

Hume Amendment C208

Expert Evidence Statement

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Prepared for
Wincity

14 August 2017



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Document Control

Version	Date	Author	Author Initials	Reviewer	Reviewer Initials
D01	14/08/17	Chris Butler		Tim McKinley	

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1 Qualifications and Expertise

In accordance with the Guide to Expert Evidence prepared by Planning Panels Victoria, my qualifications and expertise to undertake this work are summarised below:-

Name:

Christopher James Butler

Address:

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Level 4, 501 Swanston Street

Melbourne Vic 3000

Professional Qualifications:

- > Bachelor of Civil Engineering (Honours), University of Melbourne

Professional Experience:

- > Cardno Victoria 2007 – Present
- > Grogan Richards Pty Ltd 1988 – 2007
- > Road Traffic Authority and RJ Nairn and Partners Pty Ltd 1985 - 1988

Areas of Expertise:

- > Car parking, traffic and transportation.
- > Traffic advice and assessment of land uses and development proposals in relation to shopping centre developments, both new and expansions, office developments, local government and government authorities, residential and recreational developments, hospitals, schools, retirement villages and aged care facilities.

Expertise to Prepare this Report:

My training and experience including involvement with all forms of development over the past 32 years qualifies me to comment on the traffic implications of the proposal.

Instructions which Defined the Scope of this Report:

I have been retained by APP on behalf of Wincity to provide expert evidence at the Panel Hearing for Amendment C208 to the Hume Planning Scheme.

My brief is to respond to traffic issues and intersection design as they relate to the Emu Creek Town Centre area in the vicinity of Lancefield Road / Main Street intersection.

Facts, Matters and Assumptions Relied Upon:

- > Hume Planning Scheme Amendment C208 documentation as exhibited
- > Austroads Guide to Road Design
- > Submissions received on the amended documents
- > Review of relevant correspondence and other application documents.

Identity of Persons Undertaking the Work:

Chris Butler, assisted by Tim McKinley of Cardno Victoria.

'I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.'

Chris Butler



Senior Principal

for **Cardno**

2 Introduction

This report has been prepared in accordance with the Planning Panels Victoria Guidelines. In the course of preparing this assessment, I have inspected the subject site and surrounding road network, researched relevant case study data, analysed relevant traffic volume data, reviewed the proposed documents and plans outlined in Section 1.

My opinions with respect to the proposed amendment are set out in the following report.

Wincity owns the land at 45 Gellies Road and 170 Lancefield Road, Sunbury which forms part of the Lancefield Road PSP area.

I have been requested to address the following matters in the vicinity of the Emu Creek Town Centre:

1. The alignment and design of the proposed Lancefield Road / Main Street intersection ;
2. The design and location of the left-in left out treatment;
3. Road cross sections including requirements for widening/services;
4. Headlight glare;
5. Pedestrian amenity; and
6. The intersection treatment at the intersection of the two connector roads.

The following sets out my opinions with respect to these matters.

3 Background

3.1 The Proposed Amendment

The proposed Amendment C208 seeks to incorporate the “Lancefield Road Precinct Structure Plan” into the Hume Planning Scheme.

The Lancefield Precinct Structure Plan (PSP) was prepared by the Victorian Planning Authority (VPA) and exhibited in November 2016.

3.2 96A Application

A Section 96A application was made to Hume Council in December 2015, seeking approval for the subdivision and town centre development for the land at 45 Gellies Road and 170 Lancefield Road, Sunbury. This application was made due to the Precinct Structure Plan for the development area not being completed at that stage.

Cardno prepared a traffic and transport assessment, dated 4 December 2015 to accompany this application, based on the town centre design and road layout prepared by Taylors.

Since the preparation of the December 2015 report, the following traffic and transport related items have occurred:

- A draft planning permit has been issued
- The PSP has been exhibited;
- Various submissions have been made to VPA;
- The VPA has engaged David Lock and Associates to prepare a Town Centre Design.

Noting the above, I adopt this document as my Statement of Expert Evidence for the purposes of the Independent Panel convened to consider Amendment C208.

3.3 Submissions

It is understood that VPA is preparing to submit a Part B Submission with regards to altering the Lancefield Road PSP Emu Creek Town Centre Design. A preliminary plan prepared by David Lock and Associates has been forwarded to Wincity during stakeholder meetings.

4 Issues

The issues dealt with in this report are the traffic and transport implications of the proposed town centre and intersection prepared for the VPA:

- Intersection design;
- Intersection alignment and geometry;
- Road cross sections;
- Pedestrian amenity;
- Left-in/left-out treatment; and
- Headlight glare.

5 Existing Conditions

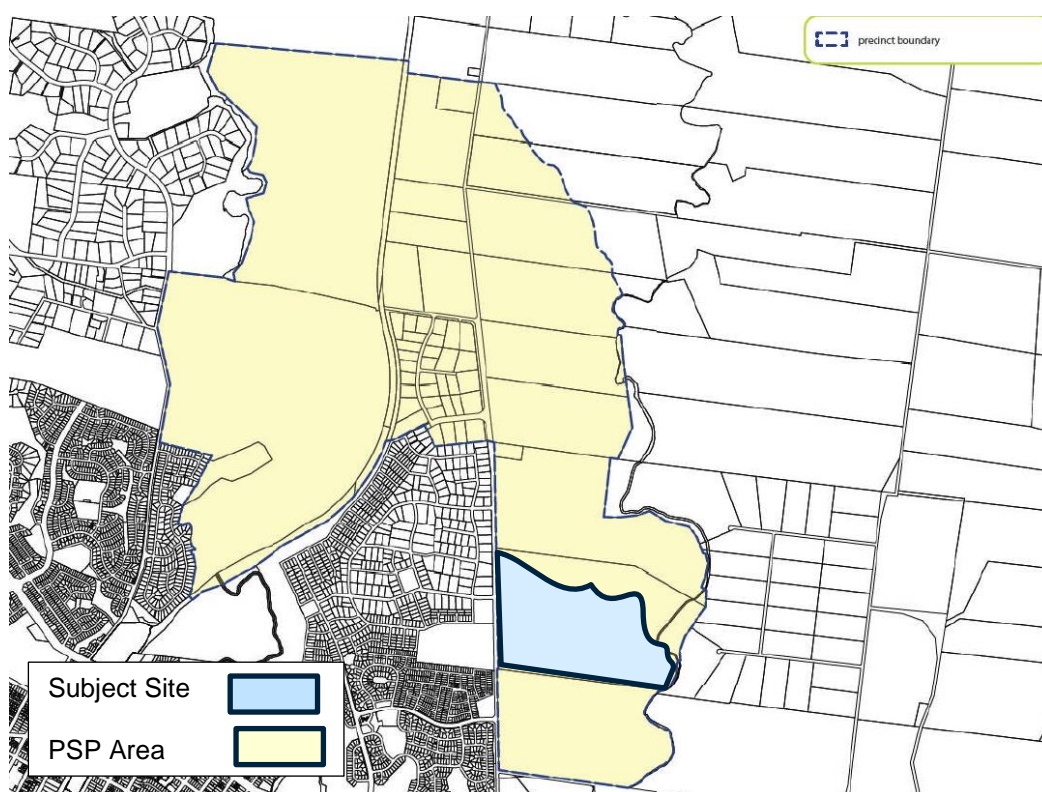
5.1 Location and Land Use

The subject site is located at 170 Lancefield Road and 45 Gellies Road, within the Lancefield Road Precinct. The location of the subject site in the context of the Lancefield Road PSP and broader Sunbury Township is shown as shown in Figure 5-1. The parcel of land is generally east of Lancefield Road, with a road frontage of 880m to this arterial. The site comprises of 274ha, of which 185ha is zoned Urban Growth Zone and the remainder Rural Conservation Zone as shown in Figure 5-2.

Land use to the west of Melbourne-Lancefield road is predominantly residential in nature, with rural land to the north, east and south.

The subject site is currently largely vacant agricultural land, with a dwelling and associated buildings.

Figure 5-1 Site Location



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5.2 Road Network

5.2.1 Melbourne-Lancefield Road

Lancefield Road is a Primary Arterial Road, running north from Sunbury Road within the East Sunbury Growth Area, to Clarkefield, Romsey and Lancefield, continuing further north to the Northern Highway at Tooborac.

Lancefield Road generally provides a two-lane, two-way cross section, with localised widening to allow for right and left turn movements at major local roads. A speed limit of 100km/h currently applies along Lancefield Road through the East Sunbury Growth Area.

A 20m road widening reserve (via a Public Acquisition Overlay) is provided along Lancefield Road for the purposes of future duplication, noting that this includes part of the existing road reservation

Figure 5-3 Melbourne – Lancefield Road, looking north through East Sunbury

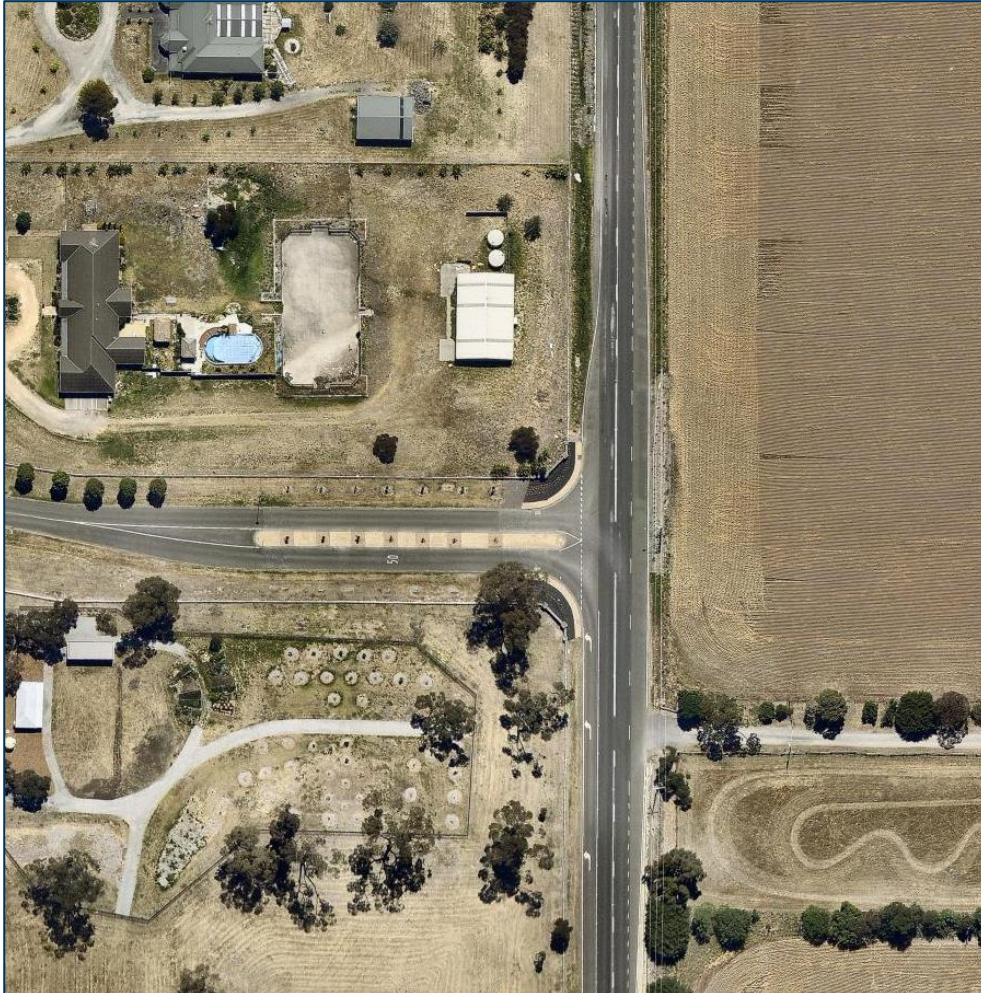


5.2.2 Rolling Meadows Drive

Rolling Meadows Drive is a local collector road operating from Melbourne-Lancefield Road in the east to Curtis Avenue in the west. Rolling Meadows Drive operates with a speed limit of 50km/h.

The intersection of Melbourne-Lancefield Road / Rolling Meadows Drive is unsignalised with auxiliary left and right turn lanes, as shown in Figure 5-4.

Figure 5-4 Intersection Melbourne-Lancefield / Rolling Meadows Drive



6 Exhibited Lancefield Road PSP

6.1 Street Network

6.1.1 Overall

The exhibited Street Network plan for the Lancefield Road PSP in the vicinity of the Wincity Land is shown in Figure 6-1, as per Plan 9 in section 3.3 of the exhibited Lancefield Road PSP.

The Street Network plan shows the higher order network (arterials and connectors), as well as intersection treatments onto the arterial network and at key internal intersections. Within the Wincity 96A application site, a signalised intersection as well as a left-in /left-out treatment is proposed from Lancefield Road.

Figure 6-1 Lancefield Road PSP – Street Network as exhibited

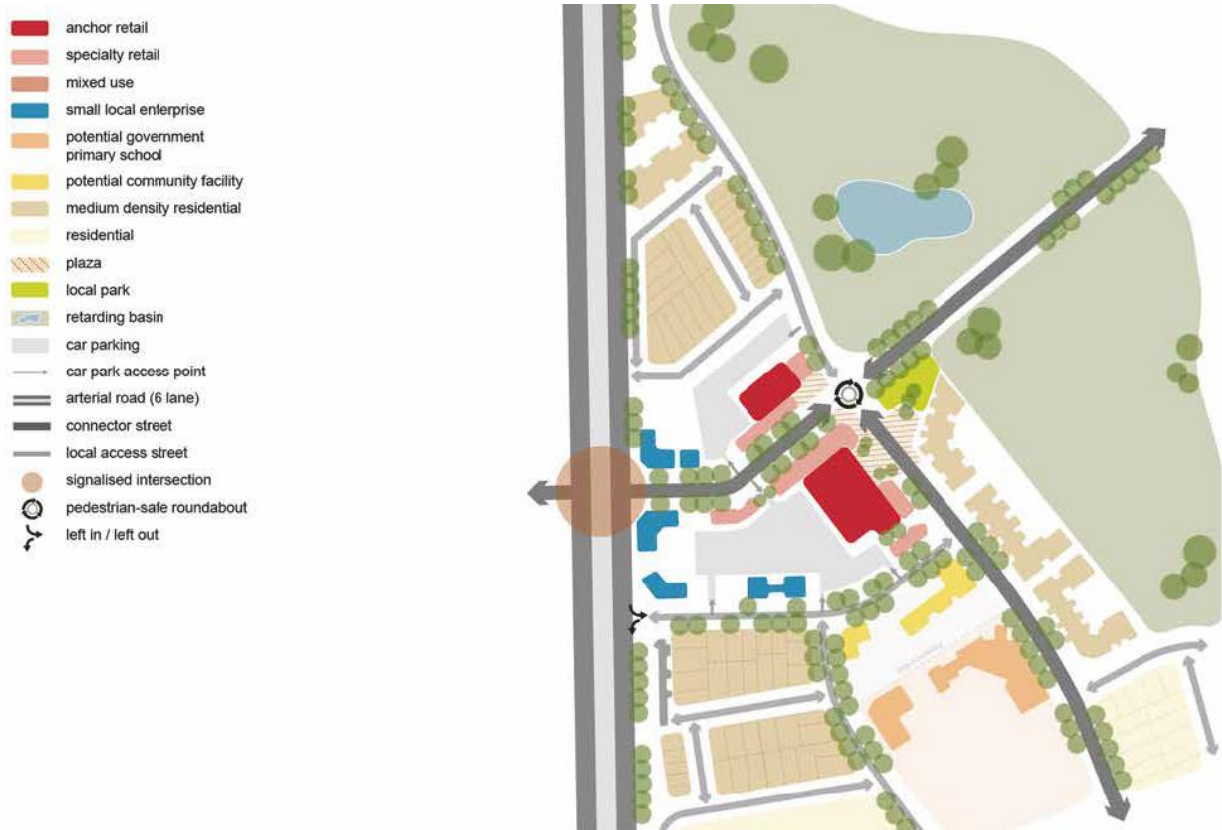


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6.1.2 Town Centre

The Emu Creek Local Town Centre Concept, as per Figure 3 in section 3.2 of the exhibited Lancefield Road PSP, is shown in Figure 6-2. This generally shows a Connector Street/Main Street aligned to the north-east, with a bend shown allowing for a right angle intersection with Lancefield Road.

Figure 6-2 Lancefield Road PSP – Emu Creek Local Town Centre Concept

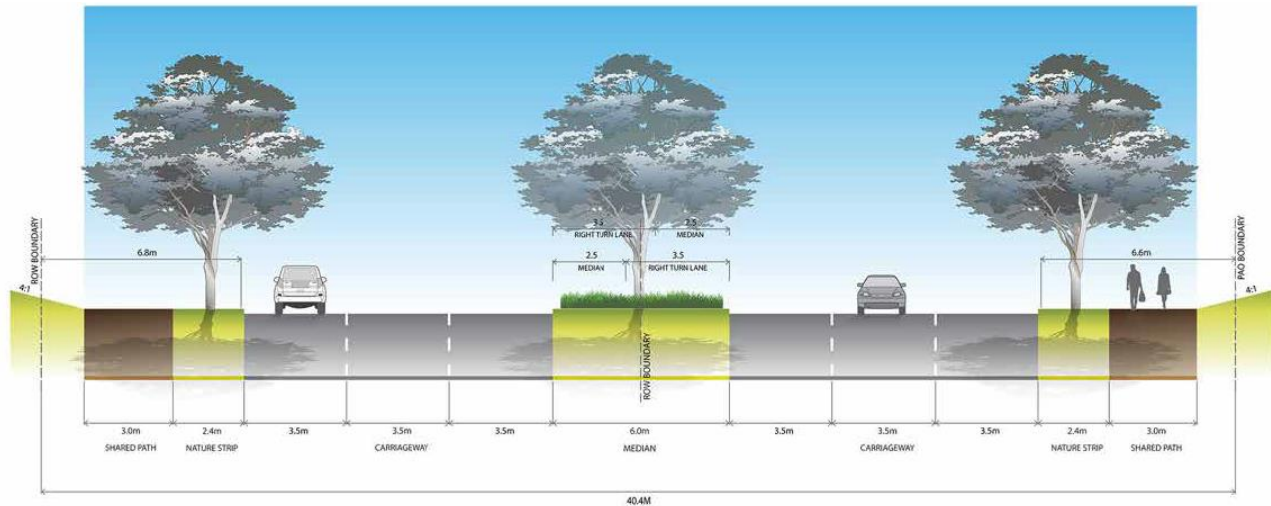


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6.1.3 Cross Sections

The arterial road network is comprised of Lancefield Road. The cross-sections set out in the exhibited PSP show this road ultimately being constructed with a divided cross-section carrying three traffic lanes in each direction. This is supplemented by a 2.4m verge and a 3.0m shared path, with further residual width to the ROW and PAO boundaries, as shown in Figure 6-3.

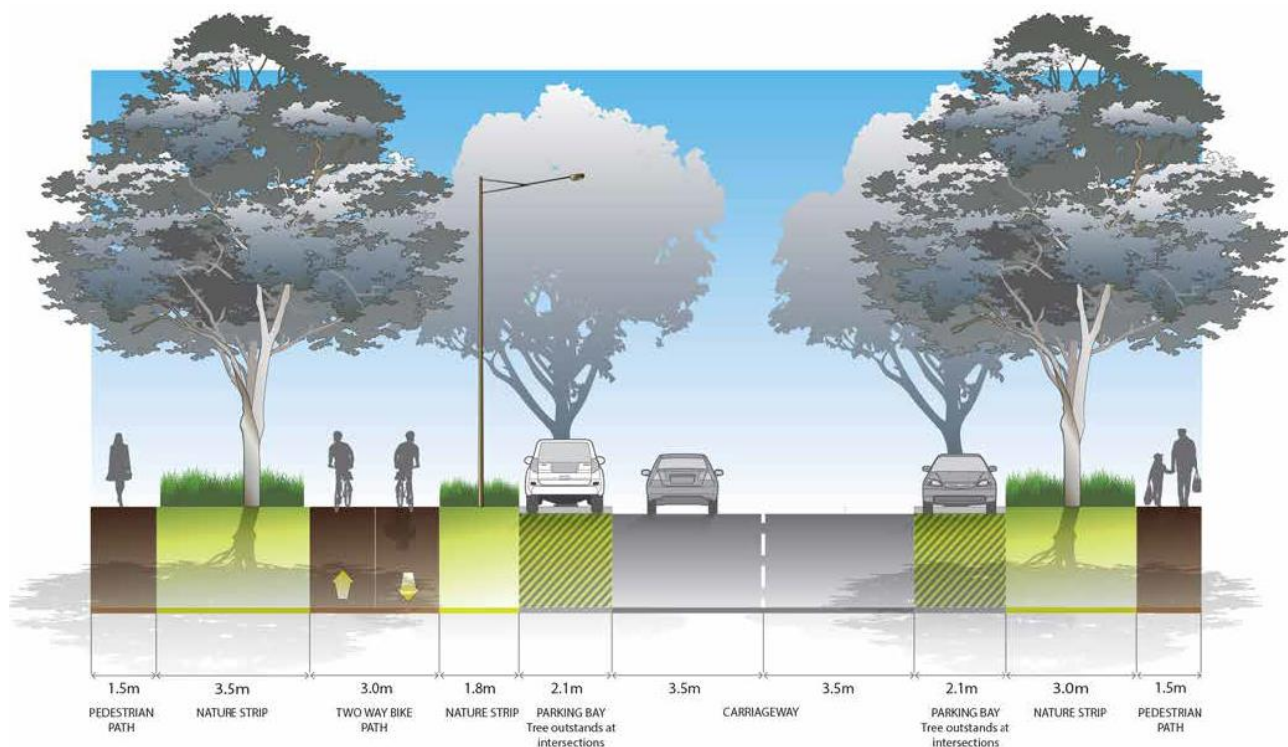
Figure 6-3 Lancefield Road Cross Section



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Immediately east of the intersection, a “kinked” Connector Street is shown connecting the Lancefield Road intersection to a bridge/culvert crossing of the creek. The cross-section set out in the exhibited PSP, shows a divided carriageway providing a single traffic lane and parking lane in each direction. Further to this, a north-south connector street is shown leading to the south east, with the intersection of these connector streets controlled by a roundabout.

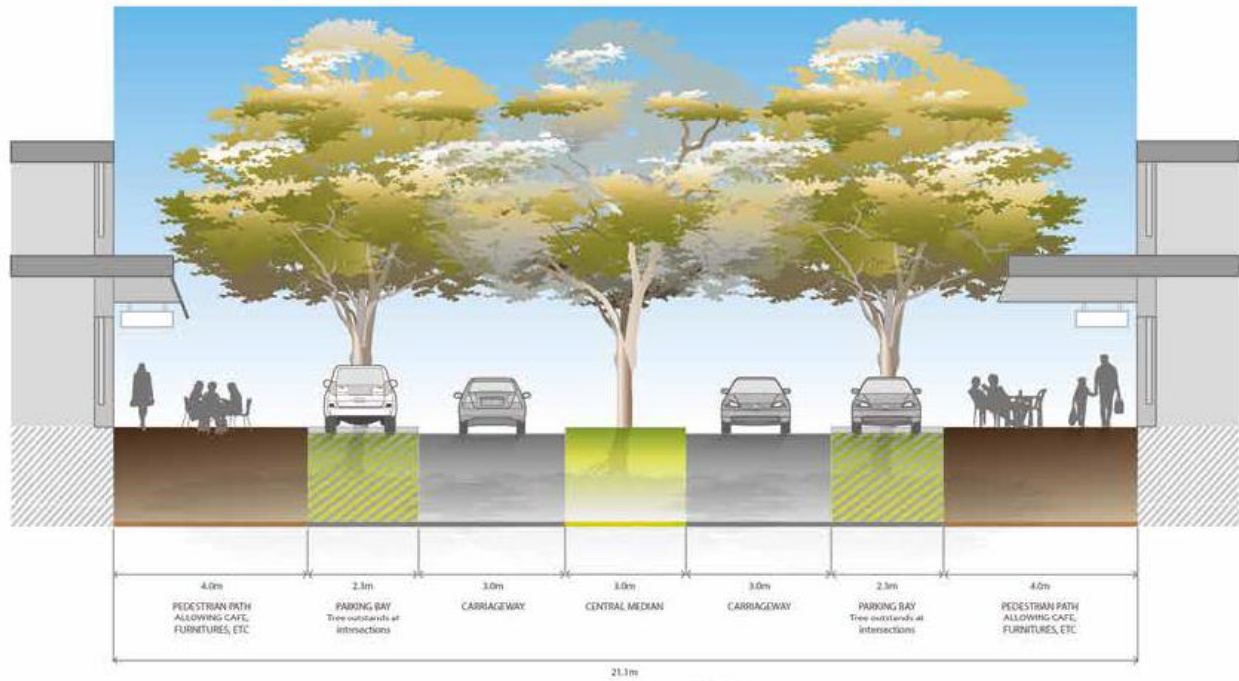
Figure 6-4 Connector Road Cross Section (Residential)



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It is noted however that the connector through the town centre would generally operate as a Main Street which requires a different cross section due to different needs within the verge. A through lane (narrower) and parking lane in each direction is shown, as well as a central median.

Figure 6-5 Main Street Road Cross Section



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6.2 Public Transport and Path Network

The indicative public transport network, as per Plan 10 in section 3.4 of the exhibited Lancefield Road PSP, is shown in Figure 6-6.

Figure 6-6 Lancefield Road PSP – Public Transport and Path Network as exhibited



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The exhibited Lancefield Road PSP shows that all arterial and connector roads will be bus capable routes. On-road bicycle lanes are shown along the connector streets and are supplemented by a network of off-road shared paths throughout the precinct.

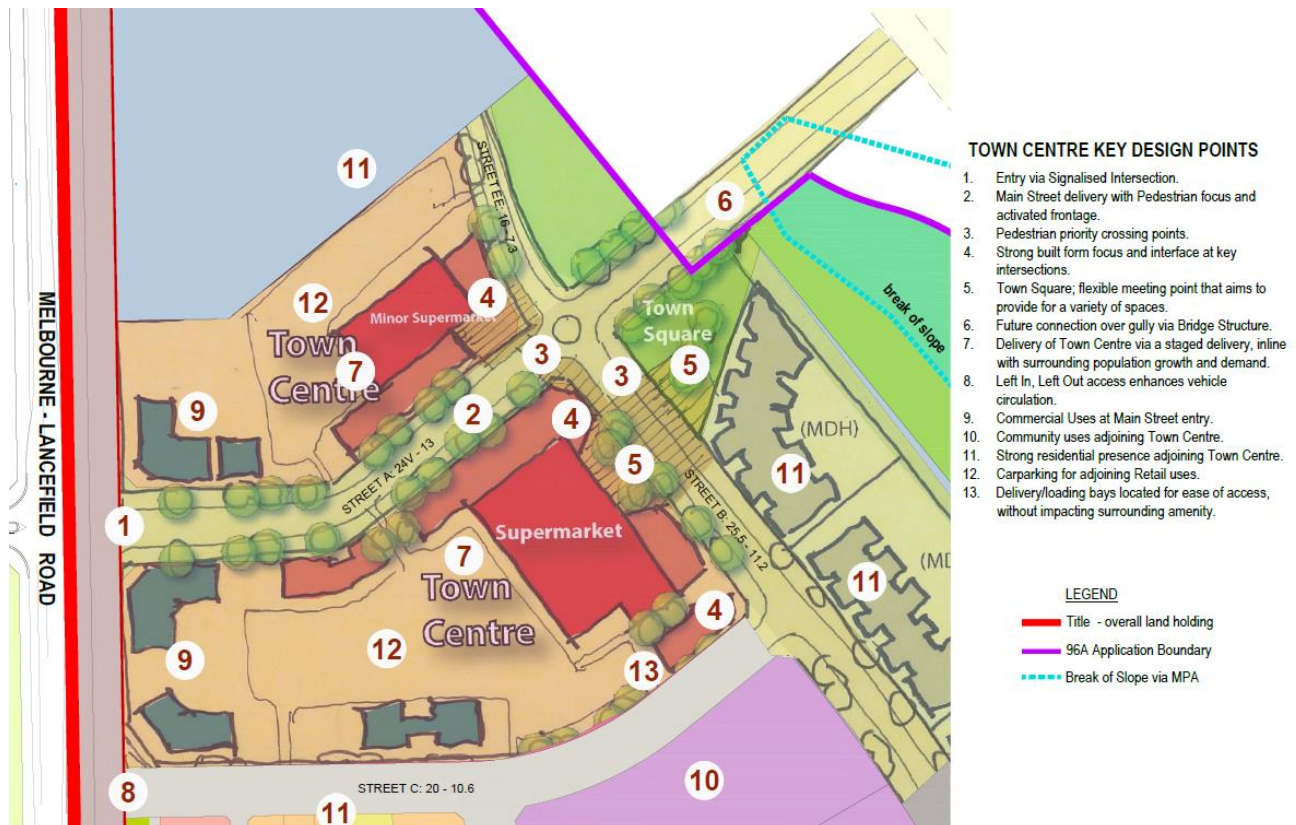
7 Potential Town Centre Layouts

Two further concept plans have been produced for the town centre – one by Taylors for the Section 96A application, with a second being produced by David Lock and Associates on behalf of the VPA/Council. It is understood that the David Lock and Associates (DLA) outline will be provided as additional information within the Part B Submission of the VPA. The DLA plan provided to Wincity is under review and may be modified, however this evidence is provided based on the information currently at hand.

Excerpts of both plans are shown below in Figure 7-1 Figure 7-2. The Taylors Plan is generally in accordance with the PSP document (shown in Section 6.1.2), whereas the DLA layout differs with in the following ways:

- The connector/main street is angled at approximately 70 degrees from the intersection rather than 90 degrees;
- Additional access roads are shown within the town centre area;
- The intersection to the north-east between the two connector roads is not a cross intersection controlled by a roundabout, but a t-intersection;
- The left-in/left-out treatment is located closer to the signalised intersection.

Figure 7-1 Taylors 96A submission Layout



The site plan illustrates the proposed development layout. Key features include:

- Building Footprints:** Two primary rectangular buildings are highlighted in pink, labeled "MUSE" and "COMMUNITY". Other smaller building footprints are shown in light brown and tan.
- Parking and Access:** Several parking areas are designated, including "CARPARK" and "PARKING". Access points are marked with labels like "DRIVEWAY", "ACCESS", and "LEFT IN - LEFT OUT".
- Topography and Infrastructure:** The plan shows contour lines indicating elevation, a "SERVICE ROAD" running diagonally, and "CANYON BLVD" running vertically on the left. A "SCHOOL" area is located to the southeast of the main development.
- Landscaping:** Green circular symbols represent trees or landscaping elements placed around the buildings and along access roads.

8 Issues

I have reviewed the relevant traffic and transport related submissions and respond as follows.

8.1 Major Intersection Design (IN-02)

Based on the cross section provided within the PSP for Lancefield Road, as well as the PSP Guideline 60 with respect to signalised intersections (to be designed in accordance with VicRoads Growth Area Road Network Planning Guidance and Policy Principles), I have designed the intersection of Lancefield Road as a Primary Arterial / Connector Road intersection. This intersection design is attached as Appendix A. The design takes into account the following features:

- PSP cross sections for the through lanes along Main Street and Lancefield Road;
- Deceleration and storage lengths for turning lanes along Lancefield Road for the design speed of 80km/h, with appropriate splays provided at the intersection;
- Standard turning lanes for Collector/Main Streets as they intersect with Lancefield Road;
- Appropriate sight distance to signals along Main Street for an approach speed of 50km/h;
- The Lancefield Road intersection aligning at 90 degrees to Rolling Meadows Drive and Main Street as per Austroads Guide to Road Design – Part 4A.

I am of the opinion that the standard intersection design as referenced within the PSP guidelines can be accommodated at this location with some minor adjustments to property boundaries. The Precinct Infrastructure Plan describes the intersection works as “Land for the ultimate configuration and construction of an Interim 4 way signalised intersection”. The interim intersection is likely to be configured similarly to the concept design provided in the 96A application traffic report prepared by Cardno in 2015 as shown in Appendix B.

8.2 Lancefield Road - Road Reserve / PAO

The road reserve as defined by the PSP has been overlaid onto the intersection plan. I am of the opinion that additional localised widening of the road reserve / PAO would be required where left turn lanes develop in the vicinity of Lancefield Road / Main Street intersection and the left-in/left-out access point to the Access Street immediately south of the main intersection. This additional localised widening is only required if and when Lancefield Road contains six lanes, which is unlikely to occur in the foreseeable future. The future urban growth boundary does not extend much further north along Lancefield Road and in my opinion the warrants for a six lane cross section are questionable.

8.3 Alignment of Main Street

I am of the opinion that the Main Street should intersect with Lancefield Road at right angles and remain straight for at least 30m from the intersection. Appropriate curve radii should be applied as per the intersection design provided to allow for safe passage through the intersection. This will allow transition to the angled alignment as required. This concept is shown within the existing PSP document and should be retained. I do not believe that a “kinked” approach provides an appropriately safe intersection design for a greenfield site.

8.4 Cross Section of Main Street

The main street cross section as defined within the PSP allows for 3.0m through lanes. This does not allow for the standard lane width for bus movements (3.5m lanes required). I am of the opinion that it would be appropriate to amend the PSP cross-section to allow for wider carriageway widths to facilitate future bus movements within the Main Street, which would require at least 22.6m. This is slightly narrower than a connector street cross section of 25m.

8.5 Main Street Crossing

I am of the opinion that the town centre concept as proposed within the PSP is appropriate in terms of no local access streets being provided. This aligns with the requirements R22-R28 of the PSP and facilitates better traffic flow, pedestrian priority and cyclist movements. The DLA plan shows two access streets off the main street.

8.6 Intersection (North East)

I am of the opinion that the roundabout at the intersection of the two connector roads to the north east of the town centre is appropriate. The provision of an alternate t-intersection defines too much priority to the north-south leg which may make it difficult for various turning movements.

8.7 Left In / Left out

I am of the opinion that the left-in/left-out intersection to the south of the intersection can be accommodated and will provide additional access to/from the town centre car park. The location of this access point must however be appropriately located to allow for the development of a deceleration lane for left turners along Lancefield Road as shown in the intersection concept layout.

8.8 Headlight Glare

Requirement 53 of the PSP requires a widened road reserve for car headlight glare barrier planting. The separation of the any loop road carriageway would be at least 8.4m away from the Lancefield Road carriageway. Within this section, a 2.4m nature strip adjacent to the Lancefield Road carriageway is provided, alongside a 3.0m shared path. Within a 13.0m loop road reservation, a 4.5m verge on the residential side supplemented by a 5.5m carriageway would be appropriate. This allows a further 3.0m for barrier planting without the need for any additional road reserve widening. It should be noted that loop roads provide access to few lots and could be designed as one-way streets if required. There are many examples of two-way service/loop roads on the arterial road network, as well as two way arterial roads with no median separating traffic flows. The median width of 6m provided on the Lancefield Road road cross section between the northbound and southbound lanes is narrower than the offset that would be provided between the southbound lanes and the loop roads. I therefore do not believe headlight glare is an item that requires additional widening for barrier planting.

9 Conclusions

Having reviewed the relevant submissions that refer to traffic and transport matters, it is my view that:

1. The signalised intersection can generally be accommodated as outlined within the PSP;
2. The main street alignment as currently shown within the PSP should generally be adopted;
3. The town centre should limit the provision of access streets bisecting the commercial area;
4. A roundabout should be provided at the intersection of the connector streets in the vicinity of the town centre;
5. The Left In / Left out access along Lancefield Road should be spaced appropriately south of the signalised intersection to allow for deceleration;
6. Headlight glare is not considered to be an issue that requires widening of road reserves for barrier planting.

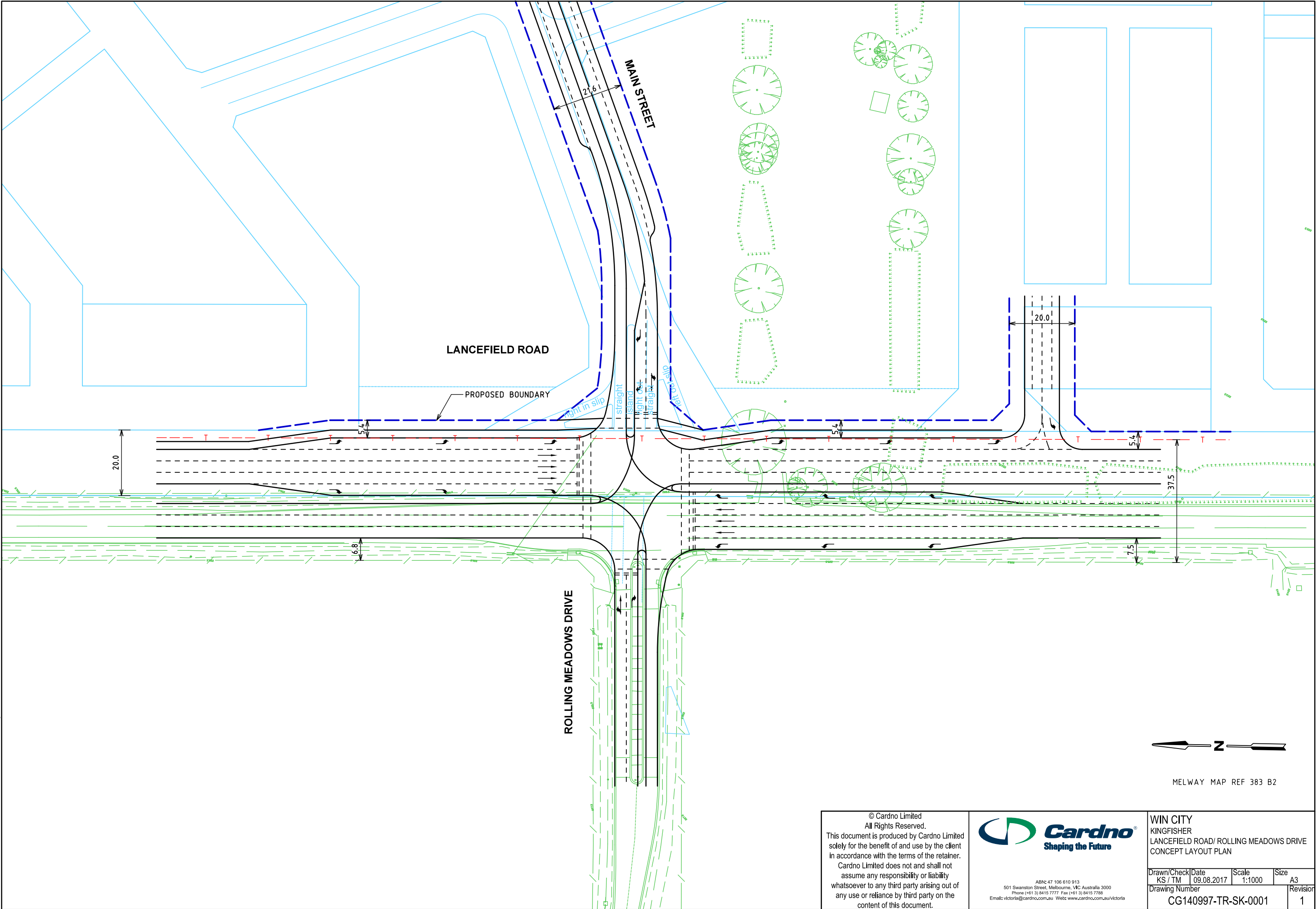
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APPENDIX

A

ULTIMATE
INTERSECTION
CONCEPT DESIGN





MELWAY MAP REF 383 B2

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WIN CITY
KINGFISHER
LANCEFIELD ROAD/ ROLLING MEADOWS DRIVE
CONCEPT LAYOUT PLAN

Drawn/Check	Date	Scale	Size
KS / TM	09.08.2017	1:1000	A3
Drawing Number			Revision
CG140997-TR-SK-0001			1

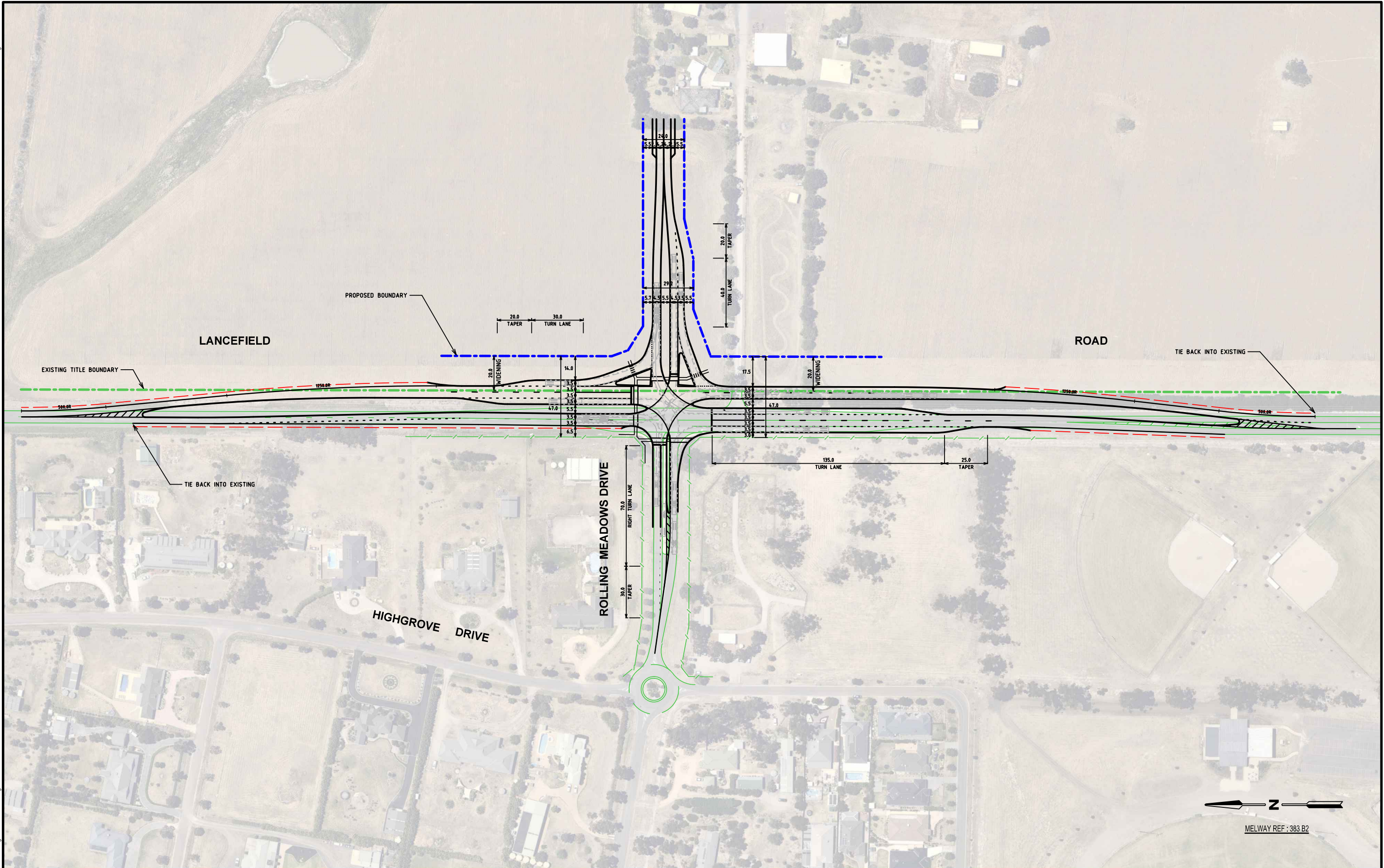
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APPENDIX

B

INTERIM
INTERSECTION
CONCEPT





Rev	Date	Description	Drawn	Appr.
P3	04.12.15	CLIENT COMMENTS	EG	TM
P2	28.05.15	ISSUE FOR INFORMATION - SIDRA OUTPUT INCORPORATED	BVH	TM
P1	10.12.14	ISSUED FOR INFORMATION	BVH	TM

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2. ALL DIMENSIONS TO FACE OF KERB AND CHANNEL I.N.O.
3. DECLARED ROAD - LANCEFIELD ROAD (SPEED ZONE 100KM/H)
4. LOCAL ROAD - ROLLING MEADOWS DRV (SPEED ZONE 50KM/H)



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Drawn

BVH

Designed

BVH

Checked

TM

Authorised

TM

Client	CLIENT COMPANY NAME		
Project	LANCEFIELD ROAD / ROLLING MEADOWS DRIVE		
Title	CONCEPT FUNCTIONAL DESIGN		
Status	PRELIMINARY NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Date	05.12.14	Scale	1:2000
Project Number	CG140997	Revision	01 P3