

Table K5d: Whole Life Cost of 2 Rows of Single Sided TCB, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	2 X S5TCB (metal)
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	5

(HM Treasury's 'The Green Book', July 2002, recommends 3.5%)

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,092,240.00
Serious	£157,120.00	£134,190.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £s	In Hours
Materials and Labour	£31,737.60	80.40
Traffic Management (total for installation)	£173,928.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£24,920.00	10.00
Traffic Management	£170,104.17	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour	£444.06	£1.05
Traffic Management (total for installation)	£12,621.64	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounded	Crossover	Retained	Rebounded	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

Detailed inspection frequency is as required by BS7669:3:1994
 Additional costs may be incurred due to the presence of services below carriageway level.
 Additional costs may also be incurred if installation is on a curved section of road.
 Exterior Paintworking schedule in accordance with BD 36/92

Present Value: £ 675,896.61

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 239,179.50	1	1	£ 58,509.00	£ 13,241.90	67046	£168		£ 310,930.40	£ 310,930.40
1							68119	£171			
2	Detailed Maintenance	£ 640.01					69209	£174		£ 640.01	£ 597.46
3							70316	£176			
4	Detailed Maintenance	£ 651.20					71441	£179		£ 651.20	£ 567.49
5							72584	£182			
6	Detailed Maintenance	£ 662.76					73745	£185		£ 662.76	£ 539.15
7							74925	£188			
8	Detailed Maintenance	£ 674.68					76124	£191		£ 674.68	£ 512.36
9							77342	£194			
10	Detailed Maintenance	£ 687.00	1	1	£ 58,509.00	£ 13,272.21	78580	£197		£ 72,468.21	£ 51,374.08
11							79837	£200			
12	Detailed Maintenance	£ 699.70					81114	£203		£ 699.70	£ 463.05
13							82412	£207			
14	Detailed Maintenance	£ 712.82					83731	£210		£ 712.82	£ 440.37
15							85070	£213			
16	Detailed Maintenance	£ 726.37					86432	£217		£ 726.37	£ 418.90
17							87814	£220			
18	Detailed Maintenance	£ 740.34					89219	£224		£ 740.34	£ 398.57
19							90647	£227			
20	Detailed Maintenance	£ 754.77	1	1	£ 58,509.00	£ 13,307.74	92097	£231		£ 72,571.51	£ 36,471.97
21							93571	£235			
22	Detailed Maintenance	£ 769.67					95068	£238		£ 769.67	£ 361.09
23							96589	£242			
24							98135	£246	£197,484.38	£ 197,484.38	£ 86,489.70
25	Installation Costs	£ 245,762.24					99705	£250		£ 245,762.24	£ 103,993.55
26							101300	£254			
27	Detailed Maintenance	£ 809.04					102921	£258		£ 809.04	£ 319.58
28							104567	£262			
29	Detailed Maintenance	£ 825.69					106241	£266		£ 825.69	£ 304.47
30							107940	£271		£ 71,858.38	£ 25,601.59
31	Detailed Maintenance	£ 842.87	1	1	£ 58,509.00	£ 13,349.38	109667	£275		£ 842.87	£ 290.14
32							111422	£279			
33	Detailed Maintenance	£ 860.61					113205	£284		£ 860.61	£ 276.55
34							115016	£288			
35	Detailed Maintenance	£ 878.91					116856	£293		£ 878.91	£ 263.65
36							118726	£298			
37	Detailed Maintenance	£ 897.81					120626	£302		£ 897.81	£ 251.42
38							122556	£307			
39	Detailed Maintenance	£ 917.32					124517	£312		£ 917.32	£ 239.80
40							126509	£317		£ 71,907.17	£ 18,161.77
41	Detailed Maintenance	£ 937.46	1	1	£ 58,509.00	£ 13,398.17	128533	£322		£ 937.46	£ 228.77
42							130590	£327			
43	Detailed Maintenance	£ 958.25					132679	£333		£ 958.25	£ 218.29
44							134802	£338			
45	Detailed Maintenance	£ 979.71					136959	£343		£ 979.71	£ 208.34
46							139150	£349			
47	Detailed Maintenance	£ 1,001.86					141376	£354		£ 1,001.86	£ 198.89
48							143638	£360			
49	Detailed Maintenance	£ 1,024.72					145937	£366		£ 1,024.72	£ 189.90
50							148272	£372	£198,741.32	£ 198,741.32	£ 35,585.30
										£ 1,258,935.42	£ 675,896.61

Table K5e: Whole Life Cost of 2 Rows of Single Sided OBB, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	2 X SSOBB (metal)
Road Type	B3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	5

(HM Treasury's 'The Green Book', July 2002, recommends 3.5%)

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,092,240.00
Serious	£157,120.00	£134,190.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £s	In Hours
Materials and Labour	£86,739.76	94.08
Traffic Management (total for installation)	£173,928.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£24,920.00	10.00
Traffic Management	£170,104.17	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour	£552.57	£0.95
Traffic Management (total for installation)	£11,640.28	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounded	Crossover	Retained	Rebounded	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

Detailed inspection frequency is as required by BS7669:3:1994
 Additional costs may be incurred due to the presence of services below carriageway level.
 Additional costs may also be incurred if installation is on a curved section of road.
 Exterior Paintwork schedule in accordance with BD 36/92

Present Value: £ 724,672.16

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 276,481.04	1	1	£ 58,509.00	£ 12,333.03	67046	£168		£ 347,323.07	£ 347,323.07
1							68119	£171			
2	Detailed Maintenance	£ 464.26					69209	£174		£ 464.26	£ 433.39
3							70316	£176			
4	Detailed Maintenance	£ 472.65					71441	£179		£ 472.65	£ 411.89
5							72584	£182			
6	Detailed Maintenance	£ 481.32					73745	£185		£ 481.32	£ 391.55
7							74925	£188			
8	Detailed Maintenance	£ 490.26					76124	£191		£ 490.26	£ 372.31
9							77342	£194			
10	Detailed Maintenance	£ 499.50	1	1	£ 58,509.00	£ 12,360.59	78580	£197		£ 71,369.09	£ 50,594.89
11							79837	£200			
12	Detailed Maintenance	£ 509.03					81114	£203		£ 509.03	£ 336.87
13							82412	£207			
14	Detailed Maintenance	£ 518.87					83731	£210		£ 518.87	£ 320.55
15							85070	£213			
16	Detailed Maintenance	£ 529.02					86432	£217		£ 529.02	£ 305.09
17							87814	£220			
18	Detailed Maintenance	£ 539.51					89219	£224		£ 539.51	£ 290.45
19							90647	£227			
20	Detailed Maintenance	£ 550.33	1	1	£ 58,509.00	£ 12,392.88	92097	£231		£ 71,452.21	£ 35,909.45
21							93571	£235			
22	Detailed Maintenance	£ 561.50					95068	£238		£ 561.50	£ 263.43
23							96589	£242			
24							98135	£246	£197,484.38	£ 197,484.38	£ 86,489.70
25	Installation Costs	£ 284,183.83					99705	£250		£ 284,183.83	£ 120,251.53
26							101300	£254			
27	Detailed Maintenance	£ 591.03					102921	£258		£ 591.03	£ 233.46
28							104567	£262			
29	Detailed Maintenance	£ 603.52					106241	£266		£ 603.52	£ 222.55
30							107940	£271		£ 70,939.74	£ 25,274.30
31	Detailed Maintenance	£ 616.40	1	1	£ 58,509.00	£ 12,430.74	109667	£275		£ 616.40	£ 212.18
32							111422	£279			
33	Detailed Maintenance	£ 629.70					113205	£284		£ 629.70	£ 202.35
34							115016	£288			
35	Detailed Maintenance	£ 643.44					116856	£293		£ 643.44	£ 193.02
36							118726	£298			
37	Detailed Maintenance	£ 657.61					120626	£302		£ 657.61	£ 184.15
38							122556	£307			
39	Detailed Maintenance	£ 672.24					124517	£312		£ 672.24	£ 175.73
40							126509	£317		£ 70,984.10	£ 17,928.63
41	Detailed Maintenance	£ 687.35					128533	£322		£ 687.35	£ 167.73
42							130590	£327			
43	Detailed Maintenance	£ 702.94					132679	£333		£ 702.94	£ 160.13
44							134802	£338			
45	Detailed Maintenance	£ 719.03					136959	£343		£ 719.03	£ 152.91
46							139150	£349			
47	Detailed Maintenance	£ 735.64					141376	£354		£ 735.64	£ 146.04
48							143638	£360			
49	Detailed Maintenance	£ 752.79					145937	£366		£ 752.79	£ 139.51
50							148272	£372	£198,741.32	£ 198,741.32	£ 35,585.30
										£ 1,328,055.85	£ 724,672.16

Table K5f: Whole Life Cost of 2 Rows of Single Sided DROBB, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	DROBB (metal)
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	5

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,140.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £s	In Hours
Materials and Labour	£109,109.76	134.08
Traffic Management (total for installation)	£176,092.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£24,920.00	10.00
Traffic Management	£170,104.17	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour	£282.91	£0.70
Traffic Management (total for installation)	£10,451.15	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounded	Crossover	Retained	Rebounded	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

*Detailed inspection frequency is as required by BS7669:3:1994
Additional costs may be incurred due to the presence of services below carriageway level.
Additional costs may also be incurred if installation is on a curved section of road.
Exterior Paintworking schedule in accordance with BD 36/92*

Present Value: £ 766,333.16

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 307,738.37	1	1	£ 58,509.00	£ 10,852.04	67046	£168		£ 377,099.42	£ 377,099.42
1	Detailed Maintenance	£ 464.26					68119	£171		£ 464.26	£ 433.39
2	Detailed Maintenance	£ 472.65					69209	£174		£ 472.65	£ 411.89
3	Detailed Maintenance	£ 481.32					70316	£176		£ 481.32	£ 391.55
4	Detailed Maintenance	£ 490.26					71441	£179		£ 490.26	£ 372.31
5	Detailed Maintenance	£ 499.50	1	1	£ 58,509.00	£ 10,872.34	72584	£182		£ 499.50	£ 353.07
6	Detailed Maintenance	£ 509.03					73745	£185		£ 509.03	£ 334.83
7	Detailed Maintenance	£ 518.87					74925	£188		£ 518.87	£ 317.59
8	Detailed Maintenance	£ 529.02					76124	£191		£ 529.02	£ 301.35
9	Detailed Maintenance	£ 539.51					77342	£194		£ 539.51	£ 286.11
10	Detailed Maintenance	£ 550.33	1	1	£ 58,509.00	£ 10,896.13	78580	£197		£ 550.33	£ 271.87
11	Detailed Maintenance	£ 561.50					79837	£200		£ 561.50	£ 258.63
12	Detailed Maintenance						81114	£203		£ 561.50	£ 246.39
13	Detailed Maintenance						82412	£207		£ 561.50	£ 235.15
14	Detailed Maintenance						83731	£210		£ 561.50	£ 224.91
15	Detailed Maintenance						85070	£213		£ 561.50	£ 215.67
16	Detailed Maintenance						86432	£217		£ 561.50	£ 207.43
17	Detailed Maintenance						87814	£220		£ 561.50	£ 199.19
18	Detailed Maintenance						89219	£224		£ 561.50	£ 191.95
19	Detailed Maintenance						90647	£227		£ 561.50	£ 185.71
20	Detailed Maintenance						92097	£231		£ 561.50	£ 179.47
21	Detailed Maintenance						93571	£235		£ 561.50	£ 174.23
22	Detailed Maintenance						95068	£238		£ 561.50	£ 169.00
23	Detailed Maintenance						96589	£242		£ 561.50	£ 164.76
24	Detailed Maintenance						98135	£246	£197,484.38	£ 561.50	£ 160.52
25	Installation Costs	£ 318,716.15					99705	£250		£ 318,716.15	£ 134,863.78
26	Detailed Maintenance						101300	£254		£ 318,716.15	£ 130.64
27	Detailed Maintenance						102921	£258		£ 318,716.15	£ 126.40
28	Detailed Maintenance						104567	£262		£ 318,716.15	£ 122.16
29	Detailed Maintenance						106241	£266		£ 318,716.15	£ 117.92
30	Detailed Maintenance		1	1	£ 58,509.00	£ 10,924.01	107940	£271		£ 318,716.15	£ 113.68
31	Detailed Maintenance						109667	£275		£ 318,716.15	£ 109.44
32	Detailed Maintenance						111422	£279		£ 318,716.15	£ 105.20
33	Detailed Maintenance						113205	£284		£ 318,716.15	£ 100.96
34	Detailed Maintenance						115016	£288		£ 318,716.15	£ 96.72
35	Detailed Maintenance						116856	£293		£ 318,716.15	£ 92.48
36	Detailed Maintenance						118726	£298		£ 318,716.15	£ 88.24
37	Detailed Maintenance						120626	£302		£ 318,716.15	£ 84.00
38	Detailed Maintenance						122556	£307		£ 318,716.15	£ 79.76
39	Detailed Maintenance						124517	£312		£ 318,716.15	£ 75.52
40	Detailed Maintenance						126509	£317		£ 318,716.15	£ 71.28
41	Detailed Maintenance						128533	£322		£ 318,716.15	£ 67.04
42	Detailed Maintenance						130590	£327		£ 318,716.15	£ 62.80
43	Detailed Maintenance						132679	£333		£ 318,716.15	£ 58.56
44	Detailed Maintenance						134802	£338		£ 318,716.15	£ 54.32
45	Detailed Maintenance						136959	£343		£ 318,716.15	£ 50.08
46	Detailed Maintenance						139150	£349		£ 318,716.15	£ 45.84
47	Detailed Maintenance						141376	£354		£ 318,716.15	£ 41.60
48	Detailed Maintenance						143638	£360		£ 318,716.15	£ 37.36
49	Detailed Maintenance						145937	£366		£ 318,716.15	£ 33.12
50	Detailed Maintenance						148272	£372	£198,741.32	£ 318,716.15	£ 28.88
										£ 1,383,354.37	£ 766,333.16

Table K5g: Whole Life Cost of Slipformed VCB, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	SFVCB
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	0

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,190.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £	In Hours
Materials and Labour	£151,996.00	120.00
Traffic Management (total for installation)	£176,092.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£16,000.00	150.00
Traffic Management	£176,362.50	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour		
Traffic Management (total for installation)		
Traffic Delay (QUADRO Costs) - 24hours		

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebanded	Crossover	Retained	Rebanded	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

*Detailed inspection frequency is as required by BS7669:3:1994
Additional costs may be incurred due to the presence of services below carriageway level.
Additional costs may also be incurred if installation is on a curved section of road.
Exterior Paintwork schedule in accordance with BD 36/92*

Present Value: £ 560,918.21

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 348,258.00	1		£ 58,509.00	£ -	67046	£168		£ 406,767.00	£ 406,767.00
1	Detailed Maintenance	£226.01			£ -	£ -	68119	£171		£ 226.01	£ 210.98
2	Detailed Maintenance	£231.60			£ -	£ -	69209	£174		£ 231.60	£ 201.83
3	Detailed Maintenance	£237.38			£ -	£ -	70316	£176		£ 237.38	£ 193.11
4	Detailed Maintenance	£243.34			£ -	£ -	71441	£179		£ 243.34	£ 184.80
5	Detailed Maintenance	£249.50	1		£ 58,509.00	£ -	72584	£182		£ 249.50	£ 176.50
6	Detailed Maintenance	£255.85			£ -	£ -	73745	£185		£ 255.85	£ 169.32
7	Detailed Maintenance	£262.41			£ -	£ -	74925	£188		£ 262.41	£ 162.11
8	Detailed Maintenance	£269.18			£ -	£ -	76124	£191		£ 269.18	£ 155.24
9	Detailed Maintenance	£276.17			£ -	£ -	77342	£194		£ 276.17	£ 148.68
10	Detailed Maintenance	£283.39	1		£ 58,509.00	£ -	78580	£197		£ 283.39	£ 142.22
11	Detailed Maintenance	£290.83			£ -	£ -	79837	£200		£ 290.83	£ 135.84
12	Detailed Maintenance	£298.52			£ -	£ -	81114	£203		£ 298.52	£ 129.52
13	Detailed Maintenance	£306.46			£ -	£ -	82412	£207		£ 306.46	£ 123.25
14	Detailed Maintenance	£314.65			£ -	£ -	83731	£210		£ 314.65	£ 117.03
15	Detailed Maintenance	£323.11	1		£ 58,509.00	£ -	85070	£213		£ 323.11	£ 110.86
16	Detailed Maintenance	£331.83			£ -	£ -	86432	£217		£ 331.83	£ 104.73
17	Detailed Maintenance	£339.75			£ -	£ -	87814	£220		£ 339.75	£ 98.64
18	Detailed Maintenance	£349.75			£ -	£ -	89219	£224		£ 349.75	£ 92.59
19	Detailed Maintenance	£359.75			£ -	£ -	90647	£227		£ 359.75	£ 86.58
20	Detailed Maintenance	£369.66	1		£ 58,509.00	£ -	92097	£231		£ 369.66	£ 80.61
21	Detailed Maintenance	£379.89			£ -	£ -	93571	£235		£ 379.89	£ 74.68
22	Detailed Maintenance	£390.45			£ -	£ -	95068	£238		£ 390.45	£ 68.79
23	Detailed Maintenance	£401.35			£ -	£ -	96589	£242		£ 401.35	£ 62.94
24	Detailed Maintenance	£412.60			£ -	£ -	98135	£246		£ 412.60	£ 57.13
25	Detailed Maintenance	£306.46			£ -	£ -	99705	£250		£ 306.46	£ 51.36
26	Detailed Maintenance	£314.65			£ -	£ -	101300	£254		£ 314.65	£ 45.63
27	Detailed Maintenance	£323.11	1		£ 58,509.00	£ -	102921	£258		£ 323.11	£ 39.94
28	Detailed Maintenance	£331.83			£ -	£ -	104567	£262		£ 331.83	£ 34.29
29	Detailed Maintenance	£339.75			£ -	£ -	106241	£266		£ 339.75	£ 28.68
30	Detailed Maintenance	£349.75			£ -	£ -	107940	£271		£ 349.75	£ 23.11
31	Detailed Maintenance	£359.75			£ -	£ -	109667	£275		£ 359.75	£ 17.58
32	Detailed Maintenance	£369.66	1		£ 58,509.00	£ -	111422	£279		£ 369.66	£ 12.09
33	Detailed Maintenance	£379.89			£ -	£ -	113205	£284		£ 379.89	£ 6.64
34	Detailed Maintenance	£390.45			£ -	£ -	115016	£288		£ 390.45	£ 1.21
35	Detailed Maintenance	£401.35			£ -	£ -	116856	£293		£ 401.35	£ -0.20
36	Detailed Maintenance	£412.60			£ -	£ -	118726	£298		£ 412.60	£ -0.71
37	Detailed Maintenance	£424.21			£ -	£ -	120626	£302		£ 424.21	£ -1.22
38	Detailed Maintenance	£436.27			£ -	£ -	122556	£307		£ 436.27	£ -1.73
39	Detailed Maintenance	£448.79			£ -	£ -	124517	£312		£ 448.79	£ -2.24
40	Detailed Maintenance	£461.77	1		£ 58,509.00	£ -	126509	£317		£ 461.77	£ -2.75
41	Detailed Maintenance	£475.21			£ -	£ -	128533	£322		£ 475.21	£ -3.26
42	Detailed Maintenance	£489.11			£ -	£ -	130590	£327		£ 489.11	£ -3.77
43	Detailed Maintenance	£503.47			£ -	£ -	132679	£333		£ 503.47	£ -4.28
44	Detailed Maintenance	£518.29			£ -	£ -	134802	£338		£ 518.29	£ -4.79
45	Detailed Maintenance	£533.57			£ -	£ -	136959	£343		£ 533.57	£ -5.30
46	Detailed Maintenance	£549.31			£ -	£ -	139150	£349		£ 549.31	£ -5.81
47	Detailed Maintenance	£565.51			£ -	£ -	141376	£354		£ 565.51	£ -6.32
48	Detailed Maintenance	£582.17			£ -	£ -	143638	£360		£ 582.17	£ -6.83
49	Detailed Maintenance	£599.29			£ -	£ -	145937	£366		£ 599.29	£ -7.34
50	Detailed Maintenance	£616.87			£ -	£ -	148272	£372	£248,119.75	£ 616.87	£ -7.85
										£ 896,327.66	£ 560,918.21

Table K5h: Whole Life Cost of Slipformed HVCB, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	SFHVCB
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&A CW Average)	67046
Number of repairs required	0

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,190.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £	In Hours
Materials and Labour	£356,996.00	240.00
Traffic Management (total for installation)	£181,502.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£30,800.00	170.00
Traffic Management	£177,264.17	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour		
Traffic Management (total for installation)		
Traffic Delay (QUADRO Costs) - 24hours		

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebanded	Crossover	Retained	Rebanded	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

*Detailed inspection frequency is as required by BS7669:3:1994
Additional costs may be incurred due to the presence of services below carriageway level.
Additional costs may also be incurred if installation is on a curved section of road.
Exterior Paintwork schedule in accordance with BD 36/92*

Present Value: £ 795,640.78

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 578,838.00	1		£ 58,509.00	£ -	67046	£168		£ 637,347.00	£ 637,347.00
1	Detailed Maintenance	£226.01			£ -	£ -	68119	£171		£ 226.01	£ 210.98
2	Detailed Maintenance	£231.60			£ -	£ -	69209	£174		£ 231.60	£ 201.83
3	Detailed Maintenance	£237.38			£ -	£ -	70316	£176		£ 237.38	£ 193.11
4	Detailed Maintenance	£243.34			£ -	£ -	71441	£179		£ 243.34	£ 184.80
5	Detailed Maintenance	£249.50	1		£ 58,509.00	£ -	72584	£182		£ 249.50	£ 176.59
6	Detailed Maintenance	£255.85			£ -	£ -	73745	£185		£ 255.85	£ 169.32
7	Detailed Maintenance	£262.41			£ -	£ -	74925	£188		£ 262.41	£ 162.11
8	Detailed Maintenance	£269.18			£ -	£ -	76124	£191		£ 269.18	£ 155.24
9	Detailed Maintenance	£276.17			£ -	£ -	77342	£194		£ 276.17	£ 148.68
10	Detailed Maintenance	£283.39	1		£ 58,509.00	£ -	78580	£197		£ 283.39	£ 142.33
11	Detailed Maintenance	£290.83			£ -	£ -	79837	£200		£ 290.83	£ 136.44
12	Detailed Maintenance	£298.52			£ -	£ -	81114	£203		£ 298.52	£ 130.74
13	Detailed Maintenance	£306.46			£ -	£ -	82412	£207		£ 306.46	£ 125.29
14	Detailed Maintenance	£314.65			£ -	£ -	83731	£210		£ 314.65	£ 120.09
15	Detailed Maintenance	£323.11	1		£ 58,509.00	£ -	85070	£213		£ 323.11	£ 115.14
16	Detailed Maintenance	£331.83			£ -	£ -	86432	£217		£ 331.83	£ 110.36
17	Detailed Maintenance	£340.84			£ -	£ -	87814	£220		£ 340.84	£ 105.82
18	Detailed Maintenance	£350.14			£ -	£ -	89219	£224		£ 350.14	£ 101.48
19	Detailed Maintenance	£359.75			£ -	£ -	90647	£227		£ 359.75	£ 97.33
20	Detailed Maintenance	£369.66	1		£ 58,509.00	£ -	92097	£231		£ 369.66	£ 93.33
21	Detailed Maintenance	£379.89			£ -	£ -	93571	£235		£ 379.89	£ 89.57
22	Detailed Maintenance	£390.45			£ -	£ -	95068	£238		£ 390.45	£ 85.94
23	Detailed Maintenance	£401.35			£ -	£ -	96589	£242		£ 401.35	£ 82.46
24	Detailed Maintenance	£412.60			£ -	£ -	98135	£246		£ 412.60	£ 79.14
25	Detailed Maintenance				£ -	£ -	99705	£250		£ -	£ -
26	Detailed Maintenance				£ -	£ -	101300	£254		£ -	£ -
27	Detailed Maintenance				£ -	£ -	102921	£258		£ -	£ -
28	Detailed Maintenance				£ -	£ -	104567	£262		£ -	£ -
29	Detailed Maintenance				£ -	£ -	106241	£266		£ -	£ -
30	Detailed Maintenance		1		£ 58,509.00	£ -	107940	£271		£ 58,832.11	£ 20,960.61
31	Detailed Maintenance				£ -	£ -	109667	£275		£ -	£ -
32	Detailed Maintenance				£ -	£ -	111422	£279		£ -	£ -
33	Detailed Maintenance				£ -	£ -	113205	£284		£ -	£ -
34	Detailed Maintenance				£ -	£ -	115016	£288		£ -	£ -
35	Detailed Maintenance				£ -	£ -	116856	£293		£ -	£ -
36	Detailed Maintenance				£ -	£ -	118726	£298		£ -	£ -
37	Detailed Maintenance				£ -	£ -	120626	£302		£ -	£ -
38	Detailed Maintenance				£ -	£ -	122556	£307		£ -	£ -
39	Detailed Maintenance				£ -	£ -	124517	£312		£ -	£ -
40	Detailed Maintenance		1		£ 58,509.00	£ -	126509	£317		£ 58,878.66	£ 14,871.13
41	Detailed Maintenance				£ -	£ -	128533	£322		£ -	£ -
42	Detailed Maintenance				£ -	£ -	130590	£327		£ 379.89	£ 89.57
43	Detailed Maintenance				£ -	£ -	132679	£333		£ -	£ -
44	Detailed Maintenance				£ -	£ -	134802	£338		£ 390.45	£ 85.94
45	Detailed Maintenance				£ -	£ -	136959	£343		£ -	£ -
46	Detailed Maintenance				£ -	£ -	139150	£349		£ 401.35	£ 82.46
47	Detailed Maintenance				£ -	£ -	141376	£354		£ -	£ -
48	Detailed Maintenance				£ -	£ -	143638	£360		£ 412.60	£ 79.14
49	Detailed Maintenance				£ -	£ -	145937	£366		£ -	£ -
50	Detailed Maintenance				£ -	£ -	148272	£372	£271,255.71	£ 271,255.71	£ 48,569.25
										£ 1,150,043.62	£ 795,640.78

Table K5i: Whole Life Cost of Slipformed Dutch Step Barrier, 5 Retained Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	DSB
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&A CW Average)	67046
Number of repairs required	0

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,140.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£58,509.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £	In Hours
Materials and Labour	£156,996.00	20.00
Traffic Management (total for installation)	£170,682.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£20,000.00	16.00
Traffic Management	£138,506.67	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour		
Traffic Management (total for installation)		
Traffic Delay (QUADRO Costs) - 24hours		

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounced	Crossover	Retained	Rebounced	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

Detailed inspection frequency is as required by BS7669:3:1994
 Additional costs may be incurred due to the presence of services below carriageway level.
 Additional costs may also be incurred if installation is on a curved section of road.
 Exterior Paintworking schedule in accordance with BD 36/92

Present Value: £ 528,719.26

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 331,039.67	1		£ 58,509.00	£ -	67046	£168		£ 389,548.67	£ 389,548.67
1					£ -	£ -	68119	£171		£ -	£ -
2	Detailed Maintenance	£ 226.01			£ -	£ -	69209	£174		£ 226.01	£ 210.98
3					£ -	£ -	70316	£176		£ -	£ -
4	Detailed Maintenance	£ 231.60			£ -	£ -	71441	£179		£ 231.60	£ 201.83
5					£ -	£ -	72584	£182		£ -	£ -
6	Detailed Maintenance	£ 237.38			£ -	£ -	73745	£185		£ 237.38	£ 193.11
7					£ -	£ -	74925	£188		£ -	£ -
8	Detailed Maintenance	£ 243.34			£ -	£ -	76124	£191		£ 243.34	£ 184.80
9					£ -	£ -	77342	£194		£ -	£ -
10	Detailed Maintenance	£ 249.50	1		£ 58,509.00	£ -	78580	£197		£ 58,758.50	£ 41,655.00
11					£ -	£ -	79837	£200		£ -	£ -
12	Detailed Maintenance	£ 255.85			£ -	£ -	81114	£203		£ 255.85	£ 169.32
13					£ -	£ -	82412	£207		£ -	£ -
14	Detailed Maintenance	£ 262.41			£ -	£ -	83731	£210		£ 262.41	£ 162.11
15					£ -	£ -	85070	£213		£ -	£ -
16	Detailed Maintenance	£ 269.18			£ -	£ -	86432	£217		£ 269.18	£ 155.24
17					£ -	£ -	87814	£220		£ -	£ -
18	Detailed Maintenance	£ 276.17			£ -	£ -	89219	£224		£ 276.17	£ 148.68
19					£ -	£ -	90647	£227		£ -	£ -
20	Detailed Maintenance	£ 283.39	1		£ 58,509.00	£ -	92097	£231		£ 58,792.39	£ 29,547.05
21					£ -	£ -	93571	£235		£ -	£ -
22	Detailed Maintenance	£ 290.83			£ -	£ -	95068	£238		£ 290.83	£ 136.45
23					£ -	£ -	96589	£242		£ -	£ -
24	Detailed Maintenance	£ 298.52			£ -	£ -	98135	£246		£ 298.52	£ 130.74
25					£ -	£ -	99705	£250		£ -	£ -
26	Detailed Maintenance	£ 306.46			£ -	£ -	101300	£254		£ 306.46	£ 125.29
27					£ -	£ -	102921	£258		£ -	£ -
28	Detailed Maintenance	£ 314.65			£ -	£ -	104567	£262		£ 314.65	£ 120.09
29					£ -	£ -	106241	£266		£ -	£ -
30	Detailed Maintenance	£ 323.11	1		£ 58,509.00	£ -	107940	£271		£ 58,832.11	£ 20,960.61
31					£ -	£ -	109667	£275		£ -	£ -
32	Detailed Maintenance	£ 331.83			£ -	£ -	111422	£279		£ 331.83	£ 110.36
33					£ -	£ -	113205	£284		£ -	£ -
34	Detailed Maintenance	£ 340.84			£ -	£ -	115016	£288		£ 340.84	£ 105.82
35					£ -	£ -	116856	£293		£ -	£ -
36	Detailed Maintenance	£ 350.14			£ -	£ -	118726	£298		£ 350.14	£ 101.48
37					£ -	£ -	120626	£302		£ -	£ -
38	Detailed Maintenance	£ 359.75			£ -	£ -	122556	£307		£ 359.75	£ 97.33
39					£ -	£ -	124517	£312		£ -	£ -
40	Detailed Maintenance	£ 369.66	1		£ 58,509.00	£ -	126509	£317		£ 58,878.66	£ 14,871.13
41					£ -	£ -	128533	£322		£ -	£ -
42	Detailed Maintenance	£ 379.89			£ -	£ -	130590	£327		£ 379.89	£ 89.57
43					£ -	£ -	132679	£333		£ -	£ -
44	Detailed Maintenance	£ 390.45			£ -	£ -	134802	£338		£ 390.45	£ 85.94
45					£ -	£ -	136959	£343		£ -	£ -
46	Detailed Maintenance	£ 401.35			£ -	£ -	139150	£349		£ 401.35	£ 82.46
47					£ -	£ -	141376	£354		£ -	£ -
48	Detailed Maintenance	£ 412.60			£ -	£ -	143638	£360		£ 412.60	£ 79.14
49					£ -	£ -	145937	£366		£ -	£ -
50					£ -	£ -	148272	£372	£164,454.11	£ 164,454.11	£ 29,446.06
										£ 795,443.67	£ 528,719.26

Table K5j: Whole Life Cost of VCB, 5 Crossover Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	SFVCB
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	5

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,190.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£146,276.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £	In Hours
Materials and Labour	£151,996.00	120.00
Traffic Management (total for installation)	£176,092.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£16,000.00	150.00
Traffic Management	£176,362.50	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour	£414.45	£0.02
Traffic Management (total for installation)	£10,008.15	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounced	Crossover	Retained	Rebounced	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

*Detailed inspection frequency is as required by BS7669:3:1994
Additional costs may be incurred due to the presence of services below carriageway level.
Additional costs may also be incurred if installation is on a curved section of road.
Exterior Paintworking schedule in accordance with BD 36/92*

Present Value: £ 837,856.64

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 348,258.00	1	1	£ 146,276.00	£ 10,425.63	67046	£168		£ 504,959.63	£ 504,959.63
1	Detailed Maintenance	£226.01					68119	£171		£ 226.01	£ 210.98
2	Detailed Maintenance						69209	£174		£ -	£ -
3	Detailed Maintenance						70316	£176		£ -	£ -
4	Detailed Maintenance	£231.60					71441	£179		£ 231.60	£ 201.83
5	Detailed Maintenance						72584	£182		£ -	£ -
6	Detailed Maintenance	£237.38					73745	£185		£ 237.38	£ 193.11
7	Detailed Maintenance						74925	£188		£ -	£ -
8	Detailed Maintenance	£243.34					76124	£191		£ 243.34	£ 184.80
9	Detailed Maintenance						77342	£194		£ -	£ -
10	Detailed Maintenance	£249.50	1	1	£ 146,276.00	£ 10,426.15	78580	£197		£ 156,951.65	£ 111,265.97
11	Detailed Maintenance						79837	£200		£ -	£ -
12	Detailed Maintenance	£255.85					81114	£203		£ 255.85	£ 169.32
13	Detailed Maintenance						82412	£207		£ -	£ -
14	Detailed Maintenance	£262.41					83731	£210		£ 262.41	£ 162.11
15	Detailed Maintenance						85070	£213		£ -	£ -
16	Detailed Maintenance	£269.18					86432	£217		£ 269.18	£ 155.24
17	Detailed Maintenance						87814	£220		£ -	£ -
18	Detailed Maintenance	£276.17					89219	£224		£ 276.17	£ 148.68
19	Detailed Maintenance						90647	£227		£ -	£ -
20	Detailed Maintenance	£283.39	1	1	£ 146,276.00	£ 10,426.76	92097	£231		£ 156,986.15	£ 78,895.88
21	Detailed Maintenance						93571	£235		£ -	£ -
22	Detailed Maintenance	£290.83					95068	£238		£ 290.83	£ 136.44
23	Detailed Maintenance						96589	£242		£ -	£ -
24	Detailed Maintenance	£298.52					98135	£246		£ 298.52	£ 130.74
25	Detailed Maintenance						99705	£250		£ -	£ -
26	Detailed Maintenance	£306.46					101300	£254		£ 306.46	£ 125.29
27	Detailed Maintenance						102921	£258		£ -	£ -
28	Detailed Maintenance	£314.65					104567	£262		£ 314.65	£ 120.09
29	Detailed Maintenance						106241	£266		£ -	£ -
30	Detailed Maintenance	£323.11	1	1	£ 146,276.00	£ 10,427.47	107940	£271		£ 157,026.58	£ 55,945.18
31	Detailed Maintenance						109667	£275		£ -	£ -
32	Detailed Maintenance	£331.83					111422	£279		£ 331.83	£ 110.36
33	Detailed Maintenance						113205	£284		£ -	£ -
34	Detailed Maintenance	£340.84					115016	£288		£ 340.84	£ 105.82
35	Detailed Maintenance						116856	£293		£ -	£ -
36	Detailed Maintenance	£350.14					118726	£298		£ 350.14	£ 101.48
37	Detailed Maintenance						120626	£302		£ -	£ -
38	Detailed Maintenance	£359.75					122556	£307		£ 359.75	£ 97.33
39	Detailed Maintenance						124517	£312		£ -	£ -
40	Detailed Maintenance	£369.66	1	1	£ 146,276.00	£ 10,428.31	126509	£317		£ 157,073.97	£ 39,672.56
41	Detailed Maintenance						128533	£322		£ -	£ -
42	Detailed Maintenance	£379.89					130590	£327		£ 379.89	£ 89.57
43	Detailed Maintenance						132679	£333		£ -	£ -
44	Detailed Maintenance	£390.45					134802	£338		£ 390.45	£ 85.94
45	Detailed Maintenance						136959	£343		£ -	£ -
46	Detailed Maintenance	£401.35					139150	£349		£ 401.35	£ 82.46
47	Detailed Maintenance						141376	£354		£ -	£ -
48	Detailed Maintenance	£412.60					143638	£360		£ 412.60	£ 79.14
49	Detailed Maintenance						145937	£366		£ -	£ -
50	Detailed Maintenance						148272	£372	£248,119.75	£ 248,119.75	£ 44,426.68
										£ 1,387,296.96	£ 837,856.64

Table K5k: Whole Life Cost of HVCB, 15 Crossover Accidents

Whole Life Cost Assessment for Safety Barriers

Barrier Type	SFHVCB
Road Type	D3M
Time of Repairs	Night
Duration of Works (hours)	6
Base Length (m)	1000
Percentage HGV	8.3
Number of Accidents during WL	0
Discount Rate Applied	0.035
Traffic Flow (CW&CW Average)	67046
Number of repairs required	15

HM Treasury's 'The Green Book', July 2002, recommends 3.5%

Accident Severity	Accident Costs-Property Damage	Casualty Costs
Fatal	£1,357,170.00	£1,194,240.00
Serious	£157,120.00	£134,140.00
Slight	£13,840.00	£10,350.00
Average (taking %ages into account)	£146,276.00	

Costs extracted from the Highways Economic Note, 2001

Installation Cost	In £	In Hours
Materials and Labour	£356,996.00	240.00
Traffic Management (total for installation)	£181,502.00	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Removal Cost		
Labour	£30,800.00	170.00
Traffic Management	£177,264.17	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	
Repair Cost		
Materials and Labour	£2,302.50	£0.03
Traffic Management (total for installation)	£10,008.22	
Traffic Delay (QUADRO Costs) - 24hours	£4,034.00	

From STATS19 Data:	Probability of accident (%)			Predicted Number of accidents		
	Retained	Rebounced	Crossover	Retained	Rebounced	Crossover
Severity of Casualty						
Fatal	1.8	2.2	7.3	0	0	0
Serious	14.8	14.5	24	HGV	Car	
Slight	83.9	83.3	68.6	0	0	

*Detailed inspection frequency is as required by BS7669:3:1994
Additional costs may be incurred due to the presence of services below carriageway level.
Additional costs may also be incurred if installation is on a curved section of road.
Exterior Paintwork schedule in accordance with BD 36/92*

Present Value: £ 1,868,303.65

Intervention Year	Description of Works	Additional Cost of Works	No. of Accidents	No. of Repairs	Accident Costs	Cost of Repair	Traffic Flow	Quadro Cost, per hour	Removal Costs	Undiscounted Cost	Present Value
0	Installation Costs	£ 578,838.00	1	1	£ 146,276.00	£ 12,315.76	67046	£168		£ 737,429.76	£ 737,429.76
1	Detailed Maintenance	£226.01			£ -	£ -	68119	£171		£ 226.01	£ 210.98
2	Detailed Maintenance	£231.60			£ 146,276.00	£ 12,316.01	69209	£174		£ 158,592.01	£ 143,040.91
3	Detailed Maintenance	£237.38			£ -	£ -	70316	£176		£ 231.60	£ 201.83
4	Detailed Maintenance	£243.34			£ 146,276.00	£ 12,316.27	71441	£179		£ 158,829.65	£ 129,208.02
5	Detailed Maintenance	£249.50			£ -	£ -	72584	£182		£ 243.34	£ 184.80
6	Detailed Maintenance	£255.85			£ 146,276.00	£ 12,316.82	73745	£185		£ 158,592.54	£ 116,364.26
7	Detailed Maintenance	£262.41			£ -	£ -	74925	£188		£ 249.50	£ 176.88
8	Detailed Maintenance	£269.18			£ 146,276.00	£ 12,317.12	76124	£191		£ 158,848.67	£ 105,123.40
9	Detailed Maintenance	£276.17			£ -	£ -	77342	£194		£ 262.41	£ 162.11
10	Detailed Maintenance	£283.39			£ 146,276.00	£ 12,317.43	78580	£197		£ 158,593.12	£ 94,662.74
11	Detailed Maintenance	£290.83			£ -	£ -	79837	£200		£ 269.18	£ 155.24
12	Detailed Maintenance	£298.52			£ 146,276.00	£ 12,317.76	81144	£203		£ 158,869.60	£ 85,529.22
13	Detailed Maintenance	£306.46			£ -	£ -	82412	£207		£ 283.39	£ 142.42
14	Detailed Maintenance	£314.65			£ 146,276.00	£ 12,318.46	83731	£210		£ 158,593.76	£ 77,008.51
15	Detailed Maintenance	£323.11			£ -	£ -	85070	£213		£ 290.83	£ 136.44
16	Detailed Maintenance	£331.83			£ 146,276.00	£ 12,319.65	86432	£217		£ 158,869.60	£ 69,529.22
17	Detailed Maintenance	£340.84			£ -	£ -	87814	£220		£ 314.65	£ 120.09
18	Detailed Maintenance	£350.14			£ 146,276.00	£ 12,319.65	89219	£224		£ 158,917.95	£ 56,619.03
19	Detailed Maintenance	£359.75			£ -	£ -	90647	£227		£ 331.83	£ 110.36
20	Detailed Maintenance	£369.66			£ 146,276.00	£ 12,320.08	92097	£231		£ 158,595.23	£ 50,963.42
21	Detailed Maintenance	£379.89			£ -	£ -	93571	£235		£ 340.84	£ 105.82
22	Detailed Maintenance	£390.45			£ 146,276.00	£ 12,319.65	95068	£238		£ 158,945.79	£ 46,067.69
23	Detailed Maintenance	£401.35			£ -	£ -	96589	£242		£ 359.75	£ 97.33
24	Detailed Maintenance	£412.60			£ 146,276.00	£ 12,320.54	98135	£246		£ 158,596.08	£ 41,459.00
25	Detailed Maintenance	£424.10			£ -	£ -	99705	£250		£ 369.66	£ 93.37
26	Detailed Maintenance	£436.85			£ 146,276.00	£ 12,321.02	101300	£254		£ 158,976.43	£ 37,483.32
27	Detailed Maintenance	£450.85			£ -	£ -	102921	£258		£ 412.60	£ 79.14
28	Detailed Maintenance	£466.10			£ 146,276.00	£ 12,321.02	104567	£262		£ 158,597.02	£ 33,727.12
29	Detailed Maintenance	£482.60			£ -	£ -	106241	£266		£ 450.85	£ 82.46
30	Detailed Maintenance	£500.35			£ 146,276.00	£ 12,321.02	107940	£271		£ 158,976.43	£ 30,967.25
31	Detailed Maintenance	£519.35			£ -	£ -	109667	£275		£ 500.35	£ 74.14
32	Detailed Maintenance	£540.60			£ 146,276.00	£ 12,321.02	111422	£279		£ 158,597.02	£ 28,212.25
33	Detailed Maintenance	£563.10			£ -	£ -	113205	£284		£ 540.60	£ 66.82
34	Detailed Maintenance	£586.85			£ 146,276.00	£ 12,321.02	115016	£288		£ 158,976.43	£ 25,762.38
35	Detailed Maintenance	£612.85			£ -	£ -	116856	£293		£ 563.10	£ 59.50
36	Detailed Maintenance	£640.10			£ 146,276.00	£ 12,321.02	118726	£298		£ 158,597.02	£ 25,762.38
37	Detailed Maintenance	£668.60			£ -	£ -	120626	£302		£ 612.85	£ 52.14
38	Detailed Maintenance	£708.35			£ 146,276.00	£ 12,320.08	122556	£307		£ 158,976.43	£ 23,212.25
39	Detailed Maintenance	£759.35			£ -	£ -	124517	£312		£ 708.35	£ 46.82
40	Detailed Maintenance	£821.60			£ 146,276.00	£ 12,320.08	126509	£317		£ 158,597.02	£ 22,762.38
41	Detailed Maintenance	£885.10			£ -	£ -	128533	£322		£ 821.60	£ 41.46
42	Detailed Maintenance	£950.85			£ 146,276.00	£ 12,320.54	130590	£327		£ 158,976.43	£ 20,762.38
43	Detailed Maintenance	£1018.85			£ -	£ -	132679	£333		£ 950.85	£ 35.14
44	Detailed Maintenance	£1089.10			£ 146,276.00	£ 12,321.02	134802	£338		£ 158,597.02	£ 19,762.38
45	Detailed Maintenance	£1161.85			£ -	£ -	136959	£343		£ 1018.85	£ 29.82
46	Detailed Maintenance	£1237.10			£ 146,276.00	£ 12,321.02	139150	£349		£ 158,976.43	£ 18,762.38
47	Detailed Maintenance	£1314.85			£ -	£ -	141376	£354		£ 1161.85	£ 20.50
48	Detailed Maintenance	£1395.10			£ 146,276.00	£ 12,321.02	143638	£360		£ 158,597.02	£ 17,762.38
49	Detailed Maintenance	£1477.85			£ -	£ -	145937	£366		£ 1314.85	£ 15.14
50	Detailed Maintenance	£1563.10			£ 146,276.00	£ 12,321.02	148272	£372	£271,255.71	£ 271,255.71	£ 48,569.25
										£ 3,236,410.15	£ 1,868,303.65