

### **3. Tender Spedding Road Extension – CON09065**

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**Reporting Officer:** Mark Seakins (Project Manager)  
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#### **Contract 09065 Spedding Road Extension Design and Construction**

This contract is for the design and construction of the Spedding Road Extension project. It includes the following works:

- Construction of earthworks
- Construction of drainage culverts, swale drains and kerbing
- Road construction and sealing
- Reconstruction of the existing section of Spedding Road including asphaltting the surface to reduce road noise and the installation of a kea crossing for the Tikipunga Primary School
- Construction of a single lane roundabout at the Spedding Road/Denby Crescent intersection
- Construction of a road connection to William Jones Drive (Provisional Item)
- Construction of a shared walking and cycle path
- Construction of noise fences adjacent to William Jones Drive properties and the Living 1 land above the golf course
- Construction of a 8m high golf fence adjacent to the golf course
- Installation of streetlights.

These works are to be designed this winter and constructed over next summer with a programmed completion date of April 2011. This project will tie in with the Kamo Bypass Stage 2 project which is programmed for completion in December 2011.

Consent for these works has been obtained from the Northland Regional Council. A designation is currently being sought for the route from the Whangarei District Council and a hearing has been set for 25 June 2010. It is expected that this designation will be approved within the next two months.

All tenders have been evaluated in accordance with the Conditions of Tendering stated in the tender documents. The tender evaluation method is "Physical Works – Price Quality Method", in accordance with Clause 2.7 of the Transfund CPP manual (1998).

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Five conforming tenders and one alternative tenders were received. Details of these tenders are provided as follows (GST exclusive):

<b>Tenders</b>	<b>Tender Price</b>	<b>Adjusted Tender Price</b>
Downer EDI Works Ltd (Alternative)	\$2,642,916.82	\$2,301,612.60
Downer EDI Works Ltd (Conforming)	\$2,902,100.82	\$2,560,796.60
Transfield Services Ltd	\$3,084,164.57	\$2,857,609.09
Hawkins Infrastructure Ltd	\$3,418,508.18	\$3,277,533.68
Fulton Hogan Ltd	\$3,587,034.00	\$3,446,313.43
United Civil Construction Ltd	\$3,709,076.04	\$3,524,589.37
<b>Engineer's Estimate</b>	<b>\$4,397,980.79</b>	

The alternative tender provided by Downer EDI Works Ltd proposed to use Open Graded Porous Asphalt (OGPA) rather than traditional asphaltic concrete (AC). The OGPA material has better noise reduction properties and improved surface friction than traditional AC. An example of OGPA is the section of SH1 past the "Blue Goose" which was resurfaced approximately two years ago. However, OGPA has a shorter life than traditional AC and will require more frequent renewal and subsequently greater long-term cost. An analysis of the additional life-cycle costs of OGPA indicates that this alternative will increase the long-term maintenance costs as follows:

<b>Description</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>	<b>Discount Factor</b>	<b>Net Present Value Cost</b>
Water blasting (annual programme)	11,000m <sup>2</sup>	\$5/m <sup>2</sup>	\$55,000	10.74	+\$590,700
Replacement of OGPA (every 7 years)	11,000m <sup>2</sup>	\$25/m <sup>2</sup>	\$275,000	2.03	+\$558,250
<i>Less</i> Replacement of AC (every 12 years)	3,200m <sup>2</sup>	\$30/m <sup>2</sup>	\$96,000	0.98	-\$94,080
<i>Less</i> Replacement of Chip Seal (every 7 years)	7,800m <sup>2</sup>	\$4/m <sup>2</sup>	\$31,200	2.03	-\$63,336
In addition, a 2m high boundary standard timber fence will be required	960m	\$95/m	\$91,200	1.00	+\$91,200
<b>TOTAL</b>					<b>+\$1,082,723</b>

Therefore, the total life-cycle cost of the alternative is expected to be in the order of \$3,725,651. As this results in the alternative tender price being \$823,550 more expensive than the highest scoring conforming tender, it has not been considered further.

On this basis, the Downer EDI Works Ltd conforming tender is preferred as it has the lowest adjusted tender price.

### Financial

The Downer EDI Works Ltd conforming tender of \$2,902,100.82 (GST exclusive) is 66% of the Engineer's Estimate.

The main difference between this tender and the Engineer's Estimate is that the earthworks, fencing and establishment costs are lower than estimated. A significant part of this cost saving is due to the tender estimate replacing noise fence with asphaltic concrete. Although this is expected to be adequate, the noise fencing had a dual role of also being a boundary fence to provide security for properties on William Jones Drive and is likely to be a condition of consent.

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On this basis, a 2m high timber boundary fence should be added to the tender cost. This would increase the tender sum by approximately \$25,000 and has been added to the total funding required shown in the table below.

Downer EDI Works Ltd is a contractor who is capable of completing the works as specified, and it is considered that the rates submitted are highly competitive, rather than unduly low.

The Council budget available for this project is \$2,971,000.

The New Zealand Transport Agency (NZTA) has approved this funding subject to Council obtaining the necessary land and consents.

The project components which are to be funded from this budget are as follows:

<b>Contract</b>	<b>Activity</b>	<b>Price</b>
CON09065	Design and Construction	\$2,902,101
CON09034	Professional Services (Investigations, Preliminary Design and Consents)	\$250,000
	Professional Services (Construction Supervision)	\$50,000
	Kamo Bypass Stage 2/ Spedding Road Intersection (50% of intersection cost as agreed with NZTA)	\$408,000
	Landscaping	\$100,000
	Timber fencing to be added to Downer EDI Works contract	\$25,000
	Land Required for William Jones Drive connection (including land negotiation and legal fees. Building removal is expected to be nil net cost)	\$200,000
	<b>TOTAL</b>	<b>\$3,935,101</b>

It should be noted that the 50% share of the Kamo Bypass/Spedding Road intersection is based on the design estimate and is expected to be significantly higher than the actual tender price for the Kamo Bypass project. NZTA has been requested to provide detail of the actual Council contribution for this work but this information is not yet available. The \$408,000 contribution used in the table above is expected to be conservative and it is likely that the total Council contribution will be significantly lower than the amount used.

This shows that there is a potential a short-fall in the project budget of approximately \$964,000. This should be made up by funding the project from the following sources:

<b>Description</b>	<b>Budget</b>
Spedding Road Extension	\$2,971,000
Bridge Replacements	\$964,000
<b>TOTAL BUDGET</b>	<b>\$3,935,000</b>

The reason that the Council's Bridge Replacement programme has been utilised to make up the funding short-fall, is that NZTA have capped a combined budget for road improvements over the 2010/11 and 2011/12 financial years to only \$3,255,000 (including 2009/10 carry overs). This capped budget includes the Spedding Road Extension, Bridge Replacements, the One Tree Point and McEwan Road upgrades and Traffic Management upgrades (ie traffic signal upgrades).

Therefore, funding for the Spedding Road project will effectively fully utilise this NZTA budget for road improvements. This may result in no new bridge replacements, no major upgrades to One Tree Point Road/McEwan Roads and no traffic management upgrades being able to be funded within the next two years.

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A request will be made to NZTA to increase the project budget for this work to \$3,935,000.

### Recommendation

1. That the contract for Spedding Road Extension - Design & Construction (CON09065) be awarded to Downer EDI Works Ltd for the conforming tendered sum of \$2,902,100.82 (Two Million, Nine Hundred and Two Thousand, One Hundred Dollars and Eighty Two Cents) excluding GST.
2. That additional funding be allocated for this project from the Council's 2010/11 Bridge Replacement budget.
3. That additional NZTA funding be sought for this project.