

APPENDIX 5

NET PRESENT VALUE CALCULATIONS

NPV @ 8.0% p.a.														
APPRaisal DATE:		Nov-10												
OPTION NUMBER & TITLE:		Base case												
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
CAPITAL COSTS (£ 000s):	Add Row													
A. Total Capital Costs (Annual)		0	0	0	0	0	0	0	0	0	0	0	0	0
B. Total Capital Costs (Cumulative)		0	0	0	0	0	0	0	0	0	0	0	0	0
REVENUE COSTS (£ 000s):	Add Row													
Transition costs		365												
Additional organisational costs			1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
C. Total Revenue Costs (Annual)		365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
D. Total Revenue Costs (Cumulative)		365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
E. Total Costs (Annual) (=A+C)		365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
F. Total Costs (Cumulative) (=B+D)		365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
BENEFITS (£ 000s):	Add Row													
Additional operational cost savings			642	1284	1927	2569	3211	3211	3211	3211	3211	3211	3211	3211
G. Total Benefits (Annual)		0	642	1284	1927	2569	3211	3211	3211	3211	3211	3211	3211	3211
H. Total Benefits (Cumulative)		0	642	1927	3853	6422	9633	12844	16055	19266	22477	25688	28899	32110
NET UNDISCOUNTED COST* (=E-G)		365	607	-35	-678	-1320	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962
DISCOUNT FACTOR @ 8% p.a.		1.0000	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971
NET PRESENT COST* (Annual)		365	562	-30	-538	-970	-1335	-1236	-1145	-1060	-981	-909	-841	-779
NET PRESENT COST* (Cumulative)		365	927	897	359	-611	-1947	-3183	-4328	-5388	-6369	-7278	-8120	-8899
TOTAL NET PRESENT COST* =		-15057												
* A minus sign in these rows denotes a Net Present Value rather than a Net Present Cost.														

Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	TOTAL
													0
													0
													0
													0
													0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
													365
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31225
													0
													0
													0
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	73853
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	73853
35321	38532	41743	44954	48165	51376	54587	57798	61009	64220	67431	70642	73853	
-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-42263
0.3677	0.3405	0.3152	0.2919	0.2703	0.2502	0.2317	0.2145	0.1987	0.1839	0.1703	0.1577	0.1460	
-721	-668	-619	-573	-530	-491	-455	-421	-390	-361	-334	-309	-286	-15057
-9620	-10288	-10907	-11479	-12010	-12501	-12955	-13376	-13766	-14127	-14461	-14771	-15057	

NPV @ 8.0% p.a.													
APPRaisal DATE:		Nov-10											
OPTION NUMBER & TITLE:		Sensitivity 1 - Operational savings delayed											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
CAPITAL COSTS (£ 000s):													
A. Total Capital Costs (Annual)	0	0	0	0	0	0	0	0	0	0	0	0	0
B. Total Capital Costs (Cumulative)	0	0	0	0	0	0	0	0	0	0	0	0	0
REVENUE COSTS (£ 000s):													
Transition costs	365												
Additional organisational costs		1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
C. Total Revenue Costs (Annual)	365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
D. Total Revenue Costs (Cumulative)	365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
E. Total Costs (Annual) (=A+C)	365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
F. Total Costs (Cumulative) (=B+D)	365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
BENEFITS (£ 000s):													
Additional operational cost savings		321	642	963	1284	1606	1927	2248	2569	2890	3211	3211	3211
G. Total Benefits (Annual)	0	321	642	963	1284	1606	1927	2248	2569	2890	3211	3211	3211
H. Total Benefits (Cumulative)	0	321	963	1927	3211	4817	6743	8991	11560	14450	17661	20872	24083
NET UNDISCOUNTED COST* (=E-G)	365	928	607	286	-35	-357	-678	-999	-1320	-1641	-1962	-1962	-1962
DISCOUNT FACTOR @ 8% p.a.	1.0000	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971
NET PRESENT COST* (Annual)	365	859	520	227	-26	-243	-427	-583	-713	-821	-909	-841	-779
NET PRESENT COST* (Cumulative)	365	1224	1744	1971	1945	1703	1276	693	-20	-841	-1750	-2591	-3370
TOTAL NET PRESENT COST* =	-9529												
* A minus sign in these rows denotes a Net Present Value rather than a Net Present Cost.													

Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	TOTAL
													0
													0
													0
													0
													0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
													365
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31225
													0
													0
													0
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	65826
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	65826
27294	30505	33716	36927	40138	43349	46560	49771	52982	56193	59404	62615	65826	
-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-1962	-34236
0.3677	0.3405	0.3152	0.2919	0.2703	0.2502	0.2317	0.2145	0.1987	0.1839	0.1703	0.1577	0.1460	
-721	-668	-619	-573	-530	-491	-455	-421	-390	-361	-334	-309	-286	-9529
-4092	-4760	-5378	-5951	-6481	-6972	-7427	-7848	-8238	-8599	-8933	-9242	-9529	

NPV @ 8.0% p.a.													
APPRaisal DATE:		Nov-10											
OPTION NUMBER & TITLE:		Sensitivity 2 - Operational gains lower than forecast											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
CAPITAL COSTS (£ 000s):													
A. Total Capital Costs (Annual)	0	0	0	0	0	0	0	0	0	0	0	0	0
B. Total Capital Costs (Cumulative)	0	0	0	0	0	0	0	0	0	0	0	0	0
REVENUE COSTS (£ 000s):													
Transition costs	365												
Additional organisational costs		1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
C. Total Revenue Costs (Annual)	365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
D. Total Revenue Costs (Cumulative)	365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
E. Total Costs (Annual) (=A+C)	365	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249
F. Total Costs (Cumulative) (=B+D)	365	1614	2863	4112	5361	6610	7859	9108	10357	11606	12855	14104	15353
BENEFITS (£ 000s):													
Additional operational cost savings		42	84	127	169	211	211	211	211	211	211	211	211
G. Total Benefits (Annual)	0	42	84	127	169	211	211	211	211	211	211	211	211
H. Total Benefits (Cumulative)	0	42	127	253	422	633	844	1055	1266	1477	1688	1899	2110
NET UNDISCOUNTED COST* (=E-G)	365	1207	1165	1122	1080	1038	1038	1038	1038	1038	1038	1038	1038
DISCOUNT FACTOR @ 8% p.a.	1.0000	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971
NET PRESENT COST* (Annual)	365	1117	998	891	794	706	654	606	561	519	481	445	412
NET PRESENT COST* (Cumulative)	365	1482	2481	3372	4166	4872	5526	6132	6693	7212	7693	8138	8550
TOTAL NET PRESENT COST* =	11808												
* A minus sign in these rows denotes a Net Present Value rather than a Net Present Cost.													

Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	TOTAL
													0
													0
													0
													0
													0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
													365
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31225
													0
													0
													0
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	1249	31590
16602	17851	19100	20349	21598	22847	24096	25345	26594	27843	29092	30341	31590	
													0
211	211	211	211	211	211	211	211	211	211	211	211	211	4853
													0
211	211	211	211	211	211	211	211	211	211	211	211	211	4853
2321	2532	2743	2954	3165	3376	3587	3798	4009	4220	4431	4642	4853	
1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	26737
0.3677	0.3405	0.3152	0.2919	0.2703	0.2502	0.2317	0.2145	0.1987	0.1839	0.1703	0.1577	0.1460	
382	353	327	303	281	260	241	223	206	191	177	164	152	11808
8932	9285	9613	9916	10196	10456	10696	10919	11125	11316	11493	11657	11808	

NPV @ 8.0% p.a.													
APPRaisal DATE:		Nov-10											
OPTION NUMBER & TITLE:		Sensitivity 3 - Agency costs higher than forecast											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
CAPITAL COSTS (£ 000s):													
A. Total Capital Costs (Annual)	0	0	0	0	0	0	0	0	0	0	0	0	0
B. Total Capital Costs (Cumulative)	0	0	0	0	0	0	0	0	0	0	0	0	0
REVENUE COSTS (£ 000s):													
Transition costs	365												
Additional organisational costs		2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498
C. Total Revenue Costs (Annual)	365	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498
D. Total Revenue Costs (Cumulative)	365	2863	5361	7859	10357	12855	15353	17851	20349	22847	25345	27843	30341
E. Total Costs (Annual) (=A+C)	365	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498
F. Total Costs (Cumulative) (=B+D)	365	2863	5361	7859	10357	12855	15353	17851	20349	22847	25345	27843	30341
BENEFITS (£ 000s):													
Additional operational cost savings		642	1284	1927	2569	3211	3211	3211	3211	3211	3211	3211	3211
G. Total Benefits (Annual)	0	642	1284	1927	2569	3211	3211	3211	3211	3211	3211	3211	3211
H. Total Benefits (Cumulative)	0	642	1927	3853	6422	9633	12844	16055	19266	22477	25688	28899	32110
NET UNDISCOUNTED COST* (=E-G)	365	1856	1214	571	-71	-713	-713	-713	-713	-713	-713	-713	-713
DISCOUNT FACTOR @ 8% p.a.	1.0000	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971
NET PRESENT COST* (Annual)	365	1718	1040	454	-52	-485	-449	-416	-385	-357	-330	-306	-283
NET PRESENT COST* (Cumulative)	365	2083	3124	3577	3525	3040	2591	2175	1790	1433	1103	797	514
TOTAL NET PRESENT COST* =	-1724												
* A minus sign in these rows denotes a Net Present Value rather than a Net Present Cost.													

Department for Regional Development
Review of Outline Business Case for Public Transport Reform
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Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	TOTAL
													0
													0
													0
													0
													0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
													365
2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	62450
													0
													0
													0
2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	62815
32839	35337	37835	40333	42831	45329	47827	50325	52823	55321	57819	60317	62815	
2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	2498	62815
32839	35337	37835	40333	42831	45329	47827	50325	52823	55321	57819	60317	62815	
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	73853
													0
3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	3211	73853
35321	38532	41743	44954	48165	51376	54587	57798	61009	64220	67431	70642	73853	
-713	-713	-713	-713	-713	-713	-713	-713	-713	-713	-713	-713	-713	-11038
0.3677	0.3405	0.3152	0.2919	0.2703	0.2502	0.2317	0.2145	0.1987	0.1839	0.1703	0.1577	0.1460	
-262	-243	-225	-208	-193	-178	-165	-153	-142	-131	-121	-112	-104	-1724
252	9	-216	-424	-617	-795	-960	-1113	-1255	-1386	-1508	-1620	-1724	