

1 SBA A5/A45 Proposed Junction Improvement – Scheme Cost Review

1.1 Introduction

This note provides a review of the scheme cost provided of the proposed improvement to the A5/A45 junction. The review is based on the information provided in WNDC26 (proposed junction layout and highway design cost estimate).

Further to this review, the note also includes an estimate of reinstating the junction to its current configuration should the Weedon, Flore and Upper Heyford Bypass scheme be implemented.

1.2 Review of Junction Improvement Scheme Cost

Figure 1 attached provides a review of the scheme cost undertaken by SBA. The review indicates that whilst it was not possible to verify all of the quantities (as the detail of the plans did not allow), a spot check of a few of the items suggests that the costs would appear to be reasonable for this scheme. Using the SBA quantities with alternative rates (where applicable) a scheme cost estimate of approximately £500,000 was produced, which when compared to the SBA cost estimate of £460,000 (see attached) is considered to be an acceptable variance given the level of information currently available.

It is worth noting that it is not currently possible to confirm the costs associated with attending to existing services within the road / footway that would be affected by the junction rearrangement (power, telecoms, cable TV etc).

1.3 Reinstatement of Junction

Figure 2 provides a cost estimate for the reinstatement of existing A5/A45 junction configuration, which would be required once the Weedon, Flore and Upper Heyford Bypass is implemented. This is based on the assumption that when the proposed junction improvement is constructed it is undertaken with the future removal in mind i.e. the drainage runs are stopped off so they can be reconnected and not just filled with concrete.

The cost for the reinstatement is estimated to be approximately £200,000 (excluding optimism bias).

1.4 Summary

Table 1 provides a summary of the cost estimates outlined above, together with allowances for addressing the removal of statutory services and also optimism bias.

Table 1 – A5/A45 Junction Improvement Cost Estimate (including reinstatement cost).

Scheme	Cost Estimate	Statutory Services*	Total (including optimism bias**)
SBA Cost Estimate	£459,195.10	£45,919.51	£727,365.04
Reinstatement of A5/A45 Junction	£199,888.72	-	£287,839.75
Total	£659,083.82	£45,919.51	£1,015,204.79

* statutory services assumed to be 10%; ** 44% optimism bias assumed

Figure 1

Job Title: **Daventry Housing - A5 / A45 Junction**

Cost Plan: **Indicative Cost Estimate**

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes
Series 700 Pavements								
A			Roadway construction	£63.00	763	m ²	£48,069.00	
B			Footway construction	£27.00	385	m ²	£10,395.00	
Series 1100 Kerbing, Footways and Paved Areas								
C			Kerbing	£27.00	504	m	£13,608.00	
Series 1200 Traffic Signs and Road Markings								
D			Road markings;	£1.50	4000	m	£6,000.00	
Series 700 Pavements								
E			Verge	£10.00	150	m	£1,500.00	
Series 1200 Traffic Signs and Road Markings								
F			Signing	£180.00	10	nr	£1,800.00	
Series 700 Pavements								
G			Anti-skid surfacing	£17.00	1500	m ²	£25,500.00	
Series 1200 Traffic Signs and Road Markings								
H			Bollards	£450.00	10	nr	£4,500.00	
Series 1300 Road Lighting, Column Brackets and Wall Mountings								
I			Lighting	£2,300.00	10	nr	£23,000.00	
Series 500 Drainage and Service Ducts								
J		<u>Drainage</u>	Drainage; connections	£157.00	15	nr	£2,355.00	
K			Gully	£250.00	15	nr	£3,750.00	
L			Manhole	£1,500.00	2	nr	£3,000.00	
M			150mm dia pipework	£65.00	50	m	£3,250.00	
Page Total					Carried Forward		£146,727.00	

Arup Review	
Arup Rates	Total
£66.40	£50,663.20
£30.00	£11,550.00
£27.00	£13,608.00
£1.25	£5,000.00
	£0.00
£250.00	£2,500.00
£19.25	£28,875.00
£400.00	£4,000.00
£1,800.00	£18,000.00
£160.00	£2,400.00
£250.00	£3,750.00
£1,500.00	£3,000.00
£68.00	£3,400.00
	£146,746.20

Job Title: **Daventry Housing - A5 / A45 Junction**

Element: **Daventry Housing**

Cost Plan: **Indicative Cost Estimate**

Made by: **IRB** Date: **29/06/2009** Chd:

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes
				b / fwd			£146,727.00	
			Series 1200 Traffic Signs and Road Markings					
			<i>Provisional</i>					
A			Allowance for signal modifications	£100,000.00	1	item	£100,000.00	
			Series 700 Pavements					
B			Stepped Joint Construction	£15.00	210	m	£3,150.00	
C			Scarify & Re-Surface	£15.00	5200	m²	£78,000.00	
			Series 600 Earthworks					
D			Excavation	£39.00	650	m³	£25,350.00	

Daventry Housing TOTAL				Carried to Summary	£353,227.00
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Arup Review	
Arup Rates	Total
	£146,746.20
£100,000.00	£100,000.00
	£0.00
£13.50	£70,200.00
£44.00	£28,600.00
	£345,546.20

Job Title: **Daventry Housing - A5 / A45 Junction**

Element: **Daventry Housing**

Cost Plan: **Indicative Cost Estimate**

Made by: **IRB** Date: **29/06/2009** Chd:

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes
Summary								
			Series 200 Site Clearance				£0.00	
			Series 300 Hedges and Fencing				£0.00	
			Series 400 Safety Fences, Safety Barriers and Pedestrian Guardrails				£0.00	
			Series 500 Drainage and Service Ducts				£12,355.00	
			Series 600 Earthworks				£25,350.00	
			Series 700 Pavements				£166,614.00	
			Series 1100 Kerbing, Footways and Paved Areas				£13,608.00	
			Series 1200 Traffic Signs and Road Markings				£112,300.00	
			Series 1300 Road Lighting, Column Brackets and Wall Mountings				£23,000.00	
			Series 2500 Special Structures				£0.00	
			Series 2700 Accommodation Works, Provisional and Prime Cost Sums				£0.00	
			Dayworks				£353,227.00	
			Preliminaries	£353,227	30%		£105,968.10	
							£459,195.10	
			Contingencies		0%		£0.00	
							£459,195.10	
			Land Acquisition Costs				£0.00	
			LCA Costs				£0.00	
			Testing	£459,195	0%		£0.00	
			Landscaping	£459,195	0%		£0.00	
							£459,195.10	

Arup Review	
Arup Rates	Total
	£0.00
	£0.00
	£0.00
	£12,550.00
	£28,600.00
	£161,288.20
	£13,608.00
	£111,500.00
	£18,000.00
	£0.00
	£0.00
	£345,546.20
25%	£86,386.55
	£431,932.75
15%	£64,789.91
	£496,722.66
	£496,722.66

Figure 2

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes
Series 600 Earthworks								
A			Excavate road construction	£45.00	821	m ³	£36,945.00	
B			Disposal, ditto	£15.00	821	m ³	£12,315.00	
C			E.O ditto for tipping charges	£29.62	821	m ³	£24,318.02	
Series 1200 Traffic Signs and Road Markings								
D			Road Markings; allowance for removal and reinstatement	£5,000.00	1	item	£5,000.00	
E			Remove Traffic signs; to store	£30.00	10	nr	£300.00	
F			Reinstate traffic signs;	£100.00	5	nr	£500.00	
G			Road markings;	£1.50	4000	m	£6,000.00	
Series 1300 Road Lighting, Column Brackets and Wall Mountings								
H			Remove lighting; to store	£100.00	10	nr	£1,000.00	
I			Reinstate lighting	£100.00	10	nr	£1,000.00	
Series 500 Drainage and Service Ducts								
Assume original drainage stilll available)								
J		<u>Drainage</u>	Allowance for reinstating original drainage	£10,000.00	1	item	£10,000.00	
K			Gully	£250.00	15	nr	£3,750.00	
L			150mm dia pipework	£65.00	45	m	£2,925.00	

Page Total	Carried Forward	£104,053.02
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Job Title: **Daventry Housing - A5 / A45 Junction - Reinstatement**

Element: **Daventry Housing**

Cost Plan: **Indicative Cost Estimate**

Made by: **IRB** Date: **09/07/2009** Chd:

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes	
				b / fwd			£104,053.02		
A			Series 1200 Traffic Signs and Road Markings <i>Provisional</i> Allowance for signal modifications	£10,000.00	1	item	£10,000.00		
B			Series 700 Pavements Make good pavements	£25,000.00	1	item	£25,000.00		
Daventry Housing TOTAL							Carried to Summary	£139,053.02	

Job Title:

Daventry Housing - A5 / A45 Junction - Reinstatement

Cost Plan:

Indicative Cost Estimate

117420-07

01

Element:

Daventry Housing

Made by:

Date:

IRB

09/07/2009

Chd:

Ref	Class	Heading	Description	Rate	Quantity	Unit	Total	Notes
<u>Summary</u>								
			Series 200 Site Clearance				£0.00	
			Series 300 Hedges and Fencing				£0.00	
			Series 400 Safety Fences, Safety Barriers and Pedestrian Guardrails				£0.00	
			Series 500 Drainage and Service Ducts				£16,675.00	
			Series 600 Earthworks				£73,578.02	
			Series 700 Pavements				£25,000.00	
			Series 1100 Kerbing, Footways and Paved Areas				£0.00	
			Series 1200 Traffic Signs and Road Markings				£21,800.00	
			Series 1300 Road Lighting, Column Brackets and Wall Mountings				£2,000.00	
			Series 2500 Special Structures				£0.00	
			Series 2700 Accommodation Works, Provisional and Prime Cost Sums				£0.00	
			Dayworks				£139,053.02	
			Preliminaries	£139,053	25%		£34,763.26	
							£173,816.28	
			Contingencies		15%		£26,072.44	
							£199,888.72	
			Land Acquisition Costs				£0.00	
			LCA Costs				£0.00	
			Testing	£173,816	0%		£0.00	
			Landscaping	£173,816	0%		£0.00	
							£199,888.72	