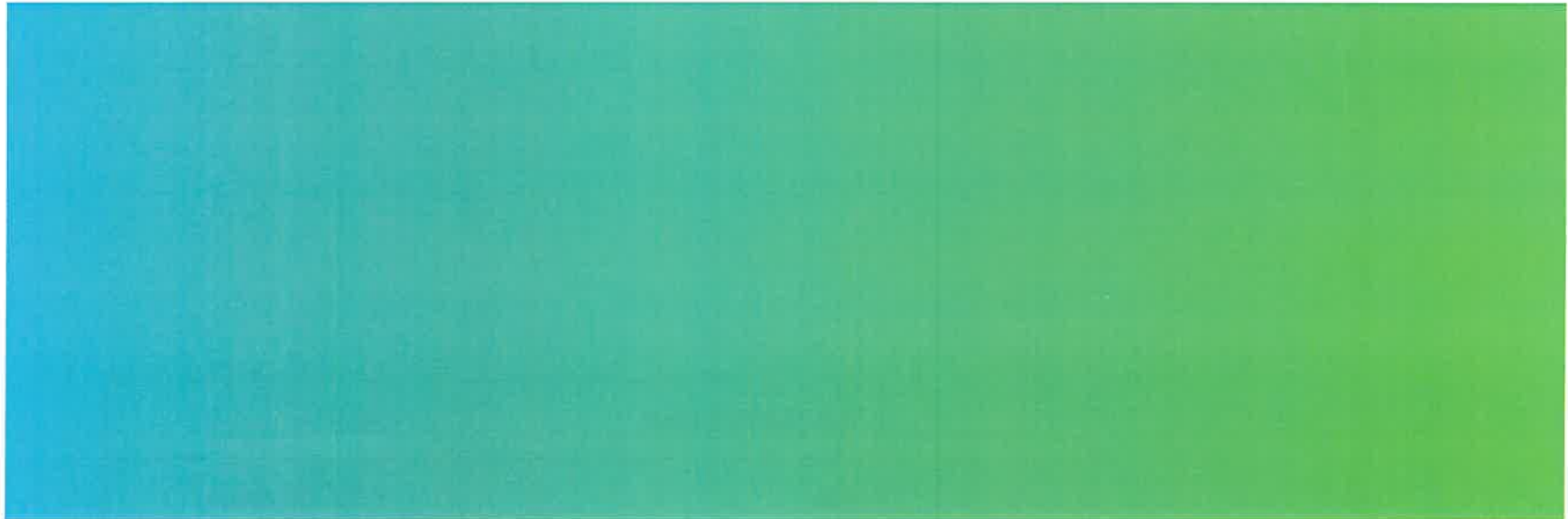



South East Maidstone Urban Expansion Cost Option Revised Route | 14 June 2012



Document Issue Sheet

Issue Nr.	Document	File Path	Issue Date	Parties Sent To	Prepared By	Checked By	Reviewed By
01	Cost Option		14/06/2012	Client	Alan Cobb	Alan Cobb	Derek Vernon

Authorised by (Director)	
Date	14/06/2012.

CONTENTS	Page Nr
1.0 Executive Summary	1
2.0 Basis and Assumptions	2
3.0 Exclusions and Risks	3
4.0 Cost Summaries	
4.1 Cost Comparison Single Carriageway	5
4.2 Cost Comparison Dual Carriageway	6
5.0 Cost Build-Ups (Single Carriageway) Old and New Routes	7
6.0 Cost Build-Ups (Dual Carriageway) Old and New Routes	17
7.0 Risk Register	27
8.0 Inflation Forecast	28
9.0 Project Experience	29
Appendix A - Plan of Proposed New Route	

1.0 EXECUTIVE SUMMARY

The purpose of this Cost Option is to provide a comparison headline figure for a proposed alternative route of the spine road to serve a new Development to the South-East of Maidstone, Kent. The alternative route has been moved eastwards to utilise the existing B2163 (Penfold Hill) at the northern end before cutting back westwards to meet the previous proposed route in zone B. This Cost Option considers 2 options as follows:-

Option 1 - Single Carriageway Road
 Option 2 - Dual Carriageway Road

The spine road is split into 3 development zones, and the estimated costs are as follows:

Option 1 - Single Carriageway Road

	Road/Bridge		Services		Total		Difference
	Old Route	New Route	Old Route	New Route	Old Route	New Route	
Zone A (Business Park)	£5,030,000	£2,854,000	£546,000	£537,000	£5,576,000	£3,391,000	(£2,185,000)
Zone B (Open Land)	£7,415,000	£7,289,000	£1,648,000	£2,332,000	£9,063,000	£9,621,000	£558,000
Zone C (Proposed residential)	£7,319,000	£7,319,000	£2,176,000	£2,176,000	£9,495,000	£9,495,000	£0
Totals	£19,764,000	£17,462,000	£4,370,000	£5,045,000	£24,134,000	£22,507,000	(£1,627,000)

Option 2 - Dual Carriageway Road

	Road/Bridge		Services		Total		Difference
	Old Route	New Route	Old Route	New Route	Old Route	New Route	
Zone A (Business Park)	£9,042,000	£5,026,000	£594,000	£584,000	£9,636,000	£5,610,000	(£4,026,000)
Zone B (Open Land)	£12,786,000	£12,983,000	£1,791,000	£2,529,000	£14,577,000	£15,512,000	£935,000
Zone C (Proposed residential)	£13,048,000	£13,048,000	£2,360,000	£2,360,000	£15,408,000	£15,408,000	£0
Totals	£34,876,000	£31,057,000	£4,745,000	£5,473,000	£39,621,000	£36,530,000	(£3,091,000)

These costs are at current rates and exclude VAT.

The cost of the old route for both Single and Dual Carriageway Roads has not increased from our Feasibility Estimate Nr 03 dated 22 December 2011 as current indices show that tender prices have remained flat since then.

1.0 EXECUTIVE SUMMARY (CONT'D)

For a comprehensive list of assumptions and exclusions see Sections 2.0 and 3.0.

See Section 4.0 for a detailed cost summary.

See Sections 5.0 and 6.0 for detailed cost build-ups of Option 1 and Option 2 respectively.

Risk items identified that could have a major impact on the Spine Road costs have been listed in Section 7.0.

Future inflation until 2014 has been assessed in Section 8.0 and may be applied to the above costs in accordance with the planned programme.

The rates contained within this estimate have been based on various project data as detailed in Section 9.0.

2.0 BASIS, ASSUMPTIONS & EXCLUSIONS

BASIS OF ESTIMATE

- 1 Golding Homes 'Brief for Cost Viability Study' dated 19 November 2010
- 2 OS Map of SE Maidstone mark-up to show proposed route of new Spine Road

ASSUMPTIONS

- 1 Professional Fees and Surveys have been assessed at 15%
- 2 A project contingency of 30% is included
- 3 Orientation of Spine Road adjusted to a more SE route from A20 roundabout junction to provide a lower river crossing. This new route is still within land controlled by the consortium and Rochester Bridge Trust
- 4 All excavated material to be retained on site
- 5 Allowance for 50% of material required for making up levels etc to be imported due to unsuitability of existing material
- 6 Existing ground contours to be followed wherever possible
- 7 2 metre wide services zone required on one side of Spine Road
- 8 Backfilling of drain trenches under road to be type 1 material
- 9 Spine road to have DBM finish or similar - 200mm base, 60mm binder, 40mm wearing course, 150mm sub-base, 500mm capping
- 10 Single carriageway spine road to have additional right turn lane at junction with existing roads
- 11 Dual carriageway spine road to have 'left in' and 'left out' only junctions with existing minor roads
- 12 Safety barriers required to dual carriageway spine road at central reservation and at isolated locations to verges
- 13 Footpath/cycleway to one side only of both single and dual carriageway roads
- 14 Footpath/cycleway to have DBM finish with colour delineation
- 15 Surface water drainage required to one side of single carriageway and both sides of dual carriageway roads
- 16 Surface water drainage to be average 450mm diameter pipework
- 17 Foul water drainage required to one side of single carriageway road
- 18 Foul water drainage required to both sides of dual carriageway road except zone B where it will remain on one side only
- 19 Foul water drainage to be average 300mm diameter pipework
- 20 Road gullies to be at 20m centres both sides
- 21 Manholes to be at average 50m centres for all drainage
- 22 Percentage of road to have lighting assessed for each zone as follows: Zone A 100%; Zone B 20%; Zone C 100%
- 23 Services zone to one side only of both single and dual carriageway roads
- 24 Lighting columns to single carriageway road to be 8m high at 24m staggered centres
- 25 Lighting columns to dual carriageway road to be 8m high, twin lamp, positioned on the central reservation at 24m centres
- 26 Water main to be average 200mm diameter
- 27 Gas main to be average 300mm diameter
- 28 Contractor's preliminaries and overheads and profit have been assessed at 20%

3.0 EXCLUSIONS AND RISKS

EXCLUSIONS

- 1 Value Added Tax
- 2 Financing costs and charges
- 3 Planning application fees
- 4 Site acquisition and associated costs including all legal fees, Agent's commissions and other costs
- 5 Tax allowances
- 6 Employer insurances
- 7 Remediation treatment connected with the treatment or disposal of contaminated material, Landfill Tax etc
- 8 Building Regulations prescribed fees
- 9 Development direct costs including on-plot infrastructure, buildings, utilities etc
- 10 Pumped drainage
- 11 Additional costs to meet requirements of SUDS
- 12 Services investigations (statutory services)
- 13 Primary sub stations
- 14 Off site reinforcement of services
- 15 Connections to existing services
- 16 Gas governors
- 17 Diversion of existing services
- 18 Spur roads into the development areas
- 19 Emergency stop and bus stop lay-bys
- 20 Archaeological costs
- 21 Costs in respect of rights exercised by adjoining owners
- 22 Developer's additional contributions towards environmental improvements
- 23 CCTV and ANPR camera installations
- 24 Works in connection with overhead cable lines
- 25 Section 104/106/278 Contributions
- 26 Ecology studies and measures
- 27 Public Art
- 28 Hard standing at either end of Spine Road for vehicle / bus drop off and pick up positions
- 29 No allowance for works to the existing A20

4.1 COST COMPARISON SINGLE CARRIAGEWAY

		Total Cost Single Carriageway (£)									
		Zone A			Zone B			Zone C	All Zones		
		Old Route	New Route	Difference	Old Route	New Route	Difference	Old Route	Old Route	New Route	Difference
1	Spine Road	3,364,000	1,909,000	(1,455,000)	4,960,000	4,876,000	(84,000)	4,896,000	13,220,000	11,681,000	(1,539,000)
2	Professional Fees/Surveys - 15%	505,000	286,000	(218,000)	744,000	731,000	(13,000)	734,000	1,983,000	1,751,000	(232,000)
3	Contingency - 30%	1,161,000	659,000	(502,000)	1,711,000	1,682,000	(29,000)	1,689,000	4,561,000	4,030,000	(531,000)
4	TOTAL SPINE ROADS (A) £	5,030,000	2,854,000	(2,175,000)	7,415,000	7,289,000	(126,000)	7,319,000	19,764,000	17,462,000	(2,302,000)
5	Services	365,000	359,000	(6,000)	1,103,000	1,560,000	457,000	1,456,000	2,924,000	3,375,000	451,000
6	Professional Fees/Surveys - 15%	55,000	54,000	(2,000)	165,000	234,000	70,000	218,000	438,000	506,000	68,000
7	Contingency - 30%	126,000	124,000	(2,000)	380,000	538,000	159,000	502,000	1,008,000	1,164,000	156,000
8	TOTAL SERVICES (B) £	546,000	537,000	(10,000)	1,648,000	2,332,000	686,000	2,176,000	4,370,000	5,045,000	675,000
9	TOTAL (A) + (B) £	5,576,000	3,391,000	(2,185,000)	9,063,000	9,621,000	560,000	9,495,000	24,134,000	22,507,000	(1,627,000)

		Total Cost Single Carriageway (£/m)									
		Zone A			Zone B			Zone C	All Zones (Ave)		
		Old Route	New Route	Difference	Old Route	New Route	Difference	Old Route	Old Route	New Route	Difference
1	Spine Road	8,626	5,024	(3,602)	4,203	2,709	(1,494)	2,949	4,093	3,042	(1,051)
2	Professional Fees/Surveys - 15%	1,295	753	(542)	631	406	(225)	442	614	456	(158)
3	Contingency - 30%	2,977	1,734	(1,243)	1,450	934	(516)	1,017	1,412	1,049	(363)
4	TOTAL SPINE ROADS (A) £	12,898	7,511	(5,387)	6,284	4,049	(2,235)	4,408	6,119	4,547	(1,572)
5	Services	936	945	9	935	867	(68)	877	905	879	(26)
6	Professional Fees/Surveys - 15%	141	142	1	140	130	(10)	131	136	132	(4)
7	Contingency - 30%	323	326	3	322	299	(23)	302	312	303	(9)
8	TOTAL SERVICES (B) £	1,400	1,413	13	1,397	1,296	(101)	1,310	1,353	1,314	(39)
9	TOTAL (A) + (B) £	14,298	8,924	(5,374)	7,681	5,345	(2,336)	5,718	7,472	5,861	(1,611)

All the above costs are at 2Q2012. For future inflation allowances, see Section 8.0.

4.2 COST COMPARISON DUAL CARRIAGEWAY

		Total Cost Dual Carriageway (£)									
		Zone A			Zone B			Zone C	All Zones		
		Old Route	New Route	Difference	Old Route	New Route	Difference	Old Route	Old Route	New Route	Difference
1	Spine Road	6,048,000	3,362,000	(2,686,000)	8,552,000	8,684,000	132,000	8,728,000	23,328,000	20,774,000	(2,554,000)
2	Professional Fees/Surveys - 15%	907,000	504,000	(403,000)	1,283,000	1,303,000	20,000	1,309,000	3,499,000	3,116,000	(383,000)
3	Contingency - 30%	2,087,000	1,160,000	(927,000)	2,951,000	2,996,000	46,000	3,011,000	8,049,000	7,167,000	(882,000)
4	TOTAL SPINE ROADS (A) £	9,042,000	5,026,000	(4,016,000)	12,786,000	12,983,000	198,000	13,048,000	34,876,000	31,057,000	(3,819,000)
5	Services	397,000	390,000	(7,000)	1,198,000	1,691,000	493,000	1,578,000	3,173,000	3,659,000	486,000
6	Professional Fees/Surveys - 15%	60,000	59,000	(1,000)	180,000	254,000	75,000	237,000	477,000	550,000	73,000
7	Contingency - 30%	137,000	135,000	(2,000)	413,000	584,000	171,000	545,000	1,095,000	1,264,000	169,000
8	TOTAL SERVICES (B) £	594,000	584,000	(10,000)	1,791,000	2,529,000	739,000	2,360,000	4,745,000	5,473,000	728,000
9	TOTAL (A) + (B) £	9,636,000	5,610,000	(4,026,000)	14,577,000	15,512,000	937,000	15,408,000	39,621,000	36,530,000	(3,091,000)

		Total Cost Dual Carriageway (£/m)									
		Zone A			Zone B			Zone C	All Zones (Ave)		
		Old Route	New Route	Difference	Old Route	New Route	Difference	Old Route	Old Route	New Route	Difference
1	Spine Road	15,508	8,847	(6,661)	7,247	4,824	(2,423)	5,258	7,222	5,410	(1,812)
2	Professional Fees/Surveys - 15%	2,326	1,326	(1,000)	1,087	724	(363)	789	1,083	811	(272)
3	Contingency - 30%	5,351	3,053	(2,298)	2,501	1,664	(837)	1,814	2,492	1,866	(626)
4	TOTAL SPINE ROADS (A) £	23,185	13,226	(9,959)	10,835	7,212	(3,623)	7,861	10,797	8,087	(2,710)
5	Services	1,018	1,026	8	1,015	939	(76)	951	982	953	(29)
6	Professional Fees/Surveys - 15%	154	155	1	153	141	(12)	143	148	143	(5)
7	Contingency - 30%	351	355	4	350	324	(26)	328	339	329	(10)
8	TOTAL SERVICES (B) £	1,523	1,536	13	1,518	1,404	(114)	1,422	1,469	1,425	(44)
9	TOTAL (A) + (B) £	24,708	14,762	(9,946)	12,353	8,616	(3,737)	9,283	12,266	9,512	(2,754)

All the above costs are at 2Q2012. For future inflation allowances, see Section 8.0.

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK				£	
1	Main spine road (7.3m wide)	390	m	790	308,100
2	Services verge one side (2.00m wide)	390	m	65	25,350
3	Footpath/cycleway one side (3.00m wide)	390	m	165	64,350
4	Extra for earthworks to bridge embankment one side	5,500	m ³	30	165,000
5	Geotextile reinforcing mat to embankment	6,700	m ²	6	40,200
6	New spur connection to existing roundabout at A20		item		300,000
7	Traffic management		item		50,000
8	Surface water drainage	390	m	350	136,500
9	Foul water drainage	390	m	250	97,500
10	Lighting (to 100% of road)	390	m	150	58,500
11	Signage and road markings		item		20,000
12	Street Furniture		item		10,000
13	Landscaping/land remodelling	390	m	200	78,000
14	Bridge (50% of total cost)		item		1,450,000
Sub-Total					2,803,500
Contractor Preliminaries / Overheads & Profit on above - 20%					560,700
TOTAL SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK TO SUMMARY				£	3,364,200

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK				£	
1	Main spine road (7.3m wide), upgrade existing road	380	m	690	262,200
2	Services verge one side (2.00m wide)	380	m	65	24,700
3	Footpath/cycleway one side (3.00m wide)	380	m	165	62,700
4	Upgrade existing footpath to A20 to footpath/cycleway (3.00m wide)	250	m	190	47,500
5	Extra for earthworks to bridge embankment one side	2,000	m ³	30	60,000
6	Geotextile reinforcing mat to embankment	3,000	m ²	6	18,000
7	Upgrade existing spur connection to roundabout at A20		item		200,000
8	Junction with existing Leeds Castle entrance		item		75,000
9	Traffic management		item		150,000
10	Surface water drainage	380	m	350	133,000
11	Foul water drainage	380	m	250	95,000
12	Lighting (to 100% of road)	380	m	150	57,000
13	Signage and road markings		item		20,000
14	Street Furniture		item		10,000
15	Landscaping/land remodelling	380	m	200	76,000
16	Bridge (50% of total cost)		item		300,000
Sub-Total					1,591,100
Contractor Preliminaries / Overheads & Profit on above - 20%					318,220
TOTAL SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK TO SUMMARY				£	1,909,320

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND				£	
1	Main spine road (7.3m wide)	1,180	m	790	932,200
2	Services verge one side (2.00m wide)	1,180	m	65	76,700
3	Footpath/cycleway one side (3.00m wide)	1,180	m	165	194,700
4	Extra for earthworks to bridge embankment one side	5,500	m ³	30	165,000
5	Geotextile reinforcing mat to embankment	6,700	m ²	6	40,200
6	New junction with Old Mill Road (both sides)		item		150,000
7	New junction with Forge Lane (one side)		item		75,000
8	Traffic management		item		30,000
9	Surface water drainage	1,180	m	350	413,000
10	Foul water drainage	1,180	m	250	295,000
11	Lighting (to 20% of road)	236	m	150	35,400
12	Signage and road markings		item		20,000
13	Street Furniture		item		20,000
14	Landscaping/land remodelling	1,180	m	200	236,000
15	Bridge (50% of total cost)		item		1,450,000
Sub-Total					4,133,200
Contractor Preliminaries / Overheads & Profit on above - 20%					826,640
TOTAL SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND TO SUMMARY				£	4,959,840

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND					£
1	Main spine road (7.3m wide), upgrade existing road	320	m	690	220,800
2	Main spine road (7.3m wide), new carriageway	1,480	m	790	1,169,200
3	Services verge one side (2.00m wide)	1,800	m	65	117,000
4	Footpath/cycleway one side (3.00m wide)	1,800	m	165	297,000
5	Extra for earthworks to bridge embankment one side	2,000	m ³	30	60,000
6	Geotextile reinforcing mat to embankment	3,000	m ²	6	18,000
7	New junction with Old Mill Road (both sides)		item		150,000
8	New junction with Forge Lane (one side)		item		75,000
9	Traffic management		item		100,000
10	Surface water drainage	1,800	m	350	630,000
11	Foul water drainage	1,800	m	250	450,000
12	Lighting (to 20% of road)	360	m	150	54,000
13	Signage and road markings		item		30,000
14	Street Furniture		item		30,000
15	Landscaping/land remodelling	1,810	m	200	362,000
16	Bridge (50% of total cost)		item		300,000
Sub-Total					4,063,000
Contractor Preliminaries / Overheads & Profit on above - 20%					812,600
TOTAL SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND TO SUMMARY					£ 4,875,600

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL				£	
1	Main spine road (7.3m wide)	1,660	m	790	1,311,400
2	Services verge one side (2.00m wide)	1,660	m	65	107,900
3	Footpath/cycleway one side (3.00m wide)	1,660	m	165	273,900
4	New junction with Forge Lane (one side)		item		75,000
5	New junction with Back Street (both sides)		item		150,000
6	New junction with Avery Lane (both sides)		item		150,000
7	New junction with A274 Sutton Road (one side)		item		250,000
8	Traffic signalling system at junction with Sutton Road		item		65,000
9	Traffic management		item		80,000
10	Surface water drainage	1,660	m	350	581,000
11	Foul water drainage	1,660	m	250	415,000
12	Lighting (to 100% of road)	1,660	m	150	249,000
13	Signage and road markings		item		20,000
14	Street Furniture		item		20,000
15	Landscaping/land remodelling	1,660	m	200	332,000
Sub-Total					4,080,200
Contractor Preliminaries / Overheads & Profit on above - 20%					816,040
TOTAL SINGLE CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL TO SUMMARY				£	4,896,240

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK - SERVICES				£	
1	Water mains	390	m	150	58,500
2	Ducts for road crossings		item		5,000
3	Gas Mains	390	m	220	85,800
4	Ducts for road crossings		item		5,000
5	Secondary substations	1	nr	50,000	50,000
6	HV distribution	390	m	70	27,300
7	LV distribution	390	m	30	11,700
8	Ducts for road crossings		item		10,000
9	Telcommunications ducts	390	m	80	31,200
10	Joint boxes		item		20,000
Sub-Total					304,500
Contractor Preliminaries / Overheads & Profit on above - 20%					60,900
TOTAL SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK - SERVICES TO SUMMARY £					365,400

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK - SERVICES				£	
1	Water mains	380	m	150	57,000
2	Ducts for road crossings		item		5,000
3	Gas Mains	380	m	220	83,600
4	Ducts for road crossings		item		5,000
5	Secondary substations	1	nr	50,000	50,000
6	HV distribution	380	m	70	26,600
7	LV distribution	380	m	30	11,400
8	Ducts for road crossings		item		10,000
9	Telcommunications ducts	380	m	80	30,400
10	Joint boxes		item		20,000
Sub-Total					299,000
Contractor Preliminaries / Overheads & Profit on above - 20%					59,800
TOTAL SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK - SERVICES TO SUMMARY £					358,800

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND - SERVICES				£	
1	Water mains	1,180	m	150	177,000
2	Ducts for road crossings		item		15,000
3	Gas Mains	1,180	m	220	259,600
4	Ducts for road crossings		item		15,000
5	Secondary substations	3	nr	50,000	150,000
6	HV distribution	1,180	m	70	82,600
7	LV distribution	1,180	m	30	35,400
8	Ducts for road crossings		item		30,000
9	Telcommunications ducts	1,180	m	80	94,400
10	Joint boxes		item		60,000
Sub-Total					919,000
Contractor Preliminaries / Overheads & Profit on above - 20%					183,800
TOTAL SINGLE CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND - SERVICES TO SUMMARY				£	1,102,800

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND - SERVICES				£	
1	Water mains	1,800	m	150	270,000
2	Ducts for road crossings		item		20,000
3	Gas Mains	1,800	m	220	396,000
4	Ducts for road crossings		item		20,000
5	Secondary substations	3	nr	50,000	150,000
6	HV distribution	1,800	m	70	126,000
7	LV distribution	1,800	m	30	54,000
8	Ducts for road crossings		item		40,000
9	Telcommunications ducts	1,800	m	80	144,000
10	Joint boxes		item		80,000
Sub-Total					1,300,000
Contractor Preliminaries / Overheads & Profit on above - 20%					260,000
TOTAL SINGLE CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND - SERVICES TO SUMMARY				£	1,560,000

5.0 COST BUILD-UPS - SINGLE CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL - SERVICES				£
1 Water mains	1,660	m	150	249,000
2 Ducts for road crossings		item		20,000
3 Gas Mains	1,660	m	220	365,200
4 Ducts for road crossings		item		20,000
5 Secondary substations	3	nr	50,000	150,000
6 HV distribution	1,660	m	70	116,200
7 LV distribution	1,660	m	30	49,800
8 Ducts for road crossings		item		35,000
9 Telecommunications ducts	1,660	m	80	132,800
10 Joint boxes		item		75,000
Sub-Total				1,213,000
Contractor Preliminaries / Overheads & Profit on above - 20%				242,600
TOTAL SINGLE CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL - SERVICES TO SUMMARY £				1,455,600

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK				£
1 Main spine road (2 x 7.3m wide + 1.00m wide central reservation)	390	m	1,680	655,200
2 Services verge one side (2.00m wide)	390	m	65	25,350
3 Footpath/cycleway one side (3.00m wide)	390	m	165	64,350
4 Safety barriers	470	m	90	42,300
5 Extra for earthworks to bridge embankment one side	8,000	m ³	30	240,000
6 Geotextile reinforcing mat to embankment	9,000	m ²	6	54,000
7 New spur connection to existing roundabout at A20		item		450,000
8 Traffic management		item		100,000
9 Surface water drainage	780	m	350	273,000
10 Foul water drainage	780	m	250	195,000
11 Lighting (to 100% of road)	390	m	250	97,500
12 Signage and road markings		item		30,000
13 Street Furniture		item		15,000
14 Landscaping/land remodelling	390	m	200	78,000
15 Bridge (50% of total cost)		item		2,720,000
Sub-Total				5,039,700
Contractor Preliminaries / Overheads & Profit on above - 20%				1,007,940
TOTAL DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK TO SUMMARY £				6,047,640

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK				£
1 Main spine road (2 x 7.3m wide + 1.00m wide central reservation)	380	m	1,680	638,400
2 Services verge one side (2.00m wide)	380	m	65	24,700
3 Footpath/cycleway one side (3.00m wide)	380	m	165	62,700
4 Upgrade existing footpath to A20 to footpath/cycleway (3.00m wide)	250	m	190	47,500
5 Safety barriers	460	m	90	41,400
6 Extra for earthworks to bridge embankment one side	2,800	m ³	30	84,000
7 Geotextile reinforcing mat to embankment	3,500	m ²	6	21,000
8 Upgrade existing spur connection to roundabout at A20		item		350,000
9 Junction with existing Leeds Castle entrance - 'left in, left out'		item		100,000
10 Traffic management		item		200,000
11 Surface water drainage	760	m	350	266,000
12 Foul water drainage	760	m	250	190,000
13 Lighting (to 100% of road)	380	m	250	95,000
14 Signage and road markings		item		30,000
15 Street Furniture		item		15,000
16 Landscaping/land remodelling	380	m	200	76,000
17 Bridge (50% of total cost)		item		560,000
Sub-Total				2,801,700
Contractor Preliminaries / Overheads & Profit on above - 20%				560,340
TOTAL DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK TO SUMMARY				£ 3,362,040

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND				£	
1	Main spine road (2 x 7.3m wide + 1.00m wide central reservation)	1,180	m	1,680	1,982,400
2	Services verge one side (2.00m wide)	1,180	m	65	76,700
3	Footpath/cycleway one side (3.00m wide)	1,180	m	165	194,700
4	Safety barriers	1,420	m	90	127,800
5	Extra for earthworks to bridge embankment one side	8,000	m ³	30	240,000
6	Geotextile reinforcing mat to embankment	9,000	m ²	6	54,000
7	New junction with Old Mill Road (both sides)		item		150,000
8	New junction with Forge Lane (one side)		item		75,000
9	Traffic management		item		30,000
10	Surface water drainage	2,360	m	350	826,000
11	Foul water drainage	1,180	m	250	295,000
12	Lighting (to 20% of road)	236	m	250	59,000
13	Signage and road markings		item		30,000
14	Street Furniture		item		30,000
15	Landscaping/land remodelling	1,180	m	200	236,000
16	Bridge (50% of total cost)		item		2,720,000
Sub-Total					7,126,600
Contractor Preliminaries / Overheads & Profit on above - 20%					1,425,320
TOTAL DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND TO SUMMARY				£	8,551,920

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND				£	
1	Main spine road (2 x 7.3m + 1m wide central reservatn), upgrade existing	320	m	1,580	505,600
2	Main spine road (2 x 7.3m + 1m wide central reservatn), new carriageway	1,480	m	1,680	2,486,400
3	Services verge one side (2.00m wide)	1,800	m	65	117,000
4	Footpath/cycleway one side (3.00m wide)	1,800	m	165	297,000
5	Safety barriers	2,160	m	90	194,400
6	Extra for earthworks to bridge embankment one side	2,800	m ³	30	84,000
7	Geotextile reinforcing mat to embankment	3,500	m ²	6	21,000
8	New junction with Old Mill Road (both sides)		item		150,000
9	New junction with Forge Lane (one side)		item		75,000
10	Traffic management		item		200,000
11	Surface water drainage	3,600	m	350	1,260,000
12	Foul water drainage	3,600	m	250	900,000
13	Lighting (to 20% of road)	360	m	250	90,000
14	Signage and road markings		item		30,000
15	Street Furniture		item		30,000
16	Landscaping/land remodelling	1,180	m	200	236,000
17	Bridge (50% of total cost)		item		560,000
Sub-Total					7,236,400
Contractor Preliminaries / Overheads & Profit on above - 20%					1,447,280
TOTAL DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND TO SUMMARY				£	8,683,680

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL				£	
1	Main spine road (2 x 7.3m wide + 1.00m wide central reservation)	1,660	m	1,680	2,788,800
2	Services verge one side (2.00m wide)	1,660	m	65	107,900
3	Footpath/cycleway one side (3.00m wide)	1,660	m	165	273,900
4	Safety barriers	1,990	m	90	179,100
5	New junction with Forge Lane (one side)		item		75,000
6	New junction with Back Street (both sides)		item		150,000
7	New junction with Avery Lane (both sides)		item		150,000
8	New junction with A274 Sutton Road (one side)		item		500,000
9	Traffic signalling system at junction with Sutton Road		item		100,000
10	Traffic management		item		150,000
11	Surface water drainage	3,320	m	350	1,162,000
12	Foul water drainage	3,320	m	250	830,000
13	Lighting (to 100% of road)	1,660	m	250	415,000
14	Signage and road markings		item		30,000
15	Street Furniture		item		30,000
16	Landscaping/land remodelling	1,660	m	200	332,000
Sub-Total					7,273,700
Contractor Preliminaries / Overheads & Profit on above - 20%					1,454,740
TOTAL DUAL CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL TO SUMMARY				£	8,728,440

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK - SERVICES				£	
1	Water mains	390	m	150	58,500
2	Ducts for road crossings		item		10,000
3	Gas Mains	390	m	220	85,800
4	Ducts for road crossings		item		10,000
5	Secondary substations	1	nr	50,000	50,000
6	HV distribution	390	m	70	27,300
7	LV distribution	390	m	30	11,700
8	Ducts for road crossings		item		20,000
9	Telcommunications ducts	470	m	80	37,600
10	Joint boxes		item		20,000
Sub-Total					330,900
Contractor Preliminaries / Overheads & Profit on above - 20%					66,180
TOTAL DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE A BUSINESS PARK - SERVICES TO SUMMARY £					397,080

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK - SERVICES				£
1 Water mains	380	m	150	57,000
2 Ducts for road crossings		item		10,000
3 Gas Mains	380	m	220	83,600
4 Ducts for road crossings		item		10,000
5 Secondary substations	1	nr	50,000	50,000
6 HV distribution	380	m	70	26,600
7 LV distribution	380	m	30	11,400
8 Ducts for road crossings		item		20,000
9 Telcommunications ducts	460	m	80	36,800
10 Joint boxes		item		20,000
Sub-Total				325,400
Contractor Preliminaries / Overheads & Profit on above - 20%				65,080
TOTAL DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE A BUSINESS PARK - SERVICES TO SUMMARY £				390,480

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND - SERVICES				£
1 Water mains	1,180	m	150	177,000
2 Ducts for road crossings		item		30,000
3 Gas Mains	1,180	m	220	259,600
4 Ducts for road crossings		item		30,000
5 Secondary substations	3	nr	50,000	150,000
6 HV distribution	1,180	m	70	82,600
7 LV distribution	1,180	m	30	35,400
8 Ducts for road crossings		item		60,000
9 Telecommunications ducts	1,420	m	80	113,600
10 Joint boxes		item		60,000
Sub-Total				998,200
Contractor Preliminaries / Overheads & Profit on above - 20%				199,640
TOTAL DUAL CARRIAGEWAY ROAD (OLD ROUTE): ZONE B OPEN LAND - SERVICES TO SUMMARY				£ 1,197,840

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND - SERVICES				£	
1	Water mains	1,800	m	150	270,000
2	Ducts for road crossings		item		40,000
3	Gas Mains	1,800	m	220	396,000
4	Ducts for road crossings		item		40,000
5	Secondary substations	3	nr	50,000	150,000
6	HV distribution	1,800	m	70	126,000
7	LV distribution	1,800	m	30	54,000
8	Ducts for road crossings		item		80,000
9	Telcommunications ducts	2,160	m	80	172,800
10	Joint boxes		item		80,000
Sub-Total					1,408,800
Contractor Preliminaries / Overheads & Profit on above - 20%					281,760
TOTAL DUAL CARRIAGEWAY ROAD (NEW ROUTE): ZONE B OPEN LAND - SERVICES TO SUMMARY				£	1,690,560

6.0 COST BUILD-UPS - DUAL CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL - SERVICES				£
1 Water mains	1,660	m	150	249,000
2 Ducts for road crossings		item		40,000
3 Gas Mains	1,660	m	220	365,200
4 Ducts for road crossings		item		40,000
5 Secondary substations	3	nr	50,000	150,000
6 HV distribution	1,660	m	70	116,200
7 LV distribution	1,660	m	30	49,800
8 Ducts for road crossings		item		70,000
9 Telcommunications ducts	2,000	m	80	160,000
10 Joint boxes		item		75,000
Sub-Total				1,315,200
Contractor Preliminaries / Overheads & Profit on above - 20%				263,040
TOTAL DUAL CARRIAGEWAY ROAD: ZONE C PROPOSED RESIDENTIAL - SERVICES TO SUMMARY £				1,578,240

7.0 Risk Register

The following comprises risk items identified that could have a major impact on the Spine Road costs:

- 1 Planning delays
- 2 Funding delays
- 3 Existing live and redundant services
- 4 Requirement for temporary and permanent services diversions
- 5 Capacity of incoming and outgoing services
- 6 High cost of services reinforcement
- 7 Difficulties associated with securing services providers commitment at an early stage
- 8 Capacity of drainage and sewage systems
- 9 Contamination of soil
- 10 Unsuitable ground conditions
- 11 Site infestation - Japanese Knotweed, Giant Hogweed etc
- 12 Discovery of sites with historical or archaeological interest
- 13 Presence of SSSI's, SAC's and SPA's
- 14 Mitigation measures to existing ecology, flora and fauna etc
- 15 Delays caused by Adopting Authorities
- 16 Delays caused due to the interface between contestable and non contestable works
- 17 Delays due to the resolution of Section 104, 106 and 278 Agreements

8.0 Inflation Forecast - Cumulative

	2012	2013	2014
	%	%	%
1Q	0.00	0.20	1.20
2Q	0.20	0.50	2.00
3Q	0.20	0.70	2.90
4Q	0.20	0.90	3.80

Based on Davis Langdon's Tender Price Index dated April 2012

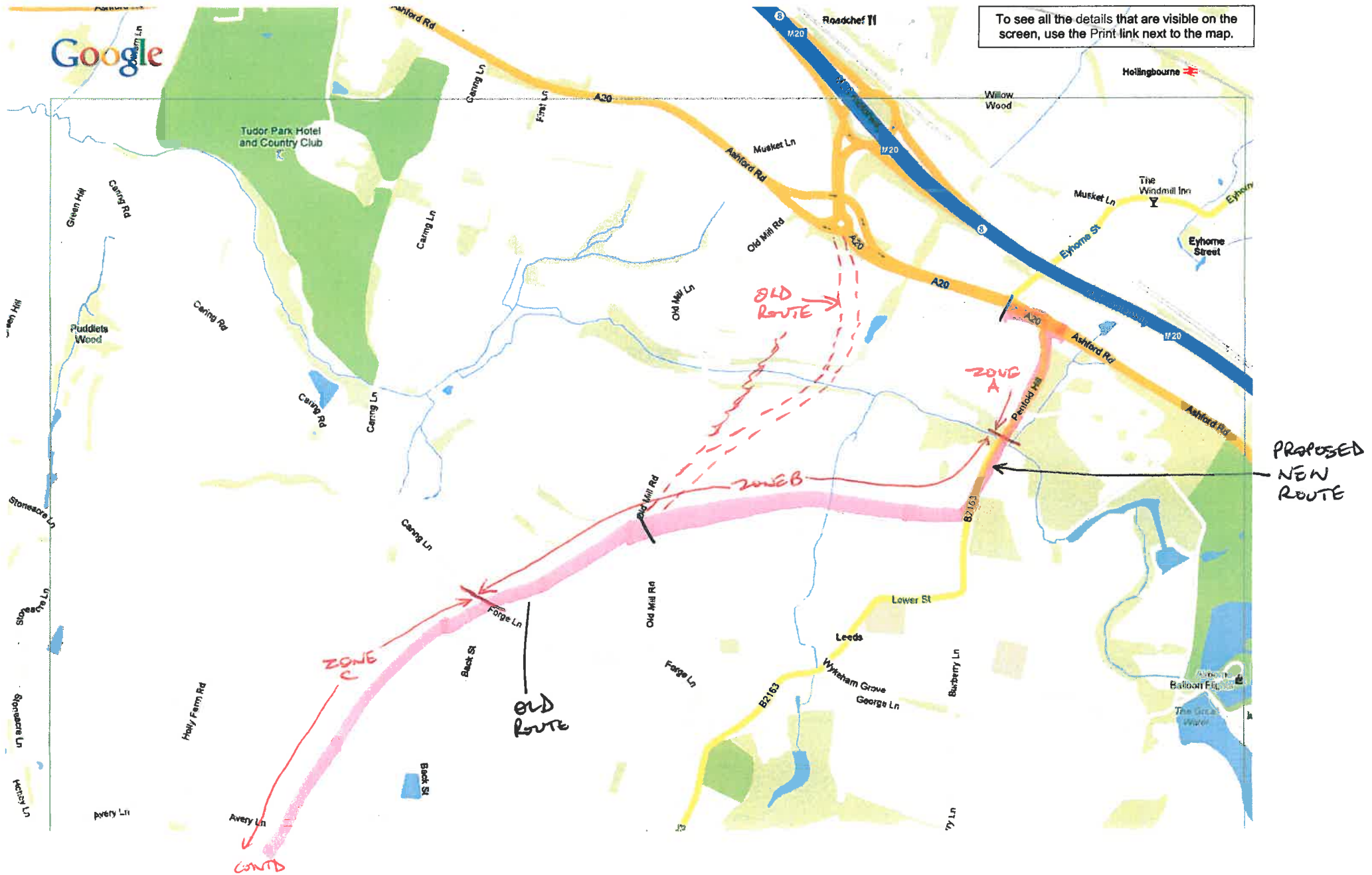
8.0 9.00 Experience

Project	Value	Status	Length of Road (Km)	Date Complete/Estimate/Tender
Roads (including roundabouts, junctions etc)				
Cambridge	4,200,000	Complete	0.63	2010
Cambridge	12,000,000	Estimate	2.30	2010
Silvertown	4,700,000	Tender	0.49	2008
Dagenham	1,500,000	Complete	0.40	2006
Reading	2,600,000	Complete	0.50	2008
Merseyside	6,200,000	Complete	1.50	2007
Hampshire (on site)	61,000,000	Current	8.50	2010
Hampshire (off site)	6,000,000	Estimate	0.75	2010
Bath	8,000,000	Estimate	1.20	2008
Kent	9,000,000	Estimate	3.60	2010
Kent	18,000,000	Complete	3.00	2008
Kent	2,500,000	Complete	0.50	2005
			Span (m)	Date Complete/Estimate
Bridges				
North West London	23,000,000	Estimate	240.00	2008
North West London	2,300,000	Estimate	23.00	2008
North West London	1,200,000	Estimate	43.00	2008
North West London	2,200,000	Estimate	14.00	2008
Wearside	46,000,000	Estimate	299.00	2009
Midlands	3,500,000	Estimate	50.00	2006
Bath	3,900,000	Estimate	80.00	2005
Manchester (4 nr bridges)	10,000,000	Complete	110.00	2008
Chelmsford	2,000,000	Complete	30.00	2004
York	2,500,000	Complete	160.00	2000
Liverpool	2,600,000	Complete	140.00	1997

**South East Maidstone Urban Expansion
Cost Option Nr 01 - 14 June 2012
Date: 2Q12**



APPENDIX A - PLAN OF PROPOSED NEW ROUTE



Submitted by:

Alan Cobb
Senior Project Surveyor

Davis Langdon, An AECOM Company
42 Kings Hill Avenue
Kings Hill
West Malling
Kent
ME19 4AJ

Tel: +44 (0) 1732 840429
Fax: +44 (0) 870 048 6167

