

User Notes

- 1 The Consultant shall prepare estimates in accordance with Network Rail's "Remit for Estimates produced by Consultants" (some provisions of which are repeated hereunder)
- 2 The Consultant is required to prepare the estimate in accordance with GRIP Manual PM04 Cost Estimating with particular reference to the requirements relating to the Type of Rates / Costs and the Quantity Take Off Detail shown within Appendix A to this document
- 3 The Consultant should particularly note that all indirect costs will be based on percentage calculations generated by the "Indirects" worksheet
- 4 It is recognised that certain costs that shall be included within the Project AFC are to be advised by Network Rail
- 5 The Consultant should note that the cost of certain materials and services provided as "free issue" to the siteworks Contractor will generally be included in the rates at GRIP 1-2
- 6 The percentages used in the Indirects worksheet to calculate the Contractors and Network Rails indirect costs may be adjusted by the Consultant in line with the range shown in PM04
- 7 The Consultant should note that Network Rail's Estimating Manager (Enhancements) will be the "approver" for all estimates and it should be anticipated that he will be asked to review/ revise certain elements within the estimate (quantities and/or rates) as part of Network Rail's approval process
- 8 The Consultant must comply with the following:
 - i All documents used in the preparation of the estimate shall be listed within the estimate
 - ii All assumptions and exclusions applicable to the estimate must be described
 - iii Exclusions that result from a lack of knowledge will not be considered acceptable; exclusions of this type will only be accepted with the agreement of the Estimating Manager
 - iv The Consultant shall ensure that estimate has been subject to an internal review by an experienced staff member who must satisfy himself that it is free from errors, that the scope of work has been accurately measured and that the level of pricing is appropriate
 - v The Consultant should submit a copy of his quantities 'take-off' to Network Rail with all estimates submitted for approval
 - vi The consultant shall identify the source of rates used in pricing the estimate; when requested, the consultant will provide copies of built-up rates and/or materials or sub-contract prices obtained for the preparation of the estimate
 - vii The consultant must provide details of the basis for establishing the level of any provisional sums and/or lump sum allowances where requested
 - vii The consultant shall include details of any particular risks seen by the estimator during preparation of the estimate and give his view of their probability and potential impact - these risks may relate to design, pricing, implementation etc and the risks are likely to be considered as part of the projects quantified cost risk analysis process
- 9 The Consultant shall note that escalation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under "Other Costs to the Customer"
- 10 The Consultant shall indicate in the tables herein, the source of his unit rates and demonstrate how his base rate has been uplifted for complexity (staging and constraints on access, working space, use of plant etc) and possessions (out of normal hours working, short shifts etc); an adjustment may be made for overheads & profit where this is not included within the base cost. The type and duration of possessions shall be shown where work is to be carried out beyond normal hours.
- 11 The Consultant shall check the accuracy of all formulas and links contained within this spreadsheet and he shall ensure that these are maintained where any amendments are made to the spreadsheet

Estimate Stage: GRIP 2 (+/-30%)
Oracle Project No.: 135112
Project Description: Foxton Level Crossing - Option 4 (Overbridge)

Assumptions

General / Drawings & Documents / Exclusions

General

- G1 The estimate base date is 1Q13
- G2 Nothing has been included in the estimate for inflation past 1Q13 as the programme is not known. Where it has been necessary to inflate any historical rates when compiling the estimate NR inflation indices number 34 has been used
- G3 An uplift factor of 30% has been applied for cost and scope uncertainty which is consistent of the requirements for a GRIP 2 estimate
- G4 See summary for further assumptions/exclusions
- G5 Possession working has been included for in the rates where thought required (generally assumed that some long weekend possessions will be available for the main bridge deck works)
- G6 TOC / FOC compensation costs included within the estimate as $25\% \times 19\% = 4.75\%$ as it is thought that majority of the works will be undertaken either 'off track' in a civils environment, fenced green zone or where required non disruptive midweek night possessions
- G7 Where there is in-sufficient information for the works to be priced confidently within the +/- % range we have included allowances within the estimate. These have been clearly identified and will require review once more information becomes available

Assumptions

- A1 Depth of road construction; 150 sub base, 120 base course, 60 binder, 40 surfacing
- A2 Depth of footpath construction; 150 sub base, 60 HRA binder, 40 surface course
- A3 Street lighting columns at 15m centres, staggered (therefore one light per 15m of highway)
- A4 No demolitions necessary, we have included for re-locating a number of portable buildings
- A5 Gullies at 25m centres both sides of the carriageway
- A6 Manholes at 50m centres
- A7 Seeding required to embankment sides (circa 150mm of site won top soil)
- A8 One carrier drain to new road construction (150mm diameter)
- A9 Safety barrier extends from road junction to end of embankment on opposite side of bridge
- A10 Retaining wall within embankment area has strip footings and a 2.5m retained height
- A11 No ground improvement works required under the new embankment (soil columns or pre-cast concrete piles etc). One layer of geotextile only required under new embankment allowed for in the estimate. No surcharging allowed for
- A12 Level Crossing to be de-commissioned and removed
- A13 Minor permanent way (tamp) and ole works required only (brackets and minor wiring work predominantly). No Signalling works required.
- A14 Palisade fence required to fence off level crossing. Post and rail fence allowed at the bottom of the 'batters' and each side of the new highway works
- A15 Existing roads and footpaths require re-surfacing at tie ins with new highway works
- A16 Kerbs HB2 or similar
- A17 No allowance made for Pedestrian Access in the Station area (footbridge or subways etc)
- A18 Car Parking along Cambridge Road Tarmacadam on Sub Base.
- A19 10% of Construction Costs allowed for Structure Design and 10% ~~5%~~ for General Civils ~~due to 'simple' scheme with standard bridge design~~

Drawings & Documents

The following documents have been used in the preparation of this estimate:

- D1 MMD-318484-C-DR-HW-07 rev p1
- D2 MMD-318484-C-DR-BR-01 rev p1

Exclusions

- E1 Excludes any allowance for Optimism Bias
- E2 VAT
- E3 Land take, temporary or permanent
- E4 Service diversions unless specifically stated otherwise
- E5 Christmas or Bank Holiday working
- E6 3rd party compensation costs
- E7 Planning and approval charges
- E8 Costs associated with Statutory Fees (e.g. HMRI, Local Authority, etc.) unless confirmed
- E9 Costs associated with taxes and levies
- E10 Costs associated with licences and all associated costs and fees
- E11 Costs associated with changes in legislation and any form of applicable standards
- E12 Costs associated with changes in legislation, regulation and interpretation covering

Enhancements Estimating

Estimate Stage: GRIP 2 (+/-30%)
 Oracle Project No.: 135112
 Project Description: Foxton Level Crossing - Option 4 (Overbridge)

Estimating Risk Register

Ref	Risk Type	Description	Probability	Potential Cost Impact
		Ground improvement works required		

The estimator is required to identify any risks to the project and/or estimate identified in preparing the estimate; this is to inform the QCRA process only and any potential cost impacts will not impact on the estimate total. The estimator should indicate his assessment of the level of cost impact (by percentage/ H/M/L assessment / cost value or range), it is recognised that this will be a subjective assessment only

CONFIDENCE LEVEL MATRIX

Asset	Scope confidence	Price confidence	Risk confidence
Signalling			
E&P			
Track			
Telecoms			
OP Property			
Structures			
General Civils			
Utilities			
Remarks			
Notes:			
Scope Confidence: High = good confidence scope will not change significantly; Medium = Limited scope growth predicted; Low = scope may grow significantly#			
Price confidence: Good = we have good cost knowledge; Poor = poor cost knowledge and/or price certainty			
Risk Confidence: Good = low risk scheme / works; Poor = high risk scheme /works			

ESTIMATE SUMMARY REPORT

Estimate No.	1302MA0161	Revision	Rev 3	Estimate Stage	GRIP 2 (+/-30%)
Estimate Date	08-May-13	Price 'Base date'	1Q2013		
Anticipated Start Date	TBC	Anticipated Finish Date	TBC		
Project No.	135112				
Project Title / Location: Foxton Level Crossing - Option 4 (Overbridge)					

WBS	Estimate Breakdown	Value	Escalation (Y/N)	%age of Point Estimate	Remarks
	Contractor's direct costs -				
10	Signalling	50,000	Y		Excluded
20	Electrification & Plant	67,250	Y		
30	Track	12,685	Y		
40	Telecoms	-	Y		
50	Operational Property	-	Y		
60	Structures	1,973,700	Y		
70	General Civils	3,835,838	Y		
80	Utilities	-	Y		
	Contractor's Base Construction Cost inc OH&P: Sub-Total A	5,939,473			
	Network Rail's "direct costs"				
tbc	NDS - Materials		Y		Generally within the rates (direct costs) at Stages 0 - 2
tbc	NDS - Fleet		Y		
tbc	- Engineering trains		Y		
tbc	- Tampers		Y		
tbc	NDS - Possession / Isolation Management	118,789			
	Sub - Total B	118,789			
	Total Base Construction Cost inc OH&P: Sub-Total C (A+B)	6,058,262		0.00%	
	Contractor's indirect costs				
tbc	Preliminaries	1,206,116	Y		Generally within the rates (direct costs) at Stages 0 - 2
tbc	Design	415,605	Y		
tbc	Testing & Commissioning	17,130	Y		
tbc	Training		Y		
tbc	Spares		Y		
tbc	Other	-	Y		
	Sub - Total D	1,638,852			
	Total Construction Cost E (C+D)	7,697,114			
	Network Rail's indirect & other costs				
tbc	Network Rail Project Management, (COWD)		N		To be advised by NR. Apportionment of GRIP 1 cost Based on typical % Calculated as 19% x 25% of construction costs Excluded Excluded Excluded as mid-point of the programme not known
tbc	Network Rail Project Management, (forecasted remaining costs)	890,921	Y		
tbc	Compensation charges (TOC & FOC), (costs from NDS)	340,229	Y		
tbc	DCO Charges	0%	Y		
tbc	Land / Property Costs & compensation	0.00%	Y		
tbc	Escalation (see Note 1)	%	NA		
tbc	Other (State)				
	Sub - Total F	1,231,150			
	Point Estimate - Sub - Total G (E+F)	8,928,264			
	Uplift for Risk and Contingency				
tbc	To Mean (see Note 3)	£			See Note 3
	Project Budget (Point Estimate + Uplift to Mean)	8,928,264			for Project Manager's reference
tbc	QRA Value - at P50 (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	QRA Value - at P80 - incremental on P50 value (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	Adjustment for residual factors (see Note 2)	% 30%			Uplift on Point Estimate Value (excluding the Cost of Work Done) See Note 2
	Project Anticipated Final Cost (AFC)	11,606,743			Authorised AFC
	Other Costs to the Customer				
tbc	Allowance for Escalation (see Note 1)				See Note 1
tbc	Allowance for Network Rail Fee Fund	-	provided by Sponsor		
tbc	Allowance for Industry Risk Fund	-	provided by Sponsor		
tbc	Allowance for Insurance Top-up		provided by Sponsor		
	Cost to Customer	11,606,743			

APPROVAL & ENDORSEMENT		
Estimate Produced by :-	Estimate Approved by (Network Rail) :-	Estimate Endorsed by (Network Rail) :-
Name :- J Yarnall - R Walker	Steve Jackson	
Company :- F & A	Network Rail	
Position :-	Estimator - Anglia Route 08/05/2013 Estimator	
Signed :-		
Date :- 19/03/2013	Estimating Manager	

Notes:-

1. Escalation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase

2. An 'Adjustment for residual factors' has been applied in accordance with the Guidance Notes on Estimating and Supplementary Note (dated 18th March 2010).

3. The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

Enhancements Estimating

Oracle Project No.: 135112

Project Description: Foxton Level Crossing - Option 4 (Overbridge)

Estimate Stage: GRIP 2 (+/-30%)

	Total	Assumed Expenditure Profile														
		%	Stage 1	%	Stage 2	%	Stage 3	%	Stage 4	%	Stage 5	%	Stage 6	%	Stage 7	%
Direct Costs																
<i>Asset-</i>																
Signalling & Telecoms	50,000											98%	49,000	2%	1,000	
Electrification & Plant	67,250											98%	65,905	2%	1,345	
Track	12,685											98%	12,432	2%	254	
Telecoms	0											98%	0	2%	0	
Operational Property	0											98%	0	2%	0	
Structures	1,973,700											98%	1,934,226	2%	39,474	
General Civils	3,835,838											98%	3,759,121	2%	76,717	
Utilities	0											100%	0			
Indirect Costs																
Preliminaries	1,206,116											98%	1,181,994	2%	24,122	
Design	415,605			1%	4,156	8%	33,248	30%	124,682	55%	228,583	6%	24,936			
Test and Commission	17,130											100%	17,130			
	712,737	4%	28,509	10%	71,274	10%	71,274	12%	85,528	12%	85,528	45%	320,732	5%	35,637	2%
Network Rail Management																
Sponsor	178,184	20%	35,637	20%	35,637	20%	35,637	10%	17,818	10%	17,818	10%	17,818	6%	10,691	4%
Other Costs																
TOC/ FOC compensation	340,229											100%	340,229			
Land purchase	0									100%	0					
Possessions/ Isolations	118,789											100%	118,789			
DCO Charges	0				20%	0	60%	0	20%	0						
Land / Property Costs & compensation	0								15%	0	85%	0				
Escalation (see Note 1)	0				2%	0	4%	0	18%	0	60%	0	15%	0	1%	
Other (State)	0								15%	0	70%	0	15%	0		
Point Estimate Total	8,928,264															
Uplift for Risk & Contingency	2,678,479				2%	53,570	4%	107,139	18%	482,126	60%	1,607,088	15%	401,772	1%	
Total expenditure by GRIP Stage		64,146	111,067	193,729	335,168	814,056	9,449,400	591,012								
Project Anticipated Final Cost	11,606,743															

No estimator input required

Stage 8
14,255
7,127
0
26,785
48,167

Estimate Stage:	GRIP 2 (+/-30%)											
Oracle Project No.:	135,112											
Project Name:	Foxton Level Crossing - Option 4 (Overbridge)											
Calculation of Contractors and Network Rail's Indirect Costs												
Asset	Total Direct Costs	%	Preliminaries	%	Design	%	Test & Commission	%	Network Rail Management	%	Sponsor	
Signalling	50,000	35%	17,500	10%	5,000	15%	7,500	12%	6,000	3%	1,500	
Electrification & Plant	67,250	35%	23,537	30%	20,175	13%	8,742	12%	8,070	3%	2,017	
Track	12,685	25%	3,171	10%	1,269	7%	888	12%	1,522	3%	381	
Telecoms	0	25%	0	10%	0	10%	0	12%	0	3%	0	
Operational Property	0	25%	0	10%	0	0%	0	12%	0	3%	0	
Structures	1,973,700	20%	394,740	10%	197,370	0%	0	12%	236,844	3%	59,211	
General Civils	3,835,838	20%	767,168	5%	191,792	0%	0	12%	460,301	3%	115,075	
Utilities	0	25%	0	10%	0	0%	0	12%	0	3%	0	
			1,206,116		415,605		17,130		712,737		178,184	
Total for TOC / FOC calculation (19% of Total Construction Cost maximum)												
	5,939,473		1,206,116				17,130					
TOTAL	7,162,719											

Oracle Project 135112						
No.						
Project Description				TOTAL	£	12,685.35
Ref	Description	Quantity	Unit	Rate	Cost	
30	<u>Track</u>					
30.1	<u>Work to existing track</u>			£ -	£ -	
30.1.1	Design ramp upon removal of existing level crossing	1	shift	£ 12,685.35	£ 12,685.35	
				£ -	£ -	
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Page Total					£	12,685.35

Oracle Project No. 135112							
Project Description Foxton Level Crossing - Option 4 (Overbridge)				TOTAL	£ -		
Ref	Description	Quantity	Unit	Rate	Cost		
40	<u>Telecoms</u>			£ -	£ -		
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		Page Total					£ -

Oracle Project No. 135112					
Project Description Foxton Level Crossing - Option 4 (Overbridge)				TOTAL	£ -
Ref	Description	Quantity	Unit	Rate	Cost
50	<u>Operational Property</u>				
				£ -	£ -
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Page Total					£ -

Oracle Project No. 135112					
Project Description Foxton Level Crossing - Option 4 (Overbridge)				TOTAL	£ 1,973,700.00
Ref	Description	Quantity	Unit	Rate	Cost
60	<u>Structures</u>				
60.1	<u>Under and Over Bridges</u>				
60.1.1	New Overbridge - Pre-cast Concrete Beam Construction	459.00	m2	£ 4,300.00	£ 1,973,700.00
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Page Total					£ 1,973,700.00

Oracle Project 135112					
Project Description Foxton Level Crossing - Option 4 (Overbridge)					
				TOTAL	£ 3,835,837.65
Ref	Description	Quantity	Unit	Rate	Cost
70	General Civils				
70.1	<u>Miscellaneous</u>				
70.1.1	Site Clearance	16,212.00	m2	£ 5.00	£ 81,060.00
70.1.2	Excavate topsoil and move to on-site stockpile; 300 thick	4,863.48	m3	£ 13.20	£ 64,197.94
70.1.3	Geotextile	16,212.00	m2	£ 8.75	£ 141,855.00
70.1.4	Fill to embankment with imported fill	65,998.91	m3	£ 35.00	£ 2,309,961.85
70.1.5	Seeding to embankments inc circa 150mm of site won topsoil	33,550.00	m2	£ 4.95	£ 166,072.50
70.1.6	Kerbs	1,956.00	m	£ 20.00	£ 39,120.00
70.1.7	Carrier drain - 150mm	520.00	m	£ 60.00	£ 31,200.00
70.1.8	Connection to existing drainage system - Allowance	1.00	sum	£ 5,000.00	£ 5,000.00
70.1.9	Gullies inc allowance for pipe to connect into carrier drain (3.7m per gully)	42.00	nr	£ 622.00	£ 26,124.00
70.1.10	Manholes	11.00	nr	£ 1,500.00	£ 16,500.00
70.1.11	Safety barrier	750.00	m	£ 120.00	£ 90,000.00
70.1.12	Lighting columns	33.00	nr	£ 2,426.76	£ 80,083.14
70.1.13	Transition parapet	60.00	m	£ 250.00	£ 15,000.00
70.1.14	Fencing off of old level crossing	70.00	m	£ 120.00	£ 8,400.00
70.1.15	Move portable buildings; 2 nr - Allowance	1.00	sum	£ 7,500.00	£ 7,500.00
70.1.16	Retaining wall near embankment (assumed retained height 2.5m)	30.00	m	£ 1,875.00	£ 56,250.00
70.2	<u>New road in embankment area</u>				
70.2.1	Sub base in new road embankment area; 150 thick	3,540.50	m2	£ 6.75	£ 23,898.38
70.2.2	Base course in new road embankment area; 120 thick	3,540.50	m2	£ 23.29	£ 82,468.61
	Tack Coat	3,540.00	m2	£ 0.75	£ 2,655.00
70.2.3	Binder in new road embankment area; 60 thick	3,540.50	m2	£ 15.59	£ 55,208.60
70.2.4	Surfacing in new road embankment area; 40 thick	3,540.50	m2	£ 14.01	£ 49,602.68
70.3	<u>New footpath in embankment area</u>				
70.3.1	Sub base in new footpath embankment area; 150 thick	3,840.00	m2	£ 6.75	£ 25,920.00
70.3.2	HRA binder in new footpath embankment area; 60 thick	3,840.00	m2	£ 15.59	£ 59,878.84
	Tack Coat	3,840.00	m2	£ 0.75	£ 2,880.00
70.3.3	Surface course in new footpath embankment area; 40 thick	3,840.00	m2	£ 14.01	£ 53,798.70
70.4	<u>New road out side of embankment area</u>				
70.4.1	Sub base, out of embankment area; 150 thick	1,314.00	m2	£ 6.75	£ 8,869.50
70.4.2	Base course , out of embankment area; 120 thick	1,314.00	m2	£ 23.29	£ 30,606.91
70.4.3	Binder course, out of embankment area; 60 thick	1,314.00	m2	£ 15.59	£ 20,489.79
	Tack Coat	1,314.00	m2	£ 0.75	£ 985.50
70.4.4	Surfacing , out of embankment area; 40 thick	1,314.00	m2	£ 11.42	£ 15,002.80
70.5	<u>New footpath out side of embankment area</u>				
70.5.1	Sub base in footpath, out side of embankment area; 150 thick	1,360.00	m2	£ 6.75	£ 9,180.00
70.5.2	HRA binder in footpath, out side of embankment area; 60 thick	1,360.00	m2	£ 15.59	£ 21,207.09
	Tack Coat		m2	£ 0.75	£ -
70.5.3	Surface course in footpath, out side of embankment area; 40 thick	1,360.00	m2	£ 14.01	£ 19,053.71
70.6	<u>Works to tie into existing road</u>				
70.6.1	Plane out surface course in existing road	1,314.00	m2	£ 5.00	£ 6,570.00
70.6.2	Plane out surface course in existing footpath	1,440.00	m2	£ 5.00	£ 7,200.00

Ref	Description	Quantity	Unit	Rate	Cost
70.6.3	Surface course, to tie in to existing road	1,314.00	m2	£ 14.01	£ 18,409.24
70.6.4	Surface course, to tie in to existing footpath	1,440.00	m2	£ 14.01	£ 20,174.51
	Tack Coat	2,754.00	m2	£ 0.75	£ 2,065.50
	Page Total				£ 3,674,449.79

Oracle Project No. 135112					
Project Description: Foxtton Level Crossing - Option 4 (Overbridge)				Rate	£ -
Ref	Description	Quantity	Unit	Rate	Cost
	<u>Other Contractors Indirect Costs</u>				
	Other Costs <i>(The Consultant shall enter details)</i>			£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
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Consultant to
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Standard Template for Stage 1-2 Estimates prepared by Consultants

Enhancements Estimating

Oracle Project No.:

Project Description:

Estimate Stage:

Level of Confidence - +/- 30%

Issue and Revision Record:					
Rev.	Date	Consultant	Prepared by	Checked	Description
Rev00	12-Mar-13	F+A	James Yarnall	Robert Walker	Draft for review
Rev01	19-Mar-13	F+A	James Yarnall	Robert Walker	Draft for review
Rev 2	8-May-13	F+A		Steve Jackson	Network Rail Validation

Consultant's Name & Address

Estimate Document Contents

1	User Notes (Consultant)
2	Assumptions
3	Estimating Risk Register
4	Estimate Summary Report
5	Indirect Costs (Auto generated)
6	Expenditure Profile (Summary by GRIP) (Auto generated)
7	10. Signalling, measured works
8	20. Electrification and Power, measured works
9	30. Track, measured works
10	40. Telecommunications, measured works
11	50. Operational Property, measured works
12	60. Structures, measured works
13	70. General Civils, measured works
14	80. Utilities, measured works
15	Other Contractors Indirect Costs
16	Network Rail Direct Costs

User Notes

- 1 The Consultant shall prepare estimates in accordance with Network Rail's "Remit for Estimates produced by Consultants" (some provisions of which are repeated hereunder)
- 2 The Consultant is required to prepare the estimate in accordance with GRIP Manual PM04 Cost Estimating with particular reference to the requirements relating to the Type of Rates / Costs and the Quantity Take Off Detail shown within Appendix A to this document
- 3 The Consultant should particularly note that all indirect costs will be based on percentage calculations generated by the "Indirects" worksheet
- 4 It is recognised that certain costs that shall be included within the Project AFC are to be advised by Network Rail
- 5 The Consultant should note that the cost of certain materials and services provided as "free issue" to the siteworks Contractor will generally be included in the rates at GRIP 1-2
- 6 The percentages used in the Indirects worksheet to calculate the Contractors and Network Rails indirect costs may be adjusted by the Consultant in line with the range shown in PM04
- 7 The Consultant should note that Network Rail's Estimating Manager (Enhancements) will be the "approver" for all estimates and it should be anticipated that he will be asked to review/ revise certain elements within the estimate (quantities and/or rates) as part of Network Rail's approval process
- 8 The Consultant must comply with the following:
 - i All documents used in the preparation of the estimate shall be listed within the estimate
 - ii All assumptions and exclusions applicable to the estimate must be described
 - iii Exclusions that result from a lack of knowledge will not be considered acceptable; exclusions of this type will only be accepted with the agreement of the Estimating Manager
 - iv The Consultant shall ensure that estimate has been subject to an internal review by an experienced staff member who must satisfy himself that it is free from errors, that the scope of work has been accurately measured and that the level of pricing is appropriate
 - v The Consultant should submit a copy of his quantities 'take-off' to Network Rail with all estimates submitted for approval
 - vi The consultant shall identify the source of rates used in pricing the estimate; when requested, the consultant will provide copies of built-up rates and/or materials or sub-contract prices obtained for the preparation of the estimate
 - vii The consultant must provide details of the basis for establishing the level of any provisional sums and/or lump sum allowances where requested
 - vii The consultant shall include details of any particular risks seen by the estimator during preparation of the estimate and give his view of their probability and potential impact - these risks may relate to design, pricing, implementation etc and the risks are likely to be considered as part of the projects quantified cost risk analysis process
- 9 The Consultant shall note that escalation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase
Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included but it shall be calculated as described herein and shown in the Estimate Summary Report under "Other Costs to the Customer"
- 10 The Consultant shall indicate in the tables herein, the source of his unit rates and demonstrate how his base rate has been uplifted for complexity (staging and constraints on access, working space, use of plant etc) and possessions (out of normal hours working, short shifts etc); an adjustment may be made for overheads & profit where this is not included within the base cost. The type and duration of possessions shall be shown where work is to be carried out beyond normal hours.
- 11 The Consultant shall check the accuracy of all formulas and links contained within this spreadsheet and he shall ensure that these are maintained where any amendments are made to the spreadsheet

Estimate Stage: GRIP 2 (+/-30%)
Oracle Project No.: 135112
Project Description: Foxton Level Crossing - Option 4 (Underpass)

Assumptions

General / Drawings & Documents / Exclusions

General

- G1 The estimate base date is 1Q13
- G2 Nothing has been included in the estimate for inflation past 1Q13 as the programme is not known. Where it has been necessary to inflate any historical rates when compiling the estimate NR inflation indices number 34 has been used
- G3 An uplift factor of 30% has been applied for cost and scope uncertainty which is consistent of the requirements for a GRIP 2 estimate
- G4 See summary for further assumptions/exclusions
- G5 Possession working has been included for in the rates where thought required (generally assumed that some long weekend possessions will be available for the main bridge deck works)
- G6 TOC / FOC compensation costs included within the estimate as $50\% \times 19\% = 9.50\%$ as it is thought that majority of the works will be undertaken either 'off track' in a civils environment, fenced green zone or where required non disruptive midweek night possessions
- G7 Where there is in-sufficient information for the works to be priced confidently within the +/- % range we have included allowances within the estimate. These have been clearly identified and will require review once more information becomes available

Assumptions

- A1 Depth of road construction; 150 sub base, 120 base course, 60 binder, 40 surfacing
- A2 Depth of footpath construction; 150 sub base, 60 HRA binder, 40 surface course
- A3 Street lighting columns at 15m centres, staggered (therefore one light per 15m of highway)
- A4 No demolitions necessary, we have included for re-locating a number of portable buildings
- A5 Gullies at 25m centres both sides of the carriageway
- A6 Manholes at 50m centres
- A7 Seeding required to embankment sides (circa 150mm of site won top soil)
- A8 One carrier drain to new road construction (150mm diameter)
- A9 Safety barrier extends from road junction to end of embankment on opposite side of bridge
- A10 Retaining wall within embankment area has strip footings and a 2.5m retained height
- A11 No ground improvement works required under the new embankment (soil columns or pre-cast concrete piles etc). One layer of geotextile only required under new embankment allowed for in the estimate. No surcharging allowed for
- A12 Level Crossing to be de-commissioned and removed
- A13 Substantial Permanent Way Works required including P Way, Signalling and OLE.
- A14 Palisade fence required to fence off level crossing. Post and rail fence allowed at the bottom of the 'batters' and each side of the new highway works
- A15 Existing roads and footpaths require re-surfacing at tie ins with new highway works
- A16 Kerbs HB2 or similar
- A17 No allowance made for Pedestrian Access in the Station area (footbridge or subways etc)
- A18 Car Parking Spaces along Cambridge Road tarmacadam on Sub Base.
- A19 Medium to Large Drainage Pumping Station required due to negative drainage associated with this option.
- A20 OLE Gantries to be Twin Track Cantilever.
- A21 Excavated Material 80% Inert, 20% non hazardous.
- A22 10% of Construction Costs allowed for Structure Design and 10% ~~5%~~ for General Civils ~~due to 'simple' scheme with standard bridge design~~
- A23 Bridge installed by SPMT or slide
- A24 No Piling required to Box.

Drawings & Documents

The following documents have been used in the preparation of this estimate:

- D1 MMD-318484-C-DR-HW-08 rev p1
- D2 MMD-318484-C-DR-BR-02 rev p1

Exclusions

- E1 Excludes any allowance for Optimism Bias
- E2 VAT
- E3 Land take, temporary or permanent
- E4 Service diversions unless specifically stated otherwise
- E5 Christmas or Bank Holiday working
- E6 3rd party compensation costs
- E7 Planning and approval charges
- E8 Costs associated with Statutory Fees (e.g. HMRI, Local Authority, etc.) unless confirmed
- E9 Costs associated with taxes and levies
- E10 Costs associated with licences and all associated costs and fees
- E11 Costs associated with changes in legislation and any form of applicable standards
- E12 Costs associated with changes in legislation, regulation and interpretation covering

Enhancements Estimating

Estimate Stage: GRIP 2 (+/-30%)
 Oracle Project No.: 135112
 Project Description: Foxton Level Crossing - Option 4 (Underpass)

Estimating Risk Register

Ref	Risk Type	Description	Probability	Potential Cost Impact
		<p><i>The estimator is required to identify any risks to the project and/or estimate identified in preparing the estimate; this is to inform the QCRA process only and any potential cost impacts will not impact on the estimate total. The estimator should indicate his assessment of the level of cost impact (by percentage/ H/M/L assessment / cost value or range), it is recognised that this will be a subjective assessment only</i></p> <p>Ground improvement works required</p>		

CONFIDENCE LEVEL MATRIX

Asset	Scope confidence	Price confidence	Risk confidence
Signalling			
E&P			
Track			
Telecoms			
OP Property			
Structures			
General Civils			
Utilities			
Remarks			
Notes:			
Scope Confidence: High = good confidence scope will not change significantly; Medium = Limited scope growth predicted; Low = scope may grow significantly#			
Price confidence: Good = we have good cost knowledge; Poor = poor cost knowledge and/or price certainty			
Risk Confidence: Good = low risk scheme / works; Poor = high risk scheme /works			

ESTIMATE SUMMARY REPORT

Estimate No.	1302MA0162	Revision	Rev 2	Estimate Stage	GRIP 2 (+/-30%)
Estimate Date	08-May-13	Price 'Base date'		1Q2013	
Anticipated Start Date	TBC	Anticipated Finish Date	TBC		
Project No.	135112				
Project Title / Location: Foxton Level Crossing - Option 4 (Underpass)					

WBS	Estimate Breakdown	Value	Escalation (Y/N)	%age of Point Estimate	Remarks
	Contractor's direct costs -				
10	Signalling	280,000	Y		Excluded
20	Electrification & Plant	99,014	Y		
30	Track	536,435	Y		
40	Telecoms	-	Y		
50	Operational Property	-	Y		
60	Structures	2,420,900	Y		
70	General Civils	6,026,719	Y		
80	Utilities	-	Y		
	Contractor's Base Construction Cost inc OH&P: Sub-Total A	9,363,069			
	Network Rail's "direct costs"				
tbc	NDS - Materials		Y		Generally within the rates (direct costs) at Stages 0 - 2
tbc	NDS - Fleet		Y		
tbc	- Engineering trains		Y		
tbc	- Tampers		Y		
tbc	NDS - Possession / Isolation Management	187,261			
	Sub - Total B	187,261			
	Total Base Construction Cost inc OH&P: Sub-Total C (A+B)	9,550,330		0.00%	
	Contractor's indirect costs				
tbc	Preliminaries	1,956,288	Y		Generally within the rates (direct costs) at Stages 0 - 2
tbc	Design	654,774	Y		
tbc	Testing & Commissioning	92,422	Y		
tbc	Training		Y		
tbc	Spares		Y		
tbc	Other	-	Y		
	Sub - Total D	2,703,484			
	Total Construction Cost E (C+D)	12,253,814			
	Network Rail's indirect & other costs				
tbc	Network Rail Project Management, (COWD)		N		To be advised by NR. Apportionment of GRIP 1 cost Based on typical % Calculated as 19% x 50% of construction costs Excluded Excluded Excluded as mid-point of the programme not known
tbc	Network Rail Project Management, (forecasted remaining costs)	1,404,460	Y		
tbc	Compensation charges (TOC & FOC), (costs from NDS)	1,084,119	Y		
tbc	DCO Charges	0%	Y		
tbc	Land / Property Costs & compensation	0.00%	Y		
tbc	Escalation (see Note 1)	%	NA		
tbc	Other (State)				
	Sub - Total F	2,488,579			
	Point Estimate - Sub - Total G (E+F)	14,742,394			
	Uplift for Risk and Contingency				
tbc	To Mean (see Note 3)	£			See Note 3
	Project Budget (Point Estimate + Uplift to Mean)	14,742,394			for Project Manager's reference
tbc	QRA Value - at P50 (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	QRA Value - at P80 - incremental on P50 value (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	Adjustment for residual factors (see Note 2)	% 30%			Uplift on Point Estimate Value (excluding the Cost of Work Done) See Note 2
	Project Anticipated Final Cost (AFC)	19,165,112			Authorised AFC
	Other Costs to the Customer				
tbc	Allowance for Escalation (see Note 1)				See Note 1
tbc	Allowance for Network Rail Fee Fund	-	provided by Sponsor		
tbc	Allowance for Industry Risk Fund	-	provided by Sponsor		
tbc	Allowance for Insurance Top-up		provided by Sponsor		
	Cost to Customer	19,165,112			

APPROVAL & ENDORSEMENT

	Estimate Produced by :-	Estimate Approved by (Network Rail) :-	Estimate Endorsed by (Network Rail) :-
Name :-	J Yarnall - R Walker	Steve Jackson	
Company :-	F & A	Network Rail	
Position :-		Estimator - Anglia Route	08/05/2013 Estimator
Signed :-			
Date :-	19/03/2013		Estimating Manager

Notes:-

1. Escalation will only be included within the Project Anticipated Final Cost (Project AFC) where the Project AFC is in excess of £50m and where the site works will be over 2 years duration; escalation shall be calculated using RPI indices from the estimate 'base date' to the mid-point of the construction phase

2. An 'Adjustment for residual factors' has been applied in accordance with the Guidance Notes on Estimating and Supplementary Note (dated 18th March 2010).

3. The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

Enhancements Estimating

Oracle Project No.: 135112

Project Description: Foxton Level Crossing - Option 4 (Underpass)

Estimate Stage: GRIP 2 (+/-30%)

	Total	Assumed Expenditure Profile														
		%	Stage 1	%	Stage 2	%	Stage 3	%	Stage 4	%	Stage 5	%	Stage 6	%	Stage 7	%
Direct Costs																
<i>Asset-</i>																
Signalling & Telecoms	280,000											98%	274,400	2%	5,600	
Electrification & Plant	99,014											98%	97,034	2%	1,980	
Track	536,435											98%	525,707	2%	10,729	
Telecoms	0											98%	0	2%	0	
Operational Property	0											98%	0	2%	0	
Structures	2,420,900											98%	2,372,482	2%	48,418	
General Civils	6,026,719											98%	5,906,185	2%	120,534	
Utilities	0											100%	0			
Indirect Costs																
Preliminaries	1,956,288											98%	1,917,162	2%	39,126	
Design	654,774			1%	6,548	8%	52,382	30%	196,432	55%	360,126	6%	39,286			
Test and Commission	92,422											100%	92,422			
	1,123,568	4%	44,943	10%	112,357	10%	112,357	12%	134,828	12%	134,828	45%	505,606	5%	56,178	2%
Network Rail Management Sponsor	280,892	20%	56,178	20%	56,178	20%	56,178	10%	28,089	10%	28,089	10%	28,089	6%	16,854	4%
Other Costs																
TOC/ FOC compensation	1,084,119											100%	1,084,119			
Land purchase	0											100%	0			
Possessions/ Isolations	187,261											100%	187,261			
DCO Charges	0			20%	0	60%	0	20%	0							
Land / Property Costs & compensation	0											15%	0	85%	0	
Escalation (see Note 1)	0			2%	0	4%	0	18%	0	60%	0	15%	0	15%	0	
Other (State)	0											15%	0	15%	0	
<i>Point Estimate Total</i>	14,742,394															
Uplift for Risk & Contingency	4,422,718			2%	88,454	4%	176,909	18%	796,089	60%	2,653,631	15%	663,408	1%		
Total expenditure by GRIP Stage			101,121		175,083		309,372		536,258		1,319,132		15,683,385		962,827	
Project Anticipated Final Cost	19,165,112															

No estimator input required

Stage 8
22,471
11,236
0
44,227
77,934

Estimate Stage:	GRIP 2 (+/-30%)											
Oracle Project No.:	135,112											
Project Name:	Foxton Level Crossing - Option 4 (Underpass)											
Calculation of Contractors and Network Rail's Indirect Costs												
Asset	Total Direct Costs	%	Preliminaries	%	Design	%	Test & Commission	%	Network Rail Management	%	Sponsor	
Signalling	280,000	35%	98,000	10%	28,000	15%	42,000	12%	33,600	3%	8,400	
Electrification & Plant	99,014	35%	34,655	30%	29,704	13%	12,872	12%	11,882	3%	2,970	
Track	536,435	25%	134,109	10%	53,644	7%	37,550	12%	64,372	3%	16,093	
Telecoms	0	25%	0	10%	0	10%	0	12%	0	3%	0	
Operational Property	0	25%	0	10%	0	0%	0	12%	0	3%	0	
Structures	2,420,900	20%	484,180	10%	242,090	0%	0	12%	290,508	3%	72,627	
General Civils	6,026,719	20%	1,205,344	5%	301,336	0%	0	12%	723,206	3%	180,802	
Utilities	0	25%	0	10%	0	0%	0	12%	0	3%	0	
			1,956,288		654,774		92,422		1,123,568		280,892	
Total for TOC / FOC calculation (19% of Total Construction Cost maximum)												
	9,363,069		1,956,288				92,422					
TOTAL	11,411,779											

Oracle Project No. 135112					
Project Description: Foxton Level Crossing - Option 4 (Underpass)				TOTAL	£ -
Ref	Description	Quantity	Unit	Rate	Cost
40	<u>Telecoms</u>			£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
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				£ -	£ -
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Oracle Project No. 135112					
Project Description Foxton Level Crossing - Option 4 (Underpass)				TOTAL	£ -
Ref	Description	Quantity	Unit	Rate	Cost
50	<u>Operational Property</u>			£ -	£ -
				£ -	£ -
				£ -	£ -
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Oracle Project No. 135112					
Project Description: Foxton Level Crossing - Option 4 (Underpass)				TOTAL	£ 2,420,900.00
Ref	Description	Quantity	Unit	Rate	Cost
60	Structures				
60.1	Under Bridge				
60.1.1	New Underpass - Concrete Box Construction	563.00	m2	£ 4,300.00	£ 2,420,900.00
				£ -	£ -
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Page Total					£ 2,420,900.00

Oracle Project 135112					
No.					
Project Description				TOTAL	£ 6,026,719.32
Ref	Description	Quantity	Unit	Rate	Cost
70	General Civils				
70.1	<u>Miscellaneous</u>				
70.1.1	Site Clearance	19,100.00	m2	£ 5.00	£ 95,500.00
70.1.2	Excavate topsoil and move to on-site stockpile; 300 thick	5,550.00	m3	£ 13.20	£ 73,260.00
70.1.3	Geotextile	19,100.00	m2	£ 8.75	£ 167,125.00
70.1.4	Excavate for cutting and dispose of material Off Site (Inert) - assumed 80%	57,905.46	m3	£ 25.00	£ 1,447,636.40
70.1.5	Excavate for cutting and dispose of material Off Site (Non Hazardous) - assumed 20%	14,476.36	m3	£ 188.10	£ 2,723,004.07
70.1.6	Seeding to embankments inc circa 150mm of site won topsoil	37,176.00	m2	£ 4.95	£ 184,021.20
70.1.7	Kerbs	1,956.00	m	£ 20.00	£ 39,120.00
70.1.8	Carrier drain - 150mm	520.00	m	£ 60.00	£ 31,200.00
70.1.9	Connection to existing drainage system - Allowance	1.00	sum	£ 5,000.00	£ 5,000.00
70.1.10	Gullies inc allowance for pipe to connect into carrier drain (3.7m per gully)	42.00	nr	£ 622.00	£ 26,124.00
70.1.11	Manholes	11.00	nr	£ 1,500.00	£ 16,500.00
70.1.12	Safety barrier	750.00	m	£ 120.00	£ 90,000.00
70.1.13	Lighting columns	33.00	nr	£ 2,426.76	£ 80,083.14
70.1.14	Containment Parapet to Top of Underpass				Included
70.1.15	Fencing off of old level crossing	70.00	m	£ 120.00	£ 8,400.00
70.1.16	Move portable buildings; 2 nr - Allowance	1.00	sum	£ 7,500.00	£ 7,500.00
70.1.17	Retaining wall near embankment (assumed retained height 2.5m)	30.00	m	£ 1,875.00	£ 56,250.00
70.1.18	Drainage Pumping station including 100m of rising main to outfall - Allowance	1.00	item	£ 256,000.00	£ 256,000.00
70.2	<u>New road in embankment area</u>				
70.2.1	Sub base in new road embankment area; 150 thick	3,540.50	m2	£ 6.75	£ 23,898.38
70.2.2	Base course in new road embankment area; 120 thick	3,540.50	m2	£ 23.29	£ 82,468.61
				£ 0.75	-
70.2.3	Binder in new road embankment area; 60 thick	3,540.50	m2	£ 15.59	£ 55,208.60
70.2.4	Surface course in new road embankment area; 40 thick	3,540.50	m2	£ 14.01	£ 49,602.68
70.3	<u>New footpath in embankment area</u>				
70.3.1	Sub base in new footpath embankment area; 150 thick	4,320.00	m2	£ 6.75	£ 29,160.00
70.3.2	HRA binder in new footpath embankment area; 60 thick	4,320.00	m2	£ 15.59	£ 67,363.70
	Tack Coat	4,320.00	m2	£ 0.75	£ 3,240.00
70.3.3	Surface course in new footpath embankment area; 40 thick	4,320.00	m2	£ 14.01	£ 60,523.54
70.4	<u>New road out side of embankment area</u>				
70.4.1	Sub base, out of embankment area; 150 thick	1,314.00	m2	£ 6.75	£ 8,869.50
70.4.2	Base course , out of embankment area; 120 thick	1,314.00	m2	£ 23.29	£ 30,606.91
70.4.3	Binder course, out of embankment area; 60 thick	1,314.00	m2	£ 15.59	£ 20,489.79
	Tack Coat	1,314.00	m2	£ 0.75	£ 985.50
70.4.4	Surface Course , out of embankment area; 40 thick	1,314.00	m2	£ 11.42	£ 15,002.80
70.5	<u>New footpath out side of embankment area</u>				
70.5.1	Sub base in footpath, out side of embankment area; 150 thick	1,530.00	m2	£ 6.75	£ 10,327.50
70.5.2	HRA binder in footpath, out side of embankment area; 60 thick	1,530.00	m2	£ 15.59	£ 23,857.98
	Tack Coat	1,530.00	m2	£ 0.75	£ 1,147.50
70.5.3	Surface course in footpath, out side of embankment area; 40 thick	1,530.00	m2	£ 14.01	£ 21,435.42
70.6	<u>Works to tie into existing road</u>				
70.6.1	Plane out surface course in existing road	1,314.00	m2	£ 5.00	£ 6,570.00
70.6.2	Plane out surface course in existing footpath	1,440.00	m2	£ 5.00	£ 7,200.00

Ref	Description	Quantity	Unit	Rate	Cost
70.6.3	Surface course, to tie in to existing road	1,314.00	m2	£ 14.01	£ 18,409.24
70.6.4	Surface course, to tie in to existing footpath	1,440.00	m2	£ 14.01	£ 20,174.51
	Tack Coat	2,754.00	m2	£ 0.75	£ 2,065.50
	Page Total				£ 5,865,331.47

Oracle Project No. 135112					
Project Description				TOTAL	£ 187,261.38
Ref	Description	Quantity	Unit	Rate	Cost
	<u>Network Rail Direct Costs</u>				
	NDS - Materials			£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				£ -	£ -
				To Estimate Summary Report	£ -
	NDS - Fleet				
	- Engineering trains			£ -	£ -
				£ -	£ -
				£ -	£ -
				To Estimate Summary Report	£ -
	-Tampers			£ -	£ -
				£ -	£ -
				£ -	£ -
				To Estimate Summary Report	£ -
	Page Total				£ -

Ref	Description	Quantity	Unit	Rate	Cost
	<i>NDS Materials & Fleet (Tampers, etc.) costs generally within rates at GRIP 0-2</i>				
	NDS - Possession / Isolation management				
	Possession Management - Allowance	1%	%	£ 9,363,069.02	£ 93,630.69
	Midweek Day		nr	£ -	£ -
	Midweek Night		nr	£ -	£ -
	Weekend		nr	£ -	£ -
	Bank Holiday		nr	£ -	£ -
	OLE Isolations - Allowance	1%	%	£ 9,363,069.02	£ 93,630.69
	Midweek Day		nr	£ -	£ -
	Midweek Night		nr	£ -	£ -
	Weekend		nr	£ -	£ -
	Bank Holiday		nr	£ -	£ -
	DC Isolations				
	Midweek Day		nr	£ -	£ -
	Midweek Night		nr	£ -	£ -
	Weekend		nr	£ -	£ -
	Bank Holiday		nr	£ -	£ -
				To Estimate Summary Report	£ £ 187,261.38
Page Total					£ 187,261.38



Standard Template for Stage 1-2 Estimates

Enhancements Estimating

Oracle Project No.:

Project Description:

Estimate Stage:

Level of Confidence - +/- 40% (Stage 1), +/- 30% (Stage 2)

Issue and Revision Record:					
Rev.	Date	Consultant	Prepared by	Checked	Description
Rev 1	8-May-13	F & A		Steve Jackson	Network Rail Validation

Estimate Document Contents

1	Assumptions
2	Estimating Risk Register
3	Estimate Summary Report
4	Summary by GRIP
5	Indirect Costs (Auto generated)
6	10. Signalling, measured works
7	20. Electrification and Power, measured works
8	30. Track, measured works
9	40. Telecommunications, measured works
10	50. Operational Property, measured works
11	60. Structures, measured works
12	70. General Civils, measured works
13	80. Utilities, measured works
14	Other Contractors Indirect Costs
15	Network Rail Direct Costs

Network Rail



Foxton Level Crossing - Footbridge / Subway Options

Assumptions

The base date of the estimate is 1/1/13

These estimates are based on high level benchmarked costs and as such the confidence limits can be no better than +/- 40%

All quantities are assumed or measured from sketches provided

Material contamination is assumed

Generally works can be carried out in normal working hours with unrestricted access other than the erection of the footbridge deck and the positioning of the subway which will be carried out during possession working

The rate for the subway allows for localised removal and re-installment of track and ballast in a long possession along with a tamping run

Exclusions

Excludes VAT

Excludes 3rd party compensation charges

Excludes planning and approval charges

Excludes permanent land purchases

Costs associated with Statutory Fees (e.g. HMRI, Local Authority, etc.) unless confirmed otherwise

DCO / TWA costs

Costs associated with taxes and levies, including VAT

Costs associated with licences and all associated costs and fees

Costs associated with changes in legislation and any form of applicable standards

Costs associated with changes in legislation, regulation and interpretation covering discriminatory, specific and general issues that may lead to design and cost changes

Allowances for adverse ground conditions / provisions for ground stabilisation unless specifically identified

Costs associated with phasing of works

Contingency costs

Excludes GI costs

Utilities diversions

Estimate Stage: 2
Oracle Project No.: 135112
Project Description: Foxton Level Xing Closure - Footbridge, Stairs & Ramps

Assumptions

General / Drawings & Documents / Exclusions

General

- G1 The estimate base date is 1Q2013
- G2
- G3 Escalation has not been included within the Project AFC as the AFC is below £50m in value and/or the construction phase will be under two years in duration
- G4 An uplift factor of 30% has been applied for cost and scope uncertainty
- G5 TOC/ FOC Uplift has been allocated at 10%
- G6
- G7
- G8

Drawings & Documents

The following documents have been used in the preparation of this estimate:

- D1 MMD-318484-C-DR-BR-101 to 104
- D2 MMD-318484-C-DR-BR-01 to 09
- D3 MMD-318484-C-DR-HW-ALL.PDF
- D4

Exclusions

- E1 Excludes any allowance for Optimism Bias
- E2 Any allowance for Network Rail Fee Fun & Industry risk
- E3 VAT
- E4 Land take temporary or permanent
- E5 Service Diversions
- E6 Power Upgrades
- E7 3rd Party Compensation costs
- E8 Planning & approval charges
- E9

Enhancements Estimating

Estimate Stage: 2
 Oracle Project No.: 135112
 Project Description: Foxton Level Xing Closure - Footbridge, Stairs & Ramps

Estimating Risk Register

Ref	Risk Type	Description	Probability	Potential Cost Impact
<p><i>The estimator is required to identify any risks to the project and/or estimate identified in preparing the estimate; this is to inform the QCRA process only and any potential cost impacts will not impact on the estimate total. The estimator should indicate his assessment of the level of cost impact (by percentage/ H/M/L assessment / cost value or range), it is recognised that this will be a subjective assessment only</i></p>				

CONFIDENCE LEVEL MATRIX

Asset	Scope confidence	Price confidence	Risk confidence
Signalling			
E&P			
Track			
Telecoms			
OP Property			
Structures			
General Civils			
Utilities			
Remarks			
Notes:			
Scope Confidence: High = good confidence scope will not change significantly; Medium = Limited scope growth predicted; Low = scope may grow significantly#			
Price confidence: Good = we have good cost knowledge; Poor = poor cost knowledge and/or price certainty			
Risk Confidence: Good = low risk scheme / works; Poor = high risk scheme /works			

ESTIMATE SUMMARY REPORT

Estimate No.	1302MA0165	Revision	Rev 1	Estimate Stage	2
Estimate Date	8-May-13	Price 'Base date'	1Q2013		
Anticipated Start Date	TBA	Anticipated Finish Date	TBA		
Project No.	135112				
Project Title / Location	Foxton Level Xing Closure - Footbridge, Stairs & Ramps				

WBS	Estimate Breakdown	Value	Escalation (Y/N)	%age of Point Estimate	Remarks
Contractor's direct costs -					
10	Signalling	-	Y		
20	Electrification & Plant	-	Y		
30	Track	-	Y		
40	Telecoms	-	Y		
50	Operational Property	-	Y		
60	Structures	1,492,688	Y		
70	General Civils	-	Y		
80	Utilities	-	Y		
Contractor's Base Construction Cost inc OH&P: Sub-Total A		1,492,688			
Network Rail's "direct costs"					
tbc	NDS - Materials		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	NDS - Fleet		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	- Engineering trains		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	- Tampers		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	NDS - Possession / Isolation Management	29,854			
Sub - Total B		29,854			
Total Base Construction Cost inc OH&P: Sub-Total C (A+B)		1,522,542		0.00%	
Contractor's indirect costs					
tbc	Preliminaries	298,538	Y		
tbc	Design	149,269	Y		
tbc	Testing & Commissioning	-	Y		
tbc	Training		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	Spares		Y		Generally within the rates (direct costs) at Stages 1 - 2
tbc	Other	-	Y		
Sub - Total D		447,806			
Total Construction Cost E (C+D)		1,970,348			
Network Rail's indirect & other costs					
tbc	Network Rail Project Management, (COWD)		N		To be advised by project manager if applicable
tbc	Network Rail Project Management, (forecasted remaining costs)	223,903	Y		Calculated as Percentage on "Indirects" tab
tbc	Compensation charges (TOC & FOC), (costs from NDS)	89,561	Y		Calculated as Percentage or preliminary estimate on "Indirects" tab
tbc	DCO Charges	-	Y		Refer "NR Indirects" tab
tbc	Land / Property Costs & compensation	-	Y		Refer "NR Indirects" tab
tbc	Escalation (see Note 1)	%	NA		See Note 1
tbc	Other (State)	-			Refer "NR Indirects" tab
Sub - Total F		313,464			
Point Estimate - Sub - Total G (E+F)		2,283,812			
Uplift for Risk and Contingency					
tbc	To Mean (see Note 3)	£			See Note 3
Project Budget (Point Estimate + Uplift to Mean)		2,283,812	for Project Manager's reference		
tbc	QRA Value - at P50 (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	QRA Value - at P80 - incremental on P50 value (see Note 3)	£			Sponsor to advise if P50 or P80 value shall apply See Note 3
tbc	Adjustment for residual factors (see Note 2)	%	30%	685,144	Uplift on Point Estimate Value (excluding the Cost of Work Done) See Note 2
Project Anticipated Final Cost (AFC)		2,968,956	Authorised AFC		
Other Costs to the Customer					
tbc	Allowance for Escalation (see Note 1)				See Note 1
tbc	Allowance for Network Rail Fee Fund	-	provided by Sponsor		
tbc	Allowance for Industry Risk Fund	-	provided by Sponsor		
tbc	Allowance for Insurance Top-up	-	provided by Sponsor		
Cost to Customer		2,968,956			

APPROVAL & ENDORSEMENT

	Estimate Produced by :-	Estimate Approved by :-	Estimate Endorsed by :-
Name :-	F & A	Steve Jackson Network Rail	
Position :-		Estimator - Anglia Route	
Signed :-			
Date :-	21/03/2013	08/05/2013	

Notes:-

- Where the project AFC is below £50m or the construction phase will be shorter than two years, escalation shall not be included.
- An 'Adjustment for residual factors' has been applied in accordance with the Guidance Notes on Estimating.
- The project team or Risk & Value Manager should provide the values for uplifts to Mean, P50 and P80. The uplifts to Mean and P50 should be entered in the spaces provided; the incremental value to P80 (beyond P50) should be shown in the box provided (i.e. P80 value - P50 value)

Estimate Stage:	2											
Oracle Project No.:	135,112											
Project Name:	Foxton Level Xing Closure - Footbridge, Stairs & Ramps											
Calculation of Contractors and Network Rail's Indirect Costs												
Asset	Total Direct Costs	%	Preliminaries	%	Design	%	Test & Commission	%	Network Rail Management	%	Sponsor	
Signalling	0	35%	0	20%	0	15%	0	12%	0	3%	0	
Electrification & Plant	0	35%	0	15%	0	7.5%	0	12%	0	3%	0	
Track	0	25%	0	10%	0	0%	0	12%	0	3%	0	
Telecoms	0	25%	0	20%	0	15%	0	12%	0	3%	0	
Operational Property	0	25%	0	10%	0	0%	0	12%	0	3%	0	
Structures	1,492,688	20%	298,538	10%	149,269	0%	0	12%	179,123	3%	44,781	
General Civils	0	20%	0	10%	0	0%	0	12%	0	3%	0	
Utilities	0	25%	0	10%	0	0%	0	12%	0	3%	0	
			298,538		149,269		0		179,123		44,781	
Allowance for TOC / FOC Compensation - calculator												
	1,492,688		298,538								0	
					TOTAL				1,791,225			
					Allowance for TOC / FOC compensation (%)	5%			89,561			

