



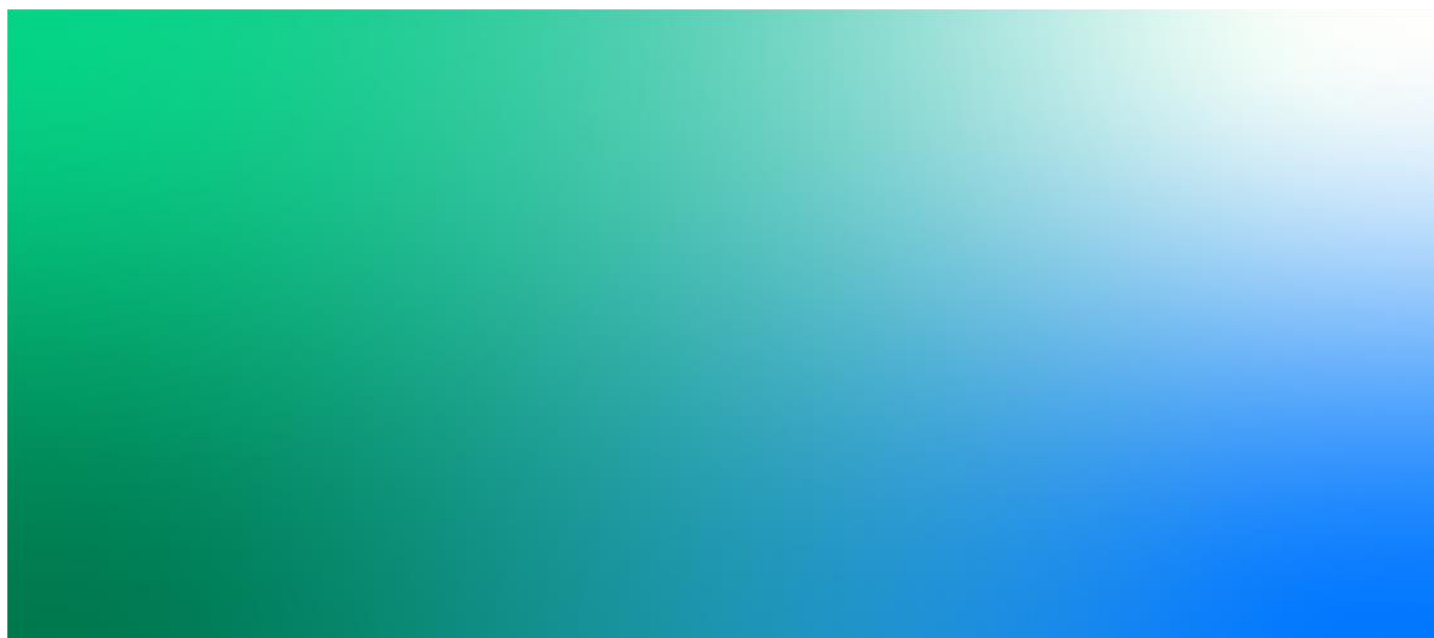
A10 Dualling

A10 Dualling Options Estimate Report

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15 July 2020

Cambridgeshire & Peterborough Combined Authority



A10 Dualling

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Document history and status

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0	22/06/2020	First Issue	C Shaw	C Leong	M Clark	K Beirne
1	15/07/2020	Adjusted Risk & Optimism Bias	C Shaw	C Leong	C McHugh	K Beirne

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Appendix A Register of Design Information

Appendix B Measured Cost Estimate

1. Project Summary

This Options Estimate provides an estimate for the construction of the seven route options for the dualling of the A10 between Cambridge and Ely.

- Route A – combination of online dualling (11.3km) and offline dual carriageway construction (8.2km)
- Route B – combination of online dualling (9.2km) and offline dual carriageway construction (10.3km)
- Route C – combination of online dualling (2.0km), offline dual carriageway construction (4.2km) and junction improvements
- Route D – combination of online dualling (0.7km) and dual carriageway offline construction (18.0km)
- Route E – combination of online dualling (16.0km) and offline dual carriageway construction (4.0km)
- Route F – Online dualling (6.7km) and junction improvements
- Route G – 7no junction improvements only

The basis of the costs, assumptions and exclusions are listed in this report and a summary of the costs are as follows:

	Total Capital Cost (excl. VAT) (£)
Route A	248,111,357
Route B	251,121,768
Route C	104,743,022
Route D	288,081,334
Route E	236,039,553
Route F	91,566,056
Route G	32,488,543

Details of the estimate have been included in Appendix B.

2. Methodology

Cambridgeshire and Peterborough Combined Authority commissioned Jacobs to produce an options estimate for the dualling of the A10. The methodology detailed below has been used to prepare this cost estimate.



Scope: This scope of works to be included in this estimate has been agreed with the Cambridgeshire and Peterborough Combined Authority via Jacobs Design Team and is defined by the design information included in Appendix A. Section 3 of this report details those elements of the works that are included within each section of the estimate, as well as any assumptions and exclusions that have been made.

Quantification: Section 4 of this report details the methods used to quantify the various elements of the scope of works and identifies any industry Standard Methods of Measurement or Work Breakdown Structures that have been used.

Basis of Cost Estimate: The base date of the estimate, location factors, and pricing methods are included in Section 5 of this report.

Check, Review & Approve: A line by line check of the estimate is carried out by an experienced surveyor prior to final high level review by the estimating manager prior to approval by the Project Manager. This process is undertaken in accordance with Jacobs UK Ltd quality procedure Work Instruction WI-3100.

3. Scope

This cost estimate has been based upon the design information listed in Appendix A.

3.1 Highway Works

3.1.1 Preliminaries

The allowance for Preliminaries includes Main Contractor's cost items such as:

- Project specific management and staff;
- Visiting management and staff;
- Support costs; staff travel, accommodation and subsistence;
- Site accommodation, offices, canteens, drying rooms, toilets and washrooms, stores, compounds and the like;
- Temporary works, bases & foundations, connections to services, temporary site roads and paths, temporary drainage, haul roads, and barriers;
- Traffic safety and management and temporary diversions for traffic.
- Furniture and equipment, IT systems, radio & telecommunications systems, sundries and consumables;
- Temporary water and electric supplies;
- Cleaning site accommodation and waste management;
- Hoardings, fences, gates and information boards;
- Safety and environmental protection, PPE, fire points, first aiders and traffic marshals;
- Contractors surveys, inspection and monitoring, setting out, protection of the works, samples and testing;
- Mechanical plant, temporary access bridge, road sweeper, jet wash, generators and compressors, and small tools;
- Site records, testing and commissioning, handover, post completion services;
- Insurances, bonds, guarantees and warranties;

3.1.2 Roadworks

The cost of the following Roadworks are included in this estimate.

- Roadworks General
 - Site Clearance, Fencing, Road Restraint Systems and Earthworks;
- Main carriageway, Interchanges and Side Roads
 - Drainage and Service Ducts, Pavements, Kerbs, Footways and Paved areas.
- Traffic Signs, Lighting and Motorway Communications
 - Traffic Signs and Road Markings, Road lighting Columns, Brackets and CCTV Masts, Electrical Work for Road Lightings and Traffic Signs.
- Landscape and Ecology

3.1.3 Structures

The cost of the following Structures are included in this estimate;

- Road Overbridge - Waterbeach Road (approx. 11m wide 30m long) (included in Routes A, B, C)
- Road Overbridge - Cottenham Road (approx. 11m wide 30m long) (included in Route D)
- Road Overbridge – Long Drove (near Two Bit Farm) (approx. 11m wide 30m long) (included in Route D)
- Road Overbridge – Long Drove (near The Old Twentypence Inn) (approx. 11m wide 30m long) (included in Route D)
- River Overbridge – New bridge over River Great Ouse (approx. 11m wide 30m long) (included in Routes A, B, E)
- River Overbridge – New bridge over River Great Ouse (approx. 23m wide 30m long) (included in Route D)
- River Overbridge – Works to existing bridge over River Great Ouse (approx. 11m wide 30m long) (included in Routes A, B, E)
- Road Overbridge – Wilburton Road (approx. 11m wide 30m long) (included in Routes A, E)
- Road Overbridge – Newmarket Road (approx. 11m wide 30m long) (included in Route B)
- Road Overbridge – Broad Baulk (approx. 11m wide 30m long) (included in Route D)
- Road Overbridge – Red Fen Road (approx. 11m wide 30m long) (included in Route D)

3.1.4 Miscellaneous

An allowance of 1% of the Roadworks and Structures has been included for Environmental Mitigation works. Another allowance of 1% of the Roadworks and Structures has been included for Carbon – net zero works. Other Miscellaneous works for service areas, car parks and maintenance compounds are excluded from this estimate.

3.1.5 Accommodation Works

An allowance of 1% of the Roadworks and Structures has been included for Accommodation Works.

3.1.6 Facilitating Works

Facilitating Works are excluded from this estimate as detailed in Section 3.9 below, except for;

- A percentage allowance of the Roadworks and Structures has been included for works for statutory undertakers for each route. Route A, B, D, E at 2.5%, Route C, F at 5%, Route G at 15%.

3.2 Project/ Design Team Fees

Allowances for project/ design team fees have been included in this estimate as below;

- £10M for Routes A, B, D, E
- £5M for Routes C, F
- £2M for Route G

3.3 Other Development/Project Costs

Other development/ project costs are excluded from this estimate as detailed in Section 3.9 below.

3.4 Inflation

Allowances have been included in this estimate for Tender Inflation and Construction Inflation (taken to the midpoint of construction) as calculated below. The current forecasted start and completion dates are found in Section 5.4 below. The Building Cost Information Service (BCIS) Road Cost Index has been used to calculate inflation. The current published forecast goes to 3Q 2024, therefore we have assumed a year on year inflation of 3.6% which was calculated from the average of 2024's year on year percentage.

- Tender Inflation calculation: Index at 2Q 2020 = 164.1, Index at 3Q 2024 = 194.1,
 $(194.1 - 164.1) \div 164.1 \times 100 = 18.3\%$
 3Q 2024 to 3Q 2025 @ 3.6% year on year
 $(1.183 \times 1.036) = 22.6\%$

Routes A, B, D, E

- Construction Inflation calculation: 3Q 2025 to 1Q 2027,
 $(1 \times 1.036) \times 1.018 = 5.5\%$

Routes C, F, G

- Construction Inflation calculation: 3Q 2025 to 2Q 2026,
 $1 \times 1.027 = 2.7\%$

3.5 Risk

Section 3.1.1 of "The Department for Transport Guidance, TAG Unit A1.2, Scheme Costs, dated July 2017" states that a Quantified Risk Assessment (QRA) is required for all transport projects with a cost greater than £5m and is encouraged for smaller schemes.

Due to the current stage of design a QRA has not yet been carried out, therefore an allowance of 45% on the cost of Highway Works have been included in this estimate for design development risks, construction risks, employer change risks and employer other risks as advised by the Jacobs design team.

HE PCF Stage (or equivalent)	Estimate Type	Risk
0 & 1: Strategy & Option Identification	Order of Magnitude	40 - 60%
1 & 2: Option Identification & selection	Options Estimate	25 - 40%
3: Preliminary Design	Preliminary / Initial Estimate	20 - 25%
4: Statutory Procedures & Powers	Developing Estimate	15 - 20%
5: Construction Preparation	Final Estimate	10 - 15%
6: Construction	Cost to Complete Estimate	5 - 10%

3.6 Optimism Bias

Section 3.5 of “The Department for Transport Guidance, TAG Unit A1.2: Scheme Costs”, dated July 2017” recommends that Optimism Bias be applied to the risk-adjusted scheme cost for different categories of works and stages of development at the rates stated in the table below.

Table 8 Recommended optimism bias uplifts for different projects at different stages of the life of a transport project				
Category	Types of projects	Stage 1	Stage 2	Stage 3
Roads	Motorway, Trunk roads, Local roads, Bicycle facilities, Pedestrian facilities, Park and ride, Bus lane schemes, Guided buses on wheels	44%**	15%	3%**
Light rail	Metro, Light rail, Guided buses on tracks	66%**	40%	6%**
Conventional rail ²	Network rail enhancement projects	64%*	18%*	4%*
Fixed links	Bridges and Tunnels	66%**	23%	6%**
Building projects	Stations and Terminal buildings	51%**	-	4%**
IT projects	IT system development	200%**	-	10%**

Sources: Flyvbjerg (2004), UCL (2015)* and Mott MacDonald (2002)**

Based on the level of information available and the inclusion of risk allowed for we have assessed that an allowance of 44% for Roads and 66% for Structures should be included for Optimism Bias.

3.7 Value Added Tax (VAT)

Value Added Tax (VAT) is excluded from this cost estimate.

3.8 Assumptions

The following assumptions have been made in the preparation of this cost estimate for all seven routes unless stated specifically in conjunction with the design team:

- Construction Works will generally be undertaken during normal working hours unless specifically identified as being undertaken out of normal working hours (evenings and weekends).
- Access to the site is unrestricted.
- Existing site conditions, extent of works and level of specification are as set out in the information included in Appendix A.
- The estimate does not consider the tender or contract strategy of the project.
- The works will be carried out as one continuous project.
- An allowance of 30% of the Roadworks, Structures, Mitigation Works, Accommodation Works and Facilitating Works has been included for Preliminaries (including traffic management) for all Routes.
- Width of existing carriageway is 7.3m.

- Width of proposed dual carriageway construction is 29.1m and includes: 2.5m verges to both sides of the carriageway; 2 no 9.3m wide carriageways with a 2.5m central reserve; 3m wide shared use footway.
- General site clearance has been calculated as length of route by the width of dual carriageway construction.
- Site clearance, items to be removed to tip off site has been calculated as online length by existing carriageway width.
- Allowance for demolition of 2no domestic properties for the A1123 Stretham Roundabout as shown on the drawing. Demolition of any other existing buildings and structures has not been included in the estimate.
- Fencing has been included for both sides of entire length of the route.
- Noise barriers have been included for both sides of 10% of online sections and 5% of offline sections for each route.
- Safety barrier systems designed to be impacted on one side have been included for both sides of the carriageway to 20% of the length of the route.
- Safety barrier systems designed to be impacted on both sides have been included for the central reserve calculated as the length of the route.
- Existing topsoil is 150mm deep and is suitable for re-use on site.
- 300mm thick topsoil to new verge and 85% of central reserves.
- 70% of excavated material is assumed to be acceptable and 30% unacceptable material Class U1A. The ground level is assumed to be generally flat, therefore excavated volumes have been calculated as the carriageway and footway box construction plus 10%.
- 10% of excavated material is hard material above the quantity of existing road pavement.
- 50% of excavated acceptable material excluding Class 5A is suitable for reuse on site in areas of fill, the remaining 50% and all the unacceptable material will be disposed off site.
- The new construction area shall be raised by 0.5m to the surrounding landscape. The shortfall in required acceptable material to construct the embankment shall be obtained through imported material.
- Allowance of 1% of excavated material has been included for excavating and filling soft spots or other voids.
- It is assumed that no geotextiles are required in relation to earthworks.
- Allowances for the removal of existing drainage systems has been based on the online length.
- An allowance for new drainage has been included, based on 15% of the central reserve length and 20% of both verges to receive new drainage pipes, with precast concrete trapped gullies spaced every 25m and precast concrete chambers spaced every 100m.
- Allowances have been included for flood relief culverts based on lengths of online and offline sections of the route.
- Allowances have been included for attenuation ponds based on the area of new carriageway of each route.
- No capping is required for new carriageway construction.

- New pavement construction: 40mm thick SMA10 surface course, 60mm thick AC20 binder course, 150mm thick AC32 base course & 250mm thick Type 1 sub-base.
- Existing carriageway to be milled and resurfaced with 40mm thick SMA10 surface course.
- An allowance for regulation course has been included based on 5mm to resurfaced area.
- Milling for tie in to existing carriageway.
- No requirement for bus or parking laybys.
- Precast concrete kerbs to edges of the carriageway for 20% of length of each route.
- Precast concrete v-shaped drainage channel to central reserve for 15% of the length of each route.
- New footway construction: 20mm thick AC6 surface course, 60mm thick AC20 binder course & 150mm thick Type 1 sub-base.
- Allowances for drainage works to side roads have been included for various junctions along the route. These allowances have been based on 50m lengths for each arm of the junction, plus roundabouts.
- Allowances for pavement works to side roads have been included for various junctions along the route. These allowances have been based on 50m lengths for each arm of the junction, plus roundabouts.
- Allowances for kerbs, footways and paved areas to side roads have been included for various junctions along the route. These allowances have been based on 50m lengths for each arm of the junction, plus roundabouts and splitter islands.
- The above three points assume the overall size for three and four arm roundabouts are 40.00m in diameter; whereas the five arm roundabouts have a 50.00m diameter.
- An allowance for road traffic signs has been included based on the area of carriageway.
- An allowance for road markings has been included based on the area of carriageway.
- Allowances for traffic signal installations at re-aligned junctions at Butt Lane and Denny End Road junctions included where applicable.
- Assumed new road lighting which has been based on 10m high columns, with single bracket arms and lantern at 40m spacing along new kerb line of junctions, including a 300m approach and 50m exit. Where junctions are spaced by a distance less than 800m then the lighting continues between the junctions.
- Allowances have been included for electrical work in association with road lighting and traffic signs.
- No requirement for communication systems.
- New verges and 85% of central reserve to be grass seeded.
- Allowances for planting have been included based on new verge areas.
- Allowances have been included for five years maintenance to grass areas and planted trees and shrubs, and an Ecologist site inspection to on-line and off-line routes.
- Allowances for new structures have been included for each route as listed in Section 3.1.3 above as agreed with the design team. The length and width of the bridges have been assumed.
- In the absence of structure designs the allowance for bridge structures includes for typical single span composite road bridge deck construction, comprising steel girder beams and reinforced concrete deck slab; including piled foundations, reinforced concrete abutment walls and wingwalls.

- An allowance for works to the existing bridge over the River Great Ouse includes for minor upgrading works only not major structural works.
- In the absence of detail for accommodation works an allowance of 1% has been included.
- The estimate does not consider the effects of global pandemics, such as Coronavirus 19, which are unknown at this time.

3.9 Exclusions

The following items are excluded from this cost estimate:

- **Facilitating Works**
 - Toxic/hazardous material removal including removal of toxic or hazardous parts of building fabric and hazardous materials or components from existing services installations;
 - Removal and/or treatment of contaminated ground material;
 - Eradication of invasive plant growth;
 - Ground gas venting measures including gas proof membranes, perforated collection pipes, proprietary gas dispersal fin layers, radon sumps and vent pipes;
 - Soil stabilisation measures including cement or chemical grouting, electrochemical stabilisation, sand stowing, soil nailing, ground anchors, compacting, and freezing of groundwater and subsoil;
 - Site dewatering and pumping to lower the ground water level of the site, including forming well points, filling, drain tubes and ring mains, sumps, pumps and pumping, off-site disposal of water, running costs and attendance;
 - Extraordinary site investigation works including archaeological investigation and other site investigation works;
- **Project/Design Team Fees**
 - Main contractor's design fees;
 - Main contractor's pre-construction fees including management and staff, specialist support services fees, temporary accommodation, services and facilities, charges, overheads and profit.
- **Other Development /Project Costs**
 - Land acquisition and compensation costs;
 - Employer finance costs, costs in connection with funding of project;
 - Fees, planning fees, building control fees, oversailing fees, fees in connection with party wall awards, fees in connection with rights of light agreements, fees in connection with other agreements between the employer and neighbours to facilitate the project, other fees in connection with licences, permits and agreements;
 - Charges, rates on temporary accommodation, licences in connection with hoardings, scaffolding, gantries and the like and licences in connection with crossovers, parking permits, parking bay suspension and the like;
 - Planning contributions, direct financial contributions in connection with planning consent, and environmental improvement works;

- Compensation for permanent land take; statutory loss payments; possible disturbance claims; potential Part 1 claims and professional fees incurred by the claimants;
- Insurances other than main contractors works insurance;
- Decanting and relocation costs, temporary relocation costs, temporary accommodation, rents and other running costs;
- Fixtures, fittings and equipment other than that included in design;
- Marketing costs, public relations events, site based advertising and public relations literature.
- Taxation & Grants
 - Capital allowances;
 - Grants;
 - Value Added Tax (VAT).

4. Quantification

The Highways Works element of this estimate have wherever possible been quantified in accordance with the Manual of Contract Documents for Highway Works - Volume 4 Bills of Quantities for Highway Works published by the Highways Agency (now Highways England).

The detailed estimate is included in Appendix B which has been prepared using the Construction Computer Software (CCS), CostX Estimating Software. Quantities are either directly entered into take off sheets or measured electronically using the built in Quantity Take off package.

5. Basis of Cost Estimate

5.1 Base Date

The rates used are in pounds sterling and reflect construction projects of a similar size and nature. The base date of the estimate is 2nd Quarter 2020 (2Q 2020).

5.2 Region

The works are located in the Eastern Region of the United Kingdom of Great Britain



5.3 Pricing

5.3.1 Percentage Allowances

Percentage allowances have been included in this estimate for Preliminaries, Miscellaneous Works (Environmental Mitigation Works), Accommodation Works, Facilitating Works (Works for Statutory Undertakers), Tender Inflation, Construction Inflation, Risk and Optimism Bias.

5.3.2 Approximate Estimating Rates

Approximate Estimating Rates have been used in this estimate for; Site Clearance based on area of existing carriageway; Flood Relief Culverts based on length of routes and Attenuation Ponds based on area of new carriageway; Traffic Signs and Road Marking based on the area of carriageway; Planting based on area of verge; Bridge structures based on area of bridge deck.

5.3.3 Unit Rates

Unit rates have been used to price Fencing, Road Restraints, Drainage, Earthworks, Pavement, Kerbs, Footways and Paved Areas, Road Lighting, and Electrical Work Associated with Road Lighting and Traffic Signs, Landscaping.

5.3.4 Resource Costs

Resource costs have not been used in this estimate.

5.4 Programme

The estimate is based on the following anticipated key dates:

	Commencement Date	Duration	Completion Date
Routes A, B, D, E	3Q 2025	3 years	3Q 2028
Routes C, F, G	3Q 2025	18 months	1Q 2027

Appendix A. Register of Design Information

The following documents have been used as a basis for this estimate:

Document No.	Rev	Title
BESP0020-JAC-HGN-XX-DR-CH-0011	P00.1	Butt Lane / Park and Ride Option 2 Northbound and Southbound Widening
BESP0020-JAC-HGN-XX-DR-CH-0013	P00.1	Denny End Road Option 2 Additional Lanes on A10
BESP0020-JAC-HGN-XX-DR-CH-0015	P00.1	Cambridgeshire Research Park Option 2 Two Lane Exits with Waterbeach Access
BESP0020-JAC-HGN-XX-DR-CH-0016	P00.1	Waste Treatment Option 1 Two Lane Exits
BESP0020-JAC-HGN-XX-DR-CH-0019	P00.1	A1123 Stretham Roundabout Option 3 New Offline Roundabout
BESP0020-JAC-HGN-XX-DR-CH-0020	P00.1	A142 Angel Drove Option 1 Left Slip Lane
BESP0020-JAC-HGN-XX-DR-CH-0022	P00.1	A142 Witchford Road Option 2 A10 Widening
BESP0020-JAC-HGN-XX-SK-CH-0007	P00	D. Option 1 Full Offline West
BESP0020-JAC-HGN-XX-SK-CH-0008	P00	E. Option 5B Online Widening to Dual (Milton West/ Stretham East)
BESP0020-JAC-HGN-XX-SK-CH-0016	P00	A. Option 8F Online Widening to Dual (Milton West/ Stretham West)
BESP0020-JAC-HGN-XX-SK-CH-0020	P00	B. Option 8L Online Widening to Dual (Milton West/ Stretham East)
BESP0020-JAC-HGN-XX-SK-CH-0022	P00	F. Option 10A Dual to Waterbeach and Junctions to the North
BESP0020-JAC-HGN-XX-SK-CH-0023	P00	C. Option 10B Dual to Waterbeach and Junctions to the North
BESP0020-JAC-HGN-XX-SK-CH-0026	P00	G. Option 12 Online Junction Improvements

Appendix B. Measured Cost Estimate

Summary		Route A	Route B	Route C	Route D	Route E	Route F	Route G
Highway Works								
1	Preliminaries (30%)	18,575,310	18,833,026	7,937,401	21,619,683	17,641,177	6,883,654	2,390,246
2	Roadworks	52,844,764	53,659,031	22,683,151	55,438,635	51,708,315	21,245,847	6,752,108
3	Structures (Bridges, Viaducts, etc)	5,845,000	5,845,000	1,815,000	12,870,000	4,030,000	Excluded	Excluded
4	Structures (Retaining walls, culverts, subways, etc)	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
5	Miscellaneous	1,173,795	1,190,081	489,963	1,366,173	1,114,766	424,917	135,042
6	Accommodation Works (1%)	586,898	595,040	244,982	683,086	557,383	212,458	67,521
7	Facilitating Works (various %)	1,467,244	1,487,601	1,224,908	1,707,716	1,393,458	1,062,292	1,012,816
	Sub-Total A	80,493,011	81,609,779	34,395,405	93,685,293	76,445,099	29,829,168	10,357,733
Project / Design Team Fees								
8	Project / design team fees	10,000,000	10,000,000	5,000,000	10,000,000	10,000,000	5,000,000	2,000,000
Other Development / Project Costs								
9	Other development / project costs	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
	Sub-Total B	90,493,011	91,609,779	39,395,405	103,685,293	86,445,099	34,829,168	12,357,733
Inflation								
10	Tender Inflation (22.6% on Sub-Total B)	20,451,420	20,703,810	8,903,362	23,432,876	19,536,592	7,871,392	2,792,848
11	Construction Inflation (various % on Sub-Total B + Tender Inflation)	6,101,944	6,177,247	1,304,067	6,991,499	5,828,993	1,152,915	409,066
	Sub-Total C	117,046,375	118,490,836	49,602,834	134,109,668	111,810,684	43,853,475	15,559,647
Risk								
12	Risks (45% on Sub-Total C)	52,670,869	53,320,876	22,321,275	60,349,351	50,314,808	19,734,064	7,001,841
13	Optimism Bias (44% for Roadworks, 66% for structures)	78,394,113	79,310,056	32,818,913	93,622,315	73,914,061	27,978,517	9,927,055
	Sub-Total D	248,111,357	251,121,768	104,743,022	288,081,334	236,039,553	91,566,056	32,488,543
VAT								
14	VAT Assessment	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
Total		248,111,357	251,121,768	104,743,022	288,081,334	236,039,553	91,566,056	32,488,543

A10 Options Estimate
A10 Dualling Route A

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	<u>Preliminaries</u>				
01	Allowance for preliminaries	30	%	61,917,701.00	18,575,310
	Preliminaries Subtotal				18,575,310
Roadworks					
02.01	Roadworks General				
02.01.200	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	566,752	m2	1.00	566,752
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	82,534	m2	2.50	206,335
02.01.300	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	38,952	m	50.00	1,947,600
02	Allowance for noise barriers	3,078	m	350.00	1,077,300
02.01.400	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	Allowance for safety barrier designed to be impacted on one side only	7,790	m	78.00	607,620
02	Allowance for safety barrier designed to be impacted on both sides	19,476	m	150.00	2,921,400
02.01.600	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	72,633	m3	4.50	326,849
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	78,984	m3	3.50	276,444
03	Excavation of acceptable material excluding Class 5A in ditches	8,294	m3	3.50	29,029
04	Excavation of unacceptable material Class U1A in cutting and other excavation	33,850	m3	3.50	118,475
	<u>Excavation in Hard Material</u>				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	19,376	m3	13.00	251,888
	<u>Deposition of Fill</u>				
06	Deposition of acceptable material in embankments and other areas of fill	43,639	m3	6.50	283,654
	<u>Disposal of Material</u>				
07	Disposal of acceptable material excluding Class 5A	43,639	m3	21.00	916,419
08	Disposal of acceptable material Class 5A	31,003	m3	20.00	620,060
09	Disposal of unacceptable material Class U1A	33,850	m3	21.00	710,850

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	188,480	m3	28.00	5,277,440
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	232,119	m3	1.60	371,390
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	1,938	m3	25.00	48,450
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	1,938	m3	42.00	81,396
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	158,000.00	158,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	138,767	m2	3.00	416,301
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	338,148	m2	0.65	219,796
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	1,012,000.00	1,012,000
02	Allowance for flood relief culverts	1	item	2,530,000.00	2,530,000
03	Allowance for attenuation ponds	1	item	560,000.00	560,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	77,922	m3	51.00	3,974,022
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	279,720	m2	26.00	7,272,720
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	283,112	m2	12.00	3,397,344
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	362,254	m2	9.40	3,405,188
	<u>Regulating Course</u>				
05	Regulating course	1,031.672	t	91.00	93,912
	<u>Tack Coat</u>				
06	Tack Coat	82,534	m2	0.50	41,267
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	79,142	m2	1.60	126,627

A10 Options Estimate
A10 Dualling Route A

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
08	Milling pavement 100mm deep	3,392	m2	2.30	7,802
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	13,320	m	18.00	239,760
02	Precast concrete drainage channel system laid straight or curved	2,921	m	45.00	131,445
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	58,428	m2	45.00	2,629,260
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	75,000.00	75,000
02	Allowance for drainage to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
03	Allowance for drainage to Green End junction (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	63,850.00	63,850
05	Allowance for drainage to Cambridge Research Park junction (4 arm roundabout)	1	item	78,850.00	78,850
06	Allowance for drainage to Waste Treatment Site junction (3 arm roundabout)	1	item	63,850.00	63,850
07	Allowance for drainage to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850
08	Allowance for drainage to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
09	Allowance for drainage to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
10	Allowance for drainage to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850
11	Allowance for drainage to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	78,850.00	78,850
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to Butt Lane junction (1no left turn junction, 1no 3 arm signalised junction)	1	item	138,700.00	138,700
02	Allowance for pavement works to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
03	Allowance for pavement works to Green End junction (1no left turn junction)	1	item	104,000.00	104,000
04	Allowance for pavement works to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	191,200.00	191,200
05	Allowance for pavement works to Cambridge Research Park junction (4 arm roundabout)	1	item	225,850.00	225,850
06	Allowance for pavement works to Waste Treatment Site junction (3 arm roundabout)	1	item	191,200.00	191,200
07	Allowance for pavement works to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
08	Allowance for pavement works to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
09	Allowance for pavement works to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
10	Allowance for pavement works to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
11	Allowance for pavement works to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	225,850.00	225,850
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	Allowance for kerbs, footways and paved areas to Butt Lane junction (1no left turn junction, 1no 3 arm signalised junction)	1	item	14,000.00	14,000
02	Allowance for kerbs, footways and paved areas to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
03	Allowance for kerbs, footways and paved areas to Green End junction (1no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	104,000.00	104,000
05	Allowance for kerbs, footways and paved areas to Cambridge Research Park junction (4 arm roundabout)	1	item	107,250.00	107,250
06	Allowance for kerbs, footways and paved areas to Waste Treatment Site junction (3 arm roundabout)	1	item	104,000.00	104,000
07	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
08	Allowance for kerbs, footways and paved areas to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
09	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
10	Allowance for kerbs, footways and paved areas to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000
11	Allowance for kerbs, footways and paved areas to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	107,250.00	107,250
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	362,254	m2	2.50	905,635
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	362,254	m2	1.50	543,381
	<u>Traffic Signal Installations</u>				
03	Traffic signal installation to Butt Lane	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	349	no	2,500.00	872,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	349	no	1,500.00	523,500
02	Allowance for electrical work for traffic signs	1	item	130,000.00	130,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	138,767	m2	2.20	305,287
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	138,767	m2	1.00	138,767

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
03	<u>Planting</u> Allowance for general planting	1	item	2,100,000.00	2,100,000
04	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u> Allowance for grassed areas and planted trees and shrubs	5	yrs	108,000.00	540,000
Roadworks Subtotal					52,844,764
Structures (Bridges, Viaducts, etc.)					
03.01	<u>Proposed Waterbeach Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Waterbeach Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.02	<u>Proposed Bridge over River Great Ouse</u>				
01	Allowance for new steel composite road bridge over the River Great Ouse. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.03	<u>Existing Bridge over River Great Ouse</u>				
01	Allowance for upgrading works to existing road bridge over the River Great Ouse.	1	item	400,000.00	400,000
03.04	<u>Proposed Wilburton Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Wilburton Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
Structures (Bridges, Viaducts, etc.) Subtotal					5,845,000
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	58,689,764.00	586,898
02	Allowance for carbon – net zero	1	%	58,689,764.00	586,898
Miscellaneous Subtotal					1,173,795
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	58,689,764.00	586,898
Accommodation Works Subtotal					586,898
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	2.5	%	58,689,764.00	1,467,244
Facilitating Works Subtotal					1,467,244
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	10,000,000.00	10,000,000

A10 Options Estimate
A10 Dualling Route A

Ref	Description	Quantity	Unit	Rate	Total
Project / Design Team Fees					<i>(Continued)</i>
	Project / Design Team Fees Subtotal				10,000,000
Tender Inflation					
<u>10.01</u>	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	90,493,011.00	20,451,420
	Tender Inflation Subtotal				20,451,420
Construction Inflation					
<u>11.01</u>	<u>Construction Inflation</u>				
01	Allowance for construction inflation	5.5	%	110,944,431.00	6,101,944
	Construction Inflation Subtotal				6,101,944
Risk					
<u>12.01</u>	<u>Project Risk</u>				
01	Allowance for project risk	45	%	117,046,375.00	52,670,869
	Risk Subtotal				52,670,869
Optimism Bias					
<u>13.01</u>	<u>Optimism Bias</u>				
01	Allowance for optimism bias for roadworks	44	%	152,814,853.81	67,238,536
02	Allowance for optimism bias for structures	66	%	16,902,390.19	11,155,578
	Optimism Bias Subtotal				78,394,113
A10 Dualling Route A Total					248,111,357

A10 Options Estimate
A10 Dualling Route B

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	<u>Preliminaries</u>				
01	Allowance for preliminaries	30	%	62,776,753.00	18,833,026
	Preliminaries Subtotal				18,833,026
Roadworks					
02.01	Roadworks General				
02.01.200	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	565,820	m2	1.00	565,820
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	67,087	m2	2.50	167,718
02.01.300	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	38,888	m	50.00	1,944,400
02	Allowance for noise barriers	2,863	m	350.00	1,002,050
02.01.400	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	Allowance for safety barrier designed to be impacted on one side only	7,778	m	78.00	606,684
02	Allowance for safety barrier designed to be impacted on both sides	19,444	m	150.00	2,916,600
02.01.600	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	74,810	m3	4.50	336,645
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	82,980	m3	3.50	290,430
03	Excavation of acceptable material excluding Class 5A in ditches	8,909	m3	3.50	31,182
04	Excavation of unacceptable material Class U1A in cutting and other excavation	35,563	m3	3.50	124,471
	<u>Excavation in Hard Material</u>				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	20,226	m3	13.00	262,938
	<u>Deposition of Fill</u>				
06	Deposition of acceptable material in embankments and other areas of fill	45,945	m3	6.50	298,636
	<u>Disposal of Material</u>				
07	Disposal of acceptable material excluding Class 5A	45,945	m3	21.00	964,824
08	Disposal of acceptable material Class 5A	33,248	m3	20.00	664,960
09	Disposal of unacceptable material Class U1A	35,563	m3	21.00	746,823

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	200,559	m3	28.00	5,615,652
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	246,504	m3	1.60	394,406
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	2,023	m3	25.00	50,575
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	2,023	m3	42.00	84,966
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	129,000.00	129,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	138,539	m2	3.00	415,617
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	352,903	m2	0.65	229,387
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	1,011,000.00	1,011,000
02	Allowance for flood relief culverts	1	item	2,722,500.00	2,722,500
03	Allowance for attenuation ponds	1	item	590,000.00	590,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	81,873	m3	51.00	4,175,523
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	294,571	m2	26.00	7,658,846
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	297,328	m2	12.00	3,567,936
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	361,658	m2	9.40	3,399,585
	<u>Regulating Course</u>				
05	Regulating course	838.588	t	91.00	76,349
	<u>Tack Coat</u>				
06	Tack Coat	67,087	m2	0.50	33,544
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	64,330	m2	1.60	102,928

A10 Options Estimate
A10 Dualling Route B

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
08	Milling pavement 100mm deep	2,757	m2	2.30	6,341
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	13,717	m	18.00	246,906
02	Precast concrete drainage channel system laid straight or curved	2,917	m	45.00	131,265
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	58,332	m2	45.00	2,624,940
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	75,000.00	75,000
02	Allowance for drainage to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
03	Allowance for drainage to Green End junction (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	63,850.00	63,850
05	Allowance for drainage to Cambridge Research Park junction (4 arm roundabout)	1	item	78,850.00	78,850
06	Allowance for drainage to Waste Treatment Site junction (3 arm roundabout)	1	item	63,850.00	63,850
07	Allowance for drainage to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850
08	Allowance for drainage to junction with existing A10 north & south/ Red Fen Road/ proposed A10 north & south (5 arm roundabout)	1	item	98,600.00	98,600
09	Allowance for drainage to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850

A10 Options Estimate
A10 Dualling Route B

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
10	Allowance for drainage to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	78,850.00	78,850
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	138,700.00	138,700
02	Allowance for pavement works to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
03	Allowance for pavement works to Green End junction (1 no left turn junction)	1	item	104,000.00	104,000
04	Allowance for pavement works to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	191,200.00	191,200
05	Allowance for pavement works to Cambridge Research Park junction (4 arm roundabout)	1	item	225,850.00	225,850
06	Allowance for pavement works to Waste Treatment Site junction (3 arm roundabout)	1	item	191,200.00	191,200
07	Allowance for pavement works to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
08	Allowance for pavement works to junction with existing A10 north & south/ Red Fen Road/ proposed A10 north & south (5 arm roundabout)	1	item	282,300.00	282,300
09	Allowance for pavement works to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
10	Allowance for pavement works to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	225,850.00	225,850
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	Allowance for kerbs, footways and paved areas to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	14,000.00	14,000
02	Allowance for kerbs, footways and paved areas to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
03	Allowance for kerbs, footways and paved areas to Green End junction (1 no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	104,000.00	104,000
05	Allowance for kerbs, footways and paved areas to Cambridge Research Park junction (4 arm roundabout)	1	item	107,250.00	107,250
06	Allowance for kerbs, footways and paved areas to Waste Treatment Site junction (3 arm roundabout)	1	item	104,000.00	104,000
07	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000
08	Allowance for kerbs, footways and paved areas to junction with existing A10 north & south/ Red Fen Road/ proposed A10 north & south (5 arm roundabout)	1	item	163,500.00	163,500
09	Allowance for kerbs, footways and paved areas to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
10	Allowance for kerbs, footways and paved areas to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	107,250.00	107,250
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	361,658	m2	2.50	904,145
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	361,658	m2	1.50	542,487
	<u>Traffic Signal Installations</u>				
03	Traffic signal installation to Butt Lane	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	294	no	2,500.00	735,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	294	no	1,500.00	441,000
02	Allowance for electrical work for traffic signs	1	item	110,000.00	110,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	138,539	m2	2.20	304,786
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	138,767	m2	1.00	138,767
	<u>Planting</u>				
03	Allowance for general planting	1	item	2,100,000.00	2,100,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	108,000.00	540,000
	Roadworks Subtotal				53,659,031

Ref	Description	Quantity	Unit	Rate	Total
Structures (Bridges, Viaducts, etc.)					
03.01	<u>Proposed Waterbeach Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Waterbeach Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.02	<u>Proposed Bridge over River Great Ouse</u>				
01	Allowance for new steel composite road bridge over the River Great Ouse. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.03	<u>Existing Bridge over River Great Ouse</u>				
01	Allowance for upgrading works to existing road bridge over the River Great Ouse.	1	item	400,000.00	400,000
03.04	<u>Proposed Newmarket Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Newmarket Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
	Structures (Bridges, Viaducts, etc.) Subtotal				5,845,000
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	59,504,031.00	595,040
02	Allowance for carbon – net zero	1	%	59,504,031.00	595,040
	Miscellaneous Subtotal				1,190,081
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	59,504,031.00	595,040
	Accommodation Works Subtotal				595,040
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	2.5	%	59,504,031.00	1,487,601
	Facilitating Works Subtotal				1,487,601
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	10,000,000.00	10,000,000
	Project / Design Team Fees Subtotal				10,000,000
Tender Inflation					
<u>10.01</u>	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	91,609,779.00	20,703,810
	Tender Inflation Subtotal				20,703,810
Construction Inflation					
<u>11.01</u>	<u>Construction Inflation</u>				

A10 Options Estimate
A10 Dualling Route B



Ref	Description	Quantity	Unit	Rate	Total
Construction Inflation					<i>(Continued)</i>
01	Allowance for construction inflation	5.5	%	112,313,589.00	6,177,247
	Construction Inflation Subtotal				6,177,247
Risk					
<u>12.01</u>	<u>Project Risk</u>				
01	Allowance for project risk	45	%	118,490,836.00	53,320,876
	Risk Subtotal				53,320,876
Optimism Bias					
<u>13.01</u>	<u>Optimism Bias</u>				
01	Allowance for optimism bias for roadworks	44	%	154,934,881.31	68,171,348
02	Allowance for optimism bias for structures	66	%	16,876,830.69	11,138,708
	Optimism Bias Subtotal				79,310,056
A10 Dualling Route B Total					251,121,768

A10 Options Estimate
A10 Dualling Route C

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	Preliminaries				
01	Allowance for preliminaries	30	%	26,458,004.00	7,937,401
	Preliminaries Subtotal				7,937,401
Roadworks (A10 Dualling)					
02.01	Roadworks General				
02.01.200	200 Site Clearance				
	Site Clearance				
01	General Site Clearance	179,896	m2	1.00	179,896
	Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	14,498	m2	2.50	36,245
02.01.300	300 Fencing				
	Fencing				
01	Allowance for new fencing	12,364	m	50.00	618,200
02	Allowance for noise barriers	817	m	350.00	285,950
02.01.400	400 Road Restraint Systems (Vehicle and Pedestrian)				
01	Allowance for safety barrier designed to be impacted on one side only	2,473	m	78.00	192,894
02	Allowance for safety barrier designed to be impacted on both sides	6,182	m	150.00	927,300
02.01.600	600 Earthworks				
	Excavation				
01	Excavation of acceptable material Class 5A	24,810	m3	4.50	111,645
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	28,224	m3	3.50	98,784
03	Excavation of acceptable material excluding Class 5A in ditches	3,113	m3	3.50	10,896
04	Excavation of unacceptable material Class U1A in cutting and other excavation	12,096	m3	3.50	42,336
	Excavation in Hard Material				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	6,824	m3	13.00	88,712
	Deposition of Fill				
06	Deposition of acceptable material in embankments and other areas of fill	15,669	m3	6.50	101,842
	Disposal of Material				
07	Disposal of acceptable material excluding Class 5A	15,669	m3	21.00	329,028
08	Disposal of acceptable material Class 5A	10,901	m3	20.00	218,000
09	Disposal of unacceptable material Class U1A	12,096	m3	21.00	254,016

A10 Options Estimate
A10 Dualling Route C

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	69,293	m3	28.00	1,940,204
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	84,962	m3	1.60	135,939
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	682	m3	25.00	17,050
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	682	m3	42.00	28,644
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	28,000.00	28,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	46,365	m2	3.00	139,095
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	119,033	m2	0.65	77,371
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	321,000.00	321,000
02	Allowance for flood relief culverts	1	item	962,500.00	962,500
03	Allowance for attenuation ponds	1	item	200,000.00	200,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	27,851	m3	51.00	1,420,401
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	100,487	m2	26.00	2,612,662
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	101,083	m2	12.00	1,212,996
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	114,985	m2	9.40	1,080,859
	<u>Regulating Course</u>				
05	Regulating course	181.223	t	91.00	16,471
	<u>Tack Coat</u>				
06	Tack Coat	14,498	m2	0.50	7,249
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	13,902	m2	1.60	22,243

A10 Options Estimate
A10 Dualling Route C

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
08	Milling pavement 100mm deep	596	m2	2.30	1,371
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	4,548	m	18.00	81,864
02	Precast concrete drainage channel system laid straight or curved	927	m	45.00	41,715
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	18,546	m2	45.00	834,570
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	75,000.00	75,000
02	Allowance for drainage to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
03	Allowance for drainage to Green End junction (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	63,850.00	63,850
05	Allowance for drainage to Cambridge Research Park junction (4 arm roundabout)	1	item	78,850.00	78,850
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	138,700.00	138,700
02	Allowance for pavement works to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
03	Allowance for pavement works to Green End junction (1 no left turn junction)	1	item	104,000.00	104,000

A10 Options Estimate
A10 Dualling Route C

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
04	Allowance for pavement works to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	191,200.00	191,200
05	Allowance for pavement works to Cambridge Research Park junction (4 arm roundabout)	1	item	225,850.00	225,850
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	Allowance for kerbs, footways and paved areas to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	14,000.00	14,000
02	Allowance for kerbs, footways and paved areas to junction with Landbeach Road/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
03	Allowance for kerbs, footways and paved areas to Green End junction (1 no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north and south (3 arm roundabout)	1	item	104,000.00	104,000
05	Allowance for kerbs, footways and paved areas to Cambridge Research Park junction (4 arm roundabout)	1	item	107,250.00	107,250
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	114,985	m2	2.50	287,463
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	114,985	m2	1.50	172,478
	<u>Traffic Signal Installations</u>				
03	Traffic signal installation to Butt Lane	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	158	no	2,500.00	395,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	158	no	1,500.00	237,000
02	Allowance for electrical work for traffic signs	1	item	60,000.00	60,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	44,047	m2	2.20	96,903
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	44,047	m2	1.00	44,047
	<u>Planting</u>				
03	Allowance for general planting	1	item	700,000.00	700,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	34,000.00	170,000
	Roadworks (A10 Dualling) Subtotal				18,458,738
Roadworks (Waste Treatment Site Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	16,038	m2	1.00	16,038
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	5,971	m2	2.50	14,928
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,187	m	50.00	59,350
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,462	m3	4.50	6,579
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	20	m3	3.50	70
03	Excavation of unacceptable material Class U1A in cutting and other excavation	9	m3	3.50	32
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	104	m3	13.00	1,352
	<u>Deposition of Fill</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
05	Deposition of acceptable material in embankments and other areas of fill <u>Disposal of Material</u>	10	m3	6.50	65
06	Disposal of acceptable material excluding Class 5A	10	m3	21.00	210
07	Disposal of acceptable material Class 5A	1,462	m3	20.00	29,240
08	Disposal of unacceptable material Class U1A <u>Imported Fill</u>	9	m3	21.00	189
09	Imported acceptable material in embankments and other areas of fill	8	m3	28.00	224
10	Imported topsoil Class 5B <u>Compaction of Fill</u>	1,441	m3	27.00	38,907
11	Compaction of acceptable material in embankments and other areas of fill <u>Soft Spots and Other Voids</u>	18	m3	1.60	29
12	Excavation of soft spots and other voids below cuttings or under embankments	15	m3	25.00	375
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material <u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>	15	m3	42.00	630
14	Allowance for removal of disused gullies and drains <u>Topsoiling and Storage of Topsoil</u>	1	item	2,000.00	2,000
15	Topsoiling 300mm thick <u>Completion of Formation and Sub-formation</u>	9,605	m2	3.00	28,815
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	506	m2	0.65	329
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	45	m2	25.00	1,125
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	17	m3	51.00	867
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	45	m2	26.00	1,170
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	59	m2	12.00	708
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	5,971	m2	9.40	56,127
	<u>Tack Coat</u>				
05	Tack Coat	5,926	m2	0.50	2,963

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	5,912	m2	1.60	9,459
07	Milling pavement 100mm deep	14	m2	2.30	32
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,187	m	18.00	21,366
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	462	m2	45.00	20,790
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	5,971	m2	2.50	14,928
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	5,971	m2	1.50	8,957

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	30	no	2,500.00	75,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	30	no	1,500.00	45,000
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,605	m2	2.20	21,131
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	9,605	m2	1.00	9,605
	<u>Planting</u>				
03	Allowance for general planting	1	item	144,000.00	144,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
	Roadworks (Waste Treatment Site Junction) Subtotal				673,589
Roadworks (A1123 Stretham Roundabout)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	22,185	m2	1.00	22,185
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	11,940	m2	2.50	29,850
03	Allowance for demolition of domestic property of masonry construction with pitched roof	2	no	50,000.00	100,000

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	2,336	m	50.00	116,800
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	2,205	m3	4.50	9,923
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	2,532	m3	3.50	8,862
03	Excavation of unacceptable material Class U1A in cutting and other excavation	1,085	m3	3.50	3,798
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	962	m3	13.00	12,506
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	1,266	m3	6.50	8,229
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	1,266	m3	21.00	26,586
07	Disposal of acceptable material Class 5A	2,205	m3	20.00	44,100
08	Disposal of unacceptable material Class U1A	1,085	m3	21.00	22,785
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	1,859	m3	28.00	52,052
10	Imported topsoil Class 5B	1,920	m3	27.00	51,840
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	3,125	m3	1.60	5,000
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	58	m3	25.00	1,450
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	58	m3	42.00	2,436
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	12,000.00	12,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	9,899	m2	3.00	29,697
	<u>Completion of Formation and Sub-formation</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	8,158	m2	0.65	5,303
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	7,811	m2	25.00	195,275
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	1,995	m3	51.00	101,745
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	7,811	m2	26.00	203,086
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	7,917	m2	12.00	95,004
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	11,940	m2	9.40	112,236
	<u>Tack Coat</u>				
05	Tack Coat	4,128	m2	0.50	2,064
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	4,023	m2	1.60	6,437
07	Milling pavement 100mm deep	105	m2	2.30	242
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	2,336	m	18.00	42,048
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	346	m2	45.00	15,570
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	11,940	m2	2.50	29,850
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	11,940	m2	1.50	17,910
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	58	no	2,500.00	145,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance electrical work for road lighting	58	no	1,500.00	87,000
02	Allowance for electrical work for traffic signs	1	item	22,000.00	22,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,899	m2	2.20	21,778
	<u>Seeding and Turfing</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
02	Amenity grass seeding <u>Planting</u>	9,899	m2	1.00	9,899
03	Allowance for general planting <u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>	1	item	148,000.00	148,000
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
Roadworks (A1123 Stretham Roundabout) Subtotal					1,850,544
Roadworks (A142 Angel Drove Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	23,661	m2	1.00	23,661
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	9,371	m2	2.50	23,428
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,689	m	50.00	84,450
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,996	m3	4.50	8,982
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	262	m3	3.50	917
03	Excavation of unacceptable material Class U1A in cutting and other excavation	112	m3	3.50	392
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	260	m3	13.00	3,380
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	131	m3	6.50	852
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	131	m3	21.00	2,751
07	Disposal of acceptable material Class 5A	1,996	m3	20.00	39,920
08	Disposal of unacceptable material Class U1A	112	m3	21.00	2,352

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	184	m3	28.00	5,152
10	Imported topsoil Class 5B	1,878	m3	27.00	50,706
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	315	m3	1.60	504
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	24	m3	25.00	600
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	24	m3	42.00	1,008
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	6,000.00	6,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	12,517	m2	3.00	37,551
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	2,560	m2	0.65	1,664
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	787	m2	25.00	19,675
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	219	m3	51.00	11,169
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	787	m2	26.00	20,462
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	842	m2	12.00	10,104
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	9,371	m2	9.40	88,087
	<u>Tack Coat</u>				
05	Tack Coat	8,584	m2	0.50	4,292
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	8,529	m2	1.60	13,646
07	Milling pavement 100mm deep	55	m2	2.30	127
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,689	m	18.00	30,402
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	1,773	m2	45.00	79,785
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1 100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1 100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1 200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	9,371	m2	2.50	23,428
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	9,371	m2	1.50	14,057
<u>02.05.1300</u>	<u>1 300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	42	no	2,500.00	105,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	42	no	1,500.00	63,000
02	Allowance for electrical work for traffic signs	1	item	16,000.00	16,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	12,517	m2	2.20	27,537
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	12,517	m2	1.00	12,517
	<u>Planting</u>				
03	Allowance for general planting	1	item	188,000.00	188,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	8,000.00	40,000
	Roadworks (A142 Angel Drove Junction) Subtotal				1,061,556
Roadworks (A142 Witchford Road Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	14,206	m2	1.00	14,206
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	6,801	m2	2.50	17,003
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,147	m	50.00	57,350

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,027	m3	4.50	4,622
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	132	m3	3.50	462
03	Excavation of unacceptable material Class U1A in cutting and other excavation	57	m3	3.50	200
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	140	m3	13.00	1,820
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	66	m3	6.50	429
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	66	m3	21.00	1,386
07	Disposal of acceptable material Class 5A	1,027	m3	20.00	20,540
08	Disposal of unacceptable material Class U1A	57	m3	21.00	1,197
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	108	m3	28.00	3,024
10	Imported topsoil Class 5B	1,087	m3	27.00	29,349
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	174	m3	1.60	278
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	12	m3	25.00	300
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	12	m3	42.00	504
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	8,000.00	8,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	6,851	m2	3.00	20,553
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	989	m2	0.65	643
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
01	Allowance for Drainage based on area of new carriageway	434	m2	25.00	10,850
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	135	m3	51.00	6,885
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	434	m2	26.00	11,284
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	499	m2	12.00	5,988
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	6,801	m2	9.40	63,929
	<u>Tack Coat</u>				
05	Tack Coat	6,367	m2	0.50	3,184
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	6,302	m2	1.60	10,083
07	Milling pavement 100mm deep	65	m2	2.30	150
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,147	m	18.00	20,646
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	555	m2	45.00	24,975
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	6,801	m2	2.50	17,003
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	6,801	m2	1.50	10,202
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	29	no	2,500.00	72,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	29	no	1,500.00	43,500
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	6,851	m2	2.20	15,072
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	6,851	m2	1.00	6,851
	<u>Planting</u>				
03	Allowance for general planting	1	item	102,759.00	102,759
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	4,000.00	20,000
	Roadworks (A142 Witchford Road Junction) Subtotal				638,724
Structures (Bridges, Viaducts, etc.)					
03.01	<u>Proposed Waterbeach Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Waterbeach Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
	Structures (Bridges, Viaducts, etc.) Subtotal				1,815,000
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	24,498,151.00	244,982
02	Allowance for carbon – net zero	1	%	24,498,151.00	244,982
	Miscellaneous Subtotal				489,963
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	24,498,151.00	244,982
	Accommodation Works Subtotal				244,982
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	5.0	%	24,498,151.00	1,224,908
	Facilitating Works Subtotal				1,224,908
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	5,000,000.00	5,000,000
	Project / Design Team Fees Subtotal				5,000,000
Tender Inflation					
10.01	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	39,395,405.00	8,903,362
	Tender Inflation Subtotal				8,903,362
Construction Inflation					
11.01	<u>Construction Inflation</u>				
01	Allowance for construction inflation	2.7	%	48,298,767.00	1,304,067
	Construction Inflation Subtotal				1,304,067
Risk					
12.01	<u>Project Risk</u>				
01	Allowance for project risk	45	%	49,602,834.00	22,321,275
	Risk Subtotal				22,321,275

Ref	Description	Quantity	Unit	Rate	Total
Optimism Bias					
13.01	Optimism Bias				
01	Allowance for optimism bias for roadworks	44	%	66,595,451.43	29,301,999
02	Allowance for optimism bias for structures	66	%	5,328,657.57	3,516,914
	Optimism Bias Subtotal				32,818,913
A10 Dualling Route C Total					104,743,022

A10 Options Estimate
A10 Dualling Route D

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	<u>Preliminaries</u>				
01	Allowance for preliminaries	30	%	72,065,610.00	21,619,683
	Preliminaries Subtotal				21,619,683
Roadworks					
02.01	Roadworks General				
02.01.200	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	556,857	m2	1.00	556,857
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	5,052	m2	2.50	12,630
02.01.300	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	39,403	m	50.00	1,970,150
02	Allowance for noise barriers	1,941	m	350.00	679,350
02.01.400	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	Allowance for safety barrier designed to be impacted on one side only	7,881	m	78.00	614,718
02	Allowance for safety barrier designed to be impacted on both sides	18,722	m	150.00	2,808,300
02.01.600	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	82,771	m3	4.50	372,470
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	98,054	m3	3.50	343,189
03	Excavation of acceptable material excluding Class 5A in ditches	11,613	m3	3.50	40,646
04	Excavation of unacceptable material Class U1A in cutting and other excavation	42,023	m3	3.50	147,081
	<u>Excavation in Hard Material</u>				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	23,446	m3	13.00	304,798
	<u>Deposition of Fill</u>				
06	Deposition of acceptable material in embankments and other areas of fill	54,834	m3	6.50	356,421
	<u>Disposal of Material</u>				
07	Disposal of acceptable material excluding Class 5A	54,834	m3	21.00	1,151,514
08	Disposal of acceptable material Class 5A	42,165	m3	20.00	843,300
09	Disposal of unacceptable material Class U1A	42,023	m3	21.00	882,483

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	246,566	m3	28.00	6,903,848
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	301,400	m3	1.60	482,240
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	2,345	m3	25.00	58,625
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	2,345	m3	42.00	98,490
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	10,000.00	10,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	135,353	m2	3.00	406,059
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	409,432	m2	0.65	266,131
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	1,011,000.00	1,011,000
02	Allowance for flood relief culverts	1	item	3,355,000.00	3,355,000
03	Allowance for attenuation ponds	1	item	690,000.00	690,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	96,720	m3	51.00	4,932,720
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	350,327	m2	26.00	9,108,502
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	350,535	m2	12.00	4,206,420
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	355,379	m2	9.40	3,340,563
	<u>Regulating Course</u>				
05	Regulating course	63.145	t	91.00	5,733
	<u>Tack Coat</u>				
06	Tack Coat	5,052	m2	0.50	2,526
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	4,844	m2	1.60	7,750

A10 Options Estimate
A10 Dualling Route D

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
08	Milling pavement 100mm deep	208	m2	2.30	478
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	15,231	m	18.00	274,158
02	Precast concrete drainage channel system laid straight or curved	2,808	m	45.00	126,360
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	59,104	m2	45.00	2,659,680
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to junction with Butt Lane/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
02	Allowance for drainage to new junction with link to existing A10 and Waterbeach (1 no left turn junction)	1	item	30,000.00	30,000
03	Allowance for drainage to new junction with link to existing A10 and Waterbeach (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with Wilburton Road east & west / proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
05	Allowance for drainage to A142 Witchford Road Roundabout (5 arm roundabout)	1	item	98,600.00	98,600
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to junction with Butt Lane/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
02	Allowance for pavement works to new junction with link to existing A10 and Waterbeach (1 no left turn junction)	1	item	104,000.00	104,000
03	Allowance for pavement works to new junction with link to existing A10 and Waterbeach (1 no left turn junction)	1	item	104,000.00	104,000

A10 Options Estimate
A10 Dualling Route D

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
04	Allowance for pavement works to junction with Wilburton Road east & west / proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
05	Allowance for pavement works to A142 Witchford Road Roundabout (5 arm roundabout)	1	item	282,300.00	282,300
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	Allowance for kerbs, footways and paved areas to junction with Butt Lane/ existing A10 north/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
02	Allowance for kerbs, footways and paved areas to new junction with link to existing A10 and Waterbeach (1no left turn junction)	1	item	5,750.00	5,750
03	Allowance for kerbs, footways and paved areas to new junction with link to existing A10 and Waterbeach (1no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with Wilburton Road east & west / proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
05	Allowance for kerbs, footways and paved areas to A142 Witchford Road Roundabout (5 arm roundabout)	1	item	163,500.00	163,500
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	355,379	m2	2.50	888,448
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	355,379	m2	1.50	533,069
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	89	no	2,500.00	222,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	89	no	1,500.00	133,500
02	Allowance for electrical work for traffic signs	1	item	30,000.00	30,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
02.06	Landscape and Ecology				
02.06.3000	3000 Landscape and Ecology				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	135,353	m2	2.20	297,777
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	135,353	m2	1.00	135,353
	<u>Planting</u>				
03	Allowance for general planting	1	item	2,000,000.00	2,000,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	104,000.00	520,000
	Roadworks Subtotal				55,438,635
Structures (Bridges, Viaducts, etc.)					
03.01	<u>Proposed Cottenham Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Cottenham Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.02	<u>Proposed Long Drove (S) Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Long Drove (near Two Bit Farm) over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.03	<u>Proposed Long Drove (N) Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Long Drove (near The Old Twentypence Inn) over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.04	<u>Proposed Bridge over River Great Ouse</u>				
01	Allowance for new steel composite road bridge over the River Great Ouse. (30m long x 23m wide)	1	item	3,795,000.00	3,795,000
03.05	<u>Proposed Broad Baulk Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Broad Baulk over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
03.06	<u>Proposed Red Fen Road over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Red Fen Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
	Structures (Bridges, Viaducts, etc.) Subtotal				12,870,000
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	68,308,635.00	683,086

A10 Options Estimate
A10 Dualling Route D

Ref	Description	Quantity	Unit	Rate	Total
Miscellaneous					<i>(Continued)</i>
02	Allowance for carbon – net zero	1	%	68,308,635.00	683,086
	Miscellaneous Subtotal				1,366,173
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	68,308,635.00	683,086
	Accommodation Works Subtotal				683,086
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	2.5	%	68,308,635.00	1,707,716
	Facilitating Works Subtotal				1,707,716
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	10,000,000.00	10,000,000
	Project / Design Team Fees Subtotal				10,000,000
Tender Inflation					
10.01	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	103,685,293.00	23,432,876
	Tender Inflation Subtotal				23,432,876
Construction Inflation					
11.01	<u>Construction Inflation</u>				
01	Allowance for construction inflation	5.5	%	127,118,169.00	6,991,499
	Construction Inflation Subtotal				6,991,499
Risk					
12.01	<u>Project Risk</u>				
01	Allowance for project risk	45	%	134,109,668.00	60,349,351
	Risk Subtotal				60,349,351
Optimism Bias					
13.01	<u>Optimism Bias</u>				
01	Allowance for optimism bias for roadworks	44	%	157,821,080.41	69,441,275
02	Allowance for optimism bias for structures	66	%	36,637,938.59	24,181,039
	Optimism Bias Subtotal				93,622,315
A10 Dualling Route D Total					288,081,334

A10 Options Estimate
A10 Dualling Route E

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	Preliminaries				
01	Allowance for preliminaries	30	%	58,803,922.00	17,641,177
	Preliminaries Subtotal				17,641,177
Roadworks					
02.01	Roadworks General				
02.01.200	200 Site Clearance				
	Site Clearance				
01	General Site Clearance	581,884	m2	1.00	581,884
	Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	116,961	m2	2.50	292,403
02.01.300	300 Fencing				
	Fencing				
01	Allowance for new fencing	39,992	m	50.00	1,999,600
02	Allowance for noise barriers	3,602	m	350.00	1,260,700
02.01.400	400 Road Restraint Systems (Vehicle and Pedestrian)				
01	Allowance for safety barrier designed to be impacted on one side only	7,998	m	78.00	623,844
02	Allowance for safety barrier designed to be impacted on both sides	19,996	m	150.00	2,999,400
02.01.600	600 Earthworks				
	Excavation				
01	Excavation of acceptable material Class 5A	69,738	m3	4.50	313,821
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	72,408	m3	3.50	253,428
03	Excavation of acceptable material excluding Class 5A in ditches	7,191	m3	3.50	25,169
04	Excavation of unacceptable material Class U1A in cutting and other excavation	31,032	m3	3.50	108,612
	Excavation in Hard Material				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	18,037	m3	13.00	234,481
	Deposition of Fill				
06	Deposition of acceptable material in embankments and other areas of fill	39,800	m3	6.50	258,700
	Disposal of Material				
07	Disposal of acceptable material excluding Class 5A	39,800	m3	21.00	835,800
08	Disposal of acceptable material Class 5A	26,996	m3	20.00	539,920
09	Disposal of unacceptable material Class U1A	31,032	m3	21.00	651,672

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	167,442	m3	28.00	4,688,376
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	207,242	m3	1.60	331,587
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	1,804	m3	25.00	45,100
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	1,804	m3	42.00	75,768
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	224,000.00	224,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	142,472	m2	3.00	427,416
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	314,953	m2	0.65	204,719
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	1,039,000.00	1,039,000
02	Allowance for flood relief culverts	1	item	2,172,500.00	2,172,500
03	Allowance for attenuation ponds	1	item	510,000.00	510,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	71,417	m3	51.00	3,642,267
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	254,965	m2	26.00	6,629,090
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	259,772	m2	12.00	3,117,264
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	371,926	m2	9.40	3,496,104
	<u>Regulating Course</u>				
05	Regulating course	1,462.008	t	91.00	133,042
	<u>Tack Coat</u>				
06	Tack Coat	116,961	m2	0.50	58,481
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	112,154	m2	1.60	179,446

A10 Options Estimate
A10 Dualling Route E

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
08	Milling pavement 100mm deep	4,807	m2	2.30	11,056
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	12,792	m	18.00	230,256
02	Precast concrete drainage channel system laid straight or curved	2,999	m	45.00	134,955
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	59,988	m2	45.00	2,699,460
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	75,000.00	75,000
02	Allowance for drainage to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	78,850.00	78,850
03	Allowance for drainage to Ely Road junction (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
05	Allowance for drainage to Denny End Road junction (3 arm signalised junction)	1	item	45,000.00	45,000
06	Allowance for drainage to Green End junction (1 no left turn junction)	1	item	30,000.00	30,000
07	Allowance for drainage to Cambridge Research Park junction (4 arm roundabout)	1	item	78,850.00	78,850
08	Allowance for drainage to Waste Treatment Site junction (3 arm roundabout)	1	item	63,850.00	63,850
09	Allowance for drainage to School Lane junction (1 no left turn junction)	1	item	30,000.00	30,000
10	Allowance for drainage to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850

A10 Options Estimate A10 Dualling Route E

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
11	Allowance for drainage to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
12	Allowance for drainage to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
13	Allowance for drainage to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	63,850.00	63,850
14	Allowance for drainage to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	78,850.00	78,850
15	Allowance for drainage to A142 Witchford Road Roundabout (4 arm roundabout)	1	item	78,850.00	78,850
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	138,700.00	138,700
02	Allowance for pavement works to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	225,850.00	225,850
03	Allowance for pavement works to Ely Road junction (1 no left turn junction)	1	item	104,000.00	104,000
04	Allowance for pavement works to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
05	Allowance for pavement works to Denny End Road junction (3 arm signalised junction)	1	item	104,000.00	104,000
06	Allowance for pavement works to Green End junction (1 no left turn junction)	1	item	104,000.00	104,000
07	Allowance for pavement works to Cambridge Research Park junction (4 arm roundabout)	1	item	225,850.00	225,850
08	Allowance for pavement works to Waste Treatment Site junction (3 arm roundabout)	1	item	191,200.00	191,200
09	Allowance for pavement works to School Lane junction (1 no left turn junction)	1	item	104,000.00	104,000
10	Allowance for pavement works to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
11	Allowance for pavement works to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
12	Allowance for pavement works to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
13	Allowance for pavement works to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	191,200.00	191,200
14	Allowance for pavement works to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	225,850.00	225,850
15	Allowance for pavement works to A142 Witchford Road Roundabout (4 arm roundabout)	1	item	225,850.00	225,850
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
01	Allowance for kerbs, footways and paved areas to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	14,000.00	14,000
02	Allowance for kerbs, footways and paved areas to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	107,250.00	107,250
03	Allowance for kerbs, footways and paved areas to Ely Road junction (1 no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
05	Allowance for kerbs, footways and paved areas to Denny End Road junction (3 arm signalised junction)	1	item	8,630.00	8,630
06	Allowance for kerbs, footways and paved areas to Green End junction (1 no left turn junction)	1	item	5,750.00	5,750
07	Allowance for kerbs, footways and paved areas to Cambridge Research Park junction (4 arm roundabout)	1	item	107,250.00	107,250
08	Allowance for kerbs, footways and paved areas to Waste Treatment Site junction (3 arm roundabout)	1	item	104,000.00	104,000
09	Allowance for kerbs, footways and paved areas to School Lane junction (1 no left turn junction)	1	item	5,750.00	5,750
10	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000
11	Allowance for kerbs, footways and paved areas to junction with existing A10 south/ Broad Baulk/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
12	Allowance for kerbs, footways and paved areas to junction with existing A10 north/ Red Fen Road/ proposed A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
13	Allowance for kerbs, footways and paved areas to junction with existing A10 south/ proposed A10 north & south (3 arm roundabout)	1	item	104,000.00	104,000
14	Allowance for kerbs, footways and paved areas to A142 Angel Drove Roundabout (4 arm roundabout)	1	item	107,250.00	107,250
15	Allowance for kerbs, footways and paved areas to A142 Witchford Road Roundabout (4 arm roundabout)	1	item	107,250.00	107,250
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	371,926	m2	2.50	929,815
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	371,926	m2	1.50	557,889
	<u>Traffic Signal Installations</u>				
03	Traffic signal installation to Butt Lane	1	item	67,500.00	67,500
04	Traffic signal installation to Denny End Road	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks					<i>(Continued)</i>
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	270	no	2,500.00	675,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	270	no	1,500.00	405,000
02	Allowance for electrical work for traffic signs	1	item	100,000.00	100,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	142,472	m2	2.20	313,438
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	142,472	m2	1.00	142,472
	<u>Planting</u>				
03	Allowance for general planting	1	item	2,100,000.00	2,100,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	111,000.00	555,000
	Roadworks Subtotal				51,708,315
Structures (Bridges, Viaducts, etc.)					
<u>03.01</u>	<u>Proposed Bridge over River Great Ouse</u>				
01	Allowance for new steel composite road bridge over the River Great Ouse. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
<u>03.02</u>	<u>Existing Bridge over River Great Ouse</u>				
01	Allowance for upgrading works to existing road bridge over the River Great Ouse.	1	item	400,000.00	400,000
<u>03.03</u>	<u>Proposed Wilburton Road Bridge over Proposed A10</u>				
01	Allowance for new steel composite road bridge for Wilburton Road over proposed A10. (30m long x 11m wide)	1	item	1,815,000.00	1,815,000
	Structures (Bridges, Viaducts, etc.) Subtotal				4,030,000

A10 Options Estimate
A10 Dualling Route E

Ref	Description	Quantity	Unit	Rate	Total
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	55,738,315.00	557,383
02	Allowance for carbon – net zero	1	%	55,738,315.00	557,383
	Miscellaneous Subtotal				1,114,766
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	55,738,315.00	557,383
	Accommodation Works Subtotal				557,383
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	2.5	%	55,738,315.00	1,393,458
	Facilitating Works Subtotal				1,393,458
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	10,000,000.00	10,000,000
	Project / Design Team Fees Subtotal				10,000,000
Tender Inflation					
10.01	Tender Inflation				
01	Allowance for tender inflation	22.6	%	86,445,099.00	19,536,592
	Tender Inflation Subtotal				19,536,592
Construction Inflation					
11.01	Construction Inflation				
01	Allowance for construction inflation	5.5	%	105,981,691.00	5,828,993
	Construction Inflation Subtotal				5,828,993
Risk					
12.01	Project Risk				
01	Allowance for project risk	45	%	111,810,684.00	50,314,808
	Risk Subtotal				50,314,808
Optimism Bias					
13.01	Optimism Bias				
01	Allowance for optimism bias for roadworks	44	%	150,403,470.39	66,177,527
02	Allowance for optimism bias for structures	66	%	11,722,021.61	7,736,534
	Optimism Bias Subtotal				73,914,061
A10 Dualling Route E Total					236,039,553

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	Preliminaries				
01	Allowance for preliminaries	30	%	22,945,514.00	6,883,654
	Preliminaries Subtotal				6,883,654
Roadworks (A10 Dualling)					
02.01	Roadworks General				
02.01.200	200 Site Clearance				
	Site Clearance				
01	General Site Clearance	195,028	m2	1.00	195,028
	Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of existing carriageway)	48,925	m2	2.50	122,313
02.01.300	300 Fencing				
	Fencing				
01	Allowance for new fencing	13,404	m	50.00	670,200
02	Allowance for noise barriers	1,340	m	350.00	469,000
02.01.400	400 Road Restraint Systems (Vehicle and Pedestrian)				
01	Allowance for safety barrier designed to be impacted on one side only	2,681	m	78.00	209,118
02	Allowance for safety barrier designed to be impacted on both sides	6,702	m	150.00	1,005,300
02.01.600	600 Earthworks				
	Excavation				
01	Excavation of acceptable material Class 5A	21,916	m3	4.50	98,622
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	21,648	m3	3.50	75,768
03	Excavation of acceptable material excluding Class 5A in ditches	2,011	m3	3.50	7,039
04	Excavation of unacceptable material Class U1A in cutting and other excavation	9,278	m3	3.50	32,473
	Excavation in Hard Material				
05	Extra over excavation for excavation in Hard Material in cutting and other excavation	5,485	m3	13.00	71,305
	Deposition of Fill				
06	Deposition of acceptable material in embankments and other areas of fill	11,830	m3	6.50	76,895
	Disposal of Material				
07	Disposal of acceptable material excluding Class 5A	11,830	m3	21.00	248,430
08	Disposal of acceptable material Class 5A	7,590	m3	20.00	151,800
09	Disposal of unacceptable material Class U1A	9,278	m3	21.00	194,838

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
	<u>Imported Fill</u>				
10	Imported acceptable material in embankments and other areas of fill	48,254	m3	28.00	1,351,112
11	Imported topsoil Class 5B	-	m3	27.00	-
	<u>Compaction of Fill</u>				
12	Compaction of acceptable material in embankments and other areas of fill	60,084	m3	1.60	96,134
	<u>Soft Spots and Other Voids</u>				
13	Excavation of soft spots and other voids below cuttings or under embankments	549	m3	25.00	13,725
14	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	549	m3	42.00	23,058
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
15	Allowance for removal of disused gullies and drains	1	item	94,000.00	94,000
	<u>Topsoiling and Storage of Topsoil</u>				
16	Topsoiling 300mm thick	47,752	m2	3.00	143,256
	<u>Completion of Formation and Sub-formation</u>				
17	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	95,839	m2	0.65	62,295
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for carriageway drainage	1	item	348,000.00	348,000
02	Allowance for flood relief culverts	1	item	605,000.00	605,000
03	Allowance for attenuation ponds	1	item	150,000.00	150,000
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	21,346	m3	51.00	1,088,646
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	75,733	m2	26.00	1,969,058
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	77,743	m2	12.00	932,916
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	124,657	m2	9.40	1,171,776
	<u>Regulating Course</u>				
05	Regulating course	611.558	t	91.00	55,692
	<u>Tack Coat</u>				
06	Tack Coat	48,925	m2	0.50	24,463
	<u>Cold Milling (planing)</u>				
07	Milling pavement 40mm deep	46,914	m2	1.60	75,062

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
08	Milling pavement 100mm deep	2,011	m2	2.30	4,625
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	4,021	m	18.00	72,378
02	Precast concrete drainage channel system laid straight or curved	1,005	m	45.00	45,225
	<u>Footways and Paved Areas</u>				
03	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	20,106	m2	45.00	904,770
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for drainage to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	75,000.00	75,000
02	Allowance for drainage to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	78,850.00	78,850
03	Allowance for drainage to Ely Road junction (1 no left turn junction)	1	item	30,000.00	30,000
04	Allowance for drainage to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	78,850.00	78,850
05	Allowance for drainage to Denny End Road junction (3 arm signalised junction)	1	item	45,000.00	45,000
06	Allowance for drainage to Green End junction (1 no left turn junction)	1	item	30,000.00	30,000
07	Allowance for drainage to Cambridge Research Park junction (4 arm roundabout)	1	item	78,850.00	78,850
<u>02.04.700</u>	<u>700 Pavements</u>				
01	Allowance for pavement works to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	138,700.00	138,700
02	Allowance for pavement works to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	225,850.00	225,850

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
03	Allowance for pavement works to Ely Road junction (1 no left turn junction)	1	item	104,000.00	104,000
04	Allowance for pavement works to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	225,850.00	225,850
05	Allowance for pavement works to Denny End Road junction (3 arm signalised junction)	1	item	104,000.00	104,000
06	Allowance for pavement works to Green End junction (1 no left turn junction)	1	item	104,000.00	104,000
07	Allowance for pavement works to Cambridge Research Park junction (4 arm roundabout)	1	item	225,850.00	225,850
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	Allowance for kerbs, footways and paved areas to Butt Lane junction (1 no left turn junction, 1 no 3 arm signalised junction)	1	item	14,000.00	14,000
02	Allowance for kerbs, footways and paved areas to junction with Landbeach Road north & south/ existing A10 east & west (4 arm roundabout)	1	item	107,250.00	107,250
03	Allowance for kerbs, footways and paved areas to Ely Road junction (1 no left turn junction)	1	item	5,750.00	5,750
04	Allowance for kerbs, footways and paved areas to junction with Car Dyke Road/ Waterbeach Road/ existing A10 north & south (4 arm roundabout)	1	item	107,250.00	107,250
05	Allowance for kerbs, footways and paved areas to Denny End Road junction (3 arm signalised junction)	1	item	8,630.00	8,630
06	Allowance for kerbs, footways and paved areas to Green End junction (1 no left turn junction)	1	item	5,750.00	5,750
07	Allowance for kerbs, footways and paved areas to Cambridge Research Park junction (4 arm roundabout)	1	item	107,250.00	107,250
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	124,657	m2	2.50	311,643
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	124,657	m2	1.50	186,986
	<u>Traffic Signal Installations</u>				
03	Traffic signal installation to Butt Lane	1	item	67,500.00	67,500
04	Traffic signal installation to Denny End Road	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	135	no	2,500.00	337,500

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A10 Dualling)					<i>(Continued)</i>
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	135	no	1,500.00	202,500
02	Allowance for electrical work for traffic signs	1	item	50,000.00	50,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	47,752	m2	2.20	105,054
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	47,752	m2	1.00	47,752
	<u>Planting</u>				
03	Allowance for general planting	1	item	700,000.00	700,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	37,000.00	185,000
	Roadworks (A10 Dualling) Subtotal				17,021,434
Roadworks (Waste Treatment Site Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	16,038	m2	1.00	16,038
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	5,971	m2	2.50	14,928
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,187	m	50.00	59,350
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
01	Excavation of acceptable material Class 5A	1,462	m3	4.50	6,579
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	20	m3	3.50	70
03	Excavation of unacceptable material Class U1A in cutting and other excavation	9	m3	3.50	32
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	104	m3	13.00	1,352
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	10	m3	6.50	65
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	10	m3	21.00	210
07	Disposal of acceptable material Class 5A	1,462	m3	20.00	29,240
08	Disposal of unacceptable material Class U1A	9	m3	21.00	189
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	8	m3	28.00	224
10	Imported topsoil Class 5B	1,441	m3	27.00	38,907
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	18	m3	1.60	29
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	15	m3	25.00	375
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	15	m3	42.00	630
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	2,000.00	2,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	9,605	m2	3.00	28,815
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	506	m2	0.65	329
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	45	m2	25.00	1,125
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	17	m3	51.00	867

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	45	m2	26.00	1,170
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	59	m2	12.00	708
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	5,971	m2	9.40	56,127
	<u>Tack Coat</u>				
05	Tack Coat	5,926	m2	0.50	2,963
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	5,912	m2	1.60	9,459
07	Milling pavement 100mm deep	14	m2	2.30	32
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,187	m	18.00	21,366
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	462	m2	45.00	20,790
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
02.05	Signs, Motorway Communications and Lighting				
02.05.1200	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	5,971	m2	2.50	14,928
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	5,971	m2	1.50	8,957
02.05.1300	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	30	no	2,500.00	75,000
02.05.1400	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	30	no	1,500.00	45,000
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
02.05.1500	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
02.06.3000	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,605	m2	2.20	21,131
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	9,605	m2	1.00	9,605
	<u>Planting</u>				
03	Allowance for general planting	1	item	144,000.00	144,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
	Roadworks (Waste Treatment Site Junction) Subtotal				673,589
Roadworks (A1123 Stretham Roundabout)					
02.01	Roadworks General				
02.01.200	<u>200 Site Clearance</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
	<u>Site Clearance</u>				
01	General Site Clearance	22,185	m2	1.00	22,185
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	11,940	m2	2.50	29,850
03	Allowance for demolition of domestic property of masonry construction with pitched roof	2	no	50,000.00	100,000
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	2,336	m	50.00	116,800
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	2,205	m3	4.50	9,923
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	2,532	m3	3.50	8,862
03	Excavation of unacceptable material Class U1A in cutting and other excavation	1,085	m3	3.50	3,798
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	962	m3	13.00	12,506
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	1,266	m3	6.50	8,229
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	1,266	m3	21.00	26,586
07	Disposal of acceptable material Class 5A	2,205	m3	20.00	44,100
08	Disposal of unacceptable material Class U1A	1,085	m3	21.00	22,785
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	1,859	m3	28.00	52,052
10	Imported topsoil Class 5B	1,920	m3	27.00	51,840
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	3,125	m3	1.60	5,000
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	58	m3	25.00	1,450
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	58	m3	42.00	2,436

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	12,000.00	12,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	9,899	m2	3.00	29,697
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	8,158	m2	0.65	5,303
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	7,811	m2	25.00	195,275
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	1,995	m3	51.00	101,745
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	7,811	m2	26.00	203,086
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	7,917	m2	12.00	95,004
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	11,940	m2	9.40	112,236
	<u>Tack Coat</u>				
05	Tack Coat	4,128	m2	0.50	2,064
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	4,023	m2	1.60	6,437
07	Milling pavement 100mm deep	105	m2	2.30	242
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	2,336	m	18.00	42,048
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	346	m2	45.00	15,570
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	11,940	m2	2.50	29,850
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	11,940	m2	1.50	17,910
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	58	no	2,500.00	145,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance electrical work for road lighting	58	no	1,500.00	87,000
02	Allowance for electrical work for traffic signs	1	item	22,000.00	22,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,899	m2	2.20	21,778
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	9,899	m2	1.00	9,899
	<u>Planting</u>				
03	Allowance for general planting	1	item	148,000.00	148,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
	Roadworks (A1123 Stretham Roundabout) Subtotal				1,850,544
Roadworks (A142 Angel Drove Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	23,661	m2	1.00	23,661
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	9,371	m2	2.50	23,428
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,689	m	50.00	84,450
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,996	m3	4.50	8,982
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	262	m3	3.50	917
03	Excavation of unacceptable material Class U1A in cutting and other excavation	112	m3	3.50	392
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	260	m3	13.00	3,380
	<u>Deposition of Fill</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
05	Deposition of acceptable material in embankments and other areas of fill <u>Disposal of Material</u>	131	m3	6.50	852
06	Disposal of acceptable material excluding Class 5A	131	m3	21.00	2,751
07	Disposal of acceptable material Class 5A	1,996	m3	20.00	39,920
08	Disposal of unacceptable material Class U1A <u>Imported Fill</u>	112	m3	21.00	2,352
09	Imported acceptable material in embankments and other areas of fill	184	m3	28.00	5,152
10	Imported topsoil Class 5B <u>Compaction of Fill</u>	1,878	m3	27.00	50,706
11	Compaction of acceptable material in embankments and other areas of fill <u>Soft Spots and Other Voids</u>	315	m3	1.60	504
12	Excavation of soft spots and other voids below cuttings or under embankments	24	m3	25.00	600
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material <u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>	24	m3	42.00	1,008
14	Allowance for removal of disused gullies and drains <u>Topsoiling and Storage of Topsoil</u>	1	item	6,000.00	6,000
15	Topsoiling 300mm thick <u>Completion of Formation and Sub-formation</u>	12,517	m2	3.00	37,551
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	2,560	m2	0.65	1,664
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	787	m2	25.00	19,675
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip <u>Pavement</u>	219	m3	51.00	11,169
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	787	m2	26.00	20,462
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	842	m2	12.00	10,104
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip <u>Tack Coat</u>	9,371	m2	9.40	88,087
05	Tack Coat	8,584	m2	0.50	4,292

A10 Options Estimate
A10 Dualling Route F

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	8,529	m2	1.60	13,646
07	Milling pavement 100mm deep	55	m2	2.30	127
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,689	m	18.00	30,402
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	1,773	m2	45.00	79,785
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	9,371	m2	2.50	23,428
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	9,371	m2	1.50	14,057

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	42	no	2,500.00	105,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	42	no	1,500.00	63,000
02	Allowance for electrical work for traffic signs	1	item	16,000.00	16,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	12,517	m2	2.20	27,537
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	12,517	m2	1.00	12,517
	<u>Planting</u>				
03	Allowance for general planting	1	item	188,000.00	188,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	8,000.00	40,000
	Roadworks (A142 Angel Drove Junction) Subtotal				1,061,556
Roadworks (A142 Witchford Road Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	14,206	m2	1.00	14,206
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	6,801	m2	2.50	17,003
<u>02.01.300</u>	<u>300 Fencing</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
	<u>Fencing</u>				
01	Allowance for new fencing	1,147	m	50.00	57,350
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,027	m3	4.50	4,622
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	132	m3	3.50	462
03	Excavation of unacceptable material Class U1A in cutting and other excavation	57	m3	3.50	200
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	140	m3	13.00	1,820
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	66	m3	6.50	429
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	66	m3	21.00	1,386
07	Disposal of acceptable material Class 5A	1,027	m3	20.00	20,540
08	Disposal of unacceptable material Class U1A	57	m3	21.00	1,197
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	108	m3	28.00	3,024
10	Imported topsoil Class 5B	1,087	m3	27.00	29,349
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	174	m3	1.60	278
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	12	m3	25.00	300
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	12	m3	42.00	504
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	8,000.00	8,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	6,851	m2	3.00	20,553
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	989	m2	0.65	643

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	434	m2	25.00	10,850
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	135	m3	51.00	6,885
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	434	m2	26.00	11,284
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	499	m2	12.00	5,988
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	6,801	m2	9.40	63,929
	<u>Tack Coat</u>				
05	Tack Coat	6,367	m2	0.50	3,184
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	6,302	m2	1.60	10,083
07	Milling pavement 100mm deep	65	m2	2.30	150
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,147	m	18.00	20,646
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	555	m2	45.00	24,975
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	6,801	m2	2.50	17,003
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	6,801	m2	1.50	10,202
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	29	no	2,500.00	72,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	29	no	1,500.00	43,500
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	6,851	m2	2.20	15,072
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	6,851	m2	1.00	6,851
	<u>Planting</u>				
03	Allowance for general planting	1	item	102,759.00	102,759

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
04	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
	Allowance for grassed areas and planted trees and shrubs	5	yrs	4,000.00	20,000
	Roadworks (A142 Witchford Road Junction) Subtotal				638,724
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	21,245,847.00	212,458
02	Allowance for carbon – net zero	1	%	21,245,847.00	212,458
	Miscellaneous Subtotal				424,917
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	21,245,847.00	212,458
	Accommodation Works Subtotal				212,458
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	5.0	%	21,245,847.00	1,062,292
	Facilitating Works Subtotal				1,062,292
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	5,000,000.00	5,000,000
	Project / Design Team Fees Subtotal				5,000,000
Tender Inflation					
10.01	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	34,829,168.00	7,871,392
	Tender Inflation Subtotal				7,871,392
Construction Inflation					
11.01	<u>Construction Inflation</u>				
01	Allowance for construction inflation	2.7	%	42,700,560.00	1,152,915
	Construction Inflation Subtotal				1,152,915
Risk					
12.01	<u>Project Risk</u>				
01	Allowance for project risk	45	%	43,853,475.00	19,734,064
	Risk Subtotal				19,734,064
Optimism Bias					
13.01	<u>Optimism Bias</u>				
01	Allowance for optimism bias for roadworks	44	%	63,587,539.00	27,978,517
02	Allowance for optimism bias for structures	66	%	–	–

Ref	Description	Quantity	Unit	Rate	Total
Optimism Bias					(Continued)
	Optimism Bias Subtotal				27,978,517
A10 Dualling Route F Total					91,566,056

Ref	Description	Quantity	Unit	Rate	Total
Preliminaries					
01.01	Preliminaries				
01.01.100	Preliminaries				
01	Allowance for preliminaries	30	%	7,967,487.00	2,390,246
	Preliminaries Subtotal				2,390,246
Roadworks (Butt Lane/ Park & Ride Junction)					
02.01	Roadworks General				
02.01.200	200 Site Clearance				
	Site Clearance				
01	General Site Clearance	13,756	m2	1.00	13,756
	Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	8,271	m2	2.50	20,678
02.01.300	300 Fencing				
	Fencing				
01	Allowance for new fencing	1,246	m	50.00	62,300
02.01.400	400 Road Restraint Systems (Vehicle and Pedestrian)				
01	None				
02.01.600	600 Earthworks				
	Excavation				
01	Excavation of acceptable material Class 5A	938	m3	4.50	4,221
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	341	m3	3.50	1,194
03	Excavation of unacceptable material Class U1A in cutting and other excavation	146	m3	3.50	511
	Excavation in Hard Material				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	100	m3	13.00	1,300
	Deposition of Fill				
05	Deposition of acceptable material in embankments and other areas of fill	171	m3	6.50	1,105
	Disposal of Material				
06	Disposal of acceptable material excluding Class 5A	171	m3	21.00	3,570
07	Disposal of acceptable material Class 5A	938	m3	20.00	18,760
08	Disposal of unacceptable material Class U1A	146	m3	21.00	3,066
	Imported Fill				
09	Imported acceptable material in embankments and other areas of fill	272	m3	28.00	7,616
10	Imported topsoil Class 5B	833	m3	27.00	22,491
	Compaction of Fill				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Butt Lane/ Park & Ride Junction)					<i>(Continued)</i>
11	Compaction of acceptable material in embankments and other areas of fill <u>Soft Spots and Other Voids</u>	443	m3	1.60	707
12	Excavation of soft spots and other voids below cuttings or under embankments	14	m3	25.00	350
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material <u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>	14	m3	42.00	588
14	Allowance for removal of disused gullies and drains <u>Topsoiling and Storage of Topsoil</u>	1	item	20,000.00	20,000
15	Topsoiling 300mm thick <u>Completion of Formation and Sub-formation</u>	5,388	m2	3.00	16,164
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	1,204	m2	0.65	783
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	1,107	m2	25.00	27,675
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip <u>Pavement</u>	344	m3	51.00	17,544
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	1,107	m2	26.00	28,782
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	1,274	m2	12.00	15,288
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip <u>Tack Coat</u>	8,271	m2	9.40	77,747
05	Tack Coat <u>Cold Milling (planing)</u>	7,163	m2	0.50	3,582
06	Milling pavement 40mm deep	6,996	m2	1.60	11,194
07	Milling pavement 100mm deep	167	m2	2.30	384
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved <u>Footways and Paved Areas</u>	1,246	m	18.00	22,428

A10 Options Estimate
A10 Dualling Route G

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Butt Lane/ Park & Ride Junction)					<i>(Continued)</i>
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	97	m2	45.00	4,365
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	8,271	m2	2.50	20,678
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	8,271	m2	1.50	12,407
	<u>Traffic Signal Installation</u>				
03	Traffic signal installation at Park and Ride	1	item	67,500.00	67,500
04	Traffic signal installation at Butt lane	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	31	no	2,500.00	77,500

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Butt Lane/ Park & Ride Junction)					<i>(Continued)</i>
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	31	no	1,500.00	46,500
02	Allowance for electrical work for traffic signs	1	item	12,000.00	12,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	5,388	m2	2.20	11,854
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	5,388	m2	1.00	5,388
	<u>Planting</u>				
03	Allowance for general planting	1	item	81,000.00	81,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	3,000.00	15,000
	Roadworks (Butt Lane/ Park & Ride Junction) Subtotal				825,473
Roadworks (Denny End Road Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	10,894	m2	1.00	10,894
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	7,130	m2	2.50	17,825
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,013	m	50.00	50,650
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Denny End Road Junction)					<i>(Continued)</i>
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	764	m3	4.50	3,438
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	613	m3	3.50	2,146
03	Excavation of unacceptable material Class U1A in cutting and other excavation	263	m3	3.50	921
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	156	m3	13.00	2,028
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	307	m3	6.50	1,989
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	307	m3	21.00	6,426
07	Disposal of acceptable material Class 5A	764	m3	20.00	15,280
08	Disposal of unacceptable material Class U1A	263	m3	21.00	5,523
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	539	m3	28.00	15,092
10	Imported topsoil Class 5B	452	m3	27.00	12,204
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	846	m3	1.60	1,354
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	16	m3	25.00	400
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	16	m3	42.00	672
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	22,000.00	22,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	3,015	m2	3.00	9,045
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	2,863	m2	0.65	1,861
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	2,114	m2	25.00	52,850
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Denny End Road Junction)					<i>(Continued)</i>
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip <u>Pavement</u>	604	m3	51.00	30,804
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	2,114	m2	26.00	54,964
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	2,303	m2	12.00	27,636
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip <u>Tack Coat</u>	7,130	m2	9.40	67,022
05	Tack Coat <u>Cold Milling (planing)</u>	5,015	m2	0.50	2,508
06	Milling pavement 40mm deep	4,827	m2	1.60	7,723
07	Milling pavement 100mm deep	188	m2	2.30	432
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u> <u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved <u>Footways and Paved Areas</u>	1,013	m	18.00	18,234
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	749	m2	45.00	33,705
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Denny End Road Junction)					<i>(Continued)</i>
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	7,130	m2	2.50	17,825
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	7,130	m2	1.50	10,695
	<u>Traffic Signal Installation</u>				
03	Traffic signal installation at Denny End Road	1	item	67,500.00	67,500
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	25	no	2,500.00	62,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	25	no	1,500.00	37,500
02	Allowance for electrical work for traffic signs	1	item	9,000.00	9,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	3,015	m2	2.20	6,633
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	3,015	m2	1.00	3,015
	<u>Planting</u>				
03	Allowance for general planting	1	item	45,000.00	45,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	2,000.00	10,000

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Denny End Road Junction)					<i>(Continued)</i>
	Roadworks (Denny End Road Junction) Subtotal				745,293
Roadworks (Cambridge Research Park Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	17,436	m2	1.00	17,436
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	9,097	m2	2.50	22,743
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,954	m	50.00	97,700
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,326	m3	4.50	5,967
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	446	m3	3.50	1,561
03	Excavation of unacceptable material Class U1A in cutting and other excavation	191	m3	3.50	669
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	258	m3	13.00	3,354
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	223	m3	6.50	1,450
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	223	m3	21.00	4,683
07	Disposal of acceptable material Class 5A	1,326	m3	20.00	26,520
08	Disposal of unacceptable material Class U1A	191	m3	21.00	4,011
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	388	m3	28.00	10,864
10	Imported topsoil Class 5B	1,262	m3	27.00	34,074
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	611	m3	1.60	978

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Cambridge Research Park Junction)					<i>(Continued)</i>
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	20	m3	25.00	500
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	20	m3	42.00	840
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	7,000.00	7,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	7,955	m2	3.00	23,865
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	1,911	m2	0.65	1,242
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	1,527	m2	25.00	38,175
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	407	m3	51.00	20,757
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	1,527	m2	26.00	39,702
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	1,591	m2	12.00	19,092
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	9,097	m2	9.40	85,512
	<u>Tack Coat</u>				
05	Tack Coat	7,569	m2	0.50	3,785
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	7,505	m2	1.60	12,008
07	Milling pavement 100mm deep	64	m2	2.30	147
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,954	m	18.00	35,172
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	384	m2	45.00	17,280

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Cambridge Research Park Junction)					<i>(Continued)</i>
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	9,097	m2	2.50	22,743
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	9,097	m2	1.50	13,646
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	49	no	2,500.00	122,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	49	no	1,500.00	73,500

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Cambridge Research Park Junction)					<i>(Continued)</i>
02	Allowance for electrical work for traffic signs	1	item	18,000.00	18,000
<u>02.05.1500</u>	<u>1 500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	7,955	m2	2.20	17,501
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	7,955	m2	1.00	7,955
	<u>Planting</u>				
03	Allowance for general planting	1	item	119,000	119,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	5,000.00	25,000
	Roadworks (Cambridge Research Park Junction) Subtotal				956,929
Roadworks (Waste Treatment Site Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	16,038	m2	1.00	16,038
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	5,971	m2	2.50	14,928
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,187	m	50.00	59,350
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,462	m3	4.50	6,579
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	20	m3	3.50	70

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
03	Excavation of unacceptable material Class U1A in cutting and other excavation <u>Excavation in Hard Material</u>	9	m3	3.50	32
04	Extra over excavation for excavation in Hard Material in cutting and other excavation <u>Deposition of Fill</u>	104	m3	13.00	1,352
05	Deposition of acceptable material in embankments and other areas of fill <u>Disposal of Material</u>	10	m3	6.50	65
06	Disposal of acceptable material excluding Class 5A	10	m3	21.00	210
07	Disposal of acceptable material Class 5A	1,462	m3	20.00	29,240
08	Disposal of unacceptable material Class U1A <u>Imported Fill</u>	9	m3	21.00	189
09	Imported acceptable material in embankments and other areas of fill	8	m3	28.00	224
10	Imported topsoil Class 5B <u>Compaction of Fill</u>	1,441	m3	27.00	38,907
11	Compaction of acceptable material in embankments and other areas of fill <u>Soft Spots and Other Voids</u>	18	m3	1.60	29
12	Excavation of soft spots and other voids below cuttings or under embankments	15	m3	25.00	375
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material <u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>	15	m3	42.00	630
14	Allowance for removal of disused gullies and drains <u>Topsoiling and Storage of Topsoil</u>	1	item	2,000.00	2,000
15	Topsoiling 300mm thick <u>Completion of Formation and Sub-formation</u>	9,605	m2	3.00	28,815
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	506	m2	0.65	329
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	45	m2	25.00	1,125
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip <u>Pavement</u>	17	m3	51.00	867
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	45	m2	26.00	1,170

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	59	m2	12.00	708
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	5,971	m2	9.40	56,127
	<u>Tack Coat</u>				
05	Tack Coat	5,926	m2	0.50	2,963
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	5,912	m2	1.60	9,459
07	Milling pavement 100mm deep	14	m2	2.30	32
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,187	m	18.00	21,366
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	462	m2	45.00	20,790
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (Waste Treatment Site Junction)					<i>(Continued)</i>
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	5,971	m2	2.50	14,928
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	5,971	m2	1.50	8,957
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	30	no	2,500.00	75,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	30	no	1,500.00	45,000
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,605	m2	2.20	21,131
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	9,605	m2	1.00	9,605
	<u>Planting</u>				
03	Allowance for general planting	1	item	144,000.00	144,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
	Roadworks (Waste Treatment Site Junction) Subtotal				673,589
Roadworks (A1123 Stretham Roundabout)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	22,185	m2	1.00	22,185

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	11,940	m2	2.50	29,850
03	Allowance for demolition of domestic property of masonry construction with pitched roof	2	no	50,000.00	100,000
<u>02.01.300 300 Fencing</u>					
	<u>Fencing</u>				
01	Allowance for new fencing	2,336	m	50.00	116,800
<u>02.01.400 400 Road Restraint Systems (Vehicle and Pedestrian)</u>					
01	None				
<u>02.01.600 600 Earthworks</u>					
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	2,205	m3	4.50	9,923
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	2,532	m3	3.50	8,862
03	Excavation of unacceptable material Class U1A in cutting and other excavation	1,085	m3	3.50	3,798
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	962	m3	13.00	12,506
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	1,266	m3	6.50	8,229
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	1,266	m3	21.00	26,586
07	Disposal of acceptable material Class 5A	2,205	m3	20.00	44,100
08	Disposal of unacceptable material Class U1A	1,085	m3	21.00	22,785
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	1,859	m3	28.00	52,052
10	Imported topsoil Class 5B	1,920	m3	27.00	51,840
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	3,125	m3	1.60	5,000
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	58	m3	25.00	1,450
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	58	m3	42.00	2,436

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	12,000.00	12,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	9,899	m2	3.00	29,697
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	8,158	m2	0.65	5,303
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	7,811	m2	25.00	195,275
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	1,995	m3	51.00	101,745
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	7,811	m2	26.00	203,086
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	7,917	m2	12.00	95,004
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	11,940	m2	9.40	112,236
	<u>Tack Coat</u>				
05	Tack Coat	4,128	m2	0.50	2,064
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	4,023	m2	1.60	6,437
07	Milling pavement 100mm deep	105	m2	2.30	242
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	2,336	m	18.00	42,048
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	346	m2	45.00	15,570
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	11,940	m2	2.50	29,850
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	11,940	m2	1.50	17,910
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	58	no	2,500.00	145,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance electrical work for road lighting	58	no	1,500.00	87,000
02	Allowance for electrical work for traffic signs	1	item	22,000.00	22,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A1123 Stretham Roundabout)					<i>(Continued)</i>
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	9,899	m2	2.20	21,778
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	9,899	m2	1.00	9,899
	<u>Planting</u>				
03	Allowance for general planting	1	item	148,000.00	148,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	6,000.00	30,000
	Roadworks (A1123 Stretham Roundabout) Subtotal				1,850,544
Roadworks (A142 Angel Drove Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	23,661	m2	1.00	23,661
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	9,371	m2	2.50	23,428
<u>02.01.300</u>	<u>300 Fencing</u>				
	<u>Fencing</u>				
01	Allowance for new fencing	1,689	m	50.00	84,450
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,996	m3	4.50	8,982
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	262	m3	3.50	917
03	Excavation of unacceptable material Class U1A in cutting and other excavation	112	m3	3.50	392
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	260	m3	13.00	3,380
	<u>Deposition of Fill</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
05	Deposition of acceptable material in embankments and other areas of fill <u>Disposal of Material</u>	131	m3	6.50	852
06	Disposal of acceptable material excluding Class 5A	131	m3	21.00	2,751
07	Disposal of acceptable material Class 5A	1,996	m3	20.00	39,920
08	Disposal of unacceptable material Class U1A <u>Imported Fill</u>	112	m3	21.00	2,352
09	Imported acceptable material in embankments and other areas of fill	184	m3	28.00	5,152
10	Imported topsoil Class 5B <u>Compaction of Fill</u>	1,878	m3	27.00	50,706
11	Compaction of acceptable material in embankments and other areas of fill <u>Soft Spots and Other Voids</u>	315	m3	1.60	504
12	Excavation of soft spots and other voids below cuttings or under embankments	24	m3	25.00	600
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material <u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>	24	m3	42.00	1,008
14	Allowance for removal of disused gullies and drains <u>Topsoiling and Storage of Topsoil</u>	1	item	6,000.00	6,000
15	Topsoiling 300mm thick <u>Completion of Formation and Sub-formation</u>	12,517	m2	3.00	37,551
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	2,560	m2	0.65	1,664
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	787	m2	25.00	19,675
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip <u>Pavement</u>	219	m3	51.00	11,169
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	787	m2	26.00	20,462
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	842	m2	12.00	10,104
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip <u>Tack Coat</u>	9,371	m2	9.40	88,087
05	Tack Coat	8,584	m2	0.50	4,292

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	8,529	m2	1.60	13,646
07	Milling pavement 100mm deep	55	m2	2.30	127
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,689	m	18.00	30,402
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	1,773	m2	45.00	79,785
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	9,371	m2	2.50	23,428
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	9,371	m2	1.50	14,057

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Angel Drove Junction)					<i>(Continued)</i>
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	42	no	2,500.00	105,000
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	42	no	1,500.00	63,000
02	Allowance for electrical work for traffic signs	1	item	16,000.00	16,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	12,517	m2	2.20	27,537
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	12,517	m2	1.00	12,517
	<u>Planting</u>				
03	Allowance for general planting	1	item	188,000.00	188,000
	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
04	Allowance for grassed areas and planted trees and shrubs	5	yrs	8,000.00	40,000
	Roadworks (A142 Angel Drove Junction) Subtotal				1,061,556
Roadworks (A142 Witchford Road Junction)					
02.01	Roadworks General				
<u>02.01.200</u>	<u>200 Site Clearance</u>				
	<u>Site Clearance</u>				
01	General Site Clearance	14,206	m2	1.00	14,206
	<u>Take Up or Down and Set Aside for Re-Use or Remove to Store or Tip off Site</u>				
02	Allowance for taking up or down sundry items and remove to tip off site / store (based on area of carriageway)	6,801	m2	2.50	17,003
<u>02.01.300</u>	<u>300 Fencing</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
	<u>Fencing</u>				
01	Allowance for new fencing	1,147	m	50.00	57,350
<u>02.01.400</u>	<u>400 Road Restraint Systems (Vehicle and Pedestrian)</u>				
01	None				
<u>02.01.600</u>	<u>600 Earthworks</u>				
	<u>Excavation</u>				
01	Excavation of acceptable material Class 5A	1,027	m3	4.50	4,622
02	Excavation of acceptable material excluding Class 5A in cutting and other excavation	132	m3	3.50	462
03	Excavation of unacceptable material Class U1A in cutting and other excavation	57	m3	3.50	200
	<u>Excavation in Hard Material</u>				
04	Extra over excavation for excavation in Hard Material in cutting and other excavation	140	m3	13.00	1,820
	<u>Deposition of Fill</u>				
05	Deposition of acceptable material in embankments and other areas of fill	66	m3	6.50	429
	<u>Disposal of Material</u>				
06	Disposal of acceptable material excluding Class 5A	66	m3	21.00	1,386
07	Disposal of acceptable material Class 5A	1,027	m3	20.00	20,540
08	Disposal of unacceptable material Class U1A	57	m3	21.00	1,197
	<u>Imported Fill</u>				
09	Imported acceptable material in embankments and other areas of fill	108	m3	28.00	3,024
10	Imported topsoil Class 5B	1,087	m3	27.00	29,349
	<u>Compaction of Fill</u>				
11	Compaction of acceptable material in embankments and other areas of fill	174	m3	1.60	278
	<u>Soft Spots and Other Voids</u>				
12	Excavation of soft spots and other voids below cuttings or under embankments	12	m3	25.00	300
13	Filling of soft spots and other voids below cuttings or under embankments with acceptable material	12	m3	42.00	504
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-Formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
14	Allowance for removal of disused gullies and drains	1	item	8,000.00	8,000
	<u>Topsoiling and Storage of Topsoil</u>				
15	Topsoiling 300mm thick	6,851	m2	3.00	20,553
	<u>Completion of Formation and Sub-formation</u>				
16	Completion of sub-formation on material other than Class 1C, 6B or rock in cuttings	989	m2	0.65	643

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
02.02	Main Carriageway				
<u>02.02.500</u>	<u>500 Drainage and Service Ducts</u>				
01	Allowance for Drainage based on area of new carriageway	434	m2	25.00	10,850
<u>02.02.700</u>	<u>700 Pavements</u>				
	<u>Sub-base</u>				
01	Type 1 unbound mixture sub-base in carriageway, hardshoulder and hardstrip	135	m3	51.00	6,885
	<u>Pavement</u>				
02	Dense asphalt concrete 32 base 150mm thick in carriageway, hardshoulder and hardstrip	434	m2	26.00	11,284
03	Dense asphalt concrete 20 binder course 60mm thick in carriageway, hardshoulder and hardstrip	499	m2	12.00	5,988
04	Stone mastic asphalt 10 surface course 40mm thick in carriageway, hardshoulder and hardstrip	6,801	m2	9.40	63,929
	<u>Tack Coat</u>				
05	Tack Coat	6,367	m2	0.50	3,184
	<u>Cold Milling (planing)</u>				
06	Milling pavement 40mm deep	6,302	m2	1.60	10,083
07	Milling pavement 100mm deep	65	m2	2.30	150
<u>02.02.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
01	Precast concrete kerb laid straight or curved	1,147	m	18.00	20,646
	<u>Footways and Paved Areas</u>				
02	Footway comprising type 1 unbound mixture sub-base 150mm thick AC20 binder course 60mm thick AC6 surface course 20mm thick	555	m2	45.00	24,975
02.03	Interchanges				
<u>02.03.500</u>	<u>500 Drainage and Service Ducts</u>				
01	None				
<u>02.03.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.03.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.04	Side Roads				
<u>02.04.500</u>	<u>500 Drainage and Service Ducts</u>				

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
01	None				
<u>02.04.700</u>	<u>700 Pavements</u>				
01	None				
<u>02.04.1100</u>	<u>1100 Kerbs, Footways and Paved Areas</u>				
01	None				
02.05	Signs, Motorway Communications and Lighting				
<u>02.05.1200</u>	<u>1200 Traffic Signs and Road Markings</u>				
	<u>Traffic Signs</u>				
01	Allowance for traffic signs based on area of carriageway	6,801	m2	2.50	17,003
	<u>Road Markings</u>				
02	Allowance for road markings based on area of carriageway	6,801	m2	1.50	10,202
<u>02.05.1300</u>	<u>1300 Road Lighting Columns</u>				
	<u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u>				
01	Allowance for road lighting column of 10 m nominal height with planted base and with single bracket arm having a projection of 0.5 m with a luminaire unit incorporating an URBIS AMPERA MIDI 5119 48LED 500mA NW 9.63klm with 7 pin NEMA and Lucy Zodion cell luminaires	29	no	2,500.00	72,500
<u>02.05.1400</u>	<u>1400 Electrical Works for Road Lighting and Traffic Signs</u>				
	<u>Electrical Works for Road Lighting</u>				
01	Allowance for electrical work for road lighting	29	no	1,500.00	43,500
02	Allowance for electrical work for traffic signs	1	item	11,000.00	11,000
<u>02.05.1500</u>	<u>1500 Motorway Communications</u>				
01	None				
02.06	Landscape and Ecology				
<u>02.06.3000</u>	<u>3000 Landscape and Ecology</u>				
	<u>Ground Preparation and Cultivation</u>				
01	Ground Preparation and Cultivation	6,851	m2	2.20	15,072
	<u>Seeding and Turfing</u>				
02	Amenity grass seeding	6,851	m2	1.00	6,851
	<u>Planting</u>				
03	Allowance for general planting	1	item	102,759.00	102,759

Ref	Description	Quantity	Unit	Rate	Total
Roadworks (A142 Witchford Road Junction)					<i>(Continued)</i>
04	<u>Maintenance of Grassed Areas and Planted Trees and Shrubs</u>				
	Allowance for grassed areas and planted trees and shrubs	5	yrs	4,000.00	20,000
	Roadworks (A142 Witchford Road Junction) Subtotal				638,724
Miscellaneous					
05.01	Environmental Mitigation Works				
01	Allowance for environmental mitigation works	1	%	6,752,108.00	67,521
02	Allowance for carbon – net zero	1	%	6,752,108.00	67,521
	Miscellaneous Subtotal				135,042
Accommodation Works					
06.01	Accommodation Works				
01	Allowance for accommodation works	1	%	6,752,108.00	67,521
	Accommodation Works Subtotal				67,521
Facilitating Works					
07.01	Works for Statutory Undertakers				
01	Allowance for works for statutory undertakers	15.0	%	6,752,108.00	1,012,816
	Facilitating Works Subtotal				1,012,816
Project / Design Team Fees					
08.01	Design Team Fees				
01	Allowance for project design team fees	1	item	2,000,000.00	2,000,000
	Project / Design Team Fees Subtotal				2,000,000
Tender Inflation					
10.01	<u>Tender Inflation</u>				
01	Allowance for tender inflation	22.6	%	12,357,733.00	2,792,848
	Tender Inflation Subtotal				2,792,848
Construction Inflation					
11.01	<u>Construction Inflation</u>				
01	Allowance for construction inflation	2.7	%	15,150,581.00	409,066
	Construction Inflation Subtotal				409,066
Risk					
12.01	<u>Project Risk</u>				
01	Allowance for project risk	45	%	15,559,647.00	7,001,841
	Risk Subtotal				7,001,841
Optimism Bias					
13.01	<u>Optimism Bias</u>				
01	Allowance for optimism bias for roadworks	44	%	22,561,488.00	9,927,055
02	Allowance for optimism bias for structures	66	%	–	–

Ref	Description	Quantity	Unit	Rate	Total
Optimism Bias					(Continued)
	Optimism Bias Subtotal				9,927,055
A10 Dualling Route G Total					32,488,543