



TOOLERN PRECINCT STRUCTURE PLAN

EXPERT REPORT

19 August 2024

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1. INTRODUCTION

1.1 DECLARATION

- 1.1.1 I, Sian McKenna, am a Director of WTP Australia Pty Ltd (WT), an Australian owned quantity surveying practice.
- 1.1.2 I have been assisted in preparing this report by Asri Rahman, an Associate of WTP Australia Pty Ltd (WT).
- 1.1.3 WT provides specialist consultancy services to the construction and engineering industries. The principal services provided by WT are cost management and quantity surveying, asset and facilities management, project controls and contract support services.
- 1.1.4 I have made all inquiries which I believe are desirable and appropriate and no matters of significance which I regard as relevant have to our knowledge been withheld from the Panel.
- 1.1.5 In preparing this report we have had regard to the duties and responsibilities set out in the PPV Practice Note 1 – Expert Witness.
- 1.1.6 This report does not purport to prove facts. All references to facts are to be read as references to assumed facts. Facts have been assumed for the purpose of carrying out the cost estimates and reaching the conclusions contained within this report. When a fact has been assumed based on the readings of a document, a reference to that document is generally provided to that document in the relevant section of this report.
- 1.1.7 We have used the relevant reference material briefed to us in the email from Harwood Andrews dated 24 July 2024 regarding the Toolern Precinct Structures Plan & Development Contributions Plan
- 1.1.8 We understand that the immediate use of this statement is for Melton City Council and Planning Panels Victoria.

19 August 2024

Date



Sian McKenna



Asri Rahman

1.2 EXPLANATION OF EXPERTISE

- 1.2.1 In our role as a quantity surveyor, we provide independent advice to both private and government clients offering independent assurance/validation that the estimates submitted as a representation of the construction costs for projects are market-related and relative to those that would be received in a competitive tendering environment.
- 1.2.2 As a Director of WT, I am responsible for the development, accuracy and quality of numerous cost estimates each year. Specific examples of projects that have relevance to the options that have been considered in this report are as follows:

PROJECT NAME	CLIENT	COMPLETION DATE	RELEVANCE TO THE REPORT
Creamery Road PSP	Stantec	2023	Road and Bridge Infrastructure costings
Officer South Employment Precinct Structure Plan (PSP)	Cardinia Shire Council	2024	Transport and Community Infrastructure Costings
Ballarat Rail Corridor	PTV	2016	Costing of pedestrian bridges along the Ballarat rail corridor
Calder Highway Upgrade	MRPV	2023	Road duplication and grade separation (bridges) cost estimates
Craigieburn Road East Duplication	MRPV	2023	Road duplication, bridges and culverts cost estimates
Sunbury South and Lancefield ICP	City of Hume	2022	Transport Infrastructure Costings

- 1.2.3 Further, in our roles as Independent Estimators, the owners of the various projects make commercially sensitive information available to WT. This information contains the Contractors' detailed cost makeups for all of the work activities that would be associated with these projects, including those submitted by subcontractors for the works that would not normally be carried out by the Principal Contractor. The costs for various different types of construction activities can therefore be tested (or 'benchmarked' as it is termed in the industry) against other projects with similar work activities to ensure that these costs are

market-related and relative to those that would be received in a competitive tendering environment.

- 1.2.4 We receive regular feedback from our clients on the costs for the projects that we are required to validate in the form of tender prices and/or actual costs.

1.3 PRIOR INVOLVEMENT

- 1.3.1 WT has had no prior involvement in the Toolern Precinct Structure Plan (PSP) or Toolern Development Contributions Plan (DCP).

1.4 BRIEF DESCRIPTION OF THE MATTER

- 1.4.1 WT has been engaged by Melton City Council to prepare a peer review of the costs included as part of the Toolern Precinct Structure Plan prepared by the Victorian Planning Authority (VPA).
- 1.4.2 This expert evidence report includes a review of costs prepared by Cardno (VPA). This review has been taken against specific selected transport projects as per instructions noted below.

1.5 INSTRUCTIONS

- 1.5.1 WT has been instructed by Harwood Andrews on behalf of Melton City Council to prepare independent cost estimates for the following Toolern Precinct Structure Plan transport projects:
- a. Roads RD02-RD08 (inclusive), RD11, RD14-RD17 (inclusive), RD19
 - b. Intersections IT01-IT06 (inclusive), IT10, IT12, IT13, IT16, IT17, IT18, IT20, IT21, IT22, IT23, IT25, IT28 (omitted), IT29
 - c. Road Bridges BD03, BD15, BD16
 - d. Pedestrian bridges BD04-BD08 (inclusive), BD10, BD14
 - e. Community projects CI03, CI04, CI06, CI07
 - f. Active Recreation projects AR01, AR02, AR03, AR08.

1.6 DOCUMENTS EXAMINED BY WTP AUSTRALIA PTY LTD (WT)

1.6.1 In preparing this report, I have been provided with, and have examined the following relevant documents:

AUTHOR	DATE(S)	REV NO.	DESCRIPTION
Cardno	11 April 2019	FINAL	Benchmark Infrastructure Report V181544
VPA	June 2022	5	Toolern Precinct Structure Plan (Amended)
Melton City Council	February 2024	-	Toolern Development Contributions Plan Review and Precinct Structure Plan Refresh Planning Report
Cardno	March 2022		Transport Project Review - Report
Cardno	March 2022	D	Transport-Project-Review – Appendix A – Intersection Project Costings.pdf
Cardno	March 2022	D	Transport Project Review – Appendix B - Road Project Costings.pdf
Cardno	March 2022	D	Transport Project Review - Appendix E - Road Cross Sections.pdf
Cardno	March 2022	D	Transport Project Review – Appendix F - Bridge Costings.pdf
Cardno	March 2022		Transport Project Review – Appendix G – Reduced – Int Plans.pdf
Cardno	March 2022		Transport Project Review – Appendix H - Road Plans.pdf
Cardno	March 2022		Transport Project Review – Appendix I – Bridge Designs.pdf
Harwood Andrews	July 2024		Scope requirements as per emails dated 24 July 2024

2. EXECUTIVE SUMMARY

- 2.1.1 This report has been prepared for Melton City Council as an independent review of the Toolern Precinct Structure Plan (PSP) and Development Contributions Plan (DCP) – amendment C232melt. Transport Project costings proposed by the Victorian Planning Authority (VPA) and seeks to identify any differences in scope and estimated costs.
- 2.1.2 VPA’s cost estimates for the Toolern Precinct Structure Plan (PSP) have been prepared by Cardno based on escalated (2021) benchmark costs outlined in VPA Benchmark Infrastructure Report V181544.
- 2.1.3 WT has been specifically instructed to prepare independent cost estimates for the following Transport Infrastructure Projects:
- Intersections - 19 No. (IT01-IT06 inclusive, IT10, IT12, IT13, IT16, IT17, IT18, IT20, IT21, IT22, IT23, IT25, IT28, IT29)
 - Roads – 13 No. (RD02-RD08 inclusive, RD11, RD14-RD17, RD19)
 - Bridges – 10 No. (BD03-BD08 inclusive, BD10, BD14, BD15 and BD16)
- 2.1.4 The following table summarises our independent estimates of these transport projects against the VPA’s project costings:

TOOLERN PSP - TRANSPORT PROJECTS	VPA TOTAL COST 2021 ¹	VPA TOTAL COST 2024 ²	WT TOTAL COST 2024	DIFFERENCE	DIFFERENCE (%)
	A	B	C	(B - C)	
Roads (RD02-RD08, RD11, RD14- RD17, RD19)	\$64,276,729	\$75,931,391	\$101,509,728	(\$25,578,337)	-33%
Intersections (IT01-IT06 inclusive, IT10, IT12, IT13, IT16, IT17, IT18, IT20, IT21, IT22, IT23, IT25, IT28, IT29)	\$122,275,575	\$144,711,443	179,074,775	(\$34,363,332)	-24%
Bridges (BD03-BD08 inclusive, BD10, BD14, BD15 and BD16)	\$61,696,172	\$72,841,363	\$108,354,933	(\$35,513,570)	-49%
TOTAL TRANSPORT PROJECTS	\$248,248,476	\$293,484,197	\$391,397,346	(\$97,913,149)	-33%

¹ VPA Benchmarked costings as per Amendment C232melt. (indexed to 2021)

² VPA Benchmarked costings (2018) indexed to 1 July 2024 based upon VPA indexation factors for FY2024/2025 (indicative only and subject to confirmation)

- 2.1.5 These independent estimates have been prepared using first principles estimating based upon current day rates and benchmarking from our internal database to derive a base case cost estimate.
- 2.1.6 In the absence of any design criteria provided, we have made assumptions as detailed in Section 6 of this report and our detailed cost estimates.
- 2.1.7 WT's overall cost estimate of the transport projects listed is \$391,397,002. This exceeds the VPA's Benchmark costings (indexed to July 2024) of \$293,484,197 by \$97,912,805 or 33%.
- 2.1.8 A detailed breakdown of all our transport projects cost estimates can be found in Appendices A-C.
- 2.1.9 WT has also been specifically instructed to prepare independent cost estimates for the following Community Infrastructure Projects:
- d. Community Projects – CI03, CI04, CI06, CI07
 - e. Active Recreation projects –AR01, AR02, AR03, AR08

2.1.10 The following table summarises our independent estimates of these transport projects against the VPA's project costings:

TOOLERN PSP - COMMUNITY PROJECTS	VPA TOTAL COST 2021 ³ (P90)	VPA TOTAL COST 2024 ⁴ (P90)	WT TOTAL COST 2024	DIFFERENCE	DIFFERENCE (%)
	A	B	C	(A - C)	
Community Projects (CI03, CI04, CI06, CI07)	\$ 33,065,484	\$ 41,662,510	\$ 41,464,000	\$ 198,510	1%
Active Recreation projects (AR01, AR02, AR03, AR08)	\$ 22,782,593	\$ 28,706,068	\$ 37,288,895	(\$8,582,827)	-30%
TOTAL COMMUNITY PROJECTS	\$55,848,077	\$70,368,578	\$78,752,895	(\$8,384,317)	-12%

2.1.11 WT's overall cost estimate of the Community projects is \$78,752,895. This exceeds the VPA's Benchmark costings (indexed to July 2024) of \$70,368,578 by \$8,384,317 or 12%.

2.1.12 A detailed breakdown of our cost estimates can be found in Appendix D.

2.1.13 All costs in this report exclude Goods & Services Tax (GST).

³ VPA Benchmarked costings as per Amendment C232melt.

⁴ VPA Benchmarked costings (2018) indexed to 1 July 2024 based upon VPA indexation factors for FY2024/2025 (indicative only and subject to confirmation)

3. TRANSPORT INFRASTRUCTURE COSTINGS

3.1.1 The table below is a summary comparison of the costs for Toolern Precinct Structure Plan transport projects:

TOOLERN PSP - TRANSPORT PROJECTS	BY VPA TOTAL COST (2021) (A)	BY VPA TOTAL COST (2024) * (B)	BY WT TOTAL COST (2024) (C)	DIFFERENCE (B - C)	DIFFERENCE (%)
RD-02 - Secondary Divided Interim Arterial Road (E-W Arterial)	4,496,855.00	5,321,965.16	6,531,709.00	-1,209,743.84	-23%
RD-03 - Secondary Divided Interim Arterial Road (Exford Road)	1,954,992.00	2,313,705.83	1,689,571.00	624,134.83	27%
RD-04 - Secondary Undivided Interim Arterial Road (Exford Road)	13,092,554.00	15,494,857.81	26,618,080.00	-11,123,222.19	-72%
RD-05 - Secondary Divided Interim Arterial Road (Toolern Road [Exford to Toolern Ck])	641,228.00	758,884.51	6,777,291.00	-6,018,406.49	-793%
RD-06 - Secondary Divided Interim Arterial Road (Toolern Road [Toolern Ck to Ferris])	6,751,787.00	7,990,645.61	10,245,211.00	-2,254,565.39	-28%
RD-07 - Secondary Divided Interim Arterial Road (Toolern Road [Ferris to Mt Cottrell])	5,615,593.00	6,645,976.25	7,032,041.17	-386,064.92	-6%
RD-08 - Secondary Interim Arterial Road (Toolern Road [Mt Cottrell to Paynes])	7,114,863.00	8,420,341.10	10,380,870.00	-1,960,528.90	-23%
RD-11 - Primary Interim Arterial Road (Mt Cottrell Road [UGB to Toolern Rd to Rail])	9,307,858.00	11,015,720.70	3,741,519.00	7,274,201.70	66%
RD-14 - Primary Interim Arterial Road (Shogaki Drive West [Mt Cottrell to Ferris])	5,071,142.00	5,760,883.99	11,208,482.00	-5,447,598.01	-95%
RD-15 - Primary Ultimate Arterial Road (Ferris Road [Western Hwy to Shogaki])	4,731,581.00	5,599,759.63	8,022,599.00	-2,422,839.37	-43%
RD-16 - Secondary Divided Interim Arterial Road (Ferris Road [Shogaki to Rail])	665,655.00	787,792.12	1,015,317.00	-227,524.88	-29%
RD-17 - Secondary Divided Interim Arterial Road (Ferris Road [Rail to Toolern])	Excl	Excl	Excl	Excl	
RD-19 - Primary Interim Arterial Road (Shogaki Drive East [Mt Cottrell to Ferris])	4,832,621.00	5,820,858.34	8,247,038.00	-2,426,179.66	-41%

TOOLERN PSP - TRANSPORT PROJECTS	BY VPA TOTAL COST (2021) (A)	BY VPA TOTAL COST (2024) * (B)	BY WT TOTAL COST (2024) (C)	DIFFERENCE (B - C)	DIFFEREN CE (%)
Subtotal - Road Projects	\$64,276,729	\$75,931,391	\$101,509,728	(\$25,578,337)	-33%
IT-01 - Secondary - Connector Intersection (Rees Road & East-West Arterial Road)	4,832,428.00	5,719,111.19	7,718,759.00	-1,999,647.81	-35%
IT-02 - Secondary - Secondary T-Intersection (Exford Road & East-West Arterial Road)	6,003,029.00	7,104,502.13	10,374,986.00	-3,270,483.87	-46%
IT-03 - Secondary - Secondary T-Intersection (Exford Road & Toolern Road)	8,928,408.00	10,566,647.33	15,945,680.00	-5,379,032.67	-51%
IT-04 - Secondary - Secondary Lane Upgrades (Exford Road & Greigs Road)	2,686,264.00	3,179,155.25	2,709,030.00	470,125.25	15%
IT-05 - Secondary - Secondary Intersection (Ferris Road & Toolern Road)	9,032,022.00	10,689,272.59	12,337,250.00	-1,647,977.41	-15%
IT-06 - Primary - Secondary Intersection (Mt Cottrell Road & Toolern Road)	11,738,409.00	13,892,245.28	17,259,526.00	-3,367,280.72	-24%
IT-10 - Primary - Primary Intersection (Mt Cottrell Road & Shogaki Drive)	7,109,635.00	8,414,153.87	9,732,523.00	-1,318,369.13	-16%
IT-12 - Primary - Connector T-Intersection (Shogaki Drive & Connector Road)	10,179,831.00	12,047,688.26	15,829,389.00	-3,781,700.74	-31%
IT-13 - Primary - Secondary Intersection (Ferris Road, Shogaki Drive & Abey Road)	11,062,998.00	13,092,905.33	15,747,929.00	-2,655,023.67	-20%
IT-16 - Secondary - Connector T-Intersection (Abey Road, Industry Collector Road)	5,190,822.00	6,143,265.19	7,640,201.00	-1,496,935.81	-24%
IT-17 - Secondary - Connector T-Intersection (Abey Road, Bundy Drive)	5,652,281.00	6,689,395.92	8,638,811.00	-1,949,415.08	-29%
IT-18 - Primary- Connector Intersection (Ferris Road, Shakamaker Drive)	7,973,390.00	9,436,397.03	12,216,977.00	-2,780,579.97	-29%
IT-20 - Primary- Connector Intersection (Mt Cottrell Road, South Connector Road)	9,393,854.00	11,117,496.53	10,645,402.00	472,094.53	4%
IT-21 - Primary- Connector Intersection (Toolern Road, Eastern North-South Connector Road)	6,512,388.00	7,707,320.11	8,684,005.00	-976,684.89	-13%

TOOLERN PSP - TRANSPORT PROJECTS	BY VPA TOTAL COST (2021) (A)	BY VPA TOTAL COST (2024) * (B)	BY WT TOTAL COST (2024) (C)	DIFFERENCE (B - C)	DIFFEREN CE (%)
IT-22 - Secondary- Connector Intersection (Toolern Road, Central North-South Connector Road)	5,595,492.00	6,622,186.11	8,520,504.00	-1,898,317.89	-29%
IT-23 - Secondary- Connector T- Intersection (Toolern Road, Western North-South Connector Road)	4,802,624.00	5,683,838.35	7,349,336.00	-1,665,497.65	-29%
IT-25 - Primary- Connector T- Intersection (Mt Cottrell Road, Bridge Road)	983,157.00	1,163,551.34	3,596,615.00	-2,433,063.66	-209%
IT-29- Secondary- Connector Intersection (Ferris Road, South Connector Road)	4,598,543.00	5,442,311.32	6,585,762.34	-1,143,451.02	-21%
Subtotal - Intersection Projects	\$122,275,575	\$144,711,443	\$181,532,685	(\$36,821,242)	-25%
BD03 Bridge: Secondary Arterial 91.5m Long Super T Bridge Interim	15,193,100.91	17,980,825.85	14,579,169.00	3,401,656.86	19%
BD04 Bridge: Pedestrian 30m Long Super T Bridge Interim	1,389,465.62	1,644,413.44	2,028,086.00	-383,672.56	-23%
BD05 Bridge: Pedestrian 30m Long Super T Bridge Interim	1,389,465.62	1,644,413.44	2,028,086.00	-383,672.56	-23%
BD06 Bridge: Pedestrian 30m Long Super T Bridge Interim	1,764,825.48	2,088,646.67	2,965,828.80	-877,182.13	-42%
BD07 Bridge: Pedestrian Underpass Interim	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96	-8%
BD08 Bridge: Pedestrian Underpass Interim	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96	-8%
BD10 Bridge: Pedestrian Underpass Interim	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96	-8%
BD14 Bridge: Pedestrian 30m Long Super T Bridge Interim	1,764,825.48	2,088,646.67	2,965,828.80	-877,182.13	-42%
BD15 Bridge: East Road - 5.9m Clearance; 76.6m Long Box Girder Bridge Interim (approx. 16.5m wide)	15,075,486.13	17,841,630.38	34,413,757.00	-16,572,126.62	-93%
BD16 Bridge: Ferris Road - 5.9m Clearance; 44.8m Long Box Girder Bridge Interim (approx. 25.4m wide)	13,833,440.54	16,371,686.51	35,178,075.00	-18,806,388.49	-115%
Subtotal - Bridge Projects	\$61,696,172	\$72,841,363	\$108,354,933	(\$35,513,570)	-49%
ESTIMATED TOTAL - TRANSPORT PROJECTS	\$248,248,476	\$293,484,197	\$391,397,346	(\$97,913,149)	-33%

- 3.1.2 The above table highlights an overall difference between the Transport Project cost estimates provided by VPA and WTP of **\$97.9M or 33%**.
- 3.1.3 Costs are based upon current day costs (July 2024) and exclude any future cost escalation.
- 3.1.4 To provide comparison between our independent estimates and VPA respective costings, VPA's project cost sheets have been indexed to 1 July 2024 as per the VPA's indexation factor⁵ noted under the Benchmark Infrastructure Costings page found on the VPA website <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2024/07/Benchmark-Costs-Estimates-for-the-2024-2025-Financial-Year-%E2%80%93-1-July-2024.pdf>
- 3.1.5 A summary and detailed breakdown of all our independent cost estimates for Transport Infrastructure projects can be found under Appendices A-C.

3.2 ROADS

- 3.2.1 As indicated in the summary table of transport projects, there is an overall variance of **\$25.6M or 33%** between VPA's road project costings (escalated to July 2024) and WT's independent cost estimates.
- 3.2.2 The VPA project costing sheets provides detailed quantities of the respective items that has allowed for comparison of the scope assumed for the respective road projects.
- 3.2.3 Generally, variances can be categorised as follows:
- Inconsistencies in scope compared to the limit of works identified in the respective plan drawings and the typical cross sections provided.
 - Assumptions for pricing items such as drainage, rock excavation, landscaping and landscape maintenance.
 - Rates applied to measured items, for example benchmark costing rates for pavements are lower than those rates applied by WT.

3.3 INTERSECTIONS

- 3.3.1 As indicated in the summary table of transport projects, there is an overall variance of **\$36.8M or 25%** between VPA's project costings (escalated to July 2024) and WT's independent cost estimates for Intersections.
- 3.3.2 Similarly to Roads, the VPA project costing sheets provides detailed quantities of the respective items that has allowed for comparison of the scope assumed for the respective intersection projects.
- 3.3.3 Generally, variances can be categorised as follows:
- Inconsistencies in scope compared to the limit of works identified in the respective plan drawings and the typical cross sections provided.
 - Assumptions for pricing items such as pavement removal, pavement tie-ins, concrete works, traffic signals, rock excavation, landscaping and landscape maintenance.

⁵ Transport projects indexation factor applied – 1.29

- c. Rates applied to measured items, for example benchmark costing rates for pavements are lower than those rates applied by WT.

3.4 BRIDGES

- 3.4.1 As indicated in the summary table of transport projects, there is an overall variance of **\$35.5M or 49%** between VPA's project costings (escalated to July 2024) and WT's independent cost estimates for Road Bridges.
- 3.4.2 The following bridges are bespoke projects, and the scope and assumptions forming the basis of the cost estimates are specific to each bridge type.
- 3.4.3 The VPA project costing sheets do not provide sufficient breakdown to compare all pricing elements in detail, however, the following comments are included in this report for information, based upon WT's observations.

3.4.4 BRIDGE, BD03

- a. Bridge BD03 is a bespoke bridge design.
- b. Cardno Drawing V191096-CI-DG-2001 Bridge Type BD03, Secondary Arterial 91.5 long Super T bridge – Interim, Rev 2 has been used to develop the independent cost estimate.
- c. WT observes differences in cost allowances for the following items:
 - i. Earthworks – it appears that the scope assumed as part of the VPA costings are significantly higher than those adopted by WT's independent estimates
 - ii. Allowance for construction in an eco-sensitive zone – we understand that BD03 falls within the Toolern Park PSP and is therefore subject to the environmental requirements under the Melbourne Strategic assessment. This is not included for within the VPA costings.

3.4.5 BRIDGE, BD15

- a. Bridge BD15 is a bespoke bridge design comprising steel box girder construction in two spans over a railway line.
- b. Cardno Drawing V191096-CI-DG-2007 Bridge Type BD15 – East Road – Interim, Rev 2 has been used to develop the independent cost estimate.
- c. WT observes significant differences in cost allowances for the following items:
 - iii. Retaining walls, abutments, footings – it is unclear what allowances are included for retaining walls to the approach ramps or deflection walls
 - iv. Structure – Cardno refer to Super T costs rather than steel box girder.
 - v. On structure barriers – Cardno rate suggests inclusion of guardrails only, without allowance for concrete containment barriers or inclusion of anti-throw screens (requirement over rail corridors)
 - vi. Off structure barriers – no cost allowance included in Cardo estimate
 - vii. Rail management - the bridge is to be constructed over an existing rail line and therefore WT's estimate includes provision for costs likely to be incurred when working in the existing rail corridor.

3.4.6 BRIDGE, BD16

- a. Bridge BD16 is a bespoke bridge design comprising single span steel box girder construction over a railway line.
- b. Cardno Drawing V191096-CI-DG-2008 Bridge Type BD16 – Ferris Road – Interim, Rev 2 has been used to develop independent cost estimate.
- c. WT observes significant differences in cost allowances for the following items:
 - i. Retaining walls, abutments, footings – it is unclear what allowances for retaining walls to the approach ramps ether
 - ii. Structure – Cardno refer to Super T costs rather than steel box girder.
 - iii. On structure barriers – Cardno rate reflects guardrails only, without allowance for concrete containment barriers or inclusion anti-throw screens (requirement over rail corridors)
 - iv. Off structure barriers – no cost allowance included in Cardo estimate
 - v. Rail management - the bridge is to be constructed over an existing rail line and therefore WT's estimate includes provision for costs likely to be incurred when working in the existing rail corridor.

3.4.7 Pedestrian Underpass, BD07, BD08 & BD10

- a. BD07, BD08 and BD10 are bespoke projects with no benchmark costing available.
- b. Cardno Drawing V191096-CI-DG-2004 Bridge Type BD07, BD08, BD10 and BD11 – 50m Long Box Culvert – Interim, Rev 2 has been used to develop the independent cost estimate.
- c. The pedestrian underpass traverses under the existing Melton railway line and is comprised of precast box culverts with shared path ramps either side, therefore WT's estimate considers the likely construction methodology to minimise impact to the existing rail assets.
- d. WT observes differences in cost allowances for the following items:
 - i. Retaining walls to shared path ramps.
 - ii. Concrete culvert structure
 - iii. Rail management - the culvert is to be constructed under an existing rail line and therefore WT's estimate includes provision for costs likely to be incurred when working in the existing rail corridor

4. COMMUNITY INFRASTRUCTURE PROJECTS

4.1.1 The table below is a summary comparison of the costs for Toolern Precinct Structure Plan Community projects:

TOOLERN PSP - COMMUNITY PROJECTS	VPA TOTAL COST 2018 ⁶	VPA TOTAL COST 2024 ⁷	WT TOTAL COST 2024	DIFFERENCE	DIFFERENCE (%)
	A	B	C	(B - C)	
CI03 - Community Facilities Level 1	7,605,318	9,582,701.00	9,516,000.00	66,701.00	1%
CI04 - Community Facilities Level 1	7,605,318	9,582,701.00	9,516,000.00	66,701.00	1%
CI06 - Community Facilities Level 2	8,927,424	11,248,554.00	11,216,000.00	32,554.00	0.3%
CI07 - Community Facilities Level 2	8,927,424	11,248,554.00	11,216,000.00	32,554.00	0.3%
Subtotal – Community Facilities	\$ 33,065,484	\$ 41,662,510	\$ 41,464,000	\$ 198,510	0.5%
AR03 - Sporting & Recreational Facilities (5-6 Ha)	8,020,190	10,105,440.00	12,110,000.00	-2,004,560.00	-20%
AR01 - Sporting & Recreational Facilities (8-10 Ha)	10,354,010	13,046,053.00	16,836,270.00	-3,790,217.00	-29%
AR02 - Sporting Pavilions - 1	1,655,681	2,086,158.00	3,036,000.00	-949,842.00	-46%
AR08 - Sporting Pavilions - 2	2,752,712	3,468,417.00	4,680,000.00	-1,211,583.00	-35%
Subtotal – Active Recreation	\$ 22,782,593	\$ 28,706,068	\$ 37,288,895	(\$8,582,827)	-30%
ESTIMATED TOTAL - COMMUNITY PROJECTS	\$55,848,077	\$70,368,578	\$78,752,895	(\$8,384,317)	-12%

⁶ VPA Benchmarked costings (2018)

⁷ VPA Benchmarked costings (2018) indexed to 1 July 2024 based upon VPA indexation factors for FY2024/2025 (indicative only and subject to confirmation)

- 4.1.2 The above table highlights an overall difference between the Community Infrastructure project cost estimates provided by VPA and WTP **of \$8.4M or 12%**.
- 4.1.3 Costs are based upon current day costs (July 2024) and exclude any future cost escalation.
- 4.1.4 To provide comparison between our independent estimates and VPA respective costings, VPA's project cost sheets have been indexed to 1 July 2024 as per the VPA's indexation factor⁸ for FY2025/2026.
- 4.1.5 A summary and detailed breakdown of all our independent cost estimates can be found under Appendix D.

4.2 COMMUNITY INFRASTRUCTURE

- 4.2.1 As indicated in the summary table of Community projects, there is a minimal variance of **\$0.2M or 0.5%** between VPA's road project costings (escalated to July 2024) and WT's independent cost estimates which sits within the acceptable limits of +/- 5%.
- 4.2.2 The VPA project costing sheets provides high level functional area estimates including quantities of the respective items that has allowed for comparison of the scope assumed.
- 4.2.3 The Cardno Benchmark Costings Report also defines the building elements assumed within each functional area.

4.3 ACTIVE RECREATION

- 4.3.1 As indicated in the summary table of Community projects, there is an overall variance of **\$8.5M or 30%** between VPA's project costings (escalated to July 2024) and WT's independent cost estimates for active recreation facilities.
- 4.3.2 The VPA project costing sheets only provides high level area estimates including quantities of the respective items that has allowed for comparison of the scope assumed.
- 4.3.3 Generally, variances are resulting from differences in the high level rates applied throughout. Our independent estimates are based upon composite rates benchmarked from our own in-house data and reflect WT's assumptions.

⁸ Community projects indexation factor applied – 1.26

5. TERMINOLOGY

5.1.1 In this report we have may adopted the following terminology:

- a. **Base cost estimate** means that based on the available information, it is the current best in market estimate of the expected financial cost of delivering the project. It includes the direct costs, the contractor's preliminaries and contractor's overheads and margins.
- b. **"Bottoms Up" Estimating Technique** means the breaking down of an item into its smallest work components e.g. **formwork**, reinforcement and concrete, estimating the cost and duration of each of these components and aggregating these costs into a full rate for the item.
- c. **Construction Costs** means the sum of the Direct Costs, the Indirect Costs and the Contractors Margins.
- d. **Contingency** means a provision for costed project risk in excess of the Base Cost Estimate. There are two types of risk that make up the provision for contingency – Inherent Risk and Contingent Risk.
- e. **Contingent Risk** means the unmeasured items outside of the Base Cost Estimate due to unforeseen circumstances such as weather impacts, industrial issues, safety, planning approval conditions, design development, owner requirements, geotechnical investigations and potential claims from the Contractor.
- f. **Contractors Preliminaries** means the best in market estimate of the expected cost for the contractor's fixed site costs, recurring site costs, profit margin and corporate overheads.
- g. **Direct Costs** mean the best in market estimate of the expected cost for labour, plant items, materials and subcontract works.
- h. **Escalation** means the anticipated variation in price of commodities or services over time as a result of factors such as inflation, market conditions, supply constraints, timeframes etc.
- i. **'First Principles' Estimating Technique** means the most accurate method of estimating an item using the direct costs and durations of the required resources of labour, plant, materials and subcontractors to determine the full rate of the item.
- j. **Indirect Costs** means the best in market estimate of the expected costs for recurring and non-recurring overheads.
- k. **Nominal Cost** means the estimated Total Project Cost adjusted to reflect the effects of escalation.
- l. **Owners Costs** means the best in market estimate of the expected costs for contracted professional staff, investigations, land costs and resumptions, authorities' fees, and owner supplied plant, equipment and materials.
- m. **Project Cost Estimate** means the sum of the Base Cost Estimate, Contingency and Escalation where defined.
- n. **Real Cost** means the estimated Total Project Cost adjusted to remove the effects of escalation.
- o. **Recurring Overheads** means the best in market estimate of the expected costs for site facilities, plant and equipment required for site maintenance, commercial obligations, quality assurance and safety during the execution of the Works.

6. ESTIMATE METHODOLOGY

The methodology that we have assumed in the preparation of the estimates are as follows:

6.1 COST ESTIMATES

- 6.1.1 Identification and review of the appropriate drawing(s) for each respective item as per the information / documentation provided (Section 1.6 refers).
- 6.1.2 Identification and quantification of the various measurable components that make up the cost estimate for each respective item (i.e., area of pavement / bridge deck, length of kerb / pipework, etc.).
- 6.1.3 Where alternate units of measurement have been used in the preparation of our cost estimates or where new items have been added, it has been noted in our detailed comments.
- 6.1.4 Our cost estimates are generally based upon 'first principles' estimating methods based upon current day rates and reflect the 'base case (or 'most likely') cost estimate. These have been benchmarked against rates from current projects of a similar nature within our cost database.
- 6.1.5 Delivery costs and contingency allowances have been included as a percentage consistent with those applied by the VPA.

7. INCLUSIONS & ASSUMPTIONS

The assumptions that we have used in the preparation of the estimates are as follows:

7.1 GENERALLY

- a. Interpretation of design guidelines contained within the Benchmark Costings Report has been accepted.⁹
- b. As the drawings issued represent generic transport projects, the cost estimates assume natural site profiles.
- c. We have included for the relocation existing utility services, when impacted by the new road and intersection infrastructure.

The following specific assumptions have been applied generally across each project:

7.1.1 Earthworks

- a. Earthworks quantities have been calculated across pavement areas, using design and existing levels outlined on long plots, considering various pavement profiles
- b. We have assumed that no soft spots are encountered below new pavements, and no batters are required.

⁹ For detailed information on the design assumptions used by VPA refer to Section 3.4 of the VPA, Cardno Benchmark Infrastructure Report V181544.

- c. We have included an allowance for clearing and grubbing
- d. Existing ground topsoil to be stripped and stockpiled - assumed @ 150 mm thick
- e. Assume 150mm thick Type B fill for sub-base materials below new pavements
- f. Assume 150mm thick capping layer below new pavements
- g. Assumed Type A and Type B filling material for the earth ramps
- h. Allowance for excavation in rippable rock assumed to be 20%

7.1.2 New Pavements

- a. Pavements to bridges - Assume asphalt finishing on concrete deck slab and approach slabs.
- b. Pavement to bridge embankments – assume primary or secondary arterial road pavement profiles
- c. New pavement composition adopted as per Table 3-3 Pavement makeup of the Cardno Benchmark Infrastructure Costing report:

Table 3-3 Pavement makeup

Pavement course	Primary Arterial	Secondary Arterial	Connector Boulevard	Connector Street	Industrial street
Asphalt wearing course	40	40	40	40	40
Asphalt intermediate course	75	60	60	60	75
Asphalt base course	90	75	75	75	90
Prime	10	10	10	10	10
CTCR base	150	150	150	150	150
FCR Base	150	150	N/A	N/A	150
Select sub-base course	200	150	200	200	200
Total Depth (mm)	715	635	535	535	715

7.1.3 Concrete Works

- a. Assume reinforced concrete kerbs to both sides of interim pavements and around grassed medians
- b. Assume RC kerb and channel on both sides of the bridge deck
- c. Traffic islands & medians are assumed to be grassed (not concrete infilled)
- d. Shared user paths / footpaths - assume 150mm thick RC concrete slab on 100mm thick Class 3 FCR RC.
- e. Cycle paths assumed 150mm thick 32Mpa concrete on 100mm thick class 3 crushed rock layer including F72mesh and bike lane markings

7.1.4 Drainage

- a. Assume 300mm diameter RCP CL3 pipe for cross drainage for widths of carriageways
- b. Assume 450mm diameter RCP CL3 pipe for drainage on 1 side of each carriageway
- c. Assume Side Entry Pits at 50m intervals
- d. Assume 30% of Side Entry Pits are Junction Pits
- e. Assume subsoil drainage behind all kerbs

7.1.5 Landscape

- a. Assume tree girth 1.0m as outlined on typical road & intersection section details
- b. Nature strip and central verge to be top soiled 100mm thick with grass seed
- c. Landscaping has been applied to 30% of seeded area on roads only. No landscaping has been included to the intersection works

7.1.6 Street Lighting

- a. Assume 1 No. of single luminaries at 50m intervals road and intersection alignment lengths
- b. Assume 2 No. of single luminaries at 20m intervals along bridge alignment length

7.1.7 Miscellaneous

- a. Assume signage at 500m intervals of total lane length
- b. Assume small signage on posts at 200m intervals of total lane length
- c. Includes allowance for landscape maintenance for both intersections and roads

7.1.8 Roads

- a. Site preparation has been included based upon the overall length of the road x the road reserve width as indicated on the respective section drawing of each road type.
- b. Subgrade preparation has been included as a measured item based upon pavement areas. We note that although total costs of this item are similar, the VPA costings use a different methodology by calculating 20% of the pavement areas multiplied by a higher rate.
- c. Road pavement composition as per Table 3-3 Pavement makeup of the Cardno Benchmark Infrastructure Costing report as noted in Section 5.3.1.
- d. Drainage - The drawings provided for VPA Benchmark Costing Item-02 indicate location of drainage pipes and size.
- e. Tree planting – The drawings provided do not indicate trees therefore quantities have been calculated based upon the spacing of trees indicated on the respective drawing of each road type.
- f. Landscaping has been calculated to the overall site area less paved areas.
- g. Street Lighting – we have applied a different pricing methodology, based upon the number of light poles, calculated at 50m spacing along the length of the road alignment. We have assumed that no lighting is required to Shared User Paths or Cycle Paths.

7.1.9 Intersections

- a. Site preparation has been included to the Ultimate project boundaries shown on the drawings.
- b. Road pavement composition as per Table 3-3 Pavement makeup of the Cardno Benchmark Infrastructure Costing report.
- c. Subgrade preparation has been included as a measured item based upon pavement areas.
- d. Drainage - The drawings provided do not indicate drainage pipes therefore sizing and layouts have been assumed similar to the designs provided for Benchmark Cost items referenced by VPA. Generally, 450mm pipe has been assumed along length of road, with 300mm dia. pipe at 50m spacing typically used as cross drainage. Pits are also assumed at 50m spacing.
- e. Traffic signals have been costed as an item per intersection.
- f. Tree planting – The drawings provided do not indicate trees therefore quantities have been based upon the spacing of trees indicated on the drawing for respective Benchmark Cost items of each project.
- g. Landscaping has been calculated to the overall site area less paved areas.
- h. Street Lighting – our pricing is based upon the number of light poles, as indicated on the respective drawing of each intersection type.

7.1.10 Bridges

- a. Drawings provided have been used as the basis for our measurement. The following general assumptions are reflected in our cost estimates:
 - i. Bored piled footings and pile cap
 - ii. Reinforced concrete piers ramps, and main spans
 - iii. Super T beams to spans nominated on drawings to a maximum of 38m
 - iv. 200 thick RC insitu deck slab
 - v. Lighting - assumed every 20m on both sides
 - vi. Approach slabs - 350mm thick
- b. Specific assumptions have been considered in developing cost estimates for the following bespoke bridge projects as follows:
- c. **BD07 – Pedestrian Underpass (BD08 & BD10 Similar)**
 - i. Site preparation includes for site clearance to culvert area and approach ramps as well as site access
 - ii. Earthworks – 15% rock excavation assumed
 - iii. Culvert construction includes precast units, insitu RC base slab, apron slabs, wing walls, head walls
 - iv. Culvert construction assumed to be open cut either side of rail line with horizontal jacking assumed to length of culvert under rail (approx. 15m)
 - v. Retaining walls to shared pathway ramps – 250mm thick precast panels on piled footings assumed with 1200mm high safety fence
 - vi. Shared pathway ramps & landings – 150mm thick reinforced concrete slab on ground

- vii. Rail management – a 5% allowance for working within the existing rail corridor is included.

d. BD15 – East Road - Road Bridge

- i. Site preparation includes for access track and site clearance to bridge and approach ramps
- ii. Bored piles (insitu RC) - 900mm diameter x 12m long
- iii. Pile caps - 20m long x 2.8m wide x 1m high
- iv. Pier columns - 15m long x 850mm wide x 4600mm high
- v. Deflection walls - 32m long x 600mm wide x 5900mm high on piled footings
- vi. Steel box girder beams
 - a) Span 1, 1400mm deep (1.6tn/m assumed) and,
 - b) Span 2, 950mm deep (1.25tn/m assumed)
- vii. Bridge deck comprising 100mm thick precast planks + 200mm thick RC insitu deck slab
- viii. On structure barriers - RC precast medium containment barrier with railings
- ix. Anti-throw screens to both sides of bridge @ 3m high fixed to on structure barrier
- x. RC precast off structure barriers 50m long assumed to bridge approach ramps
- xi. Guard rail barrier assumed to top of retaining walls
- xii. Earth fill to approach ramps (2 x 20m wide x 140m long)
- xiii. RE walls to approach ramps –140m long x 500mm < 5200mm high
- xiv. Rail management – a 5% allowance for working within or over the existing rail corridor is included.

e. BD16 – Ferris Road - Road Bridge

- i. Site preparation includes for access track and site clearance to bridge and approach ramps
- ii. Bored piles (insitu RC) - 900mm diameter x 12m long
- iii. Pile caps - 32m long x 2.8m wide x 1000mm high
- iv. Pier columns - 15m long x 850mm wide x 4600mm high
- v. Deflection walls - 44m long x 600mm wide x 5900mm high on piled footings
- vi. Steel box girder beam, 1400mm deep (1.6tn/m assumed)
- vii. Bridge deck comprising 100mm thick precast planks + 200mm thick RC insitu deck slab
- viii. On structure barriers - RC precast medium containment barrier with railings
- ix. Anti-throw screens to both sides of bridge @ 3m high fixed to on structure barrier
- x. RC precast off structure barriers 50m long assumed to bridge approach ramps
- xi. Guard rail barrier assumed to top of retaining walls
- xii. Earth Fill to approach ramps (2 x 20m wide x 140m long)
- xiii. RE walls to approach ramps –140m long x 500mm < 5300mm high

- xiv. Rail management – a 5% allowance for working within or over the existing rail corridor is included.

7.2 DELIVERY COSTS

7.2.1 The VPA have set the percentages for delivery costs, and these have been applied in the preparation of the estimates as follows:

- a. Council Fees 3.25% of direct construction costs
- b. VicRoads Fees 1.00% of direct construction costs
- c. Traffic Management 5.00% of direct construction costs
- d. Environmental Management 0.50% of direct construction costs
- e. Surveying and Design 5.00%
- f. Supervision and Project Management 9.00% of direct construction costs
- g. Site Establishment 2.50% of direct construction costs
- h. Contingency 15.00% of direct construction costs (20.00% applied to Bridge projects)

8. SPECIFIC EXCLUSIONS

8.1.1 The estimate excludes the following:

- a. Lighting to footpaths
- b. Contamination removal
- c. Demolition of properties
- d. Relocation of existing services unless noted otherwise
- e. Relocation of overhead HV power transmission towers and cables
- f. Underpinning of adjacent footings
- g. Works outside the site boundary
- h. Adjoining owner issues
- i. Loss of income and associated costs from affected businesses
- j. Early Works (There is no foreseeable early works such as demolition of structures, diversion / protection of services shown in the drawings provided. All utilities management and headworks are excluded).
- k. Street furniture
- l. Non-design consultant fees
- m. Site working hour restrictions
- n. Site access restrictions
- o. Future design impacts
- p. Community stakeholders
- q. Local Council contributions
- r. Any Non-Construction Development Costs
- s. Client Contingency (deemed to include for allowances for Clients unforeseeable risks to other non-construction Development Costs, Owner's Costs, Consultants' fees etc not visible to WT)
- t. Negotiated contracts / construction management
- u. Financing costs
- v. Cost escalation beyond July 2024
- w. Legal costs
- x. GST

9. CONCLUSION

- 9.1.1 WT conclude that costs prepared by VPA for the Toolern PSP Transport Infrastructure projects are low by approx. 33%, and for the Community Infrastructure projects costs are low by approx. 12%, the reasons are detailed in the report.
- 9.1.2 There are many differences relating to quantity or scope, but variances are also driven by differences in pricing.
- 9.1.3 As noted in this report, the independent estimates have been compared to VPA's benchmarked projects cost sheets escalated from 2018 to July 2024 using the VPA's published indexation factors, and the costs referenced by WT are subject to confirmation by VPA.
- 9.1.4 The level of construction activity in Victoria and a strong pipeline of Infrastructure projects continues to apply pressure to the current market. WT's recently updated market analysis suggests that cost pressures in the infrastructure sector are unlikely to ease over the next 12-18 months with factors such as labour / skills shortages and supply chain constraints persisting.
- 9.1.5 Should you require any further assistance in the above matters please do not hesitate to contact Sian McKenna of WTP Australia Pty Ltd (WT).



APPENDIX A

INDEPENDENT TRANSPORT INFRASTRUCTURE COST
ESTIMATES - ROADS

APPENDIX A
PR-025803 - Toolern Creek PSP and DCP

Road Projects Costs Summary

Civil Component No	Description	VPA Total Cost (\$ - 2021)	VPA Total Cost (\$ - 2024)	WT Total Cost (\$ - 2024)	Variance (\$ - 2024)
		A	B	C	B-C
RD-02	RD-02 - Secondary Divided Interim Arterial Road (E-W Arterial, 528m)	4,496,855.00	5,321,965.16	6,531,709.00	-1,209,743.84
RD-03	RD-03 - Secondary Divided Interim Arterial Road (Exford Road, 339m)	1,954,992.00	2,313,705.83	1,689,571.00	624,134.83
RD-04	RD-04 - Secondary Undivided Interim Arterial Road (Exford Road, 1857m)	13,092,554.00	15,494,857.81	26,618,080.00	-11,123,222.19
RD-05	RD-05 - Secondary Divided Interim Arterial Road (Toolern Road [Exford to Toolern Ck], 136m)	641,228.00	758,884.51	6,777,291.00	-6,018,406.49
RD-06	RD-06 - Secondary Divided Interim Arterial Road (Toolern Road [Toolern Ck to Ferris], 1011m)	6,751,787.00	7,990,645.61	10,245,211.00	-2,254,565.39
RD-07	RD-07 - Secondary Divided Interim Arterial Road (Toolern Road [Ferris to Mt Cottrell], 806m)	5,615,593.00	6,645,976.25	7,032,041.17	-386,064.92
RD-08	RD-08 - Secondary Interim Arterial Road (Toolern Road [Mt Cottrell to Paynes], 927m)	7,114,863.00	8,420,341.10	10,380,870.00	-1,960,528.90
RD-11	RD-11 - Primary Interim Arterial Road (Mt Cottrell Road [UGB to Toolern Rd to Rail], 678m)	9,307,858.00	11,015,720.70	3,741,519.00	7,274,201.70
RD-14	RD-14 - Primary Interim Arterial Road (Shogaki Drive West [Mt Cottrell to Ferris], 438m)	5,071,142.00	5,760,883.99	11,208,482.00	-5,447,598.01
RD-15	RD-15 - Primary Ultimate Arterial Road (Ferris Road [Western Hwy to Shogaki], 350m)	4,731,581.00	5,599,759.63	8,022,599.00	-2,422,839.37
RD-16	RD-16 - Secondary Divided Interim Arterial Road (Ferris Road [Shogaki to Rail], 69m)	665,655.00	787,792.12	1,015,317.00	-227,524.88
RD-17	RD-17 - Secondary Divided Interim Arterial Road (Ferris Road [Rail to Toolern], 729m)		Excluded - Project under construction		
RD-19	RD-19 - Primary Interim Arterial Road (Shogaki Drive East [Mt Cottrell to Ferris], 438m)	4,832,621.00	5,820,858.34	8,247,038.00	-2,426,179.66
	Total	64,276,729.00	75,931,391.04	101,509,728.17	-25,578,337.13

Appendix A

Toolern PSP & DCP - Road Projects

RD-02 - Secondary Divided Interim Arterial Road (E-W Arterial, 528m)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	17952	m2	3.68	66,063.36	4.96	89,041.92	114,864.08	17,918	m2	14.21	254,583.00	139,718.92
	Earthworks	6036	m3	34.07	205,646.52	40.52	244,578.72	315,506.55	6,024	m3	32.05	193,047.00	-122,459.55
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	N/A	m2	0.00	N/A	0.00
	Secondary Arterial Pavement	9504	m2	127.01	1,207,103.04	133.78	1,271,445.12	1,640,164.20	9,486	m2	194.46	1,844,645.00	204,480.80
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	N/A	m2	0.00	N/A	0.00
	Subgrade Preparation	1901	m2	14.22	27,032.22	16.16	30,720.16	39,629.01	9,486	m2	6.01	57,005.00	17,375.99
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	N/A	m2	0.00	N/A	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	N/A	m2	0.00	N/A	0.00
Concrete Works	Kerb and Channel	2112	m	54.81	115,758.72	60.90	128,620.80	165,920.83	1,054	m	82.42	86,871.00	-79,049.83
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	N/A	m2	0.00	N/A	0.00
	SUP/ Footpath	3168	m2	63.51	201,199.68	73.63	233,259.84	300,905.19	3,162	m2	187.80	593,819.00	292,913.81
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	N/A	m2	0.00	N/A	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	190	m	528.21	100,359.00	100,359.00
	Drainage Pipe 375mm CR Bfilled	524	m	259.10	135,768.40	282.96	148,271.04	191,269.64	0	m	0.00	0.00	-191,269.64
	Drainage Pipe 450mm CR Bfilled	264	m	299.43	79,049.52	334.33	88,263.12	113,859.42	1,054	m	560.00	590,240.00	476,380.58
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	30	No.	2,565.39	76,961.70	2,806.10	84,183.00	108,596.07	15	No.	4,362.80	65,442.00	-43,154.07
	Drainage - Sub-soil drainage	2112	m	33.88	71,554.56	43.40	91,660.80	118,242.43	1,054	m	94.99	100,122.00	-18,120.43
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	N/A	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	N/A	Item	0.00	N/A	0.00
Landscape	Tree Planting	35	No.	303.34	10,616.90	363.01	12,705.35	16,389.90	27	No.	1,000.00	27,000.00	10,610.10
	Landscaping	5280	m2	21.61	114,100.80	25.16	132,844.80	171,369.79	1,486	m2	30.00	44,586.00	-126,783.79
	Topsoil Seeding	5280	m2	7.21	38,068.80	8.44	44,563.20	57,486.53	4,954	m2	25.00	123,850.00	66,363.47
Street Lighting	Street Lighting - Road	528	m	216.34	114,227.52	225.67	119,153.76	153,708.35	11	No.	18,000.00	198,000.00	44,291.65
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	N/A	Item	0.00	N/A	0.00
Misc.	Regulatory Signage	12	Item	338.43	4,061.16	380.39	4,564.68	5,888.44	1	Item	10,500.00	10,500.00	4,611.56
	Line marking	9504	m2 of Pavement	3.11	29,557.44	4.09	38,871.36	50,144.05	9,486	m2	5.00	47,430.00	-2,714.05
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	N/A	Item	0.00	N/A	0.00
	Landscape maintenance (roads)	5280	m2 of l'scape	2.90	15,312.00	2.96	15,628.80	20,161.15	65	weeks	1,500.00	97,500.00	77,338.85
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	N/A	Item	0.00	N/A	0.00
Other	Rock excavation	1208	m3	100.00	120,800.00	115.00	138,920.00	179,206.80	1,792	m2	100.00	179,200.00	-6.80
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	N/A	m	0.00	N/A	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	N/A	m	0.00	N/A	0.00
	Service proving fee	1	Item	3,000.00	3,000.00	3,450.00	3,450.00	4,450.50	1	Item	10,000.00	10,000.00	5,549.50
very	Council Fees	1.00	%	3.25	85,666.18	3.25	94,924.26	122,452.30	1.00	%	3.25	150,290.00	27,837.70
	VicRoads Fees	1.00	%	1.00	26,358.82	1.00	29,207.46	37,677.63	1.00	%	1.00	46,250.00	8,572.57
	Traffic Management	1.00	%	5.00	131,794.12	5.00	146,037.32	188,388.15	1.00	%	5.00	231,210.00	42,821.85
	Environmental Management	1.00	%	0.50	13,179.41	0.50	14,603.73	18,838.81	1.00	%	0.50	23,130.00	4,291.19

Appendix A

Toolern PSP & DCP - Road Projects

RD-02 - Secondary Divided Interim Arterial Road (E-W Arterial, 528m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Deliv	Surveying and Design	1.00	%	5.00	131,794.12	5.00	146,037.32	188,388.15	1.00	%	5.00	231,210.00	42,821.85
	Supervision and Project management	1.00	%	9.00	237,229.41	9.00	262,867.18	339,098.67	1.00	%	9.00	416,180.00	77,081.33
	Site Establishment	1.00	%	2.50	65,897.06	2.50	73,018.66	94,194.07	1.00	%	2.50	115,610.00	21,415.93
	Contingency	1.00	%	15.00	395,382.35	15.00	438,111.97	565,164.44	1.00	%	15.00	693,630.00	128,465.56
Total - (2018) rates	Excluding Delivery				2,635,882.00		2,920,746.00						
	Including Delivery				3,723,184.00		4,125,554.00						
Total - (2021) rates	Excluding Delivery				2,873,112.00		3,183,614.00						
	Including Delivery				4,058,271.00		4,496,855.00						
Total - (2024) rates	Excluding Delivery							3,767,762.95				4,624,199.00	-856,436.05
	Including Delivery							5,321,965.16				6,531,709.00	-1,209,743.84

Appendix A

Toolern PSP & DCP - Road Projects

RD-03 - Secondary Divided Interim Arterial Road (Exford Road, 339m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	11526	m2	3.68	42,415.68	4.96	57,168.96	73,747.96	4,454	m2	14.21	63,284.00	-10,463.96
	Earthworks	862	m3	34.07	29,368.34	40.52	34,928.24	45,057.43	924	m3	32.05	29,611.00	-15,446.43
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	N/A	m2	0.00	N/A	0.00
	Secondary Arterial Pavement	1356	m2	127.01	172,225.56	133.78	181,405.68	234,013.33	1,454	m2	194.74	283,147.00	49,133.67
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	N/A	m2	0.00	N/A	0.00
	Subgrade Preparation	272	m2	14.22	3,867.84	16.16	4,395.52	5,670.22	1,454	m2	6.01	8,738.00	3,067.78
	Pavement Rehab	2373	m2	51.58	122,399.34	59.32	140,766.36	181,588.60	1,166	m2	75.00	87,450.00	-94,138.60
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	N/A	m2	0.00	N/A	0.00
Concrete Works	Kerb and Channel	1356	m	54.81	74,322.36	60.90	82,580.40	106,528.72	262	m	82.42	21,594.00	-84,934.72
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	N/A	m2	0.00	N/A	0.00
	SUP/ Footpath	1865	m2	63.51	118,446.15	73.63	137,319.95	177,142.74	721	m2	187.80	135,403.00	-41,739.74
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	N/A	m2	0.00	N/A	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	29	m	528.21	15,318.00	15,318.00
	Drainage Pipe 375mm CR Bfilled	326	m	259.10	84,466.60	282.96	92,244.96	118,996.00	0	m	0.00	0.00	-118,996.00
	Drainage Pipe 450mm CR Bfilled	170	m	299.43	50,903.10	334.33	56,836.10	73,318.57	131	m	560.00	73,360.00	41.43
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	18	No.	2,565.39	46,177.02	2,806.10	50,509.80	65,157.64	4	No.	4,359.50	17,438.00	-47,719.64
	Drainage - Sub-soil drainage	1356	m	33.88	45,941.28	43.40	58,850.40	75,917.02	262	m	94.99	24,888.00	-51,029.02
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	N/A	No.	0.00	N/A	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	N/A	Item	0.00	N/A	0.00
Landscape	Tree Planting	22	No.	303.34	6,673.48	363.01	7,986.22	10,302.22	7	No.	1,000.00	7,000.00	-3,302.22
	Landscaping	5933	m2	21.61	128,212.13	25.16	149,274.28	192,563.82	311	m2	29.95	9,315.00	-183,248.82
	Topsoil Seeding	5933	m2	7.21	42,776.93	8.44	50,074.52	64,596.13	1,035	m2	25.00	25,875.00	-38,721.13
Street Lighting	Street Lighting - Road	339	m	216.34	73,339.26	225.67	76,502.13	98,687.75	3	No.	18,000.00	54,000.00	-44,687.75
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	N/A	Item	0.00	N/A	0.00
Misc.	Regulatory Signage	8	Item	338.43	2,707.44	380.39	3,043.12	3,925.62	1	Item	3,500.00	3,500.00	-425.62
	Line marking	1356	m2 of Pavement	3.11	4,217.16	4.09	5,546.04	7,154.39	2,620	m2	5.00	13,100.00	5,945.61
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	N/A	Item	0.00	N/A	0.00
	Landscape maintenance (roads)	5933	m2 of l'scape	2.90	17,205.70	2.96	17,561.68	22,654.57	65	weeks	1,500.00	97,500.00	74,845.43
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	N/A	Item	0.00	N/A	0.00
Other	Rock excavation	173	m3	100.00	17,300.00	115.00	19,895.00	25,664.55	329	m2	100.00	32,900.00	7,235.45
	Telecom/power relocation allowance	25	m	1,300.00	32,500.00	1,495.00	37,375.00	48,213.75	25	m	1,500.00	37,500.00	-10,713.75
	Water/gas relocation allowance	6	m	300.00	1,800.00	345.00	2,070.00	2,670.30	6	m	2,200.00	13,200.00	10,529.70
	Service proving fee	1	Item	3,000.00	3,000.00	3,450.00	3,450.00	4,450.50	1	Item	10,000.00	10,000.00	5,549.50
	Sawcut pavement tie ins, new kerb & channel, etc.	0	m	0.00	0.00	0.00	0.00	0.00	275	m	480.00	132,000.00	132,000.00
	Council Fees	1.00	%	3.25	36,408.62	3.25	41,267.99	53,235.71	1.00	%	3.25	38,880.00	-14,355.71
	VicRoads Fees	1.00	%	1.00	11,202.65	1.00	12,697.84	16,380.22	1.00	%	1.00	11,970.00	-4,410.22
	Traffic Management	1.00	%	5.00	56,013.27	5.00	63,489.22	81,901.09	1.00	%	5.00	59,810.00	-22,091.09

Appendix A

Toolern PSP & DCP - Road Projects

RD-03 - Secondary Divided Interim Arterial Road (Exford Road, 339m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	Environmental Management	1.00	%	0.50	5,601.33	0.50	6,348.92	8,190.11	1.00	%	0.50	5,990.00	-2,200.11
	Surveying and Design	1.00	%	5.00	56,013.27	5.00	63,489.22	81,901.09	1.00	%	5.00	59,810.00	-22,091.09
	Supervision and Project management	1.00	%	9.00	100,823.88	9.00	114,280.59	147,421.96	1.00	%	9.00	107,660.00	-39,761.96
	Site Establishment	1.00	%	2.50	28,006.63	2.50	31,744.61	40,950.55	1.00	%	2.50	29,910.00	-11,040.55
	Contingency	1.00	%	15.00	168,039.81	15.00	190,467.65	245,703.27	1.00	%	15.00	179,420.00	-66,283.27
Total - (2018) rates	Excluding Delivery				1,120,265.00		1,269,784.00						
	Including Delivery				1,582,375.00		1,793,570.00						
Total - (2021) rates	Excluding Delivery				1,221,090.00		1,384,065.00						
	Including Delivery				1,724,790.00		1,954,992.00						
Total - (2024) rates	Excluding Delivery							1,638,021.82				1,196,121.00	441,900.82
	Including Delivery							2,313,705.83				1,689,571.00	624,134.83

Appendix A

Toolern PSP & DCP - Road Projects

RD-04 - Secondary Undivided Interim Arterial Road (Exford Road, 1857m)

Group	Sub Item	VPA Benchmark Costings							WT Total Cost (2024)				
		Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	63138	m2	3.68	232,347.84	4.96	313,164.48	403,982.18	60,520	m2	14.21	859,883.00	455,900.82
	Earthworks	4717	m3	34.07	160,708.19	40.52	191,132.84	246,561.36	12,434	m3	32.05	398,463.00	151,901.64
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	7428	m2	127.01	943,430.28	133.78	993,717.84	1,281,896.01	19,580	m2	194.45	3,807,259.00	2,525,362.99
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	1486	m2	14.22	21,130.92	16.16	24,013.76	30,977.75	19,580	m2	6.01	117,663.00	86,685.25
	Pavement Rehab	12999	m2	51.58	670,488.42	59.32	771,100.68	994,719.88	16,020	m2	75.00	1,201,500.00	206,780.12
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2		0.00	0.00
Concrete Works	Kerb and Channel	7428	m	54.81	407,128.68	60.90	452,365.20	583,551.11	3,560	m	82.42	293,415.00	-290,136.11
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2		0.00	0.00
	SUP/ Footpath	11142	m2	63.51	707,628.42	73.63	820,385.46	1,058,297.24	10,680	m2	187.80	2,005,688.00	947,390.76
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	m2		0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	392	m	528.20	207,056.00	207,056.00
	Drainage Pipe 375mm CR Bfilled	1669	m	259.10	432,437.90	282.96	472,260.24	609,215.71	0	m	0.00	0.00	-609,215.71
	Drainage Pipe 450mm CR Bfilled	929	m	299.43	278,170.47	334.33	310,592.57	400,664.42	1,780	m	560.00	996,800.00	596,135.58
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	111	No.	2,565.39	284,758.29	2,806.10	311,477.10	401,805.46	47	No.	4,356.45	204,753.00	-197,052.46
	Drainage - Sub-soil drainage	7428	m	33.88	251,660.64	43.40	322,375.20	415,864.01	3,560	m	94.99	338,172.00	-77,692.01
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	Item	0.00	0.00	0.00
Landscape	Tree Planting	123	No.	303.34	37,310.82	363.01	44,650.23	57,598.80	89	No.	1,000.00	89,000.00	31,401.20
	Landscaping	31569	m2	21.61	682,206.09	25.16	794,276.04	1,024,616.09	3,952	m2	30.00	118,548.00	-906,068.09
	Topsoil Seeding	31569	m2	7.21	227,612.49	8.44	266,442.36	343,710.64	13,172	m2	25.00	329,300.00	-14,410.64
Street Lighting	Street Lighting - Road	1857	m	216.34	401,743.38	225.67	419,069.19	540,599.26	36	No.	18,000.00	648,000.00	107,400.74
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	Item		0.00	0.00
Misc.	Regulatory Signage	42	Item	338.43	14,214.06	380.39	15,976.38	20,609.53	1	Item	29,000.00	29,000.00	8,390.47
	Line marking	7428	m2 of Pavement	3.11	23,101.08	4.09	30,380.52	39,190.87	35,600	m2	5.00	178,000.00	138,809.13
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	Item		0.00	0.00
	Landscape maintenance (roads)	31569	m2 of l'scape	2.90	91,550.10	2.96	93,444.24	120,543.07	65	weeks	1,500.00	97,500.00	-23,043.07
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	Item		0.00	0.00
Other	Rock excavation	944	m3	100.00	94,400.00	115.00	108,560.00	140,042.40	6,052	m2	100.00	605,200.00	465,157.60
	Telecom/power relocation allowance	587	m	1,300.00	763,100.00	1,495.00	877,565.00	1,132,058.85	587	m	1,500.00	880,500.00	-251,558.85
	Water/gas relocation allowance	1924	m	300.00	577,200.00	345.00	663,780.00	856,276.20	1,924	m	2,200.00	4,232,800.00	3,376,523.80
	Service proving fee	1	Item	20,000.00	20,000.00	23,000.00	23,000.00	29,670.00	1	Item	10,000.00	10,000.00	-19,670.00
	Light pole relocation allowance	4	Item	10,000.00	40,000.00	11,500.00	46,000.00	59,340.00	4	Item	5,000.00	20,000.00	-39,340.00
	Power pole relocation allowance	3	Item	40,000.00	120,000.00	46,000.00	138,000.00	178,020.00	3	Item	5,000.00	15,000.00	-163,020.00
	Sawcut pavement tie ins, new kerb & channel, etc.	0	m	0.00	0.00	0.00	0.00	0.00	2,419	m	480.00	1,161,120.00	1,161,120.00
very	Council Fees	1.00	%	3.25	243,175.66	3.25	276,371.20	356,518.85	1.00	%	3.25	612,460.00	255,941.15
	VicRoads Fees	1.00	%	1.00	74,823.28	1.00	85,037.29	109,698.11	1.00	%	1.00	188,450.00	78,751.89
	Traffic Management	1.00	%	5.00	374,116.40	5.00	425,186.47	548,490.54	1.00	%	5.00	942,240.00	393,749.46
	Environmental Management	1.00	%	0.50	37,411.64	0.50	42,518.65	54,849.05	1.00	%	0.50	94,230.00	39,380.95

Appendix A

Toolern PSP & DCP - Road Projects

RD-04 - Secondary Undivided Interim Arterial Road (Exford Road, 1857m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Detail	Surveying and Design	1.00	%	5.00	374,116.40	5.00	425,186.47	548,490.54	1.00	%	5.00	942,240.00	393,749.46
	Supervision and Project management	1.00	%	9.00	673,409.53	9.00	765,335.64	987,282.98	1.00	%	9.00	1,696,020.00	708,737.02
	Site Establishment	1.00	%	2.50	187,058.20	2.50	212,593.23	274,245.27	1.00	%	2.50	471,120.00	196,874.73
	Contingency	1.00	%	15.00	1,122,349.21	15.00	1,275,559.40	1,645,471.63	1.00	%	15.00	2,826,700.00	1,181,228.37
Total - (2018) rates	Excluding Delivery				7,482,328.00		8,503,729.00						
	Including Delivery				10,568,788.00		12,011,518.00						
Total - (2021) rates	Excluding Delivery				8,155,738.00		9,269,065.00						
	Including Delivery				11,519,980.00		13,092,554.00						
Total - (2024) rates	Excluding Delivery							10,969,810.84				18,844,620.00	-7,874,809.16
	Including Delivery							15,494,857.81				26,618,080.00	-11,123,222.19

Appendix A

Toolern PSP & DCP - Road Projects

RD-05 - Secondary Divided Interim Arterial Road (Toolern Road [Exford to Toolern Ck], 136m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	3230	m2	3.68	11,886.40	4.96	16,020.80	20,666.83	12,256	m2	30.19	370,039.00	349,372.17
	Earthworks	664	m3	34.07	22,622.48	40.52	26,905.28	34,707.81	5,351	m3	32.05	171,480.00	136,772.19
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	1045	m2	127.01	132,725.45	133.78	139,800.10	180,342.13	8,426	m2	194.50	1,638,835.00	1,458,492.87
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	209	m2	14.22	2,971.98	16.16	3,377.44	4,356.90	8,426	m2	6.01	50,635.00	46,278.10
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	380	m	54.81	20,827.80	60.90	23,142.00	29,853.18	1,532	m	82.42	126,267.00	96,413.82
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	570	m2	63.51	36,200.70	73.63	41,969.10	54,140.14	4,596	m2	187.80	863,122.00	808,981.86
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	m2	0.00	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	169	m	528.21	89,267.00	89,267.00
	Drainage Pipe 375mm CR Bfilled	74	m	259.10	19,173.40	282.96	20,939.04	27,011.36	0	m	0.00	0.00	-27,011.36
	Drainage Pipe 450mm CR Bfilled	48	m	299.43	14,372.64	334.33	16,047.84	20,701.71	766	m	560.00	428,960.00	408,258.29
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	3	No.	2,565.39	7,696.17	2,806.10	8,418.30	10,859.61	21	No.	4,357.24	91,502.00	80,642.39
	Drainage - Sub-soil drainage	380	m	33.88	12,874.40	43.40	16,492.00	21,274.68	1,532	m	94.99	145,528.00	124,253.32
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	Item	0.00	0.00	0.00
Landscape	Tree Planting	6	No.	303.34	1,820.04	363.01	2,178.06	2,809.70	154	No.	1,000.00	154,000.00	151,190.30
	Landscaping	1615	m2	21.61	34,900.15	25.16	40,633.40	52,417.09	919	m2	30.01	27,576.00	-24,841.09
	Topsoil Seeding	1615	m2	7.21	11,644.15	8.44	13,630.60	17,583.47	3,064	m2	25.00	76,600.00	59,016.53
Street Lighting	Street Lighting - Road	95	m	216.34	20,552.30	225.67	21,438.65	27,655.86	16	No.	18,000.00	288,000.00	260,344.14
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	Item	0.00	0.00	0.00
Misc.	Regulatory Signage	3	Item	338.43	1,015.29	380.39	1,141.17	1,472.11	1	Item	14,000.00	14,000.00	12,527.89
	Line marking	1045	m2 of Pavement	3.11	3,249.95	4.09	4,274.05	5,513.52	8,426	m2	5.00	42,130.00	36,616.48
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	Item	0.00	0.00	0.00
	Landscape maintenance (roads)	1615	m2 of l'scape	2.90	4,683.50	2.96	4,780.40	6,166.72	65	weeks	1,500.00	97,500.00	91,333.28
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	Item	0.00	0.00	0.00
Other	Rock excavation	133	m3	100.00	13,300.00	115.00	15,295.00	19,730.55	1,226	m2	100.00	122,600.00	102,869.45
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	m	0.00	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	m	0.00	0.00	0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	Item	0.00	0.00	0.00
Delivery	Council Fees	1.00	%	3.25	12,106.80	3.25	13,535.70	17,461.06	1.00	%	3.25	155,940.00	138,478.94
	VicRoads Fees	1.00	%	1.00	3,725.17	1.00	4,164.83	5,372.63	1.00	%	1.00	47,990.00	42,617.37
	Traffic Management	1.00	%	5.00	18,625.84	5.00	20,824.16	26,863.17	1.00	%	5.00	239,910.00	213,046.83
	Environmental Management	1.00	%	0.50	1,862.58	0.50	2,082.42	2,686.32	1.00	%	0.50	24,000.00	21,313.68
	Surveying and Design	1.00	%	5.00	18,625.84	5.00	20,824.16	26,863.17	1.00	%	5.00	239,910.00	213,046.83

Appendix A

Toolern PSP & DCP - Road Projects

RD-05 - Secondary Divided Interim Arterial Road (Toolern Road [Exford to Toolern Ck], 136m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Supervision and Project management	1.00	%	9.00	33,526.51	9.00	37,483.49	48,353.70	1.00	%	9.00	431,830.00	383,476.30
	Site Establishment	1.00	%	2.50	9,312.92	2.50	10,412.08	13,431.58	1.00	%	2.50	119,960.00	106,528.42
	Contingency	1.00	%	15.00	55,877.52	15.00	62,472.48	80,589.51	1.00	%	15.00	719,710.00	639,120.49
Total - (2018) rates	Excluding Delivery				372,517.00		416,483.00						
	Including Delivery				526,180.00		588,283.00						
Total - (2021) rates	Excluding Delivery				406,044.00		453,967.00						
	Including Delivery				573,537.00		641,228.00						
Total - (2024) rates	Excluding Delivery							537,263.37				4,798,041.00	-4,260,777.63
	Including Delivery							758,884.51				6,777,291.00	-6,018,406.49

Appendix A

Toolern PSP & DCP - Road Projects

RD-06 - Secondary Divided Interim Arterial Road (Toolern Road [Toolern Ck to Ferris], 1011m)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	32980	m2	3.68	121,366.40	4.96	163,580.80	211,019.23	38,862	m2	14.21	552,161.00	341,141.77
	Earthworks	6776	m3	34.07	230,858.32	40.52	274,563.52	354,186.94	7,984	m3	32.05	255,858.00	-98,328.94
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	10670	m2	127.01	1,355,196.70	133.78	1,427,432.60	1,841,388.05	12,573	m2	194.47	2,445,102.00	603,713.95
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	2134	m2	14.22	30,345.48	16.16	34,485.44	44,486.22	12,573	m2	6.01	75,556.00	31,069.78
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	3880	m	54.81	212,662.80	60.90	236,292.00	304,816.68	2,286	m	82.42	188,412.00	-116,404.68
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	5820	m2	63.51	369,628.20	73.63	428,526.60	552,799.31	6,858	m2	187.80	1,287,922.00	735,122.69
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	m2	0.00	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	252	m	528.21	133,108.00	133,108.00
	Drainage Pipe 375mm CR Bfilled	979	m	259.10	253,658.90	282.96	277,017.84	357,353.01	0	m	0.00	0.00	-357,353.01
	Drainage Pipe 450mm CR Bfilled	485	m	299.43	145,223.55	334.33	162,150.05	209,173.56	1,143	m	560.00	640,080.00	430,906.44
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	57	No.	2,565.39	146,227.23	2,806.10	159,947.70	206,332.53	30	No.	4,356.30	130,689.00	-75,643.53
	Drainage - Sub-soil drainage	3880	m	33.88	131,454.40	43.40	168,392.00	217,225.68	2,286	m	94.99	217,152.00	-73.68
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	Item	0.00	0.00	0.00
Landscape	Tree Planting	64	No.	303.34	19,413.76	363.01	23,232.64	29,970.11	58	No.	1,000.00	58,000.00	28,029.89
	Landscaping	16490	m2	21.61	356,348.90	25.16	414,888.40	535,206.04	2,538	m2	30.00	76,131.00	-459,075.04
	Topsoil Seeding	16490	m2	7.21	118,892.90	8.44	139,175.60	179,536.52	8,459	m2	25.00	211,475.00	31,938.48
Street Lighting	Street Lighting - Road	970	m	216.34	209,849.80	225.67	218,899.90	282,380.87	23	No.	18,000.00	414,000.00	131,619.13
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	Item	0.00	0.00	0.00
Misc.	Regulatory Signage	22	Item	338.43	7,445.46	380.39	8,368.58	10,795.47	1	Item	18,500.00	18,500.00	7,704.53
	Line marking	10670	m2 of Pavement	3.11	33,183.70	4.09	43,640.30	56,295.99	12,573	m2	5.00	62,865.00	6,569.01
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	Item	0.00	0.00	0.00
	Landscape maintenance (roads)	16490	m2 of l'scape	2.90	47,821.00	2.96	48,810.40	62,965.42	65	weeks	1,500.00	97,500.00	34,534.58
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	Item	0.00	0.00	0.00
Other	Rock excavation	1356	m3	100.00	135,600.00	115.00	155,940.00	201,162.60	3,887	m2	100.00	388,700.00	187,537.40
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	m	0.00	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	m	0.00	0.00	0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	Item	0.00	0.00	0.00
Delivery	Council Fees	1.00	%	3.25	127,568.27	3.25	142,523.69	183,855.56	1.00	%	3.25	235,730.00	51,874.44
	VicRoads Fees	1.00	%	1.00	39,251.78	1.00	43,853.44	56,570.94	1.00	%	1.00	72,540.00	15,969.06
	Traffic Management	1.00	%	5.00	196,258.88	5.00	219,267.22	282,854.71	1.00	%	5.00	362,670.00	79,815.29
	Environmental Management	1.00	%	0.50	19,625.89	0.50	21,926.72	28,285.47	1.00	%	0.50	36,270.00	7,984.53
	Surveying and Design	1.00	%	5.00	196,258.88	5.00	219,267.22	282,854.71	1.00	%	5.00	362,670.00	79,815.29

Appendix A

Toolern PSP & DCP - Road Projects

RD-06 - Secondary Divided Interim Arterial Road (Toolern Road [Toolern Ck to Ferris], 1011m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Supervision and Project management	1.00	%	9.00	353,265.98	9.00	394,680.99	509,138.48	1.00	%	9.00	652,790.00	143,651.52
	Site Establishment	1.00	%	2.50	98,129.44	2.50	109,633.61	141,427.36	1.00	%	2.50	181,340.00	39,912.64
	Contingency	1.00	%	15.00	588,776.63	15.00	657,801.66	848,564.14	1.00	%	15.00	1,087,990.00	239,425.86
Total - (2018) rates	Excluding Delivery				3,925,178.00		4,385,344.00						
	Including Delivery				5,544,313.00		6,194,299.00						
Total - (2021) rates	Excluding Delivery				4,278,444.00		4,780,026.00						
	Including Delivery				6,043,302.00		6,751,787.00						
Total - (2024) rates	Excluding Delivery							5,657,094.24				7,253,211.00	-1,596,116.76
	Including Delivery							7,990,645.61				10,245,211.00	-2,254,565.39

Appendix A

Toolern PSP & DCP - Road Projects

RD-07 - Secondary Divided Interim Arterial Road (Toolern Road [Ferris to Mt Cottrell], 806m)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	27404	m2	3.68	100,846.72	4.96	135,923.84	175,341.75	26,452	m2	14.21	375,836.00	200,494.25
	Earthworks	5630	m3	34.07	191,814.10	40.52	228,127.60	294,284.60	5,435	m3	32.05	174,172.00	-120,112.60
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	8866	m2	127.01	1,126,070.66	133.78	1,186,093.48	1,530,060.59	8,558	m2	194.48	1,664,402.00	134,341.41
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	1774	m2	14.22	25,226.28	16.16	28,667.84	36,981.51	8,558	m2	6.01	51,428.00	14,446.49
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	3224	m	54.81	176,707.44	60.90	196,341.60	253,280.66	1,556	m	82.42	128,246.00	-125,034.66
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	4836	m2	63.51	307,134.36	73.63	356,074.68	459,336.34	4,668	m2	187.80	876,643.00	417,306.66
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	m2	0.00	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	172	m	528.20	90,851.00	90,851.00
	Drainage Pipe 375mm CR Bfilled	819	m	259.10	212,202.90	282.96	231,744.24	298,950.07	0	m	0.00	0.00	-298,950.07
	Drainage Pipe 450mm CR Bfilled	403	m	299.43	120,670.29	334.33	134,734.99	173,808.14	778	m	560.00	435,680.00	261,871.86
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	48	No.	2,565.39	123,138.72	2,806.10	134,692.80	173,753.71	21	No.	4,357.24	91,502.00	-82,251.71
	Drainage - Sub-soil drainage	3224	m	33.88	109,229.12	43.40	139,921.60	180,498.86	1,556	m	94.99	147,808.00	-32,690.86
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	Item	0.00	0.00	0.00
Landscape	Tree Planting	53	No.	303.34	16,077.02	363.01	19,239.53	24,818.99	39	No.	1,000.00	39,000.00	14,181.01
	Landscaping	13702	m2	21.61	296,100.22	25.16	344,742.32	444,717.59	1,727	m2	30.01	51,822.00	-392,895.59
	Topsoil Seeding	13702	m2	7.21	98,791.42	8.44	115,644.88	149,181.90	5,758	m2	25.00	143,950.00	-5,231.90
Street Lighting	Street Lighting - Road	806	m	216.34	174,370.04	225.67	181,890.02	234,638.13	16	No.	18,000.00	288,000.00	53,361.87
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	Item	0.00	0.00	0.00
Misc.	Regulatory Signage	19	Item	338.43	6,430.17	380.39	7,227.41	9,323.36	1	Item	14,000.00	14,000.00	4,676.64
	Line marking	8866	m2 of Pavement	3.11	27,573.26	4.09	36,261.94	46,777.90	8,558	m2	5.00	42,790.00	-3,987.90
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	Item	0.00	0.00	0.00
	Landscape maintenance (roads)	13702	m2 of l'scape	2.90	39,735.80	2.96	40,557.92	52,319.72	65	weeks	1,500.00	97,500.00	45,180.28
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	Item	0.00	0.00	0.00
Other	Rock excavation	1126	m3	100.00	112,600.00	115.00	129,490.00	167,042.10	2,646	m2	100.00	264,600.00	97,557.90
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	0.00	0.00	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	0.00	0.00	0.00	0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	0.00	0.00	0.00	0.00
Delivery	Council Fees	1.00	%	3.25	106,103.35	3.25	118,539.74	152,916.27	1.00	%	3.25	161,800.00	8,883.73
	VicRoads Fees	1.00	%	1.00	32,647.19	1.00	36,473.77	47,051.16	1.00	%	1.00	49,782.30	2,731.14
	Traffic Management	1.00	%	5.00	163,235.93	5.00	182,368.83	235,255.80	1.00	%	5.00	248,911.50	13,655.70
	Environmental Management	1.00	%	0.50	16,323.59	0.50	18,236.88	23,525.58	1.00	%	0.50	24,891.15	1,365.57
	Surveying and Design	1.00	%	5.00	163,235.93	5.00	182,368.83	235,255.80	1.00	%	5.00	248,911.50	13,655.70
	Supervision and Project management	1.00	%	9.00	293,824.67	9.00	328,263.90	423,460.43	1.00	%	9.00	448,040.70	24,580.27

Appendix A

Toolern PSP & DCP - Road Projects

RD-07 - Secondary Divided Interim Arterial Road (Toolern Road [Ferris to Mt Cottrell], 806m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Site Establishment	1.00	%	2.50	81,617.96	2.50	91,184.42	117,627.90	1.00	%	2.50	124,455.75	6,827.85
	Contingency	1.00	%	15.00	489,707.78	15.00	547,106.50	705,767.39	1.00	%	15.00	747,018.27	41,250.88
Total - (2018) rates	Excluding Delivery				3,264,719.00		3,647,377.00						
	Including Delivery				4,611,415.00		5,151,920.00						
Total - (2021) rates	Excluding Delivery				3,558,544.00		3,975,641.00						
	Including Delivery				5,026,443.00		5,615,593.00						
Total - (2024) rates	Excluding Delivery							4,705,115.93				4,978,230.00	-273,114.07
	Including Delivery							6,645,976.25				7,032,041.17	-386,064.92

Appendix A

Toolern PSP & DCP - Road Projects

RD-08 - Secondary Interim Arterial Road (Toolern Road [Mt Cottrell to Paynes], 927m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	31518	m2	3.68	115,986.24	4.96	156,329.28	201,664.77	39,735	m2	14.21	564,564.00	362,899.23
	Earthworks	6476	m3	34.07	220,637.32	40.52	262,407.52	338,505.70	6,168	m3	32.05	197,661.00	-140,844.70
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	9,713	m2	209.66	2,036,426.00	2,036,426.00
	Secondary Arterial Pavement	10197	m2	127.01	1,295,120.97	133.78	1,364,154.66	1,759,759.51	0	NA	NA	0.00	-1,759,759.51
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	2040	m2	14.22	29,008.80	16.16	32,966.40	42,526.66	9,713	m2	6.01	58,369.00	15,842.34
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	3708	m	54.81	203,235.48	60.90	225,817.20	291,304.19	1,766	m	82.42	145,554.00	-145,750.19
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	NA	NA	0.00	0.00
	SUP/ Footpath	5562	m2	63.51	353,242.62	73.63	409,530.06	528,293.78	5,298	m2	187.80	994,956.00	466,662.22
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	795	m	528.21	419,923.00	419,923.00
	Drainage Pipe 375mm CR Bfilled	981	m	259.10	254,177.10	282.96	277,583.76	358,083.05	0	NA	NA	0.00	-358,083.05
	Drainage Pipe 450mm CR Bfilled	927	m	299.43	277,571.61	334.33	309,923.91	399,801.84	883	m	560.00	494,480.00	94,678.16
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	148	No.	2,565.39	379,677.72	2,806.10	415,302.80	535,740.61	24	No	4,359.58	104,630.00	-431,110.61
	Drainage - Sub-soil drainage	3708	m	33.88	125,627.04	43.40	160,927.20	207,596.09	1,766	m	94.99	167,756.00	-39,840.09
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	61	No.	303.34	18,503.74	363.01	22,143.61	28,565.26	45	No	1,000.00	45,000.00	16,434.74
	Landscaping	15759	m2	21.61	340,551.99	25.16	396,496.44	511,480.41	7,417	m2	30.00	222,516.00	-288,964.41
	Topsoil Seeding	15759	m2	7.21	113,622.39	8.44	133,005.96	171,577.69	24,724	m2	25.00	618,100.00	446,522.31
Street Lighting	Street Lighting - Road	927	m	216.34	200,547.18	225.67	209,196.09	269,862.96	18	No	18,000.00	324,000.00	54,137.04
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	21	Item	338.43	7,107.03	380.39	7,988.19	10,304.77	1	item	14,500.00	14,500.00	4,195.23
	Line marking	10197	m2 of Pavement	3.11	31,712.67	4.09	41,705.73	53,800.39	9,713	m2	5.00	48,565.00	-5,235.39
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	NA	NA	0.00	0.00
	Landscape maintenance (roads)	15759	m2 of l'scape	2.90	45,701.10	2.96	46,646.64	60,174.17	65	weeks	1,500.00	97,500.00	37,325.83
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	NA	NA	0.00	0.00
Other	Rock excavation	1296	m3	100.00	129,600.00	115.00	149,040.00	192,261.60	3,974	m3	100.00	397,400.00	205,138.40
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00					0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00					0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00					0.00
	Tree Vegetation removal								39,735	m2	10.00	397,350.00	397,350.00
	Council Fees	1.00	%	3.25	134,603.01	3.25	150,187.88	193,742.36	1.00	%	3.25	238,860.00	45,117.64

Appendix A

Toolern PSP & DCP - Road Projects

RD-08 - Secondary Interim Arterial Road (Toolern Road [Mt Cottrell to Paynes], 927m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	VicRoads Fees	1.00	%	1.00	41,416.31	1.00	46,211.65	59,613.03	1.00	%	1.00	73,500.00	13,886.97
	Traffic Management	1.00	%	5.00	207,081.55	5.00	231,058.27	298,065.17	1.00	%	5.00	367,470.00	69,404.83
	Environmental Management	1.00	%	0.50	20,708.16	0.50	23,105.83	29,806.52	1.00	%	0.50	36,750.00	6,943.48
	Surveying and Design	1.00	%	5.00	207,081.55	5.00	231,058.27	298,065.17	1.00	%	5.00	367,470.00	69,404.83
	Supervision and Project management	1.00	%	9.00	372,746.79	9.00	415,904.89	536,517.31	1.00	%	9.00	661,440.00	124,922.69
	Site Establishment	1.00	%	2.50	103,540.78	2.50	115,529.14	149,032.59	1.00	%	2.50	183,740.00	34,707.41
	Contingency	1.00	%	15.00	621,244.65	15.00	693,174.82	894,195.51	1.00	%	15.00	1,102,390.00	208,194.49
Total - (2018) rates	Excluding Delivery				4,141,631.00		4,621,165.00						
	Including Delivery				5,850,054.00		6,527,396.00						
Total - (2021) rates	Excluding Delivery				4,514,378.00		5,037,071.00						
	Including Delivery				6,376,559.00		7,114,863.00						
Total - (2024) rates	Excluding Delivery							5,961,303.43				7,349,250.00	-1,387,946.57
	Including Delivery							8,420,341.10				10,380,870.00	-1,960,528.90

Appendix A

Toolern PSP & DCP - Road Projects

RD-11 - Primary Interim Arterial Road (Mt Cottrell Road [UGB to Toolern Rd to Rail], 678m)

Group	Sub Item	VPA Benchmark Costings							WT Total Cost (2024)				
		Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	35998	m2	3.68	132,472.64	4.96	178,550.08	230,329.60	8,815	m2	14.21	125,246.00	-105,083.60
	Earthworks	8789	m3	34.07	299,441.23	40.52	356,130.28	459,408.06	2,153	m3	32.05	68,996.00	-390,412.06
Road Pavement	Primary Arterial Pavement	12292	m2	169.62	2,084,969.04	186.26	2,289,507.92	2,953,465.22	3,010	m2	209.80	631,484.00	-2,321,981.22
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	2459	m2	14.22	34,966.98	16.16	39,737.44	51,261.30	3,010	No	6.01	18,088.00	-33,173.30
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	3512	m	54.81	192,492.72	60.90	213,880.80	275,906.23	860	m	82.42	70,881.00	-205,025.23
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	1,290	m2	261.30	337,075.00	337,075.00
	SUP/ Footpath	6585	m2	63.51	418,213.35	73.63	484,853.55	625,461.08	323	m2	187.80	60,659.00	-564,802.08
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	61	m	528.20	32,220.00	32,220.00
	Drainage Pipe 375mm CR Bfilled	929	m	259.10	240,703.90	282.96	262,869.84	339,102.09	0	NA	NA	0.00	-339,102.09
	Drainage Pipe 450mm CR Bfilled	878	m	299.43	262,899.54	334.33	293,541.74	378,668.84	430	m	560.00	240,800.00	-137,868.84
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	140	No.	2,565.39	359,154.60	2,806.10	392,854.00	506,781.66	12	No	4,359.58	52,315.00	-454,466.66
	Drainage - Sub-soil drainage	3512	m	33.88	118,986.56	43.40	152,420.80	196,622.83	860	m	94.99	81,693.00	-114,929.83
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	58	No.	303.34	17,593.72	363.01	21,054.58	27,160.41	11	No	1,000.00	11,000.00	-16,160.41
	Landscaping	17121	m2	21.61	369,984.81	25.16	430,764.36	555,686.02	1,258	m2	30.00	37,737.00	-517,949.02
	Topsoil Seeding	17121	m2	7.21	123,442.41	8.44	144,501.24	186,406.60	4,193	m2	25.00	104,825.00	-81,581.60
Street Lighting	Street Lighting - Road	878	m	216.34	189,946.52	225.67	198,138.26	255,598.36	9	no	18,000.00	162,000.00	-93,598.36
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	20	Item	338.43	6,768.60	380.39	7,607.80	9,814.06	1	Item	4,000.00	4,000.00	-5,814.06
	Line marking	12292	m2 of Pavement	3.11	38,228.12	4.09	50,274.28	64,853.82	3,010	m2	5.00	15,050.00	-49,803.82
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	NA	NA	0.00	0.00
	Landscape maintenance (roads)	17121	m2 of l'scape	2.90	49,650.90	2.96	50,678.16	65,374.83	65	weeks	1,500.00	97,500.00	32,125.17
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	NA	NA	0.00	0.00
Other	Rock excavation	1758	m3	100.00	175,800.00	115.00	202,170.00	260,799.30	882	m3	100.00	88,200.00	-172,599.30
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	NA	NA	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	NA	NA	0.00	0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	NA	NA	0.00	0.00
	Power pole relocation allowance	6	Item	40,000.00	240,000.00	46,000.00	276,000.00	356,040.00	6	no	5,000.00	30,000.00	-326,040.00
	Dirt/Gravel Road removal								2,614	m2	25.00	65,350.00	65,350.00
	Electrical overhead relocation								215	m	1,210.00	260,150.00	260,150.00
	Tree/vegetation removal								5,356	m2	10.00	53,560.00	53,560.00
Delivery	Council Fees	1.00	%	3.25	174,060.76	3.25	196,479.89	253,459.06	1.00	%	3.25	86,090.00	-167,369.06
	VicRoads Fees	1.00	%	1.00	53,557.16	1.00	60,455.35	77,987.40	1.00	%	1.00	26,490.00	-51,497.40
	Traffic Management	1.00	%	5.00	267,785.78	5.00	302,276.76	389,937.02	1.00	%	5.00	132,450.00	-257,487.02
	Environmental Management	1.00	%	0.50	26,778.58	0.50	30,227.68	38,993.70	1.00	%	0.50	13,250.00	-25,743.70
	Surveying and Design	1.00	%	5.00	267,785.78	5.00	302,276.76	389,937.02	1.00	%	5.00	132,450.00	-257,487.02
	Supervision and Project management	1.00	%	9.00	482,014.41	9.00	544,098.16	701,886.63	1.00	%	9.00	238,400.00	-463,486.63
	Site Establishment	1.00	%	2.50	133,892.89	2.50	151,138.38	194,968.51	1.00	%	2.50	66,230.00	-128,738.51
	Contingency	1.00	%	15.00	803,357.35	15.00	906,830.27	1,169,811.05	1.00	%	15.00	397,330.00	-772,481.05

Appendix A

Toolern PSP & DCP - Road Projects

RD-11 - Primary Interim Arterial Road (Mt Cottrell Road [UGB to Toolern Rd to Rail], 678m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Total - (2018) rates	Excluding Delivery				5,355,716.00		6,045,535.00						
	Including Delivery				7,564,948.00		8,539,318.00						
Total - (2021) rates	Excluding Delivery				5,837,731.00		6,589,634.00						
	Including Delivery				8,245,795.00		9,307,858.00						
Total - (2024) rates	Excluding Delivery							7,798,740.32				2,648,829.00	5,149,911.32
	Including Delivery							11,015,720.70				3,741,519.00	7,274,201.70

Appendix A

Toolern PSP & DCP - Road Projects

RD-14 - Primary Interim Arterial Road (Shogaki Drive West [Mt Cottrell to Ferris], 438m)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	19710	m2	3.68	72,532.80	4.96	97,761.60	126,112.46	19,665	m2	14.21	279,405.00	153,292.54
	Earthworks	2193	m3	34.07	74,715.51	40.52	88,860.36	114,629.86	4,375	m3	32.05	140,202.00	25,572.14
Road Pavement	Primary Arterial Pavement	3066	m2	169.62	520,054.92	186.26	571,073.16	736,684.38	6,118	m2	209.73	1,283,146.00	546,461.62
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	614	m2	14.22	8,731.08	16.16	9,922.24	12,799.69	6,118	m2	6.01	36,765.00	23,965.31
	Pavement Rehab	3066	m2	51.58	158,144.28	59.32	181,875.12	234,618.90	393	m2	75.00	29,475.00	-205,143.90
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1752	m	54.81	96,027.12	60.90	106,696.80	137,638.87	1,748	m	82.42	144,070.00	6,431.13
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	2,622	m2	261.30	685,125.00	685,125.00
	SUP/ Footpath	3942	m2	63.51	250,356.42	73.63	290,249.46	374,421.80	2,185	m2	187.80	410,340.00	35,918.20
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	123	m	528.20	64,969.00	64,969.00
	Drainage Pipe 375mm CR Bfilled	462	m	259.10	119,704.20	282.96	130,727.52	168,638.50	0	NA	NA	0.00	-168,638.50
	Drainage Pipe 450mm CR Bfilled	438	m	299.43	131,150.34	334.33	146,436.54	188,903.14	874	m	560.00	489,440.00	300,536.86
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	68	No.	2,565.39	174,446.52	2,806.10	190,814.80	246,151.09	24	No	4,359.58	104,630.00	-141,521.09
	Drainage - Sub-soil drainage	1752	m	33.88	59,357.76	43.40	76,036.80	98,087.47	1,748	m	94.99	166,046.00	67,958.53
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	29	No.	303.34	8,796.86	363.01	10,527.29	13,580.20	22	No	1,000.00	22,000.00	8,419.80
	Landscaping	9636	m2	21.61	208,233.96	25.16	242,441.76	312,749.87	2,360	m2	30.00	70,794.00	-241,955.87
	Topsoil Seeding	9636	m2	7.21	69,475.56	8.44	81,327.84	104,912.91	7,866	m2	25.00	196,650.00	91,737.09
Street Lighting	Street Lighting - Road	438	m	216.34	94,756.92	225.67	98,843.46	127,508.06	0	NA	NA	0.00	-127,508.06
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	10	Item	338.43	3,384.30	380.39	3,803.90	4,907.03	1	item	7,500.00	7,500.00	2,592.97
	Line marking	3066	m2 of Pavement	3.11	9,535.26	4.09	12,539.94	16,176.52	6,511	m2	5.00	32,555.00	16,378.48
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	NA	NA	0.00	0.00
	Landscape maintenance (roads)	9636	m2 of l'scape	2.90	27,944.40	2.96	28,522.56	36,794.10	65	weeks	1,500.00	97,500.00	60,705.90
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	NA	NA	0.00	0.00
Other	Rock excavation	439	m3	100.00	43,900.00	115.00	50,485.00	65,125.65	1,967	m3	100.00	196,700.00	131,574.35
	Telecom/power relocation allowance	383	m	1,300.00	497,900.00	1,495.00	572,585.00	738,634.65	383	m	1,500.00	574,500.00	-164,134.65
	Water/gas relocation allowance	876	m	300.00	262,800.00	345.00	302,220.00	389,863.80	876	m	2,200.00	1,927,200.00	1,537,336.20
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	NA	NA	0.00	0.00
	Street Light Relocation								15	No	5,000.00	75,000.00	75,000.00
	Electrical overhead relocation								355	m	1,210.00	429,550.00	429,550.00
	Tree/vegetation removal								18,937	m2	10.00	189,370.00	189,370.00
	Concrete/footpath removal								335	m2	50.00	16,750.00	16,750.00
	Sawcut pavement tie ins, new kerb & channel, etc.								172	m	480.00	82,560.00	82,560.00
Pavement removal								3,659	m2	50.00	182,950.00	182,950.00	
Delivery	Council Fees	1.00	%	3.25	93,988.32	3.25	107,046.91	138,090.52	1.00	%	3.25	257,900.00	119,809.48
	VicRoads Fees	1.00	%	1.00	28,919.48	1.00	32,937.51	42,489.39	1.00	%	1.00	79,360.00	36,870.61
	Traffic Management	1.00	%	5.00	144,597.41	5.00	164,687.56	212,446.95	1.00	%	5.00	396,760.00	184,313.05
	Environmental Management	1.00	%	0.50	14,459.74	0.50	16,468.76	21,244.69	1.00	%	0.50	39,680.00	18,435.31
	Surveying and Design	1.00	%	5.00	144,597.41	5.00	164,687.56	212,446.95	1.00	%	5.00	396,760.00	184,313.05
	Supervision and Project management	1.00	%	1.00	260,275.34	9.00	296,437.60	382,404.51	1.00	%	9.00	714,170.00	331,765.49
	Site Establishment	1.00	%	1.00	72,298.71	2.50	82,343.78	106,223.47	1.00	%	2.50	198,380.00	92,156.53
	Contingency	1.00	%	1.00	433,792.23	15.00	494,062.67	637,340.85	1.00	%	15.00	1,190,280.00	552,939.15

Appendix A

Toolern PSP & DCP - Road Projects

RD-14 - Primary Interim Arterial Road (Shogaki Drive West [Mt Cottrell to Ferris], 438m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Total - (2018) rates	Excluding Delivery				2,891,948.00		3,293,751.00						
	Including Delivery				4,084,877.00		4,652,423.00						
Total - (2021) rates	Excluding Delivery				3,152,224.00		3,590,189.00						
	Including Delivery				4,452,516.00		5,071,142.00						
Total - (2024) rates	Excluding Delivery							4,008,196.66				7,935,192.00	-3,926,995.34
	Including Delivery							5,760,883.99				11,208,482.00	-5,447,598.01

Appendix A

Toolern PSP & DCP - Road Projects

RD-15 - Primary Ultimate Arterial Road (Ferris Road [Western Hwy to Shogaki], 350m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemeworks/ Earthworks	Site Preparation	14630	m2	3.68	53,838.40	4.96	72,564.80	93,608.59	14,484	m2	14.21	205,792.00	112,183.41
	Earthworks	3504	m3	34.07	119,381.28	40.52	141,982.08	183,156.88	3,088	m3	32.05	98,959.00	-84,197.88
Road Pavement	Primary Arterial Pavement	4900	m2	169.62	831,138.00	186.26	912,674.00	1,177,349.46	4,318	m2	209.76	905,743.00	-271,606.46
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	980	m2	14.22	13,935.60	16.16	15,856.80	20,429.47	4,318	m2	6.01	25,948.00	5,518.53
	Pavement Rehab	2450	m2	51.58	126,371.00	59.32	145,334.00	187,480.86	5,521	m2	75.00	414,075.00	226,594.14
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1050	m	54.81	57,550.50	60.90	63,945.00	82,489.05	1,207	m	82.42	99,481.00	16,991.95
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	1,812	m2	261.30	473,473.00	473,473.00
	SUP/ Footpath	1050	m2	63.51	66,685.50	73.63	77,311.50	99,731.84	432	m2	187.80	81,129.00	-18,602.84
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	85	m	528.20	44,897.00	44,897.00
	Drainage Pipe 375mm CR Bfilled	371	m	259.10	96,126.10	282.96	104,978.16	135,421.83	0	NA	NA	0.00	-135,421.83
	Drainage Pipe 450mm CR Bfilled	350	m	299.43	104,800.50	334.33	117,015.50	150,950.00	603	m	NA	337,680.00	186,730.01
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	56	No.	2,565.39	143,661.84	2,806.10	157,141.60	202,712.66	17	No	4,356.71	74,064.00	-128,648.66
	Drainage - Sub-soil drainage	1050	m	33.88	35,574.00	43.40	45,570.00	58,785.30	1,207	m	94.99	114,655.00	55,869.70
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	23	No.	303.34	6,976.82	363.01	8,349.23	10,770.51	16	No	1,000.00	16,000.00	5,229.49
	Landscaping	4130	m2	21.61	89,249.30	25.16	103,910.80	134,044.93	2,279	m2	30.00	68,373.00	-65,671.93
	Topsoil Seeding	4130	m2	7.21	29,777.30	8.44	34,857.20	44,965.79	7,597	m2	25.00	189,925.00	144,959.21
Street Lighting	Street Lighting - Road	350	m	216.34	75,719.00	225.67	78,984.50	101,890.01	13	No	18,000.00	234,000.00	132,110.00
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	8	Item	338.43	2,707.44	380.39	3,043.12	3,925.62	1	Item	7,000.00	7,000.00	3,074.38
	Line marking	4900	m2 of Pavement	3.11	15,239.00	4.09	20,041.00	25,852.89	9,839	m2	5.00	49,195.00	23,342.11
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	NA	NA	0.00	0.00
	Landscape maintenance (roads)	4130	m2 of l'scape	2.90	11,977.00	2.96	12,224.80	15,769.99	65	weeks	1,500.00	97,500.00	81,730.01
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	NA	NA	0.00	0.00
	Rock excavation	701	m3	100.00	70,100.00	115.00	80,615.00	103,993.35	1,449	m3	100.00	144,900.00	40,906.65
	Telecom/power relocation allowance	323	m	1,300.00	419,900.00	1,495.00	482,885.00	622,921.65	302	m	1,500.00	453,000.00	-169,921.65
	Water/gas relocation allowance	85	m	300.00	25,500.00	345.00	29,325.00	37,829.25	85	m	2,200.00	187,000.00	149,170.75
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	NA	NA	0.00	0.00

Appendix A

Toolern PSP & DCP - Road Projects

RD-15 - Primary Ultimate Arterial Road (Ferris Road [Western Hwy to Shogaki], 350m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Other	Kerb Removal	323	m	60.00	19,380.00	69.00	22,287.00	28,750.23	593	m	10.00	5,930.00	-22,820.23
	Earthen mound removal	8320	m3	34.07	283,462.40	40.52	337,126.40	434,893.06	0	NA	NA	0.00	-434,893.06
	Sawcut pavement tie ins, new kerb & channel, etc.	323	m	14.00	4,522.00	16.10	5,200.30	6,708.39	1,082	m	480.00	519,360.00	512,651.61
	Electrical overhead relocation								604	m	1,210.00	730,840.00	
	Tree/vegetation removal								7,582	m2	10.00	75,820.00	
	Concrete/footpath removal								499	m	50.00	24,950.00	
Delivery	Council Fees	1.00	%	3.25	87,866.12	3.25	99,879.09	128,844.03	1.00	%	3.25	184,590.00	55,745.97
	VicRoads Fees	1.00	%	1.00	27,035.73	1.00	30,732.03	39,644.32	1.00	%	1.00	56,800.00	17,155.68
	Traffic Management	1.00	%	5.00	135,178.65	5.00	153,660.14	198,221.58	1.00	%	5.00	283,990.00	85,768.42
	Environmental Management	1.00	%	0.50	13,517.86	0.50	15,366.01	19,822.16	1.00	%	0.50	28,400.00	8,577.84
	Surveying and Design	1.00	%	5.00	135,178.65	5.00	153,660.14	198,221.58	1.00	%	5.00	283,990.00	85,768.42
	Supervision and Project management	1.00	%	9.00	243,321.57	9.00	276,588.25	356,798.84	1.00	%	9.00	511,180.00	154,381.16
	Site Establishment	1.00	%	2.50	67,589.32	2.50	76,830.07	99,110.79	1.00	%	2.50	142,000.00	42,889.21
	Contingency	1.00	%	15.00	405,535.95	15.00	460,980.42	594,664.74	1.00	%	15.00	851,960.00	257,295.26
Total - (2018) rates	Excluding Delivery				2,703,573.00		3,073,203.00						
	Including Delivery				3,818,797.00		4,340,899.00						
Total - (2021) rates	Excluding Delivery				2,946,895.00		3,349,792.00						
	Including Delivery				4,162,489.00		4,731,581.00						
Total - (2024) rates	Excluding Delivery							3,964,431.60				5,679,689.00	-1,715,257.40
	Including Delivery							5,599,759.63				8,022,599.00	-2,422,839.37

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Toolern PSP & DCP - Road Projects

RD-16 - Secondary Divided Interim Arterial Road (Ferris Road [Shogaki to Rail], 69m)

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Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	2622	m2	3.68	9,648.96	4.96	13,005.12	16,776.60	1,344	m2	14.21	19,096.00	2,319.40
	Earthworks	482	m3	34.07	16,421.74	40.52	19,530.64	25,194.53	157	m3	32.04	5,031.00	-20,163.53
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	NA	NA	0.00	0.00
	Secondary Arterial Pavement	759	m2	127.01	96,400.59	133.78	101,539.02	130,985.34	246	m2	186.37	45,847.00	-85,138.34
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	152	m2	14.22	2,161.44	16.16	2,456.32	3,168.65	246	m2	6.01	1,478.00	-1,690.65
	Pavement Rehab	483	m2	51.58	24,913.14	59.32	28,651.56	36,960.51	246	m2	75.00	18,450.00	-18,510.51
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	276	m	54.81	15,127.56	60.90	16,808.40	21,682.84	254	m	82.42	20,935.00	-747.84
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	NA	NA	0.00	0.00
	SUP/ Footpath	414	m2	63.51	26,293.14	73.63	30,482.82	39,322.84	186	m2	187.80	34,931.00	-4,391.84
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	10	m	528.20	5,282.00	5,282.00
	Drainage Pipe 375mm CR Bfilled	61	m	259.10	15,805.10	282.96	17,260.56	22,266.12	0	NA	NA	0.00	-22,266.12
	Drainage Pipe 450mm CR Bfilled	35	m	299.43	10,480.05	334.33	11,701.55	15,095.00	128	m	560.00	71,680.00	56,585.00
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	3	No.	2,565.39	7,696.17	2,806.10	8,418.30	10,859.61	4	No	4,359.50	17,438.00	6,578.39
	Drainage - Sub-soil drainage	276	m	33.88	9,350.88	43.40	11,978.40	15,452.14	254	m	94.99	24,128.00	8,675.86
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	4	No.	303.34	1,213.36	363.01	1,452.04	1,873.13	4	No	1,000.00	4,000.00	2,126.87
	Landscaping	966	m2	21.61	20,875.26	25.16	24,304.56	31,352.88	186	m2	29.95	5,571.00	-25,781.88
	Topsoil Seeding	966	m2	7.21	6,964.86	8.44	8,153.04	10,517.42	619	m2	25.00	15,475.00	4,957.58
Street Lighting	Street Lighting - Road	69	m	216.34	14,927.46	225.67	15,571.23	20,086.89	3	No	18,000.00	54,000.00	33,913.11
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	2	Item	338.43	676.86	380.39	760.78	981.41	1	Item	3,500.00	3,500.00	2,518.59
	Line marking	759	m2 of Pavement	3.11	2,360.49	4.09	3,104.31	4,004.56	492	m2	5.00	2,460.00	-1,544.56
	Landscape maintenance (intersections)	0	Item	71,344.66	0.00	88,131.43	0.00	0.00	0	NA	NA	0.00	0.00
	Landscape maintenance (roads)	966	m2 of l'scape	2.90	2,801.40	2.96	2,859.36	3,688.57	65	weeks	1,500.00	97,500.00	93,811.43
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	NA	NA	0.00	0.00
Other	Rock excavation	97	m3	100.00	9,700.00	115.00	11,155.00	14,389.95	135	m3	100.00	13,500.00	-889.95
	Telecom/power relocation allowance	69	m	1,300.00	89,700.00	1,495.00	103,155.00	133,069.95	64	m	1,500.00	96,000.00	-37,069.95
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	NA	NA	0.00	0.00
	Service proving fee	0	Item	3,000.00	0.00	3,450.00	0.00	0.00	0	NA	NA	0.00	0.00
	Electrical overhead relocation								64	m	1,210.00	77,440.00	77,440.00
	Tree/vegetation removal								847	m2	10.00	8,470.00	8,470.00
	Dirt road removal								157	m2	75.00	11,775.00	11,775.00
	Sawcut pavement tie ins, new kerb & channel, etc.								135	m	480.00	64,800.00	64,800.00
													0.00
Delivery	Council Fees	1.00	%	3.25	12,464.35	3.25	14,051.31	18,126.19	1.00	%	3.25	23,370.00	5,243.81
	VicRoads Fees	1.00	%	1.00	3,835.18	1.00	4,323.48	5,577.29	1.00	%	1.00	7,190.00	1,612.71
	Traffic Management	1.00	%	5.00	19,175.92	5.00	21,617.40	27,886.45	1.00	%	5.00	35,940.00	8,053.55
	Environmental Management	1.00	%	0.50	1,917.59	0.50	2,161.74	2,788.64	1.00	%	0.50	3,600.00	811.36
	Surveying and Design	1.00	%	5.00	19,175.92	5.00	21,617.40	27,886.45	1.00	%	5.00	35,940.00	8,053.55
	Supervision and Project management	1.00	%	9.00	34,516.66	9.00	38,911.52	50,195.60	1.00	%	9.00	64,700.00	14,504.40
	Site Establishment	1.00	%	2.50	9,587.96	2.50	10,808.70	13,943.22	1.00	%	2.50	17,970.00	4,026.78
	Contingency	1.00	%	%	57,527.77	15.00	64,852.20	83,659.34	1.00	%	15.00	107,820.00	24,160.66
Including Delivery				383,518.00		432,348.00							

Appendix A

Toolern PSP & DCP - Road Projects

RD-16 - Secondary Divided Interim Arterial Road (Ferris Road [Shogaki to Rail], 69m)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Excluding Delivery				541,720.00		610,692.00						
	Including Delivery				418,036.00		471,260.00						
	Excluding Delivery				590,476.00		665,655.00						
	Including Delivery							557,728.93				718,787.00	-161,058.07
	Including Delivery							787,792.12				1,015,317.00	-227,524.88

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Toolern PSP & DCP - Road Projects

RD-19 - Primary Interim Arterial Road (Shogaki Drive East [Mt Cottrell to Ferris], 438m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	19710	m2	3.68	72,532.80	4.96	97,761.60	126,112.46	19,665	m2	14.21	279,405.00	153,292.54
	Earthworks	4385	m3	34.07	149,396.95	40.52	177,680.20	229,207.46	4,375	m3	32.05	140,202.00	-89,005.46
Road Pavement	Primary Arterial Pavement	6132	m2	169.62	1,040,109.84	186.26	1,142,146.32	1,473,368.75	6,118	m2	209.73	1,283,146.00	-190,222.75
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	NA	NA	0.00	0.00
	Subgrade Preparation	1227	m2	14.22	17,447.94	16.16	19,828.32	25,578.53	6,118	m2	6.01	36,765.00	11,186.47
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1752	m	54.81	96,027.12	60.90	106,696.80	137,638.87	1,748	m	82.42	144,070.00	6,431.13
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	2,622	m2	261.30	685,125.00	685,125.00
	SUP/ Footpath	3942	m2	63.51	250,356.42	73.63	290,249.46	374,421.80	2,185	m2	187.80	410,340.00	35,918.20
	Traffic Island	0	m2	77.60	0.00	84.07	0.00	0.00	0	NA	NA	0.00	0.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	123	m	528.20	64,969.00	64,969.00
	Drainage Pipe 375mm CR Bfilled	462	m	259.10	119,704.20	282.96	130,727.52	168,638.50	0	NA	NA	0.00	-168,638.50
	Drainage Pipe 450mm CR Bfilled	438	m	299.43	131,150.34	334.33	146,436.54	188,903.14	874	m	560.00	489,440.00	300,536.86
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	68	No.	2,565.39	174,446.52	2,806.10	190,814.80	246,151.09	24	No	4,359.58	104,630.00	-141,521.09
	Drainage - Sub-soil drainage	1752	m	33.88	59,357.76	43.40	76,036.80	98,087.47	1,748	m	94.99	166,046.00	67,958.53
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	NA	NA	0.00	0.00
Landscape	Tree Planting	29	No.	303.34	8,796.86	363.01	10,527.29	13,580.20	22	No	1,000.00	22,000.00	8,419.80
	Landscaping	9636	m2	21.61	208,233.96	25.16	242,441.76	312,749.87	2,622	m2	30.00	78,660.00	-234,089.87
	Topsoil Seeding	9636	m2	7.21	69,475.56	8.44	81,327.84	104,912.91	8,740	m2	25.00	218,500.00	113,587.09
Street Lighting	Street Lighting - Road	438	m	216.34	94,756.92	225.67	98,843.46	127,508.06	18	No	18,000.00	324,000.00	196,491.94
	Street Lighting - Intersections	0	Item/ Per Leg	48,468.93	0.00	55,617.74	0.00	0.00	0	NA	NA	0.00	0.00
Misc.	Regulatory Signage	10	Item	338.43	3384.30	380.39	3803.90	4,907.03	1.00	Item	7,500.00	7,500.00	2,592.97
	Line marking	6132	m2 of Pavement	3.11	19070.52	4.09	25079.88	32,353.05	6,118.00	m2	5.00	30,590.00	-1,763.05
	Landscape maintenance (intersections)	0	Item	71344.66	0.00	88131.43	0.00	0.00	0.00	NA	NA	0.00	0.00
	Landscape maintenance (roads)	9636	m2 of l'scape	2.90	27944.40	2.96	28522.56	36,794.10	65.00	weeks	1,500.00	97,500.00	60,705.90
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0.00	NA	NA	0.00	0.00
Other	Rock excavation	877	m3	100.00	87,700.00	115.00	100,855.00	130,102.95	1,967	m3	100.00	196,700.00	66,597.05
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	NA	NA	0.00	0.00
	Water/gas relocation allowance	480	m	300.00	144,000.00	345.00	165,600.00	213,624.00	480	m	2,200.00	1,056,000.00	842,376.00
	Service proving fee	1	Item	3,000.00	3,000.00	3,450.00	3,450.00	4,450.50	1	Item	3,000.00	3,000.00	-1,450.50
													0.00
Delivery	Council Fees	1.00	%	3.25	90,249.00	3.25	102,011.98	139,593.81	1.00	%	3.25	189,760.00	50,166.19
	VicRoads Fees	1.00	%	1.00	27,768.92	1.00	31,388.30	42,951.94	1.00	%	1.00	58,390.00	15,438.06
	Traffic Management	1.00	%	5.00	138,844.62	5.00	156,941.50	214,759.71	1.00	%	5.00	291,930.00	77,170.29
	Environmental Management	1.00	%	0.50	13,884.46	0.50	15,694.15	21,475.97	1.00	%	0.50	29,200.00	7,724.03
	Surveying and Design	1.00	%	5.00	138,844.62	5.00	156,941.50	214,759.71	1.00	%	5.00	291,930.00	77,170.29
	Supervision and Project management	1.00	%	9.00	249,920.32	9.00	282,494.70	386,567.47	1.00	%	9.00	525,480.00	138,912.53
	Site Establishment	1.00	%	2.50	69,422.31	2.50	78,470.75	107,379.85	1.00	%	2.50	145,970.00	38,590.15
	Contingency	1.00	%	15.00	416,533.86	15.00	470,824.51	644,279.12	1.00	%	15.00	875,790.00	231,510.88

Appendix A

Toolern PSP & DCP - Road Projects

RD-19 - Primary Interim Arterial Road (Shogaki Drive East [Mt Cottrell to Ferris], 438m)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Total - (2018) rates	Excluding Delivery				2,776,892.00		3,138,830.00						
	Including Delivery				3,922,361.00		4,433,597.00						
Total - (2021) rates	Excluding Delivery				3,026,812.00		3,421,325.00						
	Including Delivery				4,275,373.00		4,832,621.00						
Total - (2024) rates	Excluding Delivery							4,049,090.76				5,838,588.00	-1,789,497.24
	Including Delivery							5,820,858.34				8,247,038.00	-2,426,179.66



APPENDIX B

INDEPENDENT TRANSPORT INFRASTRUCTURE COST
ESTIMATES - INTERSECTIONS

PR-025803 - Toolern Creek PSP and DCP

Intersection Costs Summary

Civil Component No	Description	VPA Total Cost (\$ - 2021)	VPA Total Cost (\$ - 2024)	WT Total Cost (\$ - 2024)	Variance (\$ - 2024)
		A	B	C	B-C
IT-01	IT-01 - Secondary - Connector Intersection (Rees Road & East-West Arterial Road)	4,832,428.00	5,719,111.19	7,718,759.00	-1,999,647.81
IT-02	IT-02 - Secondary - Secondary T-Intersection (Exford Road & East-West Arterial Road)	6,003,028.94	7,104,502.13	7,917,076.00	-812,573.87
IT-03	IT-03 - Secondary - Secondary T-Intersection (Exford Road & Toolern Road)	8,928,408.00	10,566,647.33	15,945,680.00	-5,379,032.67
IT-04	IT-04 - Secondary - Secondary Lane Upgrades (Exford Road & Greigs Road)	2,686,264.00	3,179,155.25	2,709,030.00	470,125.25
IT-05	IT-05 - Secondary - Secondary Intersection (Ferris Road & Toolern Road)	9,032,022.00	10,689,272.59	12,337,250.00	-1,647,977.41
IT-06	IT-06 - Primary - Secondary Intersection (Mt Cottrell Road & Toolern Road)	11,738,409.00	13,892,245.28	17,259,526.00	-3,367,280.72
IT-10	IT-10 - Primary - Primary Intersection (Mt Cottrell Road & Shogaki Drive)	7,109,635.00	8,414,153.87	9,732,523.00	-1,318,369.13
IT-12	IT-12 - Primary - Connector T-Intersection (Shogaki Drive & Connector Road)	10,179,831.00	12,047,688.26	15,829,389.00	-3,781,700.74
IT-13	IT-13 - Primary - Secondary Intersection (Ferris Road, Shogaki Drive & Abey Road)	11,062,998.00	13,092,905.33	15,747,929.00	-2,655,023.67
IT-16	IT-16 - Secondary - Connector T-Intersection (Abey Road, Industry Collector Road)	5,190,822.00	6,143,265.19	7,640,201.00	-1,496,935.81
IT-17	IT-17 - Secondary - Connector T-Intersection (Abey Road, Bundy Drive)	5,652,281.00	6,689,395.92	8,638,811.00	-1,949,415.08
IT-18	IT-18 - Primary- Connector Intersection (Ferris Road, Shakamaker Drive)	7,973,390.00	9,436,397.03	12,216,977.00	-2,780,579.97
IT-20	IT-20 - Primary- Connector Intersection (Mt Cottrell Road, South Connector Road)	9,393,854.00	11,117,496.53	10,645,402.00	472,094.53
IT-21	IT-21 - Primary- Connector Intersection (Toolern Road, Eastern North-South Connector Road)	6,512,388.00	7,707,320.11	8,684,005.00	-976,684.89
IT-22	IT-22 - Secondary- Connector Intersection (Toolern Road, Central North-South Connector Road)	5,595,492.00	6,622,186.11	8,520,504.00	-1,898,317.89
IT-23	IT-23 - Secondary- Connector T-Intersection (Toolern Road, Western North-South Connector Road)	4,802,624.00	5,683,838.35	7,349,336.00	-1,665,497.65
IT-25	IT-25 - Primary- Connector T-Intersection (Mt Cottrell Road, Bridge Road)	983,157.00	1,163,551.34	3,596,615.00	-2,433,063.66
IT-29	IT-29- Secondary- Connector Intersection (Ferris Road, South Connector Road)	4,598,543.00	5,442,311.32	6,585,762.34	-1,143,451.02
	TOTAL - INTERSECTIONS	122,275,574.94	144,711,443.15	179,074,775.33	-34,363,332.19

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	17422	m2	3.68	64,112.96	4.96	86,413.12	111,472.92	16,407	m2	14.83	243,273.00	131,800.08
	Earthworks	4136	m3	34.07	140,913.52	40.52	167,590.72	216,192.03	3,924	m3	32.05	125,750.00	-90,442.03
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	6512	m2	127.01	827,089.12	133.78	871,175.36	1,123,816.21	6,178	m2	194.51	1,201,657.00	77,840.79
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	1303	m2	14.22	18,528.66	16.16	21,056.48	27,162.86	6,178	m2	6.01	37,126.00	9,963.14
	Pavement Rehab	2106	m2	51.58	108,627.48	59.32	124,927.92	161,157.02	2,191	m2	75.00	164,325.00	3,167.98
	Pavement Removal	416	m2	140.00	58,240.00	161.00	66,976.00	86,399.04	384	m2	50.00	19,200.00	-67,199.04
Concrete Works	Kerb and Channel	1842	m	54.81	100,960.02	60.90	112,177.80	144,709.36	1,819	m	82.42	149,922.00	5,212.64
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	1,417	m2	261.30	370,260.00	370,260.00
	SUP/ Footpath	2488	m2	63.51	158,012.88	73.63	183,191.44	236,316.96	2,667	m2	187.80	500,859.00	264,542.04
	Traffic Island	293	m2	77.60	22,736.80	84.07	24,632.51	31,775.94	0	m2	0.00	0.00	-31,775.94
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	182	m	528.20	96,133.00	96,133.00
	Drainage Pipe 375mm CR Bfilled	400	m	259.10	103,640.00	282.96	113,184.00	146,007.36	0	m	0.00	0.00	-146,007.36
	Drainage Pipe 450mm CR Bfilled	269	m	299.43	80,546.67	334.33	89,934.77	116,015.85	948	m	560.00	530,880.00	414,864.15
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	14	No.	2,565.39	35,915.46	2,806.10	39,285.40	50,678.17	13	No.	4,355.77	56,625.00	5,946.83
	Drainage - Sub-soil drainage	759	m	33.88	25,714.92	43.40	32,940.60	42,493.37	1,819	m	94.99	172,790.00	130,296.63
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	460,000.00	460,000.00	-204,537.51
Landscape	Tree Planting	60	No.	303.34	18,200.40	363.01	21,780.60	28,096.97	27	No.	1,000.00	27,000.00	-1,096.97
	Landscaping	5709	m2	21.61	123,371.49	25.16	143,638.44	185,293.59	1,559	m2	30.00	46,764.00	-138,529.59
	Topsoil Seeding	5709	m2	7.21	41,161.89	8.44	48,183.96	62,157.31	5,196	m2	25.00	129,900.00	67,742.69
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	N/A	Item	0.00	N/A	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	21	No.	18,000.00	378,000.00	91,012.46
Misc.	Regulatory Signage	10	Item	338.43	3,384.30	380.39	3,803.90	4,907.03	1	Item	15,000.00	15,000.00	10,092.97
	Line marking	9040	m2 of Pavement	3.11	28,114.40	4.09	36,973.60	47,695.94	8,369	m2	5.00	41,845.00	-5,850.94
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	N/A	weeks	0.00	N/A	0.00
	Tactile Pavers (Hazard only)	24	Item	292.43	7,018.32	319.78	7,674.72	9,900.39	0	Item	0.00	0.00	-9,900.39
Other	Rock excavation	159	m3	100.00	15,900.00	115.00	18,285.00	23,587.65	1,641	m2	100.00	164,100.00	140,512.35
	Telecom/power relocation allowance	48	m	1,300.00	62,400.00	1,495.00	71,760.00	92,570.40	48	m	1,500.00	72,000.00	-20,570.40
	Water/gas relocation allowance	46	m	300.00	13,800.00	345.00	15,870.00	20,472.30	46	m	2,200.00	101,200.00	80,727.70
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Sawcut pavement tie ins, new kerb & channel, etc.	0	m	0.00	0.00	0.00	0.00	0.00	526	m	480.00	252,480.00	252,480.00
Delivery	Council Fees	1.00	%	3.25	90,107.25	3.25	102,007.88	131,590.17	1.00	%	3.25	177,600.00	46,009.83
	VicRoads Fees	1.00	%	1.00	27,725.31	1.00	31,387.04	40,489.28	1.00	%	1.00	54,650.00	14,160.72
	Traffic Management	1.00	%	5.00	138,626.54	5.00	156,935.20	202,446.41	1.00	%	5.00	273,230.00	70,783.59
	Environmental Management	1.00	%	0.50	13,862.65	0.50	15,693.52	20,244.64	1.00	%	0.50	27,330.00	7,085.36
	Surveying and Design	1.00	%	5.00	138,626.54	5.00	156,935.20	202,446.41	1.00	%	5.00	273,230.00	70,783.59
	Supervision and Project management	1.00	%	9.00	249,527.77	9.00	282,483.37	364,403.54	1.00	%	9.00	491,820.00	127,416.46
	Site Establishment	1.00	%	2.50	69,313.27	2.50	78,467.60	101,223.21	1.00	%	2.50	136,620.00	35,396.79

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Contingency	1.00	%	15.00	415,879.62	15.00	470,805.61	607,339.24	1.00	%	15.00	819,690.00	212,350.76
Total - (2018) rates	Excluding Delivery				2,772,531.00		3,138,704.00						
	Including Delivery				3,916,200.00		4,433,420.00						
Total - (2021) rates	Excluding Delivery				3,022,059.00		3,421,188.00						
	Including Delivery				4,268,658.00		4,832,428.00						
Total - (2024) rates	Excluding Delivery							4,048,928.28				5,464,589.00	-1,415,660.72
	Including Delivery							5,719,111.19				7,718,759.00	-1,999,647.81

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-02 - Secondary - Secondary T-Intersection (Exford Road & East-West Arterial Road)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	20039	m2	3.68	73,743.52	4.96	99,393.44	128,217.54	18,133	m2	14.21	257,638.00	129,420.46
	Earthworks	4224	m3	34.07	143,911.68	40.52	171,156.48	220,791.86	4,084	m3	32.05	130,877.00	-89,914.86
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	6651	m2	127.01	844,743.51	133.78	889,770.78	1,147,804.31	6,430	m2	194.48	1,250,511.00	102,706.69
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	1331	m2	14.22	18,926.82	16.16	21,508.96	27,746.56	6,430	m2	6.01	38,640.00	10,893.44
	Pavement Rehab	3891	m2	51.58	200,697.78	59.32	230,814.12	297,750.21	3,746	m2	75.00	280,950.00	-16,800.21
	Pavement Removal	490	m2	140.00	68,600.00	161.00	78,890.00	101,768.10	463	m2	50.00	23,150.00	-78,618.10
Concrete Works	Kerb and Channel	2036	m	54.81	111,593.16	60.90	123,992.40	159,950.20	2,153	m	82.42	177,450.00	17,499.80
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	2,312	m2	261.30	604,122.00	604,122.00
	SUP/ Footpath	2588	m2	63.51	164,363.88	73.63	190,554.44	245,815.23	2,482	m2	187.80	466,116.00	220,300.77
	Traffic Island	186	m2	77.60	14,433.60	84.07	15,637.02	20,171.76	0	m2	0.00	0.00	-20,171.76
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	245	m	528.20	129,410.00	129,410.00
	Drainage Pipe 375mm CR Bfilled	591	m	259.10	153,128.10	282.96	167,229.36	215,725.87	0	m	0.00	0.00	-215,725.87
	Drainage Pipe 450mm CR Bfilled	400	m	299.43	119,772.00	334.33	133,732.00	172,514.28	1,050	m	560.00	588,000.00	415,485.72
	Drainage Pipe 525mm CR Bfilled	84	m	403.86	33,924.24	448.03	37,634.52	48,548.53	0	m	0.00	0.00	-48,548.53
	Drainage - pits	23	No.	2,565.39	59,003.97	2,806.10	64,540.30	83,256.99	17	No.	4,356.71	74,064.00	-9,192.99
	Drainage - Sub-soil drainage	2036	m	33.88	68,979.68	43.40	88,362.40	113,987.50	2,153	m	94.99	204,518.00	90,530.50
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	3	Item/ Per Leg	109,730.28	329,190.84	128,786.34	386,359.02	498,403.14	1	Item	460,000.00	460,000.00	-38,403.14
Landscape	Tree Planting	30	No.	303.34	9,100.20	363.01	10,890.30	14,048.49	32	No.	1,000.00	32,000.00	17,951.51
	Landscaping	6879	m2	21.61	148,655.19	25.16	173,075.64	223,267.58	1,643	m2	29.99	49,275.00	-173,992.58
	Topsoil Seeding	6879	m2	7.21	49,597.59	8.44	58,058.76	74,895.80	5,475	m2	25.00	136,875.00	61,979.20
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	N/A	Item	0.00	N/A	0.00
	Street Lighting - Intersections	3	Item/ Per Leg	48,468.93	145,406.79	55,617.74	166,853.22	215,240.65	21	No.	18,000.00	378,000.00	162,759.35
Misc.	Regulatory Signage	5	Item	338.43	1,692.15	380.39	1,901.95	2,453.52	1	Item	21,500.00	21,500.00	19,046.48
	Line marking	6651	m2 of Pavement	3.11	20,684.61	4.09	27,202.59	35,091.34	10,176	m2	5.00	50,880.00	15,788.66
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of 'scape	2.90	0.00	2.96	0.00	0.00	N/A	weeks	0.00	N/A	0.00
	Tactile Pavers (Hazard only)	18	Item	292.43	5,263.74	319.78	5,756.04	7,425.29	1	Item	0.00	8,400.00	974.71
Other	Rock excavation	845	m3	100.00	84,500.00	115.00	97,175.00	125,355.75	1,814	m2	100.00	181,400.00	56,044.25
	Telecom/power relocation allowance	295	m	1,300.00	383,500.00	1,495.00	441,025.00	568,922.25	295	m	1,500.00	442,500.00	-126,422.25
	Water/gas relocation allowance	365	m	300.00	109,500.00	345.00	125,925.00	162,443.25	365	m	2,200.00	803,000.00	640,556.75
	Service proving fee	1	Item	3,000.00	10,000.00	3,450.00	3,450.00	4,450.50	1	Item	10,000.00	10,000.00	5,549.50
	Sawcut pavement tie ins, new kerb & channel, etc.	0	m	0.00	0.00	0.00	0.00	0.00	934	m	480.00	448,320.00	448,320.00

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	Council Fees	1.00	%	3.25	111,938.38	3.25	126,718.16	163,466.42	1.00	%	3.25	45,070.00	-118,396.42
	VicRoads Fees	1.00	%	1.00	34,442.58	1.00	38,990.20	50,297.36	1.00	%	1.00	13,870.00	-36,427.36
	Traffic Management	1.00	%	5.00	172,212.89	5.00	194,951.01	251,486.80	1.00	%	5.00	69,330.00	-182,156.80
	Environmental Management	1.00	%	0.50	17,221.29	0.50	19,495.10	25,148.68	1.00	%	0.50	6,940.00	-18,208.68
	Surveying and Design	1.00	%	5.00	172,212.89	5.00	194,951.01	251,486.80	1.00	%	5.00	69,330.00	-182,156.80
	Supervision and Project management	1.00	%	9.00	309,983.19	9.00	350,911.82	452,676.24	1.00	%	9.00	124,790.00	-327,886.24
	Site Establishment	1.00	%	2.50	86,106.44	2.50	97,475.50	125,743.40	1.00	%	2.50	34,670.00	-91,073.40
	Contingency	1.00	%	15.00	516,638.66	15.00	584,853.03	754,460.40	1.00	%	15.00	207,980.00	-546,480.40
Total - (2018) rates	Excluding Delivery				3,444,258.00		3,899,020.00						0.00
	Including Delivery				4,865,014.00		5,507,366.00						0.00
Total - (2021) rates	Excluding Delivery				3,754,241.22		4,249,931.80						
	Including Delivery				5,302,865.26		6,003,028.94						
Total - (2024) rates	Excluding Delivery							5,029,736.02				7,345,096.00	-2,315,359.98
	Including Delivery							7,104,502.13				7,917,076.00	-812,573.87

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	28152	m2	3.68	103,599.36	4.96	139,633.92	180,127.76	27,819	m2	14.21	395,259.00	215,131.24
	Earthworks	6715	m3	34.07	228,780.05	40.52	272,091.80	350,998.42	6,591	m3	32.05	211,217.00	-139,781.42
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	10574	m2	127.01	1,343,003.74	133.78	1,414,589.72	1,824,820.74	10,379	m2	194.46	2,018,271.00	193,450.26
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	2115	m2	14.22	30,075.30	16.16	34,178.40	44,090.14	10,379	m2	6.01	62,371.00	18,280.86
	Pavement Rehab	2344	m2	51.58	120,903.52	59.32	139,046.08	179,369.44	2,232	m2	75.00	167,400.00	-11,969.44
	Pavement Removal	2156	m2	140.00	301,840.00	161.00	347,116.00	447,779.64	2,394	m2	50.00	119,700.00	-328,079.64
Concrete Works	Kerb and Channel	2999	m	54.81	164,375.19	60.90	182,639.10	235,604.44	3,097	m	82.42	255,255.00	19,650.56
	Kerb Removal	105	m	60.00	6,300.00	69.00	7,245.00	9,346.05	1,060	m	10.00	10,600.00	1,253.95
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	2,812	m2	261.30	734,771.00	734,771.00
	SUP/ Footpath	3865	m2	63.51	245,466.15	73.63	284,579.95	367,108.14	4,439	m2	187.80	833,638.00	466,529.86
	Concrete Removal	342	m2	45.03	15,400.26	49.53	16,939.26	21,851.65	274	m2	50.00	13,700.00	-8,151.65
	Traffic Island	605	m2	77.60	46,948.00	84.07	50,862.35	65,612.43	291	m2	150.00	43,650.00	-21,962.43
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	307	m	528.21	162,159.00	162,159.00
	Drainage Pipe 375mm CR Bfilled	849	m	259.10	219,975.90	282.96	240,233.04	309,900.62	0	m	0.00	0.00	-309,900.62
	Drainage Pipe 450mm CR Bfilled	425	m	299.43	127,257.75	334.33	142,090.25	183,296.42	1,536	m	560.00	860,160.00	676,863.58
	Drainage Pipe 525mm CR Bfilled	142	m	403.86	57,348.12	448.03	63,620.26	82,070.14	0	m	0.00	0.00	-82,070.14
	Drainage - pits	27	No.	2,565.39	69,265.53	2,806.10	75,764.70	97,736.46	21	No.	4,357.24	91,502.00	-6,234.46
	Drainage - Sub-soil drainage	2999	m	33.88	101,606.12	43.40	130,156.60	167,902.01	3,097	No.	94.99	294,190.00	126,287.99
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	3	Item/ Per Leg	109,730.28	329,190.84	128,786.34	386,359.02	498,403.14	1	Item	465,000.00	465,000.00	-33,403.14
Landscape	Tree Planting	131	No.	303.34	39,737.54	363.01	47,554.31	61,345.06	39	No.	1,000.00	39,000.00	-22,345.06
	Landscaping	10800	m2	21.61	233,388.00	25.16	271,728.00	350,529.12	3,143	m2	30.00	94,302.00	-256,227.12
	Topsoil Seeding	10800	m2	7.21	77,868.00	8.44	91,152.00	117,586.08	10,478	m2	25.00	261,950.00	144,363.92
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	N/A	Item	0.00	N/A	0.00
	Street Lighting - Intersections	3	Item/ Per Leg	48,468.93	145,406.79	55,617.74	166,853.22	215,240.65	31	Item	18,000.00	558,000.00	342,759.35
Misc.	Regulatory Signage	9	Item	338.43	3,045.87	380.39	3,423.51	4,416.33	1	Item	25,500.00	25,500.00	21,083.67
	Line marking	12918	m2 of Pavement	3.11	40,174.98	4.09	52,834.62	68,156.66	12,611	m2	5.00	63,055.00	-5,101.66
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	N/A	weeks	0.00	N/A	0.00
	Tactile Pavers (Hazard only)	18	Item	292.43	5,263.74	319.78	5,756.04	7,425.29	1	Item	0.00	8,400.00	974.71
Other	Rock excavation	1343	m3	100.00	134,300.00	115.00	154,445.00	199,234.05	1,814	m3	100.00	181,400.00	-17,834.05
	Telecom/power relocation allowance	262	m	1,300.00	340,600.00	1,495.00	391,690.00	505,280.10	262	m	1,500.00	393,000.00	-112,280.10
	Water/gas relocation allowance	1006	m	300.00	301,800.00	345.00	347,070.00	447,720.30	1,006	m	2,200.00	2,213,200.00	1,765,479.70
	Service proving fee	1.00	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	-4,835.00
	Light pole relocation allowance	2.00	Item	10,000.00	20,000.00	11,500.00	23,000.00	29,670.00	2.00	Item	10,000.00	20,000.00	-9,670.00
	Power pole relocation allowance	4.00	Item	40,000.00	160,000.00	46,000.00	184,000.00	237,360.00	4.00	Item	25,000.00	100,000.00	-137,360.00
	Sawcut pavement tie ins, new kerb & channel, etc.	2,037.00	m	14.00	28,518.00	16.10	32,795.70	42,306.45	1,010.00	m	480.00	484,800.00	442,493.55
Council Fees	1.00	%	3.25	166,490.46	3.25	188,470.08	243,126.40	1.00	%	3.25	366,900.00	123,773.60	

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	VicRoads Fees	1.00	%	1.00	51,227.83	1.00	57,990.79	74,808.12	1.00	%	1.00	112,890.00	38,081.88
	Traffic Management	1.00	%	5.00	256,139.17	5.00	289,953.96	374,040.61	1.00	%	5.00	564,450.00	190,409.39
	Environmental Management	1.00	%	0.50	25,613.92	0.50	28,995.40	37,404.06	1.00	%	0.50	56,450.00	19,045.94
	Surveying and Design	1.00	%	5.00	256,139.17	5.00	289,953.96	374,040.61	1.00	%	5.00	564,450.00	190,409.39
	Supervision and Project management	1.00	%	9.00	461,050.51	9.00	521,917.14	673,273.10	1.00	%	9.00	1,016,010.00	342,736.90
	Site Establishment	1.00	%	2.50	128,069.59	2.50	144,976.98	187,020.31	1.00	%	2.50	282,230.00	95,209.69
	Contingency	1.00	%	15.00	768,417.51	15.00	869,861.89	1,122,121.84	1.00	%	15.00	1,693,350.00	571,228.16
Total - (2018) rates	Excluding Delivery				5,122,783.00		5,799,079.00						
	Including Delivery				7,235,932.00		8,191,199.00						
Total - (2021) rates	Excluding Delivery				5,583,834.00		6,320,997.00						
	Including Delivery				7,887,166.00		8,928,408.00						
Total - (2024) rates	Excluding Delivery							7,480,812.27				11,288,950.00	-3,808,137.73
	Including Delivery							10,566,647.33				15,945,680.00	-5,379,032.67

Toolern PSP & DCP - Intersection Projects

IT-04 - Secondary - Secondary Lane Upgrades (Exford Road & Greigs Road)

Group	Sub Item	VPA Benchmark Costings							WT Total Cost (2024)				
		Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	7451	m2	3.68	27,419.68	4.96	36,956.96	47,674.48	1,686	m2	14.21	23,955.00	-23,719.48
	Earthworks	1708	m3	34.07	58,191.56	40.52	69,208.16	89,278.53	268	m3	32.04	8,588.00	-80,690.53
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	2689	m2	127.01	341,529.89	133.78	359,734.42	464,057.40	421	m2	195.77	82,421.00	-381,636.40
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	538	m2	14.22	7,650.36	16.16	8,694.08	11,215.36	421	m2	6.01	2,530.00	-8,685.36
	Pavement Rehab	710	m2	51.58	36,621.80	59.32	42,117.20	54,331.19	346	m2	75.00	25,950.00	-28,381.19
	Pavement Removal	872	m2	140.00	122,080.00	161.00	140,392.00	181,105.68	169	m2	50.00	8,450.00	-172,655.68
Concrete Works	Kerb and Channel	777	m	54.81	42,587.37	60.90	47,319.30	61,041.90	379	m	82.42	31,237.00	-29,804.90
	Kerb Removal	58	m	60.00	3,480.00	69.00	4,002.00	5,162.58	126	m	10.00	1,260.00	-3,902.58
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	173	m2	261.30	45,205.00	45,205.00
	SUP/ Footpath	1043	m2	63.51	66,240.93	73.63	76,796.09	99,066.96	316	m2	187.80	59,344.00	-39,722.96
	Concrete Removal	35	m2	45.03	1,576.05	49.53	1,733.55	2,236.28	20	m2	50.00	1,000.00	-1,236.28
	Traffic Island	84	m2	77.60	6,518.40	84.07	7,061.88	9,109.83	0	m2	0.00	0.00	-9,109.83
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	43	m	528.21	22,713.00	22,713.00
	Drainage Pipe 375mm CR Bfilled	242	m	259.10	62,702.20	282.96	68,476.32	88,334.45	0	m	0.00	0.00	-88,334.45
	Drainage Pipe 450mm CR Bfilled	121	m	299.43	36,231.03	334.33	40,453.93	52,185.57	212	m	560.00	118,720.00	66,534.43
	Drainage Pipe 525mm CR Bfilled	41	m	403.86	16,558.26	448.03	18,369.23	23,696.31	0	m	0.00	0.00	-23,696.31
	Drainage - pits	9	No.	2,565.39	23,088.51	2,806.10	25,254.90	32,578.82	4	No.	4,359.50	17,438.00	-15,140.82
	Drainage - Sub-soil drainage	777	m	33.88	26,324.76	43.40	33,721.80	43,501.12	379	No.	94.99	36,002.00	-7,499.12
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	N/A	Item	0.00	N/A	0.00
Landscape	Tree Planting	42	No.	303.34	12,740.28	363.01	15,246.42	19,667.88	6	No.	1,000.00	6,000.00	-13,667.88
	Landscaping	2918	m2	21.61	63,057.98	25.16	73,416.88	94,707.78	181	m2	29.98	5,427.00	-89,280.78
	Topsoil Seeding	2918	m2	7.21	21,038.78	8.44	24,627.92	31,770.02	603	m2	25.00	15,075.00	-16,695.02
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00		0.00
	Street Lighting - Intersections	1	Item/ Per Leg	48,468.93	48,468.93	55,617.74	55,617.74	71,746.88	5	Item	18,000.00	90,000.00	18,253.12
Misc.	Regulatory Signage	4	Item	338.43	1,353.72	380.39	1,521.56	1,962.81	1	Item	4,000.00	4,000.00	2,037.19
	Line marking	3399	m2 of Pavement	3.11	10,570.89	4.09	13,901.91	17,933.46	767	m2	5.00	3,835.00	-14,098.46
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	6	Item	292.43	1,754.58	319.78	1,918.68	2,475.10	0	Item	0.00	0.00	-2,475.10
Other	Rock excavation	342	m3	100.00	34,200.00	115.00	39,330.00	50,735.70	169	m3	100.00	16,900.00	-33,835.70
	Telecom/power relocation allowance	162	m	1,300.00	210,600.00	1,495.00	242,190.00	312,425.10	162	m	1,500.00	243,000.00	-69,425.10
	Water/gas relocation allowance	369	m	300.00	110,700.00	345.00	127,305.00	164,223.45	369	m	2,200.00	811,800.00	647,576.55
	Service proving fee	1.00	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	-4,835.00
	Light pole relocation allowance	1.00	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	5,000.00	5,000.00	-9,835.00
	Power pole relocation allowance	1.00	Item	40,000.00	40,000.00	46,000.00	46,000.00	59,340.00	1.00	Item	5,000.00	5,000.00	-54,340.00
	Sawcut pavement tie ins, new kerb & channel, etc.	761.00	m	14.00	10,654.00	16.10	12,252.10	15,805.21	249.00	m	480.00	119,520.00	103,714.79
Delivery	Council Fees	1.00	%	3.25	49,896.75	3.25	56,704.42	73,148.70	1.00	%	3.25	62,340.00	-10,808.70
	VicRoads Fees	1.00	%	1.00	15,352.85	1.00	17,447.51	22,507.29	1.00	%	1.00	19,180.00	-3,327.29
	Traffic Management	1.00	%	5.00	76,764.23	5.00	87,237.57	112,536.47	1.00	%	5.00	95,900.00	-16,636.47
	Environmental Management	1.00	%	0.50	7,676.42	0.50	8,723.76	11,253.65	1.00	%	0.50	9,590.00	-1,663.65
	Surveying and Design	1.00	%	5.00	76,764.23	5.00	87,237.57	112,536.47	1.00	%	5.00	95,900.00	-16,636.47
	Supervision and Project management	1.00	%	9.00	138,175.62	9.00	157,027.63	202,565.64	1.00	%	9.00	172,610.00	-29,955.64
	Site Establishment	1.00	%	2.50	38,382.12	2.50	43,618.79	56,268.23	1.00	%	2.50	47,950.00	-8,318.23
	Contingency	1.00	%	15.00	230,292.69	15.00	261,712.72	337,609.41	1.00	%	15.00	287,690.00	-49,919.41

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Total - (2018) rates	Excluding Delivery				1,535,285.00		1,744,751.00						0.00
	Including Delivery				2,168,590.00		2,464,461.00						0.00
Total - (2021) rates	Excluding Delivery				1,673,461.00		1,901,780.00						0.00
	Including Delivery				2,363,764.00		2,686,264.00						0.00
Total - (2024) rates	Excluding Delivery							2,250,729.38				1,917,870.00	332,859.38
	Including Delivery							3,179,155.25				2,709,030.00	470,125.25

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-05 - Secondary - Secondary Intersection (Ferris Road & Toolern Road)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	28076	m2	3.68	103,319.68	4.96	139,256.96	179,641.48	27,234	m2	14.21	386,947.00	207,305.52
	Earthworks	10010	m3	34.07	341,040.70	40.52	405,605.20	523,230.71	8,883	m3	32.05	284,667.00	-238,563.71
Road Pavement	Primary Arterial Pavement	14000	m2	169.62	2,374,680.00	186.26	2,607,640.00	3,363,855.60	0	m2	0.00	0.00	-3,363,855.60
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	13,988	m2	194.48	2,720,358.00	2,720,358.00
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	2800	m2	14.22	39,816.00	16.16	45,248.00	58,369.92	13,988	m2	6.01	84,059.00	25,689.08
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	2936	m	54.81	160,922.16	60.90	178,802.40	230,655.10	2,960	m	82.42	243,963.00	13,307.90
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	2,376	m2	261.30	620,845.00	620,845.00
	SUP/ Footpath	3940	m2	63.51	250,229.40	73.63	290,102.20	374,231.84	4,483	m2	187.80	841,901.00	467,669.16
	Traffic Island	467	m2	77.60	36,239.20	84.07	39,260.69	50,646.29	242	m2	150.00	36,300.00	-14,346.29
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	279	m	528.20	147,369.00	147,369.00
	Drainage Pipe 375mm CR Bfilled	831	m	259.10	215,312.10	282.96	235,139.76	303,330.29	0	m	0.00	0.00	-303,330.29
	Drainage Pipe 450mm CR Bfilled	416	m	299.43	124,562.88	334.33	139,081.28	179,414.85	1,458	m	560.00	816,480.00	637,065.15
	Drainage Pipe 525mm CR Bfilled	139	m	403.86	56,136.54	448.03	62,276.17	80,336.26	0	m	0.00	0.00	-80,336.26
	Drainage - pits	22	No.	2,565.39	56,438.58	2,806.10	61,734.20	79,637.12	20	No.	4,359.55	87,191.00	7,553.88
	Drainage - Sub-soil drainage	2936	m	33.88	99,471.68	43.40	127,422.40	164,374.90	2,960	m	94.99	281,176.00	116,801.10
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	730,000.00	730,000.00	65,462.49
Landscape	Tree Planting	149	No.	303.34	45,197.66	363.01	54,088.49	69,774.15	37	No.	1,000.00	37,000.00	-32,774.15
	Landscaping	9647	m2	21.61	208,471.67	25.16	242,718.52	313,106.89	2,556	m2	30.00	76,689.00	-236,417.89
	Topsoil Seeding	9647	m2	7.21	69,554.87	8.44	81,420.68	105,032.68	8,521	m2	25.00	213,025.00	107,992.32
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	30	No.	18,000.00	540,000.00	253,012.46
Misc.	Regulatory Signage	20	Item	338.43	6,768.60	380.39	7,607.80	9,814.06	1	Item	22,500.00	22,500.00	12,685.94
	Line marking	14000	m2 of Pavement	3.11	43,540.00	4.09	57,260.00	73,865.40	13,988	m2	5.00	69,940.00	-3,925.40
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	24	Item	292.43	7,018.52	319.78	7,674.72	9,900.39	1	Item	0.00	8,400.00	-1,500.39
Other	Rock excavation	2002	m3	100.00	200,200.00	115.00	230,230.00	296,996.70	2,724	m2	100.00	272,400.00	-24,596.70
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	m	0.00	0.00	0.00
	Water/gas relocation allowance	48	m	300.00	14,400.00	345.00	16,560.00	21,362.40	48	m	2,200.00	105,600.00	84,237.60
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
very	Council Fees	1	%	3.25	167,942.50	3.25	190,657.26	245,947.86	1	%	3.25	283,870.00	37,922.14
	VicRoads Fees	1.00	%	1.00	51,674.62	1.00	58,663.77	75,676.27	1.00	%	1.00	87,350.00	11,673.73
	Traffic Management	1.00	%	5.00	258,373.08	5.00	293,318.86	378,381.33	1.00	%	5.00	436,720.00	58,338.67
	Environmental Management	1.00	%	0.50	25,837.31	0.50	29,331.89	37,838.13	1.00	%	0.50	43,680.00	5,841.87

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Detail	Surveying and Design	1.00	%	5.00	258,373.08	5.00	293,318.86	378,381.33	1.00	%	5.00	436,720.00	58,338.67
	Supervision and Project management	1.00	%	9.00	465,071.54	9.00	527,973.95	681,086.40	1.00	%	9.00	786,090.00	105,003.60
	Site Establishment	1.00	%	2.50	129,186.54	2.50	146,659.43	189,190.67	1.00	%	2.50	218,360.00	29,169.33
	Contingency	1.00	%	15.00	775,119.23	15.00	879,956.58	1,135,143.99	1.00	%	15.00	1,310,150.00	175,006.01
Total - (2018) rates	Excluding Delivery				5,167,462.00		5,866,377.00						0.00
	Including Delivery				7,299,039.00		8,286,258.00						0.00
Total - (2021) rates	Excluding Delivery				5,632,534.00		6,394,352.00						0.00
	Including Delivery				7,955,954.00		9,032,022.00						0.00
Total - (2024) rates	Excluding Delivery							7,567,626.61				8,734,310.00	-1,166,683.39
	Including Delivery							10,689,272.59				12,337,250.00	-1,647,977.41

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-06 - Primary - Secondary Intersection (Mt Cottrell Road & Toolern Road)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	37888	m2	3.68	139,427.84	4.96	187,924.48	242,422.58	44,808	m2	14.21	636,643.00	394,220.42
	Earthworks	13272	m3	34.07	452,177.04	40.52	537,781.44	693,738.06	15,246	m3	32.05	488,578.00	-205,160.06
Road Pavement	Primary Arterial Pavement	15199	m2	169.62	2,578,054.38	186.26	2,830,965.74	3,651,945.80	14,849	m2	194.46	2,887,576.00	-764,369.80
	Secondary Arterial Pavement	3786	m2	127.01	480,859.86	133.78	506,491.08	653,373.49	7,289	m2	194.50	1,417,703.00	764,329.51
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	3797	m2	14.22	53,993.34	16.16	61,359.52	79,153.78	22,138	m2	6.01	133,035.00	53,881.22
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	3556	m	54.81	194,904.36	60.90	216,560.40	279,362.92	4,319	m	82.42	355,972.00	76,609.08
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	789	m2	261.30	206,165.00	206,165.00
	SUP/ Footpath	5575	m2	63.51	354,068.25	73.63	410,487.25	529,528.55	7,584	m2	187.80	1,424,264.00	894,735.45
	Traffic Island	726	m2	77.60	56,337.60	84.07	61,034.82	78,734.92	479	m2	150.00	71,850.00	-6,884.92
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	297	m	528.21	156,877.00	156,877.00
	Drainage Pipe 375mm CR Bfilled	969	m	259.10	251,067.90	282.96	274,188.24	353,702.83	0	m	0.00	0.00	-353,702.83
	Drainage Pipe 450mm CR Bfilled	485	m	299.43	145,223.55	334.33	162,150.05	209,173.56	1,776	m	560.00	994,560.00	785,386.44
	Drainage Pipe 525mm CR Bfilled	162	m	403.86	65,425.32	448.03	72,580.86	93,629.31	0	m	0.00	0.00	-93,629.31
	Drainage - pits	28	No.	2,565.39	71,830.92	2,806.10	78,570.80	101,356.33	24	No.	4,359.58	104,630.00	3,273.67
	Drainage - Sub-soil drainage	3556	m	33.88	120,477.28	43.40	154,330.40	199,086.22	4,319	m	94.99	410,270.00	211,183.78
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	730,000.00	730,000.00	65,462.49
Landscape	Tree Planting	172	No.	303.34	52,174.48	363.01	62,437.72	80,544.66	45	No.	1,000.00	45,000.00	-35,544.66
	Landscaping	12587	m2	21.61	272,005.07	25.16	316,688.92	408,528.71	4,382	m2	30.00	131,463.00	-277,065.71
	Topsoil Seeding	12587	m2	7.21	90,752.27	8.44	106,234.28	137,042.22	14,607	m2	25.00	365,175.00	228,132.78
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	36	No.	18,000.00	648,000.00	361,012.46
Misc.	Regulatory Signage	20	Item	338.43	6,768.60	380.39	7,607.80	9,814.06	1	Item	15,000.00	15,000.00	5,185.94
	Line marking	18985	m2 of Pavement	3.11	59,043.35	4.09	77,648.65	100,166.76	7,289	m2	5.00	36,445.00	-63,721.76
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	24	Item	292.43	7,018.32	319.78	7,674.72	9,900.39	1	Item	8,400.00	8,400.00	-1,500.39
Other	Rock excavation	2655	m3	100.00	265,500.00	115.00	305,325.00	393,869.25	4,481	m2	100.00	448,100.00	54,230.75
	Telecom/power relocation allowance	31	m	1,300.00	40,300.00	1,495.00	46,345.00	59,785.05	31	m	1,500.00	46,500.00	-13,285.05
	Water/gas relocation allowance	77	m	300.00	23,100.00	345.00	26,565.00	34,268.85	77	m	2,200.00	169,400.00	135,131.15
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Power pole relocation allowance	6	Item	40,000.00	240,000.00	46,000.00	276,000.00	356,040.00	6	Item	30,000.00	180,000.00	-176,040.00
	Council Fees	1.00	%	3.25	218,876.16	3.25	247,786.50	319,644.58	1.00	%	3.25	397,130.00	77,485.42

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	VicRoads Fees	1.00	%	1.00	67,346.51	1.00	76,242.00	98,352.18	1.00	%	1.00	122,200.00	23,847.82
	Traffic Management	1.00	%	5.00	336,732.56	5.00	381,210.00	491,760.89	1.00	%	5.00	610,960.00	119,199.11
	Environmental Management	1.00	%	0.50	33,673.26	0.50	38,121.00	49,176.09	1.00	%	0.50	61,100.00	11,923.91
	Surveying and Design	1.00	%	5.00	336,732.56	5.00	381,210.00	491,760.89	1.00	%	5.00	610,960.00	119,199.11
	Supervision and Project management	1.00	%	9.00	606,118.61	9.00	686,177.99	885,169.61	1.00	%	9.00	1,099,720.00	214,550.39
	Site Establishment	1.00	%	2.50	168,366.28	2.50	190,605.00	245,880.45	1.00	%	2.50	305,480.00	59,599.55
	Contingency	1.00	%	15.00	1,010,197.68	15.00	1,143,629.99	1,475,282.68	1.00	%	15.00	1,832,870.00	357,587.32
Total - (2018) rates	Excluding Delivery				6,734,651.00		7,624,200.00						
	Including Delivery				9,512,695.00		10,769,182.00						
Total - (2021) rates	Excluding Delivery				7,340,770.00		8,310,378.00						
	Including Delivery				10,368,838.00		11,738,409.00						
Total - (2024) rates	Excluding Delivery							9,835,217.90				12,219,106.00	-2,383,888.10
	Including Delivery							13,892,245.28				17,259,526.00	-3,367,280.72

Toolern PSP & DCP - Intersection Projects

IT-10 - Primary - Primary Intersection (Mt Cottrell Road & Shogaki Drive)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Total - (2021) rates	Excluding Delivery				4,389,900.00		5,033,370.00						
	Including Delivery				6,200,734.00		7,109,635.00						
Total - (2024) rates	Excluding Delivery							5,956,923.09				6,890,243.00	-933,319.91
	Including Delivery							8,414,153.87				9,732,523.00	-1,318,369.13

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-12 - Primary - Connector T-Intersection (Shogaki Drive & Connector Road)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	30768	m2	3.68	113,226.24	4.96	152,609.28	196,865.97	30,339	m2	14.21	431,064.00	234,198.03
	Earthworks	9788	m3	34.07	333,477.16	40.52	396,609.76	511,626.59	9,908	m3	32.05	317,515.00	-194,111.59
Road Pavement	Primary Arterial Pavement	11285	m2	169.62	1,914,161.70	186.26	2,101,944.10	2,711,507.89	11,406	m2	194.50	2,218,435.00	-493,072.89
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	m2	0.00	0.00	0.00
	Collector Arterial Pavement	3212	m2	105.15	337,741.80	112.44	361,157.28	465,892.89	3,276	m2	172.66	565,647.00	99,754.11
	Subgrade Preparation	2900	m2	14.22	41,238.00	16.16	46,864.00	60,454.56	14,682	m2	6.01	88,229.00	27,774.44
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Removal	0	m2	140.00	0.00	161.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	2770	m	54.81	151,823.70	60.90	168,693.00	217,613.97	2,823	m	82.42	232,672.00	15,058.03
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	5686	m2	63.51	361,117.86	73.63	418,660.18	540,071.63	5,331	m2	187.80	1,001,154.00	461,082.37
	Traffic Island	534	m2	77.60	41,438.40	84.07	44,893.38	57,912.46	324	m2	150.00	48,600.00	-9,312.46
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	255	m	528.20	134,692.00	134,692.00
	Drainage Pipe 375mm CR Bfilled	775	m	259.10	200,802.50	282.96	219,294.00	282,889.26	0	m	0.00	0.00	-282,889.26
	Drainage Pipe 450mm CR Bfilled	388	m	299.43	116,178.84	334.33	129,720.04	167,338.85	1,006	m	560.00	563,360.00	396,021.15
	Drainage Pipe 525mm CR Bfilled	130	m	403.86	52,501.80	448.03	58,243.90	75,134.63	0	m	0.00	0.00	-75,134.63
	Drainage - pits	22	No.	2,565.39	56,438.58	2,806.10	61,734.20	79,637.12	19	No.	4,362.16	82,881.00	3,243.88
	Drainage – Sub-soil drainage	2770	m	33.88	93,847.60	43.40	120,218.00	155,081.22	2,823	m	94.99	268,162.00	113,080.78
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	730,000.00	730,000.00	65,462.49
Landscape	Tree Planting	125	No.	303.34	37,917.50	363.01	45,376.25	58,535.36	35	No.	1,000.00	35,000.00	-23,535.36
	Landscaping	9982	m2	21.61	215,711.02	25.16	251,147.12	323,979.78	3,001	m2	30.00	90,018.00	-233,961.78
	Topsoil Seeding	9982	m2	7.21	71,970.22	8.44	84,248.08	108,680.02	10,002	m2	25.00	250,050.00	141,369.98
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	0.00	0.00	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	19	No.	18,000.00	342,000.00	55,012.46
Misc.	Regulatory Signage	16	Item	338.43	5,414.88	380.39	6,086.24	7,851.25	1	Item	21,500.00	21,500.00	13,648.75
	Line marking	14497	m2 of Pavement	3.11	45,085.67	4.09	59,292.73	76,487.62	11,406	m2	5.00	57,030.00	-19,457.62
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	24	Item	292.43	7,018.32	319.78	7,674.72	9,900.39	1	Item	0.00	8,400.00	-1,500.39
Other	Rock excavation	1958	m3	100.00	195,800.00	115.00	225,170.00	290,469.30	3,034	m2	100.00	303,400.00	12,930.70
	Telecom/power relocation allowance	235	m	1,300.00	305,500.00	1,495.00	351,325.00	453,209.25	235	m	1,500.00	352,500.00	-100,709.25
	Water/gas relocation allowance	1344	m	300.00	403,200.00	345.00	463,680.00	598,147.20	1,344	m	2,200.00	2,956,800.00	2,358,652.80
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Council Fees	1	%	3.25	189,011.98	3.25	214,886.39	277,203.45	1	%	3.25	364,220.00	87,016.55
	VicRoads Fees	1.00	%	1.00	58,157.53	1.00	66,118.89	85,293.37	1.00	%	1.00	112,070.00	26,776.63
	Traffic Management	1.00	%	5.00	290,787.66	5.00	330,594.45	426,466.84	1.00	%	5.00	560,340.00	133,873.16

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	Environmental Management	1.00	%	0.50	29,078.77	0.50	33,059.45	42,646.68	1.00	%	0.50	56,040.00	13,393.32
	Surveying and Design	1.00	%	5.00	290,787.66	5.00	330,594.45	426,466.84	1.00	%	5.00	560,340.00	133,873.16
	Supervision and Project management	1.00	%	9.00	523,417.80	9.00	595,070.01	767,640.31	1.00	%	9.00	1,008,600.00	240,959.69
	Site Establishment	1.00	%	2.50	145,393.83	2.50	165,297.23	213,233.42	1.00	%	2.50	280,170.00	66,936.58
	Contingency	1.00	%	15.00	872,362.99	15.00	991,783.35	1,279,400.52	1.00	%	15.00	1,681,000.00	401,599.48
Total - (2018) rates	Excluding Delivery				5,815,753.00		6,611,889.00						
	Including Delivery				8,214,752.00		9,339,293.00						
Total - (2021) rates	Excluding Delivery				6,339,172.00		7,206,960.00						
	Including Delivery				8,954,080.00		10,179,831.00						
Total - (2024) rates	Excluding Delivery							8,529,336.82				11,206,609.00	-2,677,272.18
	Including Delivery							12,047,688.26				15,829,389.00	-3,781,700.74

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-13 - Primary - Secondary Intersection (Ferris Road, Shogaki Drive & Abey Road)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preperation	29,964	m2	3.68	110,267.52	4.96	148,621.44	191,721.66	29,494	m2	14.21	419,058.00	227,336.34
	Earthworks	5,198	m3	34.07	177,095.86	40.52	210,622.96	271,703.62	4,643	m3	32.05	148,791.00	-122,912.62
Road Pavement	Primary Arterial Pavement	1,576	m2	169.62	267,321.12	186.26	293,545.76	378,674.03	1,657	m2	194.86	322,876.00	-55,798.03
	Secondary Arterial Pavement	6,410	m2	127.01	814,134.10	133.78	857,529.80	1,106,213.44	5,446	m2	194.54	1,059,446.00	-46,767.44
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	0	m2	0.00	0.00	0.00
	Subgrade Preparation	1,598	m2	14.22	22,723.56	16.16	25,823.68	33,312.55	7,102	m2	6.01	42,678.00	9,365.45
	Pavement Rehab	4,823	m2	51.58	248,770.34	59.32	286,100.36	369,069.46	5,177	m2	75.00	388,275.00	19,205.54
	Pavement Removal	4,017	m2	140.00	562,380.00	161.00	646,737.00	834,290.73	5,092	m2	50.00	254,600.00	-579,690.73
Concrete Works	Kerb and Channel	2,781	m	54.81	152,426.61	60.90	169,362.90	218,478.14	2,966	m	82.42	244,458.00	25,979.86
	Kerb Removal	1,204	m	60.00	72,240.00	69.00	83,076.00	107,168.04	2,052	m	10.00	20,520.00	-86,648.04
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	4,551	m2	63.51	289,034.01	73.63	335,090.13	432,266.27	4,505	m2	187.80	846,032.00	413,765.73
	Traffic Island	1,474	m2	77.60	114,382.40	84.07	123,919.18	159,855.74	0	m2	0.00	0.00	-159,855.74
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	224	m2	528.21	118,318.00	118,318.00
	Drainage Pipe 375mm CR Bfilled	750	m	259.10	194,325.00	282.96	212,220.00	273,763.80	0	m	0.00	0.00	-273,763.80
	Drainage Pipe 450mm CR Bfilled	252	m	299.43	75,456.36	334.33	84,251.16	108,684.00	1,290	m	560.00	722,400.00	613,716.00
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	29	No.	2,565.39	74,396.31	2,806.10	81,376.90	104,976.20	17	m	4,356.71	74,064.00	-30,912.20
	Drainage - Sub-soil drainage	2,781	m	33.88	94,220.28	43.40	120,695.40	155,697.07	2,966	No.	94.99	281,746.00	126,048.93
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	No.	685,000.00	685,000.00	20,462.49
Landscape	Tree Planting	128	No.	303.34	38,827.52	363.01	46,465.28	59,940.21	33	Item	1,000.00	33,000.00	-26,940.21
	Landscaping	11,063	m2	21.61	239,071.43	25.16	278,345.08	359,065.15	3,605	No.	30.00	108,162.00	-250,903.15
	Topsoil Seeding	11,063	m2	7.21	79,764.23	8.44	93,371.72	120,449.52	12,018	m2	25.00	300,450.00	180,000.48
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	26	Item	18,000.00	468,000.00	181,012.46
Misc.	Regulatory Signage	16	Item	338.43	5,414.88	380.39	6,086.24	7,851.25	1	Item	21,500.00	21,500.00	13,648.75
	Line marking	12,809	m2 of Pavement	3.11	39,835.99	4.09	52,388.81	67,581.56	1,657	m2	5.00	8,285.00	-59,296.56
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	0	Item	292.43	0.00	319.78	0.00	0.00	0	Item	0.00	0.00	0.00
Other	Rock excavation	1,040	m3	100.00	104,000.00	115.00	119,600.00	154,284.00	2,950	m3	100.00	295,000.00	140,716.00
	Telecom/power relocation allowance	947	m	1,300.00	1,231,100.00	1,495.00	1,415,765.00	1,826,336.85	947	m	1,500.00	1,420,500.00	-405,836.85
	Water/gas relocation allowance	743	m	300.00	222,900.00	345.00	256,335.00	330,672.15	743	m	2,200.00	1,634,600.00	1,303,927.85
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Earthen mound removal	2,090	m3	34.07	71,206.30	40.52	84,686.80	109,245.97	2,090	Item	50.00	104,500.00	-4,745.97
	Light pole relocation allowance	8	Item	10,000.00	80,000.00	11,500.00	92,000.00	118,680.00	8	Item	5,000.00	40,000.00	-78,680.00
	Power pole relocation allowance	4	Item	40,000.00	160,000.00	46,000.00	184,000.00	237,360.00	4	m	5,000.00	20,000.00	-217,360.00
	Sawcut pavement tie ins, new kerb & channe	2,500	m	14.00	35,000.00	16.10	40,250.00	51,922.50	1,933	m	480.00	927,840.00	875,917.50

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Rounabout removal	0	m2	0.00	0.00	0.00	0.00	0.00	627	m2	50.00	31,350.00	31,350.00
Delivery	Council Fees	1.00	%	3.25	204,439.15	3.25	233,529.22	301,252.69	1.00	%	3.25	362,350.00	61,097.31
	VicRoads Fees	1.00	%	1.00	62,904.35	1.00	71,855.14	92,693.14	1.00	%	1.00	111,490.00	18,796.86
	Traffic Management	1.00	%	5.00	314,521.77	5.00	359,275.72	463,465.68	1.00	%	5.00	557,450.00	93,984.32
	Environmental Management	1.00	%	0.50	31,452.18	0.50	35,927.57	46,346.57	1.00	%	0.50	55,750.00	9,403.43
	Surveying and Design	1.00	%	5.00	314,521.77	5.00	359,275.72	463,465.68	1.00	%	5.00	557,450.00	93,984.32
	Supervision and Project management	1.00	%	9.00	566,139.18	9.00	646,696.29	834,238.22	1.00	%	9.00	1,003,410.00	169,171.78
	Site Establishment	1.00	%	2.50	157,260.88	2.50	179,637.86	231,732.84	1.00	%	2.50	278,730.00	46,997.16
	Contingency	1.00	%	15.00	943,565.30	15.00	1,077,827.15	1,390,397.03	1.00	%	15.00	1,672,350.00	281,952.97
Total - (2018) rates	Excluding Delivery				6,290,435.00		7,185,514.00						
	Including Delivery				8,885,240.00		10,149,539.00						
Total - (2021) rates	Excluding Delivery				6,856,575.00		7,832,211.00						
	Including Delivery				9,684,912.00		11,062,998.00						
Total - (2024) rates	Excluding Delivery							9,269,313.51				11,148,949.00	-1,879,635.49
	Including Delivery							13,092,905.33				15,747,929.00	-2,655,023.67

Toolern PSP & DCP - Intersection Projects

IT-16 - Secondary - Connector T-Intersection (Abey Road, Industry Collector Road)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	16,107	m2	3.68	59,273.76	4.96	79,890.72	103,059.03	15,828	m2	14.21	224,888.00	121,828.97
	Earthworks	2,845	m3	34.07	96,929.15	40.52	115,279.40	148,710.43	3,201	m3	32.05	102,580.00	-46,130.43
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	3,805	m2	127.01	483,273.05	133.78	509,032.90	656,652.44	4,448	m2	194.57	865,439.00	208,786.56
	Collector Arterial Pavement	801	m2	105.15	84,225.15	112.44	90,064.44	116,183.13	703	m2	173.61	122,050.00	5,866.87
	Subgrade Preparation	922	m2	14.22	13,110.84	16.16	14,899.52	19,220.38	5,151	m2	6.01	30,954.00	11,733.62
	Pavement Rehab	3,459	m2	51.58	178,415.22	59.32	205,187.88	264,692.37	2,848	m2	75.00	213,600.00	-51,092.37
	Pavement Removal	0	m2	140.00	0.00	161.00	0.00	0.00	101	m2	50.00	5,050.00	5,050.00
Concrete Works	Kerb and Channel	1,599	m	54.81	87,641.19	60.90	97,379.10	125,619.04	1,644	m	82.42	135,498.00	9,878.96
	Kerb Removal	413	m	60.00	24,780.00	69.00	28,497.00	36,761.13	826	m	10.00	8,260.00	-28,501.13
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	2,404	m2	63.51	152,678.04	73.63	177,006.52	228,338.41	2,831	m2	187.80	531,658.00	303,319.59
	Concrete Removal	0	m3	45.03	0.00	49.53	0.00	0.00	0	m2	0.00	0.00	0.00
	Traffic Island	227	m2	77.60	17,615.20	84.07	19,083.89	24,618.22	0	m2	0.00	0.00	-24,618.22
	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	179	m	528.21	94,549.00	94,549.00
	Drainage Pipe 375mm CR Bfilled	236	m	259.10	61,147.60	282.96	66,778.56	86,144.34	0	m	0.00	0.00	-86,144.34
	Drainage Pipe 450mm CR Bfilled	118	m	299.43	35,332.74	334.33	39,450.94	50,891.71	894	m	560.00	500,640.00	449,748.29
	Drainage Pipe 525mm CR Bfilled	40	m	403.86	16,154.40	448.03	17,921.20	23,118.35	0	m	0.00	0.00	-23,118.35
	Drainage - pits	10	No.	2,565.39	25,653.90	2,806.10	28,061.00	36,198.69	13	No.	4,355.77	56,625.00	20,426.31
	Drainage - Sub-soil drainage	1,599	m	33.88	54,174.12	43.40	69,396.60	89,521.61	1,644	No.	94.99	156,167.00	66,645.39
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	3	Item/ Per Leg	109,730.28	329,190.84	128,786.34	386,359.02	498,403.14	1	Item	460,000.00	460,000.00	-38,403.14
Landscape	Tree Planting	87	No.	303.34	26,390.58	363.01	31,581.87	40,740.61	25	No.	1,000.00	25,000.00	-15,740.61
	Landscaping	5,371	m2	21.61	116,067.31	25.16	135,134.36	174,323.32	1,514	m2	30.00	45,423.00	-128,900.32
	Topsoil Seeding	5,371	m2	7.21	38,724.91	8.44	45,331.24	58,477.30	5,047	m2	25.00	126,175.00	67,697.70
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	3	Item/ Per Leg	48,468.93	145,406.79	55,617.74	166,853.22	215,240.65	18	Item	18,000.00	324,000.00	108,759.35
Misc.	Regulatory Signage	5	Item	338.43	1,692.15	380.39	1,901.95	2,453.52	1	Item	15,000.00	15,000.00	12,546.48
	Line marking	8,065	m2 of Pavement	3.11	25,082.15	4.09	32,985.85	42,551.75	7,999	m2	5.00	39,995.00	-2,556.75
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	18	Item	292.43	5,263.74	319.78	5,756.04	7,425.29	0	Item	0.00	0.00	-7,425.29
Other	Rock excavation	569	m3	100.00	56,900.00	115.00	65,435.00	84,411.15	1,583	m3	100.00	158,300.00	73,888.85
	Telecom/power relocation allowance	413	m	1,300.00	536,900.00	1,495.00	617,435.00	796,491.15	413	m	1,500.00	619,500.00	-176,991.15
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	m	0.00	0.00	0.00
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	-4,835.00
	Light pole relocation allowance	3	Item	10,000.00	30,000.00	11,500.00	34,500.00	44,505.00	3.00	Item	5,000.00	15,000.00	-29,505.00
	Power pole relocation allowance	4	Item	40,000.00	160,000.00	46,000.00	184,000.00	237,360.00	4.00	Item	5,000.00	20,000.00	-217,360.00
	Sawcut pavement tie ins, new kerb & channel, etc.	413	m	14.00	5,782.00	16.10	6,649.30	8,577.60	844.00	m	480.00	405,120.00	396,542.40
very	Council Fees	1.00	%	3.25	95,847.36	3.25	109,573.23	141,349.46	1.00	%	3.25	175,800.00	34,450.54
	VicRoads Fees	1.00	%	1.00	29,491.49	1.00	33,714.84	43,492.14	1.00	%	1.00	54,090.00	10,597.86
	Traffic Management	1.00	%	5.00	147,457.47	5.00	168,574.20	217,460.71	1.00	%	5.00	270,450.00	52,989.29
	Environmental Management	1.00	%	0.50	14,745.75	0.50	16,857.42	21,746.07	1.00	%	0.50	27,050.00	5,303.93

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Deliv	Surveying and Design	1.00	%	5.00	147,457.47	5.00	168,574.20	217,460.71	1.00	%	5.00	270,450.00	52,989.29
	Supervision and Project management	1.00	%	9.00	265,423.45	9.00	303,433.56	391,429.29	1.00	%	9.00	486,810.00	95,380.71
	Site Establishment	1.00	%	2.50	73,728.74	2.50	84,287.10	108,730.36	1.00	%	2.50	135,230.00	26,499.64
	Contingency	1.00	%	15.00	442,372.42	15.00	505,722.59	652,382.14	1.00	%	15.00	811,350.00	158,967.86
Total - (2018) rates	Excluding Delivery				2,949,149.00		3,371,484.00						
	Including Delivery				4,165,674.00		4,762,221.00						
Total - (2021) rates	Excluding Delivery				3,214,573.00		3,674,918.00						
	Including Delivery				4,540,584.00		5,190,822.00						
Total - (2024) rates	Excluding Delivery							4,349,214.30				5,408,971.00	-1,059,756.70
	Including Delivery							6,143,265.19				7,640,201.00	-1,496,935.81

Group	Sub Item	VPA Benchmark Costings							WT Total Cost (2024)				
		Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	16463	m2	3.68	60,583.84	4.96	81,656.48	105,336.86	16,126	m2	14.21	229,122.00	123,785.14
	Earthworks	2855	m3	34.07	97,269.85	40.52	115,684.60	149,233.13	2,854	m3	32.05	91,460.00	-57,773.13
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	m2	0.00	0.00	0.00
	Secondary Arterial Pavement	3883	m2	127.01	493,179.83	133.78	519,467.74	670,113.38	3,815	m2	194.52	742,090.00	71,976.62
	Collector Arterial Pavement	727	m2	105.15	76,444.05	112.44	81,743.88	105,449.61	805	m2	173.23	139,452.00	34,002.39
	Subgrade Preparation	922	m2	14.22	13,110.84	16.16	14,899.52	19,220.38	4,620	m2	6.01	27,763.00	8,542.62
	Pavement Rehab	3731	m2	51.58	192,444.98	59.32	221,322.92	285,506.57	3,462	m2	75.00	259,650.00	-25,856.57
	Pavement Removal	385	m2	140.00	53,900.00	161.00	61,985.00	79,960.65	395	m2	50.00	19,750.00	-60,210.65
Concrete Works	Kerb and Channel	1714	m	54.81	93,944.34	60.90	104,382.60	134,653.55	1,752	m	82.42	144,400.00	9,746.45
	Kerb Removal	1031	m	60.00	61,860.00	69.00	71,139.00	91,769.31	972	m	10.00	9,720.00	-82,049.31
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	1,508	m2	261.30	394,038.00	394,038.00
	SUP/ Footpath	2339	m2	63.51	148,549.89	73.63	172,220.57	222,164.54	2,688	m2	187.80	504,802.00	282,637.46
	Concrete Removal	1286	m3	45.03	57,908.58	49.53	63,695.58	82,167.30	1,000	m2	50.00	50,000.00	-32,167.30
	Traffic Island	342	m2	77.60	26,539.20	84.07	28,751.94	37,090.00	205	m2	150.00	30,750.00	-6,340.00
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	179	m	528.21	94,549.00	94,549.00
	Drainage Pipe 375mm CR Bfilled	242	m	259.10	62,702.20	282.96	68,476.32	88,334.45	0	m	0.00	0.00	-88,334.45
	Drainage Pipe 450mm CR Bfilled	121	m	299.43	36,231.03	334.33	40,453.93	52,185.57	882	m	560.00	493,920.00	441,734.43
	Drainage Pipe 525mm CR Bfilled	41	m	403.86	16,558.26	448.03	18,369.23	23,696.31	0	m	0.00	0.00	-23,696.31
	Drainage - pits	10	No.	2,565.39	25,653.90	2,806.10	28,061.00	36,198.69	13	No.	4,355.77	56,625.00	20,426.31
	Drainage - Sub-soil drainage	1714	m	33.88	58,070.32	43.40	74,387.60	95,960.00	1,752	No.	94.99	166,426.00	70,466.00
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	3	Item/ Per Leg	109,730.28	329,190.84	128,786.34	386,359.02	498,403.14	1	Item	505,000.00	505,000.00	6,596.86
Landscape	Tree Planting	87	No.	303.34	26,390.58	363.01	31,581.87	40,740.61	24	No.	1,000.00	24,000.00	-16,740.61
	Landscaping	5493	m2	21.61	118,703.73	25.16	138,203.88	178,283.01	1,545	m2	30.01	46,359.00	-131,924.01
	Topsoil Seeding	5493	m2	7.21	39,604.53	8.44	46,360.92	59,805.59	5,151	m2	25.00	128,775.00	68,969.41
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	3	Item/ Per Leg	48,468.93	145,406.79	55,617.74	166,853.22	215,240.65	18	Item	18,000.00	324,000.00	108,759.35
Misc.	Regulatory Signage	5	Item	338.43	1,692.15	380.39	1,901.95	2,453.52	1	Item	15,000.00	15,000.00	12,546.48
	Line marking	8341	m2 of Pavement	3.11	25,940.51	4.09	34,114.69	44,007.95	8,082	m2	5.00	40,410.00	-3,597.95
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of L'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	18	Item	292.43	5,263.74	319.78	5,756.04	7,425.29	1	Item	0.00	10,000.00	2,574.71
Other	Rock excavation	571	m3	100.00	57,100.00	115.00	65,665.00	84,707.85	1,583	m3	100.00	158,300.00	73,592.15
	Telecom/power relocation allowance	453	m	1,300.00	588,900.00	1,495.00	677,235.00	873,633.15	453	m	1,500.00	679,500.00	-194,133.15
	Water/gas relocation allowance	39	m	300.00	11,700.00	345.00	13,455.00	17,356.95	39	m	2,200.00	85,800.00	68,443.05
	Service proving fee	1.00	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	-4,835.00
	Light pole relocation allowance	4.00	Item	10,000.00	40,000.00	11,500.00	46,000.00	59,340.00	4.00	Item	5,000.00	20,000.00	-39,340.00
	Power pole relocation allowance	4.00	Item	40,000.00	160,000.00	46,000.00	184,000.00	237,360.00	4.00	Item	5,000.00	20,000.00	-217,360.00
	Sawcut pavement tie ins, new kerb & channel, etc.	459.00	m	14.00	6,426.00	16.10	7,389.90	9,532.97	1,035.00	m	480.00	496,800.00	487,267.03
Delivery	Council Fees	1.00	%	3.25	104,409.98	3.25	119,314.19	153,915.30	1.00	%	3.25	198,770.00	44,854.70
	VicRoads Fees	1.00	%	1.00	32,126.15	1.00	36,712.06	47,358.56	1.00	%	1.00	61,160.00	13,801.44
	Traffic Management	1.00	%	5.00	160,630.73	5.00	183,560.29	236,792.78	1.00	%	5.00	305,800.00	69,007.22
	Environmental Management	1.00	%	0.50	16,063.07	0.50	18,356.03	23,679.28	1.00	%	0.50	30,580.00	6,900.72
	Surveying and Design	1.00	%	5.00	160,630.73	5.00	183,560.29	236,792.78	1.00	%	5.00	305,800.00	69,007.22
	Supervision and Project management	1.00	%	9.00	289,135.32	9.00	330,408.52	426,227.00	1.00	%	9.00	550,440.00	124,213.00
	Site Establishment	1.00	%	2.50	80,315.37	2.50	91,780.15	118,396.39	1.00	%	2.50	152,900.00	34,503.61
	Contingency	1.00	%	15.00	481,892.20	15.00	550,680.87	710,378.33	1.00	%	15.00	917,400.00	207,021.67
Total - (2018) rates	Excluding Delivery				3,212,615.00		3,671,206.00						
	Including Delivery				4,537,818.00		5,185,578.00						
Total - (2021)	Excluding Delivery				3,501,750.00		4,001,615.00						

Toolern PSP & DCP - Intersection Projects

IT-17 - Secondary - Connector T-Intersection (Abey Road, Bundy Drive)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
rates	Including Delivery				4,946,222.00		5,652,281.00						
Total - (2024) rates	Excluding Delivery							4,735,855.52				6,115,961.00	-1,380,105.48
	Including Delivery							6,689,395.92				8,638,811.00	-1,949,415.08

Appendix B

Toolern PSP & DCP - Intersection Projects

IT-20 - Primary- Connector Intersection (Mt Cottrell Road, South Connector Road)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	25670	m2	3.68	94,465.60	4.96	127,323.20	164,246.93	18,779	m2	14.21	266,817.00	102,570.07
	Earthworks	9003	m3	34.07	306,732.21	40.52	364,801.56	470,594.01	6,278	m3	32.05	201,187.00	-269,407.01
Road Pavement	Primary Arterial Pavement	11412	m2	169.62	1,935,703.44	186.26	2,125,599.12	2,742,022.86	7,338	m2	209.69	1,538,690.00	-1,203,332.86
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	1576	m2	105.15	165,716.40	112.44	177,205.44	228,595.02	1,927	m2	172.64	332,683.00	104,087.98
	Subgrade Preparation	2598	m2	14.22	36,943.56	16.16	41,983.68	54,158.95	9,265	m2	6.01	55,677.00	1,518.05
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	2394	m	54.81	131,215.14	60.90	145,794.60	188,075.03	1,630	m	82.42	134,345.00	-53,730.03
	Cycle Path	3505	m2	76.59	268,447.95	91.94	322,249.70	415,702.11	2,516	m2	261.30	657,427.00	241,724.89
	SUP/ Footpath	1103	m2	63.51	70,051.53	73.63	81,213.89	104,765.92	906	m2	187.80	170,145.00	65,379.08
	Traffic Island	145	m2	77.60	11,252.00	84.07	12,190.15	15,725.29	89	m2	150.00	13,350.00	-2,375.29
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	387	m	528.20	204,415.00	204,415.00
	Drainage Pipe 375mm CR Bfilled	1000	m	259.10	259,100.00	282.96	282,960.00	365,018.40	0	NA	NA	0.00	-365,018.40
	Drainage Pipe 450mm CR Bfilled	194	m	299.43	58,089.42	334.33	64,860.02	83,669.43	856	m	560.00	479,360.00	395,690.57
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	32	No.	2,565.39	82,092.48	2,806.10	89,795.20	115,835.81	24	No	4,359.58	104,630.00	-11,205.81
	Drainage - Sub-soil drainage	2394	m	33.88	81,108.72	43.40	103,899.60	134,030.48	1,630	m	94.99	154,837.00	20,806.52
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	640,000.00	640,000.00	-24,537.51
Landscape	Tree Planting	115	No.	303.34	34,884.10	363.01	41,746.15	53,852.53	25	No	1,000.00	25,000.00	-28,852.53
	Landscaping	7920	m2	21.61	171,151.20	25.16	199,267.20	257,054.69	2,142	m2	30.00	64,269.00	-192,785.69
	Topsoil Seeding	7920	m2	7.21	57,103.20	8.44	66,844.80	86,229.79	7,141	m2	25.00	178,525.00	92,295.21
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	NA	NA	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	18	No	18,000.00	324,000.00	37,012.46
Misc.	Regulatory Signage	16	Item	338.43	5,414.88	380.39	6,086.24	7,851.25	1	Item	14,500.00	14,500.00	6,648.75
	Line marking	12988	m2 of Pavement	3.11	40,392.68	4.09	53,120.92	68,525.99	9,265	m2	5.00	46,325.00	-22,200.99
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	NA	NA	0.00	0.00
	Tactile Pavers (Hazard only)	16	Item	292.43	4,678.88	319.78	5,116.48	6,600.26	0	NA	NA	0.00	-6,600.26
Other	Rock excavation	1801	m3	100.00	180,100.00	115.00	207,115.00	267,178.35	1,878	m3	100.00	187,800.00	-79,378.35
	Telecom/power relocation allowance	270	m	1,300.00	351,000.00	1,495.00	403,650.00	520,708.50	270	m	1,500.00	405,000.00	-115,708.50
	Water/gas relocation allowance	56	m	300.00	16,800.00	345.00	19,320.00	24,922.80	56	m	2,200.00	123,200.00	98,277.20
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Power pole removal	7	Item	40,000.00	280,000.00	46,000.00	322,000.00	415,380.00	7	Item	5,000.00	35,000.00	-380,380.00
	Electrical overhead relocation								372	m	1,210.00	450,120.00	450,120.00
	Tree/vegetation removal								11,698	m2	10.00	116,980.00	116,980.00
	Dirt/Gravel Road Removal								6,604	m2	75.00	495,300.00	495,300.00
	Kerb Removal								946	m	10.00	9,460.00	9,460.00
very	Council Fees	1.00	%	3.25	174,089.01	3.25	198,295.20	255,800.81	1.00	%	3.25	244,940.00	-10,860.81
	VicRoads Fees	1.00	%	1.00	53,565.85	1.00	61,013.91	78,707.94	1.00	%	1.00	75,370.00	-3,337.94
	Traffic Management	1.00	%	5.00	267,829.24	5.00	305,069.54	393,539.70	1.00	%	5.00	376,830.00	-16,709.70
	Environmental Management	1.00	%	0.50	26,782.92	0.50	30,506.95	39,353.97	1.00	%	0.50	37,690.00	-1,663.97

Toolern PSP & DCP - Intersection Projects

IT-20 - Primary- Connector Intersection (Mt Cottrell Road, South Connector Road)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Detail	Surveying and Design	1.00	%	5.00	267,829.24	5.00	305,069.54	393,539.70	1.00	%	5.00	376,830.00	-16,709.70
	Supervision and Project management	1.00	%	9.00	482,092.64	9.00	549,125.16	708,371.46	1.00	%	9.00	678,290.00	-30,081.46
	Site Establishment	1.00	%	2.50	133,914.62	2.50	152,534.77	196,769.85	1.00	%	2.50	188,420.00	-8,349.85
	Contingency	1.00	%	15.00	803,487.73	15.00	915,208.61	1,180,619.10	1.00	%	15.00	1,130,490.00	-50,129.10
Total - (2018) rates	Excluding Delivery				5,356,585.00		6,101,391.00						
	Including Delivery				7,566,176.00		8,618,214.00						
Total - (2021) rates	Excluding Delivery				5,838,678.00		6,650,516.00						
	Including Delivery				8,247,133.00		9,393,854.00						
Total - (2024) rates	Excluding Delivery							7,870,794.00				7,536,542.00	334,252.00
	Including Delivery							11,117,496.53				10,645,402.00	472,094.53

Toolern PSP & DCP - Intersection Projects

IT-21 - Primary- Connector Intersection (Toolern Road, Eastern North-South Connector Road)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	18525	m2	3.68	68,172.00	4.96	91,884.00	118,530.36	18,519	m2	14.21	263,122.00	144,591.64
	Earthworks	6457	m3	34.07	219,989.99	40.52	261,637.64	337,512.56	5,768	m3	32.05	184,843.00	-152,669.56
Road Pavement	Primary Arterial Pavement	7682	m2	169.62	1,303,020.84	186.26	1,430,849.32	1,845,795.62	7,032	m2	209.69	1,474,563.00	-371,232.62
	Secondary Arterial Pavement	0	m2	127.01	0.00	133.78	0.00	0.00	0	NA	NA	0.00	0.00
	Collector Arterial Pavement	1801	m2	105.15	189,375.15	112.44	202,504.44	261,230.73	1,383	m2	172.82	239,009.00	-22,221.73
	Subgrade Preparation	1897	m2	14.22	26,975.34	16.16	30,655.52	39,545.62	8,415	m2	6.01	50,569.00	11,023.38
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	1,154	m2	75.00	86,550.00	86,550.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1916	m	54.81	105,015.96	60.90	116,684.40	150,522.88	1,748	m	82.42	144,070.00	-6,452.88
	Cycle Path	2444	m2	76.59	187,185.96	91.94	224,701.36	289,864.75	360	m2	261.30	94,067.00	-195,797.75
	SUP/ Footpath	377	m2	63.51	23,943.27	73.63	27,758.51	35,808.48	2,822	m2	187.80	529,967.00	494,158.52
	Traffic Island	117	m2	77.60	9,079.20	84.07	9,836.19	12,688.69	75	m2	150.00	11,250.00	-1,438.69
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	377	m	528.20	199,133.00	199,133.00
	Drainage Pipe 375mm CR Bfilled	943	m	259.10	244,331.30	282.96	266,831.28	344,212.35	0	NA	NA	0.00	-344,212.35
	Drainage Pipe 450mm CR Bfilled	0	m	299.43	0.00	334.33	0.00	0.00	966	m	560.00	540,960.00	540,960.00
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	25	No.	2,565.39	64,134.75	2,806.10	70,152.50	90,496.73	26	No	4,355.81	113,251.00	22,754.28
	Drainage - Sub-soil drainage	1916	m	33.88	64,914.08	43.40	83,154.40	107,269.18	1,748	m	94.99	166,046.00	58,776.82
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	640,000.00	640,000.00	-24,537.51
Landscape	Tree Planting	87	No.	303.34	26,390.58	363.01	31,581.87	40,740.61	28	No	1,000.00	28,000.00	-12,740.61
	Landscaping	6082	m2	21.61	131,432.02	25.16	153,023.12	197,399.82	1,721	m2	29.99	51,615.00	-145,784.82
	Topsoil Seeding	6082	m2	7.21	43,851.22	8.44	51,332.08	66,218.38	5,735	m2	25.00	143,375.00	77,156.62
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	NA	NA	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	20	No	18,000.00	360,000.00	73,012.46
Misc.	Regulatory Signage	16	Item	338.43	5,414.88	380.39	6,086.24	7,851.25	1	Item	15,000.00	15,000.00	7,148.75
	Line marking	9483	m2 of Pavement	3.11	29,492.13	4.09	38,785.47	50,033.26	9,569	m2	5.00	47,845.00	-2,188.26
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	NA	NA	0.00	0.00
	Tactile Pavers (Hazard only)	16	Item	292.43	4,678.88	319.78	5,116.48	6,600.26	0	NA	NA	0.00	-6,600.26
Other	Rock excavation	1292	m3	100.00	129,200.00	115.00	148,580.00	191,668.20	1,852	m3	100.00	185,200.00	-6,468.20
	Telecom/power relocation allowance	60	m	1,300.00	78,000.00	1,495.00	89,700.00	115,713.00	60	m	1,500.00	90,000.00	-25,713.00
	Water/gas relocation allowance	50	m	300.00	15,000.00	345.00	17,250.00	22,252.50	50	m	2,200.00	110,000.00	87,747.50
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Power pole removal	1	Item	30,000.00	30,000.00	34,500.00	34,500.00	44,505.00	1	item	5,000.00	5,000.00	-39,505.00
	Sawcut pavement tie ins, new kerb & channel, etc.								200	m	480.00	96,000.00	96,000.00

IT-21 - Primary- Connector Intersection (Toolern Road, Eastern North-South Connector Road)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Tree/vegetation removal								17,102	m2	10.00	171,020.00	171,020.00
Delivery	Council Fees	1.00	%	3.25	120,696.52	3.25	137,470.21	177,336.57	1.00	%	3.25	199,810.00	22,473.43
	VicRoads Fees	1.00	%	1.00	37,137.39	1.00	42,298.53	54,565.10	1.00	%	1.00	61,480.00	6,914.90
	Traffic Management	1.00	%	5.00	185,686.95	5.00	211,492.63	272,825.49	1.00	%	5.00	307,400.00	34,574.51
	Environmental Management	1.00	%	0.50	18,568.70	0.50	21,149.26	27,282.55	1.00	%	0.50	30,740.00	3,457.45
	Surveying and Design	1.00	%	5.00	185,686.95	5.00	211,492.63	272,825.49	1.00	%	5.00	307,400.00	34,574.51
	Supervision and Project management	1.00	%	9.00	334,236.51	9.00	380,686.73	491,085.88	1.00	%	9.00	553,320.00	62,234.12
	Site Establishment	1.00	%	2.50	92,843.48	2.50	105,746.31	136,412.75	1.00	%	2.50	153,700.00	17,287.25
	Contingency	1.00	%	15.00	557,060.86	15.00	634,477.89	818,476.47	1.00	%	15.00	922,200.00	103,723.53
Total - (2018) rates	Excluding Delivery				3,713,739.00		4,229,853.00						
	Including Delivery				5,245,656.00		5,974,667.00						
Total - (2021) rates	Excluding Delivery				4,047,976.00		4,610,540.00						
	Including Delivery				5,717,766.00		6,512,388.00						
Total - (2024) rates	Excluding Delivery							5,456,509.82				6,147,955.00	-691,445.18
	Including Delivery							7,707,320.11				8,684,005.00	-976,684.89

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Siteworks/ Earthworks	Site Preparation	18549	m2	3.68	68,260.32	4.96	92,003.04	118,683.92	18,504	m2	14.21	262,909.00	144,225.08
	Earthworks	5862	m3	34.07	199,718.34	40.52	237,528.24	306,411.43	6,687	m3	32.05	214,293.00	-92,118.43
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	NA	NA	0.00	0.00
	Secondary Arterial Pavement	7713	m2	127.01	979,628.13	133.78	1,031,845.14	1,331,080.23	9,318	m2	185.48	1,728,300.00	397,219.77
	Collector Arterial Pavement	1801	m2	105.15	189,375.15	112.44	202,504.44	261,230.73	1,438	m2	172.79	248,469.00	-12,761.73
	Subgrade Preparation	1903	m2	14.22	27,060.66	16.16	30,752.48	39,670.70	10,756	m2	6.01	64,637.00	24,966.30
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1867	m	54.81	102,330.27	60.90	113,700.30	146,673.39	1,749	m	82.42	144,153.00	-2,520.39
	Cycle Path	2452	m2	76.59	187,798.68	91.94	225,436.88	290,813.58	387	m2	261.30	101,123.00	-189,690.58
	SUP/ Footpath	377	m2	63.51	23,943.27	73.63	27,758.51	35,808.48	2,781	m2	187.80	522,268.00	486,459.52
	Traffic Island	183	m2	77.60	14,200.80	84.07	15,384.81	19,846.40	75	m2	150.00	11,250.00	-8,596.40
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	420	m	528.20	221,846.00	221,846.00
	Drainage Pipe 375mm CR Bfilled	922	m	259.10	238,890.20	282.96	260,889.12	336,546.96	0	NA	NA	0.00	-336,546.96
	Drainage Pipe 450mm CR Bfilled	0	m	299.43	0.00	334.33	0.00	0.00	1,066	m	560.00	596,960.00	596,960.00
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	22	No.	2,565.39	56,438.58	2,806.10	61,734.20	79,637.12	29	No	4,357.90	126,379.00	46,741.88
	Drainage - Sub-soil drainage	1867	m	33.88	63,253.96	43.40	81,027.80	104,525.86	1,749	m	94.99	166,141.00	61,615.14
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	4	Item/ Per Leg	109,730.28	438,921.12	128,786.34	515,145.36	664,537.51	1	Item	640,000.00	640,000.00	-24,537.51
Landscape	Tree Planting	88	No.	303.34	26,693.92	363.01	31,944.88	41,208.90	30	No	1,000.00	30,000.00	-11,208.90
	Landscaping	6007	m2	21.61	129,811.27	25.16	151,136.12	194,965.59	1,704	m2	29.99	51,111.00	-143,854.59
	Topsoil Seeding	6007	m2	7.21	43,310.47	8.44	50,699.08	65,401.81	5,679	m2	25.00	141,975.00	76,573.19
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	NA	NA	0.00	0.00
	Street Lighting - Intersections	4	Item/ Per Leg	48,468.93	193,875.72	55,617.74	222,470.96	286,987.54	22	No	18,000.00	396,000.00	109,012.46
Misc.	Regulatory Signage	10	Item	338.43	3,384.30	380.39	3,803.90	4,907.03	1	Item	18,000.00	18,000.00	13,092.97
	Line marking	9514	m2 of Pavement	3.11	29,588.54	4.09	38,912.26	50,196.82	10,756	m2	5.00	53,780.00	3,583.18
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	NA	NA	0.00	0.00
	Tactile Pavers (Hazard only)	16	Item	292.43	4,678.88	319.78	5,116.48	6,600.26	0	NA	NA	0.00	-6,600.26
Other	Rock excavation	1173	m3	100.00	117,300.00	115.00	134,895.00	174,014.55	1,851	m3	100.00	185,100.00	11,085.45
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	NA	NA	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	NA	NA	0.00	0.00
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
Delivery	Council Fees	1	%	3.25	104,643.74	3.25	118,115.41	152,368.88	1	%	3.25	196,050.00	43,681.12
	VicRoads Fees	1.00	%	1.00	32,198.07	1.00	36,343.20	46,882.73	1.00	%	1.00	60,330.00	13,447.27
	Traffic Management	1.00	%	5.00	160,990.36	5.00	181,716.02	234,413.67	1.00	%	5.00	301,610.00	67,196.33
	Environmental Management	1.00	%	0.50	16,099.04	0.50	18,171.60	23,441.37	1.00	%	0.50	30,170.00	6,728.63
	Surveying and Design	1.00	%	5.00	160,990.36	5.00	181,716.02	234,413.67	1.00	%	5.00	301,610.00	67,196.33

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
	Supervision and Project management	1.00	%	9.00	289,782.65	9.00	327,088.84	421,944.60	1.00	%	9.00	542,900.00	120,955.40
	Site Establishment	1.00	%	2.50	80,495.18	2.50	90,858.01	117,206.83	1.00	%	2.50	150,810.00	33,603.17
	Contingency	1.00	%	15.00	482,971.09	15.00	545,148.06	703,241.00	1.00	%	15.00	904,830.00	201,589.00
Total - (2018) rates	Excluding Delivery				3,219,807.00		3,634,320.00						
	Including Delivery				4,547,978.00		5,133,478.00						
Total - (2021) rates	Excluding Delivery				3,509,590.00		3,961,410.00						
	Including Delivery				4,957,296.00		5,595,492.00						
Total - (2024) rates	Excluding Delivery							4,688,273.35				6,032,194.00	-1,343,920.65
	Including Delivery							6,622,186.11				8,520,504.00	-1,898,317.89

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	16357	m2	3.68	60,193.76	4.96	81,130.72	104,658.63	16,372	m2	14.21	232,617.00	127,958.37
	Earthworks	5065	m3	34.07	172,564.55	40.52	205,233.80	264,751.60	5,088	m3	32.05	163,051.00	-101,700.60
Road Pavement	Primary Arterial Pavement	0	m2	169.62	0.00	186.26	0.00	0.00	0	NA	NA	0.00	0.00
	Secondary Arterial Pavement	7226	m2	127.01	917,774.26	133.78	966,694.28	1,247,035.62	7,399	m2	185.44	1,372,038.00	125,002.38
	Collector Arterial Pavement	889	m2	105.15	93,478.35	112.44	99,959.16	128,947.32	728	m2	172.99	125,937.00	-3,010.32
	Subgrade Preparation	1623	m2	14.22	23,079.06	16.16	26,227.68	33,833.71	8,127	m2	6.01	48,838.00	15,004.29
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	NA	NA	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Concrete Works	Kerb and Channel	1739	m	54.81	95,314.59	60.90	105,905.10	136,617.58	1,641	m	82.42	135,251.00	-1,366.58
	Cycle Path	2269	m2	76.59	173,782.71	91.94	208,611.86	269,109.30	195	m2	261.30	50,953.00	-218,156.30
	SUP/ Footpath	183	m2	63.51	11,622.33	73.63	13,474.29	17,381.83	2,672	m2	187.80	501,798.00	484,416.17
	Traffic Island	197	m2	77.60	15,287.20	84.07	16,561.79	21,364.71	38	m2	150.00	5,700.00	-15,664.71
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	353	m	528.20	186,456.00	186,456.00
	Drainage Pipe 375mm CR Bfilled	866	m	259.10	224,380.60	282.96	245,043.36	316,105.93	0	NA	NA	0.00	-316,105.93
	Drainage Pipe 450mm CR Bfilled	26	m	299.43	7,785.18	334.33	8,692.58	11,213.43	897	m	560.00	502,320.00	491,106.57
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	NA	NA	0.00	0.00
	Drainage - pits	20	No.	2,565.39	51,307.80	2,806.10	56,122.00	72,397.38	24	No	4,359.58	104,630.00	32,232.62
	Drainage - Sub-soil drainage	1739	m	33.88	58,917.32	43.40	75,472.60	97,359.65	1,641	m	94.99	155,882.00	58,522.35
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	NA	NA	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	3	Item/ Per Leg	109,730.28	329,190.84	128,786.34	386,359.02	498,403.14	1	Item	460,000.00	460,000.00	-38,403.14
Landscape	Tree Planting	78	No.	303.34	23,660.52	363.01	28,314.78	36,526.07	24	No	1,000.00	24,000.00	-12,526.07
	Landscaping	5548	m2	21.61	119,892.28	25.16	139,587.68	180,068.11	1,592	m2	29.99	47,745.00	-132,323.11
	Topsoil Seeding	5548	m2	7.21	40,001.08	8.44	46,825.12	60,404.40	5,305	m2	25.00	132,625.00	72,220.60
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	NA	NA	0.00	0.00
	Street Lighting - Intersections	3	Item/ Per Leg	48,468.93	145,406.79	55,617.74	166,853.22	215,240.65	18	No	18,000.00	324,000.00	108,759.35
Misc.	Regulatory Signage	5	Item	338.43	1,692.15	380.39	1,901.95	2,453.52	1	Item	14,500.00	14,500.00	12,046.48
	Line marking	8115	m2 of Pavement	3.11	25,237.65	4.09	33,190.35	42,815.55	8,127	m2	5.00	40,635.00	-2,180.55
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	NA	NA	0.00	0.00
	Tactile Pavers (Hazard only)	8	Item	292.43	2,339.44	319.78	2,558.24	3,300.13	0	NA	NA	0.00	-3,300.13
Other	Rock excavation	1013	m3	100.00	101,300.00	115.00	116,495.00	150,278.55	1,638	m3	100.00	163,800.00	13,521.45
	Telecom/power relocation allowance	0	m	1,300.00	0.00	1,495.00	0.00	0.00	0	NA	NA	0.00	0.00
	Water/gas relocation allowance	0	m	300.00	0.00	345.00	0.00	0.00	0	NA	NA	0.00	0.00
	Service proving fee	0	Item	10,000.00	0.00	11,500.00	0.00	0.00	0	NA	NA	0.00	0.00
	Tree/vegetation removal								6,386	m2	10.00	63,860.00	63,860.00
	Dirt/Gravel Rd Removal								9,956	m2	25.00	248,900.00	248,900.00
	Council Fees	1.00	%	3.25	89,880.48	3.25	101,378.75	130,778.58	1.00	%	3.25	169,100.00	38,321.42

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Delivery	VicRoads Fees	1.00	%	1.00	27,655.53	1.00	31,193.46	40,239.56	1.00	%	1.00	52,040.00	11,800.44
	Traffic Management	1.00	%	5.00	138,277.66	5.00	155,967.30	201,197.82	1.00	%	5.00	260,160.00	58,962.18
	Environmental Management	1.00	%	0.50	13,827.77	0.50	15,596.73	20,119.78	1.00	%	0.50	26,020.00	5,900.22
	Surveying and Design	1.00	%	5.00	138,277.66	5.00	155,967.30	201,197.82	1.00	%	5.00	260,160.00	58,962.18
	Supervision and Project management	1.00	%	9.00	248,899.78	9.00	280,741.14	362,156.07	1.00	%	9.00	468,280.00	106,123.93
	Site Establishment	1.00	%	2.50	69,138.83	2.50	77,983.65	100,598.91	1.00	%	2.50	130,080.00	29,481.09
	Contingency	1.00	%	15.00	414,832.97	15.00	467,901.90	603,593.45	1.00	%	15.00	780,460.00	176,866.55
Total - (2018) rates	Excluding Delivery				2,765,553.00		3,119,346.00						
	Including Delivery				3,906,344.00		4,406,076.00						
Total - (2021) rates	Excluding Delivery				3,014,453.00		3,400,088.00						
	Including Delivery				4,257,915.00		4,802,624.00						
Total - (2024) rates	Excluding Delivery							4,023,956.35				5,203,036.00	-1,179,079.65
	Including Delivery							5,683,838.35				7,349,336.00	-1,665,497.65

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Sitemworks/ Earthworks	Site Preparation	2448	m2	3.68	9,008.64	4.96	12,142.08	15,663.28	7,479	m2	14.21	106,263.00	90,599.72
	Earthworks	592	m3	34.07	20,169.44	40.52	23,987.84	30,944.31	2,690	m3	32.05	86,204.00	55,259.69
Road Pavement	Primary Arterial Pavement	365	m2	169.62	61,911.30	186.26	67,984.90	87,700.52	2,094	m2	194.80	407,906.00	320,205.48
	Secondary Arterial Pavement	521	m2	127.01	66,172.21	133.78	69,699.38	89,912.20	0	m2	0.00	0.00	-89,912.20
	Collector Arterial Pavement	0	m2	105.15	0.00	112.44	0.00	0.00	2,228	m2	172.69	384,747.00	384,747.00
	Subgrade Preparation	178	m2	14.22	2,531.16	16.16	2,876.48	3,710.66	4,322	m2	6.01	25,972.00	22,261.34
	Pavement Rehab	0	m2	51.58	0.00	59.32	0.00	0.00	0	m2	0.00	0.00	0.00
	Pavement Other	0	m2	0.00	0.00	0.00	0.00	0.00	0	m2	0.00	0.00	0.00
Concrete Works	Kerb and Channel	265	m	54.81	14,524.65	60.90	16,138.50	20,818.67	727	m	82.42	59,919.00	39,100.34
	Cycle Path	0	m2	76.59	0.00	91.94	0.00	0.00	0	m2	0.00	0.00	0.00
	SUP/ Footpath	623	m2	63.51	39,566.73	73.63	45,871.49	59,174.22	1,976	m2	187.80	371,090.00	311,915.78
	Traffic Island	70	m2	77.60	5,432.00	84.07	5,884.90	7,591.52	70	m2	150.00	10,500.00	2,908.48
Drainage	Drainage Pipe 300mm CR Bfilled	0	m	179.85	0.00	197.96	0.00	0.00	85	m	528.20	44,897.00	44,897.00
	Drainage Pipe 375mm CR Bfilled	150	m	259.10	38,865.00	282.96	42,444.00	54,752.76	0	m	0.00	0.00	-54,752.76
	Drainage Pipe 450mm CR Bfilled	35	m	299.43	10,480.05	334.33	11,701.55	15,095.00	700	m	560.00	392,000.00	376,905.00
	Drainage Pipe 525mm CR Bfilled	0	m	403.86	0.00	448.03	0.00	0.00	0	m	0.00	0.00	0.00
	Drainage - pits	7	No.	2,565.39	17,957.73	2,806.10	19,642.70	25,339.08	10	No.	4,369.40	43,694.00	18,354.92
	Drainage - Sub-soil drainage	265	m	33.88	8,978.20	43.40	11,501.00	14,836.29	727	m	94.99	69,059.00	54,222.71
	Drainage Culvert	0	No.	0.00	0.00	0.00	0.00	0.00	0	No.	0.00	0.00	0.00
Traffic signals	Traffic Signals (all inclusive)	0	Item/ Per Leg	109,730.28	0.00	128,786.34	0.00	0.00	0	Item	0.00	0.00	0.00
Landscape	Tree Planting	10	No.	303.34	3,033.40	363.01	3,630.10	4,682.83	18	No.	1,000.00	18,000.00	13,317.17
	Landscaping	871	m2	21.61	18,822.31	25.16	21,914.36	28,269.52	333	m2	30.03	9,999.00	-18,270.52
	Topsoil Seeding	871	m2	7.21	6,279.91	8.44	7,351.24	9,483.10	1,111	m2	25.00	27,775.00	18,291.90
Street Lighting	Street Lighting - Road	0	m	216.34	0.00	225.67	0.00	0.00	0	Item	0.00	0.00	0.00
	Street Lighting - Intersections	1	Item/ Per Leg	48,468.93	48,468.93	55,617.74	55,617.74	71,746.88	7	No.	18,000.00	126,000.00	54,253.12
Misc.	Regulatory Signage	4	Item	338.43	1,353.72	380.39	1,521.56	1,962.81	1	Item	7,500.00	7,500.00	5,537.19
	Line marking	886	m2 of Pavement	3.11	2,755.46	4.09	3,623.74	4,674.62	4,322	m2	5.00	21,610.00	16,935.38
	Landscape maintenance (intersections)	1	Item	71,344.66	71,344.66	88,131.43	88,131.43	113,689.54	65	weeks	1,500.00	97,500.00	-16,189.54
	Landscape maintenance (roads)	0	m2 of l'scape	2.90	0.00	2.96	0.00	0.00	0	weeks	0.00	0.00	0.00
	Tactile Pavers (Hazard only)	4	Item	292.43	1,169.72	319.78	1,279.12	1,650.06	0	Item	0.00	0.00	-1,650.06
Other	Rock excavation	119	m3	100.00	11,900.00	115.00	13,685.00	17,653.65	748	m3	100.00	74,800.00	57,146.35
	Telecom/power relocation allowance	56	m	1,300.00	72,800.00	1,495.00	83,720.00	107,998.80	56	m	1,500.00	84,000.00	-23,998.80
	Water/gas relocation allowance	23	m	300.00	6,900.00	345.00	7,935.00	10,236.15	23	m	2,200.00	50,600.00	40,363.85
	Service proving fee	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1	Item	10,000.00	10,000.00	-4,835.00
	Construct hump (Asphalt Size 10 Type N)	91	m2	57.15	5,200.65	65.72	5,980.75	7,714.87	81	m2	200.00	16,200.00	8,485.13
	Hump asphalt disposal fee (inc. transport)	91.00	m2	26.79	2,437.89	30.81	2,803.57	3,616.79	0.00	m2	0.00	0.00	-3,616.79
Delivery	Council Fees	1.00	%	3.25	18,137.07	3.25	20,753.47	26,771.98	1.00	%	3.25	82,760.00	55,988.02
	VicRoads Fees	1.00	%	1.00	5,580.64	1.00	6,385.68	8,237.53	1.00	%	1.00	25,470.00	17,232.47
	Traffic Management	1.00	%	5.00	27,903.19	5.00	31,928.42	41,187.66	1.00	%	5.00	127,320.00	86,132.34
	Environmental Management	1.00	%	0.50	2,790.32	0.50	3,192.84	4,118.77	1.00	%	0.50	12,740.00	8,621.23
	Surveying and Design	1.00	%	5.00	27,903.19	5.00	31,928.42	41,187.66	1.00	%	5.00	127,320.00	86,132.34
	Supervision and Project management	1.00	%	9.00	50,225.74	9.00	57,471.16	74,137.78	1.00	%	9.00	229,170.00	155,032.22
	Site Establishment	1.00	%	2.50	13,951.59	2.50	15,964.21	20,593.83	1.00	%	2.50	63,660.00	43,066.17
	Contingency	1.00	%	15.00	83,709.56	15.00	95,785.26	123,562.97	1.00	%	15.00	381,940.00	258,377.03
Total - (2018) rates	Excluding Delivery				558,064.00		638,568.00						
	Including Delivery				788,265.00		901,978.00						
Total - (2021)	Excluding Delivery				608,290.00		696,040.00						

Toolern PSP & DCP - Intersection Projects

IT-25 - Primary- Connector T-Intersection (Mt Cottrell Road, Bridge Road)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
rates	Including Delivery				859,210.00		983,157.00						
Total - (2024) rates	Excluding Delivery							823,753.16				2,546,235.00	-1,722,481.84
	Including Delivery							1,163,551.34				3,596,615.00	-2,433,063.66



APPENDIX C

INDEPENDENT TRANSPORT INFRASTRUCTURE COST
ESTIMATES – BRIDGES

APPENDIX C
Toolern Creek PSP and DCP

Bridge Projects Costs Summary

Civil Component No	Description	VPA Total Cost (\$ - 2021)	VPA Total Cost (\$ - 2024)	WT Total Cost (\$ - 2024)	Variance (\$ - 2024)
		A	B	C	B-C
BD-03	Secondary Arterial 91.5m Long Super T Bridge Interim Drwg no. V191096-CI-DG-2001 rev.2	15,193,100.91	17,980,825.85	14,579,169.00	3,401,656.86
BD-04	Pedestrian 30m Long Super T Bridge Interim Drwg No. V191096-CI-DG-2002 rev.2	1,389,465.62	1,644,413.44	2,028,086.00	-383,672.56
BD-05	Pedestrian 30m Long Super T Bridge Interim Drwg No. V191096-CI-DG-2002 rev.2	1,389,465.62	1,644,413.44	2,028,086.00	-383,672.56
BD-06	Pedestrian 30m Long Super T Bridge Interim Drwg no. V191096-CI-DG-2003 rev.2	1,764,825.48	2,088,646.67	2,965,828.80	-877,182.13
BD-07	Pedestrian Underpass [Typical] Drwg No. V191096-CI-DG-2004 rev.2	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96
BD-08	Pedestrian Underpass [Typical] Drwg No. V191096-CI-DG-2004 rev.2	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96
BD-10	Pedestrian Underpass [Typical] Drwg No. V191096-CI-DG-2004 rev.2	3,761,854.12	4,393,700.04	4,732,034.00	-338,333.96
BD-14	Pedestrian 30m Long Super T Bridge Interim Drwg no. V191096-CI-DG-2003 rev.2	1,764,825.48	2,088,646.67	2,965,828.80	-877,182.13
BD-15	Ferris Road - 5.9m Clearance 44.8m Long Box Girder Bridge Interim (approx. 25.4m wide) Drwg no. V191096-CI-DG-2008 rev.2	15,075,486.13	17,841,630.38	34,413,757.00	-16,572,126.62
BD-16	East Road - 5.9m Clearance 76.6m Long Box Girder zBridge Interim (approx. 16.5m wide) Drwg no. V191096-CI-DG-2008 rev.2	13,833,440.54	16,371,686.51	35,178,075.00	-18,806,388.49
	Total - Bridges	61,696,172.14	72,841,363.07	108,354,932.59	-35,513,569.52

Appendix C

Toolern PSP & DCP - Bridges Projects

BD-03 - Secondary Arterial 91.5m Long Super T Bridge Interim

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount P(50)	Rate (P90)	Amount P(90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Earthworks	Site Preparation	1	m2	132,968.20	132,968.20	239,342.76	239,342.76	308,752.16	9,369.00	m2	23.82	223,200.00	85,552.16
	Earthworks	1	m3	3,034,648.65	3,034,648.65	3,307,767.03	3,307,767.03	4,267,019.47	5,738.00	m3	109.05	625,746.00	3,641,273.47
On-Structure Works	Retaining Walls, abutments, footings	1	No	1,115,200.00	1,115,200.00	1,255,534.91	1,255,534.91	1,619,640.03	1.00	Item	3,475,062.00	3,475,062.00	-1,855,421.97
	Bridge Deck	1	No	1,676,607.73	1,676,607.73	2,749,637.68	2,749,637.68	3,547,032.61	1.00	Item	2,194,197.00	2,194,197.00	1,352,835.61
	Guard Rails/ Balustrade	183	m	350.00	64,050.00	450.64	82,467.83	106,382.58	204.00	m	3,500.61	714,125.00	-607,742.42
	Transition Slab	2	No	76,932.05	153,864.10	88,471.86	176,943.72	228,257.40	2.00	No	80,647.50	161,295.00	66,962.40
	Overall Super T Cost	1493	m2	789.24	1,178,333.46	931.30	1,390,433.44	1,793,655.86	1,915.00	m2	971.39	1,860,214.00	-66,558.14
Off Structure	Guard Rails/ Balustrade	256	m	350.00	89,600.00	420.04	107,529.58	138,714.01	256.00	m	350.00	89,600.00	49,114.01
	GREAT Terminal	4	No	8,767.42	35,069.68	13,875.66	55,502.64	71,598.41	4.00	No	5,000.00	20,000.00	51,598.41
	Off structure barrier	0	Item	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	Kerb and Channel	151	m	100.00	15,100.00	112.58	17,000.16	21,929.46	200.00	m	75.00	15,000.00	6,929.46
	Bridge Lighting	4	No	20,000.00	80,000.00	23,000.00	92,000.01	118,680.00	4.00	No	18,000.00	72,000.00	46,680.00
	Regulatory Signage	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	4,835.00
	Drainage Pits	4	No	3,500.00	14,000.00	3,940.43	15,761.74	20,332.62	4.00	No	3,500.00	14,000.00	6,332.62
	Drainage - Sub-soil Drainage	50	m	350.00	17,500.00	395.50	19,775.00	25,509.75	42.00	m	110.00	4,620.00	20,889.75
	Landscaping	145	m2	60.00	8,700.00	65.45	9,490.59	12,242.42	150.00	m2	60.00	9,000.00	3,242.42
	Allowance for construction in eco-sensitive zone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	Item	480,000.00	480,000.00	-480,000.00
Delivery	Council Fees	1	%	3.25	247,833.36	3.25	309,747.33	399,573.91	1.00	%	3.25	323,961.92	75,611.99
	VicRoads Fees	1	%	1.00	76,256.42	1.00	95,306.87	122,945.82	1.00	%	1.00	99,680.59	23,265.23
	Traffic Management	1	%	5.00	381,282.09	5.00	476,534.35	614,729.09	1.00	%	5.00	498,402.95	116,326.14
	Environmental Management	1	%	0.50	38,128.21	0.50	47,653.44	61,472.91	1.00	%	0.50	49,840.30	11,632.61
	Surveying and Design	1	%	5.00	381,282.09	5.00	476,534.35	614,729.09	1.00	%	5.00	498,402.95	116,326.14
	Supervision and Project management	1	%	9.00	686,307.76	9.00	857,761.84	1,106,512.36	1.00	%	9.00	897,125.31	209,387.05
	Site Establishment	1	%	2.50	190,641.05	2.50	238,267.18	307,364.54	1.00	%	2.50	249,201.48	58,163.07
	Contingency	1	%	20.00	1,525,128.36	20.00	1,906,157.42	2,458,916.36	1.00	%	20.00	1,994,494.51	464,421.85
Total - (2018) rates	Excluding Delivery				7,625,642		9,530,687						
	Including Delivery				11,152,501		13,938,630						
Total - (2021) rates	Excluding Delivery				8,311,949.78		10,388,448.83						
	Including Delivery				12,156,226.09		15,193,106.70						
Total - (2024) rates	Excluding Delivery							12,294,581.78				9,968,059.00	2,326,522.78
	Including Delivery							17,980,825.85				14,579,169.00	3,401,656.86

Appendix C

Toolern PSP & DCP - Bridges Projects
 BD-04 & BD-05 - Pedestrian 30m Long Super T Bridge Interim

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				Variance
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount 2024	Qty	Unit	Rate	Total	
Earthworks	Site Preparation	1	m2	18,564.00	18,564.00	33,415.20	33,415.20	43,105.61	2,613.00	m2	20.88	54,558.00	-11,452.39
	Earthworks	1	m3	243,150.00	243,150.00	265,033.50	265,033.50	341,893.22	3,236.00	m3	74.80	242,054.00	99,839.22
On-Structure Works	Retaining Walls, abutments, footings	1	No	206,600.00	206,600.00	232,598.20	232,598.20	300,051.68	1.00	Item	536,605.00	536,605.00	-236,553.32
	Bridge Deck	1	No	79,628.00	79,628.00	130,351.56	130,351.56	168,153.51	1.00	Item	161,227.00	161,227.00	6,926.51
	Guard Rails/ Balustrade	60	m	350.00	21,000.00	450.64	27,038.63	34,879.54	76.00	m	1,274.34	96,850.00	-61,970.46
	Transition Slab	2	No	11,000.00	22,000.00	12,650.00	25,300.00	32,637.00	2.00	No	14,981.00	29,962.00	2,675.00
	Overall Super T Cost	169	m2	345.00	58,305.00	407.10	68,799.90	88,751.87	155.00	m2	1,191.34	184,658.00	-95,906.13
Off Structure	Pedestrian Guard Rails/ Balustrade	0	m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GREAT Terminal	0	No	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Off structure barrier	0	Item	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	Edge / Kerbs	90	m	100.00	9,000.00	112.58	10,132.54	13,070.54	86.00	m	75.00	6,450.00	6,620.54
	Bridge Lighting	2	No	10,000.00	20,000.00	11,500.00	23,000.00	29,670.00	2.00	No	18,000.00	36,000.00	-6,330.00
	Regulatory Signage	1	Item	5,000.00	5,000.00	5,750.00	5,750.00	7,417.50	1.00	Item	5,000.00	5,000.00	2,417.50
	Drainage Pits	4	No	3,500.00	14,000.00	3,940.43	15,761.74	20,332.62	4.00	No	3,500.00	14,000.00	6,332.62
	Drainage - Sub-soil Drainage	50	m	350.00	17,500.00	395.50	19,775.00	25,509.75	52.00	m	110.00	5,720.00	19,789.75
Landscaping	224	m2	60.00	13,440.00	65.45	14,661.33	18,912.43	224.00	m2	60.00	13,440.00	5,472.43	
Delivery	Council Fees	1	%	3.25	23,666.08	3.25	28,327.57	36,542.52	1.00	%	3.25	45,062.03	-8,519.51
	VicRoads Fees	1	%	1.00	7,281.87	1.00	8,716.18	11,243.85	1.00	%	1.00	13,865.24	-2,621.39
	Traffic Management	1	%	5.00	36,409.35	5.00	43,580.88	56,219.26	1.00	%	5.00	69,326.20	-13,106.94
	Environmental Management	1	%	0.50	3,640.94	0.50	4,358.09	5,621.93	1.00	%	0.50	6,932.62	-1,310.69
	Surveying and Design	1	%	5.00	36,409.35	5.00	43,580.88	56,219.26	1.00	%	5.00	69,326.20	-13,106.94
	Supervision and Project management	1	%	9.00	65,536.83	9.00	78,445.58	101,194.67	1.00	%	9.00	124,787.16	-23,592.49
	Site Establishment	1	%	2.50	18,204.68	2.50	21,790.44	28,109.63	1.00	%	2.50	34,663.10	-6,553.47
	Contingency	1	%	20.00	145,637.40	20.00	174,323.52	224,877.05	1.00	%	20.00	277,599.45	-52,722.40
Total - (2018) rates	Excluding Delivery				728,187		871,618						
	Including Delivery				1,064,973		1,274,741						
Total - (2021) rates	Excluding Delivery												
	Including Delivery												
Total - (2024) rates	Excluding Delivery							1,124,385.26				1,386,524.00	-262,138.74
	Including Delivery							1,644,413.44				2,028,086.00	-383,672.56

Appendix C

Toolern PSP & DCP - Bridges Projects

BD-06 & BD-14 - Pedestrian 30m Long Super T Bridge Interim

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				Variance
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	
Earthworks	Site Preparation	1	m2	18,564.00	18,564.00	33,395.02	33,395.02	43,079.58	4,000.00	m2	23.82	95,293.00	-52,213.42
	Earthworks	1	m3	535,200.00	535,200.00	583,835.11	583,835.11	753,147.29	12,306.00	m3	73.22	901,043.00	-147,895.71
On-Structure Works	Retaining Walls, abutments, footings	1	No	106,500.00	106,500.00	119,901.78	119,901.78	154,673.30	1.00	Item	309,300.00	309,300.00	-154,626.70
	Bridge Deck	1	No	79,628.00	79,628.00	130,351.56	130,351.56	168,153.51	1.00	Item	248,914.00	248,914.00	-80,760.49
	Guard Rails/ Balustrade	60	m	350.00	21,000.00	450.64	27,038.63	34,879.54	76.00	m	1,274.34	96,850.00	-61,970.46
	Transition Slab	2	No	11,000.00	22,000.00	12,650.00	25,300.00	32,637.00	2.00	No	14,981.00	29,962.00	2,675.00
	Overall Super T Cost	169	m2	345.00	58,305.00	407.10	68,799.90	88,751.87	155.00	m2	1,036.07	160,591.00	-71,839.13
Off Structure	Pedestrian Guard Rails/ Balustrade	0	m	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GREAT Terminal	0	No	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Off structure barrier	0	Item	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	Edge / Kerbs	90	m	100.00	9,000.00	112.58	10,132.54	13,070.54	85.00	m	75.00	6,375.00	6,695.54
	Bridge Lighting	2	No	10,000.00	20,000.00	11,500.00	23,000.00	29,670.00	2.00	No	18,000.00	36,000.00	-6,330.00
	Regulatory Signage	1	Item	5,000.00	5,000.00	5,750.00	5,750.00	7,417.50	1.00	Item	5,000.00	5,000.00	2,417.50
	Drainage Pits	4	No	3,500.00	14,000.00	3,940.43	15,761.74	20,332.62	4.00	No	5,000.00	20,000.00	332.62
	Drainage - Sub-soil Drainage	50	m	350.00	17,500.00	394.04	19,702.17	25,415.58	200.00	m	110.00	22,000.00	3,415.58
Landscaping	674	m2	60.00	40,440.00	65.45	44,114.90	56,906.16	4,800.00	m2	20.00	96,000.00	-39,093.84	
Delivery	Council Fees	1	%	3.25	30,781.95	3.25	35,980.21	46,414.37	1.00	%	3.25	65,888.16	-19,473.79
	VicRoads Fees	1	%	1.00	9,471.37	1.00	11,070.83	14,281.34	1.00	%	1.00	20,273.28	-5,991.94
	Traffic Management	1	%	5.00	47,356.85	5.00	55,354.17	71,406.72	1.00	%	5.00	101,366.40	-29,959.68
	Environmental Management	1	%	0.50	4,735.69	0.50	5,535.42	7,140.67	1.00	%	0.50	10,136.64	-2,995.97
	Surveying and Design	1	%	5.00	47,356.85	5.00	55,354.17	71,406.72	1.00	%	5.00	101,366.40	-29,959.68
	Supervision and Project management	1	%	9.00	85,242.33	9.00	99,637.50	128,532.10	1.00	%	9.00	182,459.52	-53,927.42
	Site Establishment	1	%	2.50	23,678.43	2.50	27,677.08	35,703.36	1.00	%	2.50	50,683.20	-14,979.84
	Contingency	1	%	20.00	189,427.40	20.00	221,416.67	285,626.90	1.00	%	20.00	406,327.20	-120,700.30
Total - (2018) rates	Excluding Delivery				947,137		1,107,083						
	Including Delivery				1,385,188		1,619,109						
Total - (2021) rates	Excluding Delivery				1,032,379.33		1,206,720.47						
	Including Delivery				1,509,854.92		1,764,828.81						
Total - (2024) rates	Excluding Delivery							1,428,134.48				2,027,328.00	-599,193.52
	Including Delivery							2,088,646.67				2,965,828.80	-877,182.13

Appendix C

Toolern PSP & DCP - Bridges Projects

BD-07, BD-08 & BD-10 - Pedestrian Underpass

Group	Sub Item	VPA Benchmark Costings							WT Total Cost (2024)				
		Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Site works & Earthworks	Site Preparation		%	2.00%	39,865.92	3.60%	81,966.77	105,737.13	1.00	Item	92,421.00	92,421.00	13,316.13
	Earthworks - cut	2,185	M3	50.00	109,250.00	54.54	119,177.85	153,729.17	2,212.00	m3	48.45	107,176.00	46,553.17
	Earthworks - cut assumed e/o in rock say 40%	874	M3	100.00	87,400.00	109.09	95,342.28	122,994.61	449.00	m3	107.52	48,275.00	74,719.61
	Structural fill	818	M3	120.00	98,160.00	130.90	107,080.07	138,128.30	522.00	m3	218.25	113,927.00	24,201.30
Concrete Works	Geocomposite drainage material to crown units	484	M2	75.00	36,300.00	86.25	41,745.00	53,851.05	485.00	m2	76.06	36,887.00	16,964.05
	300mm thick RC slab	202	M2	350.00	70,700.00	402.50	81,305.01	104,883.45	238.00	m2	560.03	133,288.00	-28,404.55
	150mm min compacted granular bedding	323	M2	25.00	8,075.00	28.75	9,286.25	11,979.26	347.00	m2	26.31	9,131.00	2,848.26
	Pedestrian culvert - 3.6 x 3.0 x 2.4m RC crown units (21 no.)	816	M2	1,200.00	979,776.00	1,380.00	1,126,742.50	1,452,643.20	242.00	m2	5,198.07	1,257,934.00	194,709.20
	200mm thick RC endwall	75	M2	350.00	26,250.00	394.04	29,553.26	38,123.37	37.00	m2	1,076.86	39,844.00	-1,720.63
	380mm thick RC slab to endwall area (inlet and outlet)	24	M2	500.00	12,000.00	575.00	13,800.00	17,802.00	28.00	m2	745.89	20,885.00	-3,083.00
	750mm deep x 300mm wide edge beam to endwall area	13	M2	500.00	6,375.00	562.92	7,177.22	9,440.17	5.00	m3	2,419.60	12,098.00	-2,657.83
	200mm thick RC head wall								2.00	no	10,000.00	20,000.00	-20,000.00
	150mm thick RC shared path ramps and landing slab	369	M2	200.00	73,800.00	230.00	84,870.01	109,482.30	441.00	m2	185.56	81,832.00	27,650.30
	250mm thick x 1.2m high retaining wall including foundation	77	M2	350.00	26,950.00	394.04	30,341.34	39,139.99	95.00	m2	1,958.61	186,068.00	-146,928.01
	250mm thick x 2.6m high retaining wall including foundation	71	M2	400.00	28,400.00	450.34	31,973.81	41,246.64	151.00	m2	1,279.61	193,221.00	-151,974.36
	250mm thick x 2.8m high retaining wall including foundation	77	M2	400.00	30,800.00	450.34	34,675.82	44,732.27	86.00	m2	1,279.66	110,051.00	-65,318.73
	300mm thick x 3m high retaining wall including foundation	171	M2	550.00	94,050.00	619.21	105,885.10	136,591.53	26.00	m2	1,316.92	34,240.00	102,351.53
	Concrete stairs including landing	6	M/rise	9,000.00	54,000.00	10,350.00	62,100.01	80,109.00	2.00	no	50,400.00	100,800.00	-20,691.00
Drainage	Drainage - Pits	4	No.	3,500.00	14,000.00	3,940.43	15,761.74	20,332.62	8.00	no	3,638.38	29,107.00	-8,774.38
	Drainage - Sub-soil Drainage	129	M	350.00	45,010.00	394.04	50,673.98	65,572.20	271.00	m	119.42	32,363.00	33,209.20
	Drainage - underpass	100	M	75.00	7,500.00	84.44	8,443.79	10,892.76	242.00	m2	110.00	26,620.00	-15,727.24
Street Lighting	Culvert Lighting	50	M	1,250.00	62,500.00	1,437.50	71,875.01	92,718.75	6.00	no	12,750.00	76,500.00	16,218.75
	Ramp/stair Lighting	2	No.	10,000.00	20,000.00	11,500.00	23,000.00	29,670.00	4.00	no	12,000.00	48,000.00	-18,330.00
Other	Regulatory Signage	1	Item	500.00	500.00	575.00	575.00	741.75	1.00	Item	4,500.00	4,500.00	-3,758.25
	Safety fence (1.2m high) on top of retaining wall	65	M	300.00	19,500.00	337.75	21,953.85	28,320.34	177.00	m	350.00	61,950.00	-33,629.66
	Pedestrian handrails	308	M	250.00	77,000.00	321.89	99,141.66	127,893.33	292.00	m	350.00	102,200.00	25,693.33
	Tactile Pavers (Hazard Only)	1	Item	5,000.00	5,000.00	5,750.00	5,750.00	7,417.50	1.00	Item	6,000.00	6,000.00	1,417.50
Allowance for construction in rail corridor									1.00	Item	250,000.00	250,000.00	-250,000.00
Subtotal Construction Cost					2,033,161.92		2,360,197.32	0.00	0	0	0	0.00	0.00
Delivery	Council Fees	1	%	3.25	66,077.76		76,706.41	98,935.61	1.00	%	3.25	105,200.00	-6,264.39
	VicRoads Fees	1	%	1.00	20,331.62		23,601.97	29,384.36	1.00	%	1.00	32,400.00	-3,015.64
	Traffic Management	1	%	5.00	101,658.10		118,009.87	144,182.10	1.00	%	5.00	161,800.00	-17,617.90
	Environmental Management	1	%	0.50	10,165.81		11,800.99	13,950.16	1.00	%	0.50	16,200.00	-2,249.84
	Surveying and Design	1	%	5.00	101,658.10		118,009.87	139,804.28	1.00	%	5.00	161,800.00	-21,995.72
	Supervision and Project Management	1	%	9.00	182,984.57		212,417.76	248,056.62	1.00	%	9.00	291,200.00	-43,143.38
	Site Establishment	1	%	2.50	50,829.05		59,004.93	69,777.64	1.00	%	2.50	80,900.00	-11,122.36
	Contingency (bridge projects)	1	%	20.00	406,632.38		472,039.46	605,436.57	1.00	%	20.00	647,214.00	-41,777.43
Total Project Cost					2,973,499.31		3,451,788.58						
Total - (2018) rates	Excluding Delivery				2,033,161.92		2,360,197.32						
	Including Delivery				2,973,499.31		3,451,788.58						
Total - (2021) rates	Excluding Delivery				2,216,146.49		2,572,615.08						
	Including Delivery				3,241,114.25		3,762,449.55						
Total - (2024) rates	Excluding Delivery							3,044,172.70				3,235,320.00	-191,147.30
	Including Delivery							4,393,700.04				4,732,034.00	-338,333.96

Appendix C

Toolern PSP & DCP - Bridges Projects

BD-15 - Ferris Road - 5.9m Clearance 44.8m Long Box Girder Bridge Interim (approx. 25.4m wide)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost (2024)				
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	Qty	Unit	Rate	Total	Variance
Earthworks	Site Preparation	1	m2	148,032.00	148,032.00	266,296.70	266,296.70	343,522.74	5,600.00	m2	44.52	249,309.00	94,213.74
	Earthworks	1	m3	3,378,440.00	3,378,440.00	3,685,448.23	3,685,448.23	4,754,228.22	15,162.00	m3	151.28	2,293,737.00	2,460,491.22
On-Structure Works	Retaining Walls, abutments, footings	1	No	1,177,925.00	1,177,925.00	1,326,153.12	1,326,153.12	1,710,737.52	1.00	No	7,037,158.00	7,037,158.00	-5,326,420.48
	Bridge Deck	1	No	1,697,765.00	1,697,765.00	2,779,252.42	2,779,252.42	3,585,235.62	1.00	No	3,008,854.00	3,008,854.00	576,381.62
	Guard Rails/ Balustrade	90	m	350.00	31,500.00	450.64	40,557.95	52,319.30	170.00	m	3,533.05	600,618.00	-548,298.70
	Transition Slab	2	No	102,307.50	204,615.00	117,653.64	235,307.27	303,546.39	2.00	No	70,679.00	141,358.00	162,188.39
	Overall Super T Cost	1174	m2	430.82	505,780.00	508.78	597,303.53	770,526.96	1,264.00	m2	6,689.99	8,456,149.00	-7,685,622.04
Off Structure	Guard Rails/ Balustrade	544	m	350.00	190,400.00	420.04	228,500.35	294,767.27	560.00	m	220.00	123,200.00	171,567.27
	GREAT Terminal	4	No	8,767.42	35,069.68	13,875.66	55,502.64	71,598.41	4.00	No	15,000.00	60,000.00	11,598.41
	Off structure barrier	0	Item	0.00	0.00	0.00	0.00	0.00	200.00	m	1,652.25	330,450.00	-330,450.00
Other	Kerb and Channel	325	m	100.00	32,500.00	112.58	36,589.75	47,199.17	730.00	m	75.00	54,750.00	-7,550.83
	Bridge Lighting	3	No	20,000.00	60,000.00	23,000.00	69,000.01	89,010.00	3.00	No	18,000.00	54,000.00	35,010.00
	Regulatory Signage	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	4,835.00
	Bridge Drainage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,398.00	m2	111.57	155,980.00	#VALUE!
	Drainage Pits	6	No	3,500.00	21,000.00	3,940.43	23,642.60	30,498.93	8.00	No	3,638.38	29,107.00	1,391.93
	Drainage - Sub-soil Drainage	150	m	350.00	52,500.00	394.04	59,106.51	76,246.74	280.00	m	119.60	33,487.00	42,759.74
	Landscaping	653	m2	60.00	39,180.00	65.45	42,740.40	55,133.12	560.00	m2	55.00	30,800.00	24,333.12
	Anti-throw screen to bridge, 3m high	N/A	N/A	N/A	N/A	N/A	N/A	N/A	508.00	m2	850.00	431,800.00	-431,800.00
	Rail management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	Item	430,000.00	430,000.00	-430,000.00
Delivery	Council Fees	1	%	3.25	246,502.97	3.25	307,349.30	396,480.68	1.00	%	3.25	764,750.00	-368,269.32
	VicRoads Fees	1	%	1.00	75,847.07	1.00	94,569.01	121,994.05	1.00	%	1.00	235,310.00	-113,315.95
	Traffic Management	1	%	5.00	379,235.33	5.00	472,845.07	609,970.27	1.00	%	5.00	1,176,540.00	-566,569.73
	Environmental Management	1	%	0.50	37,923.53	0.50	47,284.51	60,997.03	1.00	%	0.50	117,660.00	-56,662.97
	Surveying and Design	1	%	5.00	379,235.33	5.00	472,845.07	609,970.27	1.00	%	5.00	1,176,540.00	-566,569.73
	Supervision and Project management	1	%	9.00	682,623.60	9.00	851,121.13	1,097,946.48	1.00	%	9.00	2,117,770.00	-1,019,823.52
	Site Establishment	1	%	2.50	189,617.67	2.50	236,422.54	304,985.13	1.00	%	2.50	588,270.00	-283,284.87
	Contingency	1	%	20.00	1,516,941.34	20.00	1,891,380.29	2,439,881.08	1.00	%	20.00	4,706,160.00	-2,266,278.92
Total - (2018) rates	Excluding Delivery				7,584,707		9,456,901						
	Including Delivery				11,092,634		13,830,718						
Total - (2021) rates	Excluding Delivery				8,267,330.63		10,308,022.09						
	Including Delivery				12,090,971.06		15,075,482.62						
Total - (2024) rates	Excluding Delivery							12,199,405.39			23,530,757.00		-11,331,351.61
	Including Delivery							17,841,630.38			34,413,757.00		-16,572,126.62

Appendix C

Toolern PSP & DCP - Bridges Projects

BD-16 - East Road - 5.9m Clearance 76.6m Long Box Girder zBridge Interim (approx. 16.5m wide)

Group	Sub Item	Qty	Unit	VPA Benchmark Costings					WT Total Cost				Variance
				Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount (2024)	WT Qty	Unit	WT Rate 2024	WT Amount 2024	
Earthworks	Site Preparation	1	m2	122,447.00	122,447.00	220,271.51	220,271.51	284,150.25	5,600.00	m2	44.52	249,509.00	34,841.25
	Earthworks	1	m3	2,794,530.00	2,794,530.00	3,046,037.70	3,046,037.70	3,929,388.63	26,796.00	m3	151.32	4,054,903.00	-125,514.37
On-Structure Works	Retaining Walls, abutments, footings	1	No	1,257,425.00	1,257,425.00	1,415,657.26	1,415,657.26	1,826,197.87	1.00	Item	6,471,265.00	6,471,265.00	-4,645,067.13
	Bridge Deck	1	No	1,543,945.00	1,543,945.00	2,527,448.07	2,527,448.07	3,260,408.01	1.00	Item	3,360,066.00	3,360,066.00	-99,657.99
	Guard Rails/ Balustrade	154	m	350.00	53,900.00	450.64	69,399.16	89,524.14	98.00	m	3,690.93	361,711.00	-272,186.86
	Transition Slab	2	No	84,625.26	169,250.52	97,319.05	194,638.10	251,083.15	2.00	No	112,594.50	225,189.00	25,894.15
	Overall Super T Cost	1325	m2	430.82	570,836.50	508.37	673,590.25	868,931.42	1,183.00	m2	6,637.12	7,851,715.00	-6,982,783.58
Off Structure	Guard Rails/ Balustrade	544	m	350.00	190,400.00	420.04	228,500.35	294,767.27	200.00	m	520.80	104,160.00	190,607.27
	GREAT Terminal	4	No	8,767.42	35,069.68	13,875.66	55,502.64	71,598.41	4.00	No	6,500.00	26,000.00	45,598.41
	Off structure barrier	0	Item	0.00	0.00	0.00	0.00	0.00	200.00	m	1,652.25	330,450.00	-330,450.00
Other	Kerb and Channel	357	m	100.00	35,700.00	112.58	40,192.43	51,846.47	1,332.00	m	75.00	99,900.00	-48,053.53
	Bridge Lighting	4	No	20,000.00	80,000.00	23,000.00	92,000.01	118,680.00	2.00	No	18,000.00	36,000.00	82,680.00
	Regulatory Signage	1	Item	10,000.00	10,000.00	11,500.00	11,500.00	14,835.00	1.00	Item	10,000.00	10,000.00	4,835.00
	Bridge Drainage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,183.00	m2	110.00	130,130.00	-130,130.00
	Drainage Pits	4	No	3,500.00	14,000.00	3,940.43	15,761.74	20,332.62	8.00	No	3,638.38	29,107.00	-8,774.38
	Drainage - Sub-soil Drainage	113	m	350.00	39,550.00	394.04	44,526.91	57,439.21	280.00	m	119.60	33,487.00	23,952.21
	Landscaping	653	m2	60.00	39,180.00	65.45	42,740.40	55,133.12	560.00	m2	55.00	30,800.00	24,333.12
	Anti-throw screen to bridge, 3m high	N/A	N/A	N/A	N/A	N/A	N/A	N/A	293.00	m2	850.00	249,050.00	-249,050.00
	Rail management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	Item	400,000.00	400,000.00	-400,000.00
Delivery	Council Fees	1	%	3.25	226,077.60	3.25	282,027.41	363,815.26	1.00	%	3.25	781,730.37	-417,915.11
	VicRoads Fees	1	%	1.00	69,562.34	1.00	86,777.67	111,943.16	1.00	%	1.00	240,532.42	-128,589.26
	Traffic Management	1	%	5.00	347,811.69	5.00	433,888.33	559,715.78	1.00	%	5.00	1,202,662.10	-642,946.32
	Environmental Management	1	%	0.50	34,781.17	0.50	43,388.83	55,971.58	1.00	%	0.50	120,266.21	-64,294.63
	Surveying and Design	1	%	5.00	347,811.69	5.00	433,888.33	559,715.78	1.00	%	5.00	1,202,662.10	-642,946.32
	Supervision and Project management	1	%	9.00	626,061.03	9.00	780,998.99	1,007,488.40	1.00	%	9.00	2,164,791.78	-1,157,303.38
	Site Establishment	1	%	2.50	173,905.84	2.50	216,944.16	279,857.89	1.00	%	2.50	601,331.05	-321,473.16
	Contingency	1	%	20.00	1,391,246.74	20.00	1,735,553.30	2,238,863.11	1.00	%	20.00	4,810,856.97	-2,571,993.86
Total - (2018) rates	Excluding Delivery				6,956,234		8,677,767						
	Including Delivery				10,173,492		12,691,234						
Total - (2021) rates	Excluding Delivery				7,582,295.06		9,458,766.03						
	Including Delivery				11,089,106.28		13,833,445.06						
Total - (2024) rates	Excluding Delivery							11,194,315.56				24,053,242.00	-12,858,926.44
	Including Delivery							16,371,686.51				35,178,075.00	-18,806,388.49



APPENDIX D

INDEPENDENT COMMUNITY INFRASTRUCTURE COST
ESTIMATES

Appendix D
Toolern Creek PSP and DCP

Community Infrastructure Costs Summary

Civil Component No	Description	VPA Total Cost (\$ - 20218)	VPA Total Cost (\$ - 2024)	WT Total Cost (\$ - 2024)	Variance (\$ - 2024)
		A	B	C	B-C
CI03	Community Facilities Level 1 (Item 37)	7,605,318.00	9,582,701.00	9,516,000.00	66,701.00
CI04	Community Facilities Level 1 (Item 37)	7,605,318.00	9,582,701.00	9,516,000.00	66,701.00
CI06	Community Facilities Level 2 (Item 38)	8,927,424.00	11,248,554.00	11,216,000.00	32,554.00
CI07	Community Facilities Level 2 (Item 38)	8,927,424.00	11,248,554.00	11,216,000.00	32,554.00
AR03	Sporting & Recreational Facilities (5-6 Ha) (Item 42)	8,020,190.00	10,105,440.00	12,736,625.00	-2,631,185.00
AR01	Sporting & Recreational Facilities (8-10 Ha) (Item 43)	10,354,010.00	13,046,053.00	16,836,270.00	-3,790,217.00
AR02	Sporting Pavillions - 1 (Item 40)	1,655,681.00	2,086,158.00	3,036,000.00	-949,842.00
AR08	Sporting Pavillions - 2 (Item 41)	2,752,712.00	3,468,417.00	4,680,000.00	-1,211,583.00
	Total	55,848,077.00	70,368,578.00	78,752,895.00	-8,384,317.00

Appendix D

Toolern PSP & DCP - Community Infrastructure Projects

CI03 - Community Facilities Level 1 (Item 37)

		VPA Benchmark Costings							WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount 2024	Qty	Unit	Rate	Total	Variance
Building	Kindergarten	750	m2	2,544.60	1,908,450.00	2,623.87	1,967,902.50	2,479,557.15	750	m2	3,100.00	2,325,000.00	154,557.15
	Community Facilities Level 1 (Item 37)	15	m2	2,854.70	42,820.50	3,109.11	46,636.65	58,762.18	15	m2	4,000.00	60,000.00	-1,237.82
	Community Facilities Level 1 (Item 37)	100	m2	2,464.03	246,403.00	2,567.64	256,764.00	323,522.64	100	m2	3,450.00	345,000.00	-21,477.36
	Community Facilities Level 2 (Item 38)	200	m2	2,301.97	460,394.00	2,440.90	488,180.00	615,106.80	200	m2	3,450.00	690,000.00	-74,893.20
	Community Facilities Level 2 (Item 38)	0	m2	1,830.21	0.00	2,040.01	0.00	0.00	0	m2	2,700.00	0.00	0.00
	Sporting & Recreational Facilities (5-6 Ha) (Item 42)	150	m2	2,301.97	345,295.50	2,440.90	366,135.00	461,330.10	150	m2	3,100.00	465,000.00	-3,669.90
	Sporting & Recreational Facilities (8-10 Ha) (Item 43)	0	m2	3,039.66	0.00	3,461.73	0.00	0.00	0	m2	4,350.00	0.00	0.00
	Sporting Pavillions - 1 (Item 40)	0	m2	2,852.57	0.00	3,108.74	0.00	0.00	0	m2	4,350.00	0.00	0.00
	Sporting Pavillions - 2 (Item 41)	0	m2	2,245.34	0.00	2,290.02	0.00	0.00	0	m2	2,900.00	0.00	0.00
Cleaners	0	m2	2,148.82	0.00	2,324.84	0.00	0.00	0	m2	2,900.00	0.00	0.00	
Canopy & Veranda	0	m2	1,105.52	0.00	1,298.89	0.00	0.00	0	m2	1,700.00	0.00	0.00	
Car Park	Pavement	1,910	m2	97.15	185,556.50	105.90	202,269.00	254,858.94	1,910	m2	150.00	286,500.00	-31,641.06
	Kerb & Channel	220	m2	54.81	12,058.20	62.05	13,651.00	17,200.26	220	m	90.00	19,800.00	-2,599.74
	Drainage Pipes	159	m2	179.85	28,596.15	201.37	32,017.83	40,342.47	159	m	360.00	57,240.00	-16,897.53
	Drainage Pits	7	Item	2,565.39	17,957.73	2,851.46	19,960.22	25,149.88	7	each	4,500.00	31,500.00	-6,350.12
	Linemarking/Signage	1,910	Item	3.11	5,940.10	4.27	8,155.70	10,276.18	1,910	m2	6.00	11,460.00	-1,183.82
	Car Park Lighting	2,047	m2 of carpark	15.08	30,868.76	18.35	37,562.45	47,328.69	2,047	m2 of carpark	100.00	204,700.00	-157,371.31
	Other												0.00
Outdoor Play	Kindergarten outdoor playspaces	700	m2	530.00	371,000.00	609.50	426,650.00	537,579.00	700	m2	550.00	385,000.00	152,579.00
	Playground	800	m3	794.33	635,464.00	1,131.30	905,040.00	1,140,350.40	800	m2	1,400.00	1,120,000.00	20,350.40
Site Works	Site Preparation	6,797	m2	3.68	25,012.96	5.20	35,344.40	44,533.94	6,797	m2	6.50	44,180.50	353.44
	Paths	210	m2	67.64	14,204.40	81.25	17,062.50	21,498.75	210	m2	200.00	42,000.00	-20,501.25
	Landscaping	500	m2	26.18	13,090.00	29.81	14,905.00	18,780.30	500	m2	50.00	25,000.00	-6,219.70
	Lighting	0	Item	0.00	0.00	0.00	0.00	0.00					0.00
	Boundary Fencing	125	m	88.98	11,122.50	115.53	14,441.25	18,195.98	125	m2	180.00	22,500.00	-4,304.03
	Gates	1	Item	614.85	614.85	707.08	707.08	890.92	1	each	1,000.00	1,000.00	-109.08
	Other			0.00	0.00	0.00	0.00	0.00					0.00
Services	Stormwater	1	%	3.30	143,710.02	3.30	160,161.71	201,803.75	2,210	m2	100.00	221,000.00	-19,196.26
	Sewer	1	%	2.03	88,403.43	2.03	98,523.72	124,139.88	1	item	97,500.00	97,500.00	26,639.88
	Water	1	%	1.98	86,226.01	1.98	96,097.02	121,082.25	1	item	67,500.00	67,500.00	53,582.25
	Gas	1	%	0.88	38,322.67	0.88	42,709.79	53,814.33	EXCL				53,814.33
	Fire Protection	1	%	0.66	28,742.00	0.66	32,032.34	40,360.75	1	item	67,500.00	67,500.00	-27,139.25
	Light & Power	1	%	2.38	103,645.41	2.38	115,510.56	145,543.31	1	item	125,000.00	125,000.00	20,543.31
	Communication	1	%	0.50	21,774.25	0.50	24,266.93	30,576.33	1	item	70,000.00	70,000.00	-39,423.68
Miscellaneous	Sub-standard site conditions	0	% of area	0.00	0.00	0.00	0.00						
Delivery	Council Fees	1	%	3.25	158,134.37	3.25	176,237.33	222,059.01	1.00	%	3.25	220,492.38	1,566.63
	Authority Fees	1	%	1.00	48,656.73	1.00	54,226.87	68,325.85	1.00	%	1.00	67,843.81	482.04
	Traffic Management	1	%	2.00	97,313.46	2.00	108,453.74	136,651.70	1.00	%	2.00	135,687.62	964.08
	Environmental Management	1	%	0.50	24,328.37	0.50	27,113.44	34,162.93	1.00	%	0.50	33,921.91	241.02
	Survey/Design Fees	1	%	5.00	243,283.65	5.00	271,134.35	341,629.25	1.00	%	5.00	339,219.05	2,410.20
	Supervision & Project Management	1	%	9.00	437,910.57	9.00	488,041.83	614,932.65	1.00	%	9.00	610,594.29	4,338.36
	Site Establishment	1	%	2.50	121,641.83	2.50	135,567.18	170,814.63	1.00	%	2.50	169,609.53	1,205.10
	Environmentally Sustainable Design	1	%	2.00	97,313.46	2.00	108,453.74	136,651.70	1.00	%	2.00	135,687.62	964.08
	Contingency	1	%	15.00	729,850.95	15.00	813,403.05	1,024,887.75	1.00	%	15.00	1,018,563.15	6,324.60
Total - (2018) rates	Excluding Delivery				4,865,673.00		5,422,687.00						
	Including Delivery				6,824,106.00		7,605,318.00						
Total - (2024) rates	Excluding Delivery							6,832,585.00				6,784,381.00	48,204.00
	Including Delivery							9,582,701.00				9,516,000.00	66,701.00

Appendix D

Toolern PSP & DCP - Community Infrastructure Projects

CI06 - Community Facilities Level 2 (Item 38)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount 2024	Qty	Unit	Rate	Total	Variance
Building	Kindergarten	750	m2	2,544.60	1,908,450.00	2,623.87	1,967,902.50	2,479,557.15	750	m2	3,100.00	2,325,000.00	154,557.15
	Community Facilities Level 1 (Item 37)	30	m2	2,854.70	85,641.00	3,109.11	93,273.30	117,524.36	30	m2	4,000.00	120,000.00	-2,475.64
	Community Facilities Level 1 (Item 37)	100	m2	2,464.03	246,403.00	2,567.64	256,764.00	323,522.64	100	m2	3,450.00	345,000.00	-21,477.36
	Community Facilities Level 2 (Item 38)	500	m2	2,301.97	1,150,985.00	2,440.90	1,220,450.00	1,537,767.00	500	m2	3,450.00	1,725,000.00	-187,233.00
	Community Facilities Level 2 (Item 38)	0	m2	1,830.21	0.00	2,040.01	0.00	0.00	0	m2	2,700.00	0.00	0.00
	Sporting & Recreational Facilities (5-6 Ha) (Item 42)	150	m2	2,301.97	345,295.50	2,440.90	366,135.00	461,330.10	150	m2	3,100.00	465,000.00	-3,669.90
	Sporting Pavillions - 1 (Item 40)	0	m2	3,039.66	0.00	3,461.73	0.00	0.00	0	m2	4,350.00	0.00	0.00
	Sporting Pavillions - 2 (Item 41)	0	m2	2,852.57	0.00	3,108.74	0.00	0.00	0	m2	4,350.00	0.00	0.00
	Cleaners	0	m2	2,245.34	0.00	2,290.02	0.00	0.00	0	m2	2,900.00	0.00	0.00
	Canopy & Veranda	0	m2	2,148.82	0.00	2,324.84	0.00	0.00	0	m2	2,900.00	0.00	0.00
Car Park	Pavement	2,253	m2	1,105.52	0.00	1,298.89	0.00	0.00	0	m2	1,700.00	0.00	0.00
	Kerb & Channel	2,253	m2	97.15	218,878.95	105.90	238,592.70	300,626.80	2,253	m2	150.00	337,950.00	-37,323.20
	Drainage Pipes	398	m2	54.81	21,814.38	62.05	24,695.90	31,116.83	398	m	90.00	35,820.00	-4,703.17
	Drainage Pits	195	m2	179.85	35,070.75	201.37	39,267.15	49,476.61	195	m	360.00	70,200.00	-20,723.39
	Linemarking/Signage	7	Item	2,565.39	17,957.73	2,851.46	19,960.22	25,149.88	7	each	4,500.00	31,500.00	-6,350.12
	Car Park Lighting	2,253	Item	3.11	7,006.83	4.27	9,620.31	12,121.59	2,253	m2	6.00	13,518.00	-1,396.41
	Other	2,380	m2	15.08	35,890.40	18.35	43,673.00	55,027.98	2,380	m2	100.00	238,000.00	-182,972.02
	Other	0		0.00	0.00	0.00	0.00	0.00					0.00
Outdoor Pla	Kindergarten outdoor playspaces	700	m2 of carpark	530.00	371,000.00	609.50	426,650.00	537,579.00	700	m2	550.00	385,000.00	152,579.00
	Playground	800	m3	794.33	635,464.00	1,131.30	905,040.00	1,140,350.40	800	m2	1,400.00	1,120,000.00	20,350.40
Ste Works	Site Preparation	7,313	m2	3.68	26,911.84	5.20	38,027.60	47,914.78	7,313	m2	6.50	47,534.50	380.28
	Paths	202	m2	67.64	13,663.28	81.25	16,412.50	20,679.75	202	m2	200.00	40,400.00	-19,720.25
	Landscaping	500	m2	26.18	13,090.00	29.81	14,905.00	18,780.30	500	m2	50.00	25,000.00	-6,219.70
	Lighting	0	Item	0.00	0.00	0.00	0.00	0.00					0.00
	Boundary Fencing	130	m	88.98	11,567.40	115.53	15,018.90	18,923.81	130	m2	180.00	23,400.00	-4,476.19
	Gates	1	Item	614.85	614.85	707.08	707.08	890.92	1	each	1,000.00	1,000.00	-109.08
	Other	0		0.00	0.00	0.00	0.00	0.00					0.00
Services	Stormwater	1	%	3.30	169,808.27	3.30	188,004.14	236,885.22	2,202	m2	100.00	220,200.00	16,685.22
	Sewer	1	%	2.03	104,457.81	2.03	115,651.03	145,720.30	1	item	97,500.00	97,500.00	48,220.30
	Water	1	%	1.98	101,884.96	1.98	112,802.48	142,131.13	1	item	67,500.00	67,500.00	74,631.13
	Gas	1	%	0.88	45,282.20	0.88	50,134.44	63,169.39	EXCL				63,169.39
	Fire Protection	1	%	0.66	33,961.65	0.66	37,600.83	47,377.04	1	item	67,500.00	67,500.00	-20,122.96
	Light & Power	1	%	2.38	122,467.78	2.38	135,590.86	170,844.49	1	item	125,000.00	125,000.00	45,844.49
	Communication	1	%	0.50	25,728.53	0.50	28,485.48	35,891.70	1	item	70,000.00	70,000.00	-34,108.30
Miscellaneous	Sub-standard site conditions	0	% of area	0.00	0.00	0.00	0.00						
	Council Fees	1	%	3.25	186,852.12	3.25	206,874.33	260,661.67	1.00	%	3.25	259,903.25	758.42
	Authoriy Fees	1	%	1.00	57,492.96	1.00	63,653.64	80,203.59	1.00	%	1.00	79,970.23	233.36
	Traffic Management	1	%	2.00	114,985.92	2.00	127,307.28	160,407.18	1.00	%	2.00	159,940.46	466.72
	Environmental Management	1	%	0.50	28,746.48	0.50	31,826.82	40,101.80	1.00	%	0.50	39,985.12	116.68
	Survey/Design Fees	1	%	5.00	287,464.80	5.00	318,268.20	401,017.95	1.00	%	5.00	399,851.15	1,166.80
	Supervision & Project Management	1	%	9.00	517,436.64	9.00	572,882.76	721,832.31	1.00	%	9.00	719,732.07	2,100.24
	Site Establishment	1	%	2.50	143,732.40	2.50	159,134.10	200,508.98	1.00	%	2.50	199,925.58	583.40
	Environmentally Sustainable Design	1	%	2.00	114,985.92	2.00	127,307.28	160,407.18	1.00	%	2.00	159,940.46	466.72
	Contingency	1	%	15.00	862,394.40	15.00	954,804.60	1,203,053.85	1.00	%	15.00	1,199,729.45	3,324.40
Total - (2018)	Excluding Delivery				5,749,296.00		6,365,364.00						
	Including Delivery				8,063,388.00		8,927,424.00						
Total - (2024)	Excluding Delivery							8,020,359.00				7,997,023.00	23,336.00
	Including Delivery							11,248,554.00				11,216,000.00	32,554.00

Appendix D

Toolern PSP & DCP - Community Infrastructure Projects

AR02 - Sporting Pavillions - 1 (Item 40)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount 2024	Qty	Unit	Rate	Total	Variance
Building	Site Preparation	721	m2	3.68	2,653.28	5.18	3,734.78	4,705.82	721	m2	6.50	4,686.50	19.32
	Community Facilities Level 1 (Item 37)	120	m2	2,408.05	288,966.00	2,445.18	293,421.60	369,711.22	120	m2	4,400.00	528,000.00	-158,288.78
	Community Facilities Level 1 (Item 37)	40	m2	2,519.24	100,769.60	2,594.83	103,793.20	130,779.43	40	m2	4,400.00	176,000.00	-45,220.57
	Community Facilities Level 2 (Item 38)	80	m2	2,414.15	193,132.00	2,406.11	192,488.80	242,535.89	80	m2	3,200.00	256,000.00	-13,464.11
	Community Facilities Level 2 (Item 38)	100	m2	2,365.43	236,543.00	2,330.09	233,009.00	293,591.34	100	m2	3,200.00	320,000.00	-26,408.66
	Sporting & Recreational Facilities (5-6 Ha) (Item 42)	20	m2	2,351.62	47,032.40	2,360.28	47,205.60	59,479.06	20	m2	3,200.00	64,000.00	-4,520.94
	Sporting & Recreational Facilities (8-10 Ha) (Item 43)	20	m2	2,514.88	50,297.60	2,524.88	50,497.60	63,626.98	20	m2	4,000.00	80,000.00	-16,373.02
	Sporting Pavillions - 1 (Item 40)	40	m2	1,238.63	49,545.20	1,585.83	63,433.20	79,925.83	40	m2	4,500.00	180,000.00	-100,074.17
Canopy & Shelter	Sporting Pavillions - 2 (Item 41)	80	m2	761.83	60,946.40	862.50	69,000.00	86,940.00	80	m2	1,600.00	128,000.00	-41,060.00
Site Works	Concrete Paths	0	m2	0.00	0.00	0.00	0.00						
	Lighting	0	m2	0.00	0.00	0.00	0.00						
	Gates/Entrances	0	m2	0.00	0.00	0.00	0.00						
	Other Miscellaneous	0	Item	0.00	0.00	0.00	0.00						
Services	Stormwater	1	%	3.30	33,986.21	3.30	34,867.27	43,932.77	EXCL				43,932.77
	Sewer	1	%	2.03	20,906.67	2.03	21,448.66	27,025.31	1	item	97,500.00	97,500.00	-70,474.69
	Water	1	%	1.98	20,391.72	1.98	20,920.36	26,359.66	1	item	67,500.00	67,500.00	-41,140.34
	Gas	1	%	0.88	9,062.99	0.88	9,297.94	11,715.40	EXCL				11,715.40
	Fire Protection	1	%	0.66	6,797.24	0.66	6,973.45	8,786.55	1	item	67,500.00	67,500.00	-58,713.45
	Light & Power	1	%	2.38	24,511.26	2.38	25,146.70	31,684.84	1	item	125,000.00	125,000.00	-93,315.16
	Communication	1	%	0.50	5,149.43	0.50	5,282.92	6,656.48	1	item	70,000.00	70,000.00	-63,343.52
Miscellaneous	Sub-standard site conditions	0	% of area	0.00	0.00	0.00	0.00						
Delivery	Council Fees	1	%	3.25	37,397.46	3.25	38,366.93	48,342.35	1.00	%	3.25	70,336.08	-21,993.73
	Authority Fees	1	%	1.00	11,506.91	1.00	11,805.21	14,874.57	1.00	%	1.00	21,641.87	-6,767.30
	Traffic Management	1	%	2.00	23,013.82	2.00	23,610.42	29,749.14	1.00	%	2.00	43,283.74	-13,534.60
	Environmental Management	1	%	0.50	5,753.46	0.50	5,902.61	7,437.29	1.00	%	0.50	10,820.94	-3,383.65
	Survey/Design Fees	1	%	5.00	57,534.55	5.00	59,026.05	74,372.85	1.00	%	5.00	108,209.35	-33,836.50
	Supervision & Project Management	1	%	9.00	103,562.19	9.00	106,246.89	133,871.13	1.00	%	9.00	194,776.83	-60,905.70
	Site Establishment	1	%	2.50	28,767.28	2.50	29,513.03	37,186.43	1.00	%	2.50	54,104.68	-16,918.25
	Environmentally Sustainable Design	1	%	2.00	23,013.82	2.00	23,610.42	29,749.14	1.00	%	2.00	43,283.74	-13,534.60
	Contingency	1	%	15.00	172,603.65	15.00	177,078.15	223,118.55	1.00	%	15.00	325,356.05	-102,237.50
Total - (2018)	Excluding Delivery				1,150,691.00		1,180,521.00						
	Including Delivery				1,613,844.00		1,655,681.00						
Total - (2024)	Excluding Delivery							1,487,457.00				2,164,187.00	-676,730.00
	Including Delivery							2,086,158.00				3,036,000.00	-949,842.00

Appendix D

Toolern PSP & DCP - Community Infrastructure Projects

AR08 - Sporting Pavillions - 2 (Item 41)

VPA Benchmark Costings									WT Total Cost (2024)				
Group	Sub Item	Qty	Unit	Rate (P50)	Amount (P50)	Rate (P90)	Amount (P90)	VPA Amount 2024	Qty	Unit	Rate	Total	Variance
Building	Site Preparation	1,048	m2	3.68	3,856.64	5.18	5,428.64	6,840.09	1,048	m2	6.50	6,812.00	28.09
	Community Facilities Level 1 (Item 37)	240	m2	2,408.05	577,932.00	2,445.18	586,843.20	739,422.43	240	m2	4,400.00	1,056,000.00	-316,577.57
	Community Facilities Level 1 (Item 37)	60	m2	2,519.24	151,154.40	2,594.83	155,689.80	196,169.15	60	m2	4,400.00	264,000.00	-67,830.85
	Community Facilities Level 2 (Item 38)	120	m2	2,414.15	289,698.00	2,406.11	288,733.20	363,803.83	120	m2	3,200.00	384,000.00	-20,196.17
	Community Facilities Level 2 (Item 38)	150	m2	2,365.43	354,814.50	2,330.09	349,513.50	440,387.01	150	m2	3,200.00	480,000.00	-39,612.99
	Sporting & Recreational Facilities (5-6 Ha) (Item 42)	30	m2	2,351.62	70,548.60	2,360.28	70,808.40	89,218.58	30	m2	3,200.00	96,000.00	-6,781.42
	Sporting & Recreational Facilities (8-10 Ha) (Item 43)	40	m2	2,514.88	100,595.20	2,524.88	100,995.20	127,253.95	40	m2	4,000.00	160,000.00	-32,746.05
	Sporting Pavillions - 1 (Item 40)	60	m2	1,238.63	74,317.80	1,585.83	95,149.80	119,888.75	60	m2	4,500.00	270,000.00	-150,111.25
Canopy & Y	Sporting Pavillions - 2 (Item 41)	120	m2	761.83	91,419.60	862.50	103,500.00	130,410.00	120	m2	1,600.00	192,000.00	-61,590.00
Ste Works	Concrete Paths	0	m2	0.00	0.00	0.00	0.00						
	Lighting	0	m2	0.00	0.00	0.00	0.00						
	Gates/Entrances	0	m2	0.00	0.00	0.00	0.00						
	Other Miscellaneous	0	Item	0.00	0.00	0.00	0.00						
Services	Stormwater	1	%	3.30	56,573.12	3.30	57,969.85	73,042.00	EXCL				73,042.00
	Sewer	1	%	2.03	34,801.04	2.03	35,660.24	44,931.90	1	item	97,500.00	97,500.00	-52,568.10
	Water	1	%	1.98	33,943.87	1.98	34,781.91	43,825.20	1	item	67,500.00	67,500.00	-23,674.80
	Gas	1	%	0.88	15,086.17	0.88	15,458.63	19,477.87	EXCL				19,477.87
	Fire Protection	1	%	0.66	11,314.62	0.66	11,593.97	14,608.40	1	item	67,500.00	67,500.00	-52,891.60
	Light & Power	1	%	2.38	40,801.22	2.38	41,808.56	52,678.78	1	item	125,000.00	125,000.00	-72,321.22
	Communication	1	%	0.50	8,571.69	0.50	8,783.31	11,066.97	1	item	70,000.00	70,000.00	-58,933.03
Miscellaneous	Sub-standard site conditions	0	% of area	0.00	0.00	0.00	0.00						
Delivery	Council Fees	1	%	3.25	62,251.41	3.25	63,788.34	80,373.31	1.00	%	3.25	108,430.14	-28,056.83
	Authoriy Fees	1	%	1.00	19,154.28	1.00	19,627.18	24,730.25	1.00	%	1.00	33,363.12	-8,632.87
	Traffic Management	1	%	2.00	38,308.56	2.00	39,254.36	49,460.50	1.00	%	2.00	66,726.24	-17,265.74
	Environmental Management	1	%	0.50	9,577.14	0.50	9,813.59	12,365.13	1.00	%	0.50	16,681.56	-4,316.44
	Survey/Design Fees	1	%	5.00	95,771.40	5.00	98,135.90	123,651.25	1.00	%	5.00	166,815.60	-43,164.35
	Supervision & Project Management	1	%	9.00	172,388.52	9.00	176,644.62	222,572.25	1.00	%	9.00	300,268.08	-77,695.83
	Site Establishment	1	%	2.50	47,885.70	2.50	49,067.95	61,825.63	1.00	%	2.50	83,407.80	-21,582.18
	Environmentally Sustainable Design	1	%	2.00	38,308.56	2.00	39,254.36	49,460.50	1.00	%	2.00	66,726.24	-17,265.74
	Contingency	1	%	15.00	287,314.20	15.00	294,407.70	370,953.75	1.00	%	15.00	501,268.80	-130,315.05
Total - (2018)	Excluding Delivery				1,915,428.00		1,962,718.00						
	Including Delivery				2,686,388.00		2,752,712.00						
Total - (2024)								2,473,025.00				3,336,312.00	-863,287.00
								3,468,417.00				4,680,000.00	-1,211,583.00

