


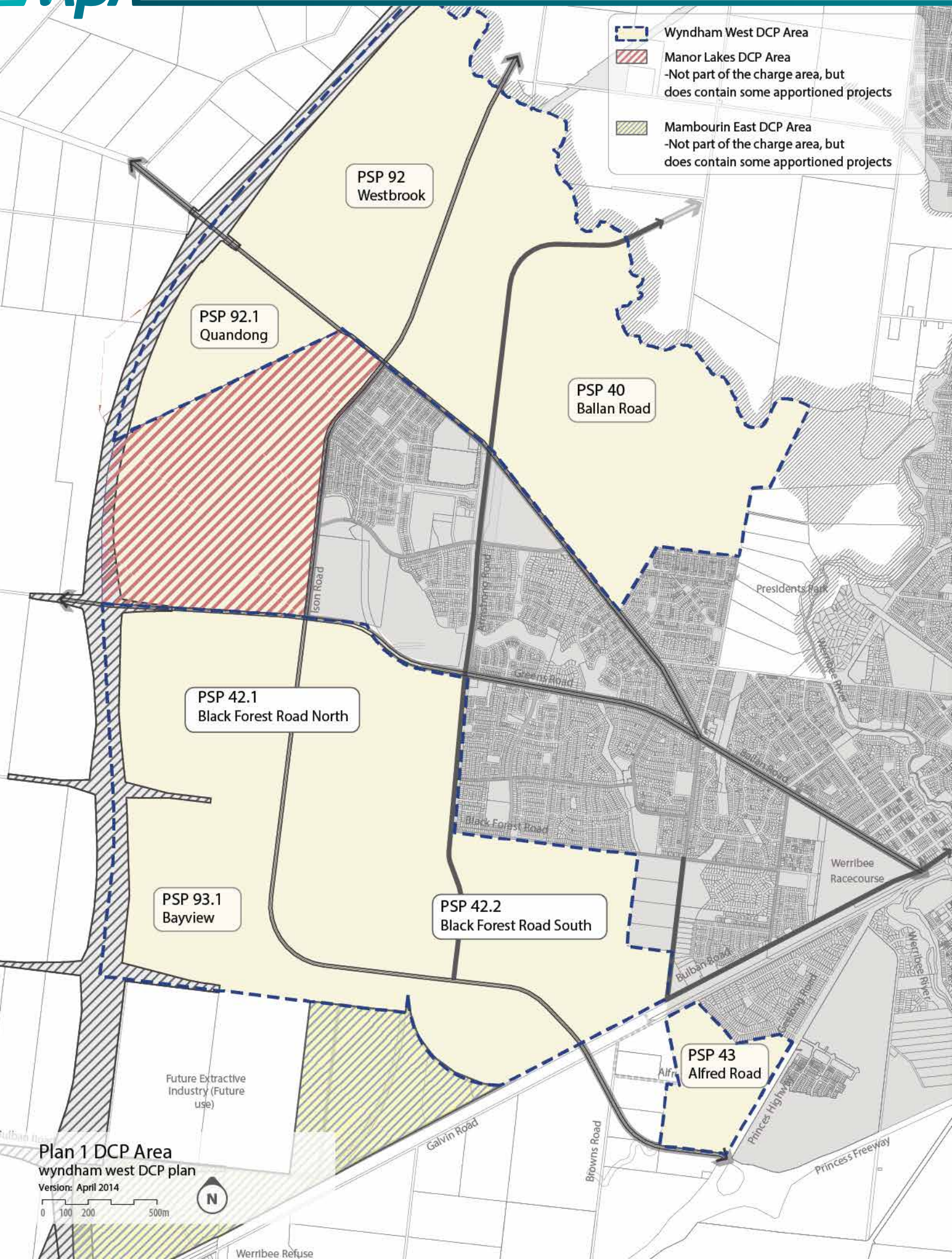




WYNDHAM WEST DEVELOPMENT CONTRIBUTIONS PLAN

April 2014 (Amended January 2024)

-  Wyndham West DCP Area
-  Manor Lakes DCP Area
-Not part of the charge area, but does contain some apportioned projects
-  Mambourin East DCP Area
-Not part of the charge area, but does contain some apportioned projects



Plan 1 DCP Area
wyndham west DCP plan
Version: April 2014



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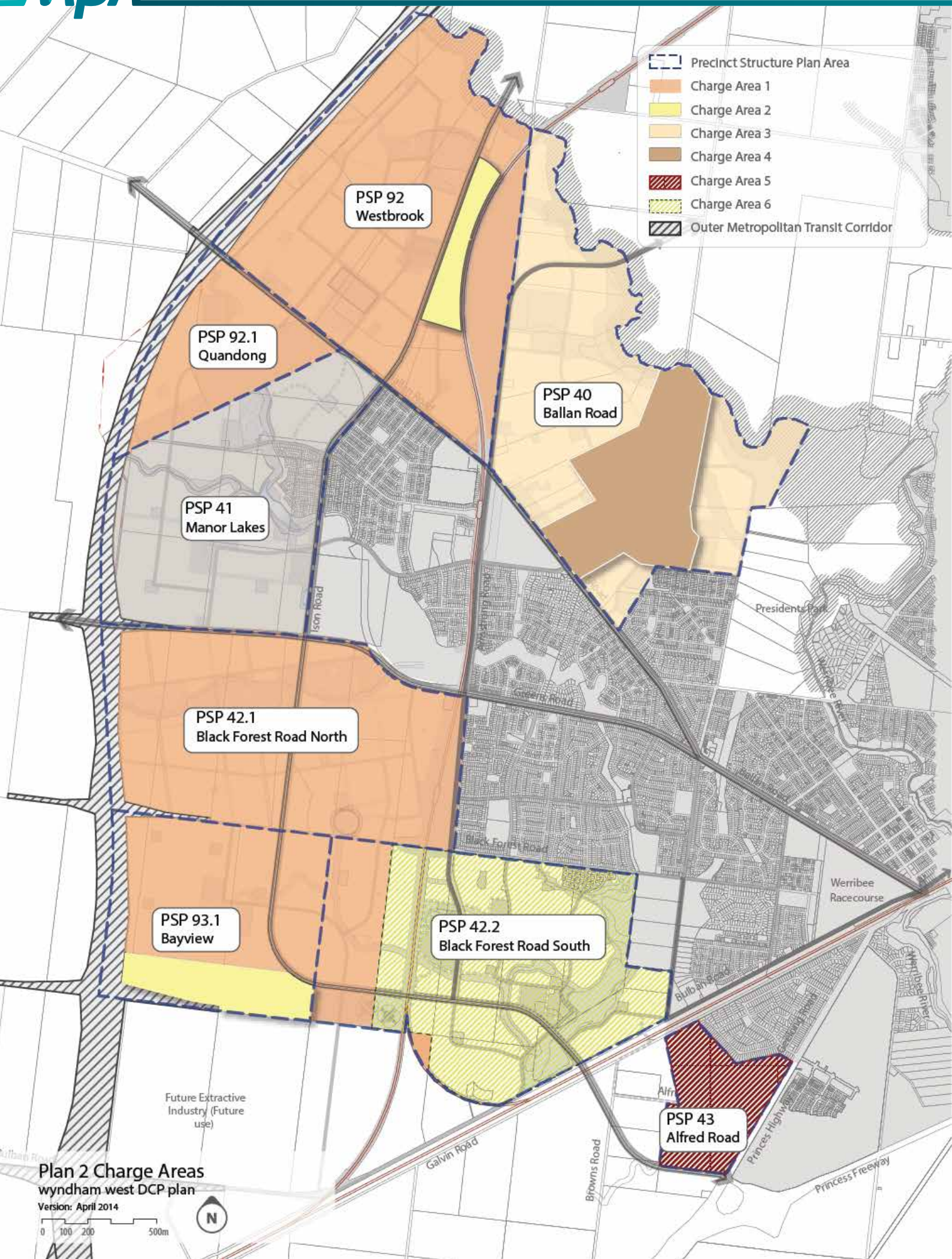
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Version	Date	Incorporated into the planning scheme by amendment	Description of changes
1	July 2014	C177	N/A
2	July 2017	GC75	Incorporate changes associated with Community Infrastructure Levy (CIL) increase.
3	December 2023	VC249	Incorporate changes associated with small second dwelling exemption
4	January 2024	C262wynd	Include non-government school

ACRONYMS

'the Act'	Planning and Environment Act 1987
AHD	Australian Height Datum
AFL	Australian Football League ovals
CIL	Community Infrastructure Levy
DCP	Development Contributions Plan
DEECD	Department of Education & Early Childhood Development
DIL	Development Infrastructure Levy
DEPI	Department of Environment & Primary Industries
DTPLI	Department of Transport, Planning & Local Infrastructure
GAA	Growth Areas Authority (also known as the Metropolitan Planning Authority)
GDA	Gross Developable Area
Ha	Hectare
LTC	Local Town Centre
MCA	Main Catchment Area
MCH	Maternal & Child Health
MPA	Metropolitan Planning Authority (also known as the Growth Areas Authority)
MSS	Municipal Strategic Statement
MTC	Major Town Centre
NDA	Net Developable Area
NDAE	Net Developable Area Employment
NDAR	Net Developable Area Residential
NDHa	Net Developable Hectare
OMRTC	Outer Metropolitan Ring Transport Corridor
PAO	Public Acquisition Overlay
PPTN	Principle Public Transport Network
PSP	Precinct Structure Plan
PTC	Principle Town Centre
PTV	Public Transport Victoria
P-6	School Prep to Year 6
P-12	State School Prep to Year 12
Sqm	Square Metres
UGB	Urban Growth Boundary
UGZ	Urban Growth Zone
WTRC	Werribee Township Regional Park
Wyndham City	Wyndham City Council



Plan 2 Charge Areas

wyndham west DCP plan

Version: April 2014



1.0 SUMMARY OF CHARGES

The following table provides an overview of the project categories and charges included within this DCP. A more detailed explanation of apportionment, methods of calculation and the description and costs of individual projects are included within the body of the document.

Amended by C262wynd **Table 1** Summary of Charges

SUMMARY - DEVELOPMENT INFRASTRUCTURE LEVY BY CHARGE AREA			
CHARGE AREA	TOTAL COST OF CONTRIBUTION	HECTARES	CONTRIBUTION RATE PER NET DEVELOPABLE HECTARE (P/NDHA)
Charge Area 1 (residential)	\$225,624,123	960	\$235,108
Charge Area 2 (employment)	\$12,878,756	91	\$141,002
Charge Area 3 (residential)	\$56,404,520	225	\$250,856
Charge Area 4 (residential)	\$30,533,592	98	\$310,203
Charge Area 5 (residential)	\$21,300,844	78	\$274,360
Charge Area 6 (residential)	\$60,692,629	264	\$229,791
TOTAL	\$407,434,464	1,716	

SUMMARY - DEVELOPMENT INFRASTRUCTURE LEVY (EXCLUDING EXTERNAL APPORTIONMENT)		
PROJECTS	TOTAL COST OF PROJECTS	DEVELOPMENT TYPES CONTRIBUTING
Transport	\$246,817,541	Residential & Employment
Recreation	\$109,156,426	Residential
Community	\$43,737,701	Residential
Finance adjustment	\$7,720,266	Residential & Employment
TOTAL	\$407,431,934	

SUMMARY - BREAKDOWN OF DEVELOPMENT INFRASTRUCTURE LEVY		
PROJECT TYPE	BASE RESIDENTIAL (CHARGE AREA 1) (P/NDHA)	EMPLOYMENT (CHARGE AREA 2) (P/NDHA)
Land	\$43,685	\$15,006
Construction	\$186,106	\$120,679
Finance adjustment	\$5,317	\$5,317
TOTAL	\$235,108	\$141,002

SUMMARY - BREAKDOWN OF COMMUNITY INFRASTRUCTURE LEVY		
LEVY	ESTIMATED DWELLINGS	ESTIMATED TOTAL CONTRIBUTION
Capped at \$1,150 per dwelling	26,691	\$30,694,650

SUMMARY - TOTAL LEVIES TO BE COLLECTED			
LEVY	RESIDENTIAL	EMPLOYMENT	TOTAL
Development Infrastructure Levy	\$394,555,708	\$12,878,756	\$407,434,464
Community Infrastructure Levy	\$30,694,650	\$0	\$30,694,650
TOTAL	\$425,250,358	\$12,878,756	\$438,129,114

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2.0 INTRODUCTION

The Wyndham West Development Contributions Plan (the 'DCP') has been prepared by the Metropolitan Planning Authority (MPA) with the assistance of Wyndham City, service authorities and major stakeholders.

The Wyndham West DCP:

- Outlines projects required to ensure that future residents, visitors and workers in the area can be provided with timely access to local infrastructure and services necessary to support a quality and affordable lifestyle.
- Establishes a framework for development proponents to make a financial contribution towards the cost of the identified infrastructure projects. It ensures that the cost of providing new infrastructure and services is shared equitably between various development proponents and the wider community.
- Provides the details of the calculation of financial contributions that must be made by future developments towards the nominated projects. In this way, it provides developers, investors and local communities with certainty about development contributions requirements and how these will be administered.

2.1 Report Structure

This document comprises five parts:

PART 1 - Strategic Basis

Section 2.0 clearly explains the strategic basis for the Development Contributions Plan, which includes information about the various Wyndham West Precinct Structure Plans. Section 3.0 provides justification for the various infrastructure projects included in the Development Contributions Plan.



PART 2 - Calculation of Contributions

Section 4.0 sets out how the development contributions are calculated and costs apportioned.



PART 3 - Development Contributions Plan Administration

Section 5.0 focuses on administration of the Development Contributions Plan.



PART 4 - Implementation

Section 6.0 focuses on implementation of the Development Contributions Plan and identifies infrastructure delivery priorities.



PART 5 - Other Information

Section 7.0 and Section 8.0 provide other supporting information .

NOTE: Any reference to the Metropolitan Planning Authority (MPA) in this document is a reference to the Growth Areas Authority (GAA).

2.2 Strategic Basis

The strategic basis for the DCP is established by the State and Local Planning Policy Framework of the Wyndham Planning Scheme. Key documents are the:

- Growth Corridor Plans
- Municipal Strategic Statement
- Werribee West Concept Plan (1996)
- Wyndham Infrastructure Financing Policy and Framework for Infrastructure Financing
- Ballan Road Precinct Structure Plan
- Black Forest Road North Precinct Structure Plan
- Black Forest Road South Precinct Structure Plan
- Alfred Road Precinct Structure Plan
- Westbrook Precinct Structure Plan
- Bayview Precinct Structure Plan (under preparation)
- Mambourin East Precinct Structure Plan (under preparation)
- Quandong Precinct Structure Plan (under preparation) and
- Precinct Structure Plan supporting documents.
- Relevant Section 173 agreements under the *Planning and Environment Act 1987*

These documents set out a broad, long term vision for the sustainable development of the Wyndham West DCP area and its surrounds.

The Growth Corridor Plans illustrate the planned extent of residential, employment and other development as well as the location of larger activity centres for each growth area. They also include key elements of infrastructure and services such as the regional open space network, metropolitan public transport networks, freeways and arterial roads.

2.3 Planning and Environment Act 1987

This DCP has been prepared in accordance with Part 3B of the *Planning and Environment Act 1987* (the Act) as well as other relevant legislation and has been developed in line with the State and Local Planning Policy Framework of the Wyndham Planning Scheme. This DCP is consistent with the Minister for Planning's Direction on Development Contributions made under section 46M(1) of the Act and has had regard to the Victorian Government's Development Contributions Guidelines (the 'DCP Guidelines').

The DCP provides for the charging of a Development Infrastructure Levy pursuant to section 46J(a) of the Act towards works, services and facilities. It also provides for the charging of a Community Infrastructure Levy pursuant to section 46J(b) of the Act as some items are classified as community infrastructure by reference to the Act, the Minister's Direction on Development Contributions and the DCP guidelines.

This DCP forms part of the Wyndham Planning Scheme pursuant to section 46I of the Act and is an incorporated document under Clause 81 of the Wyndham Planning Scheme.

The DCP is implemented in the Wyndham Planning Scheme through Schedule 11 to the Development Contributions Plan Overlay which applies to the area shown in Plan 1.

Strategic Planning for Wyndham West

The Wyndham West area includes approximately 2,700 hectares of land within the Urban Growth Boundary. Approximately 2,235ha of land is zoned Urban Growth Zone, while around 465ha is currently zoned Rural Conservation Zone but was identified for future development as part of the 2011 / 2012 Growth Corridor Plan process.

The proximity of the PSPs to each other and their location adjacent to existing development has allowed the strategic planning of Wyndham West to proceed on an integrated basis, with each PSP considering not only its individual needs, but also how it will integrate and relate to its neighbours. The transport, community and recreation needs of the future community have all been considered in terms of the whole of the Wyndham West area.

The need for the infrastructure included within this DCP has been determined according to the anticipated development scenario for Wyndham West. The DCP has been prepared in conjunction with the Precinct Structure Plans through a sub-corridor wide planning process. This process provided the rationale and justification for infrastructure items that have been included. Accordingly, the DCP is an implementation based planning tool which identifies the infrastructure items required by the new community and apportions the cost of this infrastructure in an equitable manner across the plan area.

PSPs not completed at time of DCP publication

Where a Precinct Structure Plan was not available at the time of publication, the DCP makes reasonable assumptions for required infrastructure based on typical dwelling yields and population ratios as well as:

- Sub-corridor structure planning undertaken by the MPA for the Wyndham West area including:
 - A detailed NDA for each PSP based on a survey of encumbrances and a broad allocation of community facilities.
 - All road, intersection, bridge and culvert projects required to service the new community.
 - The provision ratio for sporting reserves, schools and community centres.
- Available draft structure plans in development.

While the DCP has determined the number and size of facilities required within each uncompleted precinct, the PSPs will determine the detailed configurations and locations of these elements. This detailed refinement in PSPs will not change the project list, nor the overall DCP rate.

2.4 Wyndham West Precinct Structure Plans

The various Wyndham West PSPs set out the vision for how land should be developed, illustrates the future urban structure and describes the objectives to be achieved by the future development. The PSPs also outline projects required to ensure that future residents, visitors and workers within the area are provided with timely access to services and transport infrastructure necessary to support a quality affordable lifestyle.

The PSPs enable urban development and the future urban structure of the new communities are depicted through a number of networks, including transport, open space and active recreation, social infrastructure, town centres, housing and places for local employment.

2.4.1 Ballan Road (PSP 40)

The Ballan Road PSP is expected to ultimately accommodate approximately 15,900 people and 5,680 dwellings. At the time of writing, this PSP is awaiting finalisation, following a Planning Panel process.

2.4.2 Black Forest Road North (PSP 42.1)

The Black Forest Road North PSP will ultimately accommodate approximately 16,500 people and 5,900 dwellings. At the time of writing, this PSP is still under development and is expected to be reviewed by Government Agencies and Council in 2014.

2.4.3 Black Forest Road South (PSP 42.2)

The Black Forest Road South PSP will ultimately accommodate approximately 14,900 people and 5,320 dwellings. The PSP was approved in August 2013.

2.4.4 Alfred Road (PSP 43)

The Alfred Road PSP will ultimately accommodate approximately 3,400 people and 1,200 dwellings. The PSP was approved in August 2013.

2.4.5 Westbrook (PSP 92)

The Westbrook PSP will ultimately accommodate approximately 16,200 people and 5,790 dwellings. At the time of writing, this PSP is awaiting finalisation, following a Planning Panel process.

2.4.6 Quandong (PSP 92.1)

The Quandong PSP will ultimately accommodate approximately 2,980 people and 1,065 dwellings. At the time of writing, the Quandong PSP has not yet commenced.

2.4.7 Bayview (PSP 93.1)

The Bayview PSP will ultimately accommodate around 7,300 people and 2,600 dwellings. At the time of writing, the Bayview PSP has not yet commenced.

2.5 The Area to Which the Development Contributions Plan Applies

In accordance with section 46K(1)(a) of the *Planning and Environment Act 1987* the Wyndham West DCP applies to land shown in Plan 1. The area is also shown as DCP011 on the Wyndham Planning Scheme maps.

The Wyndham West DCP applies to approximately 2,700 hectares of land (1,720 hectares of developable land) which is divided into six charge areas as shown in Plan 2.

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by C262wynd

Table 2 Charge Areas

CHARGE AREA	NET DEVELOPABLE AREA
Charge Area 1 (residential)	960
Charge Area 2 (employment)	91
Charge Area 3 (residential)	225
Charge Area 4 (residential)	98
Charge Area 5 (residential)	78
Charge Area 6 (residential)	264
TOTAL	1,716

The DCP clearly demonstrates the infrastructure required to service the broader development sub-corridor. In selecting items, consideration has been given to ensure they are not already wholly funded through another contribution mechanism, such as a mandatory infrastructure construction requirement of the PSPs, an existing local development contributions plan, an agreement under Section 173 of the Act or as a condition on an existing planning permit. Identified overlap in funding has been addressed through the apportionment of items or other suitable means provided for in the *Planning and Environment Act*.

2.6 Related Infrastructure Agreements

2.6.1 Section 173 Agreements & Other Development Contribution Plans

As part of the Werribee West Concept Plan (1996) a number of Section 173 agreements under the *Planning and Environment Act 1987* were entered into regarding a number of projects included in this DCP. In addition a number of projects are apportioned across other DCP areas such as Manor Lakes, Wyndham North and Mambourin East.

The apportionments listed in Table 10 have taken these agreements into consideration. Refer to Appendix 2 for detail of external apportionment.

2.6.2 Melbourne Water Development Services Schemes

Where there is a waterway crossing of an existing road that is covered by a Melbourne Water Development Services Scheme (DSS), the cost of upgrading the culvert crossing in that location is shared with the relevant DSS. The DSS will pay for the cost of the culvert crossing for the width of this existing road reserve, while the DCP will pay for any widening of the culvert resulting from widening of the road reserve. This is expressed in the DCP through the apportionment of the culvert project.

2.7 Project Identification

The project identification system used in the DCP has been designed to assist in understanding and navigating the DCP. Road, intersection, bridge, recreation and community facility projects use the identification system of project category and a sequential project number.

Project identification codes used are:

- RD – Roads
- BR – Bridges & Culverts
- IN – Intersections
- AR – Recreation
- CO – Community Facilities

3.0 INFRASTRUCTURE PROJECT JUSTIFICATION

The need for infrastructure included in this DCP has been determined according to the anticipated development of the Wyndham West sub-corridor.

Items can be included in a development contributions plan if they will be used by the future community of an area. New development does not have to trigger the need for new items in its own right. The development is charged in line with its projected share of use. An item can be included in a development contributions plan regardless of whether it is within or outside the DCP area.

Before inclusion in this DCP, all items set out in the DCP have been assessed to ensure they have a relationship or nexus to proposed development in the DCP area. The cost apportionment methodology adopted in this DCP relies on the nexus principle. A new development is deemed to have a nexus with an item if it is expected to make use of that item.

A summary of how each item is related to proposed development within the DCP area is set out below and individual item apportionments are identified in Table 10.

The items that have been included in the DCP all have the following characteristics, namely they:

- Are essential to the health, safety and well being of the community.
- Will be used by a broad cross-section of the community.
- Reflect the vision and objectives expressed in the Wyndham West PSPs.
- Are not recurrent items.
- Are the basis for the future development of an integrated network.

In selecting items for inclusion in the DCP, consideration has been given to ensure they are not already funded (in whole or part) through another contribution mechanism, such as a mandatory infrastructure construction requirement of the PSP, an existing local development contributions plan, an agreement under Section 173 of the Act or as a condition on an existing planning permit

Where a funding overlap has been identified or an item services a catchment much larger than the DCP area, the costs of the infrastructure have been appropriately apportioned (as detailed in Appendix 2)

3.1 Items Not Included in the Development Contributions Plan

Developer Works Items

The following items are not included in the DCP, as they are considered to be normal to the construction of a development and are not considered to warrant cost sharing arrangements beyond those set out in this DCP. These must be provided by developers as a matter of course and in implementing the PSPs unless they are items specified in this DCP:

- Internal streets and connector streets, creek and drainage line crossings and associated traffic management measures.
- Waterway management works and drainage systems (other than those covered by a Melbourne Water Development Services Scheme).
- Intersections connecting the development to the existing road network.
- Water, sewerage, underground power, gas and telecommunications services.
- Local pathways and connections to the regional and / or district pathway networks.
- Shared path networks, including required crossings of waterways.
- Basic levelling, water tapping and landscaping of local passive open space.
- Passive public open space reserve master plans and any agreed associated works required by the PSPs.
- Provision of biodiversity assets.
- Bus stops.

The items listed above may be further addressed and defined by an agreement under s173 of the Act and / or conditions in planning permits.

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State Items

The following items have not been included within the DCP as they are determined to be State Infrastructure items:

- Duplication of Ison Road from two to four lanes, and ultimate four to six lanes.
- Construction of northernmost Ison Road intersection in PSP 92 Westbrook.
- Duplication of Ballan Road from two to four lanes, and ultimate four to six lanes.
- Duplication of Greens Road from two to four lanes.
- Construction of the Ison Road bridge crossing of the Werribee River.
- Construction of the Ison Road bridge crossing of the Regional Rail Link.
- Construction of the Ison Road bridge crossing of the Melbourne-Geelong railway.
- Construction and duplication of the Ballan Road bridge crossing of the Regional Rail Link.
- Construction and duplication of the Greens Road bridge crossing of the Regional Rail Link.
- Construction of the Black Forest Road bridge crossing of the Regional Rail Link.
- Construction of the Ballan Road bridge crossing of the Regional Rail Link.

The delivery of the State Infrastructure items will be provided as warranted and as funds become available, which may include Growth Area Infrastructure Contribution Work in Kind projects.

Other

The following items have not been included within this DCP but have other identified funding sources:

- Construction of Greens Road between Armstrong Road and Ison Road (s173 agreement)
- Construction of Greens Road between Ison Road and Manor Lakes Boulevard (Manor Lakes DCP)
- Construction of Armstrong Road between Greens Road and Ballan Road (s173 agreements)
- Construction of Ison Road intersection with Browns Road (future Mambourin East DCP).

3.2 Infrastructure Projects

The following three types of projects are included in the DCP (refer to Plans 3-6):

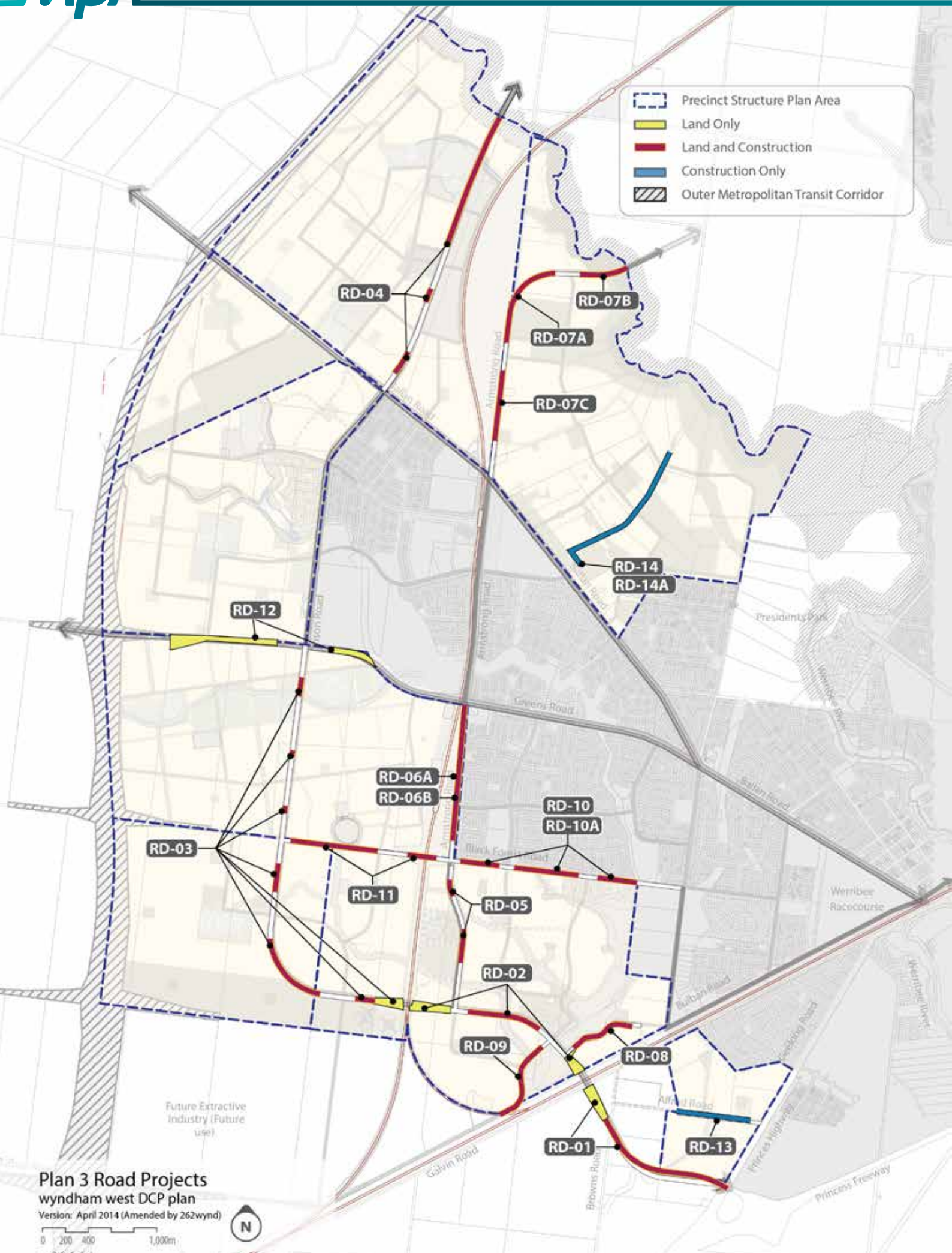
- Transport
- Recreation
- Community.

3.2.1 Transport Projects

The transport related projects in the DCP are based on the transport network depicted in Plans 3, 4 and 5, which is supported by the West Growth Area Corridor Plan and the various Wyndham West Precinct Structure Plans. The transport projects include a combination of:

- Road construction (including land and waterway crossing requirements)
- Construction of major controlled intersections and associated works.

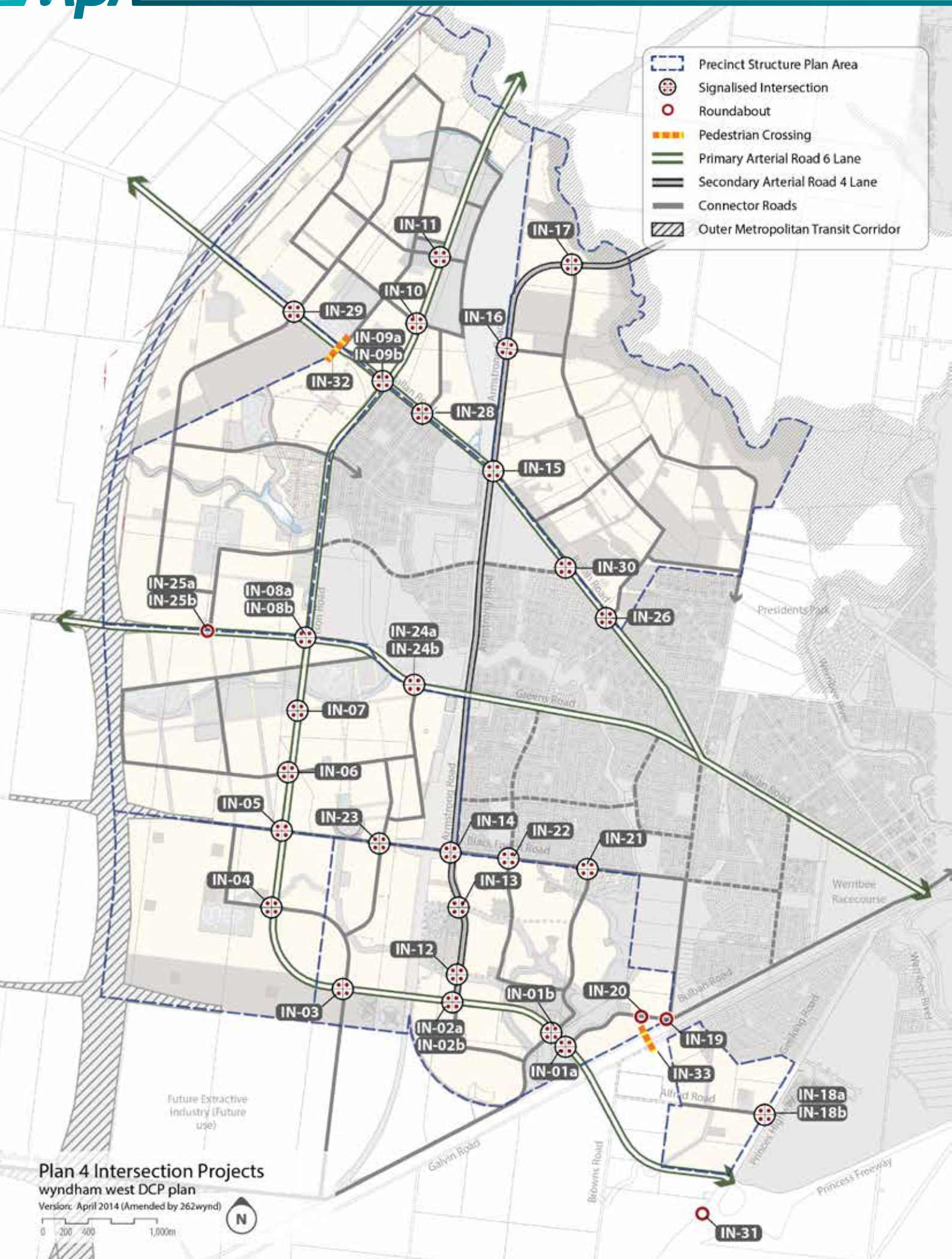
The road projects listed on the following pages and shown in Plan 3 are funded by the DCP:



Plan 3 Road Projects
 wyndham west DCP plan
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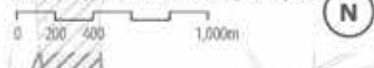
Table 3 Road Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
RD-01	Ison Road - Princes Highway to Melbourne-Geelong Rail Line	Purchase of land to create road reserve 41m wide (9.5873ha ultimate treatment) and construction of 2 lane carriageway for 1567m, excluding intersections (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-02	Ison Road - Melbourne-Geelong Rail Line to Regional Rail Link	Purchase of land to create road reserve 41m wide (6.7845ha ultimate treatment) and construction of 2 lane carriageway for 1098m, excluding intersections (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-03	Ison Road - Regional Rail Link to Greens Road	Purchase of land to create road reserve 41m wide (8.2904ha ultimate treatment) and construction of 2 lane carriageway for 1604m, excluding intersections (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-04	Ison Road - Ballan Road to the Werribee River	Purchase of land to create road reserve 41m wide (6.1199ha ultimate treatment) and construction of 2 lane carriageway for 1496m, excluding intersections (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-05	Armstrong Road - Ison Road to Black Forest Road	Purchase of land to create road reserve 34m wide and construction of 2 lane carriageway for 452m, excluding intersections (1.56ha ultimate treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-06A	Armstrong Road - Black Forest Road to Greens Road	Purchase of land to create road reserve 40m wide for 1162m (4.5154ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-06B	Armstrong Road - Black Forest Road to Greens Road	Construction of 2 lane carriageway 1162m, excluding intersections (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-07A	Armstrong Road - along existing Hobbs Road	Purchase of land to create road reserve 34m wide and construction of 2 lane carriageway for 1095m, excluding intersections (1.5151ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-07B	Armstrong Road - Hobbs Road to Werribee River	Purchase of land to create road reserve 34m wide and construction of 2 lane carriageway for 875m, excluding intersections (2.7879ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-07C	Offset cost estimate associated with removal of native vegetation.	Offset cost estimate associated with removal of native vegetation.	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-08	Bulban Road - Bend to Ison Road	Purchase of land to create road reserve 23.6m wide and construction of 2 lane carriageway for 597m, excluding intersections (1.4659ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-09	Bulban Road - Ison Road to Existing Alignment	Purchase of land to create road reserve 23.6m wide and construction of 2 lane carriageway for 586m, excluding intersections (1.4394ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-10	Black Forest Road - Lollypop Creek to Armstrong Road	Purchase of land to upgrade road reserve from 20m to 25m (0.6318ha ultimate treatment) and upgrade of existing carriageway for 1264m, excluding intersections (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-10a	Offset cost estimate associated with removal of native vegetation.	Offset cost estimate associated with removal of native vegetation.	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-11	Black Forest Road - Armstrong Road to Ison Road	Purchase of land to upgrade road reserve from 20m to 25m (0.2027ha ultimate treatment) and upgrade of existing carriageway for 1024m, excluding intersections (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-12	Greens Road - Bend to OMRTC PAO	Purchase of land to upgrade road reserve from 20m to 34m for 766m (1.5815ha ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
RD-13	Alfred Road	Upgrade of existing carriageway for 651m, excluding intersections (ultimate treatment).	Residential & Employment	Area 5	77.64	Refer to Section 6.1
RD-14	Wollahra Rise Realignment & Upgrade	Construction and upgrade of 2 lane carriageway for 1440m, excluding intersections (ultimate treatment).	Residential & Employment	Area 4	98.43	Refer to Section 6.1
RD-14a	Offset cost estimate associated with removal of native vegetation.	Offset cost estimate associated with removal of native vegetation.	Residential & Employment	Area 4	98.43	Refer to Section 6.1



Plan 4 Intersection Projects

wyndham west DCP plan
Version: April 2014 (Amended by 262wynd)



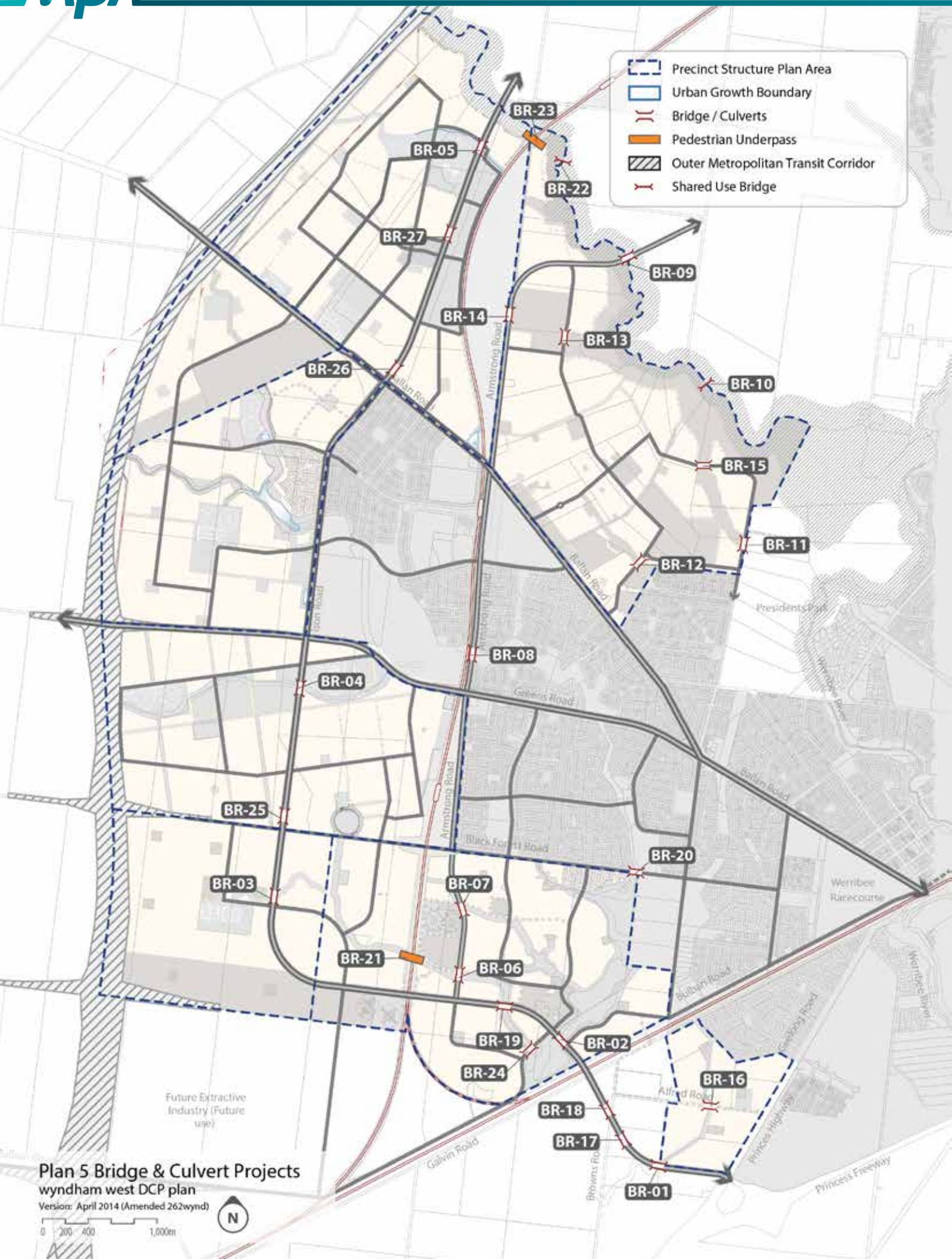
The intersections projects shown in Plan 4 and listed in the following table are funded by the DCP:

Table 4 Intersection Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
IN-01A	Ison Road / New Bulban Road	Purchase of land for intersection totalling 1,1571ha (ultimate treatment) and construction of arterial to arterial signalised T intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-01B	Ison Road / North-South Connector 1 (within PSP 42.2)	Purchase of land for intersection totalling 1,3472ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-02A	Ison Road / Armstrong Road	Purchase of land for intersection totalling 1,3166ha (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-02B	Ison Road / Armstrong Road	Interim safety treatment, prior to construction of signalised intersection	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-03	Ison Road / North-South Connector 2 (within PSP 42.2)	Purchase of land for intersection totalling 2,7679ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-04	Ison Road / East-West Connector (within PSP 93.1)	Purchase of land for intersection totalling 2,3031ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-05	Ison Road / Black Forest Road	Purchase of land for intersection totalling 2,0099ha (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection(interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-06	Ison Road / East-West Connector 1 (within PSP 42.1)	Purchase of land for intersection totalling 2,3472ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-07	Ison Road / East-West Connector 2 (within PSP 42.1)	Purchase of land for intersection totalling 2,5224ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-08A	Ison Road / Greens Road	Purchase of land for intersection totalling 1,9739ha (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-08B	Ison Road / Greens Road	Construction of arterial to arterial signalised 4-way intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-09A	Ison Road / Ballan Road	Purchase of land for intersection totalling 1,0173ha (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-09B	Ison Road / Ballan Road	Construction of arterial to arterial signalised 4-way intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-10	Ison Road / East-West Connector 5 (within PSP 92)	Purchase of land for intersection totalling 2,4888ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-11	Ison Road / East-West Connector 6 (within PSP 92)	Purchase of land for intersection totalling 2,2119ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-12	Armstrong Road / East-West Connector (within PSP 42.2)	Purchase of land for intersection totalling 1,3487ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-13	Armstrong Road / East-West Connector (within PSP 42.2)	Purchase of land for intersection totalling 1,5106ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-14	Armstrong Road / Black Forest Road	Purchase of land for intersection totalling 1,0666ha (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-15	Armstrong Road / Ballan Road	Purchase of land for intersection totalling 1,3983ha as illustrated (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-16	Armstrong Road / East-West Connector (within PSP 40)	Purchase of land for intersection totalling 0,5861ha (ultimate treatment) and construction of arterial to connector signalised T intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1

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DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
IN-17	Armstrong Road / North-South Connector (within PSP 40)	Purchase of land for intersection totalling 1.0156ha (ultimate treatment) and construction of arterial to connector signalised T intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-18A	Alfred Road / Princes Highway	Purchase of land for intersection totalling 0.0491ha (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-18B	Alfred Road / Princes Highway	Construction of arterial to connector signalised 4-way intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-19	Bulban Road / McGrath Road	Purchase of land for intersection totalling 0.4111ha (ultimate treatment) and construction of arterial to connector 3 way roundabout intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-20	Bulban Road / Galvin Road Extension	Purchase of land for intersection totalling 0.7647ha (ultimate treatment) and construction of arterial to connector 3 way roundabout intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-21	Black Forest Road / Harpley Boulevard (within PSP 42.2)	Purchase of land for intersection totalling 0.2627ha (ultimate treatment) and construction of arterial to connector 4-way signalised intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-22	Black Forest Road / Haines Drive (within PSP 42.2)	Purchase of land for intersection totalling 0.2103ha (ultimate treatment) and construction of arterial to connector 4-way signalised intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-23	Black Forest Road / North-South Connector (within PSP 42.1)	Purchase of land for intersection totalling 0.8826ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-24A	Greens Road / North-South Connector (within PSP 42.1)	Purchase of land for intersection totalling 0.1303ha (ultimate treatment) .	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-24B	Greens Road / North-South Connector (within PSP 42.1)	Construction of arterial to connector signalised T intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-25A	Greens Road / Manor Lakes Boulevard (within PSP 42.1)	Purchase of land for intersection totalling 0.3215ha (ultimate treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-25B	Greens Road / Manor Lakes Boulevard (between PSP 42.1 & 41)	Construction of arterial to connector 4-way roundabout intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-26	Ballan Road / Evergreen Drive (within PSP 40)	Purchase of land for intersection totalling 0.4023ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection(interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-27	Ballan Road / Connector (within PSP 40)	Purchase of land for intersection totalling 0.4023ha (ultimate treatment) and construction of north east connector leg of an arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-28	Ballan Road / Kinglake Drive (within PSP 92)	Purchase of land for intersection totalling 0.2206ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-29	Ballan Road / North-South Connector (within PSP 92)	Purchase of land for intersection totalling 0.3251ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-30	Ballan Road / Manor Lakes Boulevard (PSP 40)	Purchase of land for intersection totalling 0.4023ha (ultimate treatment) and construction of arterial to connector signalised 4-way intersection (interim treatment).	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-31	Wests Road / Princes Highway	Construction of arterial to connector 4-way roundabout intersection (interim treatment)	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-32	Ballan Road Pedestrian Crossing	Construction of a pedestrian crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
IN-33	Galvin Road Crossing Pedestrian Upgrade	Addition of pedestrian crossing to existing at-grade rail crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1



Plan 5 Bridge & Culvert Projects

wyndham west DCP plan

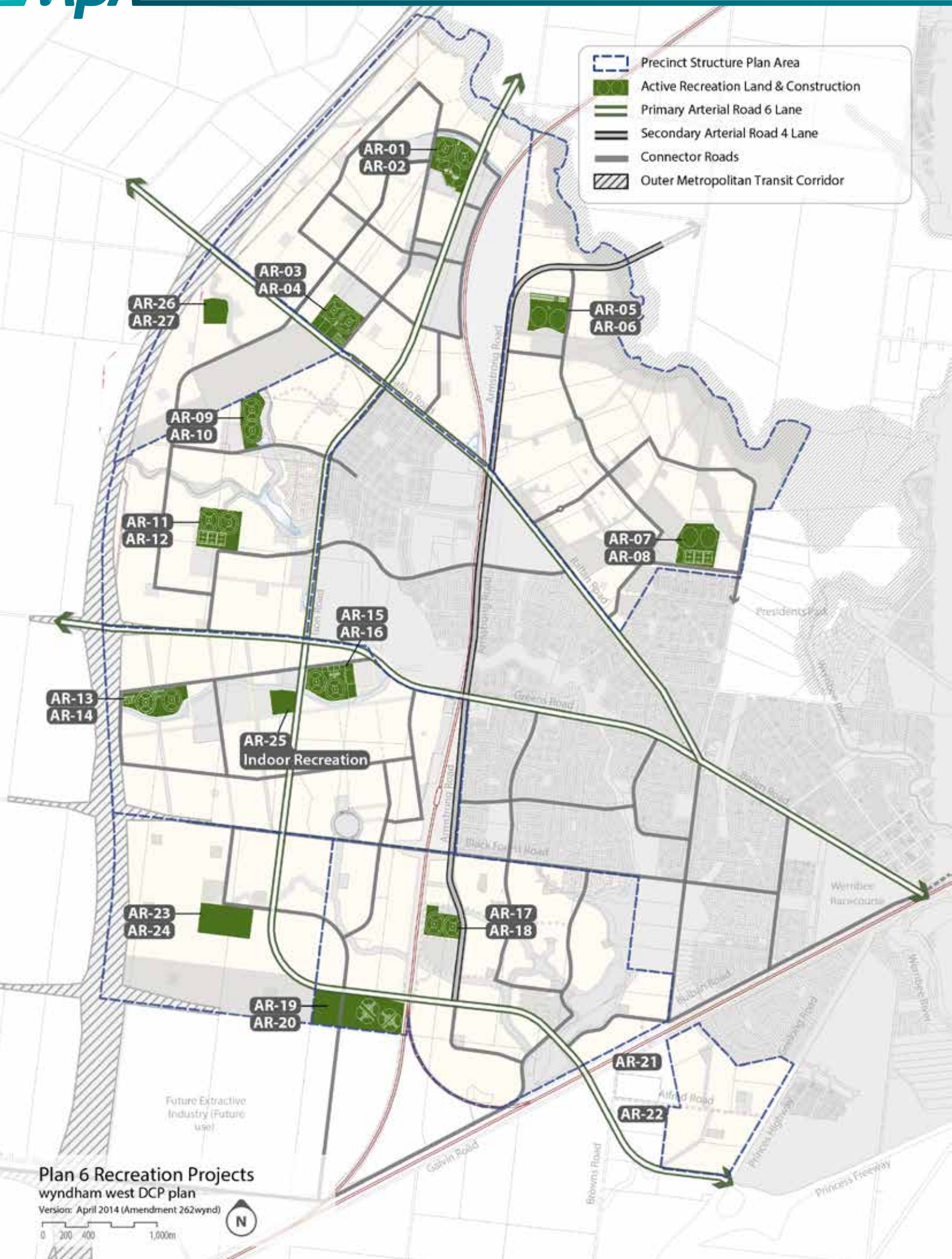
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The following bridge and culvert projects shown in Plan 5 are funded by the DCP:

Table 5 Bridge & Culvert Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
BR-01	Ison Road Culvert (adjacent PSP 43)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-02	Ison Road Lollypop Creek Bridge (within PSP 42.2)	Construction of 85m bridge	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-03	Ison Road Culvert (within PSP 93)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-04	Ison Road Culvert (within PSP 42.1)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-05	Ison Road Culvert (within PSP 92)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-06	Armstrong Road Culvert (within PSP 42.2 Southern)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-07	Armstrong Road Culvert (within PSP 42.2 Northern)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-08	Armstrong Road Lollypop Creek Bridge	Construction of 110m bridge	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-09	Armstrong Road Werribee River Bridge	Construction of 79m bridge	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-10	Werribee River Pedestrian Bridge	Construction of a shared use bridge	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-11	McGrath Road Culvert	Construction of a culvert crossing	Residential & Employment	Areas 3 & 4	323.28	Refer to Section 6.1
BR-12	Connector Culvert (within PSP 40)	Construction of a culvert crossing	Residential & Employment	Areas 3 & 4	323.28	Refer to Section 6.1
BR-13	Connector Culvert (within PSP 40)	Construction of a culvert crossing	Residential & Employment	Areas 3 & 4	323.28	Refer to Section 6.1
BR-14	Armstrong Road Culvert (within PSP 40)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-15	Connector Culvert (within PSP 40)	Construction of a culvert crossing	Residential & Employment	Areas 3 & 4	323.28	Refer to Section 6.1
BR-16	Alfred Road Culvert (within PSP 43)	Construction of a culvert crossing	Residential & Employment	Area 5	77.64	Refer to Section 6.1
BR-17	Ison Road Culvert (within Logical Inclusion Area)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-18	Ison Road Culvert (within Logical Inclusion Area)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-19	Ison Road Culvert (within PSP 42.2)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-20	Black Forest Road Culvert (within PSP 42.2)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-21	RRL pedestrian underpass (within PSP 42.2)	Construction of pedestrian / cycle underpass	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-22	Werribee River Pedestrian Bridge (near RRL)	Construction of a shared use bridge	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-23	Werribee River Shared Trail (under RRL)	Construction of shared path under RRL	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-24	Bulban Road Culvert (within PSP 42.2)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-25	Ison Road Culvert (within PSP 42.1)	Construction of two culvert crossings	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-26	Ison Road Culvert (within PSP 92)	Construction of two culvert crossings	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1
BR-27	Ison Road Culvert (within PSP 92)	Construction of a culvert crossing	Residential & Employment	Areas 1, 2, 3, 4, 5 & 6	1,716.04	Refer to Section 6.1



Plan 6 Recreation Projects
wyndham west DCP plan

Version: April 2014 (Amendment 262wynd)



3.2.2 Recreation Facility Projects

The recreation projects include:

- Provision of land for sports reserves.
- Construction of sports facilities in each reserve.
- Construction of pavilions for future sports fields.
- Provision of land for regional indoor sport.

The recreation projects are based on the open space plan contained in the relevant Wyndham West PSP. Research undertaken by the Metropolitan Planning Authority, ASR Research and assessment by Wyndham City determined the requirement for the recreation facilities. The recreation facilities defined in these projects are the best estimate of the future requirements and specifications of the future Wyndham West community.

For each recreation project, a scope is defined in Table 6, while a detailed cost sheet and indicative concept plan is provided in Appendix 4. The detailed design and scope of each of the recreation projects may be reviewed by the Development Agency closer to the time of detailed design and / or constructed.

In reviewing the scope of the projects, the Development Agency will have regard to matters such as changing provision standards and models, the immediate needs of the community, current regulations and best practice and may seek to adjust and refine the scope of the projects to respond to these matters.

The Development Agency may also adjust and refine the scope of the projects to reflect the capacity of any non-DCP funds that can be made available (for example from rates, grants or other funding streams).

In adjusting and refining any final project scope, the Development Agency must ensure that the funds levied from developers / land owners do not exceed the value nominated in this DCP (inclusive of any indexing provisions as allowed for by the DCP).

The following recreation projects shown on Plan 6 are funded by this DCP:

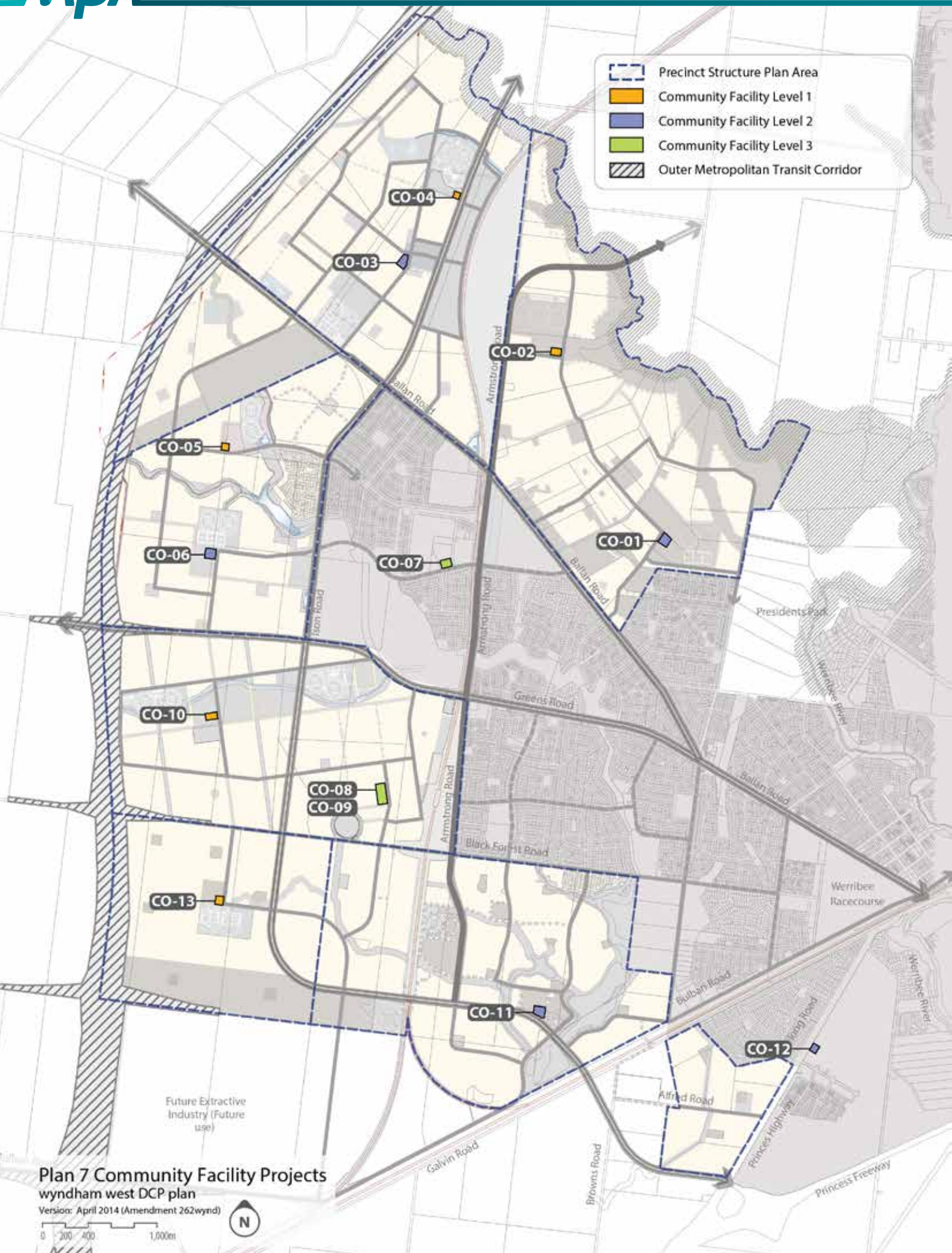
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by C262wynd

Table 6 Recreation Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
AR-01	Westbrook Active Recreation Reserve 1	Purchase of land (12.29ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-02	Westbrook Active Recreation Reserve 1	Construction of x4 senior baseball fields, x1 AFL / cricket pavilion and x1 baseball pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-03	Westbrook Active Recreation Reserve 2	Purchase of land (11.36ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x3 senior soccer pitches, x12 tennis courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-04	Westbrook Active Recreation Reserve 2	Construction of x1 AFL / cricket pavilion, x1 soccer pavilion and x1 tennis pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-05	Ballan Road Active Recreation Reserve 3	Purchase of land (10.57ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x4 netball courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-06	Ballan Road Active Recreation Reserve 3	Construction of x4 lawn bowls greens, x1 AFL / cricket pavilion, x1 lawn bowls pavilion and x1 netball pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-07	Ballan Road Active Recreation Reserve 4	Purchase of land (12.6282ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x3 senior soccer pitches and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	1,716.04	INDICATIVE PROVISION TRIGGER
AR-08	Ballan Road Active Recreation Reserve 4	Construction of x1 AFL / cricket pavilion and x1 soccer pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-09	Manor Lakes Active Recreation Reserve 5	Construction of x2 senior AFL / cricket ovals and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-10	Manor Lakes Active Recreation Reserve 5	Construction of x1 AFL / cricket pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-11	Manor Lakes Active Recreation Reserve 6	Construction of x2 senior AFL / cricket ovals, x3 senior soccer pitches, x6 tennis courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-12	Manor Lakes Active Recreation Reserve 6	Construction of x1 AFL / cricket pavilion, x1 soccer pavilion and x1 tennis pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-13	Black Forest Road North Active Recreation Reserve 7	Purchase of land (11.45ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-14	Black Forest Road North Active Recreation Reserve 7	Construction of x1 AFL / cricket pavilion, x4 lawn bowls greens, x1 lawn bowls pavilion, x2 rugby union fields and x1 rugby pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-15	Black Forest Road North Active Recreation Reserve 8	Purchase of land (12.25ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x4 netball courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-16	Black Forest Road North Active Recreation Reserve 8	Construction of x1 AFL / cricket pavilion and x1 netball pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-17	Black Forest Road South Active Recreation Reserve 9	Purchase of land (7.5915ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-18	Black Forest Road South Active Recreation Reserve 9	Construction of x1 AFL / cricket pavilion	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-19	Black Forest Road South Active Recreation Reserve 10	Purchase of land (15.5526ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x3 senior soccer pitches, x12 tennis courts, x4 netball courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-20	Black Forest Road South Active Recreation Reserve 10	Construction of x8 senior softball fields, x1 softball pavilion, x1 AFL / cricket pavilion, x1 soccer pavilion, x1 tennis pavilion, x1 netball pavilion and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-21	Alfred Road Active Recreation Reserve 11	Purchase of land (5.4383ha) for active recreation reserve and construction of x2 senior AFL / cricket ovals, x4 netball courts and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-22	Alfred Road Active Recreation Reserve 11	Construction of x1 AFL / cricket pavilion and x1 netball pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	1,716.04	INDICATIVE PROVISION TRIGGER
AR-23	Bayview Active Recreation Reserve 12	Purchase of land (12.25ha) and construction of active sports fields and associated works.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-24	Bayview Active Recreation Reserve 12	Construction of sports pavilions.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-25	Indoor Recreation	Purchase of land (6.2478ha) for indoor active recreation.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-26	Quandong Active Recreation Reserve 13	Purchase of land (4.51 ha) for active recreation reserve and construction of sporting surfaces.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
AR-27	Quandong Active Recreation Reserve 13	Construction of sports pavilion.	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1



Plan 7 Community Facility Projects
wyndham west DCP plan

Version: April 2014 (Amendment 262wynd)



3.2.3 Community Facility Projects

The community facility projects include:

- Land and construction of Level 1 community centres incorporating a double kindergarten throughout the PSPs.
- Land and construction of Level 2 community centres incorporating a double kindergarten and maternal and child health centre throughout the PSPs.
- Land and construction of a Level 3 community centres incorporating a double kindergarten, maternal and child health centre, library and performing arts centre in the Black Forest Road North Precinct.

The community projects are based on the Community Facilities Plans contained in the relevant Wyndham West PSP. Research undertaken by the Metropolitan Planning Authority, ASR Research and Wyndham City determined the requirement for a range of community facilities. The community facilities defined in these projects are the best estimates of the future requirements and specifications of the future Wyndham West community.

The detailed design and scope of each of the identified community projects may be reviewed by the Development Agency closer to the time of detailed design and / or construction.

In reviewing the scope of the facilities, the Development Agency will have regard to matters such as changing provision standards and models, the immediate needs of the community, current regulations and best practice and may adjust and refine the scope of the facilities to respond to these matters.

The Development Agency may also adjust and refine the scope of the facilities to reflect the capacity of any non-DCP funds that can be made available (for example from a grant or some other funding stream).

In adjusting and refining any final project scope, the Development Agency must ensure that the funds levied from developers / land owners does not exceed the value nominated in this DCP (inclusive of any indexing provisions as allowed for by the DCP).

The following community projects shown in Plan 6 are funded by the DCP:

Table 7 Community Facility Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
CO-01	Ballan Road Level 2 Multi Purpose Community Centre	Purchase of land (0.80ha) for community centre and construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-02	Ballan Road Level 1 Children's Centre	Purchase of land (0.60ha) for community centre and construction of two kindergarten rooms attached to a government primary school	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-03	Westbrook Level 2 Multi Purpose Community Centre	Purchase of land (0.80ha) for community centre and construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-04	Westbrook Level 1 Children's Centre	Purchase of land (0.60ha) for community centre and construction of two kindergarten rooms attached to a government primary school	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION	DEVELOPMENT TYPES CONTRIBUTING	CHARGE AREAS CONTRIBUTING	HECTARES CONTRIBUTING	INDICATIVE PROVISION TRIGGER
CO-05	Manor Lakes Level 1 Children's Centre	Construction of two kindergarten rooms attached to a government primary school	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-06	Manor Lakes Level 2 Multi Purpose Community Centre	Construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-07	Manor Lakes Level 3 Library	Construction of library	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-08	Black Forest Road North Level 3 Multi Purpose Community Centre	Purchase of land (1.50ha) for community centre and construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-09	Black Forest Road North Level 3 Library & Performing Arts Centre	Construction of library & performing arts centre	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-10	Black Forest Road North Level 1 Children's Centre	Purchase of land (0.60ha) for community centre and construction of two kindergarten rooms attached to a government primary school	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-11	Black Forest Road South Level 2 Multi Purpose Community Centre	Purchase of land (0.80ha) for community centre and construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-12	Riverwalk Level 2 Multi Purpose Community Centre	Construction of multipurpose community centre, including two kindergarten rooms and two maternal child health care rooms	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1
CO-13	Bayview Level 1 Children's Centre	Purchase of land (0.60ha) for community centre and construction of two kindergarten rooms attached to a government primary school	Residential	Areas 1, 3, 4, 5 & 6	1,624.70	Refer to Section 6.1

3.2.4 Finance Adjustment

This DCP contains a finance adjustment to assist in the early delivery of:

1. Ison Road between the Princes Highway and the Melbourne – Geelong rail line; and
2. Armstrong Road between Black Forest Road and the Werribee River.

The finance adjustment raises funds for the expected interest costs involved in delivering these priority projects in advance of collecting the associated DCP levies. For more detail on how the finance adjustment is calculated refer to Appendix 3.

3.3 Distinction between Development and Community Infrastructure

In accordance with the *Planning and Environment Act 1987* and the Ministerial Direction on Development Contributions, the DCP makes a distinction between ‘development’ and ‘community’ infrastructure.

The timing of payment of contributions is linked to the type of infrastructure in question.

The community infrastructure levy contributions are made by the home builder at the time of building approval (unless an alternative time is agreed between the collecting agency and a development proponent). Community infrastructure levy contributions will be paid for at a ‘per-dwelling’ rate. The *Planning and Environment Act 1987* currently stipulates that the amount that may be contributed under a community infrastructure levy is not more than \$1,500 per dwelling.

Amended
by GC75

Inserted
by GC75

Variation to the Community Infrastructure Levy (CIL) payable under this Development Contributions Plan (DCP)

If the maximum amount of the CIL which may be collected under an approved DCP is varied under section 46L of the *Planning and Environment Act 1987*, the collecting agency may adjust the amount of the CIL payable under this DCP in accordance with section 46L of the *Planning and Environment Act 1987*.

Inserted
by GC75

The collecting agency must publish the adjusted amount of the CIL payable under this DCP on its website.

The projects listed in Table 8 are deemed to be community infrastructure levy projects.

Table 8 Community Infrastructure Levy Projects

DCP PROJECT NUMBER	PROJECT TITLE	PROJECT DESCRIPTION
CO-07	Manor Lakes Level 3 Library	Construction of library
CO-09	Black Forest Road North Level 3 Library & Performing Arts Centre	Construction of library & performing arts centre
AR-02	Westbrook Active Recreation Reserve 1	Construction of x4 senior baseball fields, x1 AFL / cricket pavilion and x1 baseball pavilion.
AR-04	Westbrook Active Recreation Reserve 2	Construction of x1 AFL / cricket pavilion, x1 soccer pavilion and x1 tennis pavilion.
AR-06	Ballan Road Active Recreation Reserve 3	Construction of x4 lawn bowls greens, x1 AFL / cricket pavilion, x1 lawn bowls pavilion and x1 netball pavilion.
AR-08	Ballan Road Active Recreation Reserve 4	Construction of x1 AFL / cricket pavilion and x1 soccer pavilion.
AR-10	Manor Lakes Active Recreation Reserve 5	Construction of x1 AFL / cricket pavilion.
AR-12	Manor Lakes Active Recreation Reserve 6	Construction of x1 AFL / cricket pavilion, x1 soccer pavilion and x1 tennis pavilion.
AR-14	Black Forest Road North Active Recreation Reserve 7	Construction of x1 AFL / cricket pavilion, x4 lawn bowls greens, x1 lawn bowls pavilion, x2 rugby union fields and x1 rugby pavilion.
AR-16	Black Forest Road North Active Recreation Reserve 8	Construction of x1 AFL / cricket pavilion and x1 netball pavilion.
AR-18	Black Forest Road South Active Recreation Reserve 9	Construction of x1 AFL / cricket pavilion
AR-20	Black Forest Road South Active Recreation Reserve 10	Construction of x8 senior softball fields, x1 softball pavilion, x1 AFL / cricket pavilion, x1 soccer pavilion, x1 tennis pavilion, x1 netball pavilion and associated works.
AR-22	Alfred Road Active Recreation Reserve 11	Construction of x1 AFL / cricket pavilion and x1 netball pavilion.
AR-24	Bayview Active Recreation Reserve 12	Construction of sports pavilions.
AR-27	Quandong Active Recreation Reserve 13	Construction of sports pavilion.

All other infrastructure projects are considered to be development infrastructure projects.

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4.0 CALCULATION OF CONTRIBUTIONS

The general cost apportionment method includes the following steps:

- Calculation of the Net Developable Area ('NDA') and demand units (refer Tables 9a and 12).
- Calculation of project costs (refer Tables 10a and 10b).
- Identification and allowance for external use (refer Tables 10a, 10b and 13).
- Cost apportionment and catchments (refer Tables 3 to 7, 10a, 10b, and 13).
- Identification of development types required to pay the levy (refer Tables 3 to 7).
- Summary of costs payable for each infrastructure project (refer Tables 10a and 10b).
- The development infrastructure charge per hectare for each development type and the community infrastructure levy per dwelling (refer Tables 10a and 10b).

4.1 Calculation of Net Developable Area and Demand Units

The following section sets out how NDA is calculated and outlines the development projections anticipated for the area. Calculations of NDA for each individual property are outlined in the property specific land budget located in Appendix 1.

4.1.1 Net Developable Area

In this DCP, all development infrastructure contributions are payable on the net developable area of land on any given development site.

For the purposes of this DCP the NDA is defined as the total amount of land within the precinct that is made available for development of housing and employment buildings, including lots, all connector and local streets. It is the total precinct area minus community facilities, schools and educational facilities and open space, encumbered land and arterial roads. Any additional small local parks defined at the subdivision stage are included in the NDA.

It is important to note that the number of Net Developable Hectares in each charge area is based on the land budgets in Tables 9a and 12.

The 'per Net Developable Hectare' contributions will not and must not be amended to respond to minor changes to land budgets that may result from the subdivision process. In other words, the DCP is permanently linked to the calculation of Net Developable Area set out in the detailed land budget in Table 12.

Amended
by C262wynd

Table 9a Summary Land Use Budget

DESCRIPTION	WYNDHAM WEST TOTAL		
	HA	% OF TOTAL PSP	% OF NDA
TOTAL PRECINCT AREA (ha)	2,702.50	100.00%	
TRANSPORT			
6 Lane Arterial Road / Widening	54.07	2.00%	3.15%
4 Lane Arterial Road / Widening	17.30	0.64%	1.01%
Road Reserve Not Available for Development	34.22	1.27%	1.99%
Existing Road Reserve(Future OMR)	100.09	3.70%	5.83%
Railway Corridors / Easements	135.88	5.03%	7.92%
SUB-TOTAL	341.56	12.64%	19.90%
COMMUNITY & EDUCATION FACILITIES			
Community Facilities	6.30	0.23%	0.37%
Government Education	49.70	1.84%	2.90%
Non-Government Education	31.00	1.15%	1.81%
SUB-TOTAL	87.00	3.22%	5.07%
OPEN SPACE			
ENCUMBERED LAND AVAILABLE FOR RECREATION			
Power / Gas Easement	6.13	0.23%	0.36%
Waterway / Drainage Line / Wetland / Retarding	230.21	8.52%	13.42%
Waterway / Drainage Line / Wetland / Retarding (within WRTP)	26.55	0.98%	1.55%
Heritage (Aboriginal)	2.32	0.09%	0.14%
Conservation (Tree Protection)	0.09	0.00%	0.01%
Conservation Area (Werribee River Interface)	71.77	2.66%	4.18%
Conservation Area (Werribee River Interface within WRTP)	39.15	1.45%	2.28%
SUB-TOTAL ENCUMBERED LAND FOR RECREATION	376.23	13.92%	21.92%
UNENCUMBERED LAND AVAILABLE FOR RECREATION			
Active Open Space	109.23	4.04%	6.37%
Passive Open Space	51.02	1.89%	2.97%
SUB-TOTAL UNENCUMBERED LAND FOR RECREATION	160.25	5.93%	9.34%
OTHER LAND FOR RECREATION			
Werribee Regional Township Park (WRTP)	7.16	0.27%	0.42%
Other Open Space	8.00	0.30%	0.47%
Land for Indoor Sports	6.26	0.23%	0.36%
SUB-TOTAL OTHER LAND FOR RECREATION	21.42	0.79%	1.25%
SUB-TOTAL	557.91	20.64%	32.51%
NET DEVELOPABLE AREA (NDA) ha	1,716.04	63.50%	
NET DEVELOPABLE AREA - EMPLOYMENT (NDAE)	91.34	3.38%	5.32%
NET DEVELOPABLE AREA - RESIDENTIAL (NDAR)	1,624.70	60.12%	

Table 9b Summary Open Space Contribution Budget

DESCRIPTION	WYNDHAM WEST TOTAL	
	HA	% OF NDAR
RESIDENTIAL UNENCUMBERED OPEN SPACE EXPRESSED AS % OF NDAR		
Active Open Space *	109.23	6.72%
Passive Open Space	49.19	3.03%
	HA	% OF NDAE
EMPLOYMENT UNENCUMBERED OPEN SPACE EXPRESSED AS % OF NDAE		
Passive Open Space	1.83	2.00%

* Note: This figure does not include active open space to be delivered outside the DCP area.

4.1.2 Land Budget and Demand Units

Net developable hectare is the demand unit for all types of development in this DCP.

4.1.3 Property specific calculations

The NDA used to calculate the contributions within the DCP has been based on an assessment of individual property land budgets. The NDA for each property is listed in the property specific land budget located in Appendix 1. The property specific NDA and rates listed in this DCP determine the total contribution for each property.

4.1.4 Public Open Space Contributions

Overall public open space provision within the Wyndham West PSPs is 10% of NDA for residential areas and 2% of NDA for employment areas, in accordance with the Precinct Structure Planning Guidelines.

The 10% comprises 7% active open space (sporting reserves) and a 3% passive open space for neighbourhood parks in residential areas. Employment areas comprise 2% passive open space for local parks only.

This DCP funds only the acquisition of land for active open space (equal to 7% of NDA either within or proximate to the precinct area as per Alfred Road PSP) and construction of the four most common sporting surfaces (AFL / cricket, soccer, tennis and netball) on these reserves.

Works that a landowner must undertake prior to the handover of land to Council (as specified in the relevant Wyndham West PSP) can be considered to be eligible for a partial works in kind credit as per Section 5.3.3 where these works are not considered to be temporary works.

Passive open space is provided separately through Clause 52.01 of the Scheme and no contribution for passive open space is included in this DCP.

4.2 Calculation of Contribution Charges

4.2.1 Calculation of Costs

Each project has been assigned a land and / or construction cost. These costs are listed in Tables 10a and 10b. The costs are expressed in 2014 dollars.

4.2.2 Road Construction and Intersection Works

Meinhardt and SMEC have prepared the estimated costs for the transportation projects. The scope for intersection projects was established by a traffic report by GTA.

Road construction and intersection costs were derived from concept functional designs.

The intersection layout was agreed with the relevant road authority as were the scope of works. The general assumptions used were:

- No land acquisition costs have been allowed for unless stated (these are separately identified in each DCP project costing in Tables 10a and 10b).
- No trunk services have been allowed for.
- Drainage allowance is for 'road reserve or project land' areas i.e. no external catchments. However, major drainage such as culverts or bridges consistent with the Wyndham West PSPs have been included as separate projects.
- A standard excavation depth has been allowed for. Final pavement requirements will be determined at detailed design and construction stage responding to actual ground conditions.
- Where required an allowance has been made for existing services adjustment or relocation (e.g. electricity poles, water fittings, manholes etc).

Additional percentage based costs tailored to each individual project have been included for:

- Traffic management.
- Field survey and detail design fees.
- Construction overheads and supervision.
- Contingency.

The level of contingency for each project reflects the level of design resolution achieved at the time the DCP was prepared. The costs are fully detailed including, for example, street trees, road line marking, footpaths and street lighting.

With respect to road / intersection construction along existing road alignments (e.g. Black Forest Road):

- Most difficulties along the alignment will have been dealt with or built around due to the existing road, therefore upgrading of the pavement will have no effect or only a minor effect on in-ground or underground assets.
- Similar vertical alignments have been allowed for following natural terrain which reduces the possibility of extra earthworks being required.
- Higher levels of traffic management and service relocation have been allowed for.

With respect to road / intersection construction for green field alignments:

- Design generally follows natural terrain
- Existing service alterations have not been included
- Major cost items such as Melbourne Water drainage culverts have been allowed for as separate items

Where possible, arterial road works as funded by this DCP have been designed to minimise any redundant works that are required in the ultimate delivery of future arterial roads.

4.2.3 Recreation and Sports Building Projects

The indicative concepts and costings for each facility are based on cost estimates prepared by Spiire.

4.2.4 Community Centre Projects

The indicative concepts and costings for each facility are based on cost estimates prepared by CDCE.

4.2.5 Habitat Compensation Obligations

Habitat compensation obligations within existing road reserves of DCP projects have been calculated in accordance with the Biodiversity Conservation Strategy (BCS).

4.2.6 Temporary works

Temporary works are not allowed as costs against this DCP unless expressly listed in the DCP and unless to the satisfaction of the collecting agency.

4.2.7 Valuation of Land

The area of land to be acquired for each DCP project on each property was identified based on information drawn from the Wyndham West PSPs. A description of the area of land was provided to Urbis Valuations Pty Ltd as a registered valuer to prepare a valuation which determined the value for each area of land required by the DCP.

Each parcel where land is required for a DCP project was individually assessed using a 'before and after' methodology to ensure fair compensation for each affected land owner. These values have then been used to calculate the cost of the land component for all relevant projects included in this DCP.

4.2.8 Concept Designs and Cost Sheets

Concept designs and cost sheets have been prepared for each project. Supervision and project management allowances include an additional 1% for council supervision. This information is included in Appendix 4.

4.2.9 Cost Apportionment

The DCP apportions a charge to new development according to its projected share of use of identified infrastructure items. Since development contribution charges are levied 'up-front', a measure of actual use by individual development sites is not possible. Therefore costs must be shared in accordance with the estimated share of use.

This is expressed as a percentage in Tables 10a and 10b. Projects that are 100% apportioned to the DCP area are considered to be wholly required by the future development in the DCP area. Projects that are less than 100% apportioned to the DCP are shared with other areas and funding sources.

Alternative funding sources for the balance of the cost of the items not recovered under this DCP have been identified in Appendix 2.

4.2.10 Charge Areas

This DCP contains six charge areas.

Charge Area 1 applies to land where residential development is to be located under the future urban structure (refer Plan 2). This includes the Local Town Centres, Convenience Centres and associated commercial areas.

Charge Area 2 applies to land designated for dedicated employment use.

Charge Area 3 applies to land located within PSP 40 Ballan Road, except where adjacent to Wollahra Rise.

Charge Area 4 applies to land located within PSP 40 Ballan Road that is adjacent to Wollahra Rise.

Charge Area 5 applies to land located within PSP 43 Alfred Road.

Charge Area 6 applies to land located within PSP 42.2 Black Forest Road South and to be developed by Lend Lease Pty Ltd.

The variation between the residential and employment charge areas rates reflects the fact that employment land does not contribute towards community and recreation items.

Charge Areas 3, 4 and 5 are included in the DCP separately as they contain projects that would ordinarily be considered as development works (connector roads and culverts on connector roads), however, these projects have been included in the DCP due to the fragmented land ownership of the associated PSPs which would otherwise make delivery of these projects difficult.

Charge Area 6 covers land controlled by Lend Lease Pty Ltd. It has been excluded from contributing towards the finance cost due to the significant scale of priority early works (in kind) projects Lend Lease Pty Ltd will undertake, and that will also facilitate timely development of PSPs within the broader Wyndham West area.

Should Lend Lease Pty Ltd fail to commence or complete these projects as identified, this DCP will be amended. The amended DCP may include additional finance costs to cover early delivery of any priority works not delivered by Lend Lease Pty Ltd. Calculation of these potential additional finance costs must use an equivalent methodology to that already included in the approved DCP.

Further, any such amendment to the DCP would also require Charge Area 6 to contribute towards the finance cost of these priority projects.

For each infrastructure project, the charge area that is to make the contribution is specified (refer Tables 3 to 7).

4.2.11 Non-Government Schools

The development of land for a non-government school is exempt from the requirement to pay a development infrastructure levy and a community infrastructure levy under this Development Contributions Plan.

4.2.12 Schedule of Costs

Tables 10a and 10b calculates the amount of contributions payable by each charge area for each infrastructure category.

4.2.13 Summary of Charges per Hectare

Tables 10a and 10b show the quantum of funds to be contributed by each charge area towards each infrastructure project. This adds up to the total amount of funds recoverable under the DCP.

Tables 10a and 10b set out a summary of costs for each charge area.

Amended by VC249 4.2.14 Small Second Dwelling

The development of land for a small second dwelling is exempt from the requirement to pay a development infrastructure levy and a community infrastructure levy under this DCP.

Amended by C262wynd **Table 10a** Calculation of Costs (Development Infrastructure Levy)

DCP PROJECT NO.	PROJECT	INFRASTRUCTURE CATEGORY	LAND AREA HA	ESTIMATED PROJECT COST: LAND	ESTIMATED PROJECT COST: CONSTRUCTION	TOTAL ESTIMATED PROJECT COST: LAND & CONSTRUCTION	% APPORTIONED TO DCP (INTERNAL USE)	TOTAL COST RECOVERED BY DCP	CHARGE AREA 1 CONTRIBUTION PER NDHA	CHARGE AREA 2 CONTRIBUTION PER NDHA	CHARGE AREA 3 CONTRIBUTION PER NDHA	CHARGE AREA 4 CONTRIBUTION PER NDHA	CHARGE AREA 5 CONTRIBUTION PER NDHA	CHARGE AREA 6 CONTRIBUTION PER NDHA	
ROAD PROJECTS															
RD-01	Ision Road - Princes Highway to Melbourne-Geelong Rail Line	Development	9.59	\$4,375,000	\$6,550,000	\$10,925,070	90%	\$9,832,563	\$5,730	\$5,730	\$5,730	\$5,730	\$5,730	\$5,730	
RD-02	Ision Road - Melbourne-Geelong Rail Line to Regional Rail Link	Development	6.78	\$2,240,512	\$4,589,640	\$6,830,159	90%	\$6,147,143	\$3,582	\$3,582	\$3,582	\$3,582	\$3,582	\$3,582	
RD-03	Ision Road - Regional Rail Link to Greens Road	Development	8.29	\$7,409,971	\$6,704,720	\$14,114,699	90%	\$8,203,229	\$4,780	\$4,780	\$4,780	\$4,780	\$4,780	\$4,780	
RD-04	Ision Road - Ballan Road to the Werribee River	Development	6.12	\$1,619,919	\$6,253,280	\$7,873,905	90%	\$7,085,614	\$4,129	\$4,129	\$4,129	\$4,129	\$4,129	\$4,129	
RD-05	Armstrong Road - Ision Road to Back Forest Road	Development	1.56	\$393,336	\$1,762,348	\$2,155,686	100%	\$2,155,686	\$1,256	\$1,256	\$1,256	\$1,256	\$1,256	\$1,256	
RD-06A	Armstrong Road - Black Forest Road to Greens Road	Development	4.52	\$1,806,160	\$0	\$1,806,160	50%	\$903,082	\$526	\$526	\$526	\$526	\$526	\$526	
RD-06B	Armstrong Road - Black Forest Road to Greens Road	Development	0.00	\$0	\$10,271,923	\$10,271,923	57%	\$5,840,142	\$3,403	\$3,403	\$3,403	\$3,403	\$3,403	\$3,403	
RD-07A	Armstrong Road - along existing Hobbs Road	Development	1.52	\$696,148	\$6,351,000	\$7,047,149	100%	\$7,047,149	\$4,107	\$4,107	\$4,107	\$4,107	\$4,107	\$4,107	
RD-07B	Armstrong Road - Hobbs Road to Werribee River	Development	2.79	\$949,230	\$3,411,625	\$4,360,858	100%	\$4,360,858	\$2,541	\$2,541	\$2,541	\$2,541	\$2,541	\$2,541	
RD-07C	Offset cost estimate associated with removal of native vegetation.	Development	0.00	\$0	\$34,688	\$34,688	100%	\$34,688	\$20	\$20	\$20	\$20	\$20	\$20	
RD-08	Bulban Road - Bend to Ision Road	Development	1.47	\$659,655	\$3,313,350	\$3,973,006	100%	\$3,973,006	\$2,315	\$2,315	\$2,315	\$2,315	\$2,315	\$2,315	
RD-09	Bulban Road - Ision Road to Existing Alignment	Development	1.44	\$632,168	\$2,543,240	\$3,175,409	90%	\$2,857,868	\$1,665	\$1,665	\$1,665	\$1,665	\$1,665	\$1,665	
RD-10	Black Forest Road - Lollypop Creek to Armstrong Road	Development	0.63	\$222,543	\$7,495,520	\$7,718,063	100%	\$7,718,063	\$4,498	\$4,498	\$4,498	\$4,498	\$4,498	\$4,498	
RD-11	Black Forest Road - Armstrong Road to Ision Road	Development	0.20	\$60,810	\$6,502,400	\$6,563,210	100%	\$6,563,210	\$3,825	\$3,825	\$3,825	\$3,825	\$3,825	\$3,825	
RD-11a	Offset cost estimate associated with removal of native vegetation.	Development	0.00	\$0	\$9,972	\$9,972	100%	\$9,972	\$6	\$6	\$6	\$6	\$6	\$6	
RD-12	Greens Road - Bend to OMRTC PAO	Development	1.58	\$571,555	\$0	\$571,555	100%	\$571,555	\$333	\$333	\$333	\$333	\$333	\$333	
RD-13	Alfred Road	Development	0.00	\$0	\$2,962,050	\$2,962,050	100%	\$2,962,050	\$58,226	\$58,226	\$58,226	\$58,226	\$58,226	\$58,226	
RD-14	Wellahra Ree Realignment & Upgrade	Development	0.00	\$0	\$5,731,200	\$5,731,200	100%	\$5,731,200	\$1,121	\$1,121	\$1,121	\$1,121	\$1,121	\$1,121	
RD-14a	Offset cost estimate associated with removal of native vegetation.	Development	0.00	\$0	\$110,347	\$110,347	100%	\$110,347	\$42,716	\$42,716	\$42,716	\$42,716	\$42,716	\$42,716	
SUB-TOTAL			46.48	\$16,636,705	\$74,597,363	\$91,234,114		\$82,107,437	\$42,716	\$42,716	\$42,716	\$42,716	\$42,716	\$42,716	
INTERSECTION PROJECTS															
IN-01A	Ision Road / New Bulban Road	Development	1.16	\$206,695	\$3,040,893	\$3,247,589	90%	\$3,205,430	\$1,868	\$1,868	\$1,868	\$1,868	\$1,868	\$1,868	
IN-01B	Ision Road / North-South Connector 1 (within PSP 40.2)	Development	1.35	\$536,565	\$4,355,200	\$4,891,767	90%	\$4,402,590	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	\$2,566	
IN-02A	Ision Road / Armstrong Road	Development	1.32	\$394,980	\$6,039,321	\$6,434,302	90%	\$5,790,872	\$3,375	\$3,375	\$3,375	\$3,375	\$3,375	\$3,375	
IN-02B	Ision Road / Armstrong Road	Development	0.00	\$0	\$67,000	\$67,000	90%	\$60,300	\$350	\$350	\$350	\$350	\$350	\$350	
IN-03	Ision Road / North-South Connector 2 (within PSP 42.2)	Development	2.77	\$784,210	\$5,407,251	\$6,211,464	90%	\$5,590,317	\$3,258	\$3,258	\$3,258	\$3,258	\$3,258	\$3,258	
IN-04	Ision Road / East-West Connector (within PSP 99.1)	Development	2.30	\$575,775	\$5,237,000	\$5,812,777	90%	\$5,231,500	\$3,049	\$3,049	\$3,049	\$3,049	\$3,049	\$3,049	
IN-05	Ision Road / Black Forest Road	Development	2.00	\$607,270	\$5,468,000	\$6,075,272	90%	\$5,467,745	\$3,186	\$3,186	\$3,186	\$3,186	\$3,186	\$3,186	
IN-06	Ision Road / East-West Connector 1 (within PSP 42.1)	Development	2.35	\$807,190	\$5,221,000	\$6,028,192	90%	\$5,479,373	\$3,193	\$3,193	\$3,193	\$3,193	\$3,193	\$3,193	
IN-07	Ision Road / East-West Connector 2 (within PSP 42.1)	Development	2.52	\$899,380	\$5,439,000	\$6,338,383	90%	\$5,704,544	\$3,324	\$3,324	\$3,324	\$3,324	\$3,324	\$3,324	
IN-08A	Ision Road / Greens Road	Development	1.97	\$678,150	\$0	\$678,150	90%	\$610,337	\$356	\$356	\$356	\$356	\$356	\$356	
IN-08B	Ision Road / Greens Road	Development	0.00	\$0	\$5,681,600	\$5,681,600	42%	\$2,386,272	\$1,391	\$1,391	\$1,391	\$1,391	\$1,391	\$1,391	
IN-09A	Ision Road / Ballan Road	Development	1.02	\$305,190	\$0	\$305,190	90%	\$274,672	\$160	\$160	\$160	\$160	\$160	\$160	
IN-09B	Ision Road / Ballan Road	Development	0.00	\$0	\$5,416,600	\$5,416,600	50%	\$2,708,300	\$1,578	\$1,578	\$1,578	\$1,578	\$1,578	\$1,578	
IN-10	Ision Road / East-West Connector 5 (within PSP 92)	Development	2.49	\$684,420	\$5,341,000	\$6,025,422	90%	\$5,442,880	\$3,160	\$3,160	\$3,160	\$3,160	\$3,160	\$3,160	
IN-11	Ision Road / East-West Connector 6 (within PSP 92)	Development	2.21	\$608,273	\$5,603,000	\$6,211,275	90%	\$5,590,147	\$3,258	\$3,258	\$3,258	\$3,258	\$3,258	\$3,258	
IN-12	Armstrong Road / East-West Connector (within PSP 42.2)	Development	1.35	\$404,610	\$3,166,216	\$3,570,828	100%	\$3,570,828	\$2,081	\$2,081	\$2,081	\$2,081	\$2,081	\$2,081	
IN-13	Armstrong Road / East-West Connector (within PSP 42.2)	Development	1.51	\$454,338	\$3,452,470	\$3,906,809	100%	\$3,906,809	\$2,277	\$2,277	\$2,277	\$2,277	\$2,277	\$2,277	
IN-14	Armstrong Road / Black Forest Road	Development	1.07	\$397,853	\$4,310,000	\$4,707,854	100%	\$4,707,854	\$2,743	\$2,743	\$2,743	\$2,743	\$2,743	\$2,743	
IN-15	Armstrong Road / Ballan Road	Development	1.40	\$559,320	\$8,017,000	\$8,576,321	100%	\$8,576,321	\$4,998	\$4,998	\$4,998	\$4,998	\$4,998	\$4,998	
IN-16	Armstrong Road / East-West Connector (within PSP 40)	Development	0.59	\$249,093	\$3,346,696	\$3,595,789	100%	\$3,595,789	\$2,095	\$2,095	\$2,095	\$2,095	\$2,095	\$2,095	
IN-17	Armstrong Road / North-South Connector (within PSP 40)	Development	1.02	\$457,020	\$3,271,762	\$3,728,783	100%	\$3,728,783	\$2,173	\$2,173	\$2,173	\$2,173	\$2,173	\$2,173	
IN-18A	Alfred Road / Princes Highway	Development	0.05	\$28,835	\$0	\$28,835	100%	\$28,835	\$17	\$17	\$17	\$17	\$17	\$17	
IN-18B	Alfred Road / Princes Highway	Development	0.00	\$0	\$4,811,000	\$4,811,000	50%	\$2,405,500	\$1,402	\$1,402	\$1,402	\$1,402	\$1,402	\$1,402	
IN-19	Bulban Road / McGrath Road	Development	0.41	\$184,995	\$1,585,000	\$1,769,995	100%	\$1,769,995	\$1,031	\$1,031	\$1,031	\$1,031	\$1,031	\$1,031	
IN-20	Bulban Road / Galvin Road Extension	Development	0.76	\$344,115	\$2,345,000	\$2,689,116	100%	\$2,689,116	\$1,567	\$1,567	\$1,567	\$1,567	\$1,567	\$1,567	

DCP PROJECT NO.	PROJECT	INFRASTRUCTURE CATEGORY	LAND AREA HA	ESTIMATED PROJECT COST: LAND	ESTIMATED PROJECT COST: CONSTRUCTION	TOTAL ESTIMATED PROJECT COST: LAND & CONSTRUCTION	% APPORTIONED TO DCP (INTERNAL USE)	TOTAL COST RECOVERED BY DCP	CHARGE AREA 1 CONTRIBUTION PER NDHA	CHARGE AREA 2 CONTRIBUTION PER NDHA	CHARGE AREA 3 CONTRIBUTION PER NDHA	CHARGE AREA 4 CONTRIBUTION PER NDHA	CHARGE AREA 5 CONTRIBUTION PER NDHA	CHARGE AREA 6 CONTRIBUTION PER NDHA
IN-21	Black Forest Road / Harpley Boulevard (within PSP 42.2)	Development	0.26	\$1,182,215	\$2,358,106	\$2,476,321	100%	\$2,476,321	\$1,443	\$1,443	\$1,443	\$1,443	\$1,443	\$1,443
IN-22	Black Forest Road / Haines Drive (within PSP 42.2)	Development	0.21	\$67,898	\$2,358,106	\$2,426,004	100%	\$2,426,004	\$1,414	\$1,414	\$1,414	\$1,414	\$1,414	\$1,414
IN-23	Black Forest Road / North-South Connector (within PSP 42.1)	Development	0.88	\$314,798	\$4,083,000	\$4,397,798	100%	\$4,397,798	\$2,563	\$2,563	\$2,563	\$2,563	\$2,563	\$2,563
IN-24A	Greens Road / North-South Connector (within PSP 42.1)	Development	0.13	\$58,635	\$0	\$58,635	100%	\$58,635	\$34	\$34	\$34	\$34	\$34	\$34
IN-24B	Greens Road / North-South Connector (within PSP 42.1)	Development	0.00	\$0	\$4,075,000	\$4,075,000	70%	\$2,852,500	\$1,662	\$1,662	\$1,662	\$1,662	\$1,662	\$1,662
IN-25A	Greens Road / Manor Lakes Boulevard (within PSP 42.1 & 41)	Development	0.32	\$96,450	\$0	\$96,450	100%	\$96,450	\$56	\$56	\$56	\$56	\$56	\$56
IN-25B	Greens Road / Manor Lakes Boulevard (within PSP 42.1 & 41)	Development	0.00	\$0	\$1,250,800	\$1,250,800	50%	\$625,400	\$364	\$364	\$364	\$364	\$364	\$364
IN-26	Ballan Road / Evergreen Drive (within PSP 40)	Development	0.40	\$261,495	\$4,849,000	\$5,110,495	100%	\$5,110,495	\$2,978	\$2,978	\$2,978	\$2,978	\$2,978	\$2,978
IN-27	Ballan Road / Connector (within PSP 40)	Development	0.40	\$221,265	\$1,084,000	\$1,305,265	0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0
IN-28	Ballan Road / Kinglake Drive (within PSP 92)	Development	0.22	\$99,270	\$4,454,000	\$4,553,270	100%	\$4,553,270	\$2,653	\$2,653	\$2,653	\$2,653	\$2,653	\$2,653
IN-29	Ballan Road / North-South Connector (within PSP 92)	Development	0.33	\$112,695	\$3,963,000	\$4,075,695	100%	\$4,075,695	\$2,375	\$2,375	\$2,375	\$2,375	\$2,375	\$2,375
IN-30	Ballan Road / Manor Lakes Boulevard (PSP 40)	Development	0.40	\$221,265	\$4,849,000	\$5,070,265	100%	\$5,070,265	\$2,955	\$2,955	\$2,955	\$2,955	\$2,955	\$2,955
IN-31	Westons Road / Princes Highway	Development	0.00	\$0	\$1,844,000	\$1,844,000	90%	\$1,659,600	\$967	\$967	\$967	\$967	\$967	\$967
IN-32	Ballan Road Pedestrian Crossing	Development	0.00	\$0	\$262,598	\$262,598	50%	\$131,299	\$77	\$77	\$77	\$77	\$77	\$77
IN-33	Galvin Road Crossing Pedestrian Upgrade	Development	0.00	\$0	\$195,760	\$195,760	100%	\$195,760	\$114	\$114	\$114	\$114	\$114	\$114
SUB-TOTAL			35.17	\$12,114,260	\$132,868,380	\$144,982,675		\$127,174,601	\$74,111	\$74,111	\$74,111	\$74,111	\$74,111	\$74,111
BRIDGE PROJECTS														
BR-01	Ison Road Culvert (adjacent PSP 43)	Development	0.00	\$0	\$753,000	\$753,000	90%	\$677,700	\$395	\$395	\$395	\$395	\$395	\$395
BR-02	Ison Road Lollipop Creek Bridge (within PSP 42.2)	Development	0.00	\$0	\$5,571,000	\$5,571,000	90%	\$5,013,900	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922	\$2,922
BR-03	Ison Road Culvert (within PSP 93.1)	Development	0.00	\$0	\$444,000	\$444,000	90%	\$399,600	\$233	\$233	\$233	\$233	\$233	\$233
BR-04	Ison Road Culvert (within PSP 42.1)	Development	0.00	\$0	\$1,694,000	\$1,694,000	90%	\$1,524,600	\$888	\$888	\$888	\$888	\$888	\$888
BR-05	Ison Road Culvert (within PSP 92)	Development	0.00	\$0	\$444,000	\$444,000	90%	\$399,600	\$233	\$233	\$233	\$233	\$233	\$233
BR-06	Armstrong Road Culvert (within PSP 42.2 Southern)	Development	0.00	\$0	\$1,201,000	\$1,201,000	100%	\$1,201,000	\$700	\$700	\$700	\$700	\$700	\$700
BR-07	Armstrong Road Culvert (within PSP 42.2 Northern)	Development	0.00	\$0	\$1,185,000	\$1,185,000	100%	\$1,185,000	\$691	\$691	\$691	\$691	\$691	\$691
BR-08	Armstrong Road Lollipop Creek Bridge	Development	0.00	\$0	\$13,254,390	\$13,254,390	53%	\$7,024,827	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094	\$4,094
BR-09	Armstrong Road Werribee River Bridge	Development	0.00	\$0	\$10,255,866	\$10,255,866	40%	\$4,127,933	\$2,406	\$2,406	\$2,406	\$2,406	\$2,406	\$2,406
BR-10	Werribee River Pedestrian Bridge	Development	0.00	\$0	\$1,032,000	\$1,032,000	50%	\$516,000	\$301	\$301	\$301	\$301	\$301	\$301
BR-11	McGrath Road Culvert	Development	0.00	\$0	\$2,059,000	\$2,059,000	100%	\$2,059,000	\$6,369	\$6,369	\$6,369	\$6,369	\$6,369	\$6,369
BR-12	Connector Culvert (within PSP 40)	Development	0.00	\$0	\$750,000	\$750,000	100%	\$750,000	\$2,320	\$2,320	\$2,320	\$2,320	\$2,320	\$2,320
BR-13	Connector Culvert (within PSP 40)	Development	0.00	\$0	\$933,000	\$933,000	100%	\$933,000	\$2,886	\$2,886	\$2,886	\$2,886	\$2,886	\$2,886
BR-14	Armstrong Road Culvert (within PSP 40)	Development	0.00	\$0	\$789,000	\$789,000	41%	\$324,882	\$189	\$189	\$189	\$189	\$189	\$189
BR-15	Connector Culvert (within PSP 40)	Development	0.00	\$0	\$1,349,000	\$1,349,000	100%	\$1,349,000	\$4,173	\$4,173	\$4,173	\$4,173	\$4,173	\$4,173
BR-16	Alfred Road Culvert (within PSP 43)	Development	0.00	\$0	\$85,400	\$85,400	20%	\$85,400	\$229	\$229	\$229	\$229	\$229	\$229
BR-17	Ison Road Culvert (within Logical Inclusion Area)	Development	0.00	\$0	\$436,000	\$436,000	90%	\$392,400	\$186	\$186	\$186	\$186	\$186	\$186
BR-18	Ison Road Culvert (within Logical Inclusion Area)	Development	0.00	\$0	\$355,000	\$355,000	90%	\$303,200	\$186	\$186	\$186	\$186	\$186	\$186
BR-19	Ison Road Culvert (within PSP 42.2)	Development	0.00	\$0	\$1,448,000	\$1,448,000	90%	\$1,303,200	\$759	\$759	\$759	\$759	\$759	\$759
BR-20	Black Forest Road Culvert (within PSP 42.2)	Development	0.00	\$0	\$772,406	\$772,406	25%	\$193,101	\$113	\$113	\$113	\$113	\$113	\$113
BR-21	RRL pedestrian underpass (within PSP 42.2)	Development	0.00	\$0	\$113,628	\$113,628	100%	\$113,628	\$66	\$66	\$66	\$66	\$66	\$66
BR-22	Werribee River Pedestrian Bridge (near RRL)	Development	0.00	\$0	\$1,032,000	\$1,032,000	50%	\$516,000	\$301	\$301	\$301	\$301	\$301	\$301
BR-23	Werribee River Shared Trail (under RRL)	Development	0.00	\$0	\$440,529	\$440,529	100%	\$440,529	\$257	\$257	\$257	\$257	\$257	\$257
BR-24	Bulban Road Culvert (within PSP 42.2)	Development	0.00	\$0	\$1,907,139	\$1,907,139	100%	\$1,907,139	\$1,111	\$1,111	\$1,111	\$1,111	\$1,111	\$1,111
BR-25	Ison Road Culvert (within PSP 42.1)	Development	0.00	\$0	\$1,697,302	\$1,697,302	100%	\$1,697,302	\$989	\$989	\$989	\$989	\$989	\$989
BR-26	Ison Road Culvert (within PSP 92)	Development	0.00	\$0	\$2,279,326	\$2,279,326	100%	\$2,279,326	\$1,328	\$1,328	\$1,328	\$1,328	\$1,328	\$1,328
BR-27	Ison Road Culvert (within PSP 92)	Development	0.00	\$0	\$801,946	\$801,946	100%	\$801,946	\$467	\$467	\$467	\$467	\$467	\$467
SUB-TOTAL			0.00	\$0	\$53,424,532	\$53,424,532		\$37,535,513	\$18,858	\$18,858	\$18,858	\$18,858	\$18,858	\$18,858

DCP PROJECT NO.	PROJECT	INFRASTRUCTURE CATEGORY	LAND AREA HA	ESTIMATED PROJECT COST: LAND	ESTIMATED PROJECT COST: CONSTRUCTION	TOTAL ESTIMATED PROJECT COST: LAND & CONSTRUCTION	% APPORTIONED TO DCP (INTERNAL USE)	TOTAL COST RECOVERED BY DCP	CHARGE AREA 1 CONTRIBUTION PER NDHA	CHARGE AREA 2 CONTRIBUTION PER NDHA	CHARGE AREA 3 CONTRIBUTION PER NDHA	CHARGE AREA 4 CONTRIBUTION PER NDHA	CHARGE AREA 5 CONTRIBUTION PER NDHA	CHARGE AREA 6 CONTRIBUTION PER NDHA
COMMUNITY CENTRES														
CO-01	Ballian Road Level 2 Multi Purpose Community Centre	Development	0.80	\$440,000	\$6,143,329	\$6,583,330	100%	\$6,583,330	\$4,052	\$4,052	\$4,052	\$4,052	\$4,052	\$4,052
CO-02	Ballian Road Level 1 Children's Centre	Development	0.60	\$255,000	\$3,393,965	\$3,648,966	100%	\$3,648,966	\$2,246	\$2,246	\$2,246	\$2,246	\$2,246	\$2,246
CO-03	Westbrook Level 2 Multi Purpose Community Centre	Development	0.80	\$220,000	\$6,143,329	\$6,363,330	100%	\$6,363,330	\$3,917	\$3,917	\$3,917	\$3,917	\$3,917	\$3,917
CO-04	Westbrook Level 1 Children's Centre	Development	0.60	\$165,000	\$3,393,965	\$3,558,966	100%	\$3,558,966	\$2,191	\$2,191	\$2,191	\$2,191	\$2,191	\$2,191
CO-05	Manor Lakes Level 1 Children's Centre	Development	0.00	\$240,000	\$3,180,968	\$3,420,968	18%	\$608,932	\$375	\$375	\$375	\$375	\$375	\$375
CO-06	Manor Lakes Level 2 Multi Purpose Community Centre	Development	0.00	\$480,000	\$5,226,667	\$5,706,667	18%	\$1,015,787	\$625	\$625	\$625	\$625	\$625	\$625
CO-08	Black Forest Road North Level 3 Multi Purpose Community Centre	Development	1.50	\$600,000	\$6,301,294	\$6,901,296	100%	\$6,901,296	\$4,248	\$4,248	\$4,248	\$4,248	\$4,248	\$4,248
CO-10	Black Forest Road North Level 1 Children's Centre	Development	0.60	\$180,000	\$3,393,965	\$3,573,966	100%	\$3,573,966	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200
CO-11	Black Forest Road South Level 2 Multi Purpose Community Centre	Development	0.80	\$260,000	\$6,143,329	\$6,403,330	100%	\$6,403,330	\$3,941	\$3,941	\$3,941	\$3,941	\$3,941	\$3,941
CO-12	Riverwalk Level 2 Multi Purpose Community Centre	Development	0.00	\$0	\$6,143,329	\$6,143,329	25%	\$1,535,832	\$945	\$945	\$945	\$945	\$945	\$945
CO-13	Bayview Level 1 Children's Centre	Development	0.60	\$150,000	\$3,393,965	\$3,543,966	100%	\$3,543,966	\$2,181	\$2,181	\$2,181	\$2,181	\$2,181	\$2,181
SUB-TOTAL			6.30	\$2,990,000	\$52,858,106	\$55,848,112		\$43,737,701	\$26,921	\$0	\$26,921	\$26,921	\$26,921	\$26,921
ACTIVE RECREATION														
AR01	Westbrook Active Recreation Reserve 1	Development	12.29	\$3,656,730	\$5,648,742	\$9,305,505	100%	\$9,305,505	\$5,728	\$5,728	\$5,728	\$5,728	\$5,728	\$5,728
AR03	Westbrook Active Recreation Reserve 2	Development	11.36	\$3,326,500	\$9,356,875	\$12,683,386	100%	\$12,683,386	\$7,807	\$7,807	\$7,807	\$7,807	\$7,807	\$7,807
AR05	Ballian Road Active Recreation Reserve 3	Development	10.57	\$4,756,500	\$5,960,681	\$10,717,191	100%	\$10,717,191	\$6,596	\$6,596	\$6,596	\$6,596	\$6,596	\$6,596
AR07	Ballian Road Active Recreation Reserve 4	Development	12.63	\$7,094,730	\$7,639,484	\$14,734,226	100%	\$14,734,226	\$9,069	\$9,069	\$9,069	\$9,069	\$9,069	\$9,069
AR09	Manor Lakes Active Recreation Reserve 5	Development	0.00	\$0	\$4,155,663	\$4,155,663	18%	\$739,708	\$455	\$455	\$455	\$455	\$455	\$455
AR11	Manor Lakes Active Recreation Reserve 6	Development	0.00	\$0	\$7,704,517	\$7,704,517	25%	\$1,949,243	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200	\$1,200
AR13	Black Forest Road North Active Recreation Reserve 7	Development	11.45	\$3,956,250	\$6,120,684	\$10,076,945	100%	\$10,076,945	\$6,202	\$6,202	\$6,202	\$6,202	\$6,202	\$6,202
AR15	Black Forest Road North Active Recreation Reserve 8	Development	12.25	\$4,382,500	\$5,304,716	\$9,687,228	94%	\$9,149,079	\$5,631	\$5,631	\$5,631	\$5,631	\$5,631	\$5,631
AR17	Black Forest Road South Active Recreation Reserve 9	Development	7.59	\$2,394,373	\$4,832,799	\$7,227,179	100%	\$7,227,179	\$4,448	\$4,448	\$4,448	\$4,448	\$4,448	\$4,448
AR19	Black Forest Road South Active Recreation Reserve 10	Development	15.55	\$4,751,050	\$7,599,610	\$12,350,675	100%	\$12,350,675	\$7,602	\$7,602	\$7,602	\$7,602	\$7,602	\$7,602
AR21	Alfred Road Active Recreation Reserve 11	Development	5.44	\$2,991,065	\$2,330,312	\$5,321,382	100%	\$5,321,382	\$3,275	\$3,275	\$3,275	\$3,275	\$3,275	\$3,275
AR23	Bayview Active Recreation Reserve 12	Development	12.25	\$3,062,500	\$5,838,329	\$8,900,841	100%	\$8,900,841	\$5,478	\$5,478	\$5,478	\$5,478	\$5,478	\$5,478
AR25	Indoor Recreation	Development	6.25	\$2,039,020	\$0	\$2,039,026	100%	\$2,039,026	\$1,255	\$1,255	\$1,255	\$1,255	\$1,255	\$1,255
AR26	Quandong Active Recreation Reserve 13	Development	4.51	\$2,029,500	\$1,932,535	\$3,962,040	100%	\$3,962,040	\$2,439	\$2,439	\$2,439	\$2,439	\$2,439	\$2,439
SUB-TOTAL DEVELOPMENT INFRASTRUCTURE PROJECTS			122.14	\$44,440,738	\$74,424,946	\$118,865,806		\$109,156,426	\$67,185	\$67,185	\$67,185	\$67,185	\$67,185	\$67,185
FINANCE COSTS														
FI-01	Interest Charge	Development				\$7,720,266	100%	\$7,720,266	\$5,317	\$5,317	\$5,317	\$5,317	\$5,317	\$5,317
SUMMARY														
TOTAL COST ALL DEVELOPMENT INFRASTRUCTURE LEVY PROJECTS						\$407,431,934		\$407,431,934	\$235,108	\$141,002	\$250,856	\$310,203	\$274,360	\$229,791
TOTAL DEVELOPMENT INFRASTRUCTURE LEVY PER NDHA														

Table 10b Calculation of Costs (Community Infrastructure Levy)

DCP PROJECT NO.	PROJECT	INFRASTRUCTURE CATEGORY	LAND AREA HA	ESTIMATED PROJECT COST: LAND	ESTIMATED PROJECT COST: CONSTRUCTION	TOTAL ESTIMATED PROJECT COST: LAND & CONSTRUCTION	% APPORTIONED TO DCP (INTERNAL USE)	TOTAL COST ATTRIBUTED TO DCP
COMMUNITY CENTRES								
CO-07	Manor Lakes Level 3 Library	Community	0.00	\$0	\$4,214,675	\$4,214,675	50%	\$2,107,337
CO-09	Black Forest Road North Level 3 Library & Performing Arts Centre	Community	0.00	\$0	\$9,564,483	\$9,564,483	100%	\$9,564,483
SUB-TOTAL COMMUNITY INFRASTRUCTURE PROJECTS				\$0	\$13,779,158	\$13,779,158		\$11,671,820
ACTIVE RECREATION								
AR02	Westbrook Active Recreation Reserve 1	Community	0.00	\$0	\$5,081,438	\$5,081,438	100%	\$5,081,438
AR04	Westbrook Active Recreation Reserve 2	Community	0.00	\$0	\$3,379,542	\$3,379,542	100%	\$3,379,542
AR06	Ballan Road Active Recreation Reserve 3	Community	0.00	\$0	\$4,327,835	\$4,327,835	100%	\$4,327,835
AR08	Ballan Road Active Recreation Reserve 4	Community	0.00	\$0	\$3,137,404	\$3,137,404	100%	\$3,137,404
AR10	Manor Lakes Active Recreation Reserve 5	Community	0.00	\$0	\$2,093,830	\$2,093,830	18%	\$372,702
AR12	Manor Lakes Active Recreation Reserve 6	Community	0.00	\$0	\$5,301,240	\$5,301,240	28%	\$1,484,347
AR14	Black Forest Road North Active Recreation Reserve 7	Community	0.00	\$0	\$2,415,400	\$2,415,400	91%	\$2,195,400
AR16	Black Forest Road North Active Recreation Reserve 8	Community	0.00	\$0	\$6,971,754	\$6,971,754	97%	\$6,743,848
AR18	Black Forest Road South Active Recreation Reserve 9	Community	0.00	\$0	\$1,623,331	\$1,623,331	100%	\$1,623,331
AR20	Black Forest Road South Active Recreation Reserve 10	Community	0.00	\$0	\$7,800,267	\$7,800,267	100%	\$7,800,267
AR22	Alfred Road Active Recreation Reserve 11	Community	0.00	\$0	\$1,623,331	\$1,623,331	100%	\$1,623,331
AR24	Bayview Active Recreation Reserve 12	Community	0.00	\$0	\$1,909,207	\$1,909,207	100%	\$1,909,207
AR27	Quandong Active Recreation Reserve 13	Community	0.00	\$0	\$1,623,331	\$1,623,331	100%	\$1,623,331
SUB-TOTAL				\$0	\$47,287,908	\$47,287,908		\$41,301,981
SUMMARY								
TOTAL COST ALL PROJECTS				\$0	\$61,067,066	\$61,067,066		\$52,973,802
TOTAL COMMUNITY INFRASTRUCTURE LEVY PER DWELLING								\$1,150
TOTAL ESTIMATED DWELLINGS								26,827
ESTIMATED COMMUNITY INFRASTRUCTURE LEVY RAISED VIA WYNDHAM WEST DCP								\$30,851,050

Amended by GC75

Amended by GC75

5.0 DEVELOPMENT CONTRIBUTIONS PLAN ADMINISTRATION

This section sets out how the DCP will be administered and includes the timing of payments, provision of works and land in kind and how the DCP fund will be managed in terms of reporting, indexation and review periods.

The Wyndham West DCP Development Infrastructure Levy applies to subdivision and / or development of land.

The Wyndham West Community Infrastructure Levy applies to the construction of dwellings and must be paid prior to the issue of a Building Permit.

5.1 Collecting Agency (Agency Responsible for Collecting Infrastructure Levy)

Wyndham City (also referred to as Council) is the Collecting Agency pursuant to section 46K(1)(fa) of the *Planning and Environment Act 1987* which means that it is the public authority to whom all levies are payable. As the Collecting Agency, Wyndham City is also responsible for the administration of this DCP and also its enforcement pursuant to Section 46QC of the Act.

5.2 Development Agency (Agency Responsible for Works)

Wyndham City (also referred to as Council) is the Development Agency and is responsible for the provision of all of the DCP projects identified in this DCP and the timing of all works.

5.3 Payment of Contribution Levies and Payment Timing

5.3.1 Development Infrastructure

For subdivision of Land

- A development infrastructure levy must be paid to Council for the land within the following specified time, namely after certification of the relevant plan of subdivision but not more than 21 days prior to the issue of a Statement of Compliance with respect to that plan under the *Subdivision Act 1988*.
- Where the subdivision is to be developed in stages, the infrastructure levy for the stage to be developed may only be paid to the Council within 21 days prior to the issue of a Statement of Compliance for that stage provided that a Schedule of Development Contributions is submitted with each stage of plan of subdivision. This Schedule must show the amount of the development contributions payable for each stage and the value of the contributions for prior stages to the satisfaction of the Council.

If Council agrees to works or provision of land in lieu of the payment of the infrastructure levy, the land owner must enter into an agreement under Section 173 of the *Planning and Environment Act 1987* in respect of the proposed works or provision of land in lieu to specific requirements.

For development of land where no subdivision is proposed

- Provided a development infrastructure levy has not already been paid on subject land, an infrastructure levy must be paid to Council in accordance with the provisions of the approved Development Contributions Plan for each demand unit (Net Developable Hectare) proposed to be developed prior to the commencement of any development (i.e. development includes buildings, car park, access ways landscaping and ancillary components). Council may require that contributions be made at either the planning or building permit stage for Development Infrastructure.

If Council agrees to works or provision of land in lieu of the payment of the infrastructure levy, the land owner must enter into an agreement or other suitable arrangement under Section 173 of the *Planning and Environment Act 1987* in relation to the proposed works or land in lieu.

Where no planning permit is required

The following requirements apply where no planning permit is required. The land may only be used and developed subject to the following requirements being met:

- Unless some other arrangement has been agreed to by Council in a Section 173 agreement, prior to the commencement of any development, a development infrastructure levy must be paid to Council in accordance with the provision of this approved Development Contributions Plan for the land.

If Council agrees to works or provision of land in lieu of the payment of the infrastructure levy, the land owner must enter into an agreement under Section 173 of the *Planning and Environment Act 1987* in respect of the proposed works or provision of land in lieu.

5.3.2 Community Infrastructure Levy

Contributions relating to community infrastructure are to be made by the home builder prior to the issue of a building permit. However, development proponents are encouraged to pay the levy prior to the issue of a statement of compliance to reduce the administrative burden of collection from individual home builders.

Levies for 'residential buildings' will be calculated at the rate for a single dwelling. In all other forms of accommodation, the dwelling is the individual unit (such as each dwelling in a residential village, retirement village, services apartment and so on). Corrective institutions are exempt.

A community infrastructure levy is not payable for a dwelling on a lot which was created prior to the date that this Development Contributions Plan was first incorporated into the Wyndham Planning Scheme.

5.3.3 Works in Kind

Under Section 46P of the Act, Council as the Collecting Agency may accept the provision of land, works, services or facilities by the applicant in part or in full in lieu of the amount of levy payable. This can be agreed with Council before or after the application for the permit is made or before the development is carried out. The agreement must include a list of the DCP infrastructure which Council has agreed in writing to allow to be provided as works in lieu providing that:

- The works constitute project(s) funded by this DCP;
- Council agrees that the timing of the works would be consistent with priorities in this DCP ;
- The works are defined and agreed in a Section 173 agreement;
- Works must be provided to a standard that accords with this Development Contributions Plan to the satisfaction of Council, unless an alternative is agreed;
- Detailed design must be approved by Council and must generally accord with the expectations outlined in this Development Contributions Plan unless an alternative is agreed;
- The construction of works must be completed to the satisfaction Council;
- There should be no negative financial impact on this Development Contributions Plan to the satisfaction of Council; and
- In particular, the works will only be accepted in lieu of a financial contribution required by this Development Contributions Plan to the extent that they constitute part or all of the design of the infrastructure item and reduce the cost to complete that design, to Council's satisfaction. Temporary works will not be accepted as works in kind.

Where Council agrees that works are to be provided by a development proponent in lieu of cash contributions (subject to the arrangements specified above):

- The credit for the works (land and / or construction) provided shall equal the cost of the works identified in this Development Contributions Plan, taking into account the impact of indexation;
- The value of the works provided in accordance with the principle outlined above, will be off-set against the development contributions liable to be paid by the development proponent; and
- Credit for the provision of works in kind shall be at a time to be negotiated between the development proponent and Council.

5.3.4 Credit for Over Provision

Where Council agrees that a development proponent can provide works in kind (either works and/or land) the situation may arise where the developer makes a contribution that exceeds that required by the Development Contributions Plan for the individual development.

In such a case the developer is entitled to a cash reimbursement for that amount that has been over contributed.

The details of credits and reimbursements will need to be negotiated with, and agreed to by Council.

5.3.5 Non Government Schools

Where land is subdivided or developed for the purpose of a non government school and the use of that land is subsequently for a purpose other than a non government school, the owner of that land must pay to Council development contributions in accordance with the provisions of this Development Contributions Plan. The development infrastructure levy and where applicable, the community infrastructure levy must be paid within 28 days of the date of the commencement of the construction of any buildings or works for that alternative use.

5.4 Funds Administration

The administration of the contributions made under this DCP will be transparent and development contributions charges will be held in accounts for each class of infrastructure until required for provision of items in that class. Details of funds received and expenditures will be held by Council as the Collecting Agency in accordance with the provisions of the *Local Government Act 1993* and the *Planning and Environment Act 1987*.

The administration of contributions made under this DCP will be transparent and demonstrate the:

- Amount and timing of funds collected.
- Source of the funds collected.
- Amount and timing of expenditure on specific projects.
- Project on which the expenditure was made.
- Account classes for individual project classes.
- Details of works-in-kind arrangements for project provision.
- Any pooling or quarantining of fund to deliver specific projects where applicable.

Council will provide for regular monitoring, reporting and review of the monies received and expended in accordance with this DCP.

Council will establish interest bearing accounts and all monies held in these accounts will be used solely for the provision of infrastructure as specified in this DCP, as required under Section 46Q(2) of the *Planning and Environment Act 1987*.

Should Council achieve savings on any project it delivers, the surplus funds collected for these items can be used for alternative works (where there may be a shortfall) in the same infrastructure class as specified in this DCP (i.e. savings on a transport project may be directed towards another transport project but not a recreation project).

The exception to this is the local projects included in Charge Areas 3, 4 and 5 as specified below:

- Charge Areas 3 & 4 – BR-11, BR-12, BR-13 and BR-15
- Charge Area 4 – RD-14 and RD-14a
- Charge Area 5 – RD-13 and BR-16

Should any savings be achieved for these projects, the savings must be returned to the land owners within the local charge areas either in the form of a cash reimbursement or a credit towards any future DCP obligations.

Should Council resolve not to proceed with any of the infrastructure projects listed in this DCP, the funds collected for these items can also be used for alternative works in the same infrastructure class as specified by this DCP. Such funds may also be used for the provision of additional works, services or facilities where approved by the Minister responsible for the *Planning and Environment Act*, or will be refunded to developers and / or owners of land subject to these infrastructure charges.

NOTE: For the purposes of funds administration the finance adjustment contained in this DCP is considered to be in the transport class of infrastructure.

5.5 Construction and Land Value Costs Indexation

Capital costs of all infrastructure items are in 2014 dollars and will be indexed by Council quarterly for inflation.

In relation to the costs associated with infrastructure items other than land and habitat compensation obligations, the cost must be adjusted according to the following methods:

- Roads, intersections and bridges – indexed in line with the Australian Bureau of Statistics Producer Price Indexes, Road and Bridge Construction Index, Victoria.
- All other infrastructure items - indexed in line with the Australian Bureau of Statistics Producer Price Indexes, Non-Residential Building Construction Index, Victoria.

Land values will be re-valued annually by a registered valuer based on a 'before and after' methodology for each lot that includes land for a DCP project.

Habitat compensation obligation prices may be reviewed by the Department of Environment and Primary Industries.

The finance adjustment will be indexed as per roads, intersections and bridges.

Within 14 days of the adjustments being made, Council will publish the amended capital costs for each infrastructure item on the Council's website.

The Community Infrastructure Levy projects are not indexed as the value of the contribution is set by the *Planning and Environment Act 1987*.

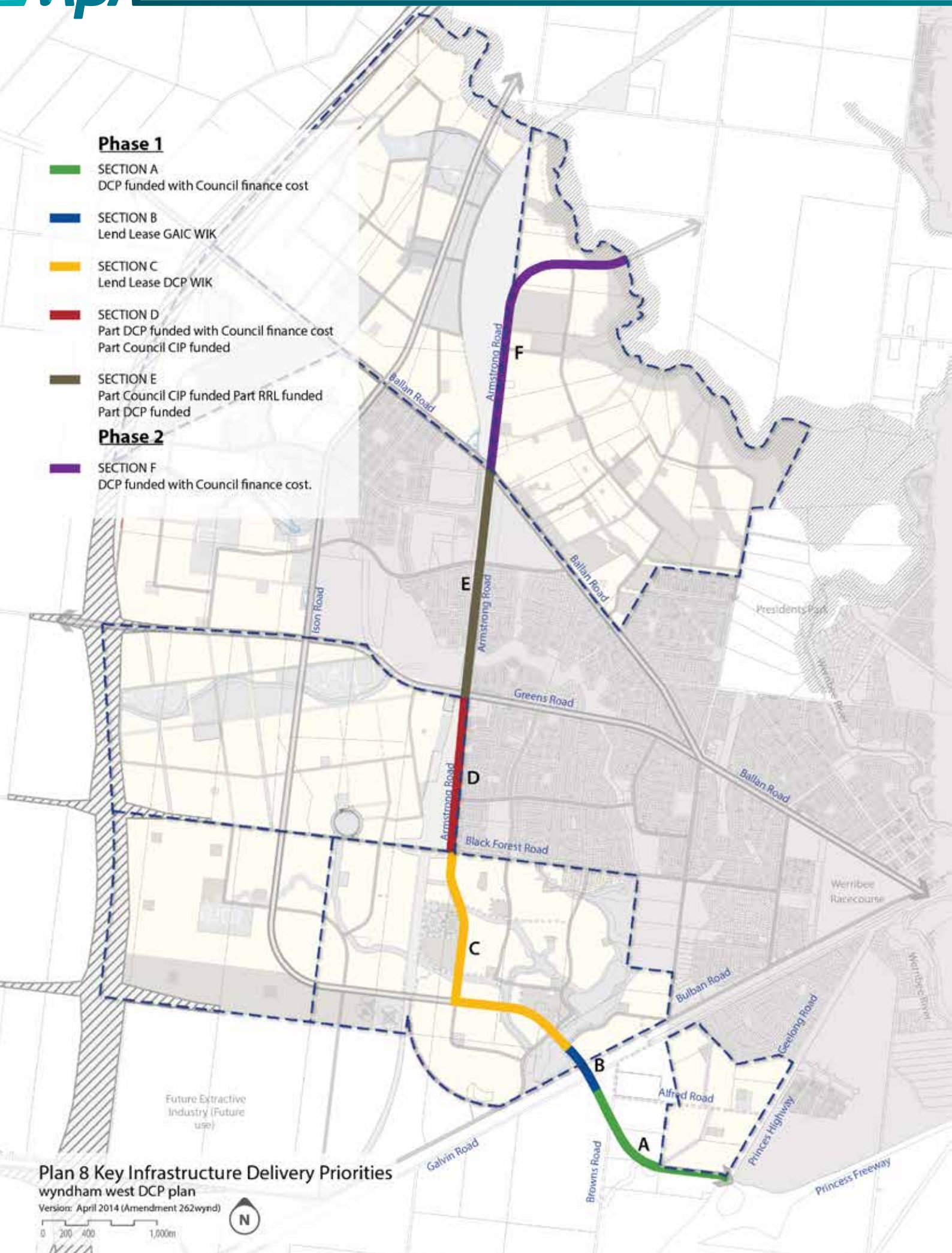
If in the future the Community Infrastructure Levy is amended, then the levy applicable to the release of any remaining dwellings may be adjusted in accordance with the revised legislative and regulatory approach as directed by the Minister for Planning.

5.6 Development Contributions Plan Review Period

This DCP adopts a long-term outlook for development. It takes into account planned future development in Wyndham West. A 'full development' horizon of land within the current Urban Growth Boundary to the year 2044 has been adopted for this DCP.

This DCP commenced on the date when it was first incorporated into the Wyndham Planning Scheme. This DCP will end when development within the DCP area is complete, which is projected to be 2044 or when the DCP is removed from the Planning Scheme.

The DCP is expected to be revised and updated every 5 years (or more frequently if required). This will require an amendment to the Wyndham Planning Scheme to replace this document with an alternative, revised document. Any review will need to have regard to any arrangements (for example an agreement under s173 of the Act) for the implementation of this DCP.



Plan 8 Key Infrastructure Delivery Priorities

wyndham west DCP plan

Version: April 2014 (Amendment 262wynd)



6.0 IMPLEMENTATION

This section provides further details regarding how Council intends to implement this DCP. Implementation has been formulated by:

- Assessing the Wyndham West PSPs.
- Having regard to the development context.
- Assessing the need for finance requirements – up front financing and pooling of funds.
- Agreeing the land value and indexing it appropriately (where possible).
- Identifying preferred implementation mechanisms to achieve the above outcomes and reducing the risk associated with the DCP to ensure that it will be delivered as intended.
- Provision of adequate resources to administer this DCP.

6.1 Project Timing

Development staging will largely be determined by the availability of essential services and subdivision proposals within the DCP area. Within this context the initial assumed provision trigger for each infrastructure item is at the time of subdivision.

To implement this DCP, Council should produce a DCP Project Implementation Programme (DCP PIP). This will be used to determine the appropriate priorities and timing of delivering all DCP projects.

As development proceeds Council will continue to monitor and amend as required the DCP PIP to respond to changes in development sequencing, works in kind projects and community priorities.

The DCP PIP must be based on:

- Delivering items in the DCP as soon as is practicable and as soon as sufficient contributions are available, consistent with Section 5.3, and acknowledging the overall infrastructure needs of the new community, Council's capital works program and the availability of DCP funds for the construction of individual projects.
- All items included in the DCP being provided within 30 years from the date upon which this DCP was first incorporated in to the Wyndham Planning Scheme.

Transport projects shall be prioritised to optimise the entry and exit capacity of the DCP area and to provide the internal roads that connect communities to entry and exit points.

Community projects shall be prioritised in the Wyndham West DCP area to provide the best achievable level of accessibility to the relevant services, consistent with the efficient use of DCP funds.

Key priority projects have been identified in Section 6.2.

Development proponents who wish to bring projects forward of the timing identified in the DCP PIP will need to discuss their proposal with the Development Agency. Where it considers it acceptable, Council may choose to amend the DCP PIP to bring forward delivery of the relevant project/s. Alternatively and where amending the DCP PIP is not an option, the development proponent and Council may enter into a works in kind agreement with the timing of any credit for works in kind to be negotiated between the parties.

6.2 Key Infrastructure Delivery Priorities

The following table provides the list of key DCP priority project over an initial 10 year period, to facilitate development across the broader Wyndham West area. These projects are considered a priority as they increase the capacity of the existing road network, improve access to land within the area and improve road safety. The table places projects into phase one and phase two priority categories. Projects in these categories are seen as important to enabling development in the Wyndham West area.

The projects shown in Table 11 and Plan 8 that are to be delivered by Wyndham City attract the financing adjustment as specified in Tables 10a and 10b and Appendix 3.

The purpose of the table is to provide Council and development proponents with a clear understanding of which projects should be prioritised.

Table 11 Key Infrastructure Delivery Priorities

	Description	Delivered by	DCP Project Nos
Phase One	Part A Construction of Ison Road between Princes Highway and Melbourne-Geelong Rail Line	Wyndham City	RD-01, IN-31, BR-01, BR-17, BR-18
	Part C Construction of Ison Road between Melbourne-Geelong Rail Line and Armstrong Road & construction of Armstrong Road between Ison Road and Black Forest Road	Lend Lease Pty Ltd	RD-02, RD-05, IN-02B, IN-13, IN-14, BR-02, BR-06, BR-07, BR-19
	Part D Construction of Armstrong Road between Black Forest and Ballan Roads	Wyndham City	RD-06A, RD-06B, BR-08
	Part E Construction of Armstrong Road Lollypop Creek Bridge	Wyndham City	BR-08
Phase Two	Description	Delivered by	DCP Project Nos
Part F Construction of Armstrong Road between Ballan Road and Werribee River	Wyndham City	RD-07, IN-15, IN-16, IN-17, BR-14, BR-09	

7.0 OTHER INFORMATION

7.1 Glossary

Active Open Space

Land set aside for the specific purpose of formal/organised club based sports.

Activity Centre

See 'Town Centre'.

Arterial Road

A higher order road providing for moderate to high volumes at relatively high speeds typically used for inter-suburban journeys and linking to freeways, and identified under the Road Management Act 2004. All declared arterials are managed by the State Government.

'Before and After' Valuation Method

Land in the DCP has been valued based on the definition of market value as approved by the Australian Property Institute. The 'Before' value is determined ignoring any impact of the acquisition, in contrast the 'After' value takes into account all impacts favourable and unfavourable resulting from the Scheme of Acquisition being the Development Contributions Plan (DCP).

Co-Location

Adjoining land uses to enable complementary programs, activities and services and shared use of resources and facilities. For example, the co-location of schools and active open space.

Community Facilities

Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs and activities. This includes facilities for education and learning (e.g. government and non-government schools, universities, adult learning centres); early years (e.g. preschool, maternal and child health, childcare); health and community services (e.g. hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (e.g. civic centres, libraries, neighbourhood houses); arts and culture (e.g. galleries, museums, performance space); sport, recreation and leisure (e.g. swimming pools); justice (e.g. law courts); voluntary and faith (e.g. places of worship) and emergency services (e.g. police, fire and ambulance stations).

Connector Street

A lower order street providing for low to moderate volumes and moderate speeds linking local streets to the arterial network Managed by the relevant local council. (See Table C1 in clause 56)

Conventional Density Housing

Housing with an average density of 10 to 15 dwellings per net developable hectare.

Development Contributions Plan

Document that sets out the contributions expected from each individual landowner to fund infrastructure and services. Refer to Part 3B of the Planning and Environment Act 1987.

Encumbered Land

Land that is constrained for development purposes. Includes easements for power/transmission lines, sewers, gas, waterways, drainage, retarding basins/wetlands, landfill, conservation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields).

Freeway

A high speed and high volume road with the highest level of access control and typically used for longer distance journeys across the metropolitan area and country Victoria. All freeways are managed by VicRoads.

Growth Area

Areas on the fringe of metropolitan Melbourne around major regional transport corridors that are designated for large-scale change, over many years from rural to urban use. Melbourne has six growth areas called Casey-Cardinia; Hume; Melton-Caroline Springs; Whittlesea, Wyndham and Mitchell.

Growth Corridor Plan

Government document that sets long-term strategic planning direction to guide the creation of a more sustainable community in the growth areas.

High Density Housing

Housing with an average density of more than 30 dwellings per net developable hectare.

Housing Density (Net)

The number of houses divided by net developable area

Linear Open Space Network

Corridors of open space, mainly along waterways that link together, forming a network.

Land Budget Table

A table setting out the total precinct area, net developable area and constituent land uses proposed within the precinct.

Lot

A part (consisting of one or more pieces) of any land (except a road, a reserve, or common property) shown on a plan, which can be disposed of separately and includes a unit or accessory unit on a registered plan of strata subdivision and a lot or accessory lot on a registered cluster plan.

Lower Density Housing

Housing with an average density of less than 10 dwellings per hectare.

Major Employment Area

Areas identified on the Growth Corridor Plan for economic and employment growth.

Major Town Centre

Town centres that have similar characteristics to Principal Town Centres, but serve smaller catchment areas.

Medium Density Housing

Housing with an average density of 16 to 30 dwellings per net developable hectare.

Native Vegetation

Plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses.

Net Developable Area

Total amount of land within the precinct that is made available for development of housing and employment buildings, including lots, local and connector streets. Total precinct area minus community facilities, schools and educational facilities and open space, arterial roads and encumbered land. Small local parks defined at subdivision stage are included in net developable area.

Net Developable Area - Employment

As per net developable area but excluding residential and town centre areas.

Net Developable Area - Residential

As per net developable area but excluding industrial employment areas.

Passive Open Space

Open space that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.

Precinct Structure Plan

A statutory document that describes how a precinct or series of sites within a growth area will be developed over time. A precinct structure plan sets out the broad environmental, social and economic parameters for the use and development of land within the precinct.

Principal Public Transport Network

A high-quality public transport network that connects Principal and Major Activity Centres, and comprises the existing radial fixed-rail network, extensions to this radial network and new cross-town bus routes.

Public Open Space

Land that is set aside in the precinct structure plan for public recreation or public resort, or as parklands, or for similar purposes. Incorporates active and passive open space.

Town Centre

Provide the focus for services, commercial and retail based employment and social interaction. They are where people shop, work, meet, relax and live. They are well-served by public transport, they range in size and intensity of use. In the growth areas, these are referred to as principal activity centres, major activity centres, neighbourhood activity centres and local centres.

Urban Growth Boundary

A statutory planning management tool used to set clear limits to metropolitan Melbourne’s urban development.

Urban Growth Zone

Statutory zone that applies to land that has been identified for future urban development. The UGZ has four purposes: (1) to manage transition of non-urban land into urban land; (2) to encourage development of well-planned and well-served new urban communities in accordance with an overall plan; (3) to reduce the number of development approvals needed in areas where an agreed plan is in place; and (4) to safeguard non-urban land from use and development that could prejudice its future urban development.

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8.0 APPENDICES

8.1 Appendix 1 – Property Specific Land Budget

Table 12 Property Specific Land Budget

Amended
by C26zwynd

PROPERTY NUMBER	TOTAL AREA (HECTARES)		TRANSPORT				COMMUNITY			ENCUMBERED LAND AVAILABLE FOR RECREATION						UNENCUMBERED LAND AVAILABLE FOR RECREATION					TOTAL NET DEVELOPABLE AREA (HECTARES)	NET DEVT AREA % OF PRECINCT				
	4 LANE ARTERIAL ROAD / WIDENING	6 LANE ARTERIAL ROAD / WIDENING	ROAD RESERVE NOT AVAILABLE FOR DEVELOPMENT	EXISTING ROAD RESERVE(FUTURE OMR)	RAILWAY CORRIDORS / EASEMENTS	COMMUNITY FACILITIES	GOVERNMENT EDUCATION	NON-GOVERNMENT EDUCATION	EASEMENT	WATERWAY / DRAINAGE LINE / WETLAND / RETARDING	WATERWAY / DRAINAGE WITHIN WTRP	HERITAGE (ABORIGINAL)	CONSERVATION (TREE RESERVE)	CONSERVATION AREA (GROWING GRASS (FROG))	CONSERVATION AREA (GROWING GRASS WITHIN WTRP)	ACTIVE OPEN SPACE	PASSIVE OPEN SPACE	PROPOSED WTRP	ADDITIONAL OPEN SPACE	LAND FOR INDOOR SPORTS						
40-01		1.46						1.45																	0.00	0.00%
40-02		22.08							1.87								0.12								9.15	41.43%
40-03		0.04																							0.00	0.00%
40-04		5.69							0.17							0.58									3.75	65.89%
40-05		41.21	3.80						0.19	0.89															26.59	64.53%
40-06		40.56	0.58						6.43	0.73															13.35	32.92%
40-07		12.83							2.08	2.48															0.00	0.00%
40-08		40.05	1.02						4.55	1.02															28.11	70.20%
40-09		0.66	0.08																						0.58	87.32%
40-10		43.15	0.74							1.73	0.44														38.25	88.64%
40-11		0.24		0.00																					0.24	99.59%
40-12		0.05																							0.05	100.00%
40-13		43.76	1.07							0.26	0.30														38.34	87.61%
40-14		12.36		0.00																					11.76	95.11%
40-15		12.15	0.54						0.50																11.11	91.48%
40-16		12.15	0.29						1.08																10.28	84.58%
40-17		12.17																							11.57	95.07%
40-18		12.17																							11.73	96.43%
40-19		12.17																							12.10	99.46%
40-20		12.53								0.01															11.44	91.29%
40-21		12.20							2.61	3.53															4.33	35.50%
40-22		12.40							3.89	0.94															7.38	59.51%
40-23		12.15							0.01																11.35	93.45%
40-24		12.09																							0.00	0.00%
40-25		12.14						0.80	2.43																7.23	59.55%
40-26		12.10								2.24															8.19	67.72%
40-27		12.15	0.82																						2.82	23.21%
40-28		12.08	0.54						0.34																11.21	92.78%
40-29		5.69	0.80																						2.31	40.60%
40-30		0.84																							0.84	100.00%
40-31		3.71							3.71																0.00	0.00%
40-32		12.14							0.63																7.46	61.45%
40-33		12.15							3.56																5.61	46.15%
40-34		59.39							8.04	14.96															16.13	27.15%
SUB-TOTAL		528.72	7.30	2.99	0.00	0.00	1.45	1.45	41.89	26.55	0.74	0.00	17.66	39.15	23.20	9.95	7.16	0.00	0.00	0.00	0.00	0.00	323.28	61.14%		
ROAD RESERVE																										
R1 (Hobbs/Armstrong Road)		6.33																							0.00	
R2 (Wollahra Rise)		3.39																							0.00	
R3 (McGrath Road West)		0.55																							0.00	
R4 (McGrath Road East)		1.32																							0.00	
SUB-TOTAL		11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	
TOTAL PRECINCT		540.31	7.30	2.99	0.00	1.45	1.45	10.59	41.89	26.55	0.74	0.00	17.66	39.15	23.20	9.95	7.16	0.00	0.00	0.00	0.00	0.00	323.28	59.83%		

PROPERTY NUMBER	TOTAL AREA (HECTARES)	TRANSPORT				COMMUNITY			ENCUMBERED LAND AVAILABLE FOR RECREATION						UNENCUMBERED LAND AVAILABLE FOR RECREATION					TOTAL NET DEVELOPABLE AREA (HECTARES)	NET DEVP AREA % OF PRECINCT					
		4 LANE ARTERIAL ROAD / WIDENING	6 LANE ARTERIAL ROAD / WIDENING	ROAD RESERVE NOT AVAILABLE FOR DEVELOPMENT	EXISTING ROAD RESERVE(FUTURE OMR)	RAILWAY CORRIDORS / EASEMENTS	COMMUNITY FACILITIES	GOVERNMENT EDUCATION	NON-GOVERNMENT EDUCATION	POWER / GAS EASEMENT	WATERWAY / DRAINAGE LINE / WETLAND / RETARDING	WATERWAY / DRAINAGE WITHIN WTRP	HERITAGE (ABORIGINAL)	CONSERVATION (TREE RESERVE)	CONSERVATION AREA (GROWING GRASS FROG)	CONSERVATION AREA (GROWING GRASS FROG)	ACTIVE OPEN SPACE	PASSIVE OPEN SPACE	PROPOSED WTRP			ADDITIONAL OPEN SPACE	LAND FOR INDOOR SPORTS			
PROPERTY																										
43-0	0.08																								0.08	100.00%
43-1	12.91																								11.98	92.80%
43-2	12.91																								11.40	88.37%
43-2A	0.77																								0.77	100.00%
43-3	11.84			0.02																					9.57	80.83%
43-4	9.13			0.02																					6.58	72.12%
43-5	8.94																								8.94	100.00%
43-6	11.85																								10.40	87.79%
43-7	11.92																								10.04	84.21%
43-8	9.00																								7.87	87.41%
SUB-TOTAL	89.35	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.64	86.90%	
ROAD RESERVE																										
Alfred Road Reserve	1.47			1.47																					0.00	0.00%
SUB-TOTAL	1.47	0.00	0.00	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
TOTAL PRECINCT	90.82	0.00	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.64	85.49%	
PROPERTY																										
1092-01	19.42				10.63																				8.76	45.11%
1092-02	10.82				3.50																				6.81	62.94%
1092-03	13.28				3.90																				8.04	60.56%
1092-04	18.94				4.98																				13.76	72.66%
1092-05	14.45				3.87																				5.10	35.31%
1092-06	1.34																								0.00	0.00%
1092-07	94.38			0.22																					83.43	88.39%
1092-08	99.08																								72.42	73.09%
1092-09	58.72			5.96																					31.04	52.87%
1092-10	100.46			7.84																					74.19	73.85%
1092-11	50.70			2.21																					40.34	79.56%
1092-12	27.00																								26.50	98.15%
1092-13	22.62																								0.00	0.00%
1092-14	66.26																								0.00	0.00%
SUB-TOTAL	597.47	0.00	16.23	0.00	26.88	0.00	1.40	3.50	9.00	5.61	21.32	0.00	19.71	0.00	23.65	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	370.39	61.99%	
TOTAL PRECINCT	597.47	0.00	16.23	0.00	26.88	0.00	1.40	3.50	9.00	5.61	21.32	0.00	19.71	0.00	23.65	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	370.39	61.99%	

PROPERTY NUMBER	TOTAL AREA (HECTARES)	TRANSPORT				COMMUNITY			ENCUMBERED LAND AVAILABLE FOR RECREATION							UNENCUMBERED LAND AVAILABLE FOR RECREATION					TOTAL NET DEVELOPABLE AREA (HECTARES)	NET DEVT AREA % OF PRECINCT					
		4 LANE ARTERIAL ROAD / WIDENING	6 LANE ARTERIAL ROAD / WIDENING	ROAD RESERVE NOT AVAILABLE FOR DEVELOPMENT	EXISTING ROAD RESERVE(FUTURE OMR)	RAILWAY CORRIDORS / EASEMENTS	COMMUNITY FACILITIES	GOVERNMENT EDUCATION	NON-GOVERNMENT EDUCATION	EASEMENT / POWER / GAS	WATERWAY / DRAINAGE LINE / WETLAND / RETARDING	WATERWAY / DRAINAGE WITHIN WTRP	HERITAGE (ABORIGINAL)	CONSERVATION (TREE RESERVE)	CONSERVATION AREA (GROWLING GRASS FROG)	CONSERVATION AREA (GROWLING GRASS FROG)	CONSERVATION AREA (GROWLING GRASS FROG) WITHIN WTRP	ACTIVE OPEN SPACE	PASSIVE OPEN SPACE	PROPOSED WTRP			ADDITIONAL OPEN SPACE	LAND FOR INDOOR SPORTS			
PROPERTY																											
10921-01	45.21																								0.00	0.00%	
10921-02	45.48		0.10		0.81																			4.51	35.34	77.70%	
10921-03	0.31				0.31																				0.00	0.00%	
10921-04	55.36				12.10																			1.94	29.09	52.56%	
10921-05	1.78				1.78																				0.00	0.00%	
10921-06	4.86				3.88																				0.00	0.00%	
SUB-TOTAL	153.00	0.00	0.10	0.00	18.88	0.00	0.00	0.00	0.00	0.52	62.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51	1.94	0.00	64.43	42.11%
ROAD RESERVE																											
R1 = Ballian Road	7.62			7.62																						0.00	
SUB-TOTAL	7.62	0.00	0.00	7.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	
TOTAL PRECINCT	160.63	0.00	0.10	7.62	18.88	0.00	0.00	0.00	0.00	0.52	62.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51	1.94	0.00	64.43	40.11%
PROPERTY																											
10931-01	130.15		7.57																							100.63	77.32%
10931-02	130.03				6.13																					101.67	78.19%
10931-03	41.37				25.81																					15.56	37.62%
SUB-TOTAL	301.55	0.00	7.57	0.00	31.93	0.00	0.60	3.50	0.00	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.13	5.95	0.00	217.87	72.25%	
ROAD RESERVE																											
R1 = Black Forest Road	1.92			1.92																						0.00	
SUB-TOTAL	1.92	0.00	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	
TOTAL PRECINCT	303.47	0.00	7.57	1.92	31.93	0.00	0.60	3.50	0.00	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.13	5.95	0.00	217.87	71.79%	
TOTAL PSP AREA	2702.499	17.301	54.168	34.218	100.088	135.884	6.300	49.700	30.999	6.128	230.214	26.546	2.322	0.090	71.775	39.155	109.232	51.020	7.164	8.000	6.248	1957.452	65.00%				

8.2 Appendix 2 – External Apportionment

Table 13 External Apportionment

DCP PROJECT NUMBER	MANOR LAKES DCP	WYNDHAM NORTH DCP	MAMBOURIN EAST DCP	MELBOURNE WATER DSS	PREVIOUS SECTION 173 AGREEMENTS / EXISTING COMMUNITY
RD-01			10%		
RD-02			10%		
RD-03			10%		
RD-04			10%		
RD-06A					50%
RD-06B					43%
RD-09			10%		
IN-01A			10%		
IN-01B			10%		
IN-02A			10%		
IN-02B			10%		
IN-03			10%		
IN-04			10%		
IN-05			10%		
IN-06			10%		
IN-07			10%		
IN-08A			10%		
IN-08B	42%				16%
IN-09A			10%		
IN-09B	50%				
IN-10			10%		
IN-11			10%		
IN-18B					50%
IN-24B					30%
IN-25B	50%				
IN-31			10%		
IN-32					50%
BR-01			10%		
BR-02			10%		
BR-03			10%		
BR-04			10%		
BR-05			10%		
BR-08	8%				39%
BR-09	10%	50%			
BR-10		50%			
BR-14				59%	
BR-16				80%	
BR-17			10%		
BR-18			10%		
BR-19			10%		
BR-20					75%

DCP PROJECT NUMBER	MANOR LAKES DCP	WYNDHAM NORTH DCP	MAMBOURIN EAST DCP	MELBOURNE WATER DSS	PREVIOUS SECTION 173 AGREEMENTS / EXISTING COMMUNITY
BR-22		50%			
CO-05	82%				
CO-06	82%				
CO-07	50%				
CO-12					75%
AR-09	82%				
AR-10	82%				
AR-11	75%				
AR-12	72%				
AR-14	9%				
AR-15	6%				
AR-16	3%				

8.3 Appendix 3 – Finance Adjustment

Wyndham West DPC Finance Charge

MPA

In order to assist with the timely provision of critical infrastructure items early in the life of the DCP It has been determined that a supplementary finance charge will be applied to the Wyndham West DCP in addition to the nominal Development Infrastructure Levy amounts for each Charge Area.

This finance charge neutralises the cost of borrowed funds required to provide for these critical infrastructure items early in the life of the DCP, at a time when funds for these items have not yet been fully collected for via levies.

The Wyndham City Council and MPA determined that the following items are to be designated as priority infrastructure items which generate the need for a finance charge. It is expected that each of these items would generally be delivered by Wyndham City Council. Where a developer provides one of these items as Works In Kind they will be eligible for the finance credit for that item.

TABLE 14: Priority Infrastructure Items

RD-01	IN-17
RD-06B	IN-31
RD-07A	BR-01
RD-07B	BR-08
RD-07C	BR-09
IN-15	BR-14
IN-16	BR-17
IN-16	BR-18

PROJECTING DCP INCOME AND EXPENDITURE

In order to estimate an appropriate finance charge a projection of both income and expenditure for the life of the DCP has been determined by Wyndham City Council and the MPA in consultation with Urban Enterprise.

A projection of DCP income has been determined by applying the nominal levy amount (before finance charge adjustment) to the projected demand units for each Charge Area based upon an indicative timeline of development. The indicative timeline of development for each Charge Area within the DCP is given in Table 15.

TABLE 15: Demand Units Developed

	TOTAL	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
CA 1	956.9	2.67	2.67	2.67	13.14	14.41	19.50	21.45	24.25	22.88	27.38	27.81	28.65
CA 2	91.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CA 3	224.9	0.00	2.78	2.78	2.78	4.03	11.80	8.58	8.16	6.81	8.06	8.48	9.31
CA 4	106.4	0.00	0.00	2.67	2.67	10.70	12.89	9.55	6.47	3.22	1.09	1.28	1.64
CA 5	77.6	0.00	3.21	3.21	3.21	3.61	5.18	4.17	4.03	3.61	4.00	3.04	1.18
CA 6	266.9	9.41	9.41	12.54	15.68	15.68	18.82	21.95	21.95	21.95	21.95	21.95	21.95
Total	1724.1	12.08	18.08	23.89	37.49	48.44	68.18	65.71	64.86	58.47	62.48	62.57	62.73
		Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24

CA 1	28.65	28.65	36.96	40.92	47.03	48.12	48.12	48.12	49.03	49.43	48.15	48.15
CA 2	0.00	0.00	0.00	0.00	11.25	10.01	10.01	10.01	10.01	10.01	10.01	10.01
CA 3	9.31	9.31	9.16	13.05	10.34	6.23	6.23	6.23	5.46	7.48	6.23	6.23
CA 4	1.64	1.64	1.57	3.28	2.26	2.73	2.73	2.73	2.39	3.28	2.73	2.73
CA 5	1.18	1.18	1.14	2.37	1.63	1.97	1.97	1.97	1.73	2.37	1.97	1.97
CA 6	21.95	21.95	9.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	62.73	62.73	58.61	59.61	72.51	69.06	69.06	69.06	68.61	72.56	69.10	69.10
	Year	Year	Year	Year	Year							
	25	26	27	28	29							
CA 1	48.15	50.11	51.23	39.07	39.46							
CA 2	10.01	0.00	0.00	0.00	0.00							
CA 3	6.23	4.99	6.38	15.35	23.06							
CA 4	2.73	2.18	2.80	6.73	10.10							
CA 5	1.97	1.58	2.02	4.86	7.29							
CA 6	0.00	0.00	0.00	0.00	0.00							
Total	69.10	58.86	62.43	66.01	79.92							

Expenditure has been determined by projecting the likely provision date of each of the infrastructure items within the DCP. The projected timing of provision for each infrastructure item has been based on best estimates at this point in time, however these may change as per Section 6.1.

CALCULATION OF FINANCE ADJUSTMENT

In determining the finance charge adjustment firstly the stream of levy income allocated to the finance charge designated items was separated from the stream of levy income allocated to non-finance charge designated items. These levy streams were allocated against the projected costs of infrastructure items for each year to determine an annual cash flow for both 'finance' and 'non-finance' categories of infrastructure.

It was then assumed that where projected expenditure for finance charge designated items exceeds the levy income available for finance charge designated items in a year; funds were to be borrowed at the standard rate of 6% per annum.

Where, and only where, the projected annual levy income stream for non-finance designated items is greater than the capital expenditure required for that year, the excess funds were to be re-allocated towards loan payments on finance charge designated items.

Modelling shows that using this method of reallocation of excess funds from non-finance charge designated items to pay down the interest costs of finance charge allocated items, the principle and interest is paid down on all finance charge designated items after approximately 15 years.

The total present value of the interest stream on finance charge designated items was then determined and divided by the total number of demand units within the DCP area to determine the finance charge required. This finance charge amount neutralises the loss of funds from the non-finance charge designated items, meaning that there is still the same relative level of funding for non-finance designated items as before the reallocation of excess funds to pay down the finance charge designated items.

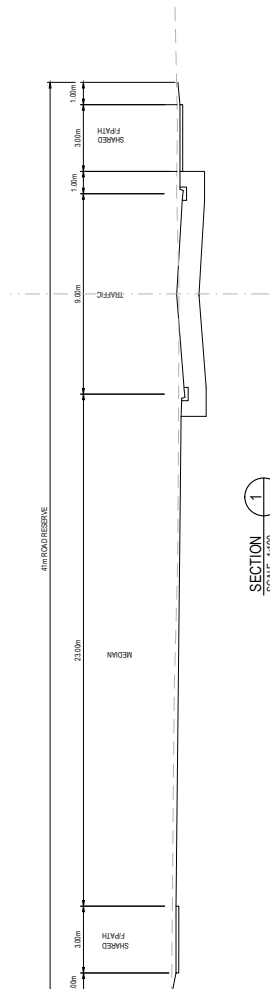
8.4 Appendix 4 – Cost Sheets

8.4.1 Road Cost Sheets

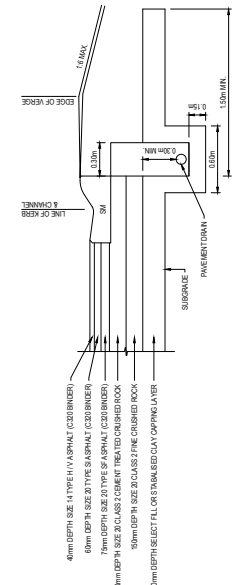
INFRASTRUCTURE OPINION OF COST						
Item	Description	Quantity	Unit	Rate (plant)	Sub Total (excl GST)	
PAVING WORKS						
1.00	Excavation	14.90	m ³	30.00	\$ 447.00	
1.02	Trim and prepare subgrade to receive sub-base	12.20	m ²	7.60	\$ 92.72	
1.03	Spread and Compact Fill On-site	1.60	m ³	8.80	\$ 14.08	
1.04	Fill (Density etc.)	0.10	Item	140.00	\$ 14.00	
CONCRETE WORKS						
2.01	Kerb & Channel (S101, S102 & S103)	2.00	Lm	50.00	\$ 100.00	
2.02	Formwork	2.00	m ²	10.00	\$ 20.00	
2.03	Striped Pavement (150mm Thick, 100kg/m ³)	1.00	m ²	300.00	\$ 300.00	
PAVEMENT WORKS						
3.01	40mm Thick Asphalt (wearing course)	0.00	m ²	181.00	\$ 0.00	
3.02	20mm Thick Asphalt (intermediate course)	0.00	m ²	31.70	\$ 0.00	
3.03	20mm Thick Asphalt (base course)	0.00	m ²	30.00	\$ 0.00	
3.04	150mm GCR Base	0.00	m ²	13.00	\$ 0.00	
3.05	150mm GCR Base	10.20	m ²	13.00	\$ 132.60	
3.06	150mm GCR Base	10.20	m ²	9.00	\$ 91.80	
3.07	200mm Sub-base Course	12.20	m ²	6.00	\$ 73.20	
3.08	Subgrade Improvement (above 20% of area)	2.40	m ²	13.40	\$ 32.16	
DRAINAGE WORKS						
4.01	150mm dia RCP (curb and backfill)	2.40	m	21.50	\$ 51.60	
4.02	150mm dia RCP (curb and backfill)	1.20	m	24.00	\$ 28.80	
4.03	150mm dia RCP (curb and backfill)	1.20	m	24.00	\$ 28.80	
4.04	Broken and Connection to Existing Drainage	0.00	Item	1,500.00	\$ 0.00	
SIGN AND LIMEWORK						
5.01	Lime work	3.00	Lm	7.50	\$ 22.50	
5.02	Sign	0.01	No.	600.00	\$ 6.00	
ELECTRICAL WORKS						
6.01	Street Light poles @ 5m spacing	0.02	No.	6,500.00	\$ 130.00	
6.02	Street Light cabling and conduit	1.00	Lm	80.00	\$ 80.00	
LANDSCAPE WORKS						
7.01	Landscaping (grass and turf only)	20.00	m ²	8.50	\$ 170.00	
7.02	Landscaping (grass and turf only)	0.10	No.	350.00	\$ 35.00	
VEGETATION PROTECTION						
8.01	Notes: No allowance for relocation of existing vegetation, Lm rate				\$ -	
					Subtotal	\$ 2,965

Traffic Management 0% \$ 1481.7
 Site Establishment & 0% \$ 74.08
 Survey and Design 0% \$ 1481.7
 Supervision and Project Management 10% \$ 296.50
 Contingency 15% (project management 1% and plant contingencies 14%) \$ 444.75
 GST 10% \$ 296.50
Total Estimated Cost per Linear Meter (incl. GST) \$ 4,189

- NOTES
- As per the site plan.
 - Costs shown are for typical construction rates from similar projects.
 - No allowance has been made for Community Liaison, Cultural Heritage, Road and Rail, and other items.
 - Costing based on GMA Black Rock Road Precinct Structure Plan, Cross-Section 1, as per MTF email 11/12/2012.
 - Pavement design is indicative only, subject to geotechnical investigation and detailed design.
 - Assume landscaping for the width of road reserve excluding roads and pathways.



SECTION 1
SCALE: 1:100
SCALE 1/30 AT ORIGINAL SIZE



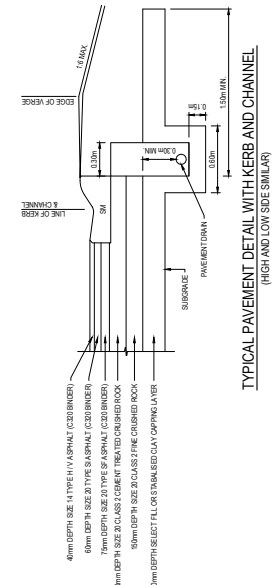
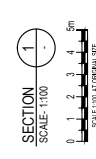
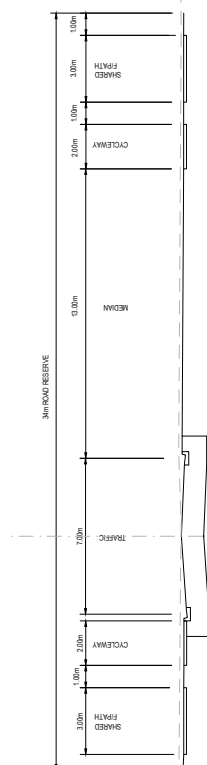
TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HIGH AND LOW SIDE SIMILAR)
SCALE 1:20

	<p>111 St Leonards Drive, St Leonards New South Wales 1588 Ph: 02 9391 1111 Fax: 02 9391 1111 www.mpa.nsw.gov.au</p>	<p>MPA METROPOLITAN PLANNING AUTHORITY PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN DRAWN: JAS SHAW DATE: 11/12/2012</p>	<p>WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST DRAWN: JAS SHAW DATE: 11/12/2012</p>	<p>107553 MIE-R01</p>	<p>B</p>
PRELIMINARY NOT FOR CONSTRUCTION					

Item	Description	Quantity	Unit	Rate (per unit)	Sub Total (excl GST)
1.00	EXCAVATIONS				
1.01	Excavate and dispose of soil	11.50	m ³	30.00	\$ 345.00
1.02	Trim and prepare subgrade to receive sub-base	10.50	m ²	7.60	\$ 79.80
1.03	Spread and Compact Fill On-site	1.50	m ³	8.80	\$ 13.20
1.04	Fill (Density etc.)	0.10	Item	140.00	\$ 14.00
2.00	CONCRETE WORKS				
2.01	Form & Cast (S11, S162 & S163)	2.00	Lm	50.00	\$ 100.00
2.02	Form & Cast (S164)	1.00	Lm	50.00	\$ 50.00
2.03	Form & Cast (S165)	10.00	m ²	51.00	\$ 510.00
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	7.00	m ²	18.10	\$ 126.70
3.02	30mm Thick Asphalt (intermediate course)	7.00	m ²	31.70	\$ 221.90
3.03	20mm Thick Asphalt (base course)	7.00	m ²	33.90	\$ 237.30
3.04	150mm GCR Base	5.00	m ²	13.50	\$ 67.50
3.05	150mm GCR Base	8.00	m ²	9.90	\$ 79.20
3.07	200mm Sub-base Course	10.50	m ²	6.00	\$ 63.00
3.08	Subgrade Improvement (above 20% of area)	2.00	m ²	13.40	\$ 26.80
4.00	DRAINAGE WORKS				
4.01	150mm dia RCP (with backfill)	2.50	Lm	31.50	\$ 78.75
4.02	150mm dia RCP (with backfill)	1.00	m	200.00	\$ 200.00
4.03	275mm dia RCP (with backfill)	1.25	m	240.00	\$ 300.00
4.04	Broken and Connection to Existing Drainage	0.00	Item	1500.00	\$ -
5.00	SIGN AND LINE MARKING				
5.01	Line Marking	3.00	Lm	17.50	\$ 52.50
5.02	Signage	0.01	No.	400.00	\$ 4.00
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 5m spacing	0.02	No.	6500.00	\$ 130.00
7.00	LANDSCAPE WORKS				
7.01	Landscape (plant and turf only)	17.00	m ²	8.00	\$ 136.00
7.02	Landscape (plant and turf only)	0.13	No.	350.00	\$ 45.50
8.00	SERVICE REGULATION / PROTECTION				
8.01	Advance for relocation of existing services	1.00	Lm	1344.00	\$ 1344.00
				Subtotal	\$ 4,114
				Traffic Management 5%	\$ 205.72
				Site Establishment 2.5%	\$ 102.85
				Survey and Design 5%	\$ 205.72
				Supervision and Project Management 10%	\$ 411.40
				Contingency 15%	\$ 617.10
				Total Estimated Cost per Linear Meter (incl GST)	\$ 6,900

NOTES

- As per the site plan.
- Check dimensions (including proposed construction) with local authorities.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Wetland Offsets.
- Costing based on GMA Black Forest Rd Precinct Structure Plan, Cross-Section 2, as per MTF email 11.12.2012.
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Assume landscaping for the extent of road reserve excluding roads and pathways.

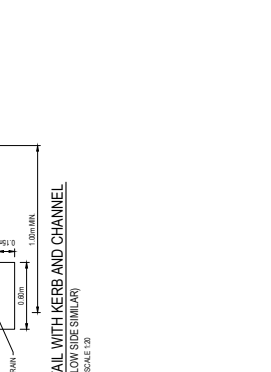
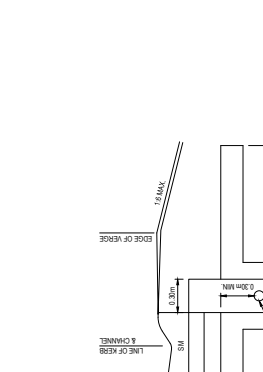


TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL (HIGH AND LOW SIDE SIMILAR) SCALE 1:20

<p>MPA METROPOLITAN PLANNING AUTHORITY 111 St Leonards Drive, St Leonards New South Wales 1588 Tel: 61 61 951 1111 Fax: 61 61 951 1111 www.mpa.nsw.gov.au</p>	<p>PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN DRAWN: AS SHOWN DATE: 10/11/2014 SCALE: 1:1000 SHEET NO: 107553 MIE-R05</p>	<p>MPA METROPOLITAN PLANNING AUTHORITY 111 St Leonards Drive, St Leonards New South Wales 1588 Tel: 61 61 951 1111 Fax: 61 61 951 1111 www.mpa.nsw.gov.au</p>
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INFRASTRUCTURE - CONSTRUCTION OF COST				
Item	Description	Quantity	Unit	Rate (\$/unit)
1.00 ELECTRICAL WORKS				
1.01	170mm Three Phase, 400V, 3 phase, 4 wire, 300mm dia cable	21.25	m	10.00 \$ = 212.50
1.02	Trim and prepare subgrade, 50mm concrete sub-base	16.60	m ²	1.00 \$ = 16.60
1.03	Spread and Compact Fill Overlay	2.15	m ²	8.00 \$ = 17.20
1.04	Trees (Birney etc.)	0.20	item	140.00 \$ = 28.00
2.00 CONCRETE WORKS				
2.01	Rein & Formwork (SM, 150x150x100)	4.00	unit	52.00 \$ = 208.00
2.02	Rein & Formwork (SM, 150x150x100)	4.00	unit	52.00 \$ = 208.00
2.03	Standard Pavement - 150mm thick, reinforced	6.00	m ²	51.00 \$ = 306.00
3.00 PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	11.20	m ²	18.10 \$ = 202.72
3.02	60mm Thick Asphalt (intermediate course)	11.20	m ²	31.70 \$ = 355.04
3.03	75mm Thick Asphalt (base course)	11.20	m ²	33.00 \$ = 369.60
3.04	100mm Thick Asphalt (base course)	11.20	m ²	35.00 \$ = 391.00
3.05	100mm FCR Base	16.60	m ²	13.00 \$ = 215.80
3.06	100mm FCR Base	16.60	m ²	9.00 \$ = 149.40
3.07	200mm Sieved Sub-base Course	16.60	m ²	6.00 \$ = 99.60
3.08	Subgrade improvement (allow 20% of area)	3.20	m ²	13.40 \$ = 42.88
4.00 DRAINAGE WORKS				
4.01	100mm dia (100mm depth)	1.20	unit	31.50 \$ = 37.80
4.02	100mm dia (100mm depth)	0.00	unit	520.00 \$ = 0.00
4.03	375mm dia (RC27 (with backfill))	2.40	m	240.00 \$ = 576.00
4.04	375mm dia (RC27 (with backfill))	0.00	m	200.00 \$ = 0.00
4.05	Backfill and Connection to Existing Drainage	0.00	item	1000.00 \$ = 0.00
5.00 SIGN AND LIGHTING WORKS				
5.01	Signposting	6.00	unit	1.75 \$ = 10.50
5.02	Signposting	0.70	unit	400.00 \$ = 280.00
6.00 ELECTRICAL WORKS				
6.01	Street Light poles @ 50mm spacing	0.02	No.	6000.00 \$ = 120.00
6.02	Street Lighting cabling and conduit	1.00	unit	80.00 \$ = 80.00
7.00 LANDSCAPE WORKS				
7.01	Landscaping (ground and turf area)	12.20	m ²	8.20 \$ = 100.20
7.02	Landscaping (ground and turf area)	0.20	No.	350.00 \$ = 70.00
8.00 SERVICE RELIEF VALVE / PROTECTION				
8.01	Allowance for relocation of existing services	0.00	unit	144.00 \$ = 0.00
				Sub-Total \$ 3,993
				Traffic Management 5% \$ 199.65
				Site Establishment 2.5% \$ 99.83
				Survey and Design 1% \$ 39.93
				Supervision and Project Management 1.5% \$ 59.89
				Contingency 1.5% \$ 59.89
				Vegetation 1% \$ 39.93
				Total Estimated Cost per Linear Metre (inc GST) \$ 5,465

NOTES
 1. All works to be completed in accordance with the relevant AS/NZS standards.
 2. Costs shown are typical construction rates from similar projects.
 3. No allowance has been made for Community Liaison, Cultural Heritage, Fences and Plants, New Gully Offsets.
 4. Costs based on GWA Black Forest Rd Precinct Structure Plan, Cross-Section 0a, as per MF email 19.12.2012.
 5. Pavement design is indicative only, subject to geotechnical investigation and detailed design.
 6. Assume landscaping for the extent of road reserve excluding roads and pathways.

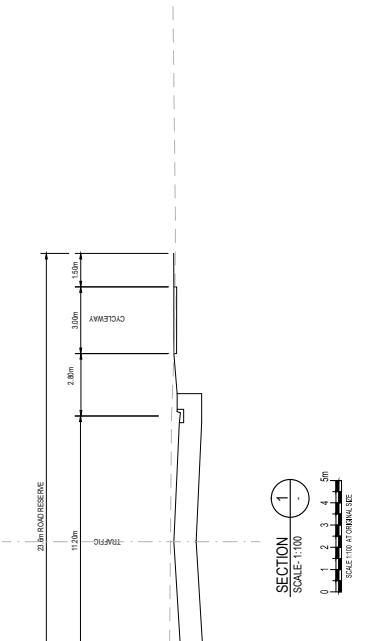
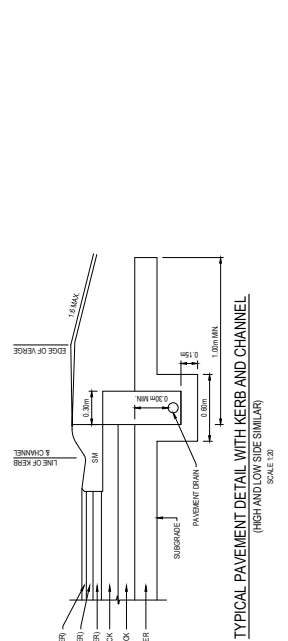


<p>MPA METROPOLITAN PLANNING AUTHORITY 151 Pitt Street, Sydney NSW 2000 Tel: 02 9550 1500 Fax: 02 9550 1501 Email: info@mpa.nsw.gov.au</p>	<p>PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST PRELIMINARY NOT FOR CONSTRUCTION</p>	<p>CLIENT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST PROJECT NO: 107553 DRAWING NO: MIE-R08 DATE: 19/12/2012</p>
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INFRASTRUCTURE CONTRIBUTION OF COST					
RD 23 (Sub-Base) Road Realignment					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl GST)
1.00 EARTHWORKS					
1.01	Excavate, haul and deposit fill	17.64	m ³	10.00	\$ 176.40
1.02	Trim and prepare subgrade to receive sub-base	13.80	m ²	1.00	\$ 13.80
1.03	Spread and Compact Fill Overlay	1.79	m ²	8.00	\$ 14.32
1.04	Trees (Removal etc.)	0.10	Items	140.00	\$ 14.00
2.00 CONCRETE WORKS					
2.01	Rein & Channel (SM, 300x300)	2.00	Lm	52.00	\$ 104.00
2.02	Formwork	4.00	m ²	10.00	\$ 40.00
2.03	Sub-base Pavement - 150mm Thick (retrofit)	4.00	m ²	51.00	\$ 204.00
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	11.20	m ²	18.10	\$ 202.72
3.02	60mm Thick Asphalt (intermediate course)	11.20	m ²	31.70	\$ 355.04
3.03	75mm Thick Asphalt (base course)	11.20	m ²	33.00	\$ 369.60
3.04	100mm FCB Base	13.80	m ²	13.00	\$ 179.40
3.05	150mm FCB Base	13.80	m ²	13.00	\$ 179.40
3.06	150mm FCB Base	13.80	m ²	9.00	\$ 124.20
3.07	200mm S&B Sub-base Course	13.80	m ²	6.00	\$ 82.80
3.08	Subgrade improvement (allow 20% of area)	2.76	m ²	15.40	\$ 42.38
4.00 DRAINAGE WORKS					
4.01	100mm dia (100mm depth)	2.00	Lm	31.00	\$ 62.00
4.02	150mm dia (150mm depth)	0.20	Lm	50.00	\$ 10.00
4.03	175mm dia (175mm depth)	1.20	m	240.00	\$ 288.00
4.04	175mm dia (175mm depth)	0.00	m	200.00	\$ -
4.05	Blanket and Connection to Existing Drainage	0.00	Items	1000.00	\$ -
5.00 SIGN AND LIGHTING					
5.01	Signposting	4.00	Lm	1.75	\$ 7.00
5.02	Lighting	0.70	Items	400.00	\$ 280.00
6.00 ELECTRICAL WORKS					
6.01	Street Light poles @ 50m spacing	0.02	No.	6000.00	\$ 120.00
6.02	Street Lighting cabling and control	1.00	Lm	80.00	\$ 80.00
7.00 LANDSCAPE WORKS					
7.01	Landscaping (seeds and turf etc.)	2.90	m ²	8.20	\$ 23.78
7.02	Planting (trees and shrubs)	0.10	No.	350.00	\$ 35.00
8.00 SERVICE RELIEF / PROTECTION					
8.01	Allowance for relocation of existing services	0.00	Lm	184.00	\$ -
				Sub Total	\$ 3,093
				Traffic Management 5%	\$ 154.65
				Site Establishment 2.5%	\$ 77.32
				Survey and Design 5%	\$ 154.65
				Construction Management 3.5%	\$ 277.93
				Vegetation 3.0%	\$ 92.79
				Vegetation 1%	\$ 30.93
				Contingency 10%	\$ 462.45
				Total Estimated Cost per Linear Metre (incl GST)	\$ 4,341

NOTES

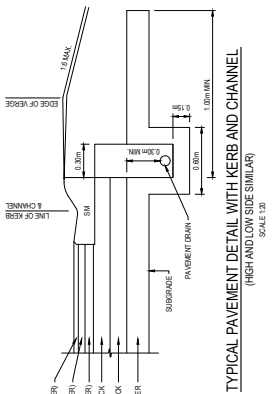
1. All items include GST.
2. Costs shown are typical construction rates from similar projects.
3. No allowance has been made for Community Liaison, Cultural Heritage, Fences and Plants, New Curb Objects.
4. Costs based on GWA Black Forest Rd Precinct Structure Plan, Cross-Section 8a, as per MF email 19.12.2012.
5. Pavement design is indicative only, subject to geotechnical investigation and detailed design.
6. Assume landscaping for the extent of road reserve excluding roads and pathways.



<p>MPA METROPOLITAN PLANNING AUTHORITY</p> <p>15 Pitt Street, Brisbane Tel: 07 3008 1100 Fax: 07 3008 1101 www.mpa.qld.gov.au</p>	<p>PROJECT: METROPOLITAN PLANNING AUTHORITY DRAWN: JAS/STW DATE: 10/11/2014 SCALE: AS SHOWN</p>	<p>PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPTION OF COST SUB-SECTION: REALIGNMENT PROJECT NO: 107553 MIE-R09</p>	<p>DATE: 10/11/2014 DRAWN: JAS/STW DATE: 10/11/2014 SCALE: AS SHOWN</p>
<p>PRELIMINARY NOT FOR CONSTRUCTION</p>		<p>DATE: 10/11/2014 DRAWN: JAS/STW DATE: 10/11/2014 SCALE: AS SHOWN</p>	

INFRASTRUCTURE COMPONENT OF COST				
Item	Description	Quantity	Unit	Rate (€/unit)
ROADWORKS				
1.00	100m ² of 150mm thick Asphalt (in intermediate course)	15.67	m ²	30.00
1.02	Trim and prepare subgrade to receive sub-base	11.00	m ²	1.00
1.03	Spread and Compact Fill Overlay	1.56	m ²	8.00
1.04	Trees (Birch) etc.	0.10	item	140.00
CONCRETE WORKS				
2.01	Rein & Concrete (SM) (S10 & S20)	2.00	Lm	52.00
2.02	Formwork	4.00	m ²	15.00
2.03	Standard Pavement - 150mm thick reinforced	6.00	m ²	51.00
PAVEMENT WORKS				
3.00	40mm Thick Asphalt (wearing course)	9.30	m ²	18.10
3.02	60mm Thick Asphalt (intermediate course)	9.30	m ²	31.70
3.03	75mm Thick Asphalt (base course)	9.30	m ²	33.90
3.04	150mm FCR Base	11.00	m ²	13.50
3.05	150mm FCR Base	11.00	m ²	9.00
3.06	150mm Sealed Sub-base Course	11.00	m ²	6.00
3.07	Subgrade improvement (allow 20% of area)	2.38	m ²	15.40
DRAINAGE WORKS				
4.00	100mm dia (100mm peak)	2.50	Lm	31.20
4.01	100mm dia (100mm peak)	0.20	Lm	52.00
4.02	150mm dia (150mm peak)	1.20	m	240.00
4.03	150mm dia (150mm peak)	1.20	m	240.00
4.04	150mm dia (150mm peak)	0.00	m	200.00
4.05	Blanket and Connection to Existing Drainage	0.00	item	1000.00
SIGN AND LIGHTING				
5.00	Signposting	3.00	Lm	1.75
5.01	Signposting	0.70	item	400.00
ELECTRICAL WORKS				
6.00	Street Light poles @ 50m spacing	0.02	No.	6000.00
6.01	Street Light poles @ 50m spacing	1.00	Lm	80.00
LANDSCAPE WORKS				
7.00	Landscaping (topsoil and turf etc)	0.70	m ²	8.20
7.01	Landscaping (topsoil and turf etc)	0.10	No.	350.00
SEWERAGE COLLECTION / PROTECTION				
8.00	Allowance for education of existing services	1.00	Lm	144.00
8.01	Allowance for education of existing services			
Sub-Total				€ 42,617
Traffic Management 5%				€ 2,130.84
Site Establishment 2.5%				€ 1,065.42
Survey and Design 5%				€ 2,130.84
Construction Management 3%				€ 1,278.51
Vat Road Fees 1%				€ 426.17
Total Estimated Cost per Linear Metre (inc. GST)				€ 53,649

- NOTES
1. No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna/ NW, Countryside.
 2. Costs shown are typical construction rates from similar projects.
 3. No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna/ NW, Countryside.
 4. Costs based on GMA Black Forest Rd Proposed Structure Plan, Cross-Sections 5, as per MT email 18.12.2012
 5. Pavement design is indicative only, subject to geotechnical investigation and detailed design.
 6. Assume landscaping for the extent of road reserve excluding roads and pathways.



MPA METROPOLITAN PLANNING AUTHORITY

15-17, The Quadrant, Dublin 2

Tel: 01 873 8151

Fax: 01 873 8150

www.mpa.ie

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN

INFRASTRUCTURE OPTION OF COST

CLIENT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN

DATE: 10/01/2014

SCALE: AS SHOWN

PROJECT NO: 107553

REVISION: A

PRELIMINARY

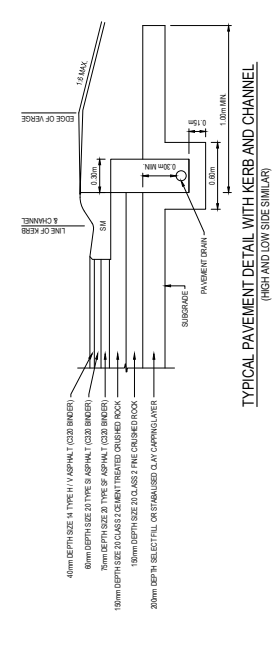
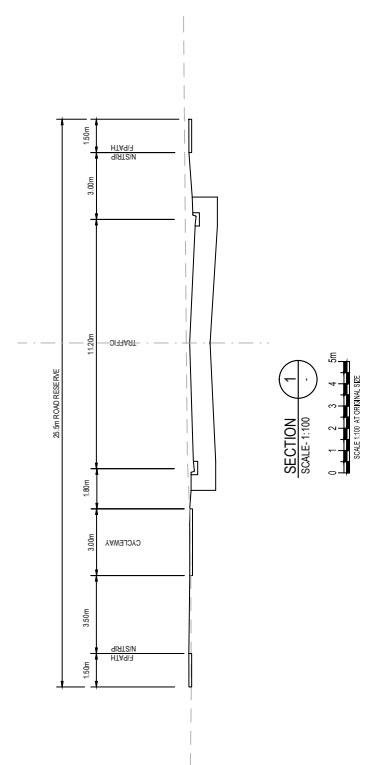
NOT FOR CONSTRUCTION

MINOR MATERIALS - SUMMARY OF COST					
Item	Description	Quantity	Unit	Rate (Rund)	Sub Total (\$ over GST)
1.00 EARTHWORKS					
1.01	Excavate and transport off site	17.24	m3	31.02	\$ 534.20
1.02	Fill and compact subgrade to receive sub-base	13.80	m2	1.60	\$ 220.80
1.03	Spread and Compact Fill Overlay	1.79	m3	8.85	\$ 15.79
1.04	Form (quantity etc.)	0.10	Item	140.00	\$ 14.00
2.00 CONCRETE WORKS					
2.01	Form & Concrete (S107, S303)	2.00	Lm	25.00	\$ 50.00
2.02	Form & Concrete (S107, S303)	2.00	Lm	25.00	\$ 50.00
2.03	Form & Concrete (S107, S303)	6.00	m2	51.00	\$ 306.00
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	11.20	m2	18.10	\$ 202.72
3.02	60mm Thick Asphalt (intermediate course)	11.20	m2	31.70	\$ 355.04
3.03	75mm Thick Asphalt (base course)	11.20	m2	33.80	\$ 378.56
3.04	150mm GFCB Base	13.80	m2	13.80	\$ 189.96
3.05	150mm GCR Base	13.80	m2	13.80	\$ 189.96
3.06	150mm GCR Base	13.80	m2	13.80	\$ 189.96
3.07	200mm Select Sub-base Course	13.80	m2	6.00	\$ 82.80
3.08	Subgrade Improvement (allow 20% of area)	2.70	m2	13.40	\$ 36.18
4.00 DRAINAGE WORKS					
4.01	150mm dia. (80m x 80m)	2.00	Lm	21.50	\$ 43.00
4.02	150mm dia. (80m x 80m)	2.00	Lm	21.50	\$ 43.00
4.03	275mm dia. RCP (curbed rock backfill)	1.20	m	240.00	\$ 288.00
4.04	275mm dia. RCP (with backfill)	0.00	m	200.00	\$ -
4.05	Block-in and Connection to Existing Drainage	0.00	Item	150.00	\$ -
5.00 SIGN AND LIMEWORKS					
5.01	Lime marking	4.00	Lm	1.75	\$ 7.00
5.02	Sign	0.01	No.	400.00	\$ 4.00
6.00 ELECTRICAL WORKS					
6.01	Street Light poles @ 20m spacing	0.02	No.	6500.00	\$ 130.00
6.02	Street Light cabling and control	1.00	Lm	80.00	\$ 80.00
7.00 LANDSCAPE WORKS					
7.01	Landscape (council area for only)	8.30	m2	3.35	\$ 27.83
7.02	Landscape (council area for only)	0.13	No.	300.00	\$ 39.00
8.00 SERVICE RELOCATION / PROTECTION					
8.01	Allowance for relocation of existing services	1.00	Lm	134.00	\$ 134.00
					\$ 6494.87

Traffic Management 5%	\$ 224.74
Site Establishment 2.2%	\$ 124.88
Survey and Design 5%	\$ 224.74
Construction Management 10%	\$ 649.49
Construction Contingency 10%	\$ 649.49
Construction Contingency 15%	\$ 974.23
Construction Contingency 15% (over GST)	\$ 630.00
Total Estimated Cost per Linear Meter (incl. GST)	\$ 6,300

NOTES

- Goods delivered along typical construction route from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Fines and Penalties / Aid Grant Offsets.
- Costing based on GMA Black Forest Road Precinct Structure Plan, Cross-Section 4, as per M1 email to 12.20.12
- Payment design is indicative only, subject to geotechnical investigation and detailed design.
- Assume landscaped for the extent of road reserve excluding roads and pathways.

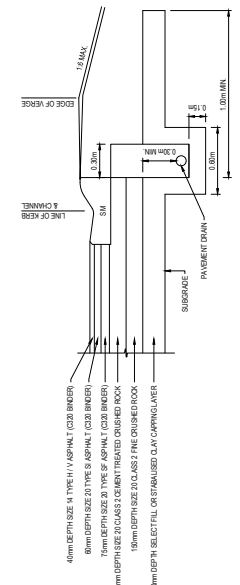
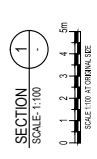
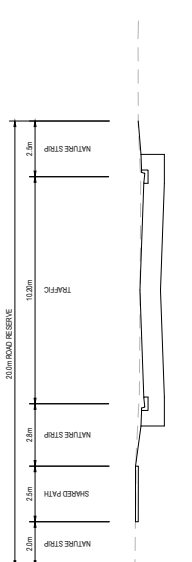


<p>MPA METROPOLITAN PLANNING AUTHORITY</p> <p>151-155 Macquarie Street, Sydney NSW 2000 Phone: (61) 2 955 5200 Fax: (61) 2 955 5201 Email: info@mpa.nsw.gov.au</p>	<p>PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN 2014</p> <p>INFRASTRUCTURE OPINION OF COST</p> <p>FILE: BLACK FOREST ROAD WEST</p> <p>DATE: 10/7/2014</p> <p>SCALE: A</p>	<p>APPROVED: [Signature]</p> <p>DATE: 10/7/2014</p> <p>NOT FOR CONSTRUCTION</p> <p>1075563 MIE-R11</p>
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INFRASTRUCTURE - SUMMARY OF COST					
RC 14 (Woolbar Base)					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl GST)
1.00 EARTHWORKS					
1.01	Excavate, fill and compact all soils	16.64	m ³	50.00	\$ 832.00
1.02	Trim and prepare subgrade to receive sub-base	12.80	m ²	1.00	\$ 12.80
1.03	Spread and Compact Fill Overlay	1.86	m ²	8.00	\$ 14.88
1.04	Trees (Birney etc.)	0.10	Items	140.00	\$ 14.00
2.00 CONCRETE WORKS					
2.01	Keen & Charney (SM) (S&K & SAN)	2.88	Lm	52.00	\$ 150.24
2.02	Keen & Charney (SM) (S&K & SAN)	2.88	Lm	52.00	\$ 150.24
2.03	Shaped Pavement - 150mm thick reinforced concrete	2.50	m ²	51.00	\$ 127.50
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	19.20	m ²	18.10	\$ 346.32
3.02	60mm Thick Asphalt (intermediate course)	19.20	m ²	31.70	\$ 608.64
3.03	75mm Thick Asphalt (base course)	19.20	m ²	33.00	\$ 632.40
3.04	150mm Thick Asphalt (base course)	12.80	m ²	13.00	\$ 166.40
3.05	150mm CTCR Base	12.80	m ²	13.00	\$ 166.40
3.06	150mm CTCR Base	12.80	m ²	9.00	\$ 115.20
3.07	200mm Select Sub-base Course	12.80	m ²	6.00	\$ 76.80
3.08	Subgrade improvement (allow 20% of area)	2.56	m ²	15.40	\$ 39.42
4.00 DRAINAGE WORKS					
4.01	375mm dia (RC27) (with backfill)	2.56	Lm	31.10	\$ 80.62
4.02	375mm dia (RC27) (with backfill)	0.08	Lm	592.00	\$ 47.36
4.03	375mm dia (RC27) (with backfill)	1.25	m	240.00	\$ 300.00
4.04	375mm dia (RC27) (with backfill)	0.00	m	200.00	\$ -
4.05	Inlet and Connection to Existing Drainage	0.00	Items	1000.00	\$ -
5.00 SIGN AND LINES MARKING					
5.01	Paint Marking	3.00	Lm	1.75	\$ 5.25
5.02	Paint Marking	0.70	Lm	400.00	\$ 280.00
6.00 ELECTRICAL WORKS					
6.01	Street Light poles @ 50m spacing	0.02	No.	6000.00	\$ 120.00
6.02	Street Lighting cabling and conduit	1.00	Lm	80.00	\$ 80.00
7.00 LANDSCAPE WORKS					
7.01	Landscaping (ground and turf etc.)	2.50	m ²	8.20	\$ 20.50
7.02	Landscaping (ground and turf etc.)	0.14	No.	350.00	\$ 49.70
8.00 SERVICE RELIEF VALVE / PROTECTION					
8.01	Services				\$ -
				Sub-Total	\$ 3,886

Traffic Management 5%	\$ 141.31
Site Establishment 2.5%	\$ 70.65
Survey and Design 5%	\$ 141.31
Construction Management 3.5%	\$ 255.30
Construction Contingency 3.5%	\$ 255.30
10% Road Allowance	\$ 222.22
Total Estimated Cost per Linear Metre (incl GST)	\$ 4,233.3
Contingency 10%	\$ 423.33
Sub-Total	\$ 3,886

Notes:
 1. No allowance has been made for Community Liaison, Cultural Heritage, Fences and Planting / New Gully Obstacle.
 2. Costs shown are typical construction rates from similar projects.
 3. No allowance has been made for Community Liaison, Cultural Heritage, Fences and Planting / New Gully Obstacle.
 4. Costs based on GWA Ballan Rd Proposed Structure Plan, Cross-Section 3, as per AIT formal 19.12.2012
 5. Pavement design is indicative only, subject to geotechnical investigation and detailed design.
 6. Assume landscaping for the extent of road reserve excluding roads and pathways.



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL (HIGH AND LOW SIDE SIMILAR) SCALE 1:20

MPA METROPOLITAN PLANNING AUTHORITY
 150 Pitt Street, Melbourne VIC 3000
 Tel: 03 9397 8100
 Fax: 03 9397 8101
 GPO Box 9748 Melbourne VIC 3000

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
 INFRASTRUCTURE OPTION OF COST
 DRAWING NO: WOLLBARRE
 PROJECT NO: 107553
 REVISION: A

DATE: 19/04/2014
 DRAWN BY: JAS/DMW
 CHECKED BY: JAS/DMW
 APPROVED BY: JAS/DMW

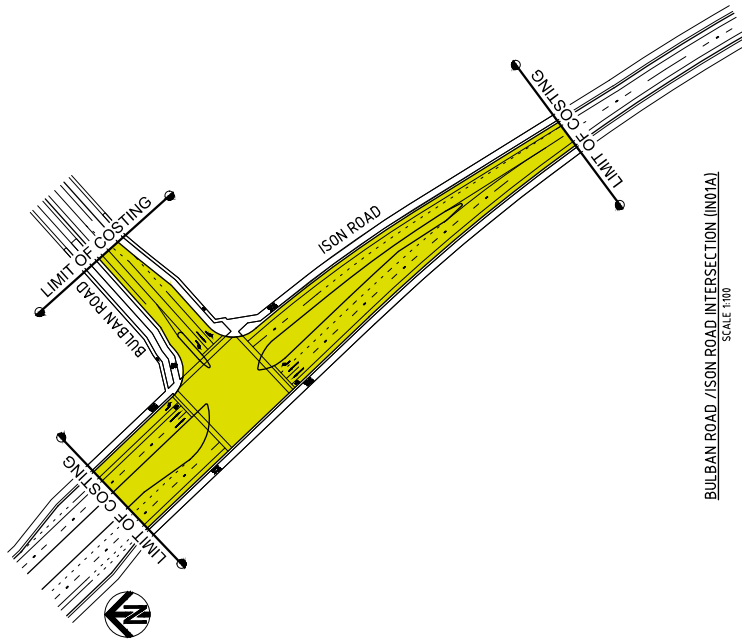
PRELIMINARY
NOT FOR CONSTRUCTION

8.4.2 Intersection Cost Sheets

INFRASTRUCTURE - OPINION OF COST					
IND1A - Bulban Road & Ison Road					
Item	Description	Quantity	Unit	"Rate (\$/unit)"	"Sub Total (\$ excl.GST)"
1.00	EARTHWORKS				
3.01	Excavation incl. and disposal off site	8.311	m ³	30.00	\$249,330.00
3.02	Trim and prepare subgrade to receive sub-base	7.900	m ²	1.60	\$12,640.00
3.03	Spread and Compact Fill Onsite	831	m ³	8.80	\$7,313.68
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00
2.00	CONCRETE WORKS				
2.01	Kerbs & Channel (SM1, SM2 & SM3)	1.097	Lm	52.00	\$57,044.00
2.02	Traffic Islands - 200mm thick reinforced	50	m ²	\$4,000.00	\$4,000.00
2.03	Shared Pathway - 125mm thick reinforced	1.983	m ²	51.00	\$101,133.00
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	6.832	m ²	18.10	\$123,659.20
3.02	60mm Thick Asphalt (intermediate course)	6.832	m ²	31.70	\$216,574.40
3.03	75mm Thick Asphalt (base course)	6.832	m ²	33.90	\$231,604.80
3.04	Prime	7.370	m ²	3.60	\$26,532.00
3.05	150mm CTCR Base	7.370	m ²	13.50	\$99,495.00
3.06	150mm FCR Base	7.370	m ²	9.90	\$72,963.00
3.07	200mm Select Sub-base Course	7.370	m ²	6.00	\$44,220.00
3.08	Subgrade Improvement (allow 20% of area)	1.580	m ²	13.40	\$21,172.00
4.00	DRAINAGE WORKS				
4.01	AG Drain	1.097	Lm	31.50	\$34,555.50
4.02	Drainage Pits (60m spacing)	12.00	No.	2,750.00	\$33,000.00
4.03	375mm dia RCP (crushed rock backfill)	754	m	240.00	\$180,960.00
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00
5.00	SIGN AND LINEMARKING				
5.01	Linemarking (allowance)	1	Item	25,000.00	\$25,000.00
5.02	Regulatory Signage	20	No.	400.00	\$8,000.00
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00
6.02	Traffic Signal Conduit (incl. allowance for pits)	180	Lm	85.00	\$15,300.00
7.00	ELECTRICAL WORKS				
7.01	Street Light poles @ 50m spacing 11	15	No.	6,500.00	\$97,500.00
7.02	Street Lighting cabling and conduit	736	Lm	80.00	\$58,880.00
8.00	LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	3,600	m ²	8.30	\$29,880.00
8.02	Landscaping (trees)	33.53	No.	350.00	\$11,735.50
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00
	Sub-total				\$2,160,492.08
	Traffic Management			5.00%	\$108,024.60
	Site Establishment			2.50%	\$54,012.30
	Survey and Design			5.00%	\$108,024.60
	Supervision and Project Management			9.00%	\$194,444.29
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$70,215.99
	VicRoads Fees			1.00%	\$21,604.92
	Contingency			15.00%	\$324,073.81
	Total Estimated Cost (excl. GST)				\$3,040,892.60

NOTES:

- ALL COSTS EXCLUDE GST.
- COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS.
- PAVEMENT DESIGN IS INDICATIVE ONLY. SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN.
- ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS. WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.

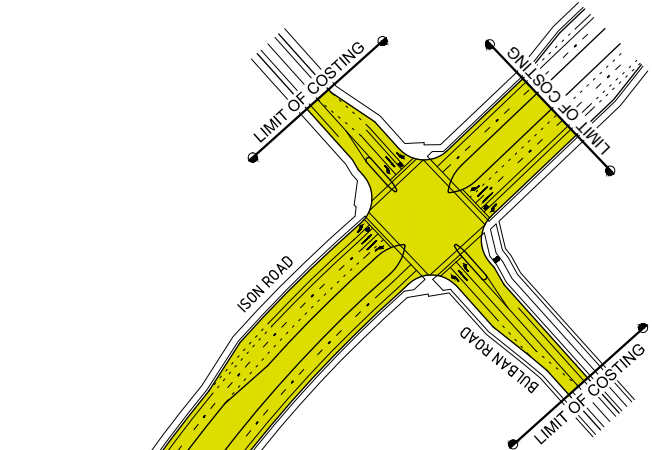


BULBAN ROAD /ISON ROAD INTERSECTION (IN01A)
SCALE 1:100

PROJECT TITLE WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST BULBAN ROAD / ISON ROAD INTERSECTION (IN01A)		PROJECT NUMBER 3004780-00-003-0101	
DRAWING STATUS PRELIMINARY		SCALE AS SHOWN	
DATE 15/04/2014		DATE 15/04/2014	
APPROVED 		APPROVED 	
DRAWN BY ASL		CHECKED BY JP	
DESIGNED BY HG		DESIGN CHECKED BY DB	
PROJECT MANAGER GE		PROJECT DIRECTOR BS	
TITLE BULBAN ROAD / ISON ROAD INTERSECTION (IN01A)		DATE 15/04/2014	
APPROVAL DH8 DH9 DH10		AMENDMENT / ISSUE DESCRIPTION A 15/04/2014 DRAFT ISSUE FOR COMMENT B 10/01/2014 FINAL ISSUE C 10/01/2014 COSTS APPROVED	

INFRASTRUCTURE - OPINION OF COST					
IN01B - Bulban Road & Ison Road					
Item	Description	Quantity	Unit	"Rate (\$/unit)"	"Sub Total (\$ excl GST)"
1.00	EARTHWORKS				
1.01	Excavation incl. and disposal off site	12,914	m3	30.00	\$387,420.00
1.02	Trim and prepare subgrade to receive	11,677	m2	1.60	\$18,683.20
1.03	Spread and Compact Fill Onsite	1,231	m3	8.80	\$11,364.32
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00
2.00	CONCRETE WORKS				
2.01	Kerbs & Channel (SM1, SM2 & SM3)	1,680	Lm	52.00	\$87,360.00
2.02	Traffic Islands - 200mm thick reinforced	100	m2	80.00	\$8,000.00
2.03	Shared Pathway - 125mm thick reinforced	2,880	m2	51.00	\$146,880.00
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	10,873	m2	18.10	\$196,801.30
3.02	60mm Thick Asphalt (intermediate course)	10,873	m2	31.70	\$344,674.10
3.03	75mm Thick Asphalt (base course)	10,873	m2	33.90	\$368,594.70
3.04	Prime	11,677	m2	3.60	\$42,037.20
3.05	150mm CTCR Base	11,677	m2	13.50	\$157,639.50
3.06	150mm PCR Base	11,677	m2	9.90	\$115,602.30
3.07	200mm Select Sub-base Course	11,677	m2	6.00	\$70,062.00
3.08	Subgrade Improvement (allow 20% of area)	2,335	m2	13.40	\$31,294.36
4.00	DRAINAGE WORKS				
4.01	AG Drain	1,680	Lm	31.50	\$52,920.00
4.02	Drainage Pits (60m spacing)	19.00	No.	2,750.00	\$52,250.00
4.03	375mm dia RCP (crushed rock backfill)	1,100	m	240.00	\$264,000.00
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00
5.00	SIGN AND LIMEPAVING				
5.01	Line marking (allowance)	1	Item	35,000.00	\$35,000.00
5.02	Regulatory Signage	32	No.	400.00	\$12,800.00
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00
7.00	ELECTRICAL WORKS				
7.01	Street Light poles @ 50m spacing 11	22	No.	6,500.00	\$143,000.00
7.02	Street Lighting cabling and conduit	1,100	Lm	80.00	\$88,000.00
8.00	LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	4,220	m2	8.30	\$35,026.00
8.02	Landscaping (trees)	37.92	No.	350.00	\$13,272.00
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00
	Sub-total				\$3,094,280.98
	Traffic Management			5.0%	\$154,714.05
	Site Establishment			2.5%	\$77,357.02
	Survey and Design			5.0%	\$154,714.05
	Supervision and Project Management			9.0%	\$278,485.29
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$100,564.13
	Victorians Fees			1.0%	\$30,942.81
	Contingency			15.0%	\$464,142.15
	Total Estimated Cost (excl. GST)				\$4,355,200.48

NOTES:
 1. ALL COSTS EXCLUDE GST.
 2. COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS.
 3. PAVEMENT DESIGN IS INDICATIVE ONLY. SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN.
 4. ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS. WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



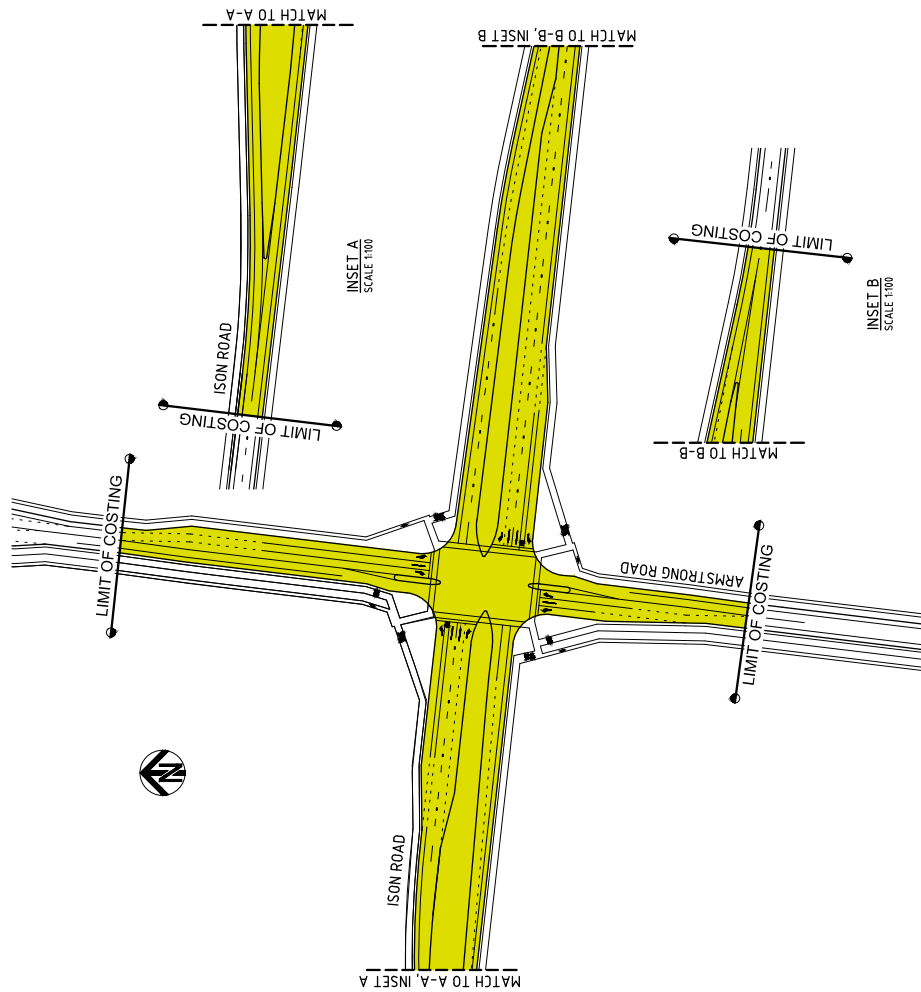
ISON ROAD/BULBAN ROAD INTERSECTION (IN01)
SCALE 1:100

<p>SMC AUSTRALIA PTY LTD 111 HORTON RD, SUITE 101 MELBOURNE VIC 3045 PH 03 9516 0800 FAX 03 9516 1802</p>		<p>MPA METROPOLITAN PLANNING AUTHORITY</p>		<p>PROJECT TITLE WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD/BULBAN ROAD INTERSECTION (IN01B)</p>	
<p>DESIGNER</p>		<p>CLIENT</p>		<p>PROJECT NUMBER 3004-780-00-003-0102</p>	
<p>SCALE AT FULL DRAWING</p> <p>SCALE 1:100</p>		<p>DATE</p>		<p>ISSUE STATUS</p>	
<p>14 Apr 2014</p>		<p>15/13 K</p>		<p>AS SHOWN</p>	
<p>APPROVAL</p> <p>D108 D109 D110</p>		<p>APPROVED</p>		<p>SCALE</p>	
<p>DATE</p> <p>A 27/01/2014 B 10/02/2014 C 10/02/2014</p>		<p>DESCRIPTION</p> <p>FINAL ISSUE FOR COMMENT FINAL ISSUE COSTS APPROVED</p>		<p>SCALE</p>	

INFRASTRUCTURE - OPINION OF COST						
IN02 - Ison Road & Armstrong Road						
Item	Description	Quantity	Unit	Rate (\$/m ²)	Sub Total (\$ excl. GST)	
1.00 EARTHWORKS						
1.01	Excavation incl. and disposal off site	18,136	m ³	30.00	\$544,080.00	
1.02	Trim and prepare subgrade to receive	19,583	m ²	1.60	\$31,332.80	
1.03	sub-base	1,814	m ³	8.80	\$15,959.68	
1.04	Spread and Compact Fill Onsite	1	Item	15,000.00	\$15,000.00	
2.00 CONCRETE WORKS						
2.01	Kerb & Channel (SM4, SM2 & SM3)	2,497	Lm	52.00	\$129,844.00	
2.02	Traffic Islands - 200mm thick reinforced	100	m ²	80.00	\$8,000.00	
2.03	Shared Pathway - 125mm thick reinforced	4,604	m ²	51.00	\$234,804.00	
3.00 PAVEMENT WORKS						
3.01	40mm Thick Asphalt (wearing course)	14,597	m ²	18.10	\$264,205.70	
3.02	60mm Thick Asphalt (intermediate course)	14,597	m ²	31.70	\$462,724.90	
3.03	75mm Thick Asphalt (base course)	14,597	m ²	33.90	\$494,838.30	
3.04	Prime	19,583	m ²	3.60	\$70,498.80	
3.05	150mm CTCR Base	19,583	m ²	13.50	\$264,370.50	
3.06	150mm FCR Base	19,583	m ²	9.90	\$193,871.70	
3.07	200mm Select Sub-base Course	19,583	m ²	6.00	\$117,498.00	
3.08	Subgrade improvement (allow 20% of area)	3,917	m ²	13.40	\$52,482.44	
4.00 DRAINAGE WORKS						
4.01	AG Drain	2,497	Lm	31.50	\$78,655.50	
4.02	Drainage Pits (60m spacing)	27.00	No.	2,750.00	\$74,250.00	
4.03	375mm dia RCP (crushed rock bankfill)	1,660	m	240.00	\$398,400.00	
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00	
5.00 SIGN AND LINES MARKING						
5.01	Line marking (allowance)	1	Item	35,000.00	\$35,000.00	
5.02	Regulatory Signage	32	No.	400.00	\$12,800.00	
6.00 PROFESSIONAL WORKS						
6.01	Traffic Signals (incl. 12yr maintenance fee)	1	No.	380,000.00	\$380,000.00	
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00	
7.00 ELECTRICAL WORKS						
7.01	Street Light poles @ 50m spacing 11	33	No.	6,500.00	\$214,500.00	
7.02	Street Lighting cabling and conduit	1,660	Lm	80.00	\$132,800.00	
8.00 LANDSCAPE WORKS						
8.01	Landscaping (topsoil and turf only)	4,220	m ²	8.30	\$35,026.00	
8.02	Landscaping (trees)	37.92	No.	350.00	\$13,272.00	
9.00 SERVICE RELOCATION / PROTECTION						
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00	
	Sub-total				\$4,290,814.32	
	Traffic Management			5.0%	\$214,540.72	
	Site Establishment			2.5%	\$107,270.36	
	Survey and Design			5.0%	\$214,540.72	
	Supervision and Project Management			9.0%	\$386,173.29	
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$139,451.47	
	VicRoads Fees			1.0%	\$42,908.14	
	Contingency			15.0%	\$643,622.15	
	Total Estimated Cost (excl. GST)				\$6,039,321.16	

NOTES:

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- COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS.
- PAVEMENT DESIGN IS INDICATIVE ONLY. SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN.
- ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS. WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



ISON ROAD/ARMSTRONG ROAD INTERSECTION (IN02)
SCALE 1:100

<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>

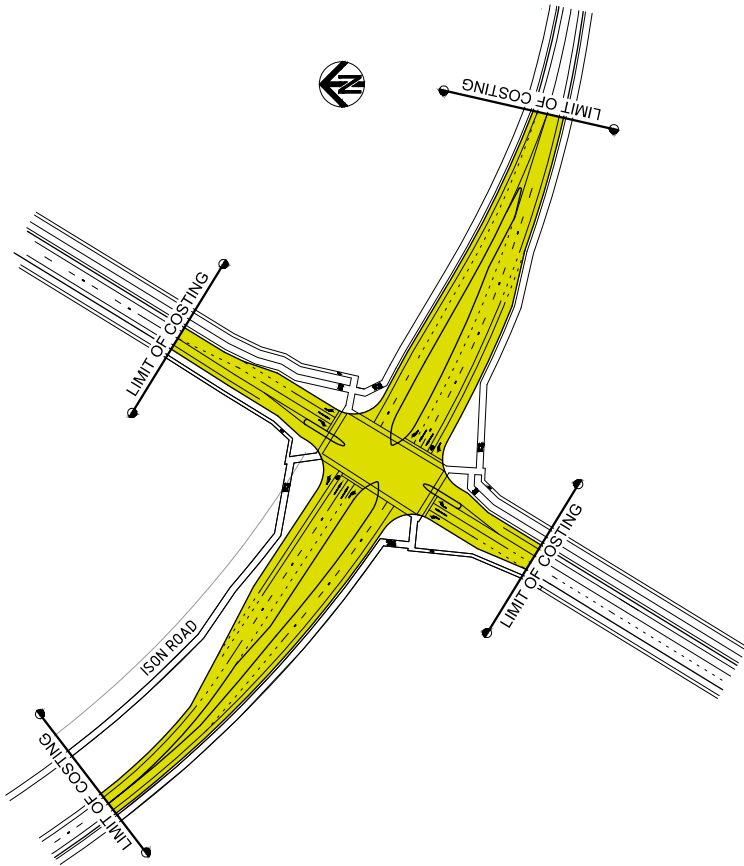
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>

<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>
<p>DATE: 15/03/24</p> <p>APPROVAL:</p> <p>DATE: 15/03/24</p> <p>APPROVED:</p>	<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / ARMSTRONG ROAD INTERSECTION (IN02)</p> <p>SCALE: AS SHOWN PROJECT / DRAWING No.: 3004.780-00-003-0103</p>

INFRASTRUCTURE - OPINION OF COST					
IN03 - Ison Road & Connector					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl GST)
1.00 EARTHWORKS					
1.01	Excavation incl. and disposal off site	14,295	m ³	30.00	\$428,850.00
1.02	Trim and prepare subgrade to receive sub-base	15,716	m ²	1.60	\$25,145.60
1.03	Spread and Compact Fill Onsite	1,430	m ³	8.80	\$12,579.60
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00
2.00 CONCRETE WORKS					
2.01	Kebs & Channel (SMA, SMA2 & SMA3)	2,082	Lm	52.00	\$108,264.00
2.02	Traffic Islands - 200mm thick reinforced	100	m ²	80.00	\$8,000.00
2.03	Shared Pathway - 125mm thick reinforced	4,202	m ²	51.00	\$214,302.00
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	13,987	m ²	18.10	\$253,164.70
3.02	60mm Thick Asphalt (intermediate course)	13,987	m ²	31.70	\$443,387.90
3.03	75mm Thick Asphalt (base course)	13,987	m ²	33.90	\$474,159.30
3.04	Prime	15,716	m ²	3.60	\$56,577.60
3.05	150mm CTC6 Base	15,716	m ²	13.50	\$212,166.00
3.06	150mm FCR Base	15,716	m ²	9.90	\$155,588.40
3.07	200mm Select Sub-base Course	15,716	m ²	6.00	\$94,296.00
3.08	Subgrade improvement (allow 20% of area)	3,143	m ²	13.40	\$42,118.88
4.00 DRAINAGE WORKS					
4.01	AG Drain	2,082	Lm	31.50	\$65,583.00
4.02	Drainage Pits (60m spacing)	27.00	No.	2,750.00	\$74,250.00
4.03	375mm dia RCP (crushed rock backfill)	1,638	m	240.00	\$393,120.00
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00
5.00 SIGN AND LINES MARKING					
5.01	Line marking (allowance)	1	Item	35,000.00	\$35,000.00
5.02	regulatory signage	32	No.	400.00	\$12,800.00
6.00 TRAFFIC SIGNAL WORKS					
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00
7.00 ELECTRICAL WORKS					
7.01	Street Light poles @ 50m spacing 11	27	No.	6,500.00	\$175,500.00
7.03	Street Lighting cabling and conduit	1,390	Lm	80.00	\$111,200.00
8.00 LANDSCAPE WORKS					
8.01	landscaping (topsoil and turf only)	4,220	m ²	8.30	\$35,026.00
8.02	landscaping (trees)	37.92	No.	350.00	\$13,322.00
9.00 SERVICE RELOCATION / PROTECTION					
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00
Sub-total					\$3,855,950.98
Traffic Management					\$192,787.55
Site Establishment					\$96,388.77
Survey and Design					\$192,797.55
Supervision and Project Management					\$947,095.59
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)					\$125,318.41
VicRoads Fees					\$38,559.51
Contingency					\$578,392.65
Total Estimated Cost (excl. GST)					\$5,427,251.00

Note: the right turn lane on Connector Road south extends for 232m. Limits of intersection is 232m to the south

- NOTES:**
- ALL COSTS EXCLUDE GST.
 - COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS.
 - PAVEMENT DESIGN IS INDICATIVE ONLY. SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN.
 - ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS. WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



ISON ROAD /CONNECTOR ROAD INTERSECTION (IN03)
SCALE 1:100

<p>DATE: 14 Apr 2014 15:54</p> <p>SCALE AT 1:100 DRAWING</p> <p>SCALE 1:100</p>		<p>MPA METROPOLITAN PLANNING AUTHORITY</p>	
<p>PROJECT TITLE: WYNDHAM WEST DEVELOPMENT CONTRIBUTIONS PLAN INFRASTRUCTURE OPINION OF COST ISON ROAD / CONNECTOR INTERSECTION (IN03)</p>		<p>PROJECT NUMBER: 3004-780-003-0104</p>	
<p>PROJECT STATUS: PRELIMINARY</p>		<p>DATE: AS SHOWN</p>	
<p>APPROVAL:</p> <p>DRAWN: D048</p> <p>CHECKED: D049</p> <p>ISSUED: D010</p>		<p>DESIGNER: AS/1</p> <p>DRAWN: JP</p> <p>CHECKED: HG</p> <p>ISSUED: DB</p> <p>PROJECT MANAGER: GE</p> <p>PROJECT DIRECTOR: BS</p>	
<p>REVISIONS:</p> <p>A 17/01/2014 DRAFT ISSUE FOR COMMENT</p> <p>B 10/01/2014 FINAL ISSUE</p> <p>C 10/01/2014 COSTS APPROVED</p>		<p>DESIGNER: SM&C</p> <p>SM&C AUSTRALIA PTY LTD</p> <p>111/112 WYNDHAM STREET WYNDHAM VIC 3083</p> <p>PH 03 9516 0885 FAX 03 9516 0882</p>	

INFRASTRUCTURE - OPINION OF COST
IN04 - Ison Road & Connector 7 Road

Item	Description	Quantity	Unit	Rate (Rate)	Sub Total (Excl GST)
1.00	LANDSCAPING				
1.01	Excavation fill and disposal off site	18,000	m3	30.00	540,000
1.02	Trim and prepare subgrade to receive sub-base	14,298	m2	1.60	22,877
1.03	Spread and Compact Fill Overlay	1,960	m3	8.80	16,388
1.04	Trees (Density etc.)	1	Item	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channels (S&T, SAC & S&A)	2,910	Lm	52.00	151,320
2.02	Traffic Islands - 200mm thick subgrade	80	m2	30.00	2,400
2.03	Traffic Islands - 200mm thick subgrade	3,000	m2	51.00	153,000
3.00	PAVEMENT WORKS				
3.01	140mm Thick Asphalt (wearing course)	11,800	m2	18.10	213,580
3.02	100mm Thick Asphalt (intermediate course)	11,800	m2	31.70	374,000
3.03	75mm Thick Asphalt (base course)	11,800	m2	33.80	400,020
3.04	Prime	11,800	m2	3.80	42,480
3.05	150mm C10R Base	14,298	m2	13.50	192,888
3.07	150mm S&B Subgrade	14,298	m2	9.90	141,551
3.08	150mm S&B Subgrade	14,298	m2	11.40	162,995
3.09	150mm S&B Subgrade	2,950	m2	11.40	33,630
4.00	DRAINAGE WORKS				
4.01	AG Drain	2,010	Lm	31.90	63,315
4.02	Drainage Pile (50m spacing)	20	No.	2,700.00	54,000
4.03	1.77mm dia RCP (curbed rock backfill)	1,300	m	240.00	312,000
4.04	1.77mm dia RCP (curbed rock backfill)	0	m	200.00	0
4.05	Reinforcement and Connection to Existing Drainage	2	Item	1,500.00	3,000
5.00	ROAD LIGHTING				
5.01	Recessed Pole (2m height)	1	Item	24,000.00	24,000
5.02	Recessed Pole (2m height)	32	No.	400.00	12,800
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signal (incl. 10yr maintenance fee)	1	No.	300,000.00	300,000
6.02	Traffic Signal (incl. 10yr maintenance fee)	180	Lm	85.00	15,300
7.00	ELECTRICAL WORKS				
7.01	Street Light Pole @ 50m spacing	15	No.	6,500.00	97,500
7.02	Street Lighting cabling and control	800	Lm	80.00	64,000
8.00	LANDSCAPE WORKS				
8.01	Planting (incl. 10yr maint)	0.700	m2	4.30	3.010
8.02	Landscaping @ 150m dia @ 15m	134	No.	300.00	40,200
9.00	SEWER RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	Item	200,000.00	200,000
					Subtotal
					3,728,147

Total Estimated Cost (incl. GST) \$ 6,327,000

Contingency (5%) 316,402

Site Establishment (5%) 186,007

Site Establishment (2%) 74,563

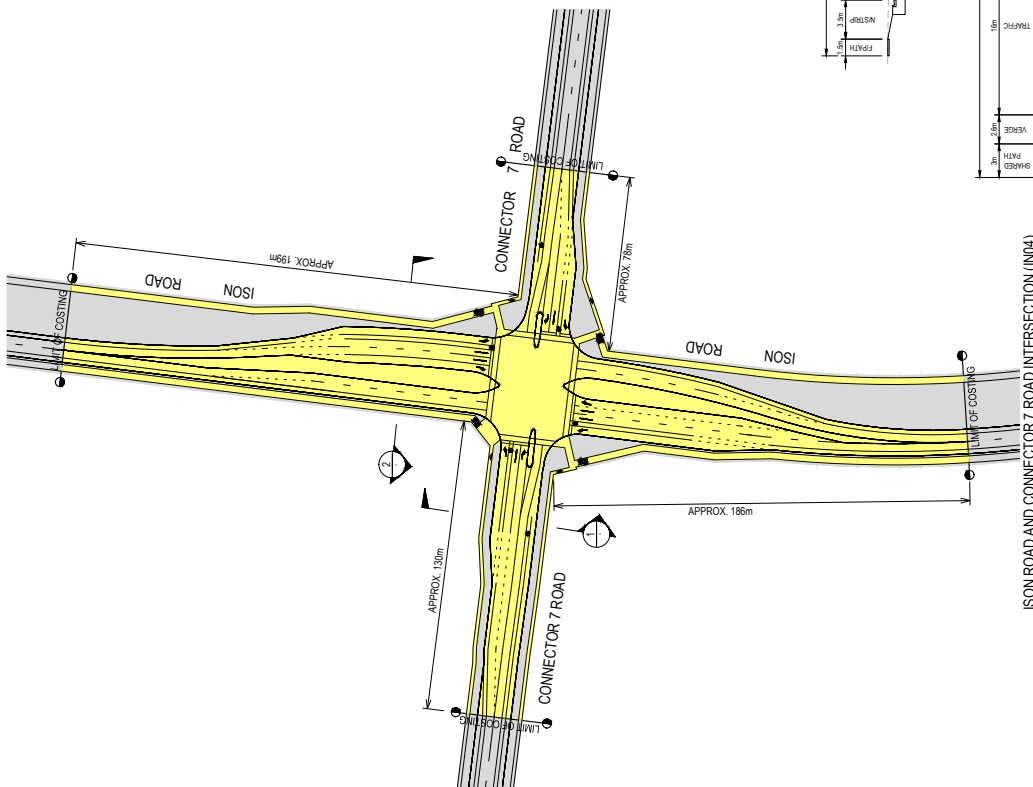
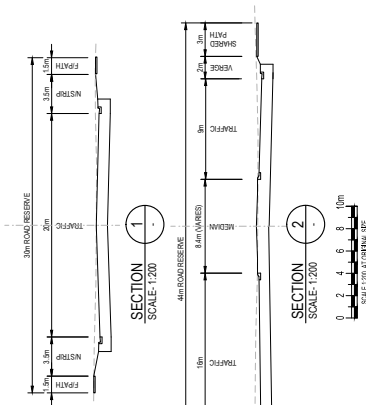
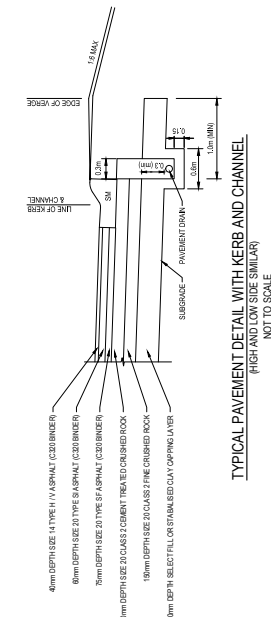
Professional Fees (10%) 3,728,147

Supervision and Project Management (10%) 372,815

Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 52,956

Vic Roads Fees 1% 37,201

- NOTES**
- All costs exclude GST.
 - No allowance has been made for temporary works, Cultural Heritage, Rent and Rates and Gate Charges.
 - Costing based on S&M/C Functional layout plan 3004790-00-07-104 issued 02/09/2012.
 - Pavement design is indicative only, subject to geotechnical investigation and design.
 - Assume handover between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at outside.



LEGEND

- EXISTING ROAD
- EXISTING ROAD
- COSTED INTERSECTION AREA
- ROAD RESERVE

SCALE 1:1000 AT DRAWING SIZE

0 10 20 30 40 50m

MPA

NOT FOR CONSTRUCTION

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST

TITLE: ISON ROAD AND CONNECTOR 7 ROAD INTERSECTION (IN04)

PROJECT NO: 107553

REV: MIE04

DATE: 10/12/2014

BY: [Signature]

FOR: [Signature]

AS: [Signature]

SCALE: 1:1000

DATE: 10/12/2014

BY: [Signature]

FOR: [Signature]

AS: [Signature]

SCALE: 1:1000

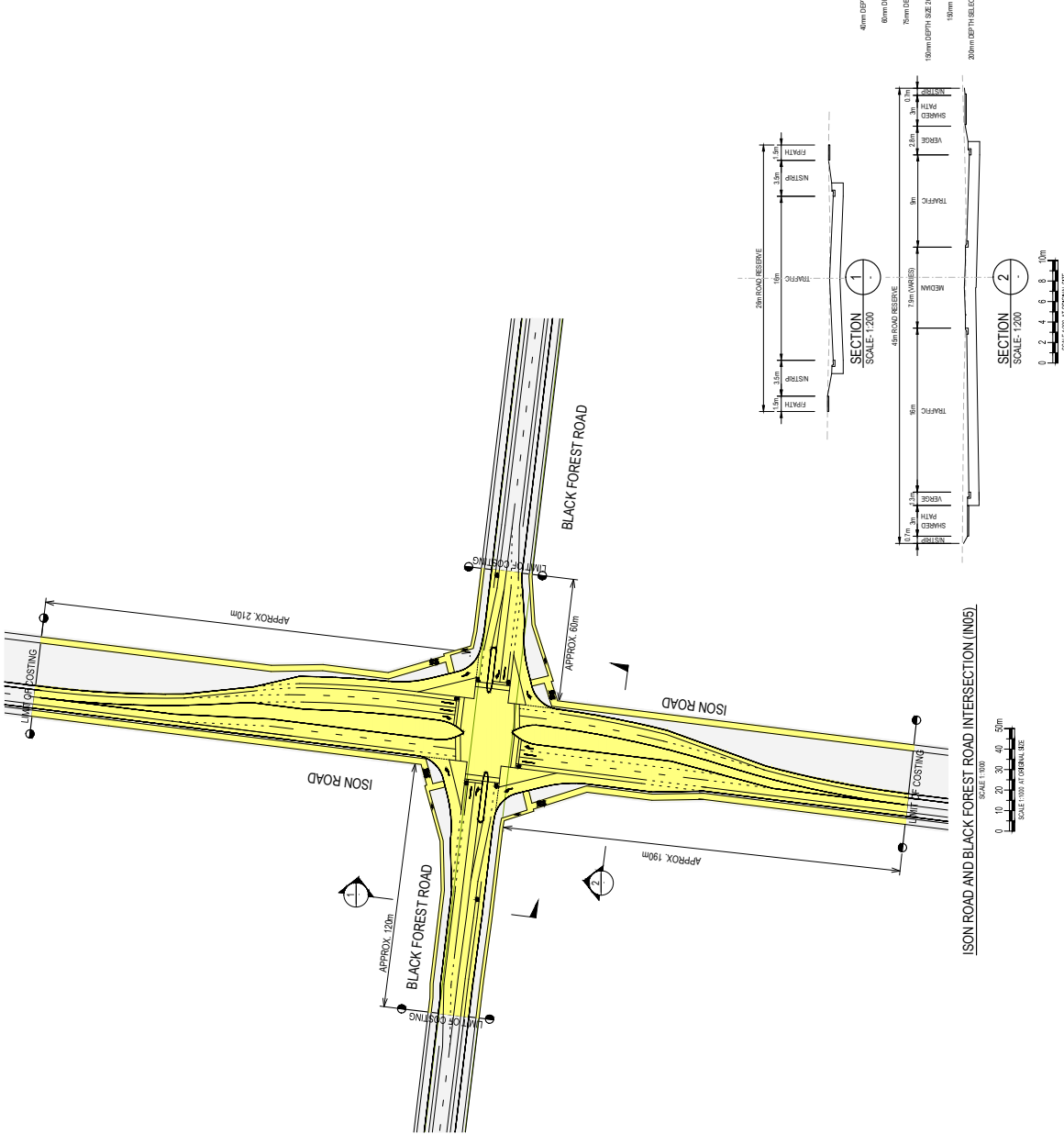
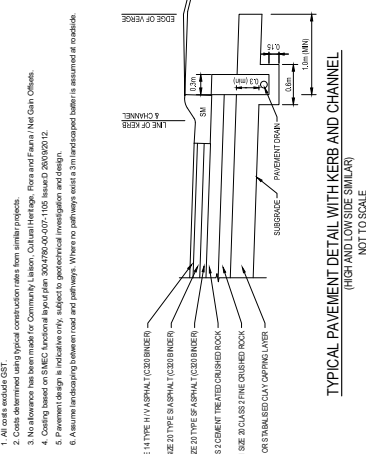
INFRASTRUCTURE - OPINION OF COST
IN05 - Ison Road & Black Forest Road

Item	Description	Unit	Quantity	Rate (p/m)	Sub Total (£ incl GST)
1.00	LANDWORKS				
1.01	Excavation incl. and disposal off site	m ³	18,200	33.00	597,000
1.02	Trim and prepare subgrade to receive sub-base	m ²	14,818	1.60	23,709
1.03	Spread and Compact Fill Overlay	m ²	1,930	8.80	16,984
1.04	Time (Clerical etc.)	Item	1	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channels (S&T, S&M & S&D)	Lm	2,310	22.00	50,820
2.02	Reinforced concrete kerbs	m ²	600	80.00	48,000
2.03	120mm thick concrete	m ²	3,000	21.00	63,000
3.00	PAVEMENT WORKS				
3.01	150mm Thick Asphalt (wearing course)	m ²	11,600	18.10	210,560
3.02	150mm Thick Asphalt (intermediate course)	m ²	11,600	21.70	251,000
3.03	150mm Thick Asphalt (base course)	m ²	11,600	33.90	394,000
3.04	Prime	m ²	11,600	3.90	45,240
3.05	150mm C10/8 Base	m ²	14,818	13.50	200,043
3.06	150mm C10/8 Base	m ²	14,818	9.90	146,698
3.07	150mm C10/8 Base	m ²	14,818	9.90	146,698
3.08	150mm C10/8 Base	m ²	14,818	9.90	146,698
4.00	DRAINAGE WORKS				
4.01	140mm dia. 2.10m	Lm	2,310	31.50	72,765
4.02	140mm dia. 2.10m	Lm	23	2,700.00	61,680
4.03	170mm dia RCP (for road backfill)	m	1,400	240.00	336,000
4.04	170mm dia RCP (for road backfill)	m	0	200.00	0
4.05	Reinforcement and Connection to Existing Drainage	2	Item	1,500.00	3,000
5.00	ISLAND LIMEWORKING				
5.01	Island Lime Working	1	Item	2,400.00	2,400
5.02	Island Lime Working	32	No.	400.00	12,800
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signals (incl. 10y maintenance fee)	Ns	1	300,000.00	300,000
6.02	Traffic Signal Control (incl. allowance for 10y)	Lm	100	85.00	8,500
7.00	ELECTRICAL WORKS				
7.01	Street Light poles @ 50m spacing	Ns	17	6,500.00	110,500
7.02	Street Lighting cabling and control	Lm	900	80.00	72,000
8.00	LANDSCAPE WORKS				
8.01	Landscaping (incl. 10y fee)	Ns	3,700	8.50	31,450
8.02	Landscaping (incl. 10y fee)	Ns	154	369.00	56,127
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	Item	1	200,000.00	200,000
	Subtotal				3,884,813

NOTES

- All costs exclude GST.
- No allowance has been made for Council's Labour, Cultural Heritage, Road and Future Net Gain Offsets.
- Costing based on SABC Functional layout plan 300/070/00-007-1105 issued 0/20/2012.
- Final design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.

Contingency (5%) 194,241
Total Estimated Cost (incl. GST) **£ 4,079,054**



MPA

NOT FOR CONSTRUCTION

107553 MIE05

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST

ISON ROAD AND BLACK FOREST ROAD INTERSECTION (IN05)

DATE: 09/04/2014
 DRAWN: [Name]
 CHECKED: [Name]
 APPROVED: [Name]

MPA PROJECT NO: 107553
 DRAWING NO: MIE05

INFRASTRUCTURE - OPINION OF COST
IN06 - Ison Road & Connector 6 Road

Item	Description	Quantity	Unit	Rate (Paving)	Sub Total (Paving Cost)
1.00	LANDSCAPING				
1.01	Excavation incl. and disposal off site	18,100	m3	30.00	543,000
1.02	Trim and prepare subgrade to receive sub-base	13,800	m2	1.60	22,080
1.03	Spread and Compact Fill Overlay	1,810	m3	8.80	15,928
1.04	Tree (Cremyte etc.)	1	Item	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channels (S1A1, S1A2 & S1A3)	2,200	Lm	22.00	48,400
2.02	Traffic Islands - 200mm thick reinforced concrete	520	m2	30.00	15,600
2.03	Traffic Islands - 100mm thick reinforced concrete	2,000	m2	7.00	14,000
3.00	PAVEMENT WORKS				
3.01	140mm Thick Asphalt (wearing course)	11,100	m2	18.10	200,910
3.02	100mm Thick Asphalt (intermediate course)	11,100	m2	31.70	351,870
3.03	75mm Thick Asphalt (base course)	11,100	m2	33.80	375,210
3.04	Prime	11,100	m2	3.50	39,000
3.05	150mm C10R Base	13,800	m2	13.50	187,215
3.07	150mm S1000 Sub-base Course	13,800	m2	9.00	124,200
3.08	150mm S1000 Sub-base Course	13,800	m2	9.00	124,200
3.09	150mm S1000 Sub-base Course	13,800	m2	9.00	124,200
4.00	DRAINAGE WORKS				
4.01	AGC Drain	2,200	Lm	31.90	69,300
4.02	Drainage Pile (50m spacing)	22	Nos	2,700.00	60,250
4.03	170mm dia RCP (for unbed rock backfill)	1,400	m	240.00	336,000
4.04	170mm dia RCP (for earth backfill)	0	m	200.00	0
4.05	Reinforcement and Connection to Existing Drainage	2	Item	1,500.00	3,000
5.00	ROAD AND LANE MARKING				
5.01	100mm Thick Asphalt (wearing course)	1	Item	24,000.00	24,000
5.02	100mm Thick Asphalt (wearing course)	32	Nos	400.00	12,800
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signal (incl. 10yr maintenance fee)	1	Nos	300,000.00	300,000
7.00	ELECTRICAL WORKS				
7.01	Street Light Poles @ 50m spacing	18	Nos	6,500.00	117,000
7.02	Street Lighting cabling and control	850	Lm	60.00	51,000
8.00	LANDSCAPE WORKS				
8.01	Planting (incl. 10yr maintenance fee)	6,500	Lm	8.50	55,250
8.02	Landscape (incl. @ 15% both sides)	140	Nos	369.00	51,660
9.00	SURVEILLANCE / PROTECTION				
9.01	Allowance for relocation of existing services	1	Item	200,000.00	200,000
			Subtotal		3,708,890

NOTES

- All costs exclude GST.
- No allowance has been made for Contractor's Labour, Cultural Heritage, Riparian and Fauna and Flora Obligations.
- Costing based on SABC, National Input plan 300/070/00/007-1/08 issued 29/09/2012.
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.

Contingency (5%) = 185,445

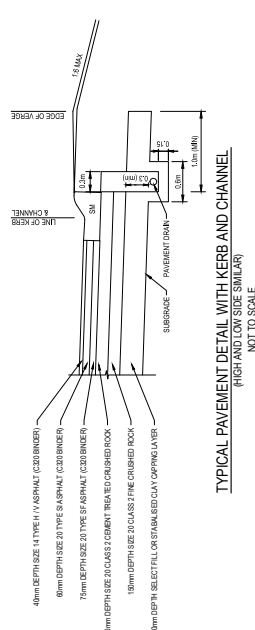
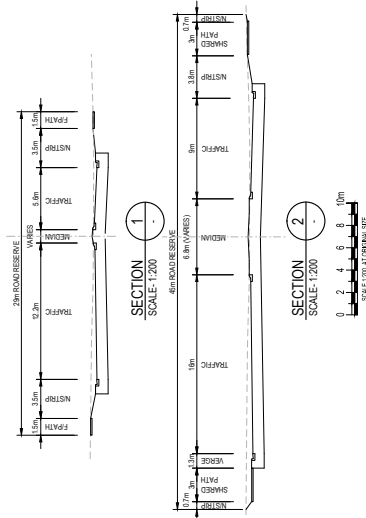
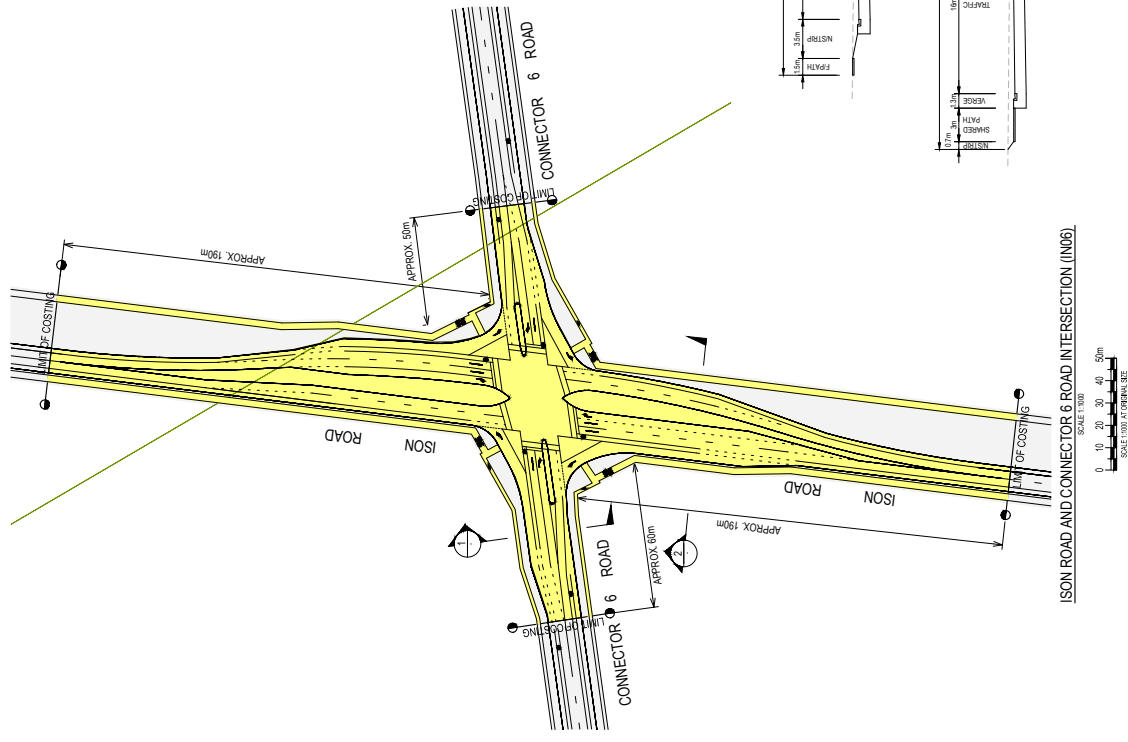
Total Estimated Cost (incl. GST) = **3,894,335**

NOTES

- All costs exclude GST.
- No allowance has been made for Contractor's Labour, Cultural Heritage, Riparian and Fauna and Flora Obligations.
- Costing based on SABC, National Input plan 300/070/00/007-1/08 issued 29/09/2012.
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.

Contingency (5%) = 185,445

Total Estimated Cost (incl. GST) = **3,894,335**



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HIGH AND LOW SIDE SIMILAR)
NOT TO SCALE

NOT FOR CONSTRUCTION

MPA

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST

PRELIMINARY

ISON ROAD AND CONNECTOR 6 ROAD INTERSECTION (IN06)

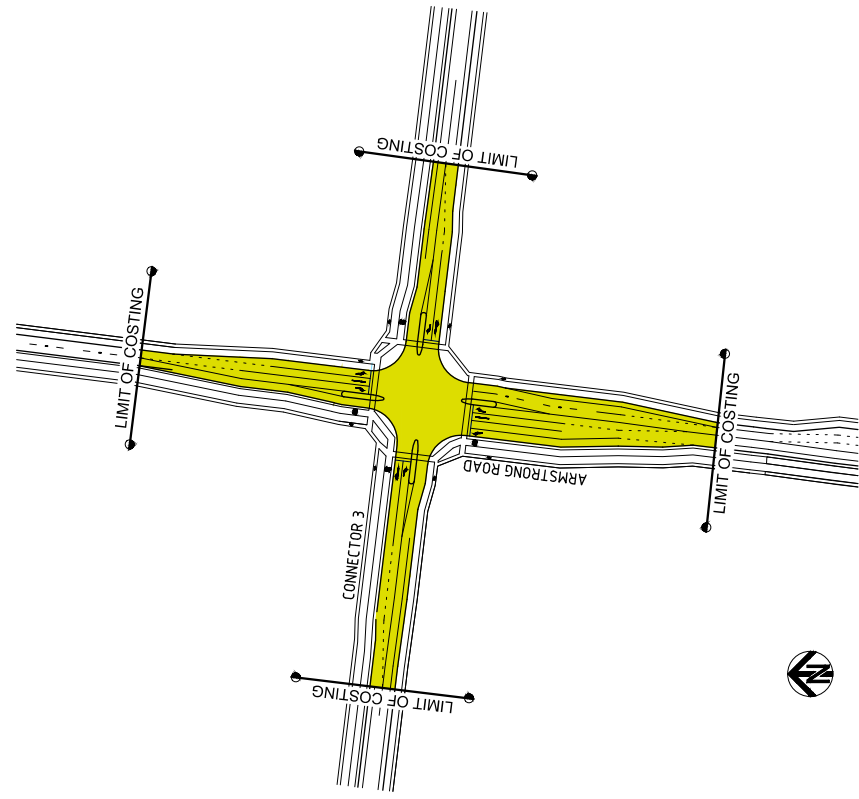
107553 MIE06

NOT FOR CONSTRUCTION

INFRASTRUCTURE - OPINION OF COST					
IN11 - Ison Road & Connector 1 Road					
Item	Description	Quantity	Unit	Rate (p/m)	Sub Total (p/m) (Gross GST)
1.00 LANDSCAPING					
1.01	Excavation fill and disposal off site	19,600	m3	30.00	588,000
1.02	Trim and prepare subgrade to receive sub-base	15,023	m2	1.60	24,037
1.03	Spread and Compact Fill Overlay	1,980	m3	8.80	17,280
1.04	Tree (Cremya etc.)	1	Item	15,000.00	15,000
2.00 CONCRETE WORKS					
2.01	Kerbs & Channels (S&T, S&K & S&A)	2,270	Lm	22.00	50,000
2.02	Traffic Islands - 200mm thick reinforced concrete	100	m2	50.00	5,000
2.03	Traffic Islands - 100mm thick reinforced concrete	3,800	m2	21.00	79,800
3.00 PAVEMENT WORKS					
3.01	140mm Thick Asphalt (wearing course)	12,200	m2	18.10	220,820
3.02	100mm Thick Asphalt (intermediate course)	12,200	m2	31.70	386,740
3.03	75mm Thick Asphalt (base course)	12,200	m2	33.80	413,260
3.04	Prime	12,200	m2	3.90	47,980
3.05	150mm RCP Base	15,023	m2	13.50	202,811
3.07	150mm RCP Sub-base Course	15,023	m2	9.00	135,207
3.08	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.09	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.10	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.11	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.12	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.13	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.14	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.15	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.16	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.17	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.18	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.19	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.20	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.21	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.22	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.23	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.24	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.25	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.26	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.27	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.28	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.29	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.30	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.31	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.32	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.33	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.34	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.35	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.36	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.37	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.38	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.39	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.40	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.41	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.42	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.43	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.44	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.45	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.46	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.47	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.48	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.49	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.50	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.51	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.52	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.53	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.54	150mm RCP Sub-base	15,023	m2	9.00	135,207
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3.59	150mm RCP Sub-base	15,023	m2	9.00	135,207
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3.61	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.62	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.63	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.64	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.65	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.66	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.67	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.68	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.69	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.70	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.71	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.72	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.73	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.74	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.75	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.76	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.77	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.78	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.79	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.80	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.81	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.82	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.83	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.84	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.85	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.86	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.87	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.88	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.89	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.90	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.91	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.92	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.93	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.94	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.95	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.96	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.97	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.98	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.99	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.100	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.101	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.102	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.103	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.104	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.105	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.106	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.107	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.108	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.109	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.110	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.111	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.112	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.113	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.114	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.115	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.116	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.117	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.118	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.119	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.120	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.121	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.122	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.123	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.124	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.125	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.126	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.127	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.128	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.129	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.130	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.131	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.132	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.133	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.134	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.135	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.136	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.137	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.138	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.139	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.140	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.141	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.142	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.143	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.144	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.145	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.146	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.147	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.148	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.149	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.150	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.151	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.152	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.153	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.154	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.155	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.156	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.157	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.158	150mm RCP Sub-base	15,023	m2	9.00	135,207
3.159	150mm RCP Sub-base	15,023	m		

INFRASTRUCTURE - OPINION OF COST
IN12 - Armstrong Road & Connector

Item	Description	Quantity	Unit	"Rate (\$/Unit)"	"Sub Total (\$ excl GST)"
1.00 EARTHWORKS					
1.01	Excavation incl. and disposal off site	10,400	m ³	30.00	\$312,000.00
	Trim and prepare subgrade to receive sub-base	7,500	m ²	1.60	\$12,000.00
1.03	Spread and Compact Fill Onsite	1,040	m ³	8.80	\$9,152.00
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00
2.00 CONCRETE WORKS					
2.01	kerb & Channel (S1A1, S1A2 & S1A3)	1,140	Lm	52.00	\$59,280.00
2.02	Traffic Islands - 200mm thick reinforced	100	m ²	80.00	\$8,000.00
2.03	Shoulder Pathway - 125mm thick reinforced	2,000	m ²	51.00	\$102,000.00
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	7,400	m ²	18.10	\$133,940.00
3.02	60mm Thick Asphalt (intermediate course)	7,400	m ²	31.70	\$234,580.00
3.03	75mm Thick Asphalt (base course)	7,400	m ²	33.90	\$250,860.00
3.04	Prime	7,500	m ²	3.60	\$27,000.00
3.05	150mm CTR Base	7,500	m ²	13.50	\$101,250.00
3.06	150mm FCR Base	7,500	m ²	9.90	\$74,250.00
3.07	200mm Selfct Sub-base Course	7,500	m ²	6.00	\$45,000.00
3.08	Subgrade Improvement (allow 20% of area)	1,500	m ²	13.40	\$20,100.00
4.00 DRAINAGE WORKS					
4.01	AG Drain	1,140	Lm	31.50	\$35,910.00
4.02	Drainage Pits (60m spacing)	11.00	No.	2,750.00	\$30,250.00
4.03	375mm dia RCP (crushed rock backfill)	700	m	240.00	\$168,000.00
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	\$0.00
5.00 SIGN AND LINEMARKING					
5.01	Linemarking (allowance)	1	Item	25,000.00	\$25,000.00
5.02	Regulatory Signage	26	No.	400.00	\$10,400.00
6.00 TRAFFIC SIGNAL WORKS					
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00
7.00 ELECTRICAL WORKS					
7.01	Street Light poles @ 50m spacing 11	12	No.	6,500.00	\$78,000.00
7.02	Street Lighting cabling and conduit	650	Lm	80.00	\$52,000.00
8.00 LANDSCAPE WORKS					
8.01	Landscaping (topsoil and turf only)	4,700	m ²	8.30	\$39,010.00
8.02	Landscaping (trees)	37.00	No.	350.00	\$12,950.00
9.00 SERVICE RELOCATION / PROTECTION					
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00
	Sub-total				\$2,249,532.00
	Traffic Management			5.0%	\$112,476.60
	Site Establishment			2.5%	\$56,238.30
	Survey and Design			5.0%	\$112,476.60
	Supervision and Project Management			9.0%	\$202,457.88
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$73,105.79
	V/Roads Fees			1.0%	\$22,495.32
	Contingency			15.0%	\$337,429.80
	Total Estimated Cost (excl. GST)				\$3,166,216.29

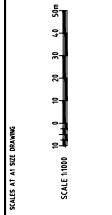


ARMSTRONG ROAD/CONNECTOR ROAD INTERSECTION (IN12)
 SCALE 1:100

Note: the right turn lane on Connector Road south extends for 232m. Limits of intersection is 232m to the south.

NOTES:

- ALL COSTS EXCLUDE GST.
- COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FOR SIMILAR PROJECTS.
- PAVEMENT DESIGN IS INDICATIVE ONLY. SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN.
- ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS, WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



DATE	APPROVAL / ISSUE / DESCRIPTION	APPROVAL	TITLE	NAME
17/04/2014	DRAFT ISSUE FOR COMMENT	DPH	DRAFTSMAN	ASL
17/04/2014	FINAL ISSUE	DPH	DRAWING CHECK	JP
17/04/2014	COSTS AGREED	DPH	DESIGN CHECK	HG
			DESIGN CHECK	DB
			PROJECT MANAGER	GE
			PROJECT DIRECTOR	BS

SCALE	DATE	APPROVED
AS SHOWN		
PRELIMINARY		

PROJECT / DRAWING NO.	SCALE	DATE
3004780-00-003-0105	AS SHOWN	

SMEC
SMEC AUSTRALIA PTY LTD
 100 JOYCE ST
 MELBOURNE VIC 3000
 PH: 03 9541-1000 FAX: 03 9541-0892

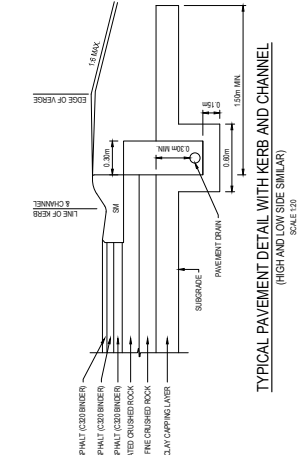
MPA
 METROPOLITAN PLANNING AUTHORITY

INFRASTRUCTURE - OPINION OF COST				
IN14 - Black Forest Road & Connector				
Item	Description	Quantity	Unit	Sub Total (\$ excl GST)
1.00	EARTHWORKS			
1.01	Excavation and disposal of soil	14,400	m ³	452,000
1.02	Trim and prepare subgrade to receive subbase	11,073	m ²	17,717
1.03	Subbase	1,440	m ³	8,800
1.04	Subbase and Concrete Fill Outside	1	item	10,000.00
2.00	CONCRETE WORKS			
2.01	Kerb & Channel (S&L, S&L2 & S&L3)	1,160	Lm	62,000
2.02	Traffic Islands - 200mm thick reinforced	180	m ²	14,400
2.03	Shoulder Pathway - 120mm thick reinforced	3,100	m ²	51,000
3.00	PAVEMENT WORKS			
3.01	40mm Thick Asphalt (wearing course)	9,600	m ²	18,100
3.02	60mm Thick Asphalt (intermediate course)	9,600	m ²	31,700
3.03	20mm Thick Asphalt (base course)	9,600	m ²	39,300
3.04	20mm Thick Asphalt (base course)	9,600	m ²	39,300
3.05	150mm ACFCB Base	11,073	m ²	14,490
3.06	150mm ACFCB Base	11,073	m ²	14,490
3.07	200mm Select Sub-base Course	11,073	m ²	66,438
3.08	Subgrade Improvement (allow 20% of area)	2,215	m ²	13,400
4.00	DRAINAGE WORKS			
4.01	Asphalt Drain	1,100	Lm	31,500
4.02	Drainage Pile (60m spacing)	12	m	27,500
4.03	300mm dia RCP (for water collection)	700	m	240,000
4.04	300mm dia RCP (for water collection)	0	m	200,000
4.05	300mm dia RCP (for water collection)	2	item	1,500.00
5.00	SIGN AND LAMPING WORKS			
5.01	Lamp Mast (allowance)	1	item	24,000.00
5.02	Regulatory Signage	32	Nu	19,200
6.00	TRAFFIC SIGNAL WORKS			
6.01	Traffic Signal (incl. 10yr maintenance)	1	Nu	300,000.00
6.02	Traffic Signal Control (incl. allowance for pit)	100	Lm	85,000
7.00	ELECTRICAL WORKS			
7.01	Street Light poles @ 20m spacing	20	Nu	630,000
7.02	Street Light poles @ 20m spacing	1,000	Lm	49,000
8.00	LANDSCAPE WORKS			
8.01	Landscaping (road and kerb edge)	5,000	m ²	46,400
8.02	Landscaping (road @ 10m, both sides)	77	Nu	350,000
9.00	SERVICE RELOCATION / PROTECTION			
9.01	Allowance for relocation of existing services	1	item	200,000.00
				Sub-total
				3,016,164

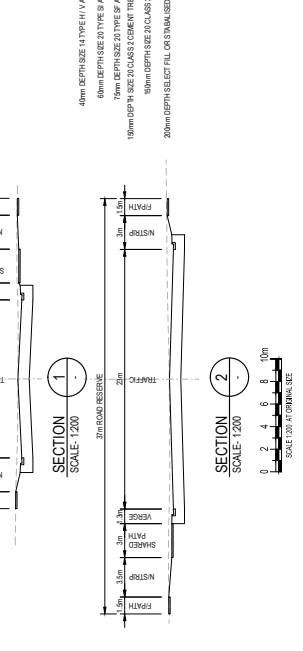
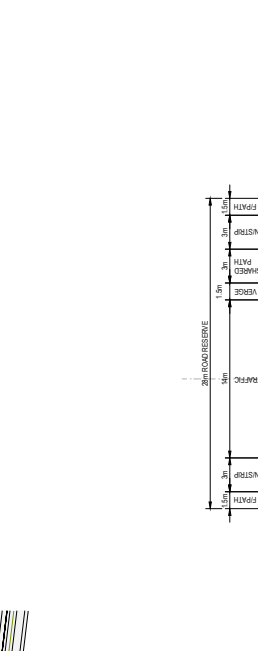
Traffic Management 0%	150,000
Site Establishment 2.5%	75,000
Construction Contingency 10%	301,616
Subtotal	3,362,164
Supervision and Project Management 8.0%	275,568
Contingency 10%	336,216
Total Estimated Cost (incl. GST)	4,379,060

NOTES

- All works outside GST.
- Typical construction values from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flood and Drain, Net Gain Offsets.
- Costing based on S&M/C. Inclusive of all items from 1000 700 00 007 1115 Issue 02/00/0012.
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HIGH AND LOW SIDE SIMILAR)
SCALE 1:20



ARMSTRONG ROAD AND BLACK FOREST ROAD INTERSECTION (IN15)
SCALE 1:1000

LEGEND

- COSTED INTERSECTION AREA
- ROAD RESERVE
- EXISTING ROAD

NOT FOR CONSTRUCTION

PRELIMINARY

107553 MIE14

INFRASTRUCTURE - OPINION OF COST
IN15 - Armstrong Road & Ballan Road

Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal of soil	24,702	m ³	35.00	861,000
1.02	Trim and prepare subgrade to receive subbase	20,533	m ²	1.90	39,000
1.03	Subbase	2,070	m ²	15.00	31,050
1.04	Topsoil	1	km	10,000.00	10,000
2.00	CONCRETE WORKS				
2.01	Kerb & Channel (S&L, S&M & S&D)	2,560	Lm	62.00	158,720
2.02	Traffic Islands - 200mm thick reinforced	400	m ²	80.00	32,000
2.03	Shoulder Pathway - 150mm thick reinforced	2,200	m ²	51.00	112,200
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	17,000	m ²	18.10	307,700
3.02	50mm Thick Asphalt (intermediate course)	17,000	m ²	31.70	538,900
3.03	50mm Thick Asphalt (base course)	17,000	m ²	33.00	561,000
3.04	150mm FCS Base	20,533	m ²	13.50	277,193
3.05	150mm FCS Sub-base	20,533	m ²	9.30	190,959
3.06	200mm Select Sub-base Course	20,533	m ²	6.00	123,170
3.07	Subgrade Improvement (below 20% of area)	4,107	m ²	13.40	55,034
4.00	DRAINAGE WORKS				
4.01	AGD Drain	2,560	Lm	31.50	80,640
4.02	Drainage Pipe (100mm spacing)	25	Nm	27,500.00	70,000
4.03	50mm dia PCP (formed road towals)	1,000	m	240.00	240,000
4.04	50mm dia PCP (formed road towals)	1	m	200.00	200
4.05	Stormwater Collection & Storage	2	Item	1,500.00	3,000
5.00	SIGN AND LAMINATING				
5.01	Laminating (above road)	1	Item	24,000.00	24,000
5.02	Regulatory Signage	20	Nm	400.00	8,000
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signal post (10yr maintenance)	1	Nm	350,000.00	350,000
6.02	Traffic Signal Control (incl. allowance for pds)	200	Lm	85.00	17,000
7.00	ELECTRICAL WORKS				
7.01	Street Light poles @ 20m spacing	25	Nm	630.00	15,750
7.02	Street Light poles @ 20m spacing	1,200	Lm	60.00	72,000
8.00	LANDSCAPE WORKS				
8.01	Landscaping (road @ 10m, both sides)	15,400	m ²	8.30	127,820
8.02	Landscaping (road @ 10m, both sides)	170	Nm	350.00	59,477
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing fibre optic cables and gas	1	Item	1,000,000.00	1,000,000
					Sub Total
					1,474,464

NOTES

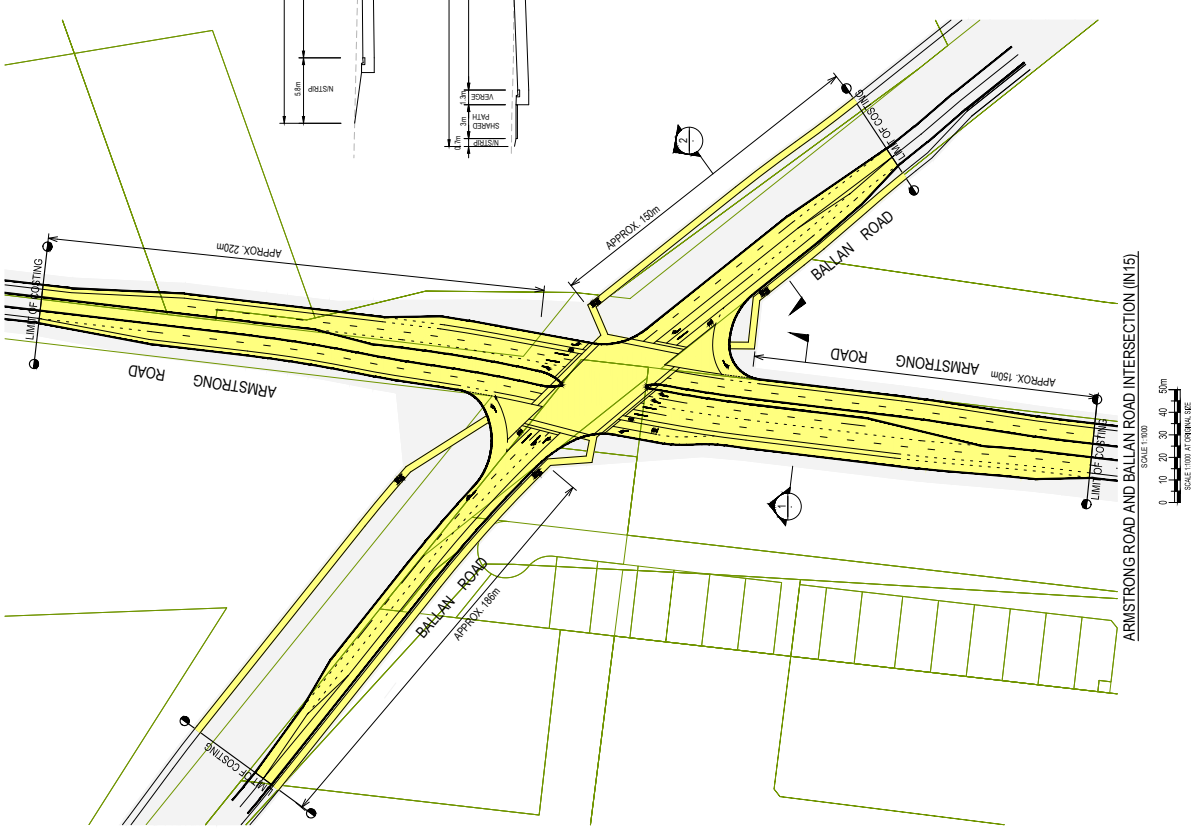
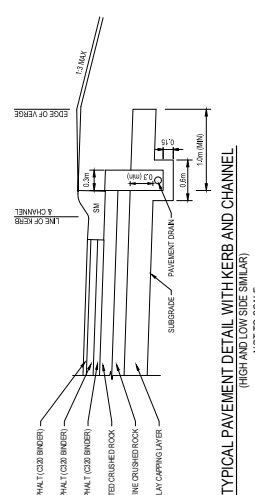
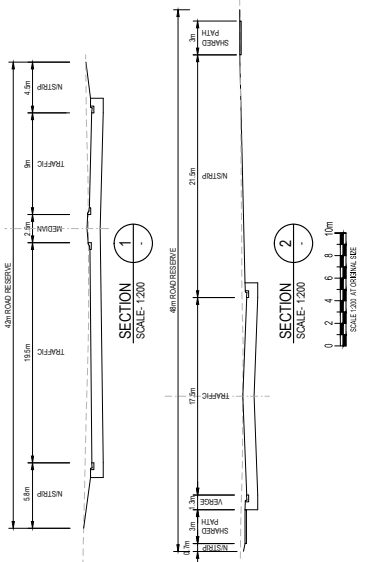
- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on SHoC functional layout plan 1904/790-00/007/1116 Issue E 20/09/2012.
- Pavement designs is indicative only - subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 2m landscaped buffer is assumed of roadside.

Supervision and Project Management 9.00%
Council Fees (Supervision 1.5%, project management 7.5% and plan checking 0.05%, 0.25%, 0.25%)
Vic Roads Fees 1%

Total Estimated Cost (incl. GST) \$ 1,877,689

Contingency: 10% \$ 187,769

Traffic Management 5%	294,774
Site Establishment 2.5%	142,387
Survey and Design 8%	298,774
Supervision and Project Management 9.00%	512,594
Vic Roads Fees 1%	195,103
	99,925



MPA METROPOLITAN PLANNING AUTHORITY

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN

INFRASTRUCTURE OPINION OF COST

ARMSTRONG ROAD AND BALLAN ROAD INTERSECTION (IN15)

PRELIMINARY

NOT FOR CONSTRUCTION

PROJECT NO: 107553

DATE: MIE15

SCALE: 1:100

SCALE 1:100 AT ORIGINAL SIZE

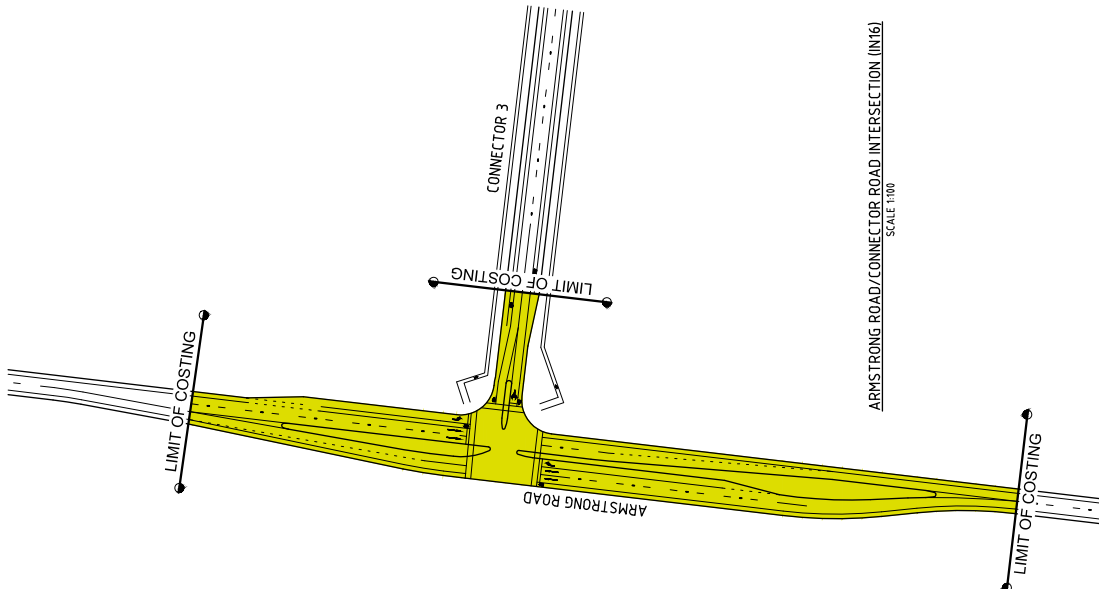
LEGEND

- COSTED INTERSECTION AREA
- EXISTING ROAD
- ROAD RESERVE

INFRASTRUCTURE - OPINION OF COST						
IN16 - Armstrong Road & Connector						
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl GST)	
1.00 EARTHWORKS						
1.01	Excavation incl. and disposal off site	9,600	m ³	30.00	\$288,000.00	
1.02	Trim and prepare subgrade to receive sub-base	9,848	m ²	1.60	\$15,756.80	
1.03	Spread and Compact Fill Onsite	960	m ³	8.80	\$8,448.00	
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00	
2.00 CONCRETE WORKS						
2.01	kerb & Channel (SA1, SW2 & SW3)	1,517	Lm	52.00	\$78,884.00	
2.02	Traffic Islands - 200mm thick reinforced	280	m ²	80.00	\$22,400.00	
2.03	Shoulder Pathway - 125mm thick reinforced	310	m ²	51.00	\$15,900.00	
3.00 PAVEMENT WORKS						
3.01	40mm Thick Asphalt (wearing course)	7,800	m ²	18.10	\$141,180.00	
3.02	60mm Thick Asphalt (intermediate course)	7,800	m ²	31.70	\$247,260.00	
3.03	75mm Thick Asphalt (base course)	7,800	m ²	33.90	\$264,420.00	
3.04	Prime	9,848	m ²	3.60	\$35,452.80	
3.05	150mm CTCR Base	9,848	m ²	13.50	\$132,948.00	
3.06	150mm FCR Base	9,848	m ²	9.90	\$97,495.20	
3.07	200mm select sub-base course	9,848	m ²	6.00	\$59,088.00	
3.08	Subgrade improvement (allow 20% of area)	1,970	m ²	13.40	\$26,392.64	
4.00 DRAINAGE WORKS						
4.01	AG Drain	1,517	Lm	31.50	\$47,788.50	
4.02	Drainage Pits (60m spacing)	15.00	No.	2,750.00	\$41,250.00	
4.03	375mm dia RCP (crushed rock backfill)	940	m	240.00	\$225,600.00	
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00	
5.00 SIGN AND LINE MARKING						
5.01	Line marking (allowance)	1	Item	35,000.00	\$35,000.00	
5.02	Regulatory signage	20	No.	400.00	\$8,000.00	
6.00 TRAFFIC SIGNAL WORKS						
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00	
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00	
7.00 ELECTRICAL WORKS						
7.01	Street Light poles @ 50m spacing 11	8	No.	6,500.00	\$52,000.00	
7.02	Street Lighting cabling and conduit	940	Lm	80.00	\$75,200.00	
8.00 LANDSCAPE WORKS						
8.01	Landscaping (tress) and turf only	4,220	m ²	8.30	\$35,026.00	
8.02	Landscaping (trees)	37.92	No.	350.00	\$13,272.00	
9.00 SERVICE RELOCATION / PROTECTION						
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00	
	Sub-total				\$2,377,758.94	
	Traffic Management			5.0%	\$118,887.95	
	Site Establishment			2.5%	\$59,443.97	
	Survey and Design			5.0%	\$118,887.95	
	Supervision and Project Management			9.0%	\$213,996.30	
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$77,277.17	
	Vicroads Fees			1.0%	\$23,777.59	
	Contingency			15.0%	\$356,663.84	
	Total Estimated Cost (excl. GST)				\$3,346,695.71	

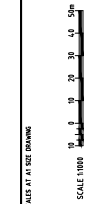
NOTES:

1. ALL COSTS EXCLUDE GST
2. COSTS DETERMINED USING TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS
3. PAVEMENT DESIGN INDICATIVE ONLY, SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN
4. ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS, WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



ARMSTRONG ROAD/CONNECTOR ROAD INTERSECTION (IN16)
SCALE 1:100

K:\Projects\334780\DWG\334780-00-003-0101.dwg		16 Apr 2014	11:52:48	APPROVAL	
DATE	AMENDMENT / ISSUE DESCRIPTION	APPROVED BY	DATE	APPROVED BY	
A	7/16/2014 DRAFT ISSUE FOR COMMENT	ASL			
B	10/16/2014 FINAL ISSUE	JP			
C	16/11/2014 COSTS AGREED	HG			
		DB			
		GE			
		BS			
PROJECT TITLE		CLIENT		DRAWING STATUS	
WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN		MPA		PRELIMINARY	
INFRASTRUCTURE OPINION OF COST		3004780-00-003-0101		SCALE	
ARMSTRONG ROAD / CONNECTOR INTERSECTION (IN16)		AS SHOWN		PROJECT / SHEET NO.	
				C	



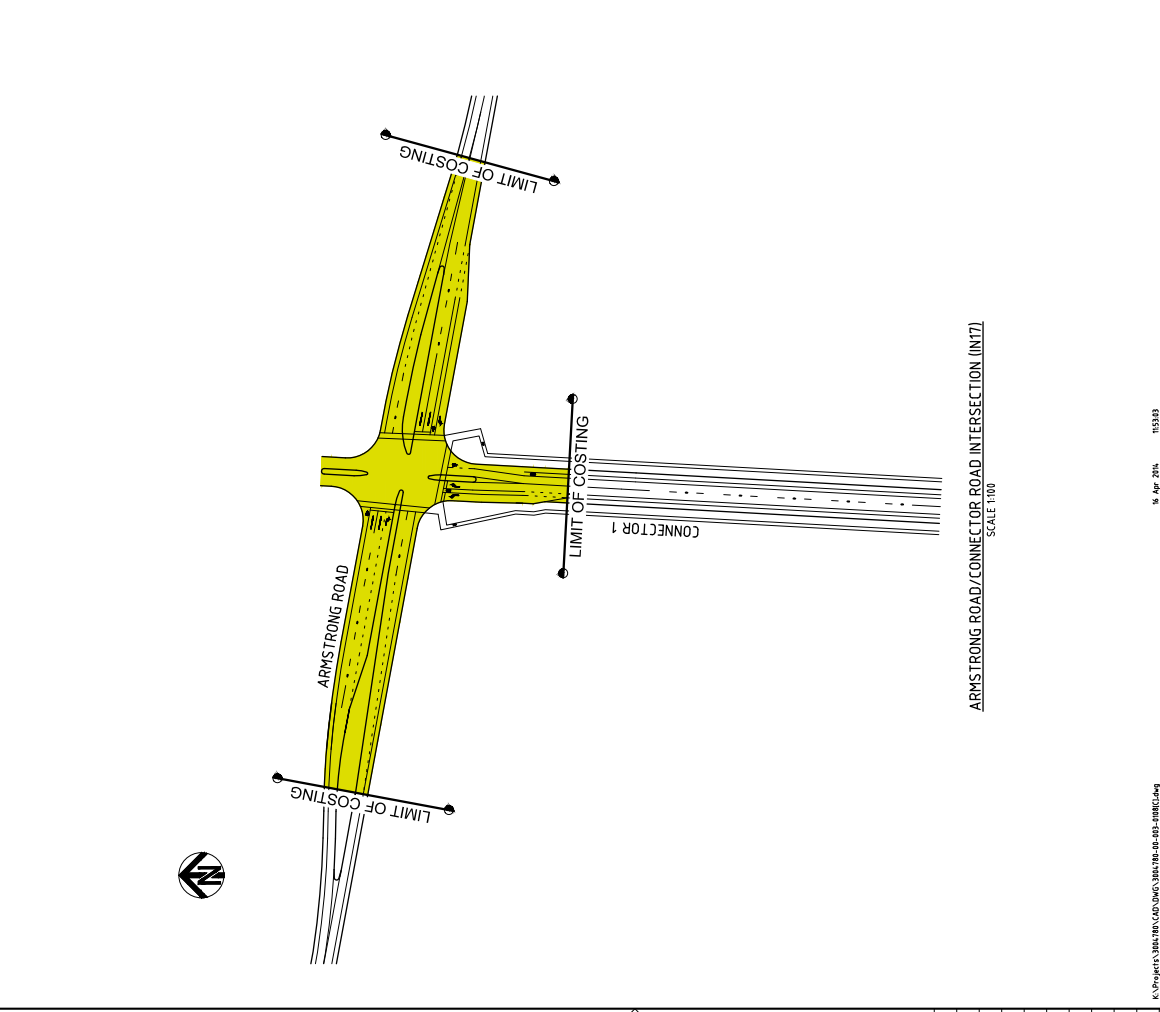
NO.	TITLE	DATE	NAME
1	DRAWN		ASL
2	CHECKED		JP
3	DESIGNED		HG
4	DESIGN CHECK		DB
5	PROJECT MANAGER		GE
6	PROJECT DIRECTOR		BS

SM&C
SMEC AUSTRALIA PTY LTD
GPO BOX 975 07
MELBOURNE VIC 3004
PH: 03 9516 1100 FAX: 03 9516 0282

INFRASTRUCTURE - OPINION OF COST
IM17 - Armstrong Road & Connector

Item	Description	Quantity	Unit	Rate (\$/Unit)	Sub Total (\$ excl GST)
1.00 EARTHWORKS					
1.01	Excavation incl. and disposal off-site	10,115	m3	30.00	\$303,450.00
	Trim and prepare subgrade to receive sub-base	10,274	m2	1.60	\$16,438.40
1.03	Spread and Compact Fill Onsite	1,012	m3	8.80	\$8,901.20
1.04	Tests (Density etc.)	1	Item	15,000.00	\$15,000.00
2.00 CONCRETE WORKS					
2.01	Keel & Channel (SM1, SM2 & SM3)	1,567	Lm	57.00	\$81,484.00
2.02	Traffic Islands - 200mm thick reinforced	280	m2	80.00	\$22,400.00
2.03	Shared Pathway - 125mm thick reinforced	260	m2	51.00	\$13,260.00
3.00 PAVEMENT WORKS					
3.01	40mm Thick Asphalt (wearing course)	8,187	m2	18.10	\$148,284.70
3.02	60mm Thick Asphalt (Intermediate course)	8,187	m2	31.70	\$259,527.90
3.03	75mm Thick Asphalt (base course)	8,187	m2	33.90	\$277,539.30
3.04	Prime	10,274	m2	3.60	\$36,986.40
3.05	150mm CTR Base	10,274	m2	13.50	\$138,699.00
3.06	150mm FCB Base	10,274	m2	9.90	\$101,712.60
3.07	200mm Select Sub-base Course	10,274	m2	6.00	\$61,644.00
3.08	Subgrade Improvement (allow 20% of area)	2,055	m2	13.40	\$27,534.32
4.00 DRAINAGE WORKS					
4.01	AG Drain	1,567	Lm	31.50	\$49,360.50
4.02	Drainage Pits (60m spacing)	10,00	No.	2,750.00	\$27,500.00
4.03	375mm dia RCP (crushed rock backfill)	600	m	240.00	\$144,000.00
4.05	Break-in and Connection to Existing Drainage	2	Item	1,500.00	\$3,000.00
5.00 SIGN AND LINEMARKING					
5.01	Linemarking (allowance)	1	Item	25,000.00	\$25,000.00
5.02	Regulatory Signage	20	No.	400.00	\$8,000.00
6.00 TRAFFIC SIGNAL WORKS					
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	380,000.00	\$380,000.00
6.02	Traffic Signal Conduit (incl. allowance for pits)	160	Lm	85.00	\$13,600.00
7.00 ELECTRICAL WORKS					
7.01	Street Light poles @ 50m spacing 11	10	No.	6,500.00	\$65,000.00
7.02	Street Lighting cabling and conduit	600	Lm	80.00	\$48,000.00
8.00 LANDSCAPE WORKS					
8.01	Landscaping (topsoil and turf only)	4,220	m2	8.30	\$35,026.00
8.02	Landscaping (trees)	37.92	No.	350.00	\$13,272.00
9.00 SERVICE RELOCATION / PROTECTION					
9.01	Allowance for relocation of existing services	0	Item	200,000.00	\$0.00
	Sub-total				\$2,324,520.32
	Traffic Management			5.0%	\$116,226.02
	Site Establishment			2.5%	\$58,113.01
	Survey and Design			5.0%	\$116,226.02
	Supervision and Project Management			9.0%	\$209,206.83
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%)			3.25%	\$75,546.91
	Vicroads Fees			1.0%	\$23,245.20
	Contingency			15.0%	\$348,678.05
	Total Estimated Cost (excl. GST)				\$3,271,762.35

NOTES:
 1. ALL COSTS EXCLUDE GST
 2. COSTS ARE BASED ON TYPICAL CONSTRUCTION RATES FROM SIMILAR PROJECTS
 3. PAYMENT SCHEDULES INDICATIVE ONLY SUBJECT TO GEOTECHNICAL INVESTIGATION AND DESIGN
 4. ASSUME LANDSCAPING BETWEEN ROAD AND PATHWAYS, WHERE NO PATHWAYS EXIST A 3m LANDSCAPED BATTER IS ASSUMED AT ROADSIDE.



DATE	APPROVAL / ISSUE DESCRIPTION	DATE	APPROVAL / ISSUE DESCRIPTION
A 7/16/2014	DRAFT ISSUE FOR COMMENT	B 11/19/2014	FINAL ISSUE
B 11/19/2014	FINAL ISSUE	C 11/19/2014	COSTS SHEDD

<p>K:\Projects\33676\33676-000\33676-00-003-INT07.dwg 16 APR 2014 11:53:03</p>		<p>SCALE 1:100 0 10 20 30 40 50m</p>
<p>PROJECT TITLE WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST ARMSTRONG ROAD / CONNECTOR INTERSECTION (INT7)</p>	<p>CLIENT METROPOLITAN PLANNING AUTHORITY</p>	<p>SCALE PRELIMINARY AS SHOWN 3004780-00-003-0108 C</p>
<p>DESIGNER SMEC AUSTRALIA PTY LTD 100 JOYCE ST MELBOURNE VIC 3000 PH: 03 9510 1000 FAX: 03 9510 1002</p>	<p>APPROVED</p>	<p>DATE</p>
<p>TITLE ASL DRAWING CHECK JP DESIGNER HG DESIGN CHECKS DB PROJECT MANAGER GE PROJECT DIRECTOR BS</p>	<p>SCALE 1:100</p>	<p>DATE</p>

WARNING
BEWARE OF UNDERGROUND SERVICES
APPROXIMATE ONLY. THE EXACT POSITION SHOULD BE PROVIDED BY THE DESIGNER. ALL SERVICES ARE SHOWN.

NOTE:
3" SHELL WHITE OIL PIPELINE IN ROAD RESERVE LOCATION TO BE CONFIRMED DURING DETAIL DESIGN

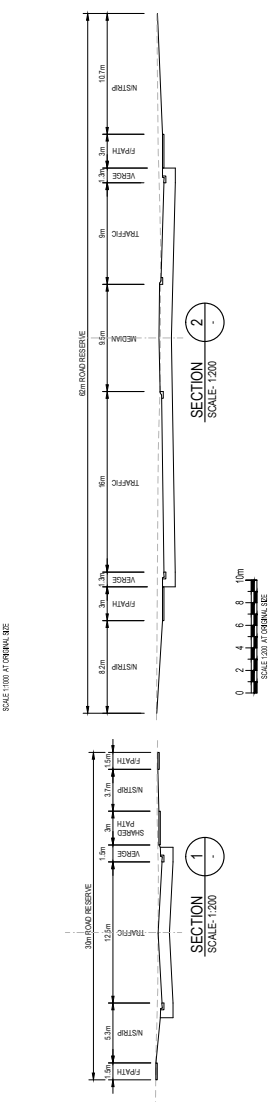
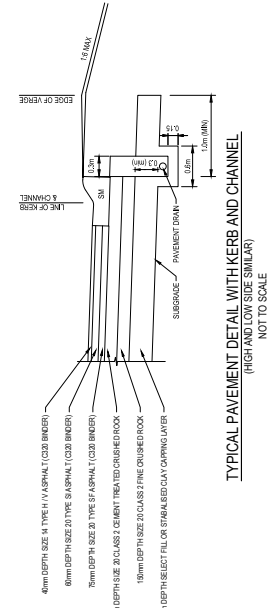
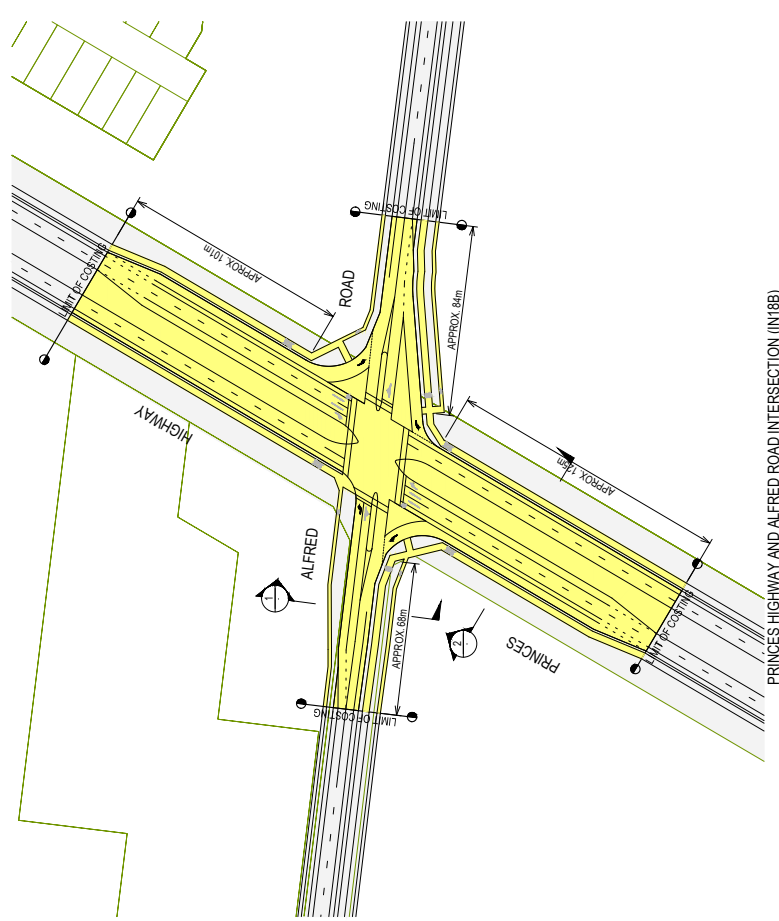
INFRASTRUCTURE - OPINION OF COST				
M18B - Alfred Road & Princess Highway				
Item	Description	Unit	Quantity	Rate (\$/unit) (Preliminary)
1.00 LANDSCAPE				
1.01	Excavate and install of site	m ²	16,000	30.00
1.02	Trim and grade to achieve sub-base	m ²	12,806	1.50
1.03	Spread and Compact Fill Grade	m ²	1,850	8.30
1.04	Trees (Cremy etc.)	1	1	15,000.00
2.00 CONCRETE WORKS				
2.01	Kerbs & Channel (S&T, S&C & S&K)	Lm	1,700	52.00
2.02	Traffic Islands - 200mm thick reinforced concrete	m ²	800	47.20
2.03	Traffic Islands - 100mm thick reinforced concrete	m ²	2,000	51.00
3.00 PAVERMENT WORKS				
3.01	140mm Thick Asphalt (wearing course)	m ²	10,100	18.10
3.02	100mm Thick Asphalt (intermediate course)	m ²	10,100	31.70
3.03	75mm Thick Asphalt (base course)	m ²	10,100	33.30
3.04	Primes	m ²	10,100	3.80
3.05	150mm CTCR Base	m ²	12,868	13.50
3.06	150mm FCR Base	m ²	12,868	9.90
3.07	200mm Sub-base Course	m ²	12,868	6.00
3.08	Sub-base Improvement (above 20% of area)	m ²	2,351	13.40
4.00 SIGN WORKS				
4.01	L&C Signs	Lm	1,200	31.50
4.02	Damage Poles (60m spacing)	18	18	2,750.00
4.03	170mm dia RCP (capped rock base)	m	1,100	24.00
4.04	170mm dia RCP (earth base)	m	0	20.00
4.05	Break in and Connection to Existing Drainage	2	2	1,500.00
5.00 SIGN AND LIGHTING				
5.01	Lighting (pole and luminaire)	1	1	24,000.00
5.02	Popularity Signs	32	32	40.00
5.03	Popularity Signs (for performance fee)	1	1	300,000.00
5.04	Traffic Signal Control (incl. allowance for park)	1	1	16,500.00
7.00 ELECTRICAL WORKS				
7.01	Sheet Light poles @ 50m spacing	14	14	6,000.00
7.02	Sheet Light cables and conduit	700	700	80.00
8.00 LANDSCAPE WORKS				
8.01	Landscape (topsoil and turf only)	7,200	7,200	8.50
8.02	Landscape (turf @ 10m x 10m areas)	117	117	300.00
9.00 SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	1	260,000.00
				Sub Total
				17,937.2
				84,434
				17,937.2
				307,569
				111,007
				34,174
				512,815
				3,437,424

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offset.
- Costing based on S&M/C functional layout plan 300783-00-007-1110 Issued 20/09/2012.
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Actual workmanship and materials. Where no pathways exist a 2m wide gutter is assumed at roadside.

Contingency 15%
Total Estimated Cost (incl. GST) **\$ 3,437,424**

Traffic Management 5%
Site Establishment 2.5%
Survey and Design 5%
Supervision and Project Management 9.5%
Construction 1% and plant (incl. 0.75% 3.25%)
Vc Roads Fees 1%
34,174



MPA METROPOLITAN PLANNING AUTHORITY

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN (M18B)
INFRASTRUCTURE OPINION OF COST

DATE: 20/09/2012

PRELIMINARY
NOT FOR CONSTRUCTION

107553 MIE18B

PRINCES HIGHWAY AND ALFRED ROAD INTERSECTION (M18B)

LEGEND
 - COSTED INTERSECTION AREA
 - EXISTING ROAD
 - ROAD RESERVE

WARNING
BEWARE OF UNDERGROUND SERVICES
APPROXIMATE LOCATIONS OF UNDERGROUND SERVICES
APPROXIMATE ONLY - ANY RELOCATION POSITION SHOULD
BE PROVIDED BY THE LOCAL AUTHORITIES BEFORE ANY
WORKING BEGINS TO TAKE PLACE

Item	Description	Unit	Quantity	Rate (AUD)	Sub Total (AUD GST)
1.00	Excavation and disposal of soil	m ³	4,000	30.00	144,000
1.02	Trim and prepare subgrade to receive sub-base	m ²	3,098	1.92	5,948
1.03	Spread and Compact Fill Course	m ²	480	8.90	4,272
1.04	Trees (Density etc.)	Items	1	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channel (S&T, S&C & S&M)	Lm	750	52.00	39,000
2.02	Traffic Islands - 200mm thick reinforced concrete	m ²	80	80.00	6,400
2.03	Traffic Islands - 100mm thick reinforced concrete	m ²	1,000	51.00	51,000
3.00	PAVEMENT WORKS				
3.01	140mm Thick Asphalt (wearing course)	m ²	2,800	18.50	51,800
3.02	100mm Thick Asphalt (intermediate course)	m ²	2,800	31.70	88,760
3.03	75mm Thick Asphalt (base course)	m ²	2,800	33.50	94,420
3.04	Prime	m ²	3,000	3.00	9,000
3.05	150mm CTCR Base	m ²	3,098	13.50	41,821
3.06	150mm FCR Base	m ²	3,098	9.90	30,670
3.07	250mm Sub-base Course	m ²	3,098	6.00	18,588
3.08	Sub-base (precast concrete) (precast 200 x 400)	m ²	737	13.50	9,950
4.00	LANDSCAPE WORKS				
4.01	140mm PVC	Lm	750	31.50	23,625
4.02	Damage Pile (60mm spacers)	7	No.	2,750.00	20,250
4.03	375mm dia RCP (coured rock backfill)	500	m	20.00	10,000
4.04	375mm dia RCP (earth backfill)	0	m	20.00	0
4.05	Break in and Connection to Existing Drainage	2	Items	1,500.00	3,000
5.00	SIGN AND PAINTWORK				
5.01	Landscape (placement)	1	Items	8,216.87	8,217
5.02	Regulatory signage	12	No.	400.00	4,800
5.03	Regulatory signage	0	No.	300.00	0
5.04	Traffic Signs (incl. 100% reflective film)	0	No.	165.00	0
6.00	ELECTRICAL WORKS				
6.01	Sheet Light poles @ 50m spacing	6	No.	6,000.00	36,000
6.02	Sheet Light cabling and conduit	300	Lm	80.00	24,000
7.00	LANDSCAPE WORKS				
7.01	Landscape (trees @ 50m spacing)	50	No.	350.00	17,500
7.02	Landscape (trees @ 10m spacing)	50	No.	350.00	17,500
8.00	TRAFFIC MANAGEMENT				
8.01	Supervision and Project Management	1	Items	200,000.00	200,000
8.02	Contingency	1	Items	11,525.00	11,525
9.00	Subtotal				1,125,648

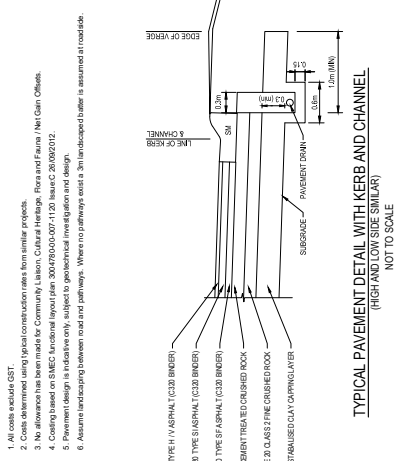
NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / New Green Offices.
- Costing based on S&M/C Functional layout plan 3001930-007-A120 Issue C 20/09/2012.
- Pavement design is for heavy duty, subject to geotechnical investigation and design.
- Adjacent road works to be undertaken at the same time as this project.

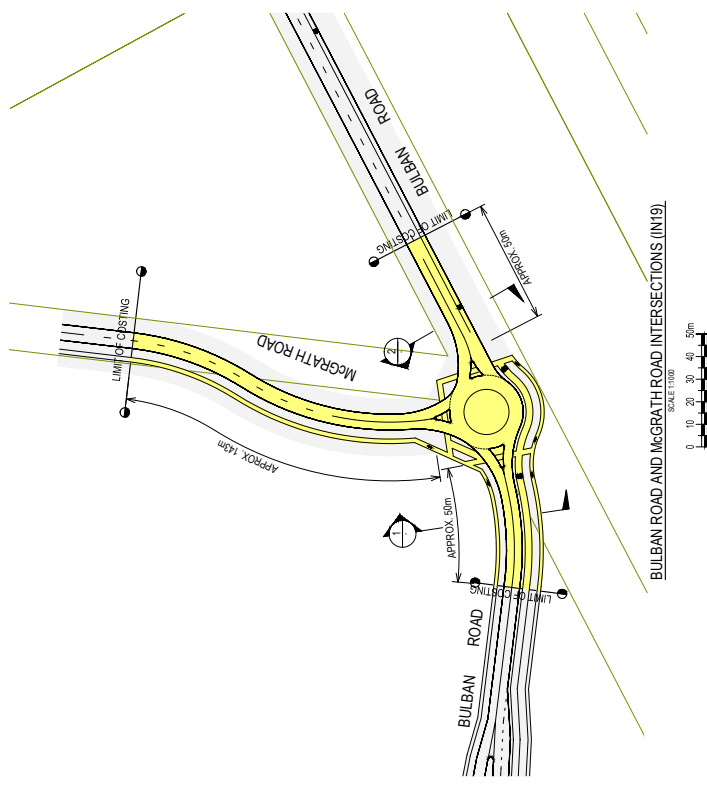
Count Fees (Supervision 15%, project management 1% and plan checking 0.25%, 0.25%, 0.25%)
Vc Roads Fees 1%

Total Estimated Cost (incl. GST) \$ 1,188,600

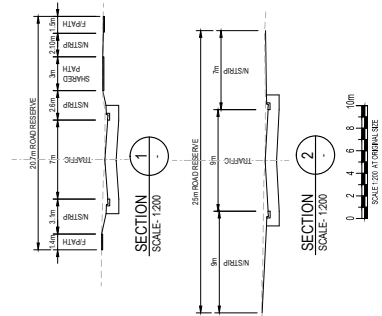
Contingency 15% 108,817



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HIGH AND LOW SIDE SIMILAR)
NOT TO SCALE



BULBAN ROAD AND MGRATH ROAD INTERSECTIONS (IN19)
SCALE 1:100 AT ORIGINAL SIZE



LEGEND

- EXISTING ROAD
- COSTED INTERSECTION AREA
- ROAD RESERVE

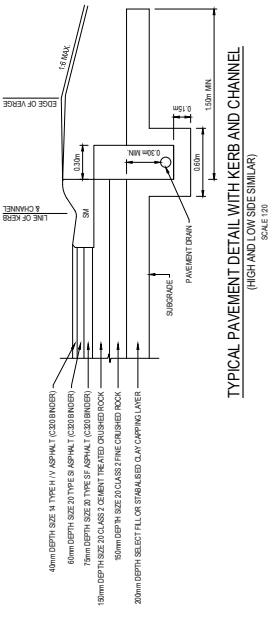
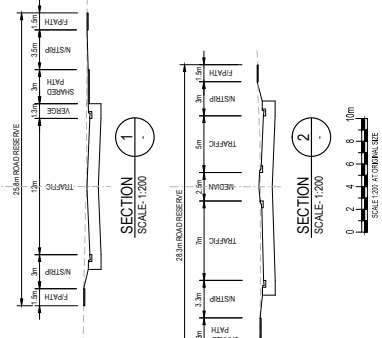
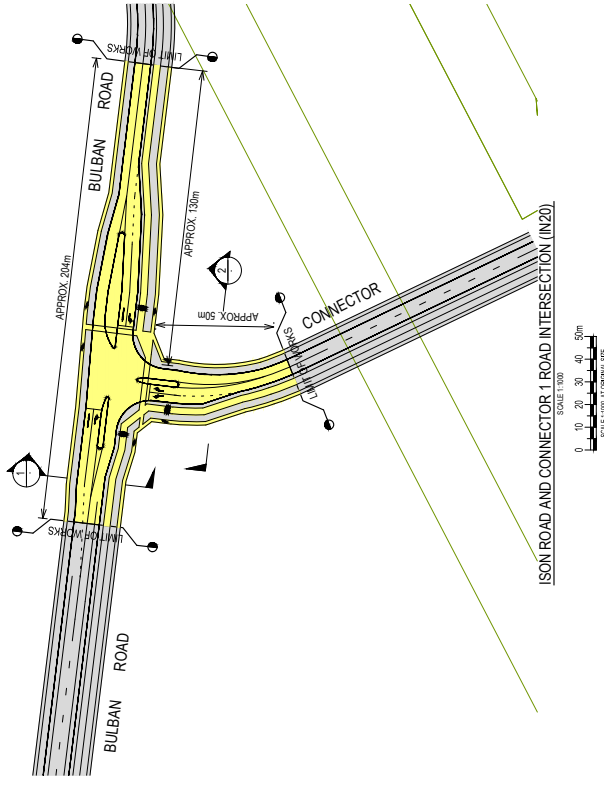
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1	ISSUED FOR TENDERS	10/01/2014			
2	REVISED FOR TENDERS	10/01/2014			
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4	REVISED FOR TENDERS	10/01/2014			
5	REVISED FOR TENDERS	10/01/2014			
6	REVISED FOR TENDERS	10/01/2014			
7	REVISED FOR TENDERS	10/01/2014			
8	REVISED FOR TENDERS	10/01/2014			
9	REVISED FOR TENDERS	10/01/2014			
10	REVISED FOR TENDERS	10/01/2014			

MPA METROPOLITAN PLANNING AUTHORITY
PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST
107553 MIE19
PRELIMINARY
NOT FOR CONSTRUCTION
C

INFRASTRUCTURE - OPINION OF COST				
IN20 - Bulban Road & Connector				
Item	Description	Quantity	Unit	Sub Total (\$ excl GST)
100 EARTHWORKS				
1.01	Excavate, fill and disposal of fill	5,500	m ³	105,000
1.02	Trim and prepare subgrade to receive sub-base	4,188	m ²	6,699
1.03	Spread and Compact F1 Overlay	550	m ³	4,542
1.04	Test (Density etc.)	1	Item	15,000.00
200 CONCRETE WORKS				
2.01	Rein & Channel (SMI 2, S&S)	750	Lm	37,500
2.02	Formwork (200mm x 200mm)	1,000	m ²	50,000
2.03	Spread Pavecrete (200mm thick sub-grade)	1,000	m ²	81,000
300 PAVEMENT WORKS				
3.01	60mm Thick Asphalt (wear/course)	3,300	m ²	66,000
3.02	60mm Thick Asphalt (intermediate course)	3,300	m ²	31,710
3.03	75mm Thick Asphalt (base course)	3,300	m ²	33,000
3.04	Prime	3,300	m ²	3,300
3.05	150mm CTCR Base	4,188	m ²	13,500
3.06	200mm Select Sub-base Course	4,188	m ²	25,038
3.07	200mm Select Sub-base Course	4,188	m ²	25,038
3.08	200mm Select Sub-base Course	4,188	m ²	25,038
400 DAMAGE WORKS				
4.01	AG Drain	750	Lm	31,500
4.02	Drainage Pits (50m spacing)	7	No.	2,750.00
4.03	375mm dia RCP (enriched rock backfill)	500	m	120,000
4.04	375mm dia RCP (earth backfill)	0	m	200,000
4.05	Break in and Connection to Existing Drainage	2	Item	1,500.00
500 SIGN AND LINE MARKING				
5.01	Unremoving pavement	1	Item	18,712.50
5.02	Regulatory Signage	20	No.	40,000
5.03	Regulatory Signage	20	No.	40,000
5.04	Traffic Signage (100mm max face for sign)	140	Lm	61,600
700 ELECTRICAL WORKS				
7.01	Street Light poles @ 50m spacing	9	No.	6,500.00
7.02	Street Lighting cabling and conduit	500	Lm	40,000
800 LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	3,000	m ²	8,500
8.02	Landscaping (trees @ 15m, both sides)	48	No.	380,000
900 SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	Item	250,000.00
				Subtotal
				1,648,527

Traffic Management 5%	83,276
Site Establishment 2.5%	41,638
Survey and Design 5%	83,276
Supervision and Project Management 6.0%	149,897
Vat Road Fee 1%	16,025
Contingency 15%	249,055
Total Estimated Cost (incl GST)	3,244,000

NOTES
 1. All costs exclude GST.
 2. Costs determined using typical construction rates from similar projects.
 3. No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Nk Gain Offsets.
 4. Contingency based on SME functional layer plan 300470000001-1 (21 Issue C200000012).
 5. Pavement design is indicative only, subject to geotechnical investigation and design.
 6. Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
 (HIGH AND LOW SIDE SIMILAR)
 SCALE 1:20

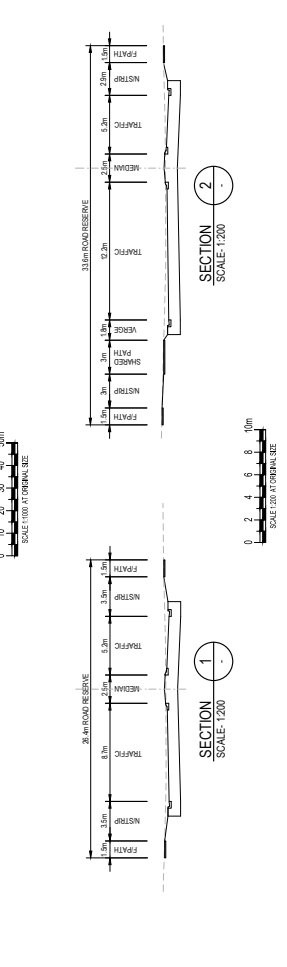
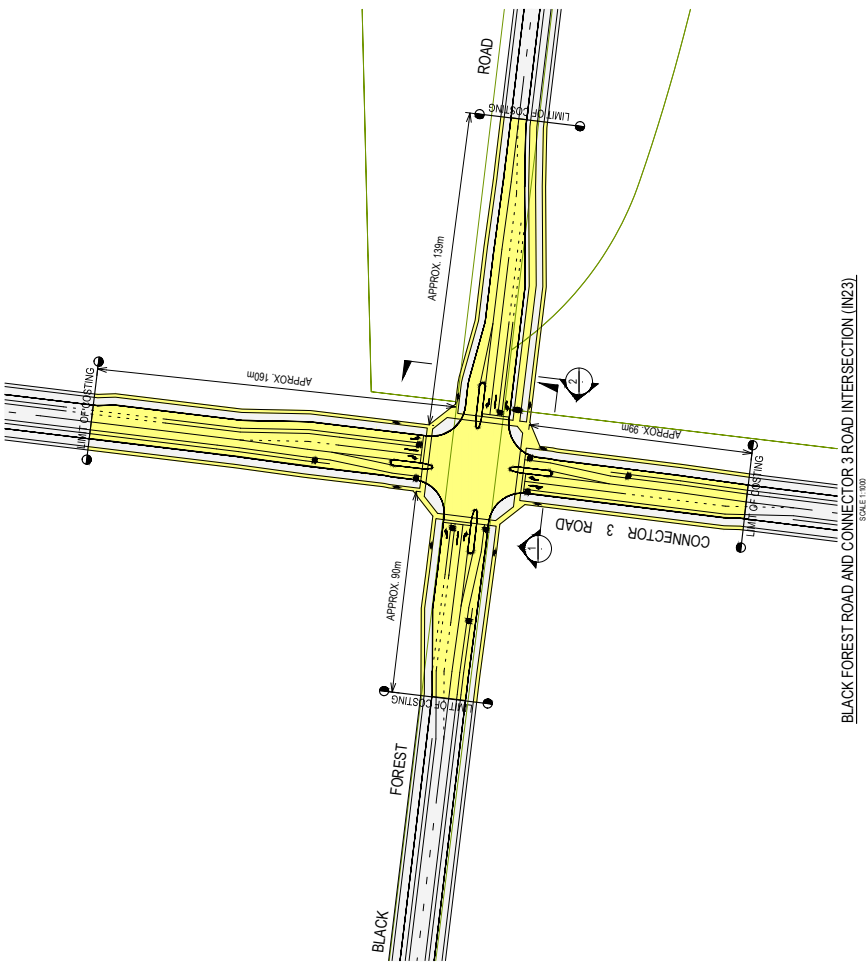
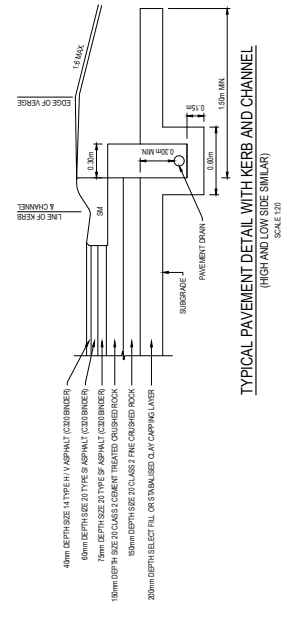
		PROJECT WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN INFRASTRUCTURE OPINION OF COST	
CLIENT METROPOLITAN PLANNING AUTHORITY LOCATION WYNDHAM VIC DATE 12/11/2013 FILE NO 107553	SCALE AS SHOWN STATUS PRELIMINARY NOT FOR CONSTRUCTION	TITLE BULBAN ROAD AND CONNECTOR INTERSECTION (IN20) PROJECT NO 107553 REVISED TO MIE20	
LEGEND [Yellow Box] CUSTODIED INTERSECTION AREA [Grey Box] ROAD RESERVE [Green Line] EXISTING ROAD		REVISIONS NO. DATE BY DESCRIPTION 01 12/11/2013 [] [] 02 12/11/2013 [] [] 03 12/11/2013 [] [] 04 12/11/2013 [] []	

INFRASTRUCTURE - OPINION OF COST				
IN23 - Black Forest Road & Connector				
Item	Description	Quantity	Unit	Rate (£/m ²)
1.00 LANDSCAPEWORKS				
1.01	Excavation and disposal of site	13,800	m ³	30.00
1.02	Tree and stump removal to receive sub-base	10,550	m ²	1.00
1.03	Spread and Compact Fill Gravel	1,380	m ³	8.90
1.04	Tree (Cretey etc.)	1	Item	15,000.00
2.00 CONCRETE WORKS				
2.01	Kerbs & Channels (S&M, S&C & S&D)	1,170	Lm	52.00
2.02	Traffic Islands - 200mm thick reinforced	190	m ²	14.000
2.03	Traffic Islands - 100mm thick reinforced	2,100	m ²	5.100
2.04	200mm thick concrete	9,100	m ²	18.50
3.00	140mm Thick Asphalt (Intermediate course)	9,100	m ²	33.20
3.01	140mm Thick Asphalt (Base course)	9,100	m ²	33.50
3.02	140mm Thick Asphalt (Sub-base course)	9,100	m ²	32.750
3.03	150mm FCN Base	10,950	m ²	13.50
3.04	150mm FCN Base	10,950	m ²	9.90
3.05	200mm Sub-base Course	10,950	m ²	6.00
3.06	Sub-base improvement (down 20% of area)	2,112	m ²	13.90
4.00	LANDSCAPE WORKS	1,170	Lm	31.50
4.01	Drainage Pits (600mm dia)	12	No.	2,750.00
4.02	Drainage Pits (containing rock backfill)	700	m	20.000
4.03	1.77m dia RCP (containing rock backfill)	0	m	0
4.04	1.77m dia RCP (earth backfill)	0	m	0
4.05	Break-in and Connection to Existing Drainage	2	Item	1,000.00
5.00	SIGN AND LINE MARKING	1	Item	24,000.00
5.01	Luminaires (off-road)	32	No.	600.00
5.02	Regulatory Signage	1	Item	300,000.00
6.00	TRAFFIC SIGNAL WORKS	1	Item	300,000.00
6.01	Traffic Signal (incl. allowance for peds)	1	Item	18,500
6.02	Signal Cable (incl. allowance for peds)	180	Lm	6,000.00
7.00	ELECTRICAL WORKS	16	No.	6,000.00
7.01	Street Light (pole @ 5m spacing)	16	No.	6,000.00
7.02	Street Lighting cabling and control	900	Lm	80.000
8.00	LANDSCAPE WORKS	4,300	m ²	8.50
8.01	Landscaping (topsoil and turf only)	78	No.	30,000
8.02	Landscaping (trees @ 10m tree sizes)	78	No.	27,200
9.00	SERVICE RELOCATION / PROTECTION	1	Item	200,000.00
9.01	Allowance for relocation of existing services	1	Item	200,000.00
				Sub-Total
				2,982,741

Traffic Management 5%	145,037
Site Establishment 2.5%	72,519
Survey and Design 5%	145,037
Supervision and Project Management 9.0%	268,107
Contingency 15% (project management 1% and plant tracking 0.25%) 3.25%	94,274
Vc Roads Fees 1%	29,827
Contingency 15%	453,117
Total Estimated Cost (incl. GST)	3,438,506

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / M&E Green Offsets.
- Costing based on S&M/C functional layout plan 3004703-007-1127 Issue D 20/09/2012.
- Pavement design is indicative only - subject to geotechnical investigation and design.
- Assume landscaping between road and pavements. Where no pavements exist a 2m landscaped buffer is assumed at roadfoes.



MPA METROPOLITAN PLANNING AUTHORITY

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST

PROJECT: BLACK FOREST ROAD AND CONNECTOR 3 ROAD INTERSECTION (IN23)
 SHEET NO: 107553 MIE23

PRELIMINARY
NOT FOR CONSTRUCTION

DATE: 10/01/2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

LEGEND:
 [Symbol] COSTED INTERSECTION AREA
 [Symbol] ROAD RESERVE
 [Symbol] EXISTING ROAD

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE AND NOT TO BE TAKEN AS GUARANTEE. APPROVED BY THE CLIENT. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

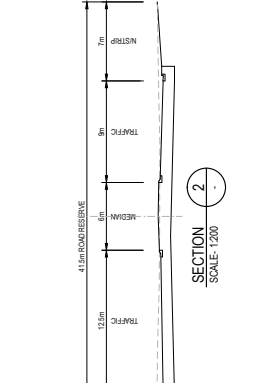
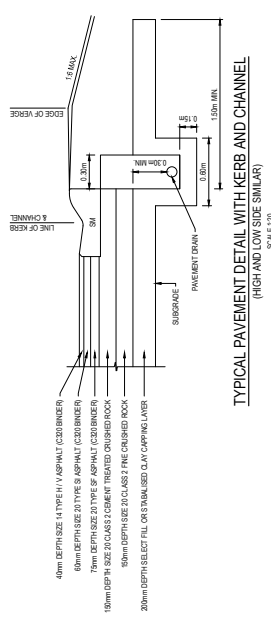
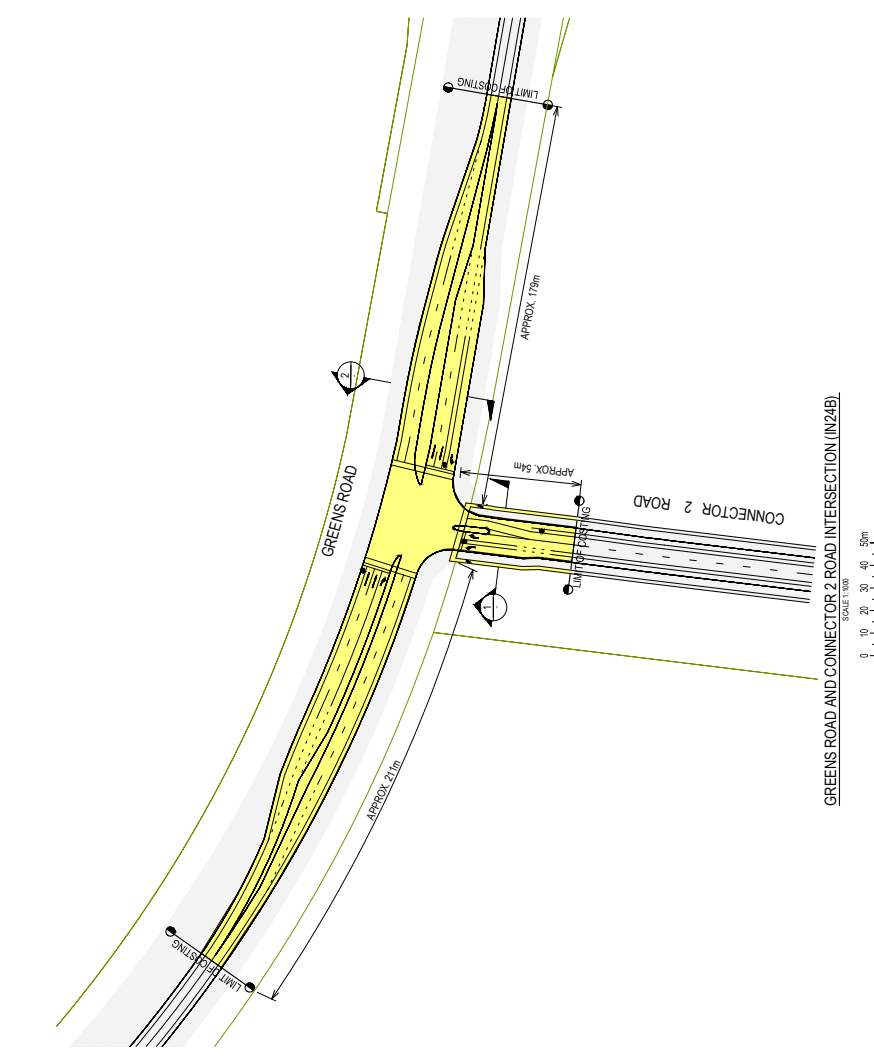
Item	Description	Quantity	Unit	Rate (£/unit)	Sub Total (£ incl GST)
1.00	EXCAVATIONS				
1.01	Excavation and disposal of soil	13,800	m ³	30.00	414,000
1.02	1m x 1m and deeper sub-base	10,601	m ²	1.00	10,601
1.03	Spread and Compact Fill Course	1,280	m ²	8.90	12,144
1.04	Ties (Density etc.)	1	Item	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channel (SMI, SMC & SMC)	1,680	Lm	52.00	87,840
2.02	Traffic Islands - 200mm thick reinforced	510	m ²	80.00	40,800
2.03	Traffic Islands - 100mm thick reinforced	200	m ²	51.00	10,200
3.00	PAVEMENT WORKS				
3.01	140mm Thick Asphalt (base course)	8,500	m ²	18.10	153,850
3.02	100mm Thick Asphalt (intermediate course)	8,500	m ²	31.10	264,450
3.03	75mm Thick Asphalt (base course)	8,500	m ²	33.30	283,150
3.04	Prime	8,500	m ²	3.50	29,750
3.05	100mm CTCOR Base	10,001	m ²	13.50	135,114
3.06	150mm FCR Base	10,001	m ²	9.90	99,009
3.07	200mm Spined Sub-base Course	10,001	m ²	6.00	60,006
3.08	Subgrade Improvement (allow 20% of area)	2,120	m ²	13.80	29,256
4.00	DRAINAGE WORKS				
4.01	100mm PVC (800mm spacing)	1,680	Lm	31.10	52,272
4.02	Drainage Pits (800mm spacing)	172	No.	2,720.00	467,824
4.03	1.70m dia RCP (covered rock backfill)	1,100	m	240.00	264,000
4.04	3.70m dia RCP (earth backfill)	0	m	200.00	0
4.05	Street-in and Connection to Existing Drainage	2	Item	1,000.00	2,000
5.00	SIGN AND LINES MARKING				
5.01	Lettermarking (allowance)	1	Item	18,712.50	18,712.50
5.02	Regulatory Signs	20	No.	400.00	8,000
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signal (allowance for 1m)	1	No.	380,000.00	380,000
6.02	Traffic Signal Control (not allowance for 1m)	1	Unit	18,000	18,000
7.00	ELECTRICAL WORKS				
7.01	Street Light (pole @ 50m spacing)	16	No.	6,000.00	96,000
7.02	Street Light cabling and control	800	Lm	80.00	64,000
8.00	LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	2,100	m ²	8.30	17,430
8.02	Landscaping (trees @ 15m, both sides)	112	No.	301.00	33,712
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	Item	200,000.00	200,000
					Subtotal
					3,407,000

NOTES

- All costs exclude GST.
- Costs determined using local construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on SMCET functional layout plan 300/F0100-007-1.120 Issue C 20/09/2012.
- Payment design is indicative only, subject to geotechnical investigation and design.
- Assume encroachments between road and pathways. Where no pathways exist a 2m landscaped buffer is assumed at roadside.

Contingency 15%
Total Estimated Cost (incl. GST) 3,407,000

Traffic Management 5%: 144,722
 SMC Establishment 2.5%: 72,361
 Survey and Design 5%: 144,732
 Supervision and Project Management 9.5%: 263,518
 Council Fees (Supervision 1% and plan checking 0.75%) 13.25%: 94,072
 Vc Roads Fees 1%: 23,942



MPA METROPOLITAN PLANNING AUTHORITY

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST

PROJECT: WYNDHAM WEST DEVELOPMENT
 DRAWING NO: 107553_MIE24B
 DATE: 20/09/2012
 SCALE: 1:200

PRELIMINARY
NOT FOR CONSTRUCTION

DESIGNED BY: MPA
 CHECKED BY: MPA
 APPROVED BY: MPA

PROJECT NO: 107553_MIE24B

DATE: 20/09/2012

SCALE: 1:200

SECTION 1
SCALE: 1:200

SECTION 2
SCALE: 1:200

LEGEND

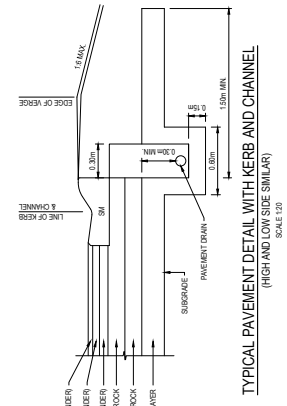
- COSTED INTERSECTION AREA
- EXISTING ROAD
- ROAD RESERVE

WARNING
 BEWARE OF MANHOLES AND SERVICES
 THE LOCATION OF UNDERGROUND SERVICES ARE
 APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD
 BE DETERMINED BY A UTILITY ENGINEER PRIOR TO ANY
 WORKING. EXISTING SERVICES ARE SHOWN.

INFRASTRUCTURE OPINION OF COST				
M26 - Ballin Road & Connector				
Item	Description	Quantity	Unit	Rate (\$/unit)
1.00	EARTHWORKS			
1.01	Excavation incl. and disposal off site	16,440	m ³	30.00
1.02	Fill and prepare subgrade to receive subbase	12,594	m ²	1.90
1.03	Spread and Compact Fill Course	1,940	m ²	8.90
1.04	Final Compaction	0	item	15,000.00
2.00	PAVEMENT			
2.01	150mm Thick Asphalt (SMB & S&L)	1,500	Lm	52.00
2.02	150mm Thick Asphalt (SMB & S&L)	80	m ²	22.90
2.03	150mm Thick Asphalt (SMB & S&L)	3,200	m ²	80.00
2.04	150mm Thick Asphalt (SMB & S&L)	3,200	m ²	51.00
3.00	PAVEMENT WORKS			
3.01	150mm Thick Asphalt (weaving course)	10,200	m ²	18.10
3.02	150mm Thick Asphalt (intermediate course)	10,200	m ²	31.70
3.03	150mm Thick Asphalt (base course)	10,200	m ²	34.60
3.04	150mm Thick Asphalt (base course)	10,200	m ²	30.70
3.05	150mm Thick Asphalt (base course)	12,594	m ²	13.50
3.06	150mm Thick Asphalt (base course)	12,594	m ²	12.60
3.07	150mm Thick Asphalt (base course)	12,594	m ²	6.00
3.08	150mm Thick Asphalt (base course)	2,519	m ²	13.50
4.00	DRAINAGE WORKS			
4.01	AG Drain	1,500	Lm	31.50
4.02	Drainage P.H. (90m length)	10	No.	2,700.00
4.03	175mm dia RCP (casted rock base)	1,500	m	20.00
4.04	175mm dia RCP (casted rock base)	2	m	200.00
4.05	175mm dia RCP (casted rock base)	0	m	200.00
4.06	175mm dia RCP (casted rock base)	2	item	1,200.00
5.00	TRAFFIC SIGNALS			
5.01	Regular Signal	1	item	24,000.00
5.02	Regular Signal	32	No.	400.00
6.00	TRAFFIC SIGNAL WORKS			
6.01	Traffic Signal (incl. 10yr maintenance fee)	1	No.	300,000.00
6.02	Traffic Signal Control (incl. allowance for p.h.)	100	Lm	85.00
7.00	ELECTRICAL WORKS			
7.01	Street Lighting (incl. 50m spacing)	10	No.	6,000.00
7.02	Street Lighting (incl. 50m spacing)	500	Lm	70.00
8.00	LANDSCAPE WORKS			
8.01	Landscaping (incl. 15m both sides)	9,300	m ²	8.30
8.02	Landscaping (incl. 15m both sides)	528	No.	300.00
9.00	SERVICE RELOCATION / PROTECTION			
9.01	Allowance for relocation of existing services	1	item	200,000.00
				Sub-total
				172,241
				88,171
				30,000
				310,000
				111,807
				34,445
				510,274
				3
				4,840,000

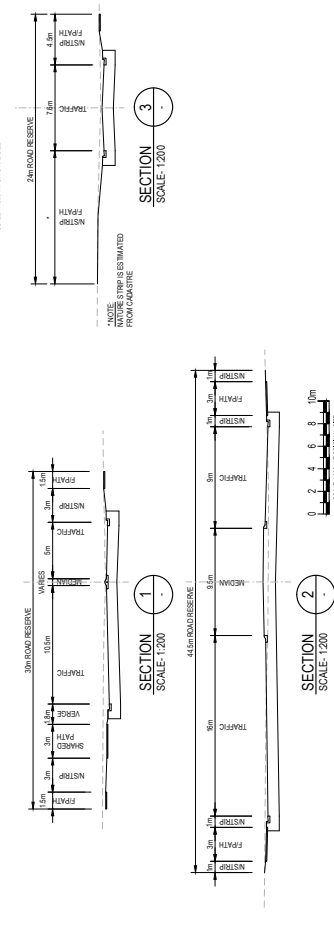
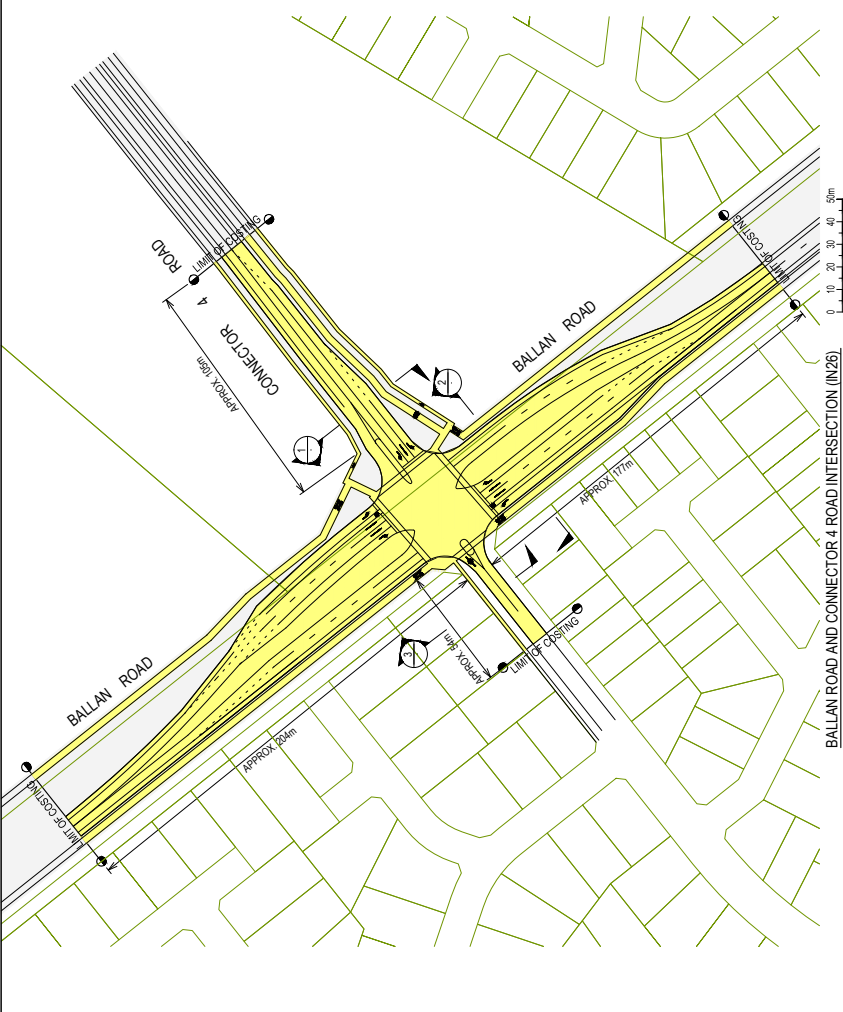
Total Estimated Cost (incl. GST)	
Traffic Management 5%	17,224
Site Establishment 2.5%	88,171
Design and Detailing 5%	30,000
Supervision and Protection 10%	310,000
Contingency 10%	111,807
Vat Road Fees 1%	34,445
Contingency 15%	510,274
	3
	4,840,000

- NOTES
- All rates include GST.
 - Costs are based on current construction rates from similar projects.
 - Prices are based on current market rates for materials and labour.
 - Contingency is based on a 15% project management fee (300,000,000) (131 based on 200,000,000).
 - Costing based on M&E Functional Report (300,000,000) (131 based on 200,000,000).
 - Pavement design is indicative only, subject to geotechnical investigation and design.
 - Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.



MPA METROPOLITAN PLANNING AUTHORITY
 100, South Street, WYNDHAM VIC 3207
 T: (03) 9470 1000 F: (03) 9470 1001
 www.mpa.vic.gov.au

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
 DRAWING: INFRASTRUCTURE OPINION OF COST
 SHEET: BALLIN ROAD AND CONNECTOR 4 ROAD INTERSECTION (IN26)
 DATE: 10/05/2014
 DRAWN BY: MIE26
 CHECKED BY: MIE26
 STATUS: PRELIMINARY
 NOT FOR CONSTRUCTION



MPA METROPOLITAN PLANNING AUTHORITY
 100, South Street, WYNDHAM VIC 3207
 T: (03) 9470 1000 F: (03) 9470 1001
 www.mpa.vic.gov.au

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
 DRAWING: INFRASTRUCTURE OPINION OF COST
 SHEET: BALLIN ROAD AND CONNECTOR 4 ROAD INTERSECTION (IN26)
 DATE: 10/05/2014
 DRAWN BY: MIE26
 CHECKED BY: MIE26
 STATUS: PRELIMINARY
 NOT FOR CONSTRUCTION

LEGEND
 COSTED INTERSECTION AREA
 ROAD RESERVE
 EXISTING ROAD

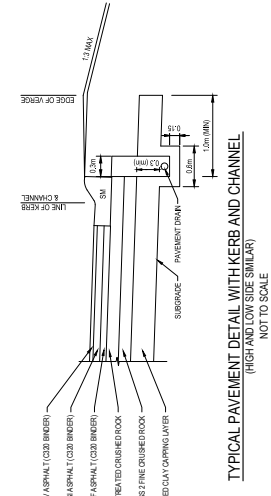
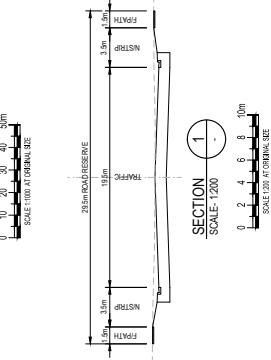
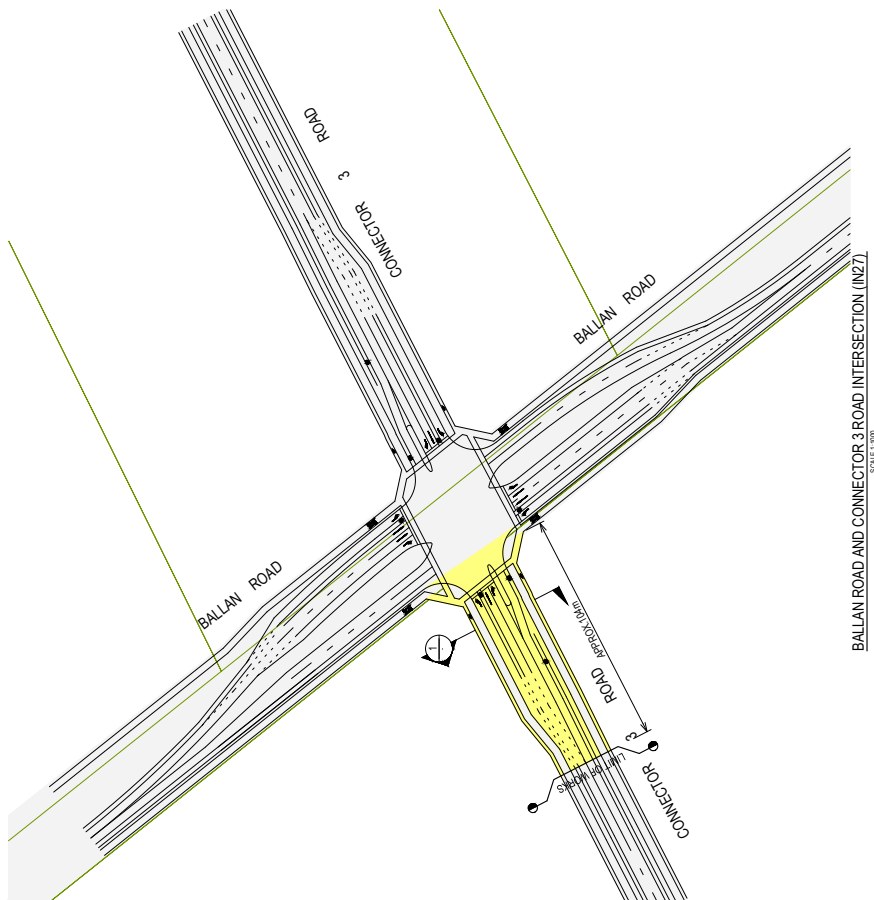
WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SERVICES PRIOR TO ANY WORK BEING UNDERTAKEN. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

INFRASTRUCTURE - OPINION OF COST					
INZ7 - Ballan Road & Connector - Connector Road ONLY					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ incl GST)
1.00	EXCAVATIONS				
1.01	Excavation and disposal of soil	3,200	m ³	30.00	96,000
1.02	1m and replace subgrade to receive sub-base	2,456	m ²	1.00	2,456
1.03	Spread and Compact Fill Overlay	300	m ²	8.00	2,400
1.04	Finish (Density etc.)	1	Item	5,000.00	5,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channels (SMI, SMC & SMC)	270	Lm	52.00	14,040
2.02	Traffic Islands - 250mm thick reinforced	50	m ²	80.00	4,000
2.03	Traffic Islands - 125mm thick reinforced	400	m ²	51.00	20,400
3.00	PAVING WORKS				
3.01	150mm Thick Asphalt (base course)	2,100	m ²	18.50	38,850
3.02	150mm Thick Asphalt (intermediate course)	2,100	m ²	33.50	70,350
3.03	150mm Thick Asphalt (base course)	2,100	m ²	33.50	70,350
3.04	Prime	2,100	m ²	3.00	6,300
3.05	150mm CTCR Base	2,456	m ²	13.50	33,156
3.06	150mm FCR Base	2,456	m ²	9.00	22,104
3.07	200mm Spalled Sub-base Course	2,456	m ²	6.00	14,736
3.08	Subgrade improvement (allow 20% of area)	401	m ²	13.40	5,373
4.00	DRAINAGE WORKS				
4.01	175mm dia RCP (covered rock backfill)	270	Lm	31.50	8,505
4.02	175mm dia RCP (open backfill)	3	No.	2,750.00	7,245
4.03	175mm dia RCP (covered rock backfill)	200	m	240.00	48,000
4.04	175mm dia RCP (open backfill)	0	m	200.00	0
4.05	Block-in and Connection to Existing Drainage	2	Item	1,000.00	2,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking (delineation)	1	Item	6,237.50	6,238
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	TRAFFIC SIGNAL WORKS				
6.01	1200mm x 1200mm x 150mm (1200mm x 150mm)	1	No.	100,000.00	100,000
6.02	Traffic Signal Control (incl allowance for P&H)	50	Lm	18.50	925
7.00	ELECTRICAL WORKS				
7.01	Sheet Light (incl @ 50m spacing)	6	No.	6,000.00	36,000
7.02	Sheet Light cabling and control	300	Lm	80.00	24,000
8.00	LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	900	m ²	8.50	7,650
8.02	Landscaping (trees @ 15m boom sides)	18	No.	301.00	5,418
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	Item	100,000.00	100,000
					762,837

NOTES

- All costs exclude GST.
- Costs determined using global construction rates from similar projects.
- No allowance has been made for Community, Lakon, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on SMC Functional layout plan 300/F010-007-1 (13/11/2012).
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscape buffer is assumed at roadside.

Costs Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3,226
Vc Roads Fees 1% 7,692
Contingency (5%) 11,643
Total Estimated Cost (incl GST) 3,108,000



LEGEND

- COSTED INTERSECTION AREA
- EXISTING ROAD
- ROAD RESERVE

MPA

PRELIMINARY
NOT FOR CONSTRUCTION

CLIENT: METROPOLITAN PLANNING AUTHORITY
PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST
CONNECTOR 3 ROAD
DRAWN: AS SHOWN
DATE: 10/04/2014
SCALE: AS SHOWN
DRAWN: AS SHOWN
DATE: 10/04/2014
SCALE: AS SHOWN
DRAWN: AS SHOWN
DATE: 10/04/2014
SCALE: AS SHOWN

107553 MIEZ7 C

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE VERIFIED BY A REGISTERED ELECTRICAL ENGINEER. EXISTING SERVICES ARE SHOWN.

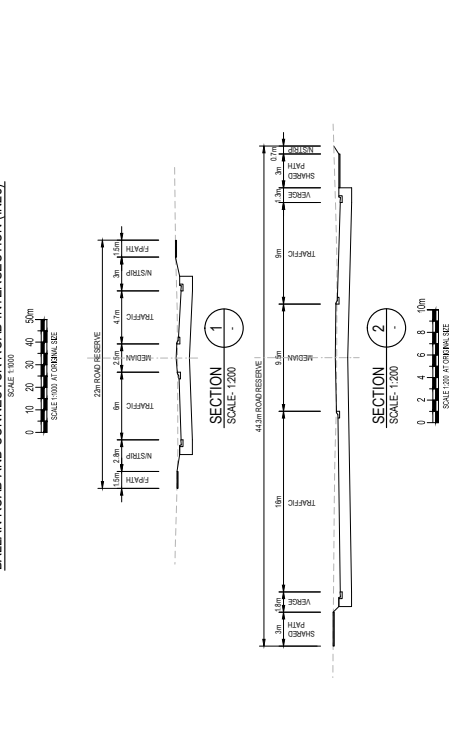
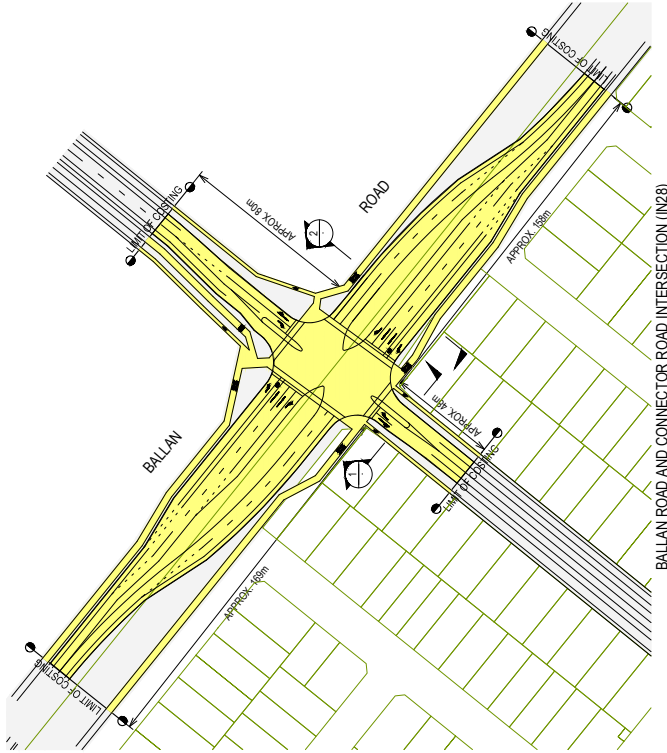
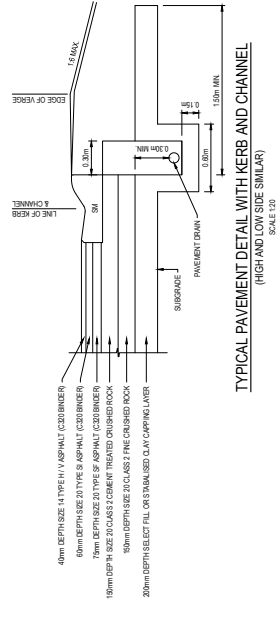
Item	Description	Quantity	Unit	Rate (£/unit)	Sub Total (£ excl GST)
1.00	EARTHWORKS				
1.01	Excavation incl. and disposal of fill	14,720	m ³	30.00	441,000
1.02	Fill and prepare subgrade to receive sub-base	11,232	m ³	1.00	11,232
1.03	Sub-base compact fill (100mm)	1,970	m ³	8.00	15,760
1.04	Sub-base compact fill (200mm)	1	item	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerbs & Channels (S.M., S.M.2 & S.M.3)	1,220	Lm	62.00	80,440
2.02	Traffic Islands - 200mm thick reinforced	10	m ²	80.00	800
2.03	Shoulder Pathways - 150mm thick reinforced	2,800	m ²	51.00	142,800
3.00	PAVEMENT WORKS				
3.01	140mm Thick Asphalt (wearing course)	9,100	m ²	18.10	164,710
3.02	100mm Thick Asphalt (intermediate course)	9,100	m ²	31.70	288,470
3.03	75mm Thick Asphalt (base course)	9,100	m ²	33.30	302,970
3.04	100mm GCR Base	1,123	m ²	13.30	14,937
3.05	150mm GCR Base	11,232	m ²	9.90	111,286
3.06	200mm Salved Sub-base Course	11,232	m ²	6.00	67,392
3.07	Subgrade Improvement (allow 20% of area)	2,220	m ²	13.40	30,152
4.00	DRAINAGE WORKS				
4.01	AD Drain	1,220	Lm	31.50	54,180
4.02	Drainage Pile (60mm spacing)	17	No.	2,750.00	47,125
4.03	175mm dia RCP (concrete rock header)	1,100	m	240.00	264,000
4.04	200mm dia RCP (concrete rock header)	0	m	200.00	0
4.05	200mm dia RCP (concrete rock header)	2	item	1,250.00	2,500
5.00	SIGNAL AND SIGNAGE				
5.01	Landscape (allowance)	1	item	24,000.00	24,000
5.02	Regulatory Signage	32	No.	600.00	19,200
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signals (incl. 10yr maintenance fee)	1	No.	300,000.00	300,000
6.02	Traffic Signal Control (incl. allowance for pit)	180	Lm	85.00	15,300
7.00	ELECTRICAL WORKS				
7.01	Street Light Poles (6m spacing)	16	No.	6,000.00	96,000
7.02	Street Light Poles (6m spacing)	650	Lm	80.00	52,000
8.00	LANDSCAPE WORKS				
8.01	Landscape (topsoil and turf area)	8,100	m ²	8.30	67,230
8.02	Landscape (trees @ 15m, 10m, 6m area)	114	No.	500.00	57,000
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Allowance for relocation of existing services	1	item	200,000.00	200,000
				Sub-total	3,164,013

Traffic Management 5%	158,201
Site Establishment 2.5%	79,100
Contingency 15%	474,602
Total Estimated Cost (incl. GST)	3,445,000

Contingency 15%: 474,602

Total Estimated Cost (incl. GST): 3,445,000

- NOTES**
- All costs exclude GST.
 - Allowance for construction rates from similar projects.
 - No allowance has been made for Community Liaison, Cultural Heritage, Removal of Trees / Not Given Offsets.
 - Costing based on S.M.E.C. Functional layout plan 300478/05/007-1133 Issue D 26/09/2012.
 - Pavement design is indicative only, subject to geotechnical investigation and design.
 - Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.



MPA METROPOLITAN PLANNING AUTHORITY

PROJECT: WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
 INFRASTRUCTURE OPINION OF COST
 LOCATION: BALLAN ROAD AND CONNECTOR ROAD INTERSECTION (IN28)

DATE: 10/05/2014
 DRAWN BY: AS SHOWN
 CHECKED BY: AS SHOWN
 APPROVED BY: AS SHOWN
 DC: AS SHOWN

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE: 1:200 AT ORIGINAL SIZE

LEGEND:
 COSTED INTERSECTION AREA
 ROAD RESERVE
 EXISTING ROAD

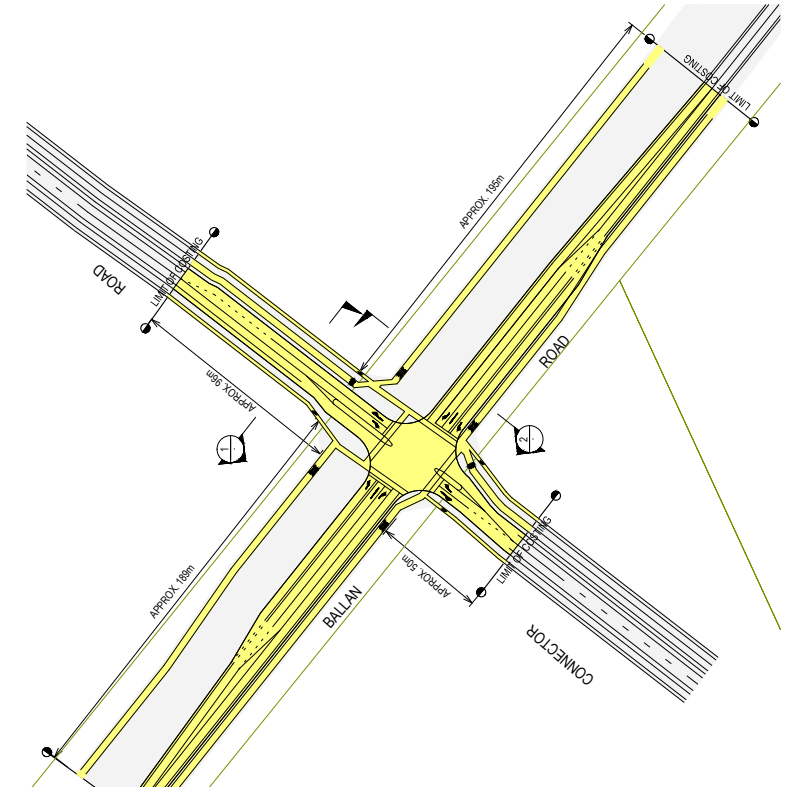
PROJECT NO: 107553
 SHEET NO: MIE28
 SHEET COUNT: 1 OF 1

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE AND NOT TO BE TAKEN AS GUARANTEE. ALL WORKS TO BE CARRIED OUT SHOULD BE VERIFIED BY OTHER MEANS PRIOR TO COMMENCEMENT OF WORKS.

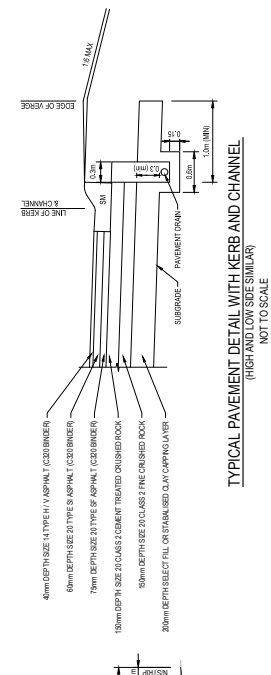
INFRASTRUCTURE - OPINION OF COST					
Item	Description	Unit	Quantity	Rate (£/unit)	Sub Total (£ incl GST)
1.00	Excavation and disposal of soil	m ³	12,200	30.00	377,000
1.02	17m and 18m deep sub-base to receive sub-base	m ²	9,958	16.00	159,328
1.03	Spread and compact fill concrete	m ²	1,250	8.00	10,000
1.04	Form (Concrete etc.)	m ²	1	15,000.00	15,000
2.00	CONCRETE WORKS				
2.01	Kerb & Channel (SMI, SMO & SMO)	Lm	1,220	52.00	63,440
2.02	Shoulder drains - 125mm thick reinforced	m ²	120	80.00	9,600
2.03	140mm thick concrete kerb	m ²	3,420	51.00	174,600
3.00	LANDSCAPE WORKS				
3.01	140mm thick concrete kerb	m ²	8,000	18.50	148,000
3.02	150mm thick Asphalt (intermediate course)	m ²	8,000	33.50	268,000
3.04	Prime	m ²	8,000	3.00	24,000
3.05	150mm CTCR Base	m ²	9,958	13.50	134,433
3.07	150mm FCR Base	m ²	9,958	9.00	89,622
3.08	Subgrade improvement (allow 20% of area)	m ²	9,958	6.00	59,748
4.00	DRAINAGE WORKS				
4.01	125mm dia RCP (depth base)	Lm	1,220	31.50	38,430
4.02	125mm dia RCP (depth base)	Lm	2,750	33.64	92,510
4.03	125mm dia RCP (depth base)	Lm	800	24.00	19,200
4.04	125mm dia RCP (depth base)	Lm	0	20.00	0
4.05	Break-in and Connection to Existing Drainage	m	2	1,000.00	2,000
5.00	SIGN AND LINES MARKING				
5.01	Line marking (delineator)	Item	1	24,800.00	24,800
5.02	Regulatory Signs	No.	32	400.00	12,800
6.00	TRAFFIC SIGNAL WORKS				
6.01	Traffic Signal (incl. advance for phase)	No.	1	300,000.00	300,000
6.02	Traffic Signal (incl. advance for phase)	No.	1	18,000.00	18,000
7.00	ELECTRICAL WORKS				
7.01	Street Light (incl. @ 50m spacing)	Item	11	6,000.00	66,000
7.02	Street Light (incl. @ 50m spacing)	Item	600	80.00	48,000
8.00	LANDSCAPE WORKS				
8.01	Landscaping (topsoil and turf only)	m ²	12,400	8.50	105,400
8.02	Landscaping (turf @ 15m from sides)	Item	81	300.00	24,300
9.00	SERVICE RELOCATION / PROTECTION				
9.01	Advanced by relocation of existing services	Item	1	200,000.00	200,000
					Sub Total
					3,244,545

Traffic Management 5%	162,227
Site Establishment 2.5%	73,285
Survey and Design 5%	162,227
Supervision and Project Management 9.5%	253,381
Contingency 15%	486,682
Vc Roads Fees 1%	28,194
Total Estimated Cost (incl. GST)	3,344,100

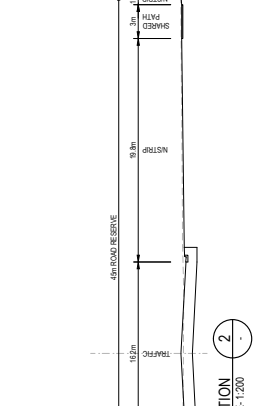
NOTES
1. All costs exclude GST.
2. Costs determined using global construction rates from similar projects.
3. No allowance has been made for Community, Lakeland, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
4. Costing based on SMC Functional layout plan 300/F0100-007-134 dated 20/09/2012.
5. Pavement design is indicative only, subject to geotechnical investigation and design.
6. Assume landscaping between road and pathways. Where no pathways exist a 2m landscaped buffer is assumed at roadside.



BALLAN ROAD AND CONNECTOR ROAD INTERSECTION (IN29)
SCALE: 1:200
0 10 20 30 40 50m
SCALE: 1:100 AT ORIGINAL SIZE



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HIGH AND LOW SIDE SIMILAR)
NOT TO SCALE



SECTION 1
SCALE: 1:200
SECTION 2
SCALE: 1:200
0 2 4 6 8 10m
SCALE: 1:50 AT ORIGINAL SIZE

	<p>MPA METROPOLITAN PLANNING AUTHORITY</p> <p>15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100</p>	<p>WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN</p> <p>INFRASTRUCTURE OPINION OF COST</p> <p>CONNECTOR ROAD</p> <p>INTERSECTION 2 (IN29)</p>
<p>DATE: 10/01/2024</p> <p>BY: [Name]</p> <p>FOR: [Name]</p>	<p>PROJECT NO: 107553</p> <p>REV: 01</p> <p>DATE: 10/01/2024</p>	<p>PRELIMINARY</p> <p>NOT FOR CONSTRUCTION</p>

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE NOT SHOWN ON THIS PLAN. APPROVED CONTRACTORS SHOULD BE PROVIDED WITH THIS INFORMATION TO GUARANTEE OTHER UTILITIES ARE NOT DAMAGED BY ANY WORK.

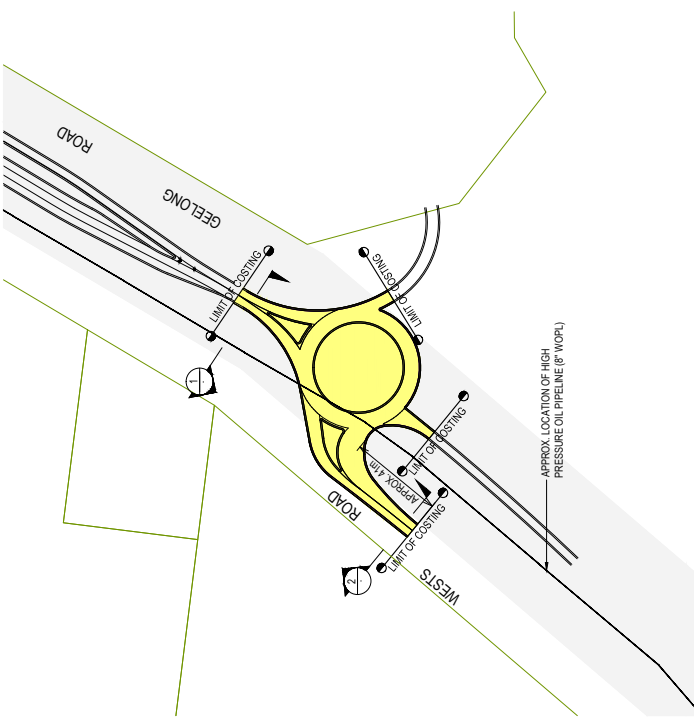
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ incl GST)
1.00 EARTHWORKS					
1.01	Excavate, backfill and compact of site	4,000	m ³	30.00	120,000
1.02	Trim and prepare subgrade to receive sub-base	3,038	m ²	1.60	4,861
1.03	Spread and Compact Fill/Gravel	400	m ²	8.90	3,560
1.04	Ties (Density etc.)	1	Item	15,000.00	15,000
2.00 CONCRETE WORKS					
2.01	Kerbs & Channel (SMI, SMC & SKI)	670	Lm	52.00	34,840
2.02	Travels (SMI, SMC & SKI)	0	m ²	80.00	0
2.03	Travels (SMI, SMC & SKI)	0	m ²	51.00	0
3.00 PAVEMENT WORKS					
3.01	140mm Thick Asphalt (base course)	2,300	m ²	18.50	41,850
3.02	100mm Thick Asphalt (intermediate course)	2,300	m ²	33.50	72,850
3.03	75mm Thick Asphalt (base course)	2,300	m ²	33.50	72,850
3.04	Prime	2,300	m ²	3.00	6,900
3.05	150mm CTCOR Base	3,038	m ²	13.50	41,000
3.06	150mm FCR Base	3,038	m ²	9.90	30,077
3.07	200mm Spalled Sub-base Course	3,038	m ²	6.00	18,222
3.08	Subgrade Improvement (allow 20% of area)	608	m ²	13.40	8,141
4.00 DRAINAGE WORKS					
4.01	100mm PVC (100mm dia)	670	Lm	31.50	21,105
4.02	100mm PVC (100mm dia)	7	No.	2,700.00	18,900
4.03	175mm dia RCP (curbed rock backfill)	600	m	24.00	14,400
4.04	175mm dia RCP (earth backfill)	0	m	20.00	0
4.05	Break-in and Connection to Existing Drainage	2	Item	1,000.00	2,000
5.00 SIGN AND LINES MARKING					
5.01	Lining/arrow (allowance)	1	Item	8,400.00	8,400
5.02	Regulatory Signage	12	No.	400.00	4,800
6.00 TRAFFIC SIGNAL WORKS					
6.01	100mm PVC (100mm dia)	0	No.	200,000.00	0
6.02	Traffic Signal Control (incl allowance for PM)	0	Lm	18.00	0
7.00 ELECTRICAL WORKS					
7.01	Sheet Light (incl @ 30m spacing)	4	No.	6,000.00	24,000
7.02	Sheet Light cabling and control	200	Lm	80.00	16,000
8.00 LANDSCAPE WORKS					
8.01	Landscape (topsoil and turf only)	2,100	m ²	8.30	17,430
8.02	Landscape (tree @ 15m boom size)	45	No.	350.00	15,750
9.00 SERVICE RELOCATION / PROTECTION					
9.01	Allowance for protection of existing services	1	Item	200,000.00	200,000
9.02	Allowance for protection of existing services	1	Item	400,000.00	400,000
				Sub-total	\$ 1,321,231

Traffic Management 5%	\$ 66,062
Site Establishment 2.5%	\$ 32,831
Contingency 15%	\$ 198,185
Total Estimated Cost (incl GST)	\$ 1,618,309

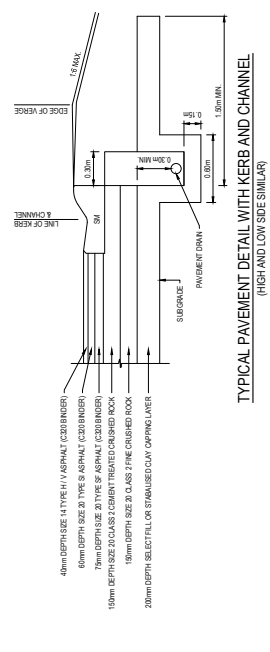
Ground Fees Supervision 1.25%, project management 1% and plan checking 0.75% 12.25%
Via Roads Fees 1%
13,312

NOTES

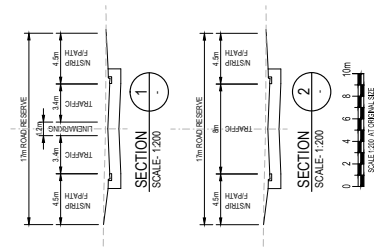
- All costs exclude GST.
- Apply local construction rates from pricing sheets.
- No allowance has been made for Council's Labour, Cultural Heritage, Race and Ethnic / Not Other Offsets.
- Costing based on QLA Roundabout, Race and Ethnic / Not Other Offsets.
- Contract based on QLA Roundabout, Geotech of Service Ops.
- Pavement design is indicative only, subject to geotechnical investigation and design.
- Assume landscaping between road and pathways. Where no pathways exist a 3m landscaped buffer is assumed at roadside.
- WOPC, unless under existing road. Allowance commodity / increase existing protection (i.e. concrete slab). Relocation excluded.
- Approximate location of "WOPC" from "Data Before You Dig" 27/01/15 Ref: VLRoads 7888 Ed3.



WESTS ROAD ROUNDABOUT INTERSECTION (INS1)
SCALE: 1:200



TYPICAL PAVEMENT DETAIL WITH KERB AND CHANNEL
(HESH AND LOW SIDE SIMILAR)
SCALE: 1:20



LEGEND

- EXISTING ROAD
- COSTED INTERSECTION AREA
- ROAD RESERVE

CLIENT: METROPOLITAN PLANNING AUTHORITY
PROJECT: WESTS ROAD ROUNDABOUT INTERSECTION (INS1)
DATE: 10/01/2014
SCALE: AS SHOWN
PRELIMINARY
NOT FOR CONSTRUCTION

WYNDHAM WEST DEVELOPMENT CONTRIBUTION PLAN
INFRASTRUCTURE OPINION OF COST
107553 MIE31

IN-32 Ballan Road Pedestrian Operated Signals (POS) - Preliminary Cost Estimate

Description	ID	Detail	Unit	Rate	Qty	Amount
SIGNAL HARDWARE	1	New Signal Pedestal - 2B	each	\$ 3,500.00	6	\$ 21,000.00
	2	New Signal Pedestal Mastarm or JUP	each	\$ 5,000.00	2	\$ 10,000.00
	3	New Pedestal Foundation - 0.7m base	each	\$ 1,500.00	6	\$ 9,000.00
	4	New Pedestal Foundation - 3.0m base	each	\$ 4,000.00	2	\$ 8,000.00
	5	Lanterns - 3 aspect (LED)	each	\$ 1,100.00	8	\$ 8,800.00
	6	Lanterns - Pedestrian (LED)	each	\$ 800.00	4	\$ 3,200.00
	7	Audio Tactiles - Variable	each	\$ 1,900.00	4	\$ 7,600.00
	8	Conduit Pit (standard)	each	\$ 1,800.00	5	\$ 9,000.00
	9	Conduit - Open trench through footpath/paved area, supply & Install 2/100mm Underground Conduit, Backfill & Reinstale	m	\$ 400.00	10	\$ 4,000.00
	10	Conduit - Open trench through grassed/unpaved area, supply & Install 2/100mm Underground Conduit, Backfill & Reinstale	m	\$ 350.00	10	\$ 3,500.00
	11	Conduit - Bore under road, supply & Install 2/100mm Underground Conduit, Backfill & Reinstale	m	\$ 450.00	14	\$ 6,300.00
	12	Conduit - Open trench through footpath/paved area, supply & Install 1/50mm Underground Conduit, Backfill & Reinstale	m	\$ 250.00	20	\$ 5,000.00
	13	13 Core Cable	m	\$ 30.00	150	\$ 4,500.00
	14	Pillar Mounted Point of Supply	each	\$ 3,400.00	1	\$ 3,400.00
	15	Microcads 10 year Maintenance Fee incl Prom & controller	item	\$ 75,000.00	1	\$ 75,000.00
16	Concrete stand for new traffic controller	each	\$ 3,500.00	1	\$ 3,500.00	
STREET LIGHTING	17	Brackets - Single	each	\$ 900.00	2	\$ 1,800.00
	18	Lamps (globes) - 150W	each	\$ 700.00	2	\$ 1,400.00
	19	Cable (supply and install)	m	\$ 30.00	50	\$ 1,500.00
	20	Conduit - Open trench through grassed/unpaved area, supply & Install 1/50mm Underground Conduit, Backfill & Reinstale	m	\$ 200.00	20	\$ 4,000.00
	21	Electrical Pit (standard)	each	\$ 1,800.00	3	\$ 5,400.00
CIVIL WORKS	22	Concrete Footpath	sq m	\$ 48.00	30	\$ 1,440.00
	23	Construct Kerb Ramp & Install TGSi	each	\$ 1,700.00	4	\$ 6,800.00
	24	Supply and Install stick down TGSi	m ²	\$ 350.00	5	\$ 1,750.00
	25	Pedestrian Lines 150mm wide	m	\$ 15.00	28	\$ 420.00
	26	Stop Bars 600mm wide	m	\$ 65.00	14	\$ 910.00
	27	Removal of linemarking - with grit blasting	m ²	\$ 60.00	4	\$ 240.00
	28	Pavement Overlay	m ²	\$ 30.00	420	\$ 12,600.00
	29	Traffic Management	item	\$ 20,000.00	1	\$ 20,000.00
					Sub Total	\$ 227,460.00
PROFESSIONAL FEES & CONTINGENCY	30	Microcads/Council Fees 8% for cost of works	item	3.25%		\$ 7,392.45
	31	Professional Design Fees	item	2.00%		\$ 5,000.00
	32	Contingency	item	10.00%		\$ 22,746.00
				TOTAL	\$ 262,598.45	
Assumptions/Comments	REF					
	9,13	Controller is located approximately 10m from the POS				
	12	Supply Point is located approximately 20m from Controller/signals. No information is available with respect to underground or above ground power availability				
	20	Street lighting will be connected to existing along the road via underground conduit network. It is understood that existing power is overhead				
	28	Pavement overlay may be required depending on the condition of the road surface. Quantity has been calculated but no cost has been allocated to this estimate				
27	Allowance for linemarking removal using grit blasting					
29	Traffic Management allowance made on the assumption that the road is operating as an existing 4 lane divided carriageway					

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyrndham Vale West DCP
MPA Ref: Rail Pedestrian Crossing Upgrade
Drp Ref: n/a

Date: 19-Mar-14
By: MVW
Revision: B



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INFRASTRUCTURE - OPINION OF COST					
Rail Pedestrian Crossing Upgrade					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	PAVEMENT				
1.01	Excavation and disposal	10	m3	30	300
1.02	Sub Coarse	50	m2	6	300
1.03	Asphalting	50	m2	34	1,695
1.04	Track Crossing Rubber Mats + Precast Edge Beam	3.6	m	7,375	26,550
1.05	Tactile Ground Surface Indicators	1	No	3,240	3,240
2.00	METAL WORK				
2.01	Fencing	50	m	150	7,500
2.02	Gates	8	No	1,000	8,000
3.00	ELECTRICAL				
3.01	Power Supply	1	No	5,000	5,000
3.02	Signalling / Sensors	1	No	20,000	20,000
3.03	Gate Actuator	4	No	1,000	4,000
4.00	MISCELLANEOUS				
4.01	Line Marking	50	m	4	175
4.02	Signage	4	No	400	1,600
4.03	Allowance for Standby Equipment	1	No	5,000	5,000
4.04	Working Lights (2 No.)	32	hrs	200	6,400
4.05	Rail Safety Team (4 People)	64	hrs	120	7,680
4.06	Track Occupation (+10%)	1	%	10%	9,744
4.07	Allowance for Night Work (+30%)	1	%	30%	29,232
	Sub-total				136,416

Traffic Management: 5%	6,821
Site Establishment 2.5%	3,410
Survey and Design: 5%	6,821
Supervision and Project Management: 9%	12,277
Council Fees 1%	1,364
Vic Roads Fees 1%	1,364
Contingency 20%	27,283
Total Estimated Cost per Lineal meter (excl. GST)	195,760

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Pedestrian Crossing assumed to be have an 'Active' design layout as per Victorian Rail Industry Operators Group Standard VRIOGS-003-2-2006.
- Pedestrian Crossing is assumed to traverse 3 railway tracks requiring four sets of gates.
- Adequate electrical supply deemed to be available within 10m.

8.4.3 Bridge/Culvert Cost Sheets

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-01 - Alfred Road DSS
Drp Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.2m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	5
Total No of Culverts	75



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INFRASTRUCTURE - OPINION OF COST					
BR-01 - Alfred Road DSS					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	252	m3	30.00	7,560
1.02	Trim and prepare subgrade for Slabs and foundations	405	m2	1.80	729
1.03	Spread and Compact Fill Onsite	392	m3	20.00	7,848
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	3060	m2	21.00	64,260
1.06	Select Fill	383	m3	30.00	11,475
2.00	CONCRETE WORKS				
2.01	Culvert	75	No.	3,699.20	277,440
2.02	Culvert Foundation Slab (300mm)	77	m3	250.00	19,125
2.03	Apron Slab (150mm)	150	m2	61.20	9,180
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	15	m2	455.00	6,825
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	270	m2	51.00	13,770
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	30	L.m	80.30	2,409
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	180	Lm	1.75	315
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	216	m2	8.30	1,793
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					516,000

Traffic Management 5%	25,800
Site Establishment 2.5%	12,900
Survey and Design 5%	25,800
Supervision and Project Management 9.0%	46,440
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	16,770
Vic Roads Fees 1%	5,160
Contingency 20%	103,200
Total Estimated Cost (excl. GST)	\$ 753,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on advice received from MT email 11.03.2014
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-02 - Ison Bridge Over Lollypop Creek
Drp Ref:

Date: 18-Mar-14
By: PH
Revision: C
Reviewer: MVW

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Bridge Geometry:

Length (m) = 85
 Width (m) = 17
 No. Spans = 4

INFRASTRUCTURE - OPINION OF COST BR-02 - Ison Bridge Over Lollypop Creek						
Item	Description	Quantity	Unit	Rate (\$/unit)	Rate (\$/m)	Sub Total (\$ excl.GST)
1.00	STRUCTURE					
1.01	Foundations (Piles, Footings)	5	No.	115,500.00		577,500
1.02	Sub-Structure (Abutments, Piers)	5	No.	168,000.00		840,000
1.03	Super-T Pre-stressed Beams	17	m2	1,155.00	19,635.00	1,668,975
1.04	Deck Slab and Footpaths/Kerb	17	m2	126.00	2,142.00	182,070
1.05	Asphalt Wearing Course	11	m2	21.00	231.00	19,635
2.00	BARRIERS					
2.01	Medium Level Containment Barrier (Steel)	2	m	1,470.00	2,940.00	249,900
2.02	Medium Level Off Structure Barrier	120	m	420.00		50,400
2.03	Guard Fence (incl. Terminals)	600	m	147.00		88,200
3.00	DRAINAGE AND MISCELLANEOUS WORKS					
3.01	Drainage Pits	5	No.	2,887.50		14,438
3.02	PE Drainage Pipe (suspended)	1	m	252.00	252.00	21,420
3.03	Services Conduits (incl. sand backfill)	4	m	136.50	546.00	46,410
3.04	Public Lighting	4	No.	15,750.00		63,000
3.05	Rock Beaching	2	No.	168.00		336
	Sub-total					3,822,284
	Traffic Management 5%					191,114
	Site Establishment 2.5%					95,557
	Survey and Design 5%					191,114
	Supervision and Project Management 9.0%					344,006
	Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%					124,224
	Vic Roads Fees 1%					38,223
	Contingency 20%					764,457
	Total Estimated Cost (excl. GST)					\$ 5,571,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-03 - Black Forest Road DSS, Ison Road, RB2 to W2
Drp Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



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 Australia 3000

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 Tel: 61 (03) 8676 1200
 Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (2.1m) x Height (1.2m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	3
Total No of Culverts	45

INFRASTRUCTURE - OPINION OF COST					
BR-03 - Black Forest Road DSS, Ison Road, RB2 to W2					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	165	m3	30.00	4,950
1.02	Trim and prepare subgrade for Slabs and foundations	170	m2	1.80	306
1.03	Spread and Compact Fill Onsite	392	m3	20.00	7,848
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1285	m2	21.00	26,989
1.06	Select Fill	383	m3	30.00	11,475
2.00	CONCRETE WORKS				
2.01	Culvert	45	No.	2,901.20	130,554
2.02	Culvert Foundation Slab (300mm)	32	m3	250.00	8,033
2.03	Apron Slab (150mm)	63	m2	61.20	3,856
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	6	m2	455.00	2,867
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	218	m2	51.00	11,108
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	13	L.m	80.30	1,012
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	145	Lm	1.75	254
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	174	m2	8.30	1,446
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					303,968

Traffic Management 5%	15,198
Site Establishment 2.5%	7,599
Survey and Design 5%	15,198
Supervision and Project Management 9.0%	27,357
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	9,879
Vic Roads Fees 1%	3,040
Contingency 20%	60,794
Total Estimated Cost (excl. GST)	\$ 444,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-04 - Ison Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

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Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.8m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	12
Total No of Culverts	180

INFRASTRUCTURE - OPINION OF COST					
BR-04 - Ison Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	462	m3	30.00	13,860
1.02	Trim and prepare subgrade for Slabs and foundations	972	m2	1.80	1,750
1.03	Spread and Compact Fill Onsite	653	m3	20.00	13,068
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	7344	m2	21.00	154,224
1.06	Select Fill	536	m3	30.00	16,065
2.00	CONCRETE WORKS				
2.01	Culvert	180	No.	4,139.54	745,117
2.02	Culvert Foundation Slab (300mm)	184	m3	250.00	45,900
2.03	Apron Slab (150mm)	360	m2	61.20	22,032
2.04	Wing Wall	42	m2	516.00	21,450
2.05	Wing Wall Foundation	22	m3	396.00	8,642
2.06	Concrete retaining wall on top of culverts (500mm)	36	m2	455.00	16,380
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	396	m2	51.00	20,196
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	72	L.m	80.30	5,782
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	264	Lm	1.75	462
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	475	m2	8.30	3,944
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					1,162,082

Traffic Management 5%	58,104
Site Establishment 2.5%	29,052
Survey and Design 5%	58,104
Supervision and Project Management 9.0%	104,587
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	37,768
Vic Roads Fees 1%	11,621
Contingency 20%	232,416
Total Estimated Cost (excl. GST)	\$ 1,694,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-05 - Ison Road
Drg Ref: N/A
Date: 19-Mar-14
By: MVW
Revision: E



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Culvert Geometry:

Culvert Dimensions:	Width (2.1m) x Height (1.2m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	3
Total No of Culverts	45

INFRASTRUCTURE - OPINION OF COST					
BR-05 - Ison Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	165	m3	30.00	4,950
1.02	Trim and prepare subgrade for Slabs and foundations	170	m2	1.80	306
1.03	Spread and Compact Fill Onsite	392	m3	20.00	7,848
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1285	m2	21.00	26,989
1.06	Select Fill	383	m3	30.00	11,475
2.00	CONCRETE WORKS				
2.01	Culvert	45	No.	2,901.20	130,554
2.02	Culvert Foundation Slab (300mm)	32	m3	250.00	8,033
2.03	Apron Slab (150mm)	63	m2	61.20	3,856
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	6	m2	455.00	2,867
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	218	m2	51.00	11,108
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	13	L.m	80.30	1,012
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	145	Lm	1.75	254
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	174	m2	8.30	1,446
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					303,968

Traffic Management 5%	15,198
Site Establishment 2.5%	7,599
Survey and Design 5%	15,198
Supervision and Project Management 9.0%	27,357
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	9,879
Vic Roads Fees 1%	3,040
Contingency 20%	60,794
Total Estimated Cost (excl. GST)	\$ 444,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-06 - Black Forest Road DSS, Armstrong Road, X2 to X3
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

MEINHARDT

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Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.8m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	8
Total No of Culverts	120

INFRASTRUCTURE - OPINION OF COST					
BR-06 - Black Forest Road DSS, Armstrong Road, X2 to X3					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	342	m3	30.00	10,260
1.02	Trim and prepare subgrade for Slabs and foundations	648	m2	1.80	1,166
1.03	Spread and Compact Fill Onsite	653	m3	20.00	13,068
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	4896	m2	21.00	102,816
1.06	Select Fill	536	m3	30.00	16,065
2.00	CONCRETE WORKS				
2.01	Culvert	120	No.	4,139.54	496,745
2.02	Culvert Foundation Slab (300mm)	122	m3	250.00	30,600
2.03	Apron Slab (150mm)	240	m2	61.20	14,688
2.04	Wing Wall	42	m2	516.00	21,450
2.05	Wing Wall Foundation	22	m3	396.00	8,642
2.06	Concrete retaining wall on top of culverts (500mm)	24	m2	455.00	10,920
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	324	m2	51.00	16,524
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	48	L.m	80.30	3,854
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	216	Lm	1.75	378
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	389	m2	8.30	3,227
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					823,614

Traffic Management 5%	41,181
Site Establishment 2.5%	20,590
Survey and Design 5%	41,181
Supervision and Project Management 9.0%	74,125
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	26,767
Vic Roads Fees 1%	8,236
Contingency 20%	164,723
Total Estimated Cost (excl. GST)	\$ 1,201,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-07 - Black Forest Road DSS, Armstrong Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



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Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.8m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	75
No of Culverts laid side to side	2
Total No of Culverts	150

INFRASTRUCTURE - OPINION OF COST					
BR-07 - Black Forest Road DSS, Armstrong Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	162	m3	30.00	4,860
1.02	Trim and prepare subgrade for Slabs and foundations	162	m2	1.80	292
1.03	Spread and Compact Fill Onsite	653	m3	20.00	13,068
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1224	m2	21.00	25,704
1.06	Select Fill	536	m3	30.00	16,065
2.00	CONCRETE WORKS				
2.01	Culvert	150	No.	4,139.54	620,931
2.02	Culvert Foundation Slab (300mm)	31	m3	250.00	7,650
2.03	Apron Slab (150mm)	60	m2	61.20	3,672
2.04	Wing Wall	42	m2	516.00	21,450
2.05	Wing Wall Foundation	22	m3	396.00	8,642
2.06	Concrete retaining wall on top of culverts (500mm)	6	m2	455.00	2,730
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	216	m2	51.00	11,016
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	12	L.m	80.30	964
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	144	Lm	1.75	252
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	259	m2	8.30	2,151
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					812,657

Traffic Management 5%	40,633
Site Establishment 2.5%	20,316
Survey and Design 5%	40,633
Supervision and Project Management 9.0%	73,139
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	26,411
Vic Roads Fees 1%	8,127
Contingency 20%	162,531
Total Estimated Cost (excl. GST)	\$ 1,185,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.



Werribee River Bridge Crossing

Growth Areas Authority

August 2012



www.smec.com

EXECUTIVE SUMMARY

SMEC has been engaged by the Growth Areas Authority (GAA) to review and refine the proposed crossing of the Werribee River as part of a proposed future extension to Hobbs Road which is situated within the Western Growth Corridor of Melbourne.

GAA's preferred river crossing option "Eastern Arterial Option 3" has been evaluated in conjunction with the hydrology and geotechnical information provided by the GAA and an updated bridge concept and construction estimate has been provided.

This report recommends a river crossing resulting in an approximate 30% reduction in bridge length from 115m to 79m. This has resulted in a revised cost estimate of approximately \$10.2M which is considerably less than previous estimates.

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1 INTRODUCTION

SMEC has been engaged by the Growth Areas Authority to review and refine the concept bridge design for Hobbs Road over the Werribee River. The current preferred option is described as the “Eastern Arterial Option 3” which is proposed to cross the Werribee River just west of the extent of the existing section of Sayers Road in Tarneit, Melbourne.

The concept bridge design has been refined to include the geotechnical and hydrological inputs provided by the GAA and an updated cost estimate has also been provided.



Figure 1: Location Map

2 REVIEW OF EXISTING INFORMATION

2.1 Information Supplied By the Growth Areas Authority

The following data was supplied by the GAA for the purposes of this assignment:

- Werribee River Crossing Planning Feasibility Study Stage 2 Report (GHD 2011)
- Wyndham Vale – Sundry IWMP Tasks: PSP90, PSP 40, PSP42 North, PSP 42 South and PSP 43 (Alluvium 2012)
- Geotechnical Investigation for the Armstrong Bridge over Werribee River, Tarneit (VicRoads June 2012)
- LIDAR Information (GAA)

2.2 Review of Existing Information

SMEC undertook a review of the information supplied by GAA and extract the information relevant to this assignment.

The elements particularly useful for this assignment were:

- The 100 ARI and flow rates were not provided within the Alluvium report. SMEC scaled the 100 year flood level from the Planning and Feasibility Study (GHD 2011) given that this level was provided from Melbourne Water. SMEC has cross checked this information with independent information available on hand and the flood level adopted seems reasonable however additional investigation is recommended to achieve an appropriate level of confidence. SMEC notes that should the 100 year flood level scaled from the 'Planning and Feasibility Study' (GHD 2011) may not be accurate, a simple solution would be to increase the height of the columns so that Melbourne Waters 600mm freeboard requirement is maintained.
- SMEC contacted Melbourne Water to determine whether a 1:2000 ARI flood level was available to ensure that the bridge concept satisfied the serviceability requirement as per AS5100. Melbourne Water confirmed that this information was not available and hence has not been considered for this bridge concept.
- The geotechnical information is limited to the north eastern bank due to specific instruction. The report assumes that the geological conditions are likely to be similar on the south western bank. No investigation has been made with respect to groundwater levels and chemistry in this area to date.
- All alignment options proposed in The Planning and Feasibility Report (GHD 2011) cross through known Floodplain EVC (55), the Werribee River BioSite, through both Degraded Tree and Native Vegetation Habitat. Information on cultural heritage is limited however this is deemed as normal for a project in this early stage of development.
- The LIDAR information supplied by GAA was configured and utilised for the purposes of setting a horizontal and vertical alignment for the proposed bridge.

3 CONCEPT BRIDGE DESIGN

3.1 Current Preferred Bridge Concept Design

GAA's current preferred option namely the "Eastern Arterial Option 3" is referenced in the Planning and Feasibility Study (GHD 2011). For the purposes of this report, this will be referred to as the 'preferred option' from hereon.

The current preferred option consists of a 115m long 'Super T' structure that is 4 spans long that accommodates 4 lanes of traffic each 3.5 metres wide and two shared use paths at either edge of the bridge both at 3.0metres wide. The estimate for this bridge is in the order of \$9,700,000.

3.2 Refinement of the Concept Bridge Design

SMEC has reviewed the current preferred bridge design and provided an updated concept (Refer to Figure 2 and Figure 4). In preparation of this concept SMEC undertook the following tasks:

- Evaluated and compiled the available LIDAR data
- Established the proposed road 'Centre line' consistent with the current preferred option.
- Set up an MX model for existing ground data and design centre line
- Reviewed and optimised the number of proposed spans in the current preferred option
- Reviewed and optimised the span arrangements so that a more effective span arrangement could be achieved
- Preliminary design check to confirm that the bridge concept was achievable (i.e. checking of span to length ratio and checking of beam sizes).

3.2.1 Discussion

Our key objective was to determine opportunities to reduce the construction cost of the bridge. To achieve this SMEC has:

- Reduced the overall bridge length from 155 m to 79 m (30% reduction)
- Adjusted the span arrangement to eliminate the low headroom that was apparent in the current preferred option. This adjacent headroom would not serve any particular purpose (i.e. not high enough for an average person to access the underside of the bridge). This achieves a reduction in total spans from 4 to 3.
- Reduced the total number of beams required for construction as a result of the reduced number of spans and optimised typical cross section from 40 beams to 27 beams.
- The location of the piers have been repositioned to maximise the distance from the centre of the river bed as considerable benefits can be realised in doing so such as: increased safety during construction, minimising environmental impacts during construction, delays to construction due to seasonal impacts are minimised.

Table 1 below summarises the work SMEC has undertaken to refine the current preferred bridge concept design.

Item	Current Preferred Design Option	Refined Concept Design	Cost Benefit
Bridge Type	T-Roff (Super T)	T-Roff (Super T)	N/A
Bridge Length	115m	79m	30% reduction in bridge length
No. Spans	4 (max span 32.5m)	3 (max span 32.5)	1 less pier
No. Beams	40	27	32% reduction in no. of beams
No. Lanes	4 (2 No. Shared Use Paths)	4 (2 No. Shared Use Paths)	N/A

Table 1 – Summary of Bridge Concept Refinement

SMEC has in addition provided an alternative typical cross section than the one identified in the current preferred option (Figure 3).

This alternative cross section moves the traffic barriers from the edge of the structure to the edge of the traffic lanes (kerb line) and uses an additional pedestrian railing system for the shared use path. This separates the traffic lanes with the shared use path users and results in an overall safer solution. It also provides additional flexibility for urban designers and architects when selecting the aesthetic finish of the structures edge. Consideration needs to be given to the off structure barrier termination and how it interfaces with pedestrian movements and other site constraints.

3.3 Assumptions & Limitations

The following assumptions have been made in the development of the refined concept design:

- The 100 year flood level has not been calculated by SMEC. It has been adopted from the ‘Planning and Feasibility Study Report’ (GHD 2011). An accurate measure of the 100 year flood level was not part of the scope.
- The 2000 year flood level was not provided by Melbourne Water and as such was not considered for the purposes of this concept design
- Targeted flora and fauna and cultural heritage (European and Indigenous) survey information has not been considered in preparation of the concept bridge design as it has not been made available.

3.4 Geotechnical Interpretation and Concept Design

The available geotechnical information indicates that, for the preferred route option, the subsurface profile at the bridge abutments is likely to comprise approximately 1.5m of stiff to hard silty clay (residual soil to extremely weathered basalt) overlying distinctly weathered to slightly weathered medium to high strength basalt. The relevant boreholes in this area (B12-66837 and B12-66838) indicate the presence of an extremely to distinctly weathered zone at a depth of about 5.6m to 5.7m below the surface on the north eastern bank. This layer is 0.7m to 0.8m thick and is likely to be compressible.

It is considered that 600mm diameter bored piles would provide a suitable foundation for the proposed bridge. These bored piles should be founded in distinctly weathered or better quality basalt. The piles should be designed based on a side friction of 400kPa and an end bearing pressure of 8MPa (ultimate).

Given the relatively shallow soil cover in this area, there may be the potential to value add by constructing the bridge on spread/pad footings. This option could be explored further should GAA require.

It should be noted that these recommendations are based on limited geotechnical information and it is recommended that further investigations be undertaken to:

- Confirm that subsurface conditions are similar on the south western bank.
- Assess the presence and chemistry of groundwater within the foundation zone.
- Assess the presence of compressible zones up to 12m below the existing ground surface.

4 CONSTRUCTION ESTIMATE

4.1 Overview

A preliminary concept estimate for the construction of the bridge crossing is provided in Table 2. The concept design construction estimate has been developed using similar rates to those used during the planning and feasibility stage of the project to enable a broad comparison. Furthermore, SMEC's concept estimate makes allowance for additional items that should be included to better understand the cost of constructing the bridge as a standalone project and as such 'White collar costs' and other incidental items have been estimated. These include: Survey and design, supervision and project management, site establishment (mobilisation), traffic management and utility services relocation. These additional items have been estimated as a percentage of the capital construction costs and the percentages adopted are understood to be generally in line with the GAAs' generally accepted provisions.

A separate item of 20% of construction costs has been included as contingency.

Item	Unit	Rate	Quantity	Cost
Structure	m ²	4000	1627	\$ 6,508,000
Cut to Fill	m ³	34	660	\$ 22,440
Import to Fill	m ³	46	4233	\$ 194,718
Subtotal				\$ 6,725,158
Service Relocation	%	10		\$ 672,516
Survey & Design	%	5		\$ 336,258
Supervision & Project Management	%	10		\$ 672,516
Site Establishment	%	2.5		\$ 168,129
Traffic Management	%	5		\$ 336,258
Contingency	%	20		\$ 1,345,032
Total Estimated Cost				\$ 10,255,866

Table 2 – Concept Estimate

4.1.1 Concept Bridge Estimate

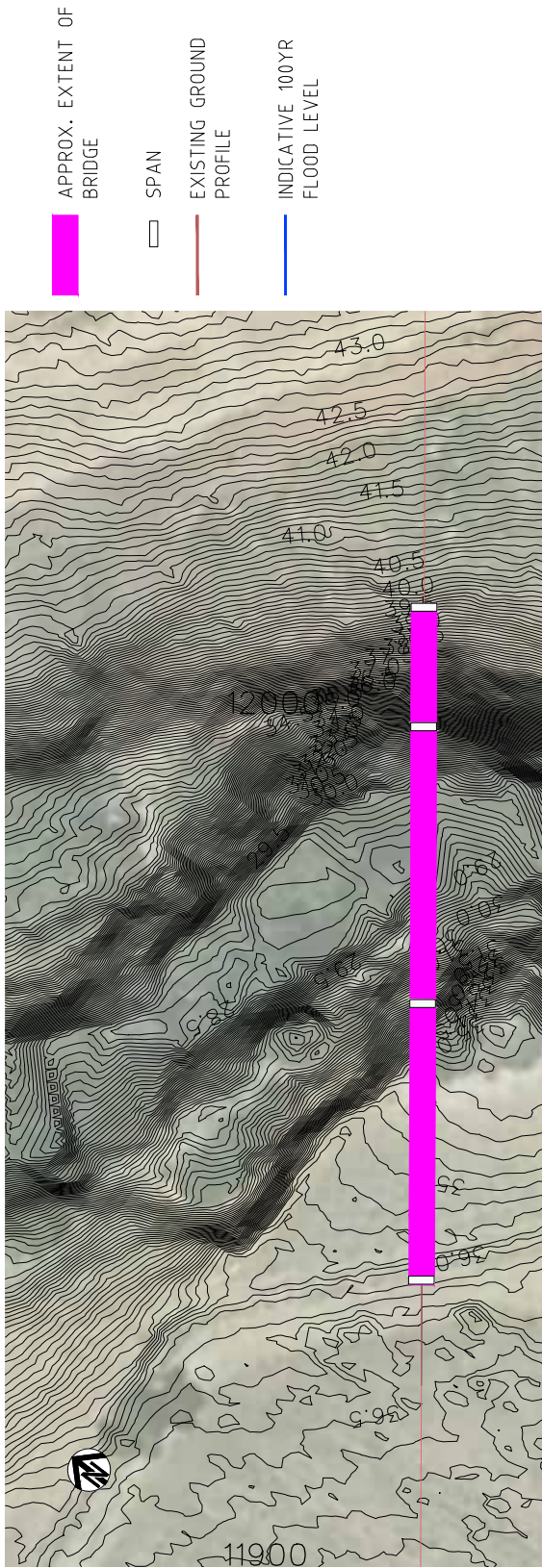
The 3 span 79metre structure over the Werribee River is considered as a moderately complex structure to construct in normal circumstances. Working within the confines of a waterway presents challenges that include environmental (flora/ fauna and cultural heritage), construction staging and in cases where there is an existing road network, managing traffic is an important consideration. All these issues can put upward pressure on the cost of construction. Adopting a deck area unit rate of \$4000/m² is considered appropriate for the purposes of estimating at this point in the projects life given the number of assumptions that require further investigation.

Additionally, it was considered prudent to include costs that are normally associated with a 'brown field' site and hence an allowance for traffic management and utility service relocation have been included however depending on when the project is constructed, these costs may not be relevant.

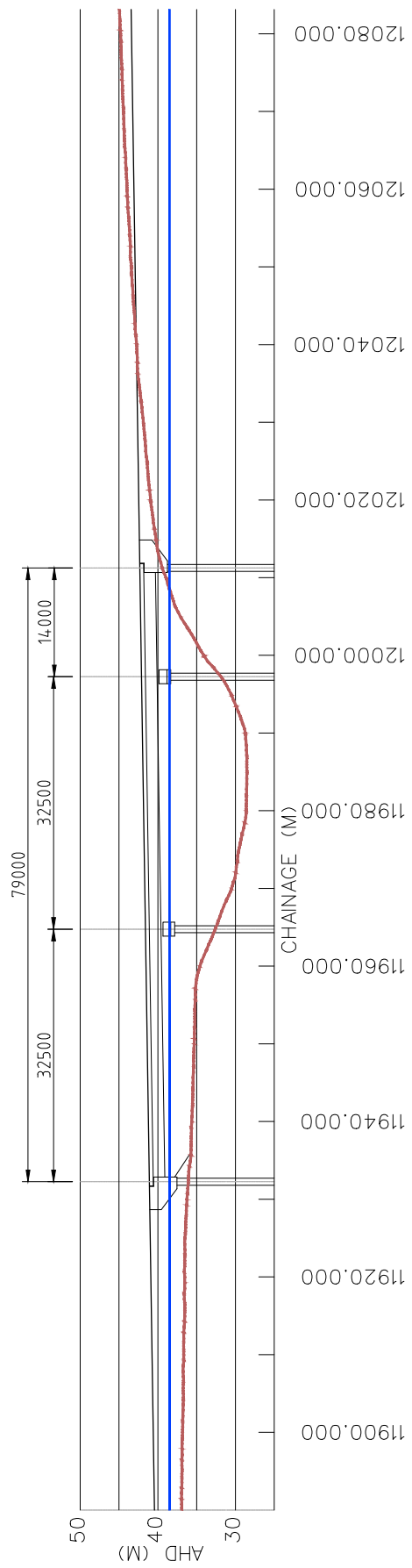
4.1.2 Risk Items

In preparing the estimate SMEC has made a number of assumptions which could influence the cost of the structure these include:

- An increase in the 100 year flood level will result in the bridge columns to be raised to accommodate the freeboard requirements imposed by Melbourne Water.
- The estimate considers the grade line to 80m either side of the structure
- Should the construction of bridge piers in the river be precluded, then the use of steel girders may be required to span a longer length. There will consequentially be an increase in the construction cost
- The majority of earthworks (fill) material will be imported
- No land acquisition costs have been included as it has been assumed a reservation has been set aside.
- Street lighting has not been included
- Signalised intersections are excluded
- General landscaping has been excluded
- Price indexation and escalation has not been included as the year of construction is not known



- APPROX. EXTENT OF BRIDGE
- SPAN
- EXISTING GROUND PROFILE
- INDICATIVE 100YR FLOOD LEVEL



INFORMATION DOCUMENT
3004780-ID-0001-20120807
FIGURE 2

WERRIBEE RIVER CROSSING
ROAD BRIDGE PLAN AND ELEVATION

NOT FOR CONSTRUCTION

SCALE 1:100
AT A3 SIZE DRAWING

DRAWING FILE LOCATION / NAME
K:\Project\3382186\CD\Info\Draws\3382186-CD-0001-20120807.dwg



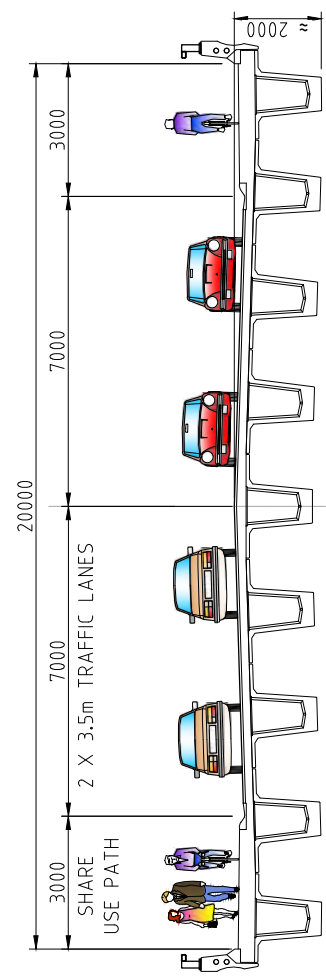
INFORMATION DOCUMENT
3004780-ID-0002-20120807
FIGURE 3

**WERRIBEE RIVER CROSSING
ROAD BRIDGE TYPICAL SECTION**

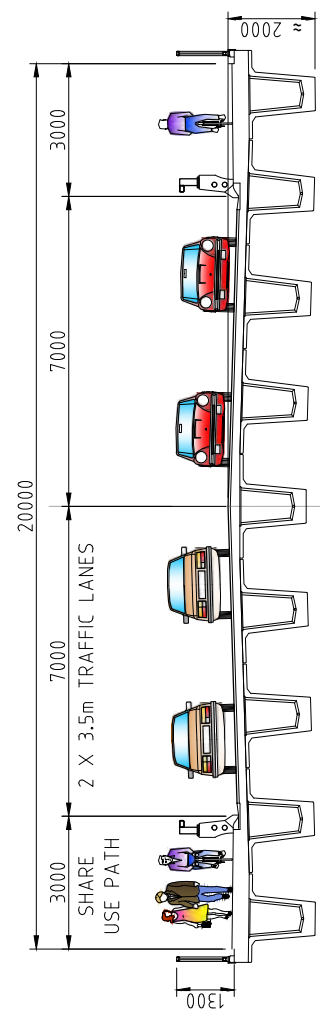
NOT FOR CONSTRUCTION

SCALE 1:100
AT A3 SIZE DRAWING

DRAWING FILE LOCATION / NAME
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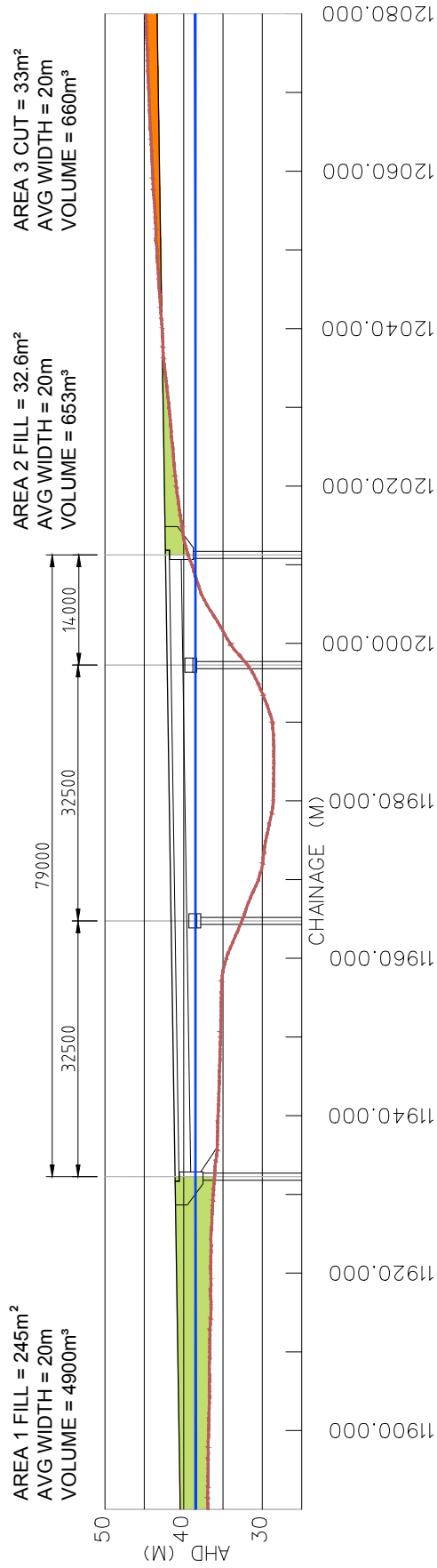


TYPICAL SECTION OF ROAD BRIDGE



ALTERNATIVE TYPICAL SECTION OF ROAD BRIDGE

CUT
FILL



INFORMATION DOCUMENT
3004780-ID-0003-20120807
FIGURE 4

WERRIBEE RIVER CROSSING
ESTIMATED CUT AND FILL VOLUMES

NOT FOR CONSTRUCTION

SCALE 1:100
AT A3 SIZE DRAWING

DRAWING FILE LOCATION: \\MPE\K:\Projects\3382\3382\CD\Info\Draws\3382\3382-ID-0003-20120807.dwg

DOCUMENT / REPORT CONTROL FORM

File Location Name:	Werribee River Bridge Crossing
Project Name:	Wyndham West Functional Road Design Plans
Project Number:	3004780
Revision Number:	0

Revision History

Revision #	Date	Prepared by	Reviewed by	Approved for Issue by
DRAFT FOR COMMENT	7/8/2012	George Eleftheriadis	David Barton Ricky Tsui	Derrick Hitchins

Issue Register

Distribution List	Date Issued	Number of Copies
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Technical Note

Introduction

SMEC has been engaged by the Growth Areas Authority (GAA) to provide a high level preliminary cost estimate for a standalone pedestrian bridge structure.

Discussion

The below estimates are indicative only and it should be noted that the rates that have been selected can vary from project to project based on a number of factors. The estimated rates can only be refined upon better understanding of the specific project site conditions including; physical conditions (geological and hydraulic), environmental/ heritage constraints as well road alignment and geometric considerations.

SMEC considered a range of pedestrian bridge types and spans in order to provide the GAA an understanding of the effect on the estimated construction costs for each type. Indicative cross sections have been included within Attachment A.

To illustrate the range of options available, 3 different bridge types are considered in Table 1 below.

Item	Pedestrian Bridge No.1 Pre-Stressed Concrete Planks	Pedestrian Bridge No.2 Steel Box Beam Bridge	Pedestrian Bridge No.3 Super T (T-Roff) Beam
Bridge Span	80 m	60 m	120 m
Width	3.0 m	3.0 m	3.0 m
Span Length	20 m	60 m	40 m
No. Spans	4	1	3
Approximate Rate	\$4300/ m ²	\$3000/ m ² - \$5000/ m ²	\$3500/ m ² - \$4500/ m ²

Table 1 – Pedestrian Bridge Estimates

Pedestrian Bridge No.1

The first bridge type considered is a typical reinforced concrete T-Beam. In Victoria this type of pedestrian bridge is very common. The T-Beam has a typical maximum span of 20 metres and so may become cost prohibitive for longer spans as the construction of additional piers and foundations can outweigh the saving in the cost of producing this type of beam. For the purposes of this estimate, an estimate span of 80 metres is considered resulting in 4 spans each of 20 metres in length. The estimated cost for this is in the order of \$4300 per m² of deck area.



Risk Considerations

Considerations that should be given to adopting a pedestrian bridge are:

- An increase in river afflux (as a result of piers in the river) may result in an increase in flood levels upstream
- Construction cost can escalate depending on when the bridge is constructed (i.e. restricted work zone access during high river flow levels).
- River profile will govern the bridge pier dimensions and locations (Hence foundations are likely to occur within the river bed)

Pedestrian Bridge No.2

The second bridge type considered is a steel box beam bridge. These bridges are not as common in Victoria and this is mainly attributed to the comparatively higher material costs which make them cost prohibitive. They can provide significant benefits for longer span bridges where the construction of a bridge pier may not be required. For the purposes of this assessment we've taken a 60m long bridge. The estimated cost range for this would be between \$3000/ m² and \$5000/ m².

Risk Considerations

- The cost of materials (i.e. steel is more expensive than concrete). For each bridge type there is a 'tipping point' where the cost associated with the supply of the steel materials becomes more cost effective over concrete beams.
- The cost of maintaining a steel structure (e.g. periodic maintenance of protective coatings) is comparatively higher than that of a concrete beam structure.

Pedestrian Bridge No.3

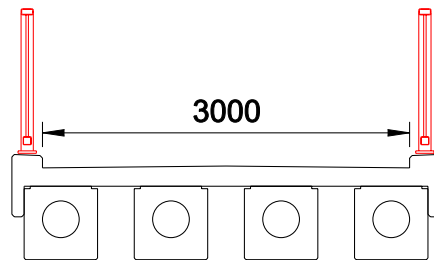
The third type of bridge considered is a 'Super T' concrete beam bridge. They are quite commonly used for pedestrian crossings and provide efficiency through the additional span length that can be achieved when compared to a simple concrete T- Beam. The estimated cost range for this type of pedestrian bridge is in the order of \$3500/ m² to \$4500/ m².

Risk Considerations

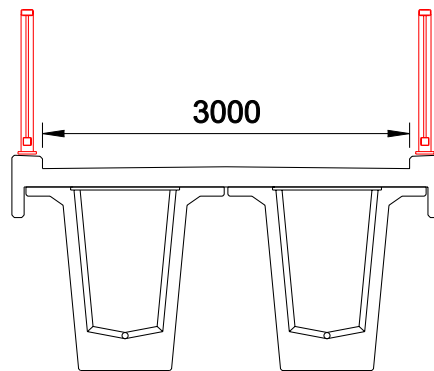
- River profile will govern the bridge pier dimensions and locations (Hence foundations are likely to occur within the river bank).



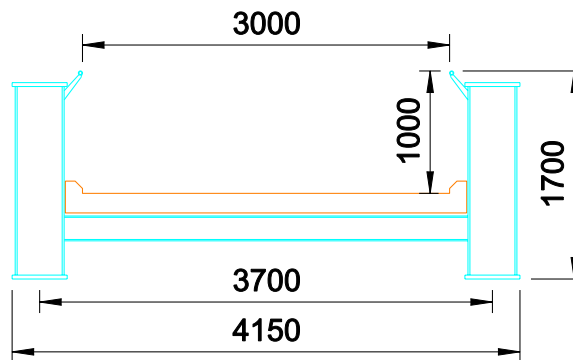
ATTACHMENT A



TYPICAL SECTION OF 20m SPAN FOOTBRIDGE
PRESTRESSED CONCRETE PLANKS



TYPICAL SECTION OF 40m SPAN FOOTBRIDGE
SUPER-T (T-ROFF) BEAMS



TYPICAL SECTION OF 60m SPAN FOOTBRIDGE
STEEL BOX BEAMS

ISSUE	DATE	AMENDMENT / ISSUE DESCRIPTION
A	08/08/2012	CONCEPT ISSUE

PROJECT TITLE			
WYNDHAM WEST WERRIBEE RIVER CROSSINGS GENERAL ARRANGEMENT FOOTBRIDGE TYPICAL SECTIONS			
SCALE	DRAWING STATUS	SKETCH NO.	ISSUE
1:50	CONCEPT	3004780-S-SKT-002	A

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-11 - McGrath Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



Meinhardt Infrastructure & Environment Pty Ltd
 A.B.N. 52 100 868 979

Level 12
 501 Swanston Street
 Melbourne Victoria
 Australia 3000

www.meinhardtgroup.com
 Tel: 61 (03) 8676 1200
 Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (4.2m) x Height (2.1m) x Length (1.2m)
Road Width (m)	13.4
No of Culverts laid end to end	12
No of Culverts laid side to side	13
Total No of Culverts	156

INFRASTRUCTURE - OPINION OF COST					
BR-11 - McGrath Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	528	m3	30.00	15,844
1.02	Trim and prepare subgrade for Slabs and foundations	1278	m2	1.80	2,300
1.03	Spread and Compact Fill Onsite	687	m3	20.00	13,734
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	4390	m2	21.00	92,187
1.06	Select Fill	482	m3	30.00	14,472
2.00	CONCRETE WORKS				
2.01	Culvert	156	No.	6,563.96	1,023,978
2.02	Culvert Foundation Slab (300mm)	219	m3	250.00	54,873
2.03	Apron Slab (150mm)	546	m2	61.20	33,415
2.04	Wing Wall	48	m2	516.00	25,025
2.05	Wing Wall Foundation	25	m3	396.00	10,083
2.06	Concrete retaining wall on top of culverts (500mm)	55	m2	455.00	24,843
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	254	m2	51.00	12,944
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	109	L.m	80.30	8,769
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	338	Lm	1.75	592
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	711	m2	8.30	5,898
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					1,412,165

Traffic Management 5%	70,608
Site Establishment 2.5%	35,304
Survey and Design 5%	70,608
Supervision and Project Management 9.0%	127,095
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	45,895
Vic Roads Fees 1%	14,122
Contingency 20%	282,433
Total Estimated Cost (excl. GST)	\$ 2,059,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-12 - PSP40 Connector
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

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Culvert Geometry:

Culvert Dimensions:	Width (2.1m) x Height (1.2m) x Length (1.2m)
Road Width (m)	13.4
No of Culverts laid end to end	12
No of Culverts laid side to side	9
Total No of Culverts	108

INFRASTRUCTURE - OPINION OF COST					
BR-12 - PSP40 Connector					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	235	m3	30.00	7,061
1.02	Trim and prepare subgrade for Slabs and foundations	442	m2	1.80	796
1.03	Spread and Compact Fill Onsite	328	m3	20.00	6,552
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1520	m2	21.00	31,911
1.06	Select Fill	302	m3	30.00	9,045
2.00	CONCRETE WORKS				
2.01	Culvert	108	No.	2,901.20	313,330
2.02	Culvert Foundation Slab (300mm)	76	m3	250.00	18,995
2.03	Apron Slab (150mm)	189	m2	61.20	11,567
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	19	m2	455.00	8,600
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	147	m2	51.00	7,482
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	38	L.m	80.30	3,035
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	196	Lm	1.75	342
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	235	m2	8.30	1,948
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					513,934

Traffic Management 5%	25,697
Site Establishment 2.5%	12,848
Survey and Design 5%	25,697
Supervision and Project Management 9.0%	46,254
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	16,703
Vic Roads Fees 1%	5,139
Contingency 20%	102,787
Total Estimated Cost (excl. GST)	\$ 750,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-13 - PSP40 Connector
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



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Level 12
 501 Swanston Street
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 Tel: 61 (03) 8676 1200
 Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.8m) x Length (1.2m)
Road Width (m)	13.4
No of Culverts laid end to end	12
No of Culverts laid side to side	8
Total No of Culverts	96

INFRASTRUCTURE - OPINION OF COST					
BR-13 - PSP40 Connector					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	277	m3	30.00	8,316
1.02	Trim and prepare subgrade for Slabs and foundations	562	m2	1.80	1,011
1.03	Spread and Compact Fill Onsite	556	m3	20.00	11,124
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1930	m2	21.00	40,522
1.06	Select Fill	422	m3	30.00	12,663
2.00	CONCRETE WORKS				
2.01	Culvert	96	No.	4,139.54	397,396
2.02	Culvert Foundation Slab (300mm)	96	m3	250.00	24,120
2.03	Apron Slab (150mm)	240	m2	61.20	14,688
2.04	Wing Wall	42	m2	516.00	21,450
2.05	Wing Wall Foundation	22	m3	396.00	8,642
2.06	Concrete retaining wall on top of culverts (500mm)	24	m2	455.00	10,920
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	162	m2	51.00	8,262
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	48	L.m	80.30	3,854
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	216	Lm	1.75	378
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	389	m2	8.30	3,227
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					639,783

Traffic Management 5%	31,989
Site Establishment 2.5%	15,995
Survey and Design 5%	31,989
Supervision and Project Management 9.0%	57,580
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	20,793
Vic Roads Fees 1%	6,398
Contingency 20%	127,957
Total Estimated Cost (excl. GST)	\$ 933,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-14 - Armstrong Road
Drp Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

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 Tel: 61 (03) 8676 1200
 Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (2.1m) x Height (1.2m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	7
Total No of Culverts	105

INFRASTRUCTURE - OPINION OF COST					
BR-14 - Armstrong Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	249	m3	30.00	7,470
1.02	Trim and prepare subgrade for Slabs and foundations	397	m2	1.80	714
1.03	Spread and Compact Fill Onsite	392	m3	20.00	7,848
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	2999	m2	21.00	62,975
1.06	Select Fill	383	m3	30.00	11,475
2.00	CONCRETE WORKS				
2.01	Culvert	105	No.	2,901.20	304,626
2.02	Culvert Foundation Slab (300mm)	75	m3	250.00	18,743
2.03	Apron Slab (150mm)	147	m2	61.20	8,996
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	15	m2	455.00	6,689
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	268	m2	51.00	13,678
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	29	L.m	80.30	2,361
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	179	Lm	1.75	313
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	215	m2	8.30	1,781
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					540,940

Traffic Management 5%	27,047
Site Establishment 2.5%	13,523
Survey and Design 5%	27,047
Supervision and Project Management 9.0%	48,685
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	17,581
Vic Roads Fees 1%	5,409
Contingency 20%	108,188
Total Estimated Cost (excl. GST)	\$ 789,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-15 - PSP 40 Connector
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



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Culvert Geometry:

Culvert Dimensions:	Width (4.2m) x Height (2.1m) x Length (1.2m)
Road Width (m)	13.4
No of Culverts laid end to end	12
No of Culverts laid side to side	8
Total No of Culverts	96

INFRASTRUCTURE - OPINION OF COST					
BR-15 - PSP 40 Connector					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	356	m3	30.00	10,678
1.02	Trim and prepare subgrade for Slabs and foundations	786	m2	1.80	1,415
1.03	Spread and Compact Fill Onsite	687	m3	20.00	13,734
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	2701	m2	21.00	56,730
1.06	Select Fill	482	m3	30.00	14,472
2.00	CONCRETE WORKS				
2.01	Culvert	96	No.	6,563.96	630,140
2.02	Culvert Foundation Slab (300mm)	135	m3	250.00	33,768
2.03	Apron Slab (150mm)	336	m2	61.20	20,563
2.04	Wing Wall	48	m2	516.00	25,025
2.05	Wing Wall Foundation	25	m3	396.00	10,083
2.06	Concrete retaining wall on top of culverts (500mm)	34	m2	455.00	15,288
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	191	m2	51.00	9,731
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	67	L.m	80.30	5,396
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	254	Lm	1.75	445
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	534	m2	8.30	4,434
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					925,112

Traffic Management 5%	46,256
Site Establishment 2.5%	23,128
Survey and Design 5%	46,256
Supervision and Project Management 9.0%	83,260
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	30,066
Vic Roads Fees 1%	9,251
Contingency 20%	185,022
Total Estimated Cost (excl. GST)	\$ 1,349,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-16 - Alfred Road DSS, Alfred Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

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501 Swanston Street
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Culvert Geometry:

Culvert Dimensions:	Width (2.1m) x Height (0.6m) x Length (1.2m)
Road Width (m)	13
No of Culverts laid end to end	11
No of Culverts laid side to side	6
Total No of Culverts	66

INFRASTRUCTURE - OPINION OF COST BR-16 - Alfred Road DSS, Alfred Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	179	m3	30.00	5,364
1.02	Trim and prepare subgrade for Slabs and foundations	290	m2	1.80	522
1.03	Spread and Compact Fill Onsite	139	m3	20.00	2,772
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	983	m2	21.00	20,639
1.06	Select Fill	176	m3	30.00	5,265
2.00	CONCRETE WORKS				
2.01	Culvert	66	No.	2,110.40	139,286
2.02	Culvert Foundation Slab (300mm)	49	m3	250.00	12,285
2.03	Apron Slab (150mm)	126	m2	61.20	7,711
2.04	Wing Wall	14	m2	516.00	7,150
2.05	Wing Wall Foundation	7	m3	396.00	2,881
2.06	Concrete retaining wall on top of culverts (500mm)	13	m2	455.00	5,733
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	128	m2	51.00	6,518
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	25	L.m	80.30	2,024
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	170	Lm	1.75	298
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	102	m2	8.30	849
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					292,506

Traffic Management 5%	14,625
Site Establishment 2.5%	7,313
Survey and Design 5%	14,625
Supervision and Project Management 9.0%	26,326
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	9,506
Vic Roads Fees 1%	2,925
Contingency 20%	58,501
Total Estimated Cost (excl. GST)	\$ 427,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-17 - Alfred Road DSS, Ison Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



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Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.5m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	2
Total No of Culverts	30

INFRASTRUCTURE - OPINION OF COST BR-17 - Alfred Road DSS, Ison Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	162	m3	30.00	4,860
1.02	Trim and prepare subgrade for Slabs and foundations	162	m2	1.80	292
1.03	Spread and Compact Fill Onsite	518	m3	20.00	10,350
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	1224	m2	21.00	25,704
1.06	Select Fill	459	m3	30.00	13,770
2.00	CONCRETE WORKS				
2.01	Culvert	30	No.	3,923.60	117,708
2.02	Culvert Foundation Slab (300mm)	31	m3	250.00	7,650
2.03	Apron Slab (150mm)	60	m2	61.20	3,672
2.04	Wing Wall	35	m2	516.00	17,875
2.05	Wing Wall Foundation	18	m3	396.00	7,202
2.06	Concrete retaining wall on top of culverts (500mm)	6	m2	455.00	2,730
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	216	m2	51.00	11,016
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	12	L.m	80.30	964
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	144	Lm	1.75	252
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	216	m2	8.30	1,793
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					299,047

Traffic Management 5%	14,952
Site Establishment 2.5%	7,476
Survey and Design 5%	14,952
Supervision and Project Management 9.0%	26,914
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	9,719
Vic Roads Fees 1%	2,990
Contingency 20%	59,809
Total Estimated Cost (excl. GST)	\$ 436,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-18 - Alfred Road DSS, Ison Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E

Meinhardt Infrastructure & Environment Pty Ltd
A.B.N. 52 100 868 979

Level 12
501 Swanston Street
Melbourne Victoria
Australia 3000

www.meinhardtgroup.com
Tel: 61 (03) 8676 1200
Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (4.2m) x Height (1.2m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	1
Total No of Culverts	15

INFRASTRUCTURE - OPINION OF COST BR-18 - Alfred Road DSS, Ison Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	144	m3	30.00	4,320
1.02	Trim and prepare subgrade for Slabs and foundations	113	m2	1.80	204
1.03	Spread and Compact Fill Onsite	392	m3	20.00	7,848
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	857	m2	21.00	17,993
1.06	Select Fill	383	m3	30.00	11,475
2.00	CONCRETE WORKS				
2.01	Culvert	15	No.	5,694.80	85,422
2.02	Culvert Foundation Slab (300mm)	21	m3	250.00	5,355
2.03	Apron Slab (150mm)	42	m2	61.20	2,570
2.04	Wing Wall	28	m2	516.00	14,300
2.05	Wing Wall Foundation	15	m3	396.00	5,761
2.06	Concrete retaining wall on top of culverts (500mm)	4	m2	455.00	1,911
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	205	m2	51.00	10,465
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	8	L.m	80.30	675
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	137	Lm	1.75	239
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	164	m2	8.30	1,363
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					243,111

Traffic Management 5%	12,156
Site Establishment 2.5%	6,078
Survey and Design 5%	12,156
Supervision and Project Management 9.0%	21,880
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	7,901
Vic Roads Fees 1%	2,431
Contingency 20%	48,622
Total Estimated Cost (excl. GST)	\$ 355,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

Infrastructure Project - Opinion of Cost

Project: Melbourne Planning Authority - Wyndham Vale West DCP
MPA Ref: BR-19 - Black Forest Road DSS, Ison Road
Drg Ref: N/A

Date: 19-Mar-14
By: MVW
Revision: E



Meinhardt Infrastructure & Environment Pty Ltd
 A.B.N. 52 100 868 979

Level 12
 501 Swanston Street
 Melbourne Victoria
 Australia 3000

www.meinhardtgroup.com
 Tel: 61 (03) 8676 1200
 Fax: 61 (03) 8676 1201

Culvert Geometry:

Culvert Dimensions:	Width (3m) x Height (1.8m) x Length (1.2m)
Road Width (m)	17
No of Culverts laid end to end	15
No of Culverts laid side to side	10
Total No of Culverts	150

INFRASTRUCTURE - OPINION OF COST					
BR-19 - Black Forest Road DSS, Ison Road					
Item	Description	Quantity	Unit	Rate (\$/unit)	Sub Total (\$ excl.GST)
1.00	EARTHWORKS				
1.01	Excavation and disposal off site	402	m3	30.00	12,060
1.02	Trim and prepare subgrade for Slabs and foundations	810	m2	1.80	1,458
1.03	Spread and Compact Fill Onsite	653	m3	20.00	13,068
1.04	Tests (Density etc.)	1	Item	15,000.00	15,000
1.05	Rip Rap + Geotextile	6120	m2	21.00	128,520
1.06	Select Fill	536	m3	30.00	16,065
2.00	CONCRETE WORKS				
2.01	Culvert	150	No.	4,139.54	620,931
2.02	Culvert Foundation Slab (300mm)	153	m3	250.00	38,250
2.03	Apron Slab (150mm)	300	m2	61.20	18,360
2.04	Wing Wall	42	m2	516.00	21,450
2.05	Wing Wall Foundation	22	m3	396.00	8,642
2.06	Concrete retaining wall on top of culverts (500mm)	30	m2	455.00	13,650
2.07	Concrete Kerb lead in/out	60	L.m	52.00	3,120
2.08	Shared Pathway - 125mm thick reinforced	360	m2	51.00	18,360
3.00	PAVEMENT WORKS				
3.01	40mm Thick Asphalt (wearing course)	0	m2	18.10	0
3.02	60mm Thick Asphalt (intermediate course)	0	m2	31.70	0
3.03	75mm Thick Asphalt (base course)	0	m2	33.90	0
3.04	Prime	0	m2	3.60	0
3.05	150mm CTCR Base	0	m2	13.50	0
3.06	150mm FCR Base	0	m2	9.90	0
3.07	200mm Select Sub-base Course	0	m2	6.00	0
3.08	Subgrade Improvement (allow 20% of area)	0	m2	13.40	0
3.09	Safety Barrier	60	L.m	80.30	4,818
4.00	DRAINAGE WORKS				
4.01	AG Drain	60	Lm	31.50	1,890
4.02	Drainage Pits (60m spacing)	0	No.	2,750.00	0
4.03	375mm dia RCP (crushed rock backfill)	0	m	240.00	0
4.04	375mm dia RCP (earth backfill)	0	m	200.00	0
4.05	Break-in and Connection to Existing Drainage	0	Item	1,500.00	0
4.06	Environmental controls and temporary diversion allowance	1	item	50,000.00	50,000
5.00	SIGN AND LINE MARKING				
5.01	Line marking	240	Lm	1.75	420
5.02	Regulatory Signage	8	No.	400.00	3,200
6.00	ELECTRICAL WORKS				
6.01	Street Light poles @ 50m spacing	0	No.	6,500.00	0
6.02	Street Lighting cabling and conduit	0	Lm	80.00	0
7.00	LANDSCAPE WORKS				
7.01	Landscaping (topsoil and turf only)	432	m2	8.30	3,586
7.02	Landscaping (trees)	0	No.	350.00	0
8.00	SERVICE RELOCATION / PROTECTION				
8.01	Note: No allowance for relocation of existing services in L.m rate				0
Sub-total					992,848

Traffic Management 5%	49,642
Site Establishment 2.5%	24,821
Survey and Design 5%	49,642
Supervision and Project Management 9.0%	89,356
Council Fees (Supervision 1.5%, project management 1% and plan checking 0.75%) 3.25%	32,268
Vic Roads Fees 1%	9,928
Contingency 20%	198,570
Total Estimated Cost (excl. GST)	\$ 1,448,000

NOTES

- All costs exclude GST.
- Costs determined using typical construction rates from similar projects.
- No allowance has been made for Community Liaison, Cultural Heritage, Flora and Fauna / Net Gain Offsets.
- Costing based on GAA Black Forest Rd Precinct Structure Plan, Cross-Sections, as per MT email 8.04.2013
- Pavement design is indicative only, subject to geotechnical investigation and detailed design.
- Road pavement excluded as included in road costing.

BR-20 Culvert Crossing of Lolly Pop Creek

Description	ID	Detail	Unit	Rate	Qty	Amount
Site Mobilisation & Preparation	1	General Ancillaries and removal of existing infrastructure	Item	\$ 20,000.00	1	\$ 20,000.00
Earthworks	2	Earthworks - Cut to Fill, used on site	m3 solid	\$ 35.00	1080	\$ 37,800.00
Structure	3	Culverts	m ²	\$ 1,200.00	300	\$ 360,000.00
	4	Link Slabs	m ²	\$ 200.00	300	\$ 60,000.00
	5	Wing Wall Construction	Item	\$ 3,000.00	4	\$ 12,000.00
Pavement	6	Construct granular pavement, including double application seal (550mm depth)	m ²	\$ 80.00	2100	\$ 168,000.00
Barriers	7	Guardfence - Supply & Erect (Armco)	m	\$ 135.00	240	\$ 32,400.00
						Sub Total
						\$ 670,200.00
PROFESSIONAL FEES & CONTINGENCY	14	Vicroads/Council Fees	item	3.25%	1	\$ 21,781.50
	15	Professional Design Fees	item	2.00%	1	\$ 13,404.00
	16	Contingency	item	10.00%	1	\$ 67,020.00
						TOTAL
						\$ 772,405.50

Assumptions/Comments	REF	
	3	Design flow rate of 145 m ³ /sec as per Melbourne Waters 1-100 peak flow.
	3	Culvert area is 75m long by 8m wide consisting of 13x 3m wide x 1.2m high x 2.4m long culverts and 11 x link slabs across a full width base slab.
	4	Reconstruction of existing road for approximately 300m
	Gen	No allowance has been made for traffic management
Gen	No allowance for ground improvement works.	

BR-21 Pedestrian Underpass along waterway (flood prevented upto 1:100 year flood) - Cost Estimate

Description	ID	Detail	Unit	Rate	Qty	Amount
Earthworks	1	Earthworks - Cut to Fill, used on site	m ³ solid	\$ 45.00	300	\$ 13,500.00
	2	Concrete for structure	m ³ solid	\$ 100.00	200	\$ 20,000.00
	3	Reinforcement M20 @150	tonne	\$ 2,300.00	3	\$ 6,900.00
Signage	4	Height clearance sign	no	\$ 350.00	2	\$ 700.00
Linemarking	5	continuity line	m	\$ 60.00	3	\$ 180.00
	6	70W luminaire	no	\$ 800.00	1	\$ 800.00
Lighting	7	conduit	m	\$ 230.00	30	\$ 6,900.00
	8	cable	m	\$ 38.00	50	\$ 1,900.00
	9	Electrical Pit	no	\$ 2,000.00	2	\$ 4,000.00
Drainage	10	Sump/pit	m	\$ 3,000.00	1	\$ 3,000.00
	11	Pump	no	\$ 4,000.00	1	\$ 4,000.00
	12	Supply & Install Class 2 300mm dia RCP	m	\$ 350.00	10	\$ 3,500.00
	13	Rock beaching at the bottom of wall	m ²	\$ 150.00	70	\$ 10,500.00
Sub Total						\$ 75,880.00
PROFESSIONAL FEES & CONTINGENCY	14	Vicroads/Council Fees	item	3.25%	1	\$ 2,466.10
	15	VicTrack assessment	item	approx.	1	\$ 3,000.00
	16	ARECON tech assessment for Victrack	item	approx.	1	\$ 5,000.00
	17	Victrack site access / occupation	item	approx.	1	\$ 3,000.00
	18	Professional Engineering Design Fees	item	2.00%	1	\$ 1,517.60
	16	Contingency	item	30.00%	1	\$ 22,764.00
TOTAL						\$ 113,627.70
Assumptions/Comments	REF					
	1	The Rail Structure needs to be assessed as the new path structure is approximately 1m away from the piles. The stability of the bridge piles need to be checked				
	13	Melbourne Water needs to be consulted as the opening for the creek is reduced due to the new path				
	2,3	The design of the path is only an estimate as we have not done a design taking consideration of the ground conditions and stability of embankment				
	17	No allowance made for employment of Lvl 3 Rail Safety Officer @ \$1000/day				
17	No allowance made for costs associated with complete rail line shutdown					
13	No fee determined for negotiation with or possible review by Melbourne Water					

Note: As the above cost estimates are based on typical expected costs for each of the design attributes and not on a specific preliminary design, these costs may vary significantly and as such should only be considered indicative or "Ball Park" estimate.

BR-23 Werribee River Shared Trail under RRL

Description	Structure				Barrier/Handrail		Construction Total	Survey & Design 5%	Traffic Management 5%	Council Fees 3.25%	Viceroads Fees 1.00%	Supervision & Project Management 9%	Site Establishment 2.5%	Contingency 20%	TOTAL
	LENGTH	WIDTH	Plan Area	Rate	Length	Rate									
	m	m	m ²	\$/m ²	m	\$/Lin.m									
Shared Use Path Footbridge under RRL bridge adjacent to Werribee River - Concrete Plank Construction	65	3	195	1450	130	150	\$ 302,250.00	\$ 15,112.50	\$ 15,112.50	\$ 9,823.13	\$ 3,022.50	\$ 27,202.50	\$ 7,556.25	\$ 60,450.00	\$ 440,529.38

BR-24 Bulban Road Culvert

Description	Number of culverts	Structure				Barrier (on and off structure)		Construction Total	Survey & Design	Traffic Management	Council Fees	Vicroads Fees	Supervision & Project Management	Site Establishment	Contingency	TOTAL
		LENGTH	WIDTH	Plan Area	Rate	Length	Rate									
		No	m	m	m ²	\$/m ²	m									
Crossing Bulban Road. 10 rows of culverts, 19 culverts per row, each culvert 3m(w)x1.2m(L)x1.8m(H).	190	23	30	690	1450	154	2000	\$ 1,308,500.00	\$ 65,425.00	\$ 65,425.00	\$ 42,526.25	\$ 13,085.00	\$ 117,765.00	\$ 32,712.50	\$ 261,700.00	\$ 1,907,138.75

BR-25 Ison Road Culvert

Culvert	Description	Number of culverts	Structure				Barrier (on and off structure)		Construction Total	Survey & Design	Traffic Management	Council Fees	Vicroads Fees	Supervision & Project Management	Site Establishment	Contingency	TOTAL
			LENGTH	WIDTH	Plan Area	Rate	Length	Rate									
			No	m	m	m ²	\$/m ²	m									
Road Culverts																	
C1	Crossing Ison Road. 3 rows of culverts, 7 culverts per row, each culvert 2.7m(W)x1.2m(H)x2.5m(L).	21	17	8	136	1450	142	2000	\$ 481,200.00	\$ 24,060.00	\$ 24,060.00	\$ 15,639.00	\$ 4,812.00	\$ 43,308.00	\$ 12,030.00	\$ 96,240.00	\$ 701,349.00
C2	Crossing Ison Road. 6 rows of culverts, 7 culverts per row, each culvert 2.7m(W)x1.2m(H)x2.5m(L).	42	17	16.2	275.4	1450	142	2000	\$ 683,330.00	\$ 34,166.50	\$ 34,166.50	\$ 22,208.23	\$ 6,833.30	\$ 61,499.70	\$ 17,083.25	\$ 136,666.00	\$ 995,953.48

BR-26 Ison Road Culvert

Culvert	Description	Number of culverts	Structure				Barrier (on and off structure)		Construction Total	Survey & Design	Traffic Management	Council Fees	Vicroads Fees	Supervision & Project Management	Site Establishment	Contingency	TOTAL
			LENGTH	WIDTH	Plan Area	Rate	Length	Rate									
			No	m	m	m ²	\$/m ²	m									
Road Culverts																	
C3	Crossing Ison Road. 9 rows of culverts, 7 culverts per row, each culvert 2.7m(W)x1.2m(H)x2.5m(L).	63	17	24.2	411.4	1450	142	2000	\$ 880,530.00	\$ 44,026.50	\$ 44,026.50	\$ 28,617.23	\$ 8,805.30	\$ 79,247.70	\$ 22,013.25	\$ 176,106.00	\$ 1,283,372.48
C4	Crossing Ison Road. 6 rows of culverts, 7 culverts per row, each culvert 2.7m(W)x1.2m(H)x2.5m(L).	42	17	16.2	275.4	1450	142	2000	\$ 683,330.00	\$ 34,166.50	\$ 34,166.50	\$ 22,208.23	\$ 6,833.30	\$ 61,499.70	\$ 17,083.25	\$ 136,666.00	\$ 995,953.48

BR-27 Ison Road Culvert

Culvert	Description	Number of culverts	Structure				Barrier (on and off structure)		Construction Total	Survey & Design	Traffic Management	Council Fees	Vicroads Fees	Supervision & Project Management	Site Establishment	Contingency	TOTAL
			LENGTH	WIDTH	Plan Area	Rate	Length	Rate									
			No	m	m	m ²	\$/m ²	m									
Road Culverts																	
CS	Crossing Ison Road. 4 rows of culverts, 7 culverts per row, each culvert 2.7m(W)x1.2m(H)x2.5m(L).	28	17	10.8	183.6	1450	142	2000	\$ 550,220.00	\$ 27,511.00	\$ 27,511.00	\$ 17,882.15	\$ 5,502.20	\$ 49,519.80	\$ 13,755.50	\$ 110,044.00	\$ 801,945.65

8.4.4 Community Centre Cost Sheets

Community Centre Level 1

Name: Community Centre Level 1 Site 0.4ha

Scope of works: Double Kindergarten with carparking facilities

Detail Double Kindergarten with community room and Carparking facilities

Notes: Costs based on estimate from previous community centres as provided by Wyndham City Council
Estimate based on normal earthworks on fairly level site

Item	Unit	Rate	area	comments	subtotal	Amount
Community Centre	subtotal		712 square metres			\$ 2,277,247
Building	m ²	\$ 2,721.00	100		\$ 272,100.00	
Community room	m ²	\$ 2,721.00	368	2 children rooms, Kitchen, Office/Admin, Storage internal & External, Children's toilets	\$ 1,001,328.00	
Kindergarten (double)	m ²	\$ 2,721.00	84	includes circulation space	\$ 228,564.00	
Central Management Offices	m ²	\$ 2,721.00	40		\$ 108,840.00	
Kitchen/Kiosk	m ²	\$ 2,439.00	61		\$ 148,779.00	
Storage	m ²	\$ 2,439.00	59		\$ 143,901.00	
Public amenities	m ²	\$ 2,721.00	71.2	allowance for wall thickness 10% of room areas	\$ 193,735.20	
Wall area	m ²	\$ 225.00	800	outdoor play space for kindergarten and 100m2 playgroups	\$ 180,000.00	
Playground	m ²	\$ 3,000.00	73	fixed cost	\$ 219,000.00	
Carpark works			500	Level A		\$ 246,500
Landscaping Level A	m ²	\$ 55.00	500		\$ 27,500.00	
Subtotal					\$ 2,523,747.20	
estimated total						\$ 2,523,747
Contingence			15%			\$ 378,562
Total + contingencies					\$ 2,902,309	
Services for buildings	Item					\$ 50,000
Survey and Design			5%			\$ 126,187
Overheads (supervision etc)			10%			\$ 252,375
Site establishment			2.5%			\$ 63,094
Total Estimated Cost						\$ 3,393,965
Adopted Cost						\$ 3,393,965

Estimate Prepared by: **CDCE**

Mar-14

Name: Community Centre Level 2 Site 0.8ha
Scope of works: Integrated Community Centre
 Detail Double Kindergarten, 2 consulting rooms for Maternal & Child Health, Flexible activity rooms, Consulting rooms for visiting services
 Community Hall, Public amenities, Central Management Office and carparking.
Notes: Costs based on estimate from previous community centres as provided by Wyndham City Council
 Estimate based on normal earthworks on fairly level site

Item	Unit	Rate	area	comments	subtotal	Amount
Community Centre						
Building	subtotal		1381	square metres		\$ 4,278,503
Community Hall	m ²	\$ 2,721.00	500	includes community rooms	\$ 1,360,500.00	
Kindergarten (double)	m ²	\$ 2,721.00	368	2 children rooms, Kitchen, Office/Admin, Storage internal & External, Children's toilets	\$ 1,001,328.00	
Maternal & Child Health	m ²	\$ 2,721.00	100	2 consulting rooms & consult/interview room, waiting room, separate consulting/waiting	\$ 272,100.00	
Visiting Services Consulting rms	m ²	\$ 2,721.00	70	2 consulting rooms, waiting room	\$ 190,470.00	
Central Management Offices	m ²	\$ 2,721.00	179	includes circulation space of 95m ²	\$ 487,059.00	
Flexible Activity rooms	m ²	\$ 2,439.00	25	youth space	\$ 60,975.00	
Kitchen/Kiosk	m ²	\$ 2,721.00	40		\$ 108,840.00	
Storage	m ²	\$ 2,439.00	40		\$ 97,560.00	
Public amenities	m ²	\$ 2,439.00	59		\$ 143,901.00	
Wall thickness	m ²	\$ 2,721.00	138.1	allowance for wall thickness 10% of room areas	\$ 375,770.10	
Playground	m ²	\$ 225.00	800	outdoor play space for kindergarten and 100m ² for playgroups	\$ 180,000.00	
Carpark works			85	fixed cost	\$ 255,000.00	\$ 282,500
Landscaping Level A	m ²	\$ 55.00	500	Level A	\$ 27,500.00	
Subtotal					\$ 4,561,003.10	\$ 4,561,003
estimated total						\$ 684,150
Contingence			15%			\$ 100,000
Total + contingencies					\$ 5,245,154	\$ 228,050
Services for buildings	Item					\$ 456,100
Survey and Design			5%			\$ 114,025
Overheads (supervision etc)			10%			\$ 6,143,329
Site establishment			2.5%			
Total Estimated Cost						
Adopted Cost						

Notes: Costs based on estimate from previous community centres as provided by Wyndham City Council
 Estimate based on normal earthworks on fairly level site

Item	Unit	Rate	area	comments	subtotal	Amount
Community Centre	subtotal		2409	square metres		\$ 4,689,928
Building	m ²	\$ 2,721.00	500	includes community rooms	\$ 1,360,500.00	
Community Hall	m ²	\$ 2,721.00	368	2 children rooms, Kitchen, Office/Admin, Storage internal & External, Children's toilets	\$ 1,001,328.00	
Kindergarten (double)	m ²	\$ 2,721.00	100	2 consulting rooms & consult/interview room, waiting room, separate consulting/waiting	\$ 272,100.00	
Maternal & Child Health	m ²	\$ 2,721.00	70	2 consulting rooms, waiting room	\$ 190,470.00	
Visiting Services Consulting rms	m ²	\$ 2,721.00	179	includes circulation space of 95m ²	\$ 487,059.00	
Central Management Offices	m ²	\$ 2,439.00	54	youth consulting rooms & lounge	\$ 131,706.00	
Youth space	m ²	\$ 2,439.00	25	youth space	\$ 60,975.00	
Flexible Activity rooms	m ²	\$ 2,721.00	40		\$ 108,840.00	
Kitchen/Kiosk	m ²	\$ 2,439.00	40		\$ 97,560.00	
Storage	m ²	\$ 2,439.00	59		\$ 143,901.00	
Public amenities	m ²	\$ 2,439.00	240.9	allowance for wall thickness 10% of room areas	\$ 655,488.90	
Wall thickness	m ²	\$ 2,721.00	800	outdoor play space for kindergarten and 100m ² playgroups	\$ 180,000.00	
Playground	m ²	\$ 225.00				\$ 2,634,462
Library	m ²	\$ 2,721.00	856	single level	\$ 2,329,176.00	
Public Area	m ²	\$ 2,721.00	12		\$ 32,652.00	
Office	m ²	\$ 2,721.00	50		\$ 136,050.00	
Office open plan space	m ²	\$ 2,439.00	24		\$ 58,536.00	
Public Toilets	m ²	\$ 2,439.00	12		\$ 29,268.00	
Staff Room	m ²	\$ 2,439.00	7		\$ 17,073.00	
Staff toilet	m ²	\$ 2,439.00	13		\$ 31,707.00	
Storage	m ²	\$ 3,000.00	130	fixed cost	\$ 390,000.00	
Carpark works	subtotal		500	Level A		\$ 417,500
Landscaping Level A	m ²	\$ 55.00			\$ 27,500.00	
Subtotal					\$ 7,741,889.90	
estimated total						\$ 7,741,890
Contingence			15%			\$ 1,161,283
Total + contingencies					\$ 8,903,173	
Services for buildings	Item		5%			\$ 100,000
Survey and Design			10%			\$ 387,094
Overheads (supervision etc)			2.5%			\$ 774,189
Site establishment						\$ 193,547

Performing Arts Centre

Name: Performing Arts Centre

Scope of works: Performing Arts Centre (rehearsal facilities)

Detail: 3 large rehearsal rooms, 4 practise rooms (3 medium, 1 small), Kitchen, foyer, office/admin, female & male change rooms, amenities storage rooms (secure) to each rehearsal and practise rooms, workshop for set creation and storage

Notes: Costs based on being attached to Level three community centre estimate from previous community centres as provided by Wyndham City Council
Estimate based on normal earthworks on fairly level site

Item	Unit	Rate	area	comments	subtotal	Amount
Performing Arts Centre Building	subtotal		1537	square metres		\$ 3,815,091
Rehearsal rooms	m ²	\$ 3,370.00	456	3 large rooms recommended (19x8 each)	\$ 1,536,720.00	
Practise rooms	m ²	\$ 3,370.00	107	3 medium sized (4.5x6.5m) 1 small (4.2x4.6)	\$ 360,590.00	
Storage rooms	m ²	\$ 2,925.00	129	3 separate rooms per rehearsal room each (3.2x4.5)	\$ 377,325.00	
Management Offices	m ²	\$ 2,721.00	35		\$ 95,235.00	
Foyer	m ²	\$ 2,721.00	90	required for large number of parents doing pick up and drop off	\$ 244,890.00	
Kitchen	m ²	\$ 2,721.00	27		\$ 73,467.00	
Amenities	m ²	\$ 2,439.00	105	includes male & female change rooms	\$ 256,095.00	
Wall Thickness	m ²	\$ 3,370.00	153.7	allowance for wall thickness 10% of room areas	\$ 517,969.00	
Workshop	m ²	\$ 600.00	588	area let to groups to create and store stage props etc.	\$ 352,800.00	
Carpark works	subtotal	\$ 3,000.00	65	fixed cost	\$ 195,000.00	\$ 222,500
Landscaping Level A	m ²	\$ 55.00	500	Level A	\$ 27,500.00	
Subtotal					\$ 4,037,591.00	
estimated total						\$ 4,037,591
Contingence						\$ 605,639
Total + contingencies					\$ 4,643,230	
Survey and Design						\$ 201,880
Overheads (supervision etc)						\$ 403,759
Site establishment						\$ 100,940
Total Estimated Cost						\$ 5,349,808
Adopted Cost						

Estimate Prepared by: **CDCE** Mar-14

8.4.5 Active Recreation Cost Sheets

AR01-AR02 Concept Plan (12.39 ha)

Item Description	UNIT PRICE	QUANTITY	TOTAL PRICE
Site Preparation	\$ 27,700.00	1	\$ 27,700.00
Excavation	\$ 400,000.00	1	\$ 400,000.00
Retaining	\$ 100,000.00	1	\$ 100,000.00
Drainage	\$ 200,000.00	1	\$ 200,000.00
Landscaping	\$ 150,000.00	1	\$ 150,000.00
Planting	\$ 100,000.00	1	\$ 100,000.00
Lighting	\$ 50,000.00	1	\$ 50,000.00
Water & Gas	\$ 100,000.00	1	\$ 100,000.00
Construction	\$ 1,000,000.00	1	\$ 1,000,000.00
Professional Fees	\$ 200,000.00	1	\$ 200,000.00
Contingency	\$ 100,000.00	1	\$ 100,000.00
Subtotal			\$ 2,367,700.00
Contingency (10%)			\$ 236,770.00
Grand Total			\$ 2,604,470.00

Rev	Amendments	Date
B	AMENDED AS PER MPA COMMENTS. DRAFT COSTINGS RE-ISSUED TO MPA.	12/01/14
A	DRAFT COSTINGS	23/02/14

Designed: PS
 Checked: NR
 Authorised: PS

Map Reference: 1:5000
 Sheet Number: 01
 Drawn: PS
 Date: 12/01/14

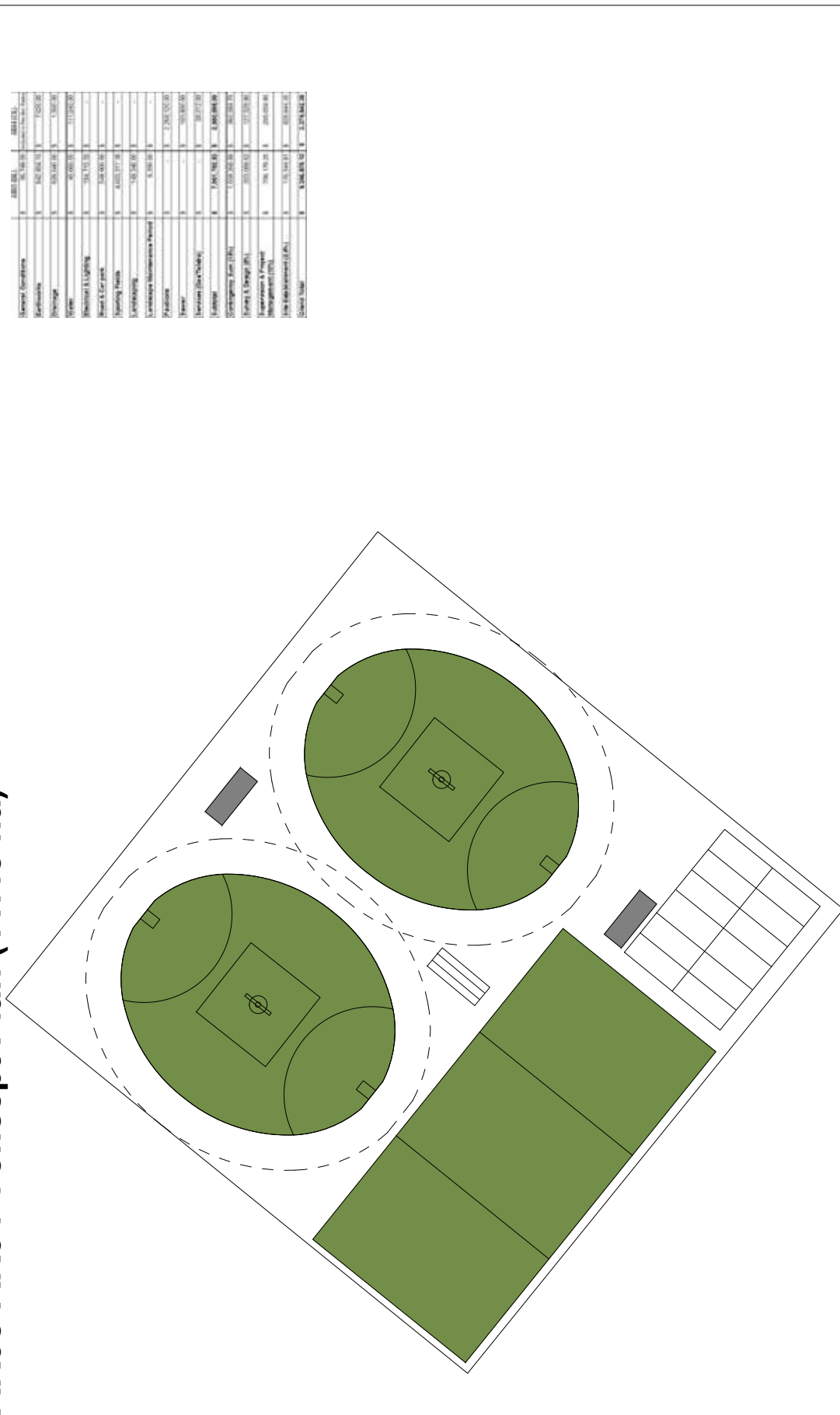
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WYNDHAM WEST DCP CONSTRUCTION COST ESTIMATES
 ACTIVE RECREATION PROJECTS
 AR01-AR02
 METROPOLITAN PLANNING AUTHORITY
 CITY OF WYNDHAM

Spire Infrastructure
 100 St Albans Road, St Albans, VIC 3023
 Phone: (03) 9487 1000
 Email: info@spireinfrastructure.com.au
 Website: www.spireinfrastructure.com.au

Project No: 3002051.MP01
 Rev: B

AR03-AR04 Concept Plan (11.45 ha)



Item	Quantity	Unit Price	Total Price
General Excavation	100	\$100.00	\$10,000.00
Earthworks	100	\$100.00	\$10,000.00
Drainage	100	\$100.00	\$10,000.00
Water	100	\$100.00	\$10,000.00
Electrical & Lighting	100	\$100.00	\$10,000.00
Roof & Car park	100	\$100.00	\$10,000.00
Landscaping	100	\$100.00	\$10,000.00
Construction Management Fee	100	\$100.00	\$10,000.00
Permit	100	\$100.00	\$10,000.00
Operations (see Policy)	100	\$100.00	\$10,000.00
Contingency Allowance	100	\$100.00	\$10,000.00
Design & Survey Fee	100	\$100.00	\$10,000.00
Construction Program	100	\$100.00	\$10,000.00
Site Rehabilitation Fee	100	\$100.00	\$10,000.00
Grand Total			\$1,145,000.00

Rev	Amendments	Date	App'd
B	AMENDED AS PER MPA COMMENTS. DRAFT COSTINGS RE-ISSUED TO MPA.	12/01/14	FS
A	DRAFT COSTINGS	25/02/14	FS

Map Reference: **SP16**
 Sheet Number: **02**
 Dwg Status: **PRELIMINARY**

No. 137405 Wyndham West DCP Active Reserves LAMP011120406 WYNDHAM WEST
 13/02/04 3.4.18M
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WYNDHAM WEST DCP
CONSTRUCTION COST ESTIMATES
ACTIVE RECREATION PROJECTS
AR03-AR04
WYNDHAM WEST DEVELOPMENT CONTRIBUTIONS PLAN
CITY OF WYNDHAM

Rev **B**
 Dwg No **300205LMP02**

AR07-AR08 (12.63 ha)

AR07: Development Infrastructure Levy (DIL)


Item	Description	Rate	Area	Value	Notes
1	Development Infrastructure Levy (DIL) - Residential	1.5%	12.63 ha	194,850	
2	Development Infrastructure Levy (DIL) - Commercial	2.5%	12.63 ha	391,275	
3	Development Infrastructure Levy (DIL) - Industrial	3.5%	12.63 ha	451,050	
4	Development Infrastructure Levy (DIL) - Public Works	0.5%	12.63 ha	194,850	
5	Development Infrastructure Levy (DIL) - Other	0.5%	12.63 ha	194,850	
6	Development Infrastructure Levy (DIL) - Total	6.5%	12.63 ha	1,367,925	

AR08: Community Infrastructure Levy (CIL)

Item	Description	Rate	Area	Value	Notes
1	Community Infrastructure Levy (CIL) - Residential	1.5%	12.63 ha	194,850	
2	Community Infrastructure Levy (CIL) - Commercial	2.5%	12.63 ha	391,275	
3	Community Infrastructure Levy (CIL) - Industrial	3.5%	12.63 ha	451,050	
4	Community Infrastructure Levy (CIL) - Public Works	0.5%	12.63 ha	194,850	
5	Community Infrastructure Levy (CIL) - Other	0.5%	12.63 ha	194,850	
6	Community Infrastructure Levy (CIL) - Total	6.5%	12.63 ha	1,367,925	

WYNDHAM WEST DCP
CONSTRUCTION COST ESTIMATES
ACTIVE RECREATION PROJECTS
AR07-AR08
METROPOLITAN PLANNING AUTHORITY
CITY OF WYNDHAM

Rev B
 Dwg No 300205LMP04B



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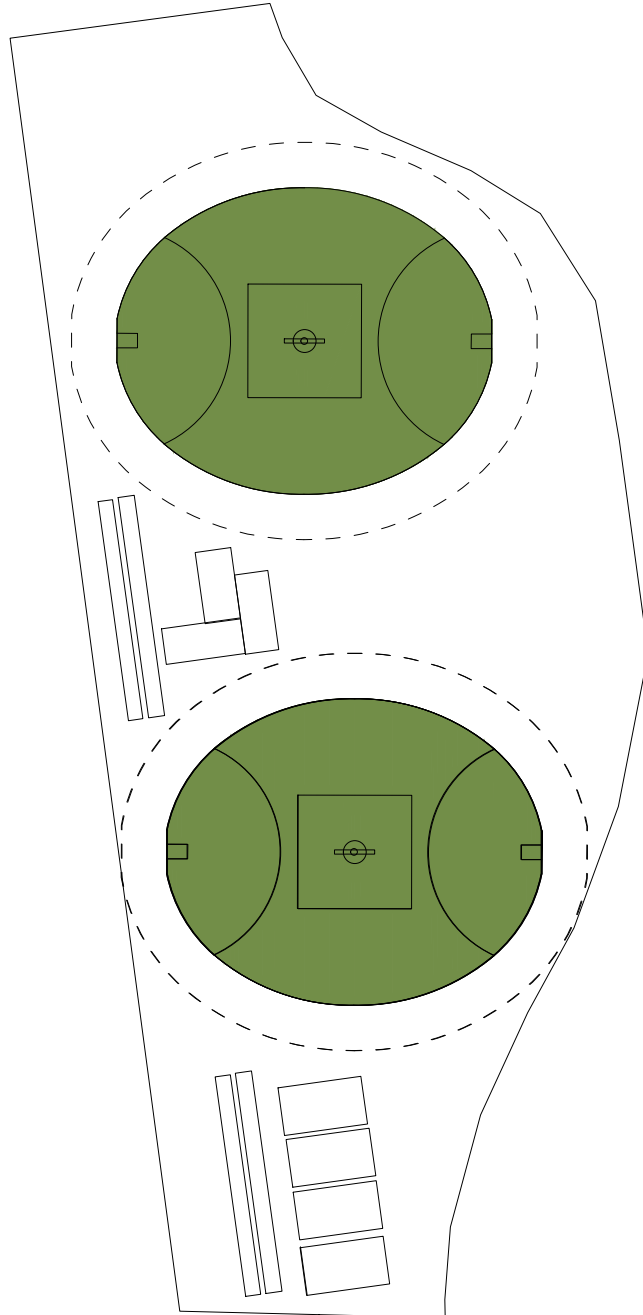
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Map Reference
 Sheet Number
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AR13-AR14 Concept Plan (11.24 ha)

Item	Quantity	Unit Price	Total
General Conditions	1	\$2,100,000	\$2,100,000
Site Works	1	\$1,500,000	\$1,500,000
Drainage	1	\$1,000,000	\$1,000,000
Power	1	\$1,000,000	\$1,000,000
Street & Lighting	1	\$1,000,000	\$1,000,000
Water & Gas	1	\$1,000,000	\$1,000,000
Landscaping	1	\$1,000,000	\$1,000,000
Professional Fees	1	\$1,000,000	\$1,000,000
Contingency	1	\$1,000,000	\$1,000,000
Subtotal			\$11,240,000
Contingency (5%)			\$562,000
Professional Fees (5%)			\$562,000
Contingency & Professional Fees			\$1,124,000
Subtotal			\$12,364,000
State Infrastructure Levy (SIL)			\$1,124,000
Subtotal			\$13,488,000
State Infrastructure Levy (SIL)			\$1,124,000
Subtotal			\$14,612,000



Rev	Amendments	Date	App'd
B	AMENDED AS PER MPA COMMENTS. DRAFT COSTINGS RE-ISSUED TO MPA.	12/01/14	FS
A	DRAFT COSTINGS	25/02/14	FS

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 1302051MP08 - Version 20141114

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WYNDHAM WEST DCP
CONSTRUCTION COST ESTIMATES
ACTIVE RECREATION PROJECTS
AR13-AR14
METROPOLITAN PLANNING AUTHORITY
CITY OF WYNDHAM
 Rev B
 Dwg No 3002051MP08

AR13-AR14 (11.24 ha)

AR13: Development Infrastructure Levy (DIL)

Item	Description	Rate	Area	Value	Total
1	Development Infrastructure Levy (DIL) - Residential	15.00%	11.24 ha	1,686,000	1,686,000
2	Development Infrastructure Levy (DIL) - Commercial	20.00%	0.00 ha	0	0
3	Development Infrastructure Levy (DIL) - Industrial	25.00%	0.00 ha	0	0
4	Development Infrastructure Levy (DIL) - Public Buildings	10.00%	0.00 ha	0	0
5	Development Infrastructure Levy (DIL) - Other	5.00%	0.00 ha	0	0
Total			11.24 ha	1,686,000	1,686,000

AR14: Community Infrastructure Levy (CIL)


Item	Description	Rate	Area	Value	Total
1	Community Infrastructure Levy (CIL) - Residential	10.00%	11.24 ha	1,124,000	1,124,000
2	Community Infrastructure Levy (CIL) - Commercial	15.00%	0.00 ha	0	0
3	Community Infrastructure Levy (CIL) - Industrial	20.00%	0.00 ha	0	0
4	Community Infrastructure Levy (CIL) - Public Buildings	5.00%	0.00 ha	0	0
5	Community Infrastructure Levy (CIL) - Other	2.00%	0.00 ha	0	0
Total			11.24 ha	1,124,000	1,124,000

Designed: [Name]
 Checked: [Name]
 Authorized: [Name]

Map Reference: [Reference]
 Sheet Number: [Number]
 Drg Status: [Status]

WYNDHAM WEST DCP
 CONSTRUCTION COST ESTIMATES
 ACTIVE RECREATION PROJECTS
 AR13-AR14
 METROPOLITAN PLANNING AUTHORITY
 CITY OF WYNDHAM

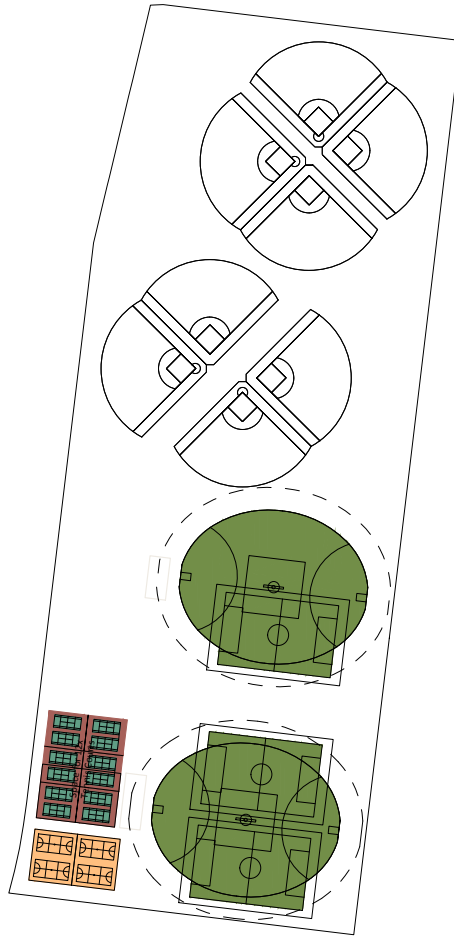
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AR19-AR20 Concept Plan (23.55 ha)



ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
General Conditions				10,000,000
Site Preparation	m ²	100,000	100	10,000,000
Excavation	m ³	100,000	100	10,000,000
Backfill	m ³	100,000	100	10,000,000
Gravel	m ³	100,000	100	10,000,000
Asphalt	m ²	100,000	100	10,000,000
Concrete	m ³	100,000	100	10,000,000
Paint	m ²	100,000	100	10,000,000
Lighting	fixture	100	100,000	10,000,000
Security	fixture	100	100,000	10,000,000
Landscaping	fixture	100	100,000	10,000,000
Professional Fees				10,000,000
Contingency				10,000,000
Subtotal				10,000,000
Tax				10,000,000
Total				20,000,000

Rev	Amendments	App'd	Date
B	AMENDED AS PER MPA COMMENTS. DRAFT COSTINGS RE-ISSUED TO MPA.		12.03.14
A	DRAFT COSTINGS		20.02.14

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 Checked: NR
 Authorised: PS

Map Reference: 10
 Sheet Number: 10
 Draw Status: PRELIMINARY

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WYNDHAM WEST DCP
CONSTRUCTION COST ESTIMATES
ACTIVE RECREATION PROJECTS
AR19-AR20
METROPOLITAN PLANNING AUTHORITY
CITY OF WYNDHAM
 Rev B
 Dwg No. 3002051.MP10

ASSUMPTIONS

ASSUMPTIONS
 All costs are estimates only based upon schematic design layouts
 All costs and rates are GST exclusive

General Conditions

General conditions are assumed to include securing the site at all times, setting out and establishing site sheds and compounds, liaison with Council and Superintendents, provision of securities and contract insurances, OH&S, Traffic and Environmental Management Plans Allowance for General Conditions (site security, establishment, insurances etc) will be required a each stage (Part A, B and C) and we have made preliminary assumptions for this base on square meter areas

Earthworks

It is assumed sites will require preliminary establishment works to clear existing conditions, adjust levels and soft spots, remove existing vegetation, rubble, structures and unsuitable materials.

Preliminary site establishment and preparation includes cleaning up prior to start of works and excavation of existing channels/depressions to firm base.

Removal and disposal of trees, rubbish, structures, fences, rocks, rubble, building rubbish and unsuitable material etc. will be undertaken as developer works.

Fill materials will require to be to Level 1 supervision

Sub grade of sporting areas will require testing to ensure Australian Standards

Assume that additional fill material will be required to accommodate volume of rock removed from site sub-grade and topsoil. We have allowed for additional 20% volume to areas other than designated for landscaping. Assume additional fill material above will be sourced from off site or alternative location and require delivery and stock pile to site. Assume balance of cut and fill to 1m equates to cut to 0.5m and fill to .5m across the designated area. We have made preliminary assumptions based upon construction cut-to-relocate and fill rates for works in the Wyndham area and elsewhere across Melbourne area.

Drainage

All pipe rates to include excavation, supply of pipes, glays, lay, bed, joint, dewatering and backfill. All surplus spoil to be disposed of if not suitable for fill elsewhere.

A basic drainage layout using 450mm, 375mm and 300mm R.C Class 2 pipe has been allowed for estimation purposes. A full and accurate drainage design has not been undertaken at this stage and would require further resolution of the reserve schematic designs for more accurate pricing. It is assumed that sports fields will be designed for positive surface drainage, specialised subsurface drainage (Soccer, Lawn Bowls) has been included in the cost to the field construction works. Landscape drainage is allowed for within the landscaping rates. It is assumed the site will predominantly be designed and graded to allow positive surface drainage to the landscape and connection to the civil drainage works.

No allowance has been made for the catchment, treatment or reuse of any water on site.

All services are assumed to have supply mains located along the site frontage for tapping/connection into.

No allowance has been made for pump stations.

Lighting/Electrical

Lighting conduits have been considered to one Netball Court and one Lawn Bowls Rink per reserve only, and four Tennis Courts per site only. Lighting conduit works have been allowed for Sports lighting to all AFL, Soccer and Rugby pitches for the future provision of sports lighting. Where possible we have assumed that poles would be mounted with multiple flood lights (multiple directions) to reduce requirement for pole quantities. No allowance has been made for excavation in rock, trenching works assume minimal surface rock present and incidental flatters only. No public lighting (roadways, foot paths, playgrounds etc) other than car parking has been allowed for. Electrical cabling has been allowed to car park lighting only, all future sports lighting would require installations of cabling to conduits provided.

Road and Car Parks

Construction assumes full base and kerb construction require to all areas, surface construction to be compacted FCR. Allowance has been made to include access roads to all pavilions.

Sporting Fields

All sporting fields to utilise warm season grass and allow for 13 week establishment and maintenance period independent from the overall site maintenance period. Irrigation has been allowed for all sporting playing areas.

We have assumed that irrigation pump and controls are housed in cabinets adjacent to the respective pavilions where possible.

Landscaping

High end landscaping rate allows for detailed and specialised landscaping including feature paving, walling, furniture and structures, garden beds, rockwork, established trees and instant turf. Standard landscaping rate allows for general landscaping works including basic pathways, trees and garden beds, hydro seeded turf areas and furniture items. Base landscaping rate assumes minimal preparation and topsoil works and application of hydro seeding only. Provision of playground equipment is assumed to be undertaken as developer works and has not been allowed for within the landscaping rates.

Pavilions

Pavilion rates assume square meter rate applied across nominated footprints for constructed pavilions, inclusive of change and club rooms, kitchen, public toilets, change and shower facilities.

Square meter rates for pavilions has been taken from Rawlisons Australian construction handbook section 11.2.2 - Clubhouse and change rooms.

Maintenance

No allowance has been made for maintenance beyond the initial 13 week establishment period (DLP).

Establishment maintenance has been considered for each sporting facility as part of the construction cost of that specific code.

Landscape maintenance assumes all areas other than Sporting fields/pitches/courts, roads and car parks and Pavilion footprints.

No allowance has been made for additional watering over and above general establishment maintenance allowance. It is assumed that basic landscaping (sprigs, seeding) will be programmed such to take advantage of appropriate seasonal conditions to minimize requirements for additional watering.

Sewer

No allowance has been made for pump stations.

Rev	Amendments	App'd	Date
B	AMENDED AS PER RMPA COMMENTS. DRAFT CONTRIBUTIONS RE-SUBMITTED TO MPA.	FS	12.03.14
A	DRAFT CONTRIBUTIONS	FS	24.02.14

Designed	Checked	Noted	Approved

Map Reference	Sheet Number	Drwg Status
	12	PRELIMINARY

Innovation in Infrastructure

WYNDHAM WEST DCP
 CONSTRUCTION COST ESTIMATES
 ACTIVE RECREATION PROJECTS
 ASSUMPTIONS
 METROPOLITAN PLANNING AUTHORITY
 CITY OF WYNDHAM

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