



A428 Western Corridor Guided Bus Route Option 6

for

Cambridgeshire County Council

Masterplanning Stage Cost Study - Highways

March 2017



Document status					
Revision	Date	Status or comment	Prepared by	Checked by	Authorised by
0	31.03.2017	First issue	I. Chui	P. Ashworth	P. Ashworth

Option 6	£17,741,000
----------	-------------

All prices are as at 2010 and exclusive of VAT.

**A428 Western Corridor
Guided Bus Route Option 6
Masterplanning Stage Cost Study - Highways
Assumptions and Exclusions**



1.00 Exclusions

- 1.01 Works arising from asbestos surveys or analyses.
- 1.02 Works arising from the identification of hazardous materials.
- 1.03 Abnormal ground conditions over and above risk allowance.
- 1.04 Client direct order works.
- 1.05 Requirements imposed by Planning Authority or Fire Officer.
- 1.06 Landfill tax higher level for active waste.
- 1.07 Agency costs, legal fees and finance charges.
- 1.08 Development taxes, levies or other "planning gain" items.
- 1.09 Section 106 /278 agreements and costs.
- 1.10 VAT.
- 1.11 Statutory fees.
- 1.12 Land acquisition and associated costs (CPO), provided separately.
- 1.13 Noise barriers.
- 1.14 Piled foundations other than as covered by the risk allowance.
- 1.15 Professional fees and surveys - 12% to be added to TUBA spreadsheet.

2.00 Assumptions

- 2.01 Ground conditions are generally good with no soft spots.
- 2.02 "Shallow foundations" for the entire length of the guideway i.e. no piling.
- 2.03 Stabilisation of soils not required over and above risk allowance.
- 2.04 No major ecological impacts i.e. badgers, owls, newts, etc. over and above risk allowance.

The Estimate has been prepared by reference to the following information:-

PDF

5040372-HW-FS-35 - 038 - Option 6 (Central Tidal Bus Lane)-240317 JRC (W NW Devlp. Junc.)-5040372-HW-FS-035
5040372-HW-FS-35 - 038 - Option 6 (Central Tidal Bus Lane)-240317 JRC (W NW Devlp. Junc.)-5040372-HW-FS-036
5040372-HW-FS-35 - 038 - Option 6 (Central Tidal Bus Lane)-240317 JRC (W NW Devlp. Junc.)-5040372-HW-FS-037
5040372-HW-FS-35 - 038 - Option 6 (Central Tidal Bus Lane)-240317 JRC (W NW Devlp. Junc.)-5040372-HW-FS-038

DWG

5040372-HW-FS-35 - 038 - Option 6 (Central Tidal Bus Lane)-240317 JRC (W NW Devlp. Junc.)

WORD

Tranche 1 Comparison Report - Draft March 2017 (Rev.1)

Risk

For the purposes of this Masterplanning Stage Cost Study, Faithful+Gould have considered the risk profile for the construction element of the A428 Western Corridor Study. We have taken into account other comparable schemes such as the extension to the Cambridge Guided Busway at Chesterton and the A13 Diversionary Works at Barking, as well as producing a Quantitative Risk Assessment specifically for this project.

The allowance for risk at Masterplanning Stage is set at 30% and whilst no specific allowance has been included for Government Optimism Bias, we consider this to be a 'standard civil engineering project', that is to say, not requiring any special design considerations.

Commentary

Generally the rates and percentage additions used are derived from historical data from other comparable schemes.

Unmeasured works and design development (10%) includes for items which have not been designed at this early stage in the process or where a design is modified as more detail is added.

Preliminaries (25%) is to cover for items which aren't included in the measured works such as; staff, welfare provisions, site offices, site waste clearance, water, electricity, furniture, ICT and consumables, protection of work, protective clothing, site transport, and so on.

Traffic management (30%) includes for all temporary works associated with maintaining transport routes for the duration of the works and will include: temporary roads and footpaths; diversions; traffic lights and signage.

Overheads & profit (8%) is the percentage that will be added to all the contractor's costs, including subcontract packages,

Contingency (30%) is an allowance for risk, as outlined in the above Risk section, and represents a sum of money that the client should have in reserve to meet the cost of any identified or unforeseen risks which may materialise on a given project.

A428 Western Corridor
Masterplanning Stage Cost Study - Highways
Option 6



Description	Quantity	Unit	Rate	Total £	Notes
<u>Section I : Northhampton Street - Lansdowne Road</u>					
1 Breaking out existing hard pavings	0	m	70	-	
2 Disposal of excavated materials	0	m3	45	-	
3 Stabilisation of existing ground	0	item	50,000	-	
4 Disposal of surface and ground water	0	item	20,000	-	
5 New footpath	0	m	200	-	
6 Widening existing carriageway	0	m	500	-	
7 Kerbing	0	m	30	-	
8 Removing existing traffic island	0	nr	1,500	-	
9 New traffic island	0	nr	3,000	-	
10 Road markings	0	m	5	-	
11 Street lighting	0	m	70	-	
12 Utilities diversions	0	item	250,000	-	
13 Unmeasured works and design development	10.0%			-	
Sub-total:				-	
14 Preliminaries	25.0%			-	
15 Traffic management	20.0%			-	
16 Overheads & profit	8.0%			-	
17 Contingency	30%			-	
To Summary £				-	

A428 Western Corridor
Masterplanning Stage Cost Study - Highways
Option 6



Description	Quantity	Unit	Rate	Total £	Notes
<u>Section II : High Cross - Madingley Mulch Roundabout</u>					
1 Breaking out existing hard pavings	3,600	m	70	252,000	
2 Disposal of excavated materials	1,620	m3	45	72,900	
3 Stabilisation of existing ground	1	item	80,000	80,000	
4 Disposal of surface and ground water	1	item	30,000	30,000	
5 New footpath	3,600	m	200	720,000	
6 Widening existing carriageway	3,600	m	500	1,800,000	
7 Kerbing	7,200	m	30	216,000	
8 Removing existing traffic island	6	nr	1,500	9,000	
9 New traffic island	10	nr	3,000	30,000	
10 Road markings	7,000	m	5	35,000	
11 Street lighting	3,600	m	70	252,000	
12 Utilities diversions	1	item	100,000	100,000	
Carried forward £				3,596,900	

March 2017

A428 Western Corridor
Masterplanning Stage Cost Study - Highways
Option 6



Description	Quantity	Unit	Rate	Total £	Notes	
Brought forward £				3,596,900		
13 Alterations to existing bridge over M11	1	item	2,076,641	2,076,641	As 6 June 2016 - Option 4: widening the bridge to the South.	
14 Signalised junction with bus priority	2	nr	95,000	190,000		
15 Signalised T-junction	4	nr	83,000	332,000		
16 Full gantries	17	nr	25,000	425,000		
17 Cantilever gantries	5	nr	15,000	75,000		
18 Remove existing gabion wall	140	m	40	5,600		Including disposal.
19 Remove existing concrete retaining wall	75	m	100	7,500		Including disposal.
20 New retaining wall	1,200	m2	300	360,000		Assume concrete retaining wall; 300mm thick, 2000mm high.
21 Unmeasured works and design development	10.0%			706,864		
Sub-total:				7,775,505		
22 Preliminaries	25.0%			1,944,000		
23 Traffic management	30.0%			2,916,000		
24 Overheads & profit	8.0%			1,011,000		
25 Contingency	30%			4,094,000		
To Summary £				17,741,000		

March 2017