

Winton Shire Council 16-Jul-2015 Doc No. 60343415 Commercial-in-Confidence

DRAFT

Winton Flood Mitigation Levee

Detailed Design Estimate



Winton Flood Mitigation Levee Commercial-in-Confidence

DRAFT

Winton Flood Mitigation Levee

Detailed Design Estimate

Client: Winton Shire Council

ABN: 46 299 386 399

Prepared by

Davis Langdon Australia Pty Ltd Level 1, 21 Stokes Street, Townsville QLD 4810, Australia T +61 7 4721 2788 F +61 7 4721 3766 www.davislangdon.com ABN 40 008 657 289

In association with

AECOM

16-Jul-2015

Job No.: 60343415

Davis Langdon in Australia and New Zealand is certified to the latest version of ISO9001, ISO14001, AS/NZS4801 and OHSAS18001.

© Davis Langdon Australia Pty Ltd (Davis Langdon). All rights reserved.

The Report and the information within it is confidential and may be privileged. If you have received the Report in error please notify Davis Langdon immediately. You should not copy it for any purpose, or disclose its contents to any other person. The Report is qualified in its entirety by and should be considered in the light of Davis Langdon's Terms of Engagement and the following:

- 1) The Report is provided solely for your use and benefit unless expressly permitted and then only in connection with the purpose in respect of which the Report is provided. Unless required by law, you shall not provide the Report to any third party without Davis Langdon's prior written consent, which Davis Langdon may at its discretion grant, withhold or grant subject to conditions. Possession of the Report does not carry with it the right to commercially reproduce, publish, sale, hire, lend, redistribute, abstract, excerpt or summarise the Report or to use the name of Davis Langdon in any manner without first obtaining the prior written consent of Davis Langdon.
- 2) Davis Langdon has used its reasonable endeavours to ensure that the data contained in the Report reflects the most accurate and timely information available to it and is based on information that was current as of the date of the Report.
- 3) The Report is based on estimates, assumptions and other information developed by Davis Langdon from its independent research effort, general knowledge of the industry and consultations with you, your employees and your representatives. No warranty or representation is made by Davis Langdon that any of the projected values or results contained in the Report will actually be achieved. In addition, the Report is based upon information that was obtained on or before the date in which the Report was prepared. Circumstances and events may occur following the date on which such information was obtained that are beyond our control and which may affect the findings or projections contained in the Report. We may not be held responsible for such circumstances or events and specifically disclaim any responsibility therefore.
- 4) Davis Langdon has relied on information provided by you and by third parties (Information Providers) to produce the Report and arrive at its conclusions. Davis Langdon has not verified information provided by Information Providers (unless specifically noted otherwise) and we assume no responsibility and make no representations with respect to the adequacy, accuracy or completeness of such information. No responsibility is assumed for inaccuracies in reporting by Information Providers including, without limitation, by your employees or your representatives or for inaccuracies in any other data source whether provided in writing or orally used in preparing or presenting the Report.
- 5) In no event, regardless of whether Davis Langdon's consent has been provided, shall Davis Langdon assume any liability or responsibility to any third party to whom the Report is disclosed or otherwise made available.
- 6) The conclusions in the Report must be viewed in the context of the entire Report including, without limitation, any assumptions made and disclaimers provided. The conclusions in this Report must not be excised from the body of the Report under any circumstances.
- 7) Without the prior written consent of Davis Langdon, the Report is not to be used in conjunction with any public or private offering of securities or other similar purpose where it might be relied upon to any degree by any person other than you.
- 8) All intellectual property rights (including, but not limited to copyright, database rights and trade marks rights) in the Report including any forecasts, drawings, spreadsheets, plans or other materials provided are the property of Davis Langdon. You may use and copy such materials for your own internal use only.

Quality Information

Document	Winton Flood Mitigation Levee
Ref	60343415
Date	16-Jul-2015
Prepared by	Aidan Bradley
Reviewed by	Jason Meager

Revision History

Revision	Revision Date	Details	Authorised		
		Dotalio	Name/Position	Signature	
0	16-Jul-2015	For Client Review and Comment	Jason Meager Associate Director	Julez	
				0	

Table of Contents

Execu	itive Summary	1
1.0	Scope	1
2.0	Estimate Summary	2
3.0	Contingency & Risk Allowances	2
4.0	Programme	2
5.0	Inclusions and Assumptions	2
6.0	Exclusions to the Estimate	3
7.0	Information Used in Preparing the Estimate	3
Apper	ndix A	
	Pre Tender Cost Estimate	A

Executive Summary

Davis Langdon, An AECOM Company has prepared the following Detailed Design Estimate for the provision of Flood Mitigation Levees to the Township of Winton in Queensland. The Proposed project is at approximately 90% Detailed Design Stage and as such the estimate has been prepared using quantities obtained from the current design documents prepared by AECOM. Rates and amounts, where possible have been built up using first principles, with use of historical cost data.

The overall estimate in the order of **\$18,673,857 (Excl. GST)** has been prepared based on the assumption that the project will be delivered under a 'Traditional' procurement strategy utilising 'standard' contract conditions common to the industry in the State of Queensland.

The estimate includes for Contingency Allowances in the order of 15% of the Direct Construction Costs, to account for unforeseen issues and circumstances during the construction phase.

A preliminary construction programme is currently being considered, with early indications showing a construction period of approximately 12 months, dependent on weather conditions, and finalisation of geotechnical information.

1.0 Scope

This Concept Design Estimate has been based on the documentation provided by AECOM and includes the following works:

- Provision of an Embankment Levee System to provide flood protection around the Township of Winton;
- Associated works with the relocation of existing services where required;
- Spillway
- Four levee road crossings
- Drainage and hydraulic works to levee
- Two associated pump stations
- Borrow pit adjacent to the site.
- Inclusion of allowances for contingency, statutory authority fees, consultant fees and construction phase management administration costs
- Exclusion of escalation allowance.

Please also note the inclusions and assumptions under Section 5.0 and exclusions under Section 6.0.

Table 4

2.0 Estimate Summary

The Concept Design Estimate has been compiled taking into account the extent of works indicated within the documentation and is summarised as follows:

Table 1 Estimate Summary	
Proposed Works	Estimated Cost
Site Establishment	\$ 618,911
Provision for Traffic	\$ 148,443
Environmental Management	\$ 120,355
Embankment Levee	\$ 6,195,184
Spillway	\$ 143,200
Levee Road Crossings	\$ 1,575,719
Drainage and Hydraulic Works	\$ 838,900
Pump Stations	\$ 2,941,438
Existing Services	\$ 222,000
Borrow Pit Works	\$ 2,739,118
Principal Obligations	\$ 3,130,589
Total	\$ 18,673,857

Please note that the above amounts include contractor's preliminaries and margin, and contingency.

Please refer to Appendix A for a full breakdown of the cost estimate.

3.0 Contingency & Risk Allowances

For the purpose of this Detailed Design Estimate the risks identified and calculated during the Detailed Design phase have been considered and in accordance with benchmarked information from previous projects. The allowance of 15% would seem to be sufficient at this advanced stage of design.

4.0 Programme

A preliminary construction programme is currently being considered. Initial indications would seem that a reasonable allowance for the construction period will be in the order of 12 months. For the purpose of this Concept Estimate this time frame has been adopted.

5.0 Inclusions and Assumptions

The Preliminary Order of Cost Estimates includes the following:

- Contractor's preliminaries and margin;
- Construction of levees as detailed on the documentation;
- "Fill" material available from a local "borrow pit" adjacent to the site;
- Road crossings to levees as required;
- Drainage works to maintain normal flow during non-flood periods;
- Adjustment/relocation of existing services to accommodate new levees;
- Contingency allowance [20.0%];
- Statutory fees and charges

- Design and planning fees
- Construction phase management and administration costs.

6.0 Exclusions to the Estimate

The Order of Cost Estimate specifically excludes the following:

- Excavation in and removal of contaminated materials
- Excavation in rock and/or hard ground
- Finance costs
- Funding application costs
- Escalation beyond Third Quarter 2015 (it is suggested that an allowance of 2.0% pa be added for escalation)
- Goods & Services Tax (GST).

7.0 Information Used in Preparing the Estimate

Documents used for the preparation of the estimates are as follows;

AECOM Drawings;

60343415-01	Locality plan and drawing index
60343415-02	Overall layout plan
60343415-03	Layout plan and longitudinal section – 1 of 11
60343415-04	Layout plan and longitudinal section – 2 of 11
60343415-05	Layout plan and longitudinal section – 3 of 11
60343415-06	Layout plan and longitudinal section – 4 of 11
60343415-07	Layout plan and longitudinal section – 5 of 11
60343415-08	Layout plan and longitudinal section – 6 of 11
60343415-09	Layout plan and longitudinal section – 7 of 11
60343415-10	Layout plan and longitudinal section – 8 of 11
60343415-11	Layout plan and longitudinal section – 9 of 11
60343415-12	Layout plan and longitudinal section – 10 of 11
60343415-13	Layout plan and longitudinal section – 11 of 11
60343415-14	Control Line Setout – 1 of 5
60343415-15	Control Line Setout – 2 of 5
60343415-16	Control Line Setout – 3 of 5
60343415-17	Control Line Setout – 4 of 5
60343415-18	Control Line Setout – 5 of 5
60343415-19	Control Line Setout Tables
60343415-20	Typical Sections and Miscellaneous Details
60343415-21	Levee Road Crossing – Landsborough Highway – 1 of 2
60343415-22	Levee Road Crossing – Landsborough Highway – 2 of 2
60343415-23	Levee Road Crossing – Jundah Road
60343415-24	Levee Road Crossing – Vindex Street
60343415-25	Levee Road Crossing – Cork Street
60343415-26	Borrow Pit – Layout, Setout and Details
60343415-27	Miscellaneous Details
60343415-28	Stormwater Catchment Plan
60343415-29	Stormwater Pump Station 1 – Layout Plan
60343415-30	Stormwater Pump Station 1 – Details 1 of 3
60343415-31	Stormwater Pump Station 1 – Details 2 of 3
60343415-32	Stormwater Pump Station 1 – Details 3 of 3
60343415-33	Stormwater Pump Station 2 – Layout Plan
60343415-34	Stormwater Pump Station 2 – Details 1 of 3

P:\603X\60343415\8. Issued Docs\8.1 Reports\Clerical\detailed design estimate\draft copy\detailed design estimate.docx Revision 0 – 16-Jul-2015 Prepared for – Winton Shire Council – ABN: 46 299 386 399

60343415-35	Stormwater Pump Station 2 – Details 2 of 3
60343415-36	Stormwater Pump Station 3 – Details 3 of 3
60343415-37	Stormwater Pump Station 1 and 2 – Single Line Diagram
60343415-38	Stormwater Culvert Details

AECOM Specifications

Technical Specification – Winton Flood Mitigation Levee

Winton Flood Mitigation Levee Commercial-in-Confidence

DRAFT

Appendix A

Pre Tender Cost Estimate

Cost Plan : Winton Flood Mitigation Levee

Rev	: Initial			Pro	ject Summary
No.	Description	Unit	Quantity	Rate	Total
	SITE ESTABLISHMENT				618,911
	PROVISION FOR TRAFFIC				148,443
	ENVIRONMENTAL MANAGEMENT				120,355
	EMBANKMENT LEVEE				6,195,184
	SPILLWAY				143,200
	LEVEE ROAD CROSSINGS				1,575,719
	DRAINAGE AND HYDRAULIC WORKS				838,900
	PUMP STATIONS				2,941,438
	EXISTING SERVICES				222,000
	BORROW PIT WORKS				2,739,118
	Direct Project Cost Sub-Total				15,543,268
	PRINCIPAL'S OBLIGATIONS				3,130,589
	То	tal			18,673,857

Cost Plan : Winton Flood Mitigation Levee

Rev :	Initial	Initial SITE ESTABLISHMENT				
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
1a	Contractor's site facilities	Lump Sum	1	405,493.22	405,493.22	
1b	Insurances - Public	Lump Sum	1	125,001.67	125,001.67	
1c	Insurances - Employees	Lump Sum	1	88,415.81	88,415.81	
	Total				618,911	0.00

Cost Plan : Winton Flood Mitigation Levee

Rev :	ev : Initial PROVISION FOR TRAF				RAFFIC	
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
3a	Provision for Traffic Management	Lump Sum	1	140,917.30	140,917.30	
3b	Traffic Management Plan	Lump Sum	1	7,525.84	7,525.84	
	Total				148,443	0.00
DL Proj	ect No. 60343415	1	6-Jul-2015			Page 3

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

ENVIRONMENTAL MANAGEMENT

Rev :	Initial			ENVIRONME	NTAL MANAG	EMENT
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
4a	Environmental Inspections	Lump Sum	1	25,095.28	25,095.28	
4b	Develop Environmental Management Plan (Construction)	Lump Sum	1	10,040.24	10,040.24	
4c	Implement Environmental Management Plan (Construction)	Lump Sum	1	65,074.96	65,074.96	
4d	Environmental Licenses, Permits and Approvals	Lump Sum	1	15,072.60	15,072.60	
4e	Water quality monitoring, if ordered (Provisional Quantity)	Lump Sum	1	5,072.20	5,072.20	
	Total				120,355	0.00
	ect No. 603/3/15	4	6- Jul-2015			Page 4

Winton Flood Mitigation Levee Project :

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

EMBANKMENT LEVEE

Rev :	v: Initial EMBANKMENT LEVER				LEVEE	
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
5a	Clearing and grubbing	m2	234,054.00	0.33	76,068	
5b	Stripping of topsoil (200mm)	m3	33,030.00	6.00	198,180	
5c	Prepare subgrade surface	m2	165,148.00	1.83	302,221	
5d	Sand drain (dry side)	m3	21,524.00	48.65	1,047,143	
5e	Gravel end drain (dry side)	m3	3,444.00	53.50	184,254	
5f	Seepage drain net excavation (dry side)	m3	3,444.00	30.66	105,602	
5g	Levee Homogeneous Embankment Material	m3	342,644.00	10.01	3,429,010	
5h	Embankment Excavation (Cut)	m3	18,502.00	12.06	223,134	
5i	Apply topsoil	m3	17,474.00	7.03	122,842	
5j	Revegetation (Hydromulching)	m2	174,735.00	2.90	506,732	
	Total				6,195,184	0.00

Cost Plan : Winton Flood Mitigation Levee

Rev :	Initial				SPI	LLWAY
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Clearing and Grubbing	m2	2,559.00	0.65	1,663	
	Topsoil Stripping (200 mm)	m3	512.00	7.85	4,019	
	Prepare subgrade surface	m2	2,559.00	2.95	7,549	
	Rock protection 450 mm thick D50 300 mm	m3	1,152.00	112.80	129,948	
	Rounding	Item	1	19.92	19.92	
	Total				143,200	0.00
DL Proj	ect No. 60343415	1	6-Jul-2015			Page 6

Project : Winton Flood Mitigation Levee **Cost Plan : Winton Flood Mitigation Levee**

Rev :

Initial

Davis Langdon

LEVEE ROAD CROSSINGS

No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Landsborough Highway Levee Crossing					
	Road Embankment	m3	10,366	52.65	545,770	
	Road Excavation	m3	1,296.00	37.15	48,146	
	Remove Existing Pavement and Surfacing	Lump Sum	1.00	9,764.78	9,765	
	Prepare subgrade surface (compaction)	m2	6,835.00	5.40	36,909	
	Base (Type 2.1 CMB) 150mm	m3	786.00	85.55	67,243	
	Subbase (Type 2.3) 300mm	m3	1,502.00	81.80	122,862	
	Prime AMCOO 0.8 L/m2)	m2	4,770.00	2.20	10,494	
	First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]	m2	4,770.00	2.25	10,733	
	Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)	m3	69.00	141.85	9,787.68	
	Spreading cover aggregate 20mm, 70 m2/m3 spread rate	m3	69.00	94.85	6,544.65	
	Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]	m2	4,770.00	2.60	12,402	
	Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)	m3	30.00	141.85	4,255.52	
	Spreading cover aggregate 19mm, 160 m2/m3 spread rate	m3	30.00	132.85	3,985.50	
	Linemarking	Item	1	5,700.00	5,700	
	Signage	Item	1	3,250.00	3,250	
	Rounding	Item	1.00	72.82	73	
	Landsborough Highway Levee Crossing Sub-Total				<u>897,920</u>	
	Jundah Road Levee Crossing					
	Road Embankment	m3	4,924.00	52.65	259,249	
	Remove Existing Pavement and Surfacing	Lump Sum	1.00	6,155.40	6,155	
	Prepare subgrade surface (compaction)	m2	2,539.00	5.40	13,711	
	Base (Type 2.1 CMB) 150mm	m3	247.00	85.55	21,131	
	Subbase (Type 2.3) 150mm	m3	512.00	81.80	41,881	
	Prime AMCOO 0.8 L/m2)	m2	1,380.00	2.20	3,036	
	First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]	m2	1,380.00	2.25	3,105	
	Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)	m3	20.00	141.85	2,837.01	

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

Rev : Initial

No. Description Unit Elemental Qty Elemental Rate Amount Wm*GFJ Spreading cover aggregate 20mm, 70 m2/m3 spread rate m3 20.00 94.85 1,897.00 Second Coat SealS0.38 (0.8 L/m2) (19mm, Aggregate (160m2/m3) measered below] m2 1,380.00 2.60 3,588 Supply of cover aggregate precoated, 19 mm nominal size (160m2/m3) measered below] m3 9.00 141.85 1,276.65 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 9.00 132.85 1,195.65 Linemarking Item 1 2,700.00 2,700 Signage Item 1.00 89.00 89 Jundeh Road Levee Crossing Sum 365.107 Vinkex Street Road Crossing Sum 11,876.15 11,876 Sub-Total m2 1,514.00 5.40 8,176 Prepare subgrade surface (compaction) m2 960.00 2.25 2,160 Prime AMCOO 0.8 L/m2) 960.00 2.26 2,160 4,327 Subbase (Type 2.3 150mm m3 14.00 141.85	Rev :	Initial	LEVEE ROAD CROSSINGS						
Spreading cover aggregate 20mm, 70 m2/m3 spread rate m3 m2/m3 spread rate 20.00 m2 94.85 m2 1,387.00 m2 Second Coat SealS0.3B (0.8 L/m2) (19mm Aggregate (160m2/m3) measered balow) m2 m3 1,380.00 m3 2.60 m3 3.588 m3 Supply of cover aggregate (160m2/m3) Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 m3 9.00 m3 141.85 m3 1,276.65 m3 Linemarking Item 1 2,700 m3 3,250 m3 3,250 m3 Rounding Item 1 3,2500 m3 3,250 m3 3,250 m3 Vindex Street Road Crossing Sub-Total Item 1.00 m3 2,218.00 m3 52.65 m3 116,778 m3 Remove Existing Pavement and Surfacing Lump Sum 1.514.00 m3 54.0 m3 8.176 m3 1.67.0 m3 8.176 m3 Prepare subgrade surface (compaction) m3 167.00 m3 85.55 m3 14.287 m3 2.112 m3 Subbase (Type 2.3) f50mm m3 167.00 m3 2.20 m3 2.112 m3 1.985.91 m3 Supply of cover aggregate precoated, Prime AMCOO 0.8 L/m2) m3 14.00 m3 14.185 m3 1.985.91 m3 Supply of cove	No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA		
Second Coat Sea(S0.38 (n3 L/m2) [19mm Aggregate (160m2/m3) measered below] m2 1,380.00 2.60 3,588 Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) m3 9.00 141.85 1.276.85 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 9.00 132.85 1,195.65 Linemarking Item 1 2.700.00 2.700 Signage Item 1 3.250.00 3.250 Rounding Item 1.00 89.00 89 Jundeh Road Levee Crossing Sub-Total m3 2.218.00 52.65 116.778 Remove Existing Pavement and Surfacing Lump 1.00 11.876.15 11.876 Subbase (Type 2.1) CMB) 150mm m3 167.00 85.55 144.287 Subbase (Type 2.1) CMB) 150mm m3 167.00 82.12 2.218.00 Prime AMCOO 0.8 L/m2) m2 960.00 2.20 2.112 First Coat Seal C170 (1.6/m2) (20mm Aggregate (70m2/m3) measured below] m3 14.00 94.85 1,327.90 Sceond Coat SealSO 38 (0.8 L/m2)		Spreading cover aggregate 20mm, 70 m2/m3 spread rate	m3	20.00	94.85	1,897.00			
Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) m3 9.00 141.85 1.276.65 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 9.00 132.85 1,195.65 Linemarking Item 1 2,700.00 3,250 Rounding Item 1 3,250.00 3,250 Rounding Item 1.00 89.00 89 Jundah Road Levee Crossing Sub-Total 365.101 365.101 Vindex Street Road Crossing Sub-Total 365.101 365.101 Vindex Street Road Crossing Sump 1.00 11.876.15 11.876 Subrade Surface m2 1,514.00 5.40 8,176 (compaction) m3 167.00 85.55 14.287 Subbase (Type 2.1) E0mm m3 167.00 2.20 2,112 First Coat Seal C170 (1.61/m2) (20mm m2 960.00 2.22 2,160 belowi Supply of cover aggregate 20mm, 70 m3 14.00 141.85 1,327.90 Spreading cover aggregate 20mm, 70<		Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]	m2	1,380.00	2.60	3,588			
Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 9.00 132.85 1,195.65 Linemarking Item 1 2,700.00 2,700 Signage Item 1 3,250.00 3,250 Rounding Item 1.00 89.00 89 Jundah Road Levee Crossing Item 1.00 89.00 89 Jundah Road Levee Crossing Item 1.00 89.00 89 Vindex Street Road Crossing Item 1.00 11,876.15 116,778 Remove Existing Pavement and Surfacing Lump 1.00 11,876.15 11,876 Base (Type 2.1 CMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.1 CMB) 150mm m3 167.00 82.22 2,112 First Coat Seal C170 (1.61/m2) (20mm m2 960.00 2.20 2,112 First Coat Seal C170 (1.61/m2) (20mm m3 14.00 141.85 1,985.91 Supply of cover aggregate, precoated, 20 mn nominal size (70m2/m3) m3 6.00 141.85 651.10		Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)	m3	9.00	141.85	1,276.65			
Linemarking Item 1 2,700.00 2,700 Signage Item 1 3,250.00 3,250 Rounding Item 1.00 89.00 89 Jundah Road Levee Crossing 365.101 365.101 365.101 Sub-Total 365.101 365.101 365.101 Vindex Street Road Crossing m3 2.218.00 52.65 116,778 Remove Existing Pavement and Sufracing Lump 1.00 11,876.15 11,876 Subractonin m3 167.00 85.55 14,287 Subbase (Type 2.1 CMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.3) 150mm m3 199.00 81.80 16,278 Prime AMCOO 0.8 L/m2) 960.00 2.22 2,112 First Coat Seal C170 (1.6(Im2) [20mm m3 14.00 94.85 1,327.90 Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3) m3 14.00 2.496 1,327.90 Spreading cover aggregate, precoated, 19 mm nominal size (160m2/m3) m3		Spreading cover aggregate 19mm, 160 m2/m3 spread rate	m3	9.00	132.85	1,195.65			
Signage Item 1 3,250.00 3,250 Rounding Item 1.00 89.00 89 Jundah Road Levee Crossing Sub-Total 365.101 365.101 365.101 Vindex Street Road Crossing Road Embankment m3 2,218.00 52.65 116,778 Remove Existing Pavement and Surfacing Lump Surfacing 1.00 11,876.15 11,876 Prepare subgrade surface (compaction) m2 1,514.00 5.40 8,176 Subbase (Type 2.1 GMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.1 GMB) 150mm m3 140.00 2.22 2,112 First Coat Seal C170 (1.6(<i>Im</i> 2) [20mm Aggregate (70m2/m3) measured below] m3 14.00 94.85 1,985.91 Supply of cover aggregate, precoated, 20 mn nominal size (70m2/m3) m3 6.00 2.60 2.496 Item Aggregate (160m2/m3) m3 6.00 141.85 851.10 Spreading cover aggregate, precoated, 19 mn nominal size (160m2/m3) m3 6.00 141.85 797.10 160 m2/m3 spread rate 1<		Linemarking	Item	1	2,700.00	2,700			
RoundingItem1.0089.0089Jundah Road Levee Crossing Sub-TotalImage: Crossing Sub-TotalImage: Crossing Sub-TotalImage: Crossing Sub-TotalVindex Street Road Crossingm32,218.0052.65116,778Remove Existing Pavement and SurfacingLump Sum1.0011,876.1511,876Prepare subgrade surface (compaction)m21,514.005.408,176Base (Type 2.1 CMB) 150mmm3167.0085.5514,287Subbase (Type 2.3) 150mmm3199.0081.8016,278Prime AMCOO 0.8 L/m2)960.002.202,112First Coat Seal C170 (1.6/m2) [20mm Mgregate (70m2/m3) measured below]m314.00141.85Supply of cover aggregate precoated, m2/m3 spread ratem314.0094.85Second Coat Seal S0.3B (0.8 L/m2) (19mm Aggregate (160m2/m3) measered below]m36.00141.85Supply of cover aggregate 19mm, 160 m2/m3 spread ratem36.00141.85Supply of cover aggregate 19mm, 160 m2/m3 spread ratem36.00141.85SignageItem11,900.001,900LinemarkingItem11,900.003,250RoundingItem1.0088.391,84.363Vindex Street Road CrossingItem1.0088.39Supply Crover aggregate 19mm, 160 m2/m3164.3631,84.363Cork Street Road CrossingItem1.0088.39Cork Street Road CrossingItem1.00 <td></td> <td>Signage</td> <td>Item</td> <td>1</td> <td>3,250.00</td> <td>3,250</td> <td></td>		Signage	Item	1	3,250.00	3,250			
Jundah Road Levee Crossing Sub-TotalJandah Road Levee Crossing Sub-Total365.101Vindex Street Road Crossing Road Embankmentm32.218.0052.65116,778Remove Existing Pavement and SurfacingLump Sum1.0011.876.1511.876Prepare subgrade surface (compaction)m21.514.005.408,176Base (Type 2.1 CMB) 150mmm3167.0085.5514,287Subbase (Type 2.3) 150mmm3199.0081.8016,278Prime AMCOO 0.8 L/m2)960.002.202,112First Coat Seal C170 (1.6l/m2) [20mm ma mominal size (70m2/m3) measured below]m314.00141.851,985.91Supply of cover aggregate, precoated, m2/m3 spread ratem314.0094.851,327.90Second Coat SealS0.3B (0.8 L/m2) (19mm Aggregate (160m2/m3) measered below]m2960.002.602.496Supply of cover aggregate 19mm, 160 m2/m3 spread ratem36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3m36.00141.85851.10SignageItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road CrossingItem1.0088.39Supply for cover aggregate 19mm, 160 m2/m3Item1.0088.39SignageItem1.0088.3988.39Vindex Street Road CrossingItem1.0088.39		Rounding	Item	1.00	89.00	89			
Vindex Street Road Crossingm32,218.0052.65116,778Road Embankmentm32,218.0052.65116,778Remove Existing Pavement and SurfacingLump Sum1.0011,876.1511,876Prepare subgrade surface (compaction)m21,514.005.408.176Base (Type 2.1 CMB) 150mmm3167.0085.5514,287Subbase (Type 2.3) 150mmm3199.0081.8016,278Prime AMCOO 0.8 L/m2)960.002.202,112First Coat Seal C170 (1,61/m2) [20mm M2/m3) measured below]m2960.002.25Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3) measered below]m314.0094.851,327.90Spreading cover aggregate precoated, (19mm Aggregate (160m2/m3) measered below]m36.00141.85851.10Supply of cover aggregate precoated, 19 mm nominal size (160m2/m3) measered below]m36.00132.85797.10Supply of cover aggregate precoated, 19 mm nominal size (160m2/m3) measered below]m36.00132.85797.10Supply of cover aggregate precoated, 19 mm nominal size (160m2/m3) to 0 m2/m3 spread ratem36.00132.85797.10Supply of cover aggregate tate LinemarkingItem11,900.003,250Rounding Sub-TotalItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalItem1.0088.3988.39		<u>Jundah Road Levee Crossing</u> <u>Sub-Total</u>				<u>365,101</u>			
Road Embankment m3 2,218.00 52.65 116,778 Remove Existing Pavement and Surfacing Lump Sum 1.00 11,876.15 11,876 Prepare subgrade surface (compaction) m2 1,514.00 5.40 8,176 Base (Type 2.1 CMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.3) 150mm m3 199.00 81.80 16,278 Prime AMCOO 0.8 L/m2) 960.00 2.20 2,112 First Coat Seal C170 (1.6/m2) [20mm Aggregate (70m2/m3) measured below] m2 960.00 2.25 2,160 Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3) m3 14.00 141.85 1,985.91 Scecond Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) m2 960.00 2.60 2,496 Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) m3 6.00 141.85 851.10 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 6.00 132.85 797.10 Signage Item 1 3,250.00 3,250 3,250		Vindex Street Road Crossing							
Remove Existing Pavement and SurfacingLump Sur1.0011,876.1511,876Prepare subgrade surface (compaction)m21,514.005.408,176Base (Type 2.1 CMB) 150mmm3167.0085.5514,287Subbase (Type 2.3) 150mmm3199.0081.8016,278Prime AMCOO 0.8 L/m2)960.002.202,112First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]m2960.002.252,160Supply of cover aggregate, precoated, 20 mn nominal size (70m2/m3) measered below]m314.00141.851,985.91Supply of cover aggregate 20mm, 70 m2/m3 spread ratem36.002.602,496Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) measered below]m36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem1,900.003,250Rounding Sub_TotalItem1.0088.3988.39 <i>Vindex Street Road Crossing</i> Sub_TotalItem1.0088.39 <i>Vindex Street Road Crossing</i> Sub_TotalItem1.0088.39		Road Embankment	m3	2,218.00	52.65	116,778			
Prepare subgrade surface (compaction) m2 1,514.00 5.40 8,176 Base (Type 2.1 CMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.3) 150mm m3 199.00 81.80 16,278 Prime AMCOO 0.8 L/m2) 960.00 2.20 2,112 First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below] m2 960.00 2.25 2,160 Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3) m3 14.00 141.85 1,985.91 Spreading cover aggregate 20mm, 70 m2/m3 spread rate m3 14.00 94.85 1,327.90 Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) measered below] m2 960.00 2.60 2,496 Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) m3 6.00 141.85 851.10 Supply of cover aggregate 19mm, 160 m2/m3 spread rate m3 6.00 132.85 797.10 I60 m2/m3 spread rate Item 1 3,250.00 3,250 Rounding Item 1.00 88.39 88.39 <t< td=""><td></td><td>Remove Existing Pavement and Surfacing</td><td>Lump Sum</td><td>1.00</td><td>11,876.15</td><td>11,876</td><td></td></t<>		Remove Existing Pavement and Surfacing	Lump Sum	1.00	11,876.15	11,876			
Base (Type 2.1 CMB) 150mm m3 167.00 85.55 14,287 Subbase (Type 2.3) 150mm m3 199.00 81.80 16,278 Prime AMCOO 0.8 L/m2) 960.00 2.20 2,112 First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below] m2 960.00 2.25 2,160 Supply of cover aggregate, precoated, below] m3 14.00 141.85 1,985.91 Spreading cover aggregate 20mm, 70 m2/m3 spread rate m3 14.00 94.85 1,327.90 Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below] m2 960.00 2.60 2,496 Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) measered below] m3 6.00 141.85 851.10 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 6.00 132.85 797.10 Linemarking Item 1 1,900.00 1,900 3,250 Signage Item 1.00 88.39 184.363 <i>Vindex Street Road Crossing</i> 184.363 184.363 184.363		Prepare subgrade surface (compaction)	m2	1,514.00	5.40	8,176			
Subbase (Type 2.3) 150mm m3 199.00 81.80 16,278 Prime AMCOO 0.8 L/m2) 960.00 2.20 2,112 First Coat Seal C170 (1.6l/m2) [20mm m2 960.00 2.25 2,160 Aggregate (70m2/m3) measured m3 14.00 141.85 1,985.91 Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3) m3 14.00 94.85 1,327.90 Spreading cover aggregate 20mm, 70 m3 14.00 94.85 1,327.90 m2/m3 spread rate m2 960.00 2.60 2,496 Supply of cover aggregate (160m2/m3) m2 960.00 2.60 2,496 I19 mm nominal size (160m2/m3) m3 6.00 141.85 851.10 Spreading cover aggregate 19mm, 160 m2/m3 spread rate m3 6.00 132.85 797.10 I60 m2/m3 spread rate m3 6.00 132.85 797.10 3,250 Spreading cover aggregate 19mm, 160 m2/m3 m3 6.00 3,250 3,250 Rounding Item 1.00 88.39 88.39 Vindex Street Road Crossing 184.363 184.363<		Base (Type 2.1 CMB) 150mm	m3	167.00	85.55	14,287			
Prime AMCOO 0.8 L/m2)960.002.202,112First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]m2960.002.252,160Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)m314.00141.851,985.91Spreading cover aggregate 20mm, 70 m2/m3 spread ratem314.0094.851,327.90Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) measered below]m36.00141.85851.10Supply of cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road CrossingItem1.0088.39184.363		Subbase (Type 2.3) 150mm	m3	199.00	81.80	16,278			
First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]m2960.002.252,160Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)m314.00141.851,985.91Spreading cover aggregate 20mm, 70 m2/m3 spread ratem314.0094.851,327.90Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) spread ratem36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10KingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road CrossingItem1.0088.39184.363Vindex Street Road CrossingItem1.0088.39184.363		Prime AMCOO 0.8 L/m2)		960.00	2.20	2,112			
Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)m314.00141.851,985.91Spreading cover aggregate 20mm, 70 m2/m3 spread ratem314.0094.851,327.90Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) measered below]m36.00141.85851.10Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3) spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,9001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalItem1.00184.363		First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]	m2	960.00	2.25	2,160			
Spreading cover aggregate 20mm, 70 m2/m3 spread ratem314.0094.851,327.90Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)m36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalItem1.00184.363Cork Street Road CrossingItemItem1.00184.363		Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)	m3	14.00	141.85	1,985.91			
Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]m2960.002.602,496Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)m36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalItem1.00184.363Cork Street Road CrossingItemItemItem1		Spreading cover aggregate 20mm, 70 m2/m3 spread rate	m3	14.00	94.85	1,327.90			
Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)m36.00141.85851.10Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalIIICork Street Road CrossingIIII		Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measered below]	m2	960.00	2.60	2,496			
Spreading cover aggregate 19mm, 160 m2/m3 spread ratem36.00132.85797.10LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalImage: Cork Street Road CrossingImage: Cork Street Road CrossingImage: Cork Street Road Crossing		Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)	m3	6.00	141.85	851.10			
LinemarkingItem11,900.001,900SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalImage: Sub-TotalImage: Street Road Crossing Sub-TotalImage: Street Road CrossingImage: Street Road CrossingImage: Street Road CrossingStreet Road CrossingImage: Street Road CrossingStreet Road CrossingImage: Street Road CrossingImage: Street Road CrossingImage: Street Road CrossingImage: Street Road CrossingStreet Road CrossingImage: Street Road CrossingImage: Street Road CrossingImage: Street Road CrossingImage: Street Road CrossingStreet Road CrossingImage: Street Road Crossing <td< td=""><td></td><td>Spreading cover aggregate 19mm, 160 m2/m3 spread rate</td><td>m3</td><td>6.00</td><td>132.85</td><td>797.10</td><td></td></td<>		Spreading cover aggregate 19mm, 160 m2/m3 spread rate	m3	6.00	132.85	797.10			
SignageItem13,250.003,250RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalImage: Sub-TotalImage: Sub-TotalImage: Sub-TotalCork Street Road CrossingImage: Sub-TotalImage: Sub-TotalImage: Sub-TotalImage: Sub-Total		Linemarking	Item	1	1,900.00	1,900			
RoundingItem1.0088.3988.39Vindex Street Road Crossing Sub-TotalImage: Cork Street Road CrossingImage: Cork Street Road CrossingImage: Cork Street Road CrossingImage: Cork Street Road CrossingImage: Cork Street Road Crossing		Signage	Item	1	3,250.00	3,250			
Vindex Street Road Crossing 184,363 Sub-Total 1 Cork Street Road Crossing 1		Rounding	Item	1.00	88.39	88.39			
Cork Street Road Crossing		<u>Vindex Street Road Crossing</u> <u>Sub-Total</u>				<u>184,363</u>			
		Cork Street Road Crossing							
Road Embankment m3 1,325.00 52.65 69,761		Road Embankment	m3	1,325.00	52.65	69,761			

DL Project No. 60343415

Cost Plan : Winton Flood Mitigation Levee

Rev : Initial

Davis Langdon

LEVEE ROAD CROSSINGS

No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Remove Existing Pavement and Surfacing	Lump Sum	1.00	9,754.42	9,754	
	Prepare subgrade surface (compaction)	m2	1,318.00	5.40	7,117	
	Base (Type 2.1 CMB) 150mm	m3	146.00	85.55	12,490	
	Subbase (Type 2.3) 300mm	m3	170.00	81.80	13,906	
	Prime AMCOO 0.8 L/m2)	m2	840.00	2.20	1,848	
	First Coat Seal C170 (1.6l/m2) [20mm Aggregate (70m2/m3) measured below]	m2	840.00	2.25	1,890	
	Supply of cover aggregate, precoated, 20 mm nominal size (70m2/m3)	m3	12.00	141.85	1,702.21	
	Spreading cover aggregate 20mm, 70 m2/m3 spread rate	m3	12.00	94.85	1,138.20	
	Second Coat SealS0.3B (0.8 L/m2) [19mm Aggregate (160m2/m3) measured below]	m2	840.00	2.60	2,184	
	Supply of cover aggregate, precoated, 19 mm nominal size (160m2/m3)	m3	6.00	141.85	851.10	
	Spreading cover aggregate 19mm, 160 m2/m3 spread rate	m3	6.00	132.85	797.10	
	Linemarking	Item	1	1,600.00	1,600	
	Signage	Item	1	3,250.00	3,250	
	Rounding	Item	1.00	45.00	45	
					<u>128,335</u>	
	Total				1,575,719	0.00
	aat No. 60242445	- 1	6 Jul 2015			Daga (

Project : Winton Flood Mitigation Levee **Cost Plan : Winton Flood Mitigation Levee**

Davis Langdon

Rev :	Initial		DF	RAINAGE AND	HYDRAULIC	WORKS
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Drainage Structures through Levee Embankment					
	W-01 450 RCP Class 4 Including End Structures and Protective Treatments.	m	14.00	850.00	11,900	
	W-02 900 RCP Class 4 Including End Structures and Protective Treatments.	m	19.00	1,450.00	27,550	
	W-03 900 RCP Class 4 Including End Structures and Protective Treatments.	m	41.00	1,100.00	45,100	
	S-02 2 x 900 RCP Class 4 Including End Structures and Protective Treatments.	m	49.00	2,050.00	100,450	
	S-03 900 RCP Class 4 Including End Structures and Protective Treatments.	m	44.00	1,100.00	48,400	
	S-04 900 RCP Class 4 Including End Structures and Protective Treatments.	m	43.00	1,100.00	47,300	
	E-01 2 x 600 RCP Class 4 Including End Structures and Protective Treatments.	m	33.00	1,300.00	42,900	
	E-02 2 x 900 RCP Class 4 Including End Structures and Protective Treatments.	m	25.00	2,500.00	62,500	
	E-03 450 RCP Class 4 Including End Structures and Protective Treatments.	m	26.00	600.00	15,600	
	E-04 2 x 900 RCP Class 4 Including End Structures and Protective Treatments.	m	19.00	2,800.00	53,200	
	Sreens and Barriers at Outlet Structures	Lump Sum	1	Included.	0	
	Flap Valves at Culvert Outlets	Lump Sum	1	Included.	0	
	Concrete seepage plug	Lump Sum	1	36,050.00	36,050	
	Rounding	Item	1	50.60	51	
	<u>Drainage Structures through Levee</u> <u>Embankment Sub-Total</u>				<u>491,000</u>	
	Drainage Structures in Open Drains behind Levee					
	RC-01 450 RCP Class 4 Including End Structures and Protective Treatments.	m	63.00	400.00	25,200	
	RC-02 900 RCP Class 4 Including End Structures and Protective Treatments.	m	51.00	1,050.00	53,550	
	RC-03 1050 RCP Class 4 Including End Structures and Protective Treatments.	m	30.00	2,100.00	63,000	
	RC-04 1050 RCP Class 4 Including End Structures and Protective Treatments.	m	25.00	2,350.00	58,750	

DL Project No. 60343415

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

Initial				HIDRAULIC	WURNS
Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
RC-05 375 RCP Class 4 Including End Structures and Protective Treatments.	m	15.00	700.00	10,500	
V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments	m	17.00	4,100.00	69,700	
C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments	m	16.00	4,200.00	67,200	
Rounding	Item	1	0.12	0	
Drainage Structures in Open Drains behind Levee Sub-Total				<u>347,900</u>	
Total				838,900	0.00
	Description RC-05 375 RCP Class 4 Including End Structures and Protective Treatments. V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments Rounding Drainage Structures in Open Drains behind Levee Sub-Total	Description Unit RC-05 375 RCP Class 4 Including End Structures and Protective Treatments. m V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m Rounding Item Drainage Structures in Open Drains behind Levee Sub-Total Total	Description Unit Elemental Qy RC-05 375 RCP Class 4 Including End Structures and Protective Treatments. m 15.00 V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 17.00 C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 16.00 Rounding Item 1 Drainage Structures in Open Drains behind Levee Sub-Total Item 1 Total Item 1	Initial Unit Elemental Qty Elemental Rate RC-05 375 RCP Class 4 including End Structures and Protective Treatments. m 15.00 700.00 V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 17.00 4,100.00 Col 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 16.00 4,200.00 Col 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 16.00 4,200.00 Rounding ttem 1 0.12 Drainage Structures in Open Drains behind Levee Sub-Total ttem 1 0.12 Total N N N N N	Description Unit Elemental Qy Elemental Rate Amount RC-05 375 RCP Class 4 Including End Structures and Protective Treatments m 15.00 700.00 10,500 V01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 17.00 4,100.00 69,700 C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 16.00 4,200.00 67,200 C01 2/1200 x 600 RCBC Including End Structures and Protective Treatments m 16.00 4,200.00 67,200 Rounding Item 1 0.12 0 347,300 Drainage Structures in Open Drains behind Levee Sub-Total Total N 838,900 347,300

DL Project No. 60343415

PUMP STATIONS Rev: Initial Description Unit **Elemental Qty Elemental Rate** Amount \$/m² GFA No. 1,470,718.98 9a Pump Station No. 1 Lump Sum 1,470,718.98 9b Pump Station No. 2 Lump Sum 0.00 Total 2,941,438

Cost Plan : Winton Flood Mitigation Levee

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

Rev:	: Initial PUMP STATION					
No.	Description	Unit	Quantity	Rate	Total	
	Pump Station No. 1					
	Pump Station No. 1					
	Clearing and grubbing	m2	201	0.65	131	
	Topsoil Stripping (200 mm)	m3	41	7.85	322	
	Prepare subgrade surface	m2	201	4.50	905	
	Treatment / removal of acid sulphate soil	m2	41	21.55	884	
	Excavation (detention basin)	m3	288	43.65	12,571	
	Topsoil spreading	m3	41	74.55	3,057	
	Generator & enclosure & slabs	unit	1.00	275,000.00	275,000	
	Switchboard & enclosure & slabs	unit	1.00	46,500.00	46,500	
	Fence - 1.8 m high 3 strand barbed wire cranked out	m	85.00	126.70	10,770	
	Access gate - 4 m wide	unit	2.00	1,541.88	3,084	
	Access gate - 1 m wide	unit	1.00	489.38	489	
	Pumps units (pump/ piping/ tee)	unit	3.00	63,245.00	189,735	
	Anti-cavitation device	unit	3.00	11,975.00	35,925	
	Flood gate - 1350 mm diameter	unit	1.00	70,087.50	70,088	
	Penstock - 1350 mm diameter	unit	1.00	15,035.63	15,036	
	DN1350 RCP outlet pipes	m	25.00	1,961.69	49,042	
	Outlet pipes rubber rings	unit	21.00	36.65	770	
	Inlet outlet cut-off wall	m3	2.60	1,343.40	3,493	
	Inlet outlet rock protection	m3	6.000	330.85	1,985	
	Seepage Collar	m3	4.000	1,343.40	5,374	
	Seepage Collar Hydrotite	m	15.000	52.95	794	
	Trash rack - 10.2 m wide	unit	1.00	13,467.80	13,468	
	Headwall concrete - min 6 m wide at the outlets	m3	9.00	1,817.45	16,357	
	Security cage - min 6 m wide at the outlets	unit	1.00	2,458.65	2,459	
	Apron - min 6 m wide at the outlets	m3	3.00	711.45	2,134	
	Sheet pile minimum 5 m deep	m	22.00	2,118.00	46,596	
	Concrete pump station structure concrete	m3	332	1,817.45	603,393	
	Fixed step type ladder - 1 m long, 0.7 m wide	m	1.00	190.80	191	
	Fixed step type ladder - 0.35 m long, 0.7 m wide	m	1.00	190.80	191	
	Handrail	m	72.00	229.35	16,513	
	Removable grating	m2	54.00	804.91	43,465	
	Pump Station No. 1 Sub-total				1,470,719	
	Total				1,470,718.98	
	Pump Station No. 2					
	Pump Station No. 1					
	Clearing and grubbing	m2	201	0.65	131	

DL Project No. 60343415

16-Jul-2015

Page 13

Project : Winton Flood Mitigation Levee **Cost Plan : Winton Flood Mitigation Levee**

Rev :	Initial			Pl	JMP STATIONS
No.	Description	Unit	Quantity	Rate	Total
	Topsoil Stripping (200 mm)	m3	41	7.85	322
	Prepare subgrade surface	m2	201	4.50	905
	Treatment / removal of acid sulphate soil	m2	41	21.55	884
	Excavation (detention basin)	m3	288	43.65	12,571
	Topsoil spreading	m3	41	74.55	3,057
	Generator & enclosure & slabs	unit	1.00	275,000.00	275,000
	Switchboard & enclosure & slabs	unit	1.00	46,500.00	46,500
	Fence - 1.8 m high 3 strand barbed wire cranked out	m	85.00	126.70	10,770
	Access gate - 4 m wide	unit	2.00	1,541.88	3,084
	Access gate - 1 m wide	unit	1.00	489.38	489
	Pumps units (pump/ piping/ tee)	unit	3.00	63,245.00	189,735
	Anti-cavitation device	unit	3.00	11,975.00	35,925
	Flood gate - 1350 mm diameter	unit	1.00	70,087.50	70,088
	Penstock - 1350 mm diameter	unit	1.00	15,035.63	15,036
	DN1350 RCP outlet pipes	m	25.00	1,961.69	49,042
	Outlet pipes rubber rings	unit	21.00	36.65	770
	Inlet outlet cut-off wall	m3	2.60	1,343.40	3,493
	Inlet outlet rock protection	m3	6.000	330.85	1,985
	Seepage Collar	m3	4.000	1,343.40	5,374
	Seepage Collar Hydrotite	m	15.000	52.95	794
	Trash rack - 10.2 m wide	unit	1.00	13,467.80	13,468
	Headwall concrete - min 6 m wide at the outlets	m3	9.00	1,817.45	16,357
	Security cage - min 6 m wide at the outlets	unit	1.00	2,458.65	2,459
	Apron - min 6 m wide at the outlets	m3	3.00	711.45	2,134
	Sheet pile minimum 5 m deep	m	22.00	2,118.00	46,596
	Concrete pump station structure concrete	m3	332	1,817.45	603,393
	Fixed step type ladder - 1 m long, 0.7 m wide	m	1.00	190.80	191
	Fixed step type ladder - 0.35 m long, 0.7 m wide	m	1.00	190.80	191
	Handrail	m	72.00	229.35	16,513
	Removable grating	m2	54.00	804.91	43,465
	Pump Station No. 1 Sub-total				1,470,719
	Total				1,470,718.98

Cost Plan : Winton Flood Mitigation Levee

Rev :	Initial				EXISTING SEI	RVICES
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Electrical PUP Adjustments / Protection	Lump Sum			80,000.00	
	Sewerr PUP Adjustments / Protection	Lump Sum			32,000.00	
	Stormwater PUP Adjustments / Protection	Lump Sum			38,000.00	
	Water PUP Adjustments / Protecetion	Lump Sum			40,000.00	
	Communications PUP Adjustments / Protection	Lump Sum			32,000.00	
	Total				222,000	0.00

Cost Plan : Winton Flood Mitigation Levee

Rev :	Initial				EXIST	ING SERVICES
No.	Description		Unit	Quantity	Rate	Total
	Electrical PUP Adjustments / Protection	on				
	Service conflicts - Ergon		No.	4	20,000.00	80,000
		Total				80,000.00
	Sewerr PUP Adjustments / Protection					
	Service conflicts - Sewer		No.	4	8,000.00	32,000
		Total				32,000.00
	Stormwater PUP Adjustments / Protect	tion				
	Service conflicts - Stormwater		No.	4	9,500.00	38,000
		Total				38,000.00
	Water PUP Adjustments / Protecetion					
	Service conflicts - Water		No.	4	10,000.00	40,000
		Total				40,000.00
	Communications PUP Adjustments /					
	Service conflicts - Telstra		No.	4	8,000.00	32,000
		Total				32,000.00

Cost Plan : Winton Flood Mitigation Levee

Davis Langdon

Rev :	Initial			В	ORROW PIT W	VORKS
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	Clearing and grubbing	m2	95,412.00	0.33	31,009	
	Excavation	m3	460,843.00	5.41	2,491,041	
	Trim & profile Borrow Pit / Retention Baisn to grade as detailed	m2	95,412.00	2.28	217,062	
	Rounding	Item	1.00	6.00	6	
	Total				2,739,118	0.00

DL Project No. 60343415

Winton Flood Mitigation Levee Project :

Cost Plan : Winton Flood Mitigation Levee

Rev :	Initial			PRINCI	PAL'S OBLIG	ATIONS
No.	Description	Unit	Elemental Qty	Elemental Rate	Amount	\$/m² GFA
	OBLIGATIONS AND COSTS					
	Project Contingency - (15.0%)	Lump Sum	1	2,418,790.00	2,418,790.00	
	Statutory Fees and Charges (Qleave)	Lump Sum	1	101,928.35	101,928.35	
	Obligations and Costs Total				<u>2,520,718</u>	
	DESIGN AND MANAGEMENT COSTS					
	Design and Planning Fees (2.50%)	Lump Sum	1	381,178.65	381,178.65	
	Construction Phase Management and Administration Costs (1.5%)	Lump Sum	1	228,691.59	228,691.59	
	Design and Management Costs Total				<u>609,870.24</u>	
	Total				3,130,589	0.00