

## **Appendix C      Report on project cost**

This Appendix contains the following information:

A copy of the report, *Report on Cost of Inland Corridors (Refined) for the Pacific Highway Upgrading*, MacDonald International Consulting Engineers, June 2006



**M a c D o n a l d**  
I n t e r n a t i o n a l  
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**Report on Cost of Inland Corridors  
(Refined) for the Pacific Highway  
Upgrading**

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**1<sup>st</sup> June 2006**

## **1.0 INTRODUCTION**

### **1.1 MacDonald International**

MacDonald International is a firm of engineering consultants specialising in Estimating, Programming and Risk Analysis for road projects.

The company:

- Produces many Strategic, Concept and Detailed Estimates each year for many branches of the RTA of NSW
- Has Industry Expert status for estimating with Transit New Zealand, and calculates costs for many of the major projects in New Zealand
- Is on the Transport South Australia panel of estimators

MacDonald International uses an associated company, Benchmark Estimating, to provide and operate the Roadworks Estimator software to produce Strategic Estimates.

### **1.2 Benchmark Estimating's Roadworks Estimator Software**

Roadworks Estimator software was used for costing all options. This software is designed for costing at the Strategic Design stage, when a proposal may simply be a line on a map. When a preliminary design has been done, as in this case, the longsection information can be imported and the quantities recalculated in accordance with the details of Design surface Level and Existing Surface Level, giving more accurate earthworks quantity information.

The Item rates used for calculating costs are based on a first principles estimate, and have been calibrated with, and adjusted if it seemed prudent, with the recommended item rates from the Estimator's Workshop for the Pacific Highway Project.

## **2.0 BRIEF AND INFORMATION**

### **2.1 Brief by the RTA**

Macdonald International has been requested to prepare costings for alternative routes to the Pacific Highway from Grafton to Tyagarah. The work is to be produced using the Benchmark Roadworks Estimator Software, with additional “bottom line adjustments” made for project specific items such as upgrading of additional pavements.

There is no requirement to calculate costs for Service roads or Access roads, or any other roads not on the main alignment, other than:

- specific nominated roads such as an access road from Lismore to the alignment.
- allowances as nominated for Access Roads of 10% of the main alignment length for nominated sections

Contingency percentages are to be included. .

### **2.2 Information provided by the RTA**

The following was provided:

1. Details of the routes, including plans and longsection information, and lengths of tunnels
2. Costs of tunnels (see Appendix A)
3. Cost of upgrading the northernmost section near Tyagarah from Class A to Class M
4. Positions of interchanges, transverse bridges, major bridges, minor bridges over permanent waterways and tunnels.
5. Other information

### **3.0 ROUTES CONSIDERED**

#### **3.1 Links**

- A1 Grafton Bypass – Eastern Route Class M
- A2 Grafton Bypass – Western Route Class M
- B Summerland Way Class A/M
- B Summerland Way Class M
- C1 Inland Corridor A North Class M
- C2 Inland Corridor B North Class M
- D Ewingsdale to Tyagarah Class M

#### **3.2 Inland Corridor A (Refined)**

There are 2 options containing A/M:

- Grafton Bypass Eastern Route(M), Summerland Way with one new carriageway (A/M) and Inland Corridor A North (M).
- Grafton Bypass Western Route (M), Summerland Way with one new carriageway (A/M) and Inland Corridor A North (M).

There are 2 options containing full M:

- Grafton Bypass Eastern Route, Summerland Way with two new carriageways (M), Inland Corridor A North (M) and Ewingsdale to Tyagarah (M)
- Grafton Bypass Western Route, Summerland Way with two new carriageways (M), Inland Corridor A North (M) and Ewingsdale to Tyagarah (M)

#### **3.3 Inland Corridor B (Refined)**

We have shown results for 2 options containing A/M:

- Grafton Bypass Eastern Route(M), Summerland Way with one new carriageway (A/M) and the Inland Corridor B North (M)
- Grafton Bypass Western Route (M), Summerland Way with one new carriageway (A/M) and the Inland Corridor B North (M)

There are 2 options containing full M:

- Grafton Bypass Eastern Route(M), Summerland Way with two new carriageways (M) and the Inland Corridor B North (M)
- Grafton Bypass Western Route (M), Summerland Way with two new carriageways (M) and the Inland Corridor B North (M)

## **3.0 RISK**

### **3.1 Risk Assessment and Contingencies**

Contingencies were generally calculated by the Assessment Method as specified in the RTA Estimating Manual.

A Contingency allowance of 65% for the tunnel work was specifically recommended by the RTA Project Management Office, and this has been included.

The contingency for the remainder of the work are in the upper range of what are normally allowed. The reasons for this include that very little design work has been done, and it appears that significant risks do exist. These risks include:

1. the geological conditions in the northern section suggest a possibility that costs could increase, and increase dramatically.
2. the flood plain areas near Grafton could lead to increased costs of earthworks and bridges
3. there are significant risks involved with the provision of access roads

#### 4.0 SCOPE

- 1) There may be a requirement for the northern section of the Inland Routes need more allowances for a service road.
- 2) More sections may need to be included in upgrading of access roads to towns. Our understanding of the brief was that 2 particular roads only were to be included: 5.5 km of upgrade of the Lismore Nimbin Road, and 8.8 km near Casino at the South end of the Cars Route using the existing road upgraded as one carriageway.
- 3) There may need to be a higher allowance for access roads to properties than 10% of the length, as we were instructed. In the northern section there are deep cuts and fills, meaning nearly all adjacent properties will be cut off. They will need an access road to reach the section where the cut fill line is at grade, so that there is an intersection at grade.
- 4) Land acquisition costs and areas as provided to us may need to be higher.
- 5) There may be a need to allow for costs incurred as a result of the amount of forest that would be destroyed in the northern section as compensatory habitat works.
- 6) No allowance has been included for “Geobruigg” fences in the cuts in the northern section to take the impact of rocks falling 40 metres.
- 7) This estimate does not include allowances for the following:
  - a) Noise walls or Mounds: house treatments are included within 300 metres
  - b) House Demolition
  - c) Bridge Demolition
  - d) Contaminated Sites

## 5.0 PROPERTY

### 5.1 Property Acquisition Costs

Property Acquisition costs have been based on information provided by the RTA.

<b>Section</b>	<b>Classification</b>	<b>Rate per Hectare</b>
Wells Crossing to Swan Creek	Rural Low Cost	<b>\$30,000</b>
Grafton Bypass - Western Route	Rural Residential (excluding State Forest)	<b>\$200,000</b>
Grafton Bypass - Eastern Route	Rural Medium Cost	<b>\$50,000</b>
Summerland Way	Rural Low Cost (excluding State Forest)	<b>\$30,000</b>
Inland Route A Northern Section	Rural Medium Cost	<b>\$50,000</b>
Inland Route A Northern Section	Rural High Cost	<b>\$80,000</b>
Inland Route B Northern Section	Rural Medium Cost	<b>\$50,000</b>
Inland Route B Northern Section	Rural High Cost	<b>\$80,000</b>

### 5.2 Property Acquisition Areas

Property Acquisition areas have been based on information provided by the RTA.

<b>Section</b>	<b>Classification</b>	<b>Class A Area (HA)</b>	<b>Class M Area (HA)</b>
Wells Crossing to Swan Creek	Rural Low Cost	40	40
Grafton Bypass - Western Route	Rural Residential (excluding State Forest)	176	176
Grafton Bypass - Eastern Route	Rural Medium Cost	139	139
Summerland Way	Rural Low Cost (excluding State Forest)	183	273
Inland Route A Northern Section	Rural Medium Cost	213	213
Inland Route A Northern Section	Rural High Cost	301	301
Inland Route B Northern Section	Rural Medium Cost	245	245
Inland Route B Northern Section	Rural High Cost	391	391



## 6.0 RESULTS

### 6.1 Costs

Costs are shown below. Summary Sheets are included in Appendices B and C.

### 6.2 Links

<b>Link</b>	<b>Length (km)</b>	<b>Estimate (including contingency) (000's)</b>	<b>Cost per Road km (million)</b>
Link A1 (Grafton East Bypass)	36.3	\$759,413	\$20.9
Link A2 (Grafton West Bypass)	44.0	\$693,835	\$15.8
Link B (Grafton to Casino) - Class A/M	74.7	\$644,448	\$8.6
Link B (Grafton to Casino) - Class M	74.7	\$828,793	\$11.1
Link C1 (Casino to Ewingsdale - Don Page Refined)	70.20	\$1,790,220	\$25.5
Link D (Ewingsdale to Tyagarah Upgrade)	2.4	\$19,300	\$8.0
Link C2 (Casino to Tyagarah - CARS Refined) - Class M	79.4	\$1,619,238	\$20.4

### 6.3 Options

Option	Length (km)	Estimate (excluding contingency) (000's)	Contingency		Estimate (including contingency) (000's)	Cost per Road km (million)
			%	Amount (000's)		
<b>Class A and M</b>						
Inland Corridor A (Refined) with the Grafton East Bypass - Class A and M	181.2	\$2,127,660	50%	\$1,066,421	\$3,194,081	\$17.6
Inland Corridor A (Refined) with the Grafton West Bypass - Class A and M	188.9	\$2,082,123	50%	\$1,046,379	\$3,128,503	\$16.6
Inland Corridor B (Refined) with the Grafton East Bypass - Class A and M	190.4	\$2,028,023	49%	\$995,076	\$3,023,099	\$15.9
Inland Corridor B (Refined) with the Grafton West Bypass - Class A and M	198.1	\$1,982,486	49%	\$975,035	\$2,957,521	\$14.9
<b>Class M</b>						
Inland Corridor A (Refined) with the Grafton East Bypass - Class M	183.6	\$2,258,976	50%	\$1,138,749	\$3,397,726	\$18.5
Inland Corridor A (Refined) with the Grafton West Bypass - Class M	191.3	\$2,213,440	51%	\$1,118,708	\$3,332,148	\$17.4
Inland Corridor B (Refined) with the Grafton East Bypass - Class M	190.4	\$2,145,043	50%	\$1,062,401	\$3,207,444	\$16.8
Inland Corridor B (Refined) with the Grafton West Bypass - Class M	198.1	\$2,099,506	50%	\$1,042,360	\$3,141,866	\$15.9

## Appendix A: Tunnel Cost Information

The following information was provided by RTA Project Management Office to the Pacific Highway Office.

The basis is for a two carriageway road, each carriageway having two lanes. The setup cost is to be \$15 million for each 2 lane tunnel, and the cost for each tunnel is to be \$55 million per km. A contingency of 65% is to be allowed.

So for a tunnel for a 2 carriageway 2 lane section 1.29 km long, the cost is to be:

Setup Costs: 2 x \$15M	=	\$30 M
Tunnels: 2 x 1.29km x \$55M	=	\$141.9 M
Total	=	\$171.9 M

Including Contingency =  $\$171.9 \times 1.65 = \mathbf{\$283.6 M}$

## Appendix B: Link Summary Sheets

<b>Project:</b>	<b>Pacific Highway Inland Corridor Link A1 - Grafton Bypass - Eastern Route Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$8,922	50%	\$4,461	\$13,384	
1.2 Project Management Services	\$268	50%	\$134	\$402	
1.3 Client Representation	\$22	50%	\$11	\$33	
<b>Sub total</b>	<b>\$9,212</b>	<b>50%</b>	<b>\$4,606</b>	<b>\$13,818</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$22,306	50%	\$11,153	\$33,459	
2.2 Project Management Services	\$669	50%	\$335	\$1,004	
2.3 Client Representation	\$56	50%	\$28	\$84	
<b>Sub total</b>	<b>\$23,031</b>	<b>50%</b>	<b>\$11,515</b>	<b>\$34,546</b>	<b>4.5%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$8,150	50%	\$4,075	\$12,225	
3.2 Professional Services for Acquisitions	\$571	50%	\$285	\$856	
3.3 Property Adjustments	\$726	50%	\$363	\$1,089	
3.4 Project Management Services	\$283	50%	\$142	\$425	
3.5 Client Representation	\$22	50%	\$11	\$33	
<b>Sub total</b>	<b>\$9,752</b>	<b>50%</b>	<b>\$4,876</b>	<b>\$14,628</b>	<b>1.9%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$8,922	50%	\$4,461	\$13,384	
4.2 Project Management Services	\$268	50%	\$134	\$402	
4.3 Client Representation	\$22	50%	\$11	\$33	
<b>Sub total</b>	<b>\$9,212</b>	<b>50%</b>	<b>\$4,606</b>	<b>\$13,818</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$8,762	50%	\$4,381	\$13,143	
5 (b) Control of Erosion and Sedimentation	\$2,058	50%	\$1,029	\$3,087	
5 (c) Drainage	\$29,109	50%	\$14,555	\$43,664	
5 (d) Earthworks	\$63,675	60%	\$38,205	\$101,880	
5 (e) Bridges	\$189,890	45%	\$85,451	\$275,341	
5 (f) Pavements	\$88,460	35%	\$30,961	\$119,421	
5 (g) Roadside Improvements	\$20,571	50%	\$10,286	\$30,857	
5 (h) Miscellaneous Items	\$43,592	50%	\$21,796	\$65,388	
5 (i) Tunnels					
Sub Total Construction	\$446,117	46%	\$206,663	\$652,780	
5 (j) Project Management Services	\$13,384	50%	\$6,692	\$20,075	
5 (k) Principal Arranged Insurance	\$4,461	50%	\$2,231	\$6,692	
5 (l) Client Representation	\$1,115	50%	\$558	\$1,673	
<b>Sub total</b>	<b>\$465,077</b>	<b>46%</b>	<b>\$216,142</b>	<b>\$681,219</b>	<b>89.7%</b>
<b>6. Handover</b>					
6.1 Refurbish old route					
6.2 Project data and performance	\$892	50%	\$446	\$1,338	
6.3 Project Management Services	\$27	50%	\$13	\$40	
6.4 Client Representation	\$2	50%	\$1	\$3	
<b>Sub total</b>	<b>\$921</b>	<b>50%</b>	<b>\$461</b>	<b>\$1,382</b>	<b>0.2%</b>
<b>Total</b>	<b>\$517,206</b>	<b>47%</b>	<b>\$242,207</b>	<b>\$759,413</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor Link A2 - Grafton Bypass - Western Route Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$7,450	50%	\$3,725	\$11,175	
1.2 Project Management Services	\$223	50%	\$112	\$335	
1.3 Client Representation	\$19	50%	\$9	\$28	
<b>Sub total</b>	<b>\$7,692</b>	<b>50%</b>	<b>\$3,846</b>	<b>\$11,538</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$18,625	50%	\$9,312	\$27,937	
2.2 Project Management Services	\$559	50%	\$279	\$838	
2.3 Client Representation	\$47	50%	\$23	\$70	
<b>Sub total</b>	<b>\$19,230</b>	<b>50%</b>	<b>\$9,615</b>	<b>\$28,845</b>	<b>4.2%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$42,600	50%	\$21,300	\$63,900	
3.2 Professional Services for Acquisitions	\$2,982	50%	\$1,491	\$4,473	
3.3 Property Adjustments	\$880	50%	\$440	\$1,320	
3.4 Project Management Services	\$1,394	50%	\$697	\$2,091	
3.5 Client Representation	\$109	50%	\$54	\$163	
<b>Sub total</b>	<b>\$47,965</b>	<b>50%</b>	<b>\$23,982</b>	<b>\$71,947</b>	<b>10.4%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$7,450	50%	\$3,725	\$11,175	
4.2 Project Management Services	\$223	50%	\$112	\$335	
4.3 Client Representation	\$19	50%	\$9	\$28	
<b>Sub total</b>	<b>\$7,692</b>	<b>50%</b>	<b>\$3,846</b>	<b>\$11,538</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$7,321	50%	\$3,661	\$10,982	
5 (b) Control of Erosion and Sedimentation	\$2,686	50%	\$1,343	\$4,029	
5 (c) Drainage	\$33,437	50%	\$16,719	\$50,156	
5 (d) Earthworks	\$72,240	60%	\$43,344	\$115,584	
5 (e) Bridges	\$65,260	45%	\$29,367	\$94,627	
5 (f) Pavements	\$117,534	35%	\$41,137	\$158,671	
5 (g) Roadside Improvements	\$28,647	50%	\$14,324	\$42,971	
5 (h) Miscellaneous Items	\$45,366	50%	\$22,683	\$68,049	
5 (i) Tunnels					
Sub Total Construction	\$372,491	46%	\$172,576	\$545,067	
5 (j) Project Management Services	\$11,175	50%	\$5,587	\$16,762	
5 (k) Principal Arranged Insurance	\$3,725	50%	\$1,862	\$5,587	
5 (l) Client Representation	\$931	50%	\$466	\$1,397	
<b>Sub total</b>	<b>\$388,322</b>	<b>46%</b>	<b>\$180,492</b>	<b>\$568,814</b>	<b>82.0%</b>
<b>6. Handover</b>					
6.1 Refurbish old route					
6.2 Project data and performance	\$745	50%	\$372	\$1,117	
6.3 Project Management Services	\$22	50%	\$11	\$34	
6.4 Client Representation	\$2	50%	\$1	\$3	
<b>Sub total</b>	<b>\$769</b>	<b>50%</b>	<b>\$385</b>	<b>\$1,154</b>	<b>0.2%</b>
<b>Total</b>	<b>\$471,669</b>	<b>47%</b>	<b>\$222,166</b>	<b>\$693,835</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor Link B - Summerland Way - Class A Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$7,689	50%	\$3,844	\$11,533	
1.2 Project Management Services	\$231	50%	\$115	\$346	
1.3 Client Representation	\$19	50%	\$10	\$29	
<b>Sub total</b>	<b>\$7,939</b>	<b>50%</b>	<b>\$3,969</b>	<b>\$11,908</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$19,222	50%	\$9,611	\$28,833	
2.2 Project Management Services	\$577	50%	\$288	\$865	
2.3 Client Representation	\$48	50%	\$24	\$72	
<b>Sub total</b>	<b>\$19,846</b>	<b>50%</b>	<b>\$9,923</b>	<b>\$29,770</b>	<b>4.6%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$8,760	50%	\$4,380	\$13,140	
3.2 Professional Services for Acquisitions	\$613	50%	\$307	\$920	
3.3 Property Adjustments	\$1,494	50%	\$747	\$2,241	
3.4 Project Management Services	\$326	50%	\$163	\$489	
3.5 Client Representation	\$26	50%	\$13	\$38	
<b>Sub total</b>	<b>\$11,219</b>	<b>50%</b>	<b>\$5,609</b>	<b>\$16,828</b>	<b>2.6%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$7,689	50%	\$3,844	\$11,533	
4.2 Project Management Services	\$231	50%	\$115	\$346	
4.3 Client Representation	\$19	50%	\$10	\$29	
<b>Sub total</b>	<b>\$7,939</b>	<b>50%</b>	<b>\$3,969</b>	<b>\$11,908</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$7,567	50%	\$3,784	\$11,351	
5 (b) Control of Erosion and Sedimentation	\$4,582	50%	\$2,291	\$6,873	
5 (c) Drainage	\$16,612	50%	\$8,306	\$24,918	
5 (d) Earthworks	\$49,902	60%	\$29,941	\$79,843	
5 (e) Bridges	\$18,135	45%	\$8,161	\$26,296	
5 (f) Pavements	\$215,988	35%	\$75,596	\$291,584	
5 (g) Roadside Improvements	\$34,164	50%	\$17,082	\$51,246	
5 (h) Miscellaneous Items	\$37,484	50%	\$18,742	\$56,226	
5 (i) Tunnels					
Sub Total Construction	\$384,434	43%	\$163,902	\$548,336	
5 (j) Project Management Services	\$11,533	50%	\$5,767	\$17,300	
5 (k) Principal Arranged Insurance	\$3,844	50%	\$1,922	\$5,767	
5 (l) Client Representation	\$961	50%	\$481	\$1,442	
<b>Sub total</b>	<b>\$400,772</b>	<b>43%</b>	<b>\$172,071</b>	<b>\$572,844</b>	<b>88.9%</b>
<b>6. Handover</b>					
6.1 Refurbish old route					
6.2 Project data and performance	\$769	50%	\$384	\$1,153	
6.3 Project Management Services	\$23	50%	\$12	\$35	
6.4 Client Representation	\$2	50%	\$1	\$3	
<b>Sub total</b>	<b>\$794</b>	<b>50%</b>	<b>\$397</b>	<b>\$1,191</b>	<b>0.2%</b>
<b>Total</b>	<b>\$448,509</b>	<b>44%</b>	<b>\$195,940</b>	<b>\$644,448</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor Link B - Summerland Way - Class M Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$9,504	50%	\$4,752	\$14,255	
1.2 Project Management Services	\$285	50%	\$143	\$428	
1.3 Client Representation	\$24	50%	\$12	\$36	
<b>Sub total</b>	<b>\$9,812</b>	<b>50%</b>	<b>\$4,906</b>	<b>\$14,719</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$23,759	50%	\$11,880	\$35,639	
2.2 Project Management Services	\$713	50%	\$356	\$1,069	
2.3 Client Representation	\$59	50%	\$30	\$89	
<b>Sub total</b>	<b>\$24,531</b>	<b>50%</b>	<b>\$12,266</b>	<b>\$36,797</b>	<b>4.4%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$13,260	50%	\$6,630	\$19,890	
3.2 Professional Services for Acquisitions	\$928	50%	\$464	\$1,392	
3.3 Property Adjustments	\$1,494	50%	\$747	\$2,241	
3.4 Project Management Services	\$470	50%	\$235	\$706	
3.5 Client Representation	\$37	50%	\$18	\$55	
<b>Sub total</b>	<b>\$16,190</b>	<b>50%</b>	<b>\$8,095</b>	<b>\$24,284</b>	<b>2.9%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$9,504	50%	\$4,752	\$14,255	
4.2 Project Management Services	\$285	50%	\$143	\$428	
4.3 Client Representation	\$24	50%	\$12	\$36	
<b>Sub total</b>	<b>\$9,812</b>	<b>50%</b>	<b>\$4,906</b>	<b>\$14,719</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$9,514	50%	\$4,757	\$14,271	
5 (b) Control of Erosion and Sedimentation	\$4,563	50%	\$2,282	\$6,845	
5 (c) Drainage	\$89,565	50%	\$44,783	\$134,348	
5 (d) Earthworks	\$70,609	60%	\$42,365	\$112,974	
5 (e) Bridges	\$42,300	45%	\$19,035	\$61,335	
5 (f) Pavements	\$162,974	35%	\$57,041	\$220,015	
5 (g) Roadside Improvements	\$41,483	50%	\$20,742	\$62,225	
5 (h) Miscellaneous Items	\$54,173	50%	\$27,087	\$81,260	
5 (i) Tunnels					
Sub Total Construction	\$475,181	46%	\$218,090	\$693,271	
5 (j) Project Management Services	\$14,255	50%	\$7,128	\$21,383	
5 (k) Principal Arranged Insurance	\$4,752	50%	\$2,376	\$7,128	
5 (l) Client Representation	\$1,188	50%	\$594	\$1,782	
<b>Sub total</b>	<b>\$495,376</b>	<b>46%</b>	<b>\$228,188</b>	<b>\$723,564</b>	<b>87.3%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$8,548	50%	\$4,274	\$12,822	
6.2 Project data and performance	\$950	50%	\$475	\$1,426	
6.3 Project Management Services	\$285	50%	\$142	\$427	
6.4 Client Representation	\$24	50%	\$12	\$36	
<b>Sub total</b>	<b>\$9,807</b>	<b>50%</b>	<b>\$4,903</b>	<b>\$14,710</b>	<b>1.8%</b>
<b>Total</b>	<b>\$565,529</b>	<b>47%</b>	<b>\$263,264</b>	<b>\$828,793</b>	<b>100%</b>



<b>Project:</b>	<b>Pacific Highway Inland Corridor Link C1 - Corridor B - Don Page Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$19,980	50%	\$9,990	\$29,971	
1.2 Project Management Services	\$599	50%	\$300	\$899	
1.3 Client Representation	\$50	50%	\$25	\$75	
<b>Sub total</b>	<b>\$20,630</b>	<b>50%</b>	<b>\$10,315</b>	<b>\$30,945</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$49,951	50%	\$24,976	\$74,927	
2.2 Project Management Services	\$1,499	50%	\$749	\$2,248	
2.3 Client Representation	\$125	50%	\$62	\$187	
<b>Sub total</b>	<b>\$51,575</b>	<b>50%</b>	<b>\$25,787</b>	<b>\$77,362</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$34,730	50%	\$17,365	\$52,095	
3.2 Professional Services for Acquisitions	\$2,431	50%	\$1,216	\$3,647	
3.3 Property Adjustments	\$1,452	50%	\$726	\$2,178	
3.4 Project Management Services	\$1,158	50%	\$579	\$1,738	
3.5 Client Representation	\$90	50%	\$45	\$136	
<b>Sub total</b>	<b>\$39,862</b>	<b>50%</b>	<b>\$19,931</b>	<b>\$59,793</b>	<b>3.3%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$19,980	50%	\$9,990	\$29,971	
4.2 Project Management Services	\$599	50%	\$300	\$899	
4.3 Client Representation	\$50	50%	\$25	\$75	
<b>Sub total</b>	<b>\$20,630</b>	<b>50%</b>	<b>\$10,315</b>	<b>\$30,945</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$19,617	50%	\$9,809	\$29,426	
5 (b) Control of Erosion and Sedimentation	\$4,019	50%	\$2,010	\$6,029	
5 (c) Drainage	\$12,743	50%	\$6,372	\$19,115	
5 (d) Earthworks	\$193,883	60%	\$116,330	\$310,213	
5 (e) Bridges	\$71,318	45%	\$32,093	\$103,411	
5 (f) Pavements	\$181,939	35%	\$63,679	\$245,617	
5 (g) Roadside Improvements	\$45,974	50%	\$22,987	\$68,961	
5 (h) Miscellaneous Items	\$63,435	50%	\$31,718	\$95,153	
5 (i) Tunnels	\$391,800	65%	\$254,670	\$646,470	
Sub Total Construction	\$984,728	55%	\$539,665	\$1,524,393	
5 (j) Project Management Services	\$29,971	50%	\$14,985	\$44,956	
5 (k) Principal Arranged Insurance	\$9,990	50%	\$4,995	\$14,985	
5 (l) Client Representation	\$2,498	50%	\$1,249	\$3,746	
<b>Sub total</b>	<b>\$1,027,186</b>	<b>55%</b>	<b>\$560,895</b>	<b>\$1,588,081</b>	<b>88.7%</b>
<b>6. Handover</b>					
6.1 Refurbish old route					
6.2 Project data and performance	\$1,998	50%	\$999	\$2,997	
6.3 Project Management Services	\$60	50%	\$30	\$90	
6.4 Client Representation	\$5	50%	\$2	\$7	
<b>Sub total</b>	<b>\$2,063</b>	<b>50%</b>	<b>\$1,031</b>	<b>\$3,094</b>	<b>0.2%</b>
<b>Total</b>	<b>\$1,161,945</b>	<b>54%</b>	<b>\$628,274</b>	<b>\$1,790,220</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor Link C2 - CARS - Class M Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$17,786	50%	\$8,893	\$26,680	
1.2 Project Management Services	\$534	50%	\$267	\$800	
1.3 Client Representation	\$44	50%	\$22	\$67	
<b>Sub total</b>	<b>\$18,364</b>	<b>50%</b>	<b>\$9,182</b>	<b>\$27,547</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$44,466	50%	\$22,233	\$66,699	
2.2 Project Management Services	\$1,334	50%	\$667	\$2,001	
2.3 Client Representation	\$111	50%	\$56	\$167	
<b>Sub total</b>	<b>\$45,911</b>	<b>50%</b>	<b>\$22,955</b>	<b>\$68,866</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$43,530	50%	\$21,765	\$65,295	
3.2 Professional Services for Acquisitions	\$3,047	50%	\$1,524	\$4,571	
3.3 Property Adjustments	\$1,546	50%	\$773	\$2,319	
3.4 Project Management Services	\$1,444	50%	\$722	\$2,166	
3.5 Client Representation	\$113	50%	\$56	\$169	
<b>Sub total</b>	<b>\$49,679</b>	<b>50%</b>	<b>\$24,840</b>	<b>\$74,519</b>	<b>4.6%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$17,786	50%	\$8,893	\$26,680	
4.2 Project Management Services	\$534	50%	\$267	\$800	
4.3 Client Representation	\$44	50%	\$22	\$67	
<b>Sub total</b>	<b>\$18,364</b>	<b>50%</b>	<b>\$9,182</b>	<b>\$27,547</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$17,488	50%	\$8,744	\$26,232	
5 (b) Control of Erosion and Sedimentation	\$4,738	50%	\$2,369	\$7,107	
5 (c) Drainage	\$25,909	50%	\$12,955	\$38,864	
5 (d) Earthworks	\$252,939	60%	\$151,763	\$404,702	
5 (e) Bridges	\$52,735	45%	\$23,731	\$76,466	
5 (f) Pavements	\$197,308	35%	\$69,058	\$266,366	
5 (g) Roadside Improvements	\$47,439	50%	\$23,720	\$71,159	
5 (h) Miscellaneous Items	\$72,661	50%	\$36,331	\$108,992	
5 (i) Tunnels	\$218,100	65%	\$141,765	\$359,865	
Sub Total Construction	\$889,317	53%	\$470,434	\$1,359,751	
5 (j) Project Management Services	\$26,680	50%	\$13,340	\$40,019	
5 (k) Principal Arranged Insurance	\$8,893	50%	\$4,447	\$13,340	
5 (l) Client Representation	\$2,223	50%	\$1,112	\$3,335	
<b>Sub total</b>	<b>\$927,113</b>	<b>53%</b>	<b>\$489,332</b>	<b>\$1,416,445</b>	<b>87.5%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$1,007	50%	\$503	\$1,510	
6.2 Project data and performance	\$1,779	50%	\$889	\$2,668	
6.3 Project Management Services	\$84	50%	\$42	\$125	
6.4 Client Representation	\$7	50%	\$3	\$10	
<b>Sub total</b>	<b>\$2,876</b>	<b>50%</b>	<b>\$1,438</b>	<b>\$4,314</b>	<b>0.3%</b>
<b>Total</b>	<b>\$1,062,308</b>	<b>52%</b>	<b>\$556,930</b>	<b>\$1,619,238</b>	<b>100%</b>

## Appendix C: Option Summary Sheets

<b>Project:</b>	<b>Pacific Highway Inland Corridor A (Refined)</b> <b>- Grafton Bypass - Eastern Route - Class A and M</b> <b>Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International</b> <b>49 Berry Street</b> <b>Nowra</b> <b>Ph (02) 4423 0566</b> <b>Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$36,592	50%	\$18,296	\$54,887	
1.2 Project Management Services	\$1,098	50%	\$549	\$1,647	
1.3 Client Representation	\$91	50%	\$46	\$137	
<b>Sub total</b>	<b>\$37,781</b>	<b>50%</b>	<b>\$18,890</b>	<b>\$56,671</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$91,479	50%	\$45,739	\$137,218	
2.2 Project Management Services	\$2,744	50%	\$1,372	\$4,117	
2.3 Client Representation	\$229	50%	\$114	\$343	
<b>Sub total</b>	<b>\$94,452</b>	<b>50%</b>	<b>\$47,226</b>	<b>\$141,678</b>	<b>4.4%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$51,640	50%	\$25,820	\$77,460	
3.2 Professional Services for Acquisitions	\$3,615	50%	\$1,807	\$5,422	
3.3 Property Adjustments	\$3,672	50%	\$1,836	\$5,508	
3.4 Project Management Services	\$1,768	50%	\$884	\$2,652	
3.5 Client Representation	\$138	50%	\$69	\$207	
<b>Sub total</b>	<b>\$60,833</b>	<b>50%</b>	<b>\$30,416</b>	<b>\$91,249</b>	<b>2.9%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$36,592	50%	\$18,296	\$54,887	
4.2 Project Management Services	\$1,098	50%	\$549	\$1,647	
4.3 Client Representation	\$91	50%	\$46	\$137	
<b>Sub total</b>	<b>\$37,781</b>	<b>50%</b>	<b>\$18,890</b>	<b>\$56,671</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$35,946	50%	\$17,973	\$53,919	
5 (b) Control of Erosion and Sedimentation	\$10,659	50%	\$5,330	\$15,989	
5 (c) Drainage	\$58,464	50%	\$29,232	\$87,696	
5 (d) Earthworks	\$307,460	60%	\$184,476	\$491,936	
5 (e) Bridges	\$279,343	45%	\$125,704	\$405,047	
5 (f) Pavements	\$486,387	35%	\$170,235	\$656,622	
5 (g) Roadside Improvements	\$100,709	50%	\$50,355	\$151,064	
5 (h) Miscellaneous Items	\$144,511	50%	\$72,256	\$216,767	
5 (i) Tunnels	\$391,800	50%	\$254,670	\$646,470	
Sub Total Construction	\$1,815,279	50%	\$910,230	\$2,725,509	
5 (j) Project Management Services	\$54,887	50%	\$27,444	\$82,331	
5 (k) Principal Arranged Insurance	\$18,296	50%	\$9,148	\$27,444	
5 (l) Client Representation	\$4,574	50%	\$2,287	\$6,861	
<b>Sub total</b>	<b>\$1,893,036</b>	<b>50%</b>	<b>\$949,109</b>	<b>\$2,842,144</b>	<b>89.0%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$0				
6.2 Project data and performance	\$3,659	50%	\$1,830	\$5,489	
6.3 Project Management Services	\$110	50%	\$55	\$165	
6.4 Client Representation	\$9	50%	\$5	\$14	
<b>Sub total</b>	<b>\$3,778</b>	<b>50%</b>	<b>\$1,889</b>	<b>\$5,667</b>	<b>0.2%</b>
<b>Total</b>	<b>\$2,127,660</b>	<b>50%</b>	<b>\$1,066,421</b>	<b>\$3,194,081</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor A (Refined)</b> <b>- Grafton Bypass - Western Route - Class A and M</b> <b>Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International</b> <b>49 Berry Street</b> <b>Nowra</b> <b>Ph (02) 4423 0566</b> <b>Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$35,119	50%	\$17,559	\$52,678	
1.2 Project Management Services	\$1,054	50%	\$527	\$1,580	
1.3 Client Representation	\$88	50%	\$44	\$132	
<b>Sub total</b>	<b>\$36,260</b>	<b>50%</b>	<b>\$18,130</b>	<b>\$54,391</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$87,797	50%	\$43,899	\$131,696	
2.2 Project Management Services	\$2,634	50%	\$1,317	\$3,951	
2.3 Client Representation	\$219	50%	\$110	\$329	
<b>Sub total</b>	<b>\$90,651</b>	<b>50%</b>	<b>\$45,325</b>	<b>\$135,976</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$86,090	50%	\$43,045	\$129,135	
3.2 Professional Services for Acquisitions	\$6,026	50%	\$3,013	\$9,039	
3.3 Property Adjustments	\$3,826	50%	\$1,913	\$5,739	
3.4 Project Management Services	\$2,878	50%	\$1,439	\$4,317	
3.5 Client Representation	\$225	50%	\$112	\$337	
<b>Sub total</b>	<b>\$99,045</b>	<b>50%</b>	<b>\$49,523</b>	<b>\$148,568</b>	<b>4.7%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$35,119	50%	\$17,559	\$52,678	
4.2 Project Management Services	\$1,054	50%	\$527	\$1,580	
4.3 Client Representation	\$88	50%	\$44	\$132	
<b>Sub total</b>	<b>\$36,260</b>	<b>50%</b>	<b>\$18,130</b>	<b>\$54,391</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$34,505	50%	\$17,253	\$51,758	
5 (b) Control of Erosion and Sedimentation	\$11,287	50%	\$5,644	\$16,931	
5 (c) Drainage	\$62,792	50%	\$31,396	\$94,188	
5 (d) Earthworks	\$316,025	60%	\$189,615	\$505,640	
5 (e) Bridges	\$154,713	45%	\$69,621	\$224,334	
5 (f) Pavements	\$515,461	35%	\$180,411	\$695,872	
5 (g) Roadside Improvements	\$108,785	50%	\$54,393	\$163,178	
5 (h) Miscellaneous Items	\$146,285	50%	\$73,143	\$219,428	
5 (i) Tunnels	\$391,800	50%	\$254,670	\$646,470	
Sub Total Construction	\$1,741,653	50%	\$876,144	\$2,617,797	
5 (j) Project Management Services	\$52,678	50%	\$26,339	\$79,018	
5 (k) Principal Arranged Insurance	\$17,559	50%	\$8,780	\$26,339	
5 (l) Client Representation	\$4,390	50%	\$2,195	\$6,585	
<b>Sub total</b>	<b>\$1,816,281</b>	<b>50%</b>	<b>\$913,458</b>	<b>\$2,729,739</b>	<b>87.3%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$0				
6.2 Project data and performance	\$3,512	50%	\$1,756	\$5,268	
6.3 Project Management Services	\$105	50%	\$53	\$158	
6.4 Client Representation	\$9	50%	\$4	\$13	
<b>Sub total</b>	<b>\$3,626</b>	<b>50%</b>	<b>\$1,813</b>	<b>\$5,439</b>	<b>0.2%</b>
<b>Total</b>	<b>\$2,082,123</b>	<b>50%</b>	<b>\$1,046,379</b>	<b>\$3,128,503</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor B (Refined)</b> <b>- Grafton Bypass - Eastern Route - Class A and M</b> <b>Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International</b> <b>49 Berry Street</b> <b>Nowra</b> <b>Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$34,397	50%	\$17,199	\$51,596	
1.2 Project Management Services	\$1,032	50%	\$516	\$1,548	
1.3 Client Representation	\$86	50%	\$43	\$129	
<b>Sub total</b>	<b>\$35,515</b>	<b>50%</b>	<b>\$17,758</b>	<b>\$53,273</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$85,993	50%	\$42,997	\$128,990	
2.2 Project Management Services	\$2,580	50%	\$1,290	\$3,870	
2.3 Client Representation	\$215	50%	\$107	\$322	
<b>Sub total</b>	<b>\$88,788</b>	<b>50%</b>	<b>\$44,394</b>	<b>\$133,182</b>	<b>4.4%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$60,440	50%	\$30,220	\$90,660	
3.2 Professional Services for Acquisitions	\$4,231	50%	\$2,115	\$6,346	
3.3 Property Adjustments	\$3,766	50%	\$1,883	\$5,649	
3.4 Project Management Services	\$2,053	50%	\$1,027	\$3,080	
3.5 Client Representation	\$161	50%	\$80	\$241	
<b>Sub total</b>	<b>\$70,650</b>	<b>50%</b>	<b>\$35,325</b>	<b>\$105,975</b>	<b>3.5%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$34,397	50%	\$17,199	\$51,596	
4.2 Project Management Services	\$1,032	50%	\$516	\$1,548	
4.3 Client Representation	\$86	50%	\$43	\$129	
<b>Sub total</b>	<b>\$35,515</b>	<b>50%</b>	<b>\$17,758</b>	<b>\$53,273</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$33,817	50%	\$16,909	\$50,726	
5 (b) Control of Erosion and Sedimentation	\$11,378	50%	\$5,689	\$17,067	
5 (c) Drainage	\$71,630	50%	\$35,815	\$107,445	
5 (d) Earthworks	\$366,516	60%	\$219,910	\$586,426	
5 (e) Bridges	\$260,760	45%	\$117,342	\$378,102	
5 (f) Pavements	\$501,756	35%	\$175,615	\$677,371	
5 (g) Roadside Improvements	\$102,174	50%	\$51,087	\$153,261	
5 (h) Miscellaneous Items	\$153,737	50%	\$76,869	\$230,606	
5 (i) Tunnels	\$218,100	50%	\$141,765	\$359,865	
Sub Total Construction	\$1,719,868	49%	\$840,999	\$2,560,867	
5 (j) Project Management Services	\$51,596	50%	\$25,798	\$77,394	
5 (k) Principal Arranged Insurance	\$17,199	50%	\$8,599	\$25,798	
5 (l) Client Representation	\$4,300	50%	\$2,150	\$6,450	
<b>Sub total</b>	<b>\$1,792,962</b>	<b>49%</b>	<b>\$877,546</b>	<b>\$2,670,509</b>	<b>88.3%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$1,007	50%	\$503	\$1,510	
6.2 Project data and performance	\$3,440	50%	\$1,720	\$5,160	
6.3 Project Management Services	\$133	50%	\$67	\$200	
6.4 Client Representation	\$11	50%	\$6	\$17	
<b>Sub total</b>	<b>\$4,591</b>	<b>50%</b>	<b>\$2,296</b>	<b>\$6,887</b>	<b>0.2%</b>
<b>Total</b>	<b>\$2,028,023</b>	<b>49%</b>	<b>\$995,076</b>	<b>\$3,023,099</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor B - Grafton Bypass - Western Route - Class A and M Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$32,925	50%	\$16,462	\$49,387	
1.2 Project Management Services	\$988	50%	\$494	\$1,482	
1.3 Client Representation	\$82	50%	\$41	\$123	
<b>Sub total</b>	<b>\$33,995</b>	<b>50%</b>	<b>\$16,997</b>	<b>\$50,992</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$82,312	50%	\$41,156	\$123,468	
2.2 Project Management Services	\$2,469	50%	\$1,235	\$3,704	
2.3 Client Representation	\$206	50%	\$103	\$309	
<b>Sub total</b>	<b>\$84,987</b>	<b>50%</b>	<b>\$42,494</b>	<b>\$127,481</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$94,890	50%	\$47,445	\$142,335	
3.2 Professional Services for Acquisitions	\$6,642	50%	\$3,321	\$9,963	
3.3 Property Adjustments	\$3,920	50%	\$1,960	\$5,880	
3.4 Project Management Services	\$3,164	50%	\$1,582	\$4,745	
3.5 Client Representation	\$247	50%	\$124	\$371	
<b>Sub total</b>	<b>\$108,863</b>	<b>50%</b>	<b>\$54,431</b>	<b>\$163,294</b>	<b>5.5%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$32,925	50%	\$16,462	\$49,387	
4.2 Project Management Services	\$988	50%	\$494	\$1,482	
4.3 Client Representation	\$82	50%	\$41	\$123	
<b>Sub total</b>	<b>\$33,995</b>	<b>50%</b>	<b>\$16,997</b>	<b>\$50,992</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$32,376	50%	\$16,188	\$48,564	
5 (b) Control of Erosion and Sedimentation	\$12,006	50%	\$6,003	\$18,009	
5 (c) Drainage	\$75,958	50%	\$37,979	\$113,937	
5 (d) Earthworks	\$375,081	60%	\$225,049	\$600,130	
5 (e) Bridges	\$136,130	45%	\$61,259	\$197,389	
5 (f) Pavements	\$530,830	35%	\$185,791	\$716,621	
5 (g) Roadside Improvements	\$110,250	50%	\$55,125	\$165,375	
5 (h) Miscellaneous Items	\$155,511	50%	\$77,756	\$233,267	
5 (i) Tunnels	\$218,100	50%	\$141,765	\$359,865	
Sub Total Construction	\$1,646,242	49%	\$806,913	\$2,453,155	
5 (j) Project Management Services	\$49,387	50%	\$24,694	\$74,081	
5 (k) Principal Arranged Insurance	\$16,462	50%	\$8,231	\$24,694	
5 (l) Client Representation	\$4,116	50%	\$2,058	\$6,173	
<b>Sub total</b>	<b>\$1,716,207</b>	<b>49%</b>	<b>\$841,896</b>	<b>\$2,558,103</b>	<b>86.5%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$1,007	50%	\$503	\$1,510	
6.2 Project data and performance	\$3,292	50%	\$1,646	\$4,939	
6.3 Project Management Services	\$129	50%	\$64	\$193	
6.4 Client Representation	\$11	50%	\$5	\$16	
<b>Sub total</b>	<b>\$4,439</b>	<b>50%</b>	<b>\$2,220</b>	<b>\$6,659</b>	<b>0.2%</b>
<b>Total</b>	<b>\$1,982,486</b>	<b>49%</b>	<b>\$975,035</b>	<b>\$2,957,521</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor A (Refined) - Grafton Bypass - Eastern Route - Class M Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$38,406	50%	\$19,203	\$57,610	
1.2 Project Management Services	\$1,152	50%	\$576	\$1,728	
1.3 Client Representation	\$96	50%	\$48	\$144	
<b>Sub total</b>	<b>\$39,655</b>	<b>50%</b>	<b>\$19,827</b>	<b>\$59,482</b>	<b>1.8%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$96,016	50%	\$48,008	\$144,024	
2.2 Project Management Services	\$2,880	50%	\$1,440	\$4,321	
2.3 Client Representation	\$240	50%	\$120	\$360	
<b>Sub total</b>	<b>\$99,137</b>	<b>50%</b>	<b>\$49,568</b>	<b>\$148,705</b>	<b>4.4%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$56,140	50%	\$28,070	\$84,210	
3.2 Professional Services for Acquisitions	\$3,930	50%	\$1,965	\$5,895	
3.3 Property Adjustments	\$3,672	50%	\$1,836	\$5,508	
3.4 Project Management Services	\$1,912	50%	\$956	\$2,868	
3.5 Client Representation	\$150	50%	\$75	\$224	
<b>Sub total</b>	<b>\$65,804</b>	<b>50%</b>	<b>\$32,902</b>	<b>\$98,705</b>	<b>2.9%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$38,406	50%	\$19,203	\$57,610	
4.2 Project Management Services	\$1,152	50%	\$576	\$1,728	
4.3 Client Representation	\$96	50%	\$48	\$144	
<b>Sub total</b>	<b>\$39,655</b>	<b>50%</b>	<b>\$19,827</b>	<b>\$59,482</b>	<b>1.8%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$37,893	50%	\$18,947	\$56,840	
5 (b) Control of Erosion and Sedimentation	\$10,640	50%	\$5,320	\$15,960	
5 (c) Drainage	\$131,417	50%	\$65,709	\$197,126	
5 (d) Earthworks	\$328,167	60%	\$196,900	\$525,067	
5 (e) Bridges	\$303,508	45%	\$136,579	\$440,087	
5 (f) Pavements	\$447,669	35%	\$156,684	\$604,353	
5 (g) Roadside Improvements	\$108,028	50%	\$54,014	\$162,042	
5 (h) Miscellaneous Items	\$161,200	50%	\$80,600	\$241,800	
5 (i) Tunnels	\$391,800	50%	\$254,670	\$646,470	
Sub Total Construction	\$1,920,322	50%	\$969,422	\$2,889,744	
5 (j) Project Management Services	\$57,610	50%	\$28,805	\$86,414	
5 (k) Principal Arranged Insurance	\$19,203	50%	\$9,602	\$28,805	
5 (l) Client Representation	\$4,801	50%	\$2,400	\$7,201	
<b>Sub total</b>	<b>\$2,001,936</b>	<b>50%</b>	<b>\$1,010,229</b>	<b>\$3,012,164</b>	<b>88.7%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$8,548	50%	\$4,274	\$12,822	
6.2 Project data and performance	\$3,841	50%	\$1,920	\$5,761	
6.3 Project Management Services	\$372	50%	\$186	\$557	
6.4 Client Representation	\$31	50%	\$15	\$46	
<b>Sub total</b>	<b>\$12,791</b>	<b>50%</b>	<b>\$6,396</b>	<b>\$19,187</b>	<b>0.6%</b>
<b>Total</b>	<b>\$2,258,976</b>	<b>50%</b>	<b>\$1,138,749</b>	<b>\$3,397,726</b>	<b>100%</b>



<b>Project:</b>	<b>Pacific Highway Inland Corridor A (Refined)</b> <b>- Grafton Bypass - Western Route - Class M</b> <b>Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International</b> <b>49 Berry Street</b> <b>Nowra</b> <b>Ph (02) 4423 0566</b> <b>Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$36,934	50%	\$18,467	\$55,401	
1.2 Project Management Services	\$1,108	50%	\$554	\$1,662	
1.3 Client Representation	\$92	50%	\$46	\$139	
<b>Sub total</b>	<b>\$38,134</b>	<b>50%</b>	<b>\$19,067</b>	<b>\$57,201</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$92,335	50%	\$46,167	\$138,502	
2.2 Project Management Services	\$2,770	50%	\$1,385	\$4,155	
2.3 Client Representation	\$231	50%	\$115	\$346	
<b>Sub total</b>	<b>\$95,336</b>	<b>50%</b>	<b>\$47,668</b>	<b>\$143,004</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$90,590	50%	\$45,295	\$135,885	
3.2 Professional Services for Acquisitions	\$6,341	50%	\$3,171	\$9,512	
3.3 Property Adjustments	\$3,826	50%	\$1,913	\$5,739	
3.4 Project Management Services	\$3,023	50%	\$1,511	\$4,534	
3.5 Client Representation	\$236	50%	\$118	\$354	
<b>Sub total</b>	<b>\$104,016</b>	<b>50%</b>	<b>\$52,008</b>	<b>\$156,024</b>	<b>4.7%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$36,934	50%	\$18,467	\$55,401	
4.2 Project Management Services	\$1,108	50%	\$554	\$1,662	
4.3 Client Representation	\$92	50%	\$46	\$139	
<b>Sub total</b>	<b>\$38,134</b>	<b>50%</b>	<b>\$19,067</b>	<b>\$57,201</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$36,452	50%	\$18,226	\$54,678	
5 (b) Control of Erosion and Sedimentation	\$11,268	50%	\$5,634	\$16,902	
5 (c) Drainage	\$135,745	50%	\$67,873	\$203,618	
5 (d) Earthworks	\$336,732	60%	\$202,039	\$538,771	
5 (e) Bridges	\$178,878	45%	\$80,495	\$259,373	
5 (f) Pavements	\$476,743	35%	\$166,860	\$643,603	
5 (g) Roadside Improvements	\$116,104	50%	\$58,052	\$174,156	
5 (h) Miscellaneous Items	\$162,974	50%	\$81,487	\$244,461	
5 (i) Tunnels	\$391,800	50%	\$254,670	\$646,470	
Sub Total Construction	\$1,846,696	51%	\$935,336	\$2,782,032	
5 (j) Project Management Services	\$55,401	50%	\$27,700	\$83,101	
5 (k) Principal Arranged Insurance	\$18,467	50%	\$9,233	\$27,700	
5 (l) Client Representation	\$4,617	50%	\$2,308	\$6,925	
<b>Sub total</b>	<b>\$1,925,181</b>	<b>51%</b>	<b>\$974,578</b>	<b>\$2,899,759</b>	<b>87.0%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$8,548	50%	\$4,274	\$12,822	
6.2 Project data and performance	\$3,693	50%	\$1,847	\$5,540	
6.3 Project Management Services	\$367	50%	\$184	\$551	
6.4 Client Representation	\$31	50%	\$15	\$46	
<b>Sub total</b>	<b>\$12,639</b>	<b>50%</b>	<b>\$6,320</b>	<b>\$18,959</b>	<b>0.6%</b>
<b>Total</b>	<b>\$2,213,440</b>	<b>51%</b>	<b>\$1,118,708</b>	<b>\$3,332,148</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor B (Refined) - Grafton Bypass - Eastern Route - Class M Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International 49 Berry Street Nowra Ph (02) 4423 0566 Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$36,212	50%	\$18,106	\$54,318	
1.2 Project Management Services	\$1,086	50%	\$543	\$1,630	
1.3 Client Representation	\$91	50%	\$45	\$136	
<b>Sub total</b>	<b>\$37,389</b>	<b>50%</b>	<b>\$18,695</b>	<b>\$56,084</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$90,531	50%	\$45,265	\$135,796	
2.2 Project Management Services	\$2,716	50%	\$1,358	\$4,074	
2.3 Client Representation	\$226	50%	\$113	\$339	
<b>Sub total</b>	<b>\$93,473</b>	<b>50%</b>	<b>\$46,736</b>	<b>\$140,209</b>	<b>4.4%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$64,940	50%	\$32,470	\$97,410	
3.2 Professional Services for Acquisitions	\$4,546	50%	\$2,273	\$6,819	
3.3 Property Adjustments	\$3,766	50%	\$1,883	\$5,649	
3.4 Project Management Services	\$2,198	50%	\$1,099	\$3,296	
3.5 Client Representation	\$172	50%	\$86	\$258	
<b>Sub total</b>	<b>\$75,621</b>	<b>50%</b>	<b>\$37,810</b>	<b>\$113,431</b>	<b>3.5%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$36,212	50%	\$18,106	\$54,318	
4.2 Project Management Services	\$1,086	50%	\$543	\$1,630	
4.3 Client Representation	\$91	50%	\$45	\$136	
<b>Sub total</b>	<b>\$37,389</b>	<b>50%</b>	<b>\$18,695</b>	<b>\$56,084</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$35,764	50%	\$17,882	\$53,646	
5 (b) Control of Erosion and Sedimentation	\$11,359	50%	\$5,680	\$17,039	
5 (c) Drainage	\$144,583	50%	\$72,292	\$216,875	
5 (d) Earthworks	\$387,223	60%	\$232,334	\$619,557	
5 (e) Bridges	\$284,925	45%	\$128,216	\$413,141	
5 (f) Pavements	\$448,742	35%	\$157,060	\$605,802	
5 (g) Roadside Improvements	\$109,493	50%	\$54,747	\$164,240	
5 (h) Miscellaneous Items	\$170,426	50%	\$85,213	\$255,639	
5 (i) Tunnels	\$218,100	50%	\$111,765	\$329,865	
Sub Total Construction	\$1,810,615	49%	\$895,187	\$2,705,802	
5 (j) Project Management Services	\$54,318	50%	\$27,159	\$81,478	
5 (k) Principal Arranged Insurance	\$18,106	50%	\$9,053	\$27,159	
5 (l) Client Representation	\$4,527	50%	\$2,263	\$6,790	
<b>Sub total</b>	<b>\$1,887,566</b>	<b>49%</b>	<b>\$933,663</b>	<b>\$2,821,229</b>	<b>88.0%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$9,555	50%	\$4,777	\$14,332	
6.2 Project data and performance	\$3,621	50%	\$1,811	\$5,432	
6.3 Project Management Services	\$395	50%	\$198	\$593	
6.4 Client Representation	\$33	50%	\$16	\$49	
<b>Sub total</b>	<b>\$13,604</b>	<b>50%</b>	<b>\$6,802</b>	<b>\$20,407</b>	<b>0.6%</b>
<b>Total</b>	<b>\$2,145,043</b>	<b>50%</b>	<b>\$1,062,401</b>	<b>\$3,207,444</b>	<b>100%</b>

<b>Project:</b>	<b>Pacific Highway Inland Corridor B (Refined)</b> <b>- Grafton Bypass - Western Route - Class M</b> <b>Summary Sheet</b>	<b>Prepared By:</b>	<b>MacDonald International</b> <b>49 Berry Street</b> <b>Nowra</b> <b>Ph (02) 4423 0566</b> <b>Fax (02) 4423 3228</b>
<b>Date:</b>	<b>03-May-2006</b>	<b>Estimate Stage:</b>	<b>Strategic</b>

Item	Estimate (excluding contingency)  (000)'s	Contingency		Estimate (including contingency)  (000)'s	% of Total Estimate
		%	Amount  (000)'s		
<b>1. Project Development</b>					
1.1 Route/Concept/EIS or REF	\$34,740	50%	\$17,370	\$52,110	
1.2 Project Management Services	\$1,042	50%	\$521	\$1,563	
1.3 Client Representation	\$87	50%	\$43	\$130	
<b>Sub total</b>	<b>\$35,869</b>	<b>50%</b>	<b>\$17,934</b>	<b>\$53,803</b>	<b>1.7%</b>
<b>2. Investigation and Design</b>					
2.1 Investigation and Design	\$86,849	50%	\$43,425	\$130,274	
2.2 Project Management Services	\$2,605	50%	\$1,303	\$3,908	
2.3 Client Representation	\$217	50%	\$109	\$326	
<b>Sub total</b>	<b>\$89,672</b>	<b>50%</b>	<b>\$44,836</b>	<b>\$134,508</b>	<b>4.3%</b>
<b>3. Property Acquisitions</b>					
3.1 Property Acquisition Costs	\$99,390	50%	\$49,695	\$149,085	
3.2 Professional Services for Acquisitions	\$6,957	50%	\$3,479	\$10,436	
3.3 Property Adjustments	\$3,920	50%	\$1,960	\$5,880	
3.4 Project Management Services	\$3,308	50%	\$1,654	\$4,962	
3.5 Client Representation	\$258	50%	\$129	\$387	
<b>Sub total</b>	<b>\$113,833</b>	<b>50%</b>	<b>\$56,917</b>	<b>\$170,750</b>	<b>5.4%</b>
<b>4. Public Utility Adjustments</b>					
4.1 Adjust Utilities	\$34,740	50%	\$17,370	\$52,110	
4.2 Project Management Services	\$1,042	50%	\$521	\$1,563	
4.3 Client Representation	\$87	50%	\$43	\$130	
<b>Sub total</b>	<b>\$35,869</b>	<b>50%</b>	<b>\$17,934</b>	<b>\$53,803</b>	<b>1.7%</b>
<b>5. Construction</b>					
5 (a) General Provisions	\$34,323	50%	\$17,162	\$51,485	
5 (b) Control of Erosion and Sedimentation	\$11,987	50%	\$5,994	\$17,981	
5 (c) Drainage	\$148,911	50%	\$74,456	\$223,367	
5 (d) Earthworks	\$395,788	60%	\$237,473	\$633,261	
5 (e) Bridges	\$160,295	45%	\$72,133	\$232,428	
5 (f) Pavements	\$477,816	35%	\$167,236	\$645,052	
5 (g) Roadside Improvements	\$117,569	50%	\$58,785	\$176,354	
5 (h) Miscellaneous Items	\$172,200	50%	\$86,100	\$258,300	
5 (i) Tunnels	\$218,100	50%	\$111,765	\$359,865	
Sub Total Construction	\$1,736,989	50%	\$861,101	\$2,598,090	
5 (j) Project Management Services	\$52,110	50%	\$26,055	\$78,165	
5 (k) Principal Arranged Insurance	\$17,370	50%	\$8,685	\$26,055	
5 (l) Client Representation	\$4,342	50%	\$2,171	\$6,514	
<b>Sub total</b>	<b>\$1,810,811</b>	<b>50%</b>	<b>\$898,012</b>	<b>\$2,708,823</b>	<b>86.2%</b>
<b>6. Handover</b>					
6.1 Refurbish old route	\$9,555	50%	\$4,777	\$14,332	
6.2 Project data and performance	\$3,474	50%	\$1,737	\$5,211	
6.3 Project Management Services	\$391	50%	\$195	\$586	
6.4 Client Representation	\$33	50%	\$16	\$49	
<b>Sub total</b>	<b>\$13,452</b>	<b>50%</b>	<b>\$6,726</b>	<b>\$20,178</b>	<b>0.6%</b>
<b>Total</b>	<b>\$2,099,506</b>	<b>50%</b>	<b>\$1,042,360</b>	<b>\$3,141,866</b>	<b>100%</b>