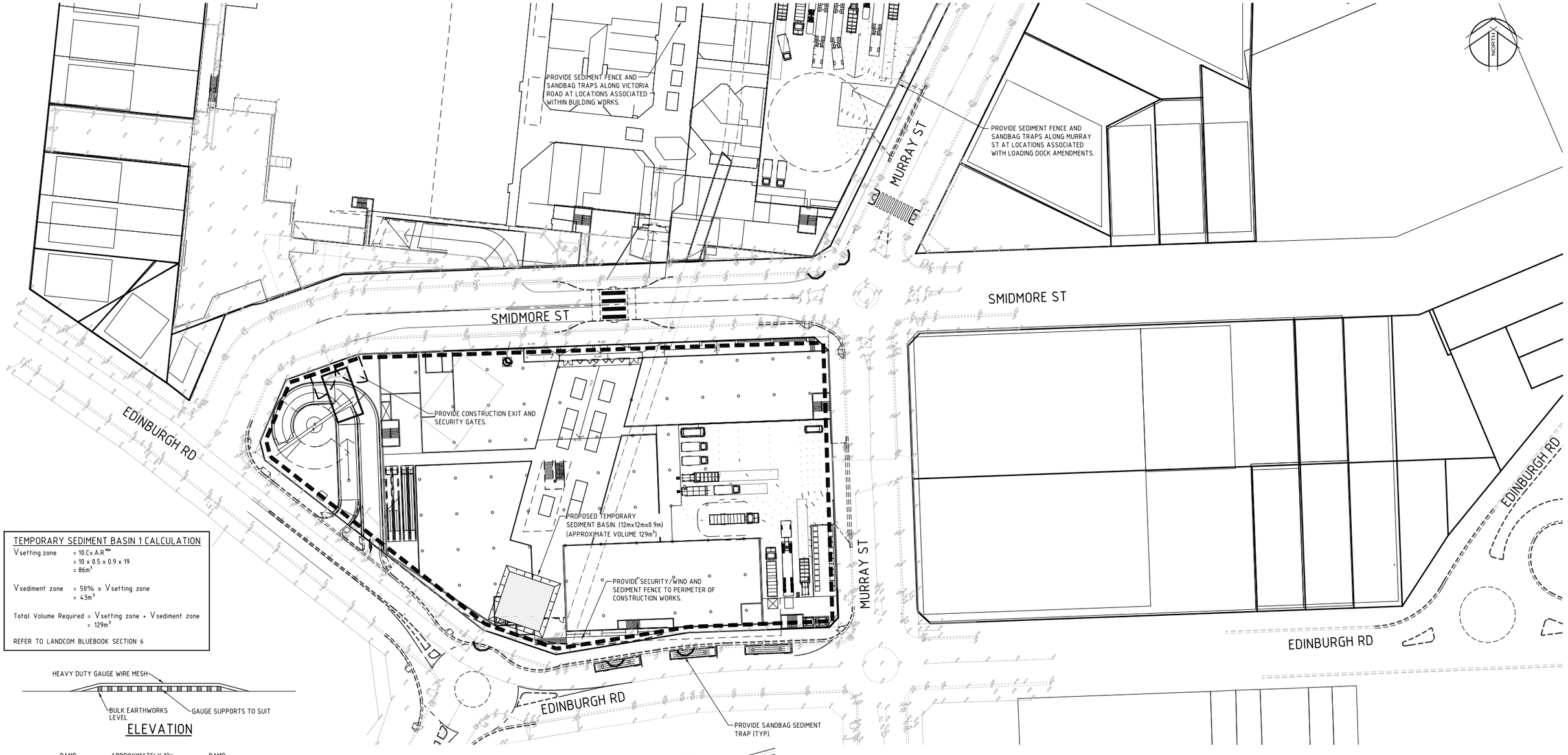
Proposed Extension of Marrickville Metro, Infrastructure and hydrology Study, prepared by Golder Associates (October 2010).

4.2 Architectural Documentation

Drg No.	Title
EA000	TITLE SHEET
EA001	SITE PLAN
EA002	SITE ANALYSIS
EA003	EXISTING GROUND PLAN
EA004	EXISTING ROOFTOP CAR PARK PLAN (LEVEL1)
EA005	EXISTING ROOF PLAN
EA006	PROPOSED GROUND FLOOR PLAN
EA007	PROPOSED LEVEL1 PLAN
EA008	PROPOSED ROOFTOP CAR PARK A(LEVEL 2)
EA009	PROPOSED ROOFTOP CAR PARK (LEVEL 2A)
EA010	PROPOSED ROOF PLAN
EA011	OVERALL ELEVATIONS, EXISTING & PROPOSED
EA012	OVERALL ELEVATIONS, PROPOSED
EA013	OVERALL SECTIONS
EA014	SHADOW DIAGRAMS - EXISTING
EA015	SHADOW DIAGRAMS - PROPOSED
EA016	PERSPECTIVE VIEW 1 – SMIDMORE STREET PLAZA
EA017	PERSPECTIVE VIEW 2 – EDINBURGH ROAD
EA024	PERSPECTIVE VIEW 3 – VICTORIA ROAD
EA018	PROPOSED GROUND FLOOR PLAN – STAGE 1
EA019	PROPOSED LEVEL1 PLAN – STAGE 1
EA020	PROPOSED ROOFTOP CARPARK (LEVEL2) – STAGE
EA021	PROPOSED ROOFTOP CARPARK (LEVEL2A) – STAGE 1

Appendix A

Concept Erosion and Sediment Control Plan



TEMPORARY SEDIMENT BASIN 1 CALCULATION

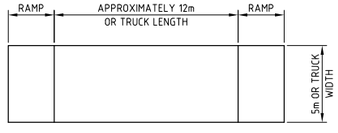
$V_{setting\ zone}$ = 10.C.v.A.R$^{1/4}$
= 10 x 0.5 x 0.9 x 19
= 86m^3

$V_{sediment\ zone}$ = 50% x $V_{setting\ zone}$
= 43m^3

Total Volume Required = $V_{setting\ zone}$ + $V_{sediment\ zone}$
= 129m^3

REFER TO LANDCOM BLUEBOOK SECTION 6

ELEVATION

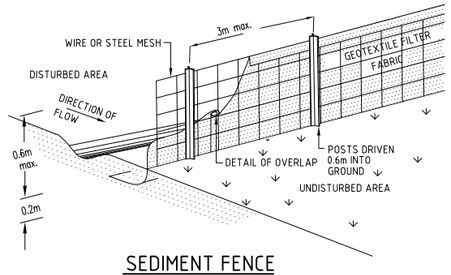


PLAN

TEMPORARY CONSTRUCTION EXIT (WASH DOWN DETAIL)

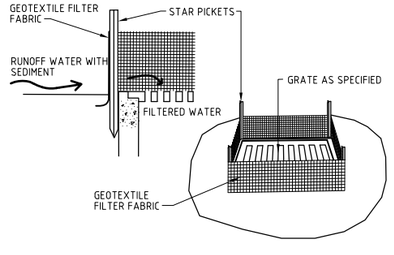
SCALE 1:200

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE REPAIR AND OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.



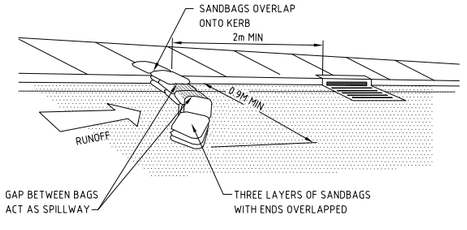
SEDIMENT FENCE

NTS



GEOTEXTILE FILTER PIT SURROUND

NTS



SANDBAG SEDIMENT TRAP FOR KERB INLET ON GRADE

NTS

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
G	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
F	04.11.10	REVISED ARCHITECTURAL	PD	RPL
E	25.10.10	UPDATED LAYOUT	RDM	MKH
D	15.10.10	REVISED ARCHITECTURAL	RPL	MKH
C	21.05.10	REISSUED FOR INFORMATION	MDH	MKH
B	15.05.10	REISSUED FOR INFORMATION	PD	MKH
A	07.05.10	ISSUED FOR INFORMATION	PD	MKH

AMP capital INVESTORS

Bovis Lend Lease

Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au
Quality Endorsed Company
AS 9001 Lic. 5960 Standards Australia

Drawn	PD	Date 07.05.10
Checked	MKH	Date 07.05.10
Designed	PD	Date 07.05.10
Verified	MKH	Date 07.05.10
Approved	MKH	Date 07.05.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-SEDIMENT AND EROSION PLAN

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:500	A1

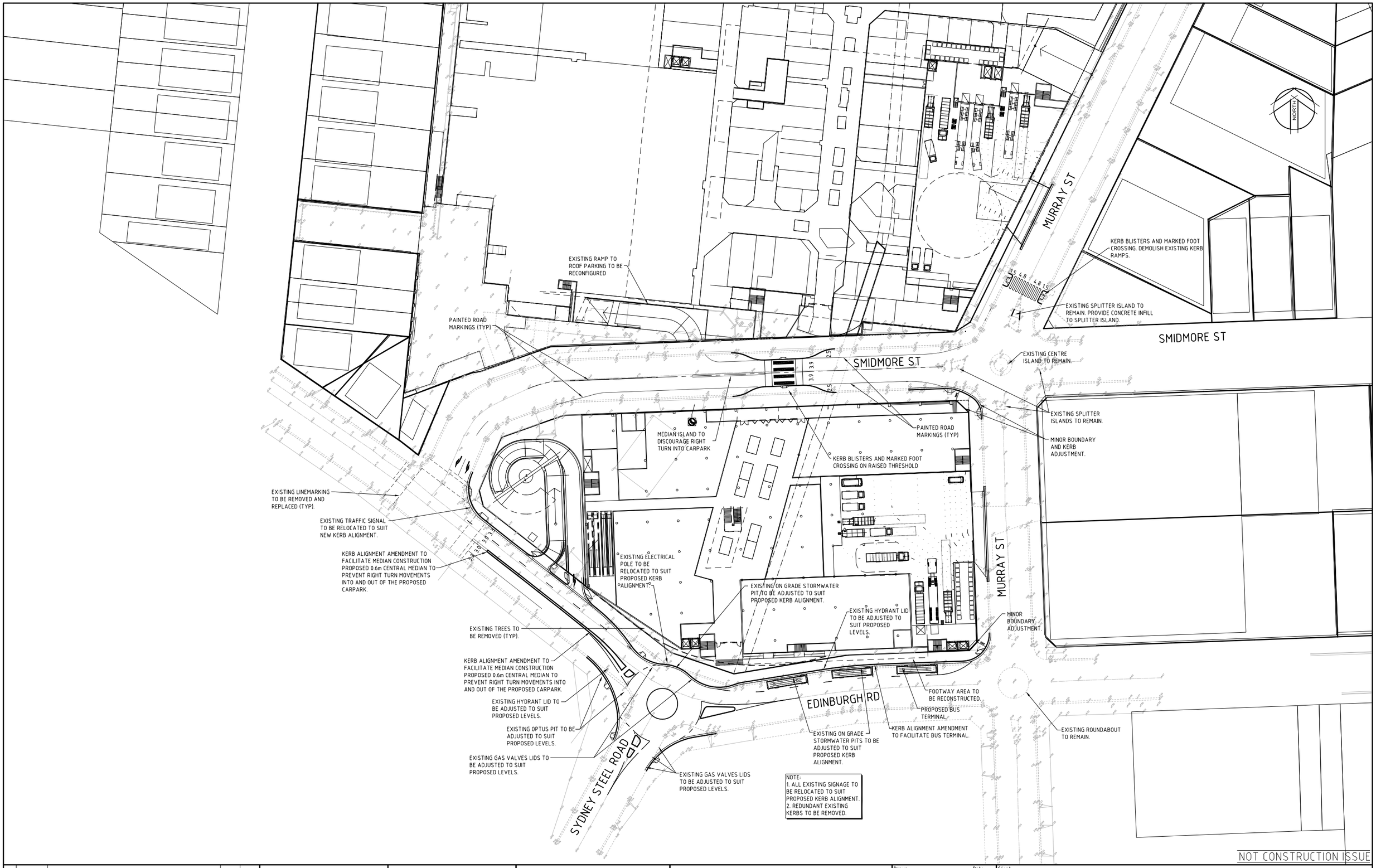
Drawing Number: 210026-SK-050

Revision: G

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

Appendix B

Concept Roadworks and Intersection Plans



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Rev	Date	Description	Drawn	Appr.
B	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
A	04.11.10	ISSUED FOR INFORMATION	PD	MKH

Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au
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Drawn	PD	Date 04.11.10
Checked	MKH	Date 04.11.10
Designed	PD	Date 04.11.10
Verified	MKH	Date 04.11.10
Approved	MKH	Date 04.11.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-GENERAL ARRANGEMENT PLAN

Status: FOR INFORMATION

Date	Datum	Scale	Size
OCT '10'	AHD	1:500	A1

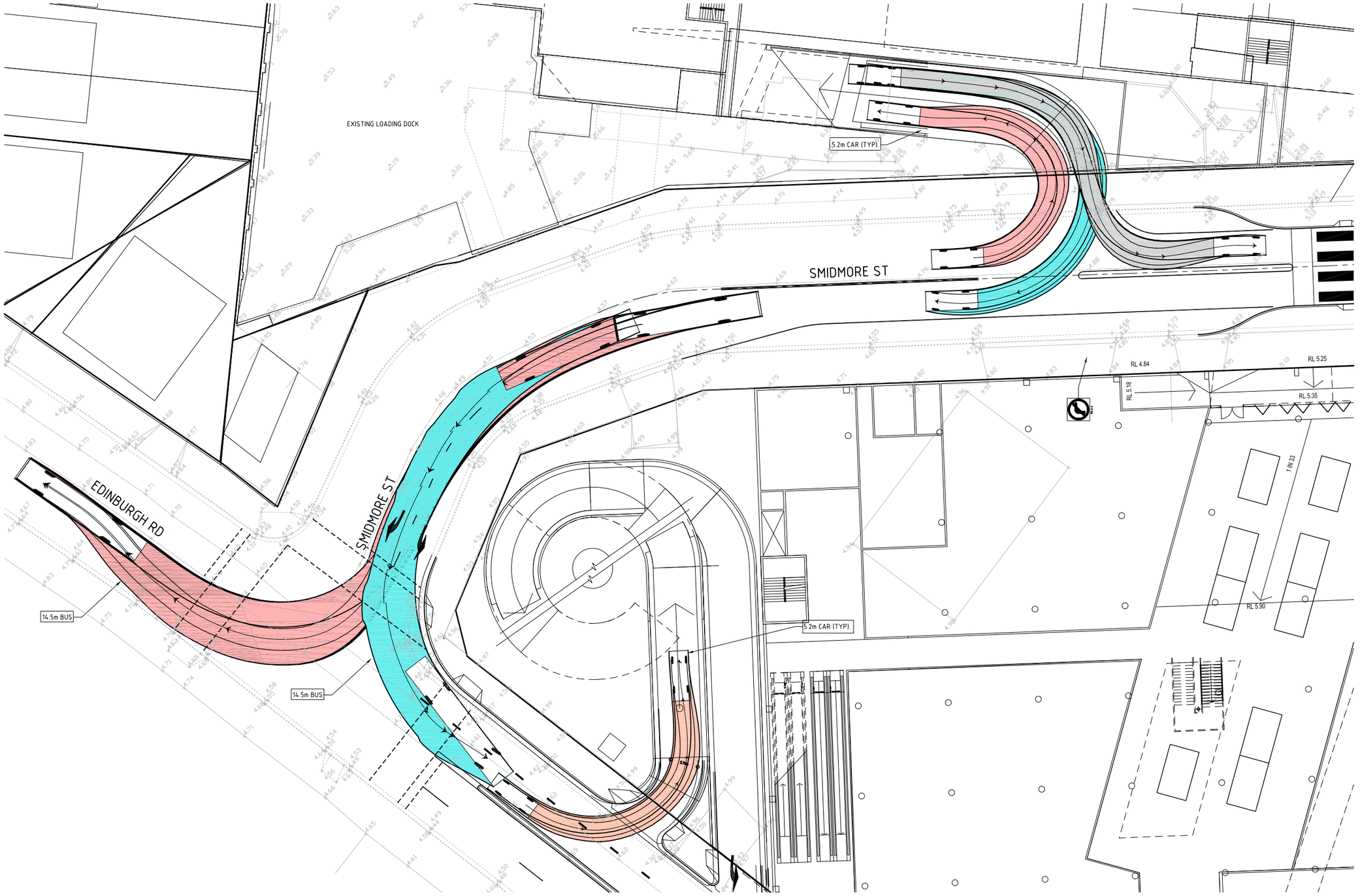
Drawing Number: 210026-SK-000
Revision: B

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

DATE PLOTTED: 8 November 2010 11:22 AM BY : MICHAEL HODGES (NORWEST)

XREFs: X-BHL_A1-Logo, CH4331C1_m, X210026-Siteworks, X-BHL-A1-SHT, EA006_m, 210026-TURNING PATHS

CAD FILE: G:\210026 - Marrickville Metro Shopping Centre\Drawings\Civil\DA\Sketches\210026-SK-001(E)-EDINBURGH ROAD AND SMIDMORE ST ENTRY AND EXIT.dwg



REFER TO SK002 FOR CONTINUATION

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
E	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
D	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
C	25.10.10	UPDATED LAYOUT	RDM	MKH
B	18.10.10	UPDATED SITE LAYOUT	RDM	MKH
A	07.05.10	ISSUED FOR INFORMATION	PD	MKH

AMP capital INVESTORS

Bovis Lend Lease

Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au

Quality Endorsed Company
AS 9001 Lic. 5960 Standards Australia

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Checked	MKH	Date 07.05.10
Designed	PD	Date 07.05.10
Verified	MKH	Date 07.05.10
Approved	MKH	Date 07.05.10

Client: AMP Capital Investors Limited

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Marrickville Metro Shopping Centre

-EDINBURGH ROAD AND SMIDMORE ST ENTRY AND EXIT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:200	A1

Drawing Number: 210026-SK-001

Revision: E

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
E	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
D	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
C	25.10.10	UPDATED LAYOUT	RDM	MKH
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A	07.05.10	ISSUED FOR INFORMATION	PD	MKH

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Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au

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AS 9001 Lic. 5960 Standards Australia

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Designed	PD	Date 07.05.10
Verified	MKH	Date 07.05.10
Approved	MKH	Date 07.05.10

Client: AMP Capital Investors Limited

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Marrickville Metro Shopping Centre

-EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:200	A1

Drawing Number: 210026-SK-002a
Revision: E

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

REFER TO SK001 FOR CONTINUATION

RL 5.30

19m SEMI TRAILER (TYP).

19m SEMI TRAILER (TYP).

MURRAY ST

EDINBURGH RD

SYDNEY STEEL ROAD

3000

NORTH

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
E	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
D	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
C	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
B	25.10.10	UPDATED SITE LAYOUT	RDM	MKH
A	18.10.10	UPDATED SITE LAYOUT	RDM	MKH

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Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au

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Drawn	RDM	Date 18.10.10
Checked	MKH	Date 18.10.10
Designed	RDM	Date 18.10.10
Verified	MKH	Date 07.05.10
Approved	MKH	Date 07.05.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:200	A1

Drawing Number: 210026-SK-002b

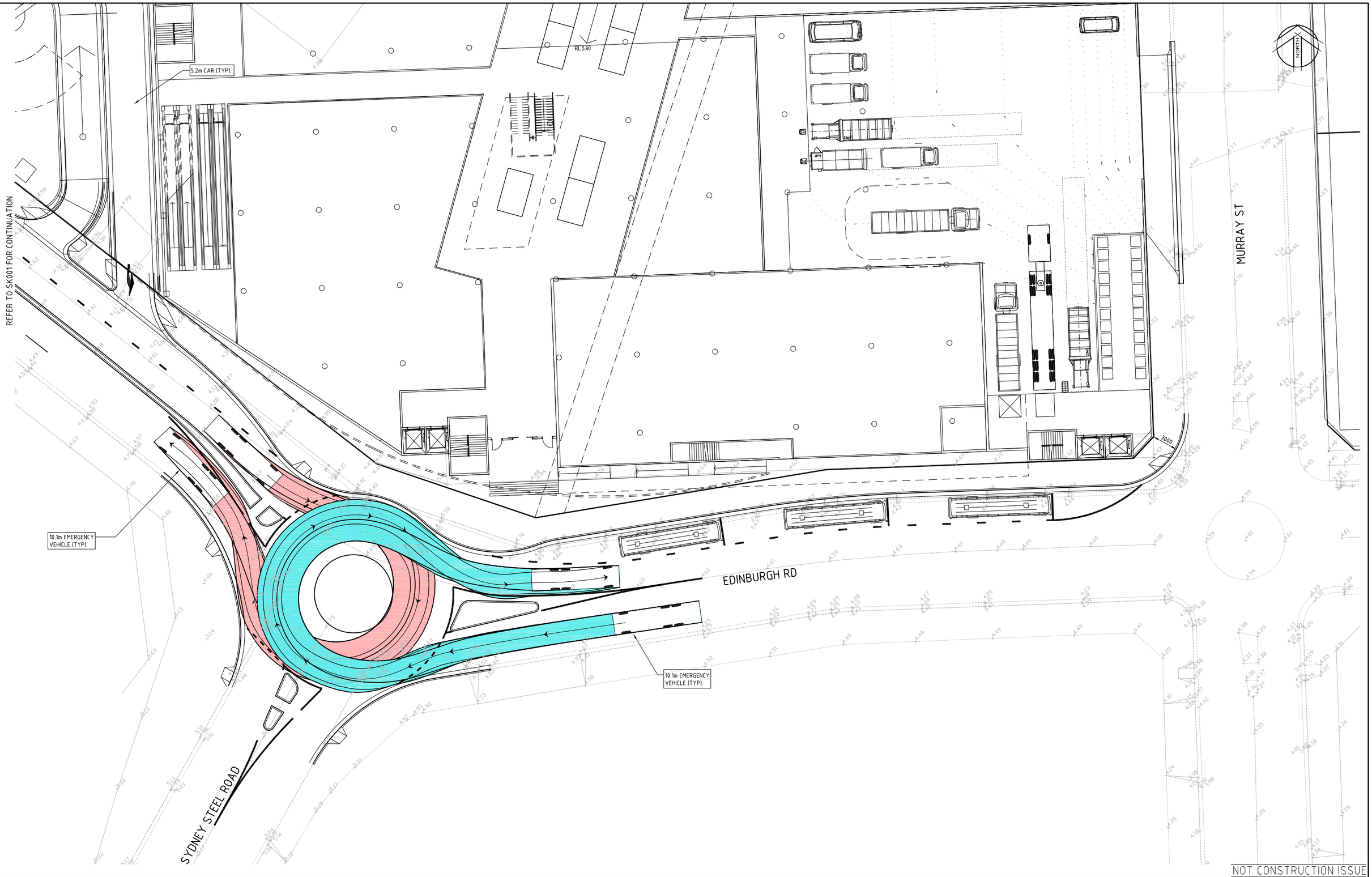
Revision: D

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

DATE PLOTTED: 8 November 2010 11:24 AM BY : MICHAEL HODGES (NORWEST)

XREF's X-BHL_A1-Logo; CH4331C1_m; X210026-Siteworks; X-BHL-A1-SHT; EA006_m; 210026-TURNING PATHS

CAD FILE: G:\210026 - Marrickville Metro Shopping Centre\Drawings\Civil\DA\Sketches\210026-SK-002c(D)-EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT.dwg



NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
D	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
C	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
B	25.10.10	UPDATED SITE LAYOUT	RDM	MKH
A	18.10.10	UPDATED SITE LAYOUT	RDM	MKH

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Cardno
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Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au

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		Date
Drawn	RDM	18.10.10
Checked	MKH	18.10.10
Designed	RDM	18.10.10
Verified	MKH	07.05.10
Approved	MKH	07.05.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:200	A1

Drawing Number: 210026-SK-002c

Revision: D

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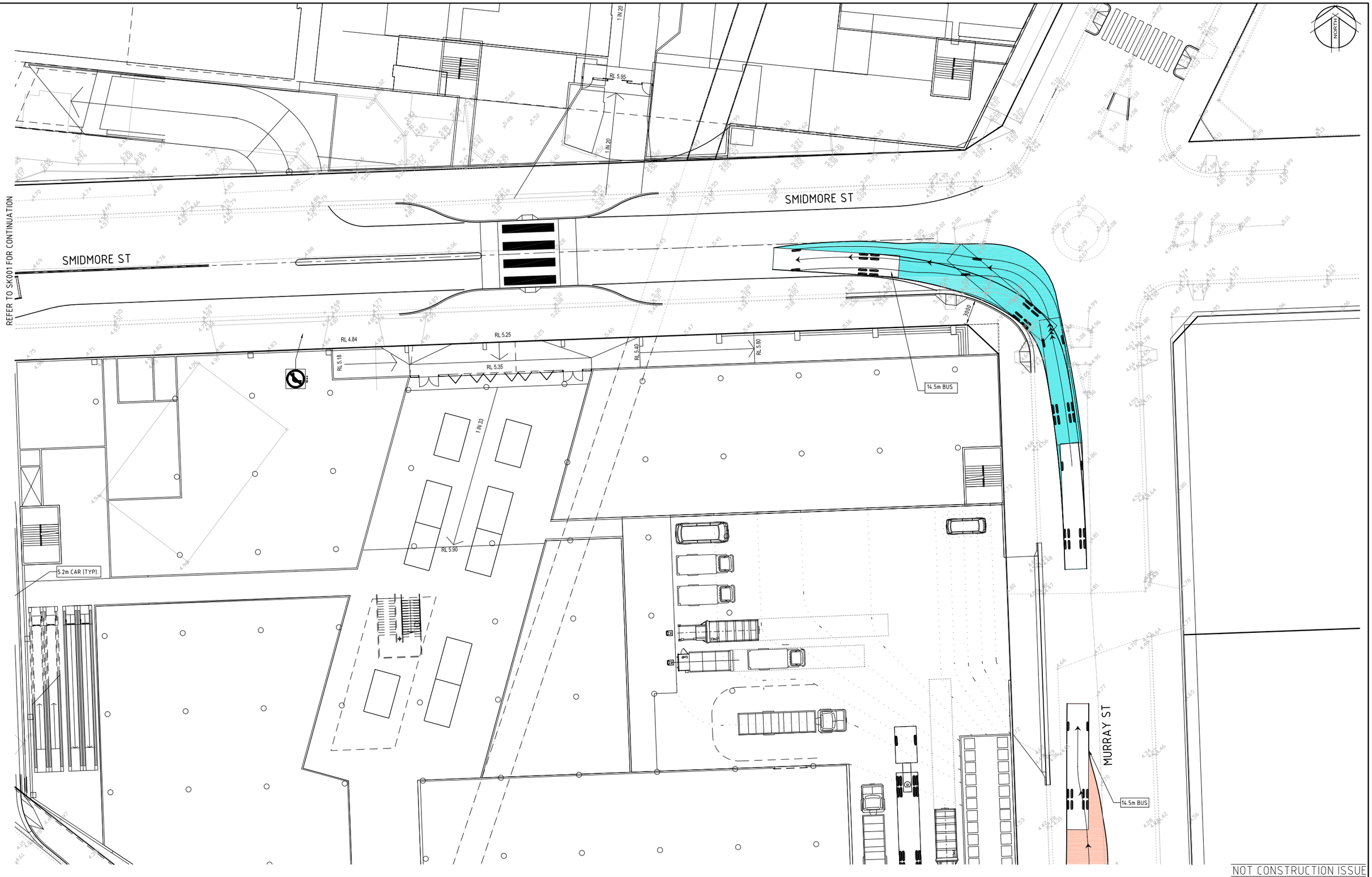

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Rev	Date	Description	Drawn	Appr.
A	18.10.10	UPDATED SITE LAYOUT	RDM	MKH

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ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au
Quality Endorsed Company
AS 9001 Lic. 5960 Standards Australia

		Date
Drawn	RDM	18.10.10
Checked	MKH	18.10.10
Designed	RDM	18.10.10
Verified	MKH	07.05.10
Approved	MKH	07.05.10

Client: AMP Capital Investors Limited

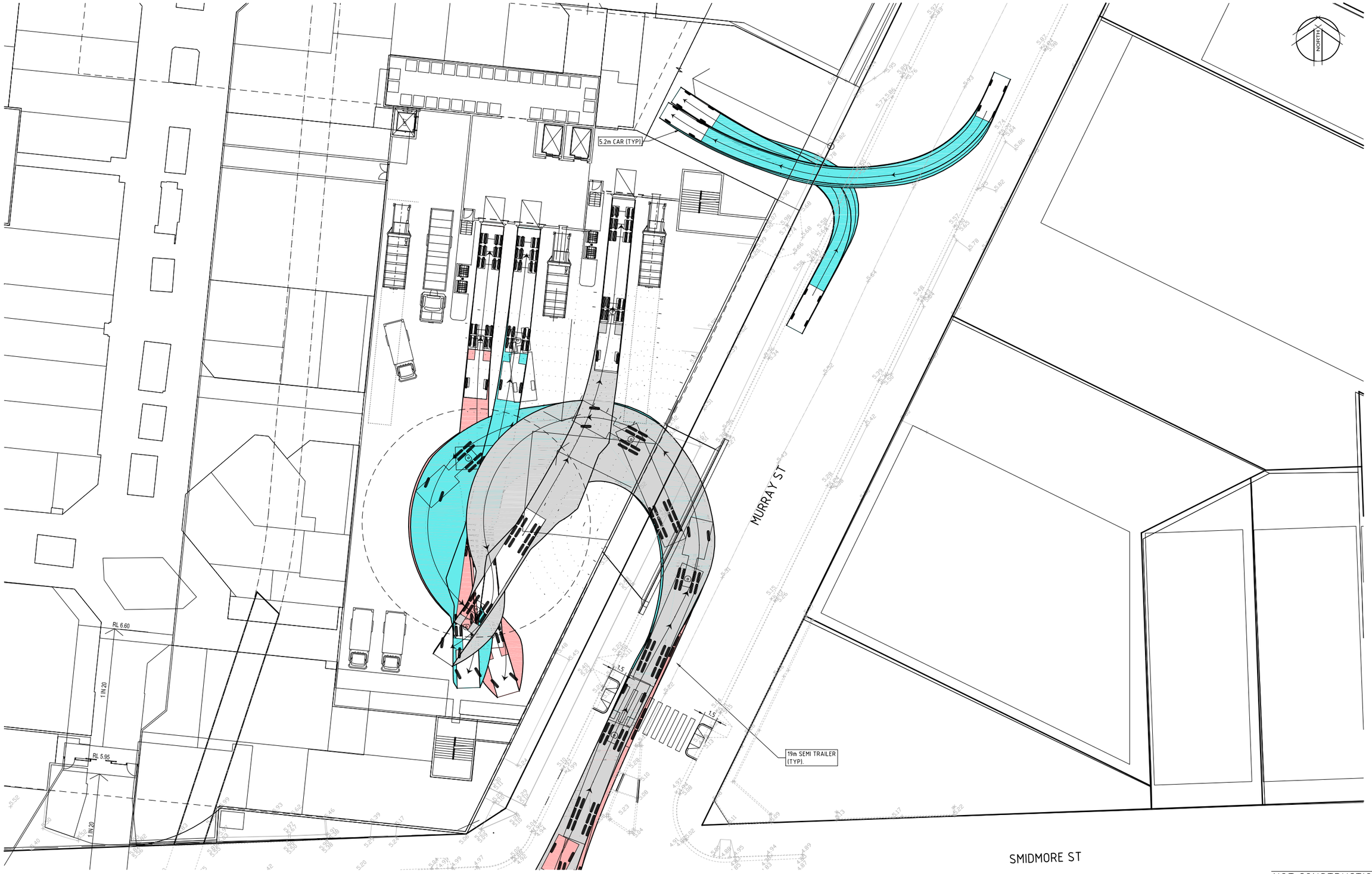
Bovis Lend Lease
Marrickville Metro Shopping Centre
-SMIDMORE STREET ROUNDABOUT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	1:200	A1

Drawing Number: 210026-SK-002d
Revision: A

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL



NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
E	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
D	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
C	25.10.10	UPDATED LAYOUT	RDM	MKH
B	18.10.10	UPDATED SITE LAYOUT	RDM	MKH
A	07.05.10	ISSUED FOR INFORMATION	PD	MKH

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ABN: 95 001 145 035
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Drawn	PD	07.05.10
Checked	MKH	07.05.10
Designed	PD	07.05.10
Verified	MKH	07.05.10
Approved	MKH	07.05.10

Client: AMP Capital Investors Limited

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Marrickville Metro Shopping Centre

-MURRAY STREET AND SMIDMORE STREET INTERSECTION - IN

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	NTS	A1

Drawing Number: 210026-SK-004a
Revision: E

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
D	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
C	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
B	25.10.10	UPDATED SITE LAYOUT	RDM	MKH
A	15.10.10	ISSUED FOR INFORMATION	RDM	MKH

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Bovis Lend Lease

Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au
Quality Endorsed Company
AS 9001 Lic. 5960 Standards Australia

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Checked	MKH	Date 15.10.10
Designed	RDM	Date 15.10.10
Verified	MKH	Date 15.10.10
Approved	MKH	Date 15.10.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-MURRAY STREET AND SMIDMORE STREET INTERSECTION - OUT

Status: FOR INFORMATION

Date	Datum	Scale	Size
MAY '10'	AHD	NTS	A1

Drawing Number: 210026-SK-004b
Revision: D

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL

DATE PLOTTED: 8 November 2010 11:25 AM BY : MICHAEL HODGES (NORWEST)

XREFs: X-BHL-A1-Logo; CH433TC1_m; X210026-Siteworks; X-BHL-A1-SHT; EA006_m; 210026-TURNING PATHS

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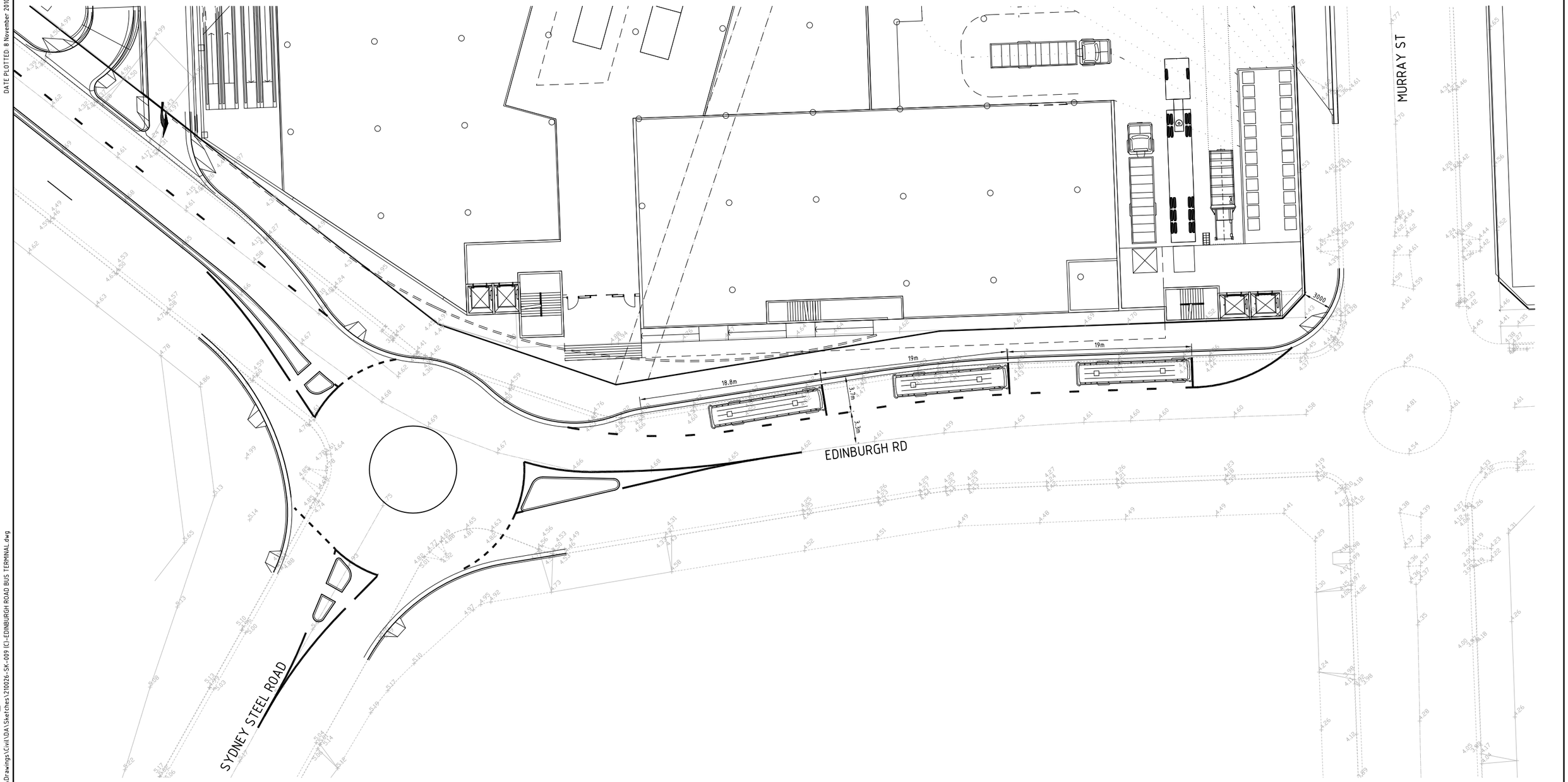

NOT CONSTRUCTION ISSUE

Rev	Date	Description	Drawn	Appr.
C	08.11.10	ISSUE FOR APPROVALS	MKH	MKH
B	04.11.10	REVISED ARCHITECTURAL	RDM	MKH
A	25.10.10	ISSUED FOR INFORMATION	RDM	MKH

Cardno
ABN: 95 001 145 035
910 Pacific Highway, Gordon, NSW Australia 2072
Phone (+61 2) 9496 7700 Fax (+61 2) 9499 3902
Email: Sydney@cardno.com.au Web: www.cardno.com.au
Quality Endorsed Company
AS 9001 Lic. 5960 Standards Australia

Drawn	RDM	Date 21.10.10
Checked	MKH	Date 21.10.10
Designed	RDM	Date 21.10.10
Verified	MKH	Date 21.10.10
Approved	MKH	Date 21.10.10

Client: AMP Capital Investors Limited

Bovis Lend Lease
Marrickville Metro Shopping Centre

-EDINBURGH ROAD BUS TERMINAL

Status: FOR INFORMATION

Date	Datum	Scale	Size
OCT '10'	AHD	1:200	A1

Drawing Number: 210026-SK-009
Revision: C

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm ON A1 ORIGINAL