Warrnambool Eastern Activity Centre

Shared Infrastructure Plan

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INTRODUCTION

This document has been prepared to accompany the Eastern Activity Precinct Structure Plan (the EAP Structure Plan).
The EAP Structure Plan sets out a clear spatial vision and set of objectives for how the Precinct is intended to develop. A key component of facilitating high quality and holistic development outcomes is to have a clear understanding of how infrastructure can be funded and delivered.

The EAP Structure Plan identifies a set of higher order infrastructure requirements, such as drainage, roads and intersections, shared paths and open space that will service the broader EAP area.

In order to ensure that the funding and delivery of this shared infrastructure is distributed fairly across the landholders who will benefit, this Shared Infrastructure Funding Plan has been prepared.

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SHARED INFRASTRUCTURE FUNDING PLAN

A public infrastructure plan (refer to Figure 1 and Table 1) sets out the higher shared order infrastructure that is required to service new development within the EAP.

Prior to rezoning of land in accordance with the Structure Plan (or prior to approval of a Development Plan or a planning permit for already zoned land), landholders must enter into a Section 173 that identifies the landholder's obligation to contribute to (either in cash contributions or works in kind) the cost of delivery of higher order shared infrastructure.

Council will negotiate with each landholder on a case by case basis regarding a reasonable allocation of costs/projects. Negotiations will be based on an holistic understanding of infrastructure required, as identified in Eastern Activity Precinct Structure Plan, and a detailed understanding of infrastructure required to service individual properties based on timing and location of the each development.

Agreements will be based on the fair and equitable allocation of costs associated on a per hectare of net developable area basis for new development (refer to Table 2). Existing development, and land subject to existing approvals have not been included in the land budget, and are not included in the Shared Infrastructure Funding Agreement. Infrastructure requirements will be addressed by Council at the time of approval on a site-specific basis.

The infrastructure projects that will form the basis of the shared funding agreement are identified in Figure 1 and Table 2 Shared Infrastructure Projects.

All land is proposed to contribute to the cost of Roads and Intersection projects, and drainage projects within the relevant catchment. Only residential/ mixed use land will contribute to open space.

For the majority of projects, it is likely that Warrnambool City Council will require developers to deliver projects on a 'works in kind' basis, in lieu of payment of cash contributions. Timing of credits or cash payments form Council for works that exceed a developer's obligation will be negotiated on a case by case basis, and should be reflected in the Section 173 Agreement.

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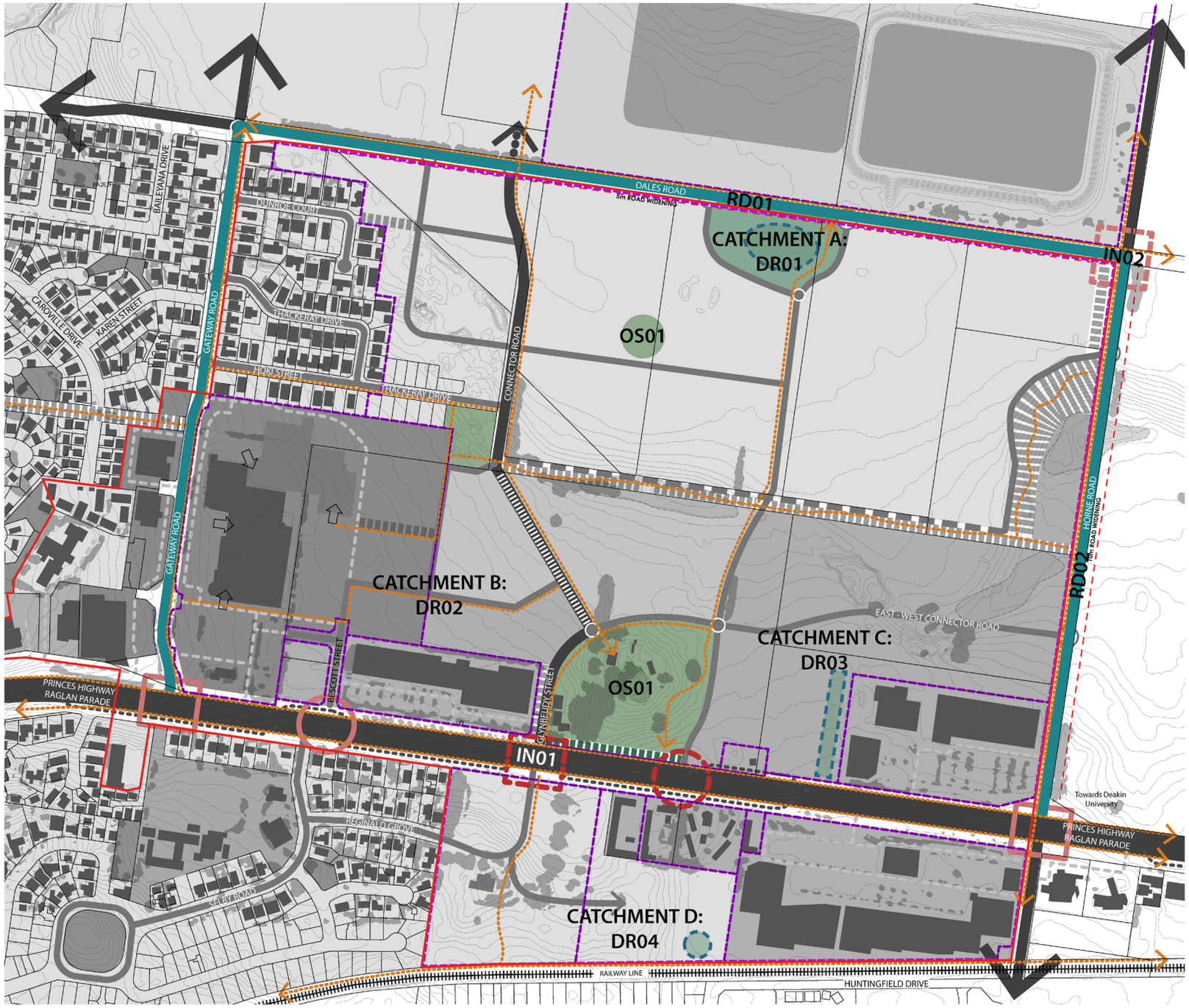
Table 1 **Shared Infrastructure Projects**

Project Number	Project Description	Estimated Land Cost as at 2016	2016 Construction Cost	Total Cost of Project 2016	Land_Estimated External Usage/External Funding %	Construction_Estimated External Usage/External Funding %	Total Cost Attributable to Main Catchment Area	Main Catchment Area (MCA)	Development Types Making Contribution	Number of Net Developable Hectares in MCA	Contribution per Net Developable Hectare
ROADS + INTERSECTIONS											
RD01	**Dales Road** Land for road widening. Construction of southern portion of cross-section to be undertaken by adjoining developers.	$186,000.00	$2,652,881.25	$2,838,881.25	0%	50%	$1,512,440.63	All	All	64.9	$23,304
RD02	**Horne Road** Construction (upgrade) of eastern portion of cross-section to be undertaken by adjoining developers.	$186,000.00	$1,439,159.00	$1,625,159.00	100%	50%	$719,579.50	All	All	64.9	$11,088
IN01	**Gateway Intersection (Glynbeudy Street)** 4 way signalised intersection. Connector Road entry intersecting with Princes Highway.	$72,000.00	$1,307,737.50	$1,379,737.50	0%	0%	$1,379,737.50	All	All	64.9	$21,259
IN02	**Dales Road + Horne Road Intersection** 4 way signalised intersection.	$22,000.00	$1,324,355.00	$1,346,355.00	66%	66%	$457,760.70	All	All	64.9	$7,053
Sub-Total		**$466,000.00**	**$6,724,132.75**	**$7,190,132.75**			**$4,069,518.33**				**$62,704.44**
OPEN SPACE											
OS01	**Passive Open Space** Land for passive reserves. Open space associated with the ridgeline and the existing area of open space not included.	$1,232,970.00	$0.00	$1,232,970.00	0%	0%	$1,232,970.00	All	Resi/Mixed	48.06	$25,654.81
Sub-Total		**$1,232,970.00**	**$0.00**	**$1,232,970.00**			**$1,232,970.00**				**$25,654.81**
OFF-ROAD PEDESTRIAN & CYCLE TRAILS											
PC01	**Shared Paths (not within road reserves)** 2.5m concrete shared path within open space, linear reserves. Approx.3250m in total Shared paths located with connector road reserves to be constructed by developers as part of stage works.	$0	$455,000	$455,000	0%	0%	$455,000	All	All	64.9	$7,011
Sub-Total		**$0**	**$455,000**	**$455,000**			**$455,000**				**$7,011**
DRAINAGE											
DR01	**Catchment A Drainage** Land for retarding basin, construction of retarding basin and construction of main drain pipe in Dales Road. Refer to Project Sheet.	$196,000	$774,025	$970,025	0%	0%	$970,025	A	All	40.40	$24,011
DR02	**Catchment B Drainage** Contribution to Council to discharge into existing drainage system via Simpson Street	$0	$185,143	$185,143	0%	0%	$185,143	B	All	6.44	$28,749
DR03	**Catchment C Drainage** Upgrade to existing stormwater system (refer to Project Sheet)	$104,000	$487,448	$591,448	0%	0%	$591,448	C	All	8.36	$70,747
DR04	**Catchment D Drainage** Installation of main drain connecting to existing Council stormwater infrastructure at Huntingfield Drive and Raglan Parade.	$44,000	$319,500	$363,500	0%	0%	$363,500	D	All	9.70	$37,474
		$344,000	**$1,766,116**	**$2,110,116**	**$0**	**$0**	**$2,110,116**				**$160,981**
TOTAL		**$2,042,970**	**$8,945,249**	**$10,988,219**			**$7,867,604**				

TOTAL CHARGE PER NET DEVELOPABLE HECTARE	
Catchment A_Residential/Mixed Use	**$119,381**
Catchment A_Commercial	**$93,726**
Catchment B_Residential/Mixed Use	**$124,119**
Catchment B_Commercial	**$91,453**
Catchment C_Residential/Mixed Use	**$166,117**
Catchment C_Commercial	**$140,463**
Catchment D_Residential/Mixed Use	**$132,844**
Catchment D_Commercial	**$107,189**

Figure 1 **Public Infrastructure Plan**



DRAWING KEY

Primary Study Area Boundary

DRAINAGE & INFRASTRUCTURE

- Property Ownership Boundaries
- Higher Order Roads
- Open Space
- Drainage
- Intersection Upgrade
- Drainage Catchment

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0 25 50 75 125 METERS

1:2500 at A1 1:5000 at A3

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Table 2 **Land Budget**

Property Number	Total Area (ha)	ENCUMBERED LAND			ROAD RESERVE		OPEN SPACE		TOTAL Net Developable Area (Hectares)		LAND USE			
		Drainage (Retarding Basin)	Ridgeline	Vegetation to be retained	Dales Road Widening	Horne Road Widening	Passive Open Space	Linear Links/Buffers			Residential	Mixed Use	Commercial/ Retail	Employment/ Office
Existing Development		NA	NA	NA	NA	NA		NA	NA					
1	3.4				0.0				**3.3**		3.3	0.0	0.0	0.0
2	2.5				0.1				**2.4**		2.4	0.0	0.0	0.0
3	2.0				0.0			0.6	**1.4**		1.4	0.0	0.0	0.0
4	1.0								**1.0**		1.0	0.0	0.0	0.0
5	6.0				0.1		0.3		**5.6**		5.6	0.0	0.0	0.0
6	7.7	1.2			0.1		0.0		**6.4**		6.4	0.0	0.0	0.0
7	7.7	0.2			0.1				**7.4**		7.4	0.0	0.0	0.0
8	2.4				0.1		0.2	0.0	**2.1**		2.1	0.0	0.0	0.0
9	5.7		1.2					0.2	**4.3**		3.3	0.0	0.0	1.0
10	15.0						3.6	0.1	**11.4**		0.0	7.0	0.0	4.3
11	6.8								**6.8**		0.0	0.0	0.0	6.8
12	2.6	0.3							**2.3**		0.0	0.0	0.0	2.3
13	0.2								**0.2**		0.0	0.0	0.2	0.0
14	5.3								**5.3**		5.3	0.0	0.0	0.0
15	0.4								**0.4**		0.0	0.0	0.4	0.0
16	0.4								**0.4**		0.0	0.0	0.4	0.0
17	0.8								**0.8**		0.0	0.0	0.8	0.0
18	0.2								**0.2**		0.0	0.0	0.2	0.0
19	0.4								**0.4**		0.0	0.0	0.4	0.0
20	2.9	0.10							**2.8**		2.8	0.0	0.0	0.0
TOTAL	**73.4**	**1.7**	**1.2**	**0.0**	**0.6**	**0.0**	**4.1**	**0.9**	**64.9**		**41.1**	**7.0**	**2.4**	**14.4**

CATCHMENT AREA														
A			B			C			D			TOTALS		
Resi/Mixed	Comm/Empl	All	Resi/Mixed	Comm/Empl	All	Resi/Mixed	Comm/Empl	All	Resi/Mixed	Comm/Empl	All	Resi/Mixed	Comm/Empl	All Uses
35.5	4.9	40.4	4.1	2.3	6.4	0.4	8.0	8.4	8.1	1.6	9.7	48.1	16.8	64.9

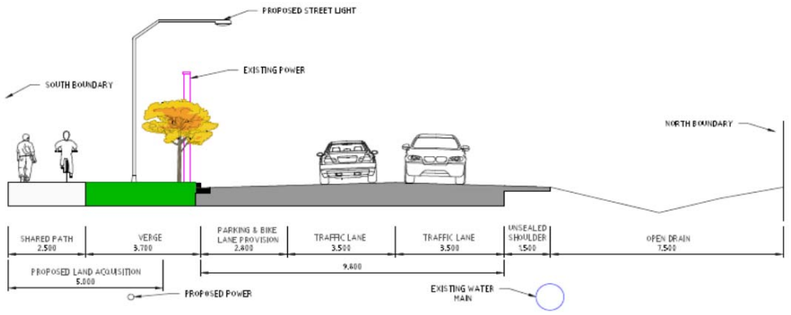
Figure 2 **Parcel Identification**

APPENDICES

North East Warrnambool

RD01 Dales Road Construction - between Horne Road and Gateway Road

Construction of Dales Road between Horne and Gateway Roads to facilitate residential development south of Dales Road and create links to commercial uses north of Raglan Pde including Gateway Plaza and various bulky goods outlets. Road profile as per below and associated drainage works linking with main drain constructed west of Gateway Road. Construction of traffic signals (Project 1 - Dales Road - Horne Road Intersection Traffic Signals) could also occur with this project if required. Land acquisition required to facilitate ultimate 25.0m road reserve width - west end road reserve currently 23.0m



Standard of construction:

Pavement design to be determined after estimation of traffic volumes and %CV. Stabilisation of subgrade assumed prior to pavement construction. Drainage linking to Dales/Gateway main drain assumed; road crossings only included in this project. Main drain and retention system covered in project DRN-001. Road geometry determined from Infrastructure Design Manual and design to cater for 6,000 vpd. Consideration of existing 450mm water main required prior to finalisation of road alignment

Pavement standard

Pavement design based on 300mm subgrade stabilisation achieving CBR of 15%. 300mm flexible pavement and wearing course built upon stabilised subgrade.

Project justification:

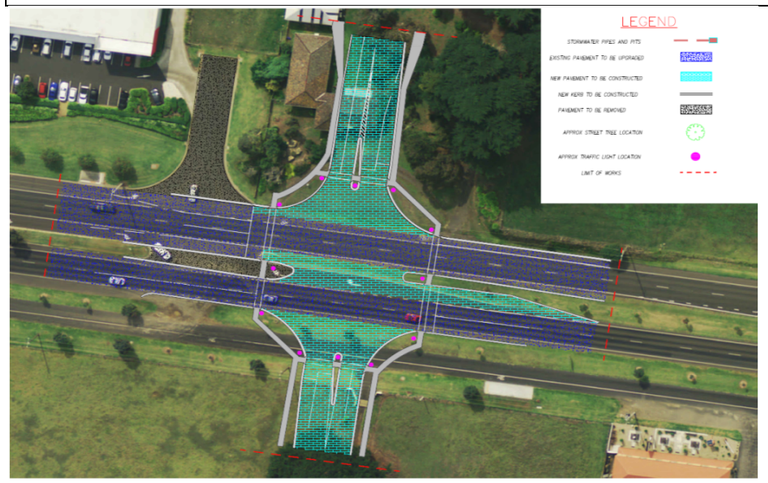
Major collector road for residential traffic required for proposed residential subdivision. Would become a significant east west link from Horne Road through to Mortlake Road (Hopkins Highway) via Moore Street. Benefit to existing residential areas to the east. Interim design and construction could occur to facilitate immediate link to Horne Rd Industrial Park/Deakin/bulky goods precinct etc. from Gateway Road. Improves connectivity from established residential areas to the west to bulky good precinct. Creates pedestrian/cycle links in area (Horne Road, Wangoom Road etc significant cyclist traffic).

	Quantity	Units	Unit Rate	Amount	Notes
Capital cost details					
Excavate & dispose redundant road pavement & reinstate (nature strip)	5,638	m³	$ 25.00	$ 140,938	
Drainage - Road Crossings 375mm dia	169	Lm	$ 180.00	$ 30,375	
Drainage - Pits & Lids	23	item	$ 2,000.00	$ 45,000	
Stabilise subgrade	10,780	m²	$ 25.50	$ 274,890	
Pavement construction - 150mm Cl 2, 150mm Cl 3	10,780	m²	$ 45.00	$ 485,100	
Pavement construction - 150mm Cl 2 shoulder	1,650	m²	$ 25.00	$ 41,250	
Primer Seal	10,780	m²	$ 10.00	$ 107,800	
40mm Asphalt (Widening & Overlay Existing	10,780	m²	$ 22.00	$ 237,160	
Kerb and channel	1100	Lm	$ 65.00	$ 71,500	
Footpath	2,625	m²	$ 140.00	$ 367,500	
Linemarking and signage	1	Item	$ 3,000.00	$ 3,000	
Street lighting Upgrade	15	item	$ 2,000.00	$ 30,000	
				$ 1,834,513	
Road landscaping					
Nature strips	2,210	m²	$ 5.00	$ 11,050	
Tree planting	100	item	$ 315.00	$ 31,500	
				$ 42,550	
Service Relocations					
Power poles	9	Item	$ 15,000.00	$ 135,000	
				$ 135,000	
Land Acquisition					
Unencumbered developable land	0.5500	ha	$ 300,000.00	$ 165,000	
Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
Fencing	550.0000	m	$ 20.00	$ 11,000	
Legal Costs	1.0000	Item	$ 10,000.00	$ 10,000	
				$ 186,000	
			Sub Total	**$ 2,198,063**	
Design and supervision					
% of project cost	10%			**$ 201,206.25**	
Contingency					
% of project costs	20%			**$ 439,612.50**	
			Total	**$ 2,838,881**	

North East Warrnambool

Raglan Parade & Proposed North South Road Traffic Signals Construction

Construction of traffic signals and associated infrastructure at the Raglan Parade Intersection with the proposed north south collector road, including intersection construction on both sides of Raglan Parade. Intersection will create link to Princes Highway for future connection for Collector Roads being extension of Reginald Grove and Glynbeudy St



Standard of construction:

Signal installation and associated pavement works. Pavement design to be determined after estimation of traffic volumes and % CV. Stabilisation of subgrade assumed prior to pavement construction. Street lighting and signage as required. Minor kerb & drainage works to facilitate works. Pavement design and geometry in accordance with the Infrastructure Design Manual.

Pavement standard

Pavement design based on 300mm subgrade stabilisation achieving CBR of 15%. 300mm flexible pavement and wearing course built upon stabilised subgrade. Concrete driveway to existing shopping precinct to ensure commercial vehicle access. Location of road allows 40m frontage to new north-south road adjacent Harvey Norman. Costs associated with removal of existing Glynbeudy Street to be funded by developer(s)

Project justification:

Works required in conjunction with internal developments (commercial, mixed use and residential in the WEAP to ensure safety access/egress from Princes Highway (Raglan Parade). Signals recommended once traffic volumes from proposed north south collector road reach XXXXX VPD or XXXX % CV. Provides safer and more efficent access/egress to Raglan Parade. Improved pedestrian links and provision for cyclists to access highway.

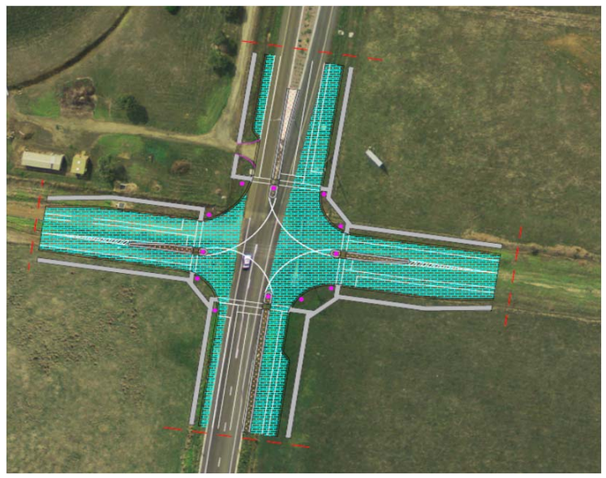
Capital cost details

	Quantity	Units	Unit Rate	Amount	Notes
Roadworks					
Excavate & dispose redundant road pavement & reinstate (nature strip)	1,675	m³	$ 25.00	$ 41,875	
Drainage - Road Crossings 375mm dia	100	Lm	$ 180.00	$ 18,000	
Drainage - Pits & Lids	12	item	$ 2,000.00	$ 24,000	
Stabilise subgrade	1,850	m²	$ 25.50	$ 47,175	
Pavement construction - 150mm Cl 2, 150mm Cl 3	1,850	m²	$ 45.00	$ 83,250	
Primer Seal	1,850	m²	$ 10.00	$ 18,500	
40mm Asphalt (Widening & Overlay Existing	4,500	m²	$ 22.00	$ 99,000	
Kerb and channel	205	Lm	$ 65.00	$ 13,325	
Splitter Islands	350	m²	$ 125.00	$ 43,750	
Footpath	480	m²	$ 140.00	$ 67,200	
DDA compliant pram/wheelchair crossing	14	each	$ 1,250.00	$ 17,500	
Linemarking and signage	1	item	$ 5,000.00	$ 5,000	
Street lighting Upgrade	6	item	$ 2,000.00	$ 12,000	
Construct new Commercial Concrete Driveway to	315	m2	$ 160.00	$ 50,400	
				$ 540,975	
Road landscaping					
Nature strips	150	m²	$ 5.00	$ 750	
Tree planting	10	item	$ 315.00	$ 3,150	
				$ 3,900	
Traffic signals					
Supply and install including civils	1	Item	$ 300,000.00	$ 300,000	
Maintenance allowance (10 years)	1	Item	$ 150,000.00	$ 150,000	
				$ 450,000	
Land Acquisition					
Unencumbered developable Land	0.2000	ha	$ 300,000.00	$ 60,000	
Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
Fencing	100.0000	Lm	$ 20.00	$ 2,000	
Legal Costs	1.0000	item	$ 10,000.00	$ 10,000	
				$ 72,000	
			Sub Total	**$ 1,066,875**	
Design and supervision					
% of project cost	10%			**$ 99,487.50**	
Contingency					
% of project costs	20%			**$ 213,375.00**	
			Total	**$ 1,379,738**	

North East Warrnambool

Dales & Horne Road Intersection Traffic Signals

Construction of traffic signals, pavement widening, kerb & channel and associated stormwater drainage infrastructure. Project would require construction of Dales Road between Gateway and Horne Roads prior to construction.



Standard of construction:

Pavement design to be determined after estimation of traffic volumes and % CV. Geometry determined by Dales Road construction (Refer project 2).g Kerb & channel to be constructed on both sides of Dales Road and extended on Horne Road as required. 2.5m shared path on eastern side of Horne Road and south side of Dales. Landscaping works at intersection to suit. allow for extension of Horne Road to the south and Dales Road to east.

Pavement standard

Pavement design based on 300mm subgrade stabilisation achieving CBR of 15%. 300mm flexible pavement and wearing course built upon stabilised subgrade.

Project justification:

Subject to significant traffic growth and construction of Dales Road associated with residential development along Dales Road and the Gateway Industrial Park areas. Intersection at present utilised only by Wannon Water and limited farm use. Geometry and infrastructure requirements determined by Infrastructure Design Manual for Collector Roads. Safe access/egress from Horne Road for motorists.

Capital cost details

	Quantity	Units	Unit Rate	Amount	Notes
Roadworks					
Excavate & dispose redundant road pavement & reinstate (nature strip)	1,425	m^3	$ 25.00	$ 35,625	
Drainage - Road Crossings 375mm dia	80	Lm	$ 180.00	$ 14,400	
Drainage - Pits & Lids	12	item	$ 2,000.00	$ 24,000	
Stabilise subgrade	2,850	m^2	$ 25.50	$ 72,675	
Pavement construction - 150mm Cl 2, 150mm Cl 3	2,850	m^2	$ 45.00	$ 128,250	
Primer Seal	2,850	m^2	$ 10.00	$ 28,500	
40mm Asphalt (Widening & Overlay Existing	2,850	m^2	$ 22.00	$ 62,700	
Kerb and channel	1,420	Lm	$ 65.00	$ 92,300	
Splitter Islands	150	m^2	$ 125.00	$ 18,750	
Footpath	310	m^2	$ 140.00	$ 43,400	
DDA compliant pram/wheelchair crossing	12	each	$ 1,250.00	$ 15,000	
Linemarking and signage - Intersectio	1	each	$ 5,000.00	$ 5,000	
				$ 540,600	
Street Lighting					
Street lighting Upgrade	6	item	$ 3,500.00	$ 21,000	
				$ 21,000	
Road landscaping					
Nature strips	150	m^2	$ 5.00	$ 750	
Landscaping	1	item	$ 3,000.00	$ 3,000	
				$ 3,750	
Traffic signals					
Supply and install including civils	1	Item	$ 300,000.00	$ 300,000	
Maintenance allowance (10 years)	1	Item	$ 150,000.00	$ 150,000	
				$ 450,000	
Land Acquisition					
Dales Road South	0.0200	ha	$ 300,000.00	$ 6,000	
Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
Fencing	300.0000	Lm	$ 20.00	$ 6,000	
Legal Costs	1.0000	item	$ 10,000.00	$ 10,000	
				$ 22,000	
			Sub Total	**$ 1,037,350**	
Design and supervision					
% of project cost	10%			**$ 101,535.00**	
Contingency					
% of project costs	20%			**$ 207,470.00**	
				$ 1,346,355	

North East Warrnambool

WEAP Drainage Construction - Catchment A

Name of project and description:

Installation of main drain connecting to existing Council stormwater infrastructure in Dales Road. Some drainage of the Eastern Activity Precinct will drain south to Hopkins River

Standard of construction:

Class 2 pipes where minimum cover can be achieved. Crushed rock backfill under all roads and kerbs, general backfill elsewhere. All pits to be steel or fibre reinforced w/ fibreglass lids. Drainage lines as per Brian Consulting concept design, 2 basins rather than 4. Noting 1 existing basin within development of 24 Aberline Road. NOTE - MESH concept allows for 1 large basin, BC design for 3 smaller basins on Dales Road. Connection to Dales Road drain immediately east of Gateway Road, constructed Spring 2014.

Project justification:

Critical infrastructure to ensure flooding does not occur and does not cause detriment to existing properties. Development cannot occur without drainage infrastructure development preceding or occurring concurrently with initial development. Opportunity to ensure quality stormwater treatments without causing detriment to downstream catchments. Main drain to precede or be built in conjunction with first development with a Development Contribution Plan in place for later developments.

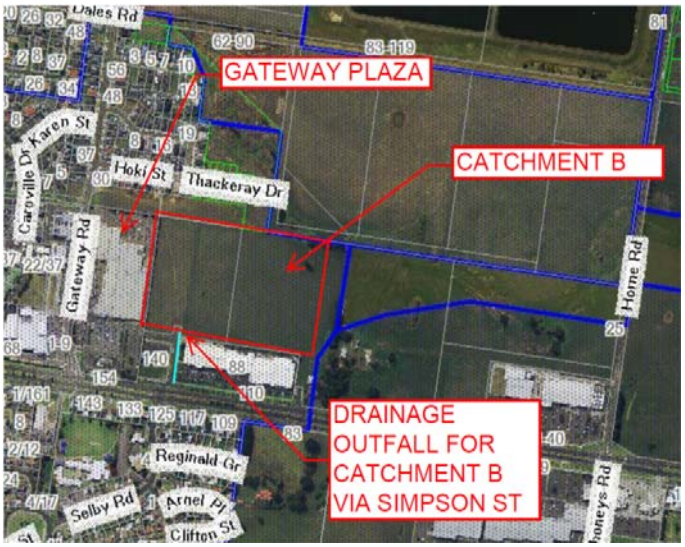
Capital cost details

	Quantity	Units	Unit Rate	Amount	Notes
Pipeline Construction (including pits every 80m)					
Construct 600mm dia - part constructed in 2014 (Dales to Aberline)	750	Lm	$ 500.00	$ 375,000	
Pits & Lid	9	Item	$ 2,000.00	$ 18,750	
600mmØ Concrete headwall and beaching	2	No	$ 4,500.00	$ 9,000	
Misscellaneous items, including reinstatement of road reserve etc	1	Item	$ 10,000.00	$ 10,000	
				$ 412,750	
Detention Basin Construction					
Construction of Detention basins (DB3, DB4 & DB5) Excavation, shaping, fencing and landscaping	5,000	m^3	$ 25.00	$ 125,000	
Topsoiling and shaping	1,500	m^2	$ 5.00	$ 7,500	
Fencing	250	Lm	$ 20.00	$ 5,000	
Landscaping	1	item	$ 15,000.00	$ 15,000	
				$ 565,250	
Land Acquisition					
Unencumbered developable land	0.6000	ha	$ 300,000.00	$ 180,000	
Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
Fencing	300.0000	m	$ 20.00	$ 6,000	
Legal Costs	1.0000	Item	$ 10,000.00	$ 10,000	
				$ 196,000	
				$ 761,250	
Design and supervision					
% of project cost	10%			**$ 56,525**	
Contingency					
% of project costs	20%			**$ 152,250.00**	
				$ 970,025	

North East Warrnambool

WEAP Drainage Construction - Catchment B

Catchment B stormwater infrastructure discharges via the Simpson Street tunnel. Contribution by developers to be made in lieu of works already planned downstream. Drainage within catchment area to be constructed as required by development proposed.



Standard of construction:

All drainage to the outfall location within Catchment B to be constructed at full cost to developer. Class 2 pipes where minimum cover can be achieved. Crushed rock backfill under all roads and kerbs, general backfill elsewhere. All pits to be steel or fibre reinforced w/ fibreglass lids

Project justification:

Critical infrastructure to ensure flooding does not occur and does not cause detriment to existing properties. Opportunity to ensure quality stormwater treatments without causing detriment to downstream catchments. Works already underway for Simpson Street tunnel upgrade.

Capital cost details

		Quantity	Units	Unit Rate	Amount	Notes
Contribution						
	Contribution to Simpson Street Tunnel Upgrade	##############	ha	$ 17,142.86	$ 185,143	
					$ 185,143	

North East Warrnambool

WEAP Drainage Construction - Catchment C

Name of project and description:

Upgrade existing Council stormwater infrastructure at Raglan Parade (west of Bunnings site) to cater for 5% AEP storm event

Standard of construction:

Upgrade to Raglan Parade drainage to ensure capacity. Network to cater for 5% AEP (industrial), with overland flow paths available for 1% AEP storm events. Construction in accordance with Infrastructure Design Manual. On-site retention will be required as allotments are developed to a standard of 90m³ per hectare.

Project justification:

Critical infrastructure to ensure flooding does not occur and does not cause detriment to existing properties. Residential and commercial development cannot occur without its construction. Opportunity to improve stormwater quality being discharged to downstream catchments.

Capital cost details

	Quantity	Units	Unit Rate	Amount	Notes
Drainage Line Construction					
900mmØ Class 2 reinforced concrete pipe including excavation, bedding, jointing and backfill	130	Lm	$ 600.00	$ 78,000	
Pits 900mm x 900mm reinforced concrete	6	No	$ 2,000.00	$ 12,000	
Allowance for Raglan Parade road crossing; traffic, reinstatement etc	1	Item	$ 60,000	$ 60,000	
Misscellaneous items, including reinstatement of road reserve etc	1	Item	$ 10,000.00	$ 10,000	
Reimbursement of previous Council Contribution on behalf of Catchment C	1	Item	$ 198,960.00	$ 198,960	Refer How Hoodhouse Graesser Report 25/1/06
				$ 358,960	
Land Acquisition					
Unencumbered developable land	0.3000	ha	$ 300,000.00	$ 90,000	
Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
Fencing	200.0000	m	$ 20.00	$ 4,000	
Legal Costs	1.0000	Item	$ 10,000.00	$ 10,000	
				$ 104,000	
			Sub Total	**$ 462,960**	
Design and supervision					
% of project cost	10%			**$ 35,896.00**	
Contingency					
% of project costs	20%			**$ 92,592.00**	
				$ 591,448	

North East Warrnambool

WEAP Drainage Construction - Catchment D

Name of project and description:

Installation of main drain connecting to existing Council stormwater infrastructure at Huntingfield Drive (behind homemaker centre) and Raglan Parade. Total Catchment 9.7ha discharged via 3 different drainage systems

Standard of construction:

Detailed design and catchment plans to determine size. Large diameter pipe to adequately cater for existing catchment area with some on-site retention. Network to cater for 5% AEP (industrial), with overland flow paths available for 1% AEP storm events. Construction in accordance with Infrastructure Design Manual.

Project justification:

Critical infrastructure to ensure flooding does not occur and does not cause detriment to existing properties. Residential and commercial development cannot occur without its construction. Opportunity to improve stormwater quality being discharged to downstream catchments.

Capital cost details

		Quantity	Units	Unit Rate	Amount	Notes
Drainage Line Construction						
	Construct basin for South East sub-catchment	400	m^3	$ 25.00	$ 10,000	
	675mmØ Class 2 reinforced concrete pipe including excavation, bedding, jointing and backfill	50	Lm	$ 600.00	$ 30,000	
	600mmØ Class 2 reinforced concrete pipe including excavation, bedding, jointing and backfill	25	Lm	$ 500.00	$ 12,500	
	450mmØ Class 2 reinforced concrete pipe including excavation, bedding, jointing and backfill	200	Lm	$ 460.00	$ 92,000	
	Pits 900mm x 900mm reinforced concrete	10	No	$ 2,000.00	$ 20,000	
	600mmØ Concrete headwall and beaching	1	No	$ 4,500.00	$ 4,500	
	Allowance for Raglan Parade road crossing; traffic, reinstatement etc	1	Item	$ 60,000.00	$ 60,000	
	Misscellaneous items, including reinstatement of road reserve etc	1	Item	$ 10,000.00	$ 10,000	
					$ 239,000	
Land Acquisition						
	Unencumbered developable land	0.1000	ha	$ 300,000.00	$ 30,000	
	Encumbered non developable Land	0.0000	ha	$ 20,000.00	$ -	
	Fencing	200.0000	m	$ 20.00	$ 4,000	
	Legal Costs	1.0000	Item	$ 10,000.00	$ 10,000	
					$ 44,000	
				Sub Total	**$ 283,000**	
Design and supervision						
	% of project cost	10%			**$ 23,900.00**	
Contingency						
	% of project costs	20%			**$ 56,600.00**	
					$ 363,500	

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