

Appendix E

Economic Assessment

IMPROVED BUS NETWORK (Land Use Option A)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs			Total Benefits	Total Costs
					CMK	Other			
2011	-8,831,998	3,076,223	3,822,138	3,698,871	10,157,038		-5,755,775	10,033,771	
2012	-8,988,762	3,074,091	3,819,489	3,696,308	0		-5,914,671	-123,181	
2013	-9,124,823	3,068,586	3,812,648	3,689,688	0		-6,056,237	-122,961	
2014	-9,241,403	3,059,937	3,801,903	3,679,289	0		-6,181,466	-122,614	
2015	-9,339,663	3,048,364	3,787,524	3,665,373	0		-6,291,299	-122,150	
2016	-9,420,710	3,034,075	3,769,770	3,648,192	0		-6,386,635	-121,578	
2017	-9,485,595	3,017,266	3,748,885	3,627,981	0		-6,468,329	-120,904	
2018	-9,535,319	2,998,125	3,725,102	3,604,965	0		-6,537,194	-120,137	
2019	-9,570,833	2,976,827	3,698,641	3,579,357	0		-6,594,005	-119,284	
2020	-9,593,040	2,953,542	3,669,709	3,551,358	0		-6,639,498	-118,351	
2021	-9,602,801	4,860,904	3,975,591	3,768,049	0		-4,741,896	-207,542	
2022	-8,584,011	4,755,276	4,008,110	3,960,877	0		-3,828,735	-47,233	
2023	-7,623,144	4,651,233	4,033,884	4,136,355	0		-2,971,910	102,471	
2024	-6,717,446	4,548,789	4,053,331	4,295,435	0		-2,168,657	242,104	
2025	-5,864,286	4,447,955	4,066,850	4,439,026	0		-1,416,332	372,176	
2026	-5,061,146	4,348,738	4,074,819	4,567,994	0		-712,408	493,175	
2027	-4,305,619	4,251,146	4,077,599	4,683,163	0		-54,473	605,564	
2028	-3,595,402	4,155,181	4,075,531	4,785,319	0		559,778	709,788	
2029	-2,928,296	4,060,844	4,068,940	4,875,210	0		1,132,549	806,270	
2030	-2,302,196	3,968,137	4,058,134	4,953,550	0		1,665,941	895,416	
2031	-1,715,093	3,877,056	4,043,406	5,021,016	0		2,161,963	977,610	
2032	-1,092,458	4,379,832	4,654,395	5,872,300	0		3,287,374	1,217,905	
2033	-260,888	4,299,023	4,651,711	5,956,146	0		4,038,135	1,304,435	
2034	523,167	4,219,206	4,645,236	6,030,126	0		4,742,373	1,384,890	
2035	1,261,771	4,140,391	4,635,191	6,094,744	0		5,402,162	1,459,553	
2036	1,956,905	4,062,588	4,621,791	6,150,482	0		6,019,493	1,528,691	
2037	2,610,476	3,985,804	4,605,239	6,197,803	0		6,596,280	1,592,564	
2038	3,224,314	3,910,047	4,585,731	6,237,149	0		7,134,362	1,651,419	
2039	3,800,181	3,835,322	4,563,452	6,268,946	0		7,635,503	1,705,494	
2040	4,339,766	3,761,633	4,538,581	6,293,599	0		8,101,399	1,755,019	
2041	4,844,696	3,667,196	3,808,539	4,729,363	0		8,511,892	920,824	
2042	5,550,377	3,597,634	3,734,587	4,637,531	0		9,148,012	902,944	
2043	6,210,842	3,529,013	3,661,711	4,547,036	0		9,739,855	885,325	
2044	6,828,124	3,461,338	3,589,913	4,457,878	0		10,289,461	867,965	
2045	7,404,179	3,394,611	3,519,191	4,370,057	0		10,798,789	850,866	
2046	7,940,885	3,328,834	3,449,543	4,283,570	0		11,269,719	834,027	
2047	8,440,045	3,264,009	3,380,967	4,198,413	0		11,704,054	817,446	
2048	8,903,391	3,200,137	3,313,459	4,114,583	0		12,103,528	801,124	
2049	9,332,586	3,137,217	3,247,015	4,032,075	0		12,469,803	785,060	
2050	9,729,227	3,075,246	3,181,631	3,950,883	0		12,804,473	769,251	
2051	10,094,845	3,014,225	3,117,302	3,870,999	0		13,109,070	753,698	
Total	-49,789,155	151,495,603	161,697,186	188,221,057	10,157,038	0	101,706,448	36,680,909	

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	2.77
NPV	£65,025,538

IMPROVED BUS NETWORK (Land Use Option B)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs		Total Benefits	Total Costs
					CMK	Other		
2011	-8,835,557	3,825,891	3,936,298	3,797,623	10,157,038	0	-5,009,666	10,018,363
2012	-9,033,186	3,823,111	3,933,438	3,794,863	0	0	-5,210,075	-138,574
2013	-9,207,345	3,816,144	3,926,270	3,787,948	0	0	-5,391,201	-138,322
2014	-9,359,395	3,805,277	3,915,088	3,777,160	0	0	-5,554,118	-137,928
2015	-9,490,632	3,790,780	3,900,173	3,762,771	0	0	-5,699,852	-137,402
2016	-9,602,290	3,772,912	3,881,790	3,745,035	0	0	-5,829,378	-136,755
2017	-9,695,544	3,751,918	3,860,190	3,724,196	0	0	-5,943,626	-135,994
2018	-9,771,510	3,728,029	3,835,611	3,700,483	0	0	-6,043,481	-135,128
2019	-9,831,250	3,701,465	3,808,281	3,674,116	0	0	-6,129,785	-134,165
2020	-9,875,777	3,672,435	3,778,413	3,645,300	0	0	-6,203,342	-133,113
2021	-9,906,049	5,733,228	4,088,414	3,880,871	0	0	-4,172,821	-207,542
2022	-8,900,797	5,555,616	4,122,263	4,078,528	0	0	-3,345,181	-43,735
2023	-7,952,205	5,383,460	4,149,147	4,258,378	0	0	-2,568,745	109,230
2024	-7,057,591	5,216,595	4,169,499	4,421,400	0	0	-1,840,996	251,901
2025	-6,214,388	5,054,859	4,183,730	4,568,527	0	0	-1,159,530	384,797
2026	-5,420,143	4,898,096	4,192,231	4,700,647	0	0	-522,047	508,416
2027	-4,672,509	4,746,155	4,195,372	4,818,608	0	0	73,646	623,235
2028	-3,969,240	4,598,889	4,193,507	4,923,214	0	0	629,649	729,707
2029	-3,308,193	4,456,156	4,186,970	5,015,236	0	0	1,147,962	828,266
2030	-2,687,315	4,317,816	4,176,080	5,095,404	0	0	1,630,501	919,324
2031	-2,104,646	4,183,738	4,161,139	5,164,415	0	0	2,079,092	1,003,276
2032	-1,724,393	4,687,648	4,790,150	6,039,599	0	0	2,963,255	1,249,448
2033	-1,065,392	4,564,060	4,787,608	6,125,451	0	0	3,498,668	1,337,843
2034	-443,316	4,443,695	4,781,150	6,201,179	0	0	4,000,378	1,420,029
2035	143,425	4,326,469	4,771,006	6,267,298	0	0	4,469,894	1,496,292
2036	696,364	4,212,302	4,757,398	6,324,306	0	0	4,908,667	1,566,908
2037	1,216,971	4,101,116	4,740,535	6,372,676	0	0	5,318,087	1,632,141
2038	1,706,661	3,992,833	4,720,618	6,412,863	0	0	5,699,494	1,692,245
2039	2,166,793	3,887,378	4,697,840	6,445,303	0	0	6,054,171	1,747,463
2040	2,598,673	3,784,680	4,672,384	6,470,413	0	0	6,383,353	1,798,029
2041	3,003,557	3,525,232	3,919,433	4,864,433	0	0	6,528,789	945,000
2042	3,656,565	3,458,363	3,843,328	4,769,978	0	0	7,114,928	926,650
2043	4,268,985	3,392,399	3,768,330	4,676,898	0	0	7,661,384	908,568
2044	4,842,629	3,327,343	3,694,442	4,585,194	0	0	8,169,972	890,753
2045	5,379,235	3,263,199	3,621,660	4,494,865	0	0	8,642,434	873,205
2046	5,880,474	3,199,969	3,549,984	4,405,907	0	0	9,080,443	855,923
2047	6,347,951	3,137,654	3,479,411	4,318,319	0	0	9,485,605	838,908
2048	6,783,208	3,076,254	3,409,938	4,232,095	0	0	9,859,463	822,157
2049	7,187,726	3,015,769	3,341,560	4,147,230	0	0	10,203,495	805,671
2050	7,562,924	2,956,198	3,274,272	4,063,719	0	0	10,519,122	789,447
2051	7,910,169	2,897,539	3,208,069	3,981,554	0	0	10,807,707	773,485
Total	-88,776,353	165,082,668	166,423,017	193,534,001	10,157,038	0	76,306,315	37,268,021

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	2.05
NPV	£39,038,293

BusWays (Land Use Option A)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs		Total Benefits	Total Costs
					CMK	Other		
2011	-8,831,060	3,075,960	3,822,138	3,698,871	10,157,038	0	-5,755,100	10,033,771
2012	-9,251,353	3,073,829	3,819,489	3,696,308	0	0	-6,177,524	-123,181
2013	-9,633,122	3,068,324	3,812,648	3,689,688	0	0	-6,564,798	-122,961
2014	-9,978,491	3,059,676	3,801,903	3,679,289	0	0	-6,918,815	-122,614
2015	-10,289,485	3,048,104	3,787,524	3,665,373	0	0	-7,241,381	-122,150
2016	-10,568,036	3,033,816	3,769,770	3,648,192	0	0	-7,534,220	-121,578
2017	-10,815,980	3,017,009	3,748,885	3,627,981	0	0	-7,798,972	-120,904
2018	-11,035,071	2,997,869	3,725,102	3,604,965	0	0	-8,037,202	-120,137
2019	-11,226,975	2,976,573	3,698,641	3,579,357	0	0	-8,250,401	-119,284
2020	-11,393,281	2,953,290	3,669,709	3,551,358	0	20,646,150	-8,439,991	20,527,799
2021	-11,535,500	8,068,550	3,975,591	3,768,049	0	19,947,971	-3,466,950	19,740,429
2022	-10,532,346	8,067,918	4,008,110	3,960,877	0	0	-2,464,428	-47,233
2023	-9,583,847	8,058,102	4,033,884	4,136,355	0	0	-1,525,745	102,471
2024	-8,687,453	8,039,724	4,053,331	4,295,435	0	0	-647,729	242,104
2025	-7,840,725	8,013,374	4,066,850	4,439,026	0	0	172,649	372,176
2026	-7,041,329	7,979,612	4,074,819	4,567,994	0	0	938,283	493,175
2027	-6,287,032	7,938,970	4,077,599	4,683,163	0	0	1,651,937	605,564
2028	-5,575,699	7,891,951	4,075,531	4,785,319	0	0	2,316,252	709,788
2029	-4,905,285	7,839,034	4,068,940	4,875,210	0	0	2,933,749	806,270
2030	-4,273,838	7,780,671	4,058,134	4,953,550	0	0	3,506,833	895,416
2031	-3,679,487	7,717,291	4,043,406	5,021,016	0	0	4,037,804	977,610
2032	-3,123,573	8,845,358	4,654,395	5,872,300	0	0	5,721,786	1,217,905
2033	-2,073,990	8,804,382	4,651,711	5,956,146	0	0	6,730,392	1,304,435
2034	-1,082,899	8,758,288	4,645,236	6,030,126	0	0	7,675,390	1,384,890
2035	-147,781	8,707,411	4,635,191	6,094,744	0	0	8,559,630	1,459,553
2036	733,782	8,652,067	4,621,791	6,150,482	0	0	9,385,850	1,528,691
2037	1,564,118	8,592,560	4,605,239	6,197,803	0	0	10,156,678	1,592,564
2038	2,345,462	8,529,180	4,585,731	6,237,149	0	0	10,874,642	1,651,419
2039	3,079,964	8,462,203	4,563,452	6,268,946	0	0	11,542,167	1,705,494
2040	3,769,689	8,391,891	4,538,581	6,293,599	0	0	12,161,581	1,755,019
2041	4,416,624	7,299,565	3,808,539	4,729,363	0	0	11,716,189	920,824
2042	5,306,789	7,161,102	3,734,587	4,637,531	0	0	12,467,891	902,944
2043	6,141,353	7,024,512	3,661,711	4,547,036	0	0	13,165,865	885,325
2044	6,922,800	6,889,803	3,589,913	4,457,878	0	0	13,812,603	867,965
2045	7,653,516	6,756,983	3,519,191	4,370,057	0	0	14,410,499	850,866
2046	8,335,793	6,626,055	3,449,543	4,283,570	0	0	14,961,847	834,027
2047	8,971,833	6,497,021	3,380,967	4,198,413	0	0	15,468,854	817,446
2048	9,563,750	6,369,883	3,313,459	4,114,583	0	0	15,933,633	801,124
2049	10,113,576	6,244,639	3,247,015	4,032,075	0	0	16,358,215	785,060
2050	10,623,259	6,121,287	3,181,631	3,950,883	0	0	16,744,547	769,251
2051	11,094,673	5,999,824	3,117,302	3,870,999	0	0	17,094,497	753,698
Total	-88,756,652	268,433,659	161,697,186	188,221,057	10,157,038	40,594,120	179,677,008	77,275,030

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	2.33
NPV	£102,401,978

BusWays (Land Use Option B)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs		Total Benefits	Total Costs
					CMK	Other		
2011	-8,835,557	3,825,891	3,936,298	3,797,623	10,157,038	0	-5,009,666	10,018,363
2012	-9,568,952	3,823,111	3,933,438	3,794,863	0	0	-5,745,841	-138,574
2013	-10,242,642	3,816,144	3,926,270	3,787,948	0	0	-6,426,497	-138,322
2014	-10,859,825	3,805,277	3,915,088	3,777,160	0	0	-7,054,548	-137,928
2015	-11,423,553	3,790,780	3,900,173	3,762,771	0	0	-7,632,773	-137,402
2016	-11,936,736	3,772,912	3,881,790	3,745,035	0	0	-8,163,824	-136,755
2017	-12,402,148	3,751,918	3,860,190	3,724,196	0	0	-8,650,230	-135,994
2018	-12,822,432	3,728,029	3,835,611	3,700,483	0	0	-9,094,403	-135,128
2019	-13,200,109	3,701,465	3,808,281	3,674,116	0	0	-9,498,644	-134,165
2020	-13,537,579	3,672,435	3,778,413	3,645,300	0	20,646,150	-9,865,144	20,513,037
2021	-13,837,130	9,017,402	4,088,414	3,880,871	0	19,947,971	-4,819,728	19,740,429
2022	-12,535,016	8,866,976	4,122,263	4,078,528	0	0	-3,668,040	-43,735
2023	-11,305,143	8,716,412	4,149,147	4,258,378	0	0	-2,588,732	109,230
2024	-10,144,117	8,565,891	4,169,499	4,421,400	0	0	-1,578,226	251,901
2025	-9,048,685	8,415,582	4,183,730	4,568,527	0	0	-633,103	384,797
2026	-8,015,741	8,265,644	4,192,231	4,700,647	0	0	249,903	508,416
2027	-7,042,310	8,116,223	4,195,372	4,818,608	0	0	1,073,913	623,235
2028	-6,125,548	7,967,455	4,193,507	4,923,214	0	0	1,841,907	729,707
2029	-5,262,736	7,819,468	4,186,970	5,015,236	0	0	2,556,731	828,266
2030	-4,451,274	7,672,378	4,176,080	5,095,404	0	0	3,221,104	919,324
2031	-3,688,675	7,526,295	4,161,139	5,164,415	0	0	3,837,619	1,003,276
2032	-3,173,907	8,535,474	4,695,555	6,039,599	0	0	5,361,567	1,344,043
2033	-2,161,759	8,409,841	4,603,928	6,125,451	0	0	6,248,082	1,521,523
2034	-1,205,879	8,284,285	4,513,655	6,201,179	0	0	7,078,407	1,687,524
2035	-303,847	8,158,909	4,424,735	6,267,298	0	0	7,855,062	1,842,563
2036	546,662	8,033,809	4,337,165	6,324,306	0	0	8,580,471	1,987,140
2037	1,347,885	7,909,074	4,250,943	6,372,676	0	0	9,256,959	2,121,732
2038	2,101,971	7,784,790	4,166,065	6,412,863	0	0	9,886,762	2,246,798
2039	2,810,986	7,661,037	4,082,524	6,445,303	0	0	10,472,023	2,362,778
2040	3,476,916	7,537,888	4,000,316	6,470,413	0	0	11,014,804	2,470,097
2041	4,101,670	6,284,161	3,919,433	4,864,433	0	0	10,385,830	945,000
2042	4,960,037	6,164,958	3,843,328	4,769,978	0	0	11,124,995	926,650
2043	5,764,923	6,047,369	3,768,330	4,676,898	0	0	11,812,292	908,568
2044	6,518,715	5,931,399	3,694,442	4,585,194	0	0	12,450,113	890,753
2045	7,223,705	5,817,054	3,621,660	4,494,865	0	0	13,040,760	873,205
2046	7,882,099	5,704,339	3,549,984	4,405,907	0	0	13,586,437	855,923
2047	8,496,011	5,593,254	3,479,411	4,318,319	0	0	14,089,265	838,908
2048	9,067,475	5,483,802	3,409,938	4,232,095	0	0	14,551,276	822,157
2049	9,598,442	5,375,980	3,341,560	4,147,230	0	0	14,974,422	805,671
2050	10,090,786	5,269,787	3,274,272	4,063,719	0	0	15,360,573	789,447
2051	10,546,308	5,165,220	3,208,069	3,981,554	0	0	15,711,527	773,485
Total	-118,596,709	263,790,116	162,779,217	193,534,001	10,157,038	40,594,120	145,193,407	81,505,942

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	1.78
NPV	£63,687,465

Guided Light Transit (Land Use Option A)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs			Total Benefits	Total Costs
					CMK	Other			
2011	-8,831,998	3,076,223	3,822,138	3,698,871	10,157,038	0	-5,755,775	10,033,771	
2012	-9,332,228	3,074,091	3,819,489	3,696,308	0	0	-6,258,136	-123,181	
2013	-9,788,525	3,068,586	3,812,648	3,689,688	0	0	-6,719,940	-122,961	
2014	-10,203,290	3,059,937	3,801,903	3,679,289	0	0	-7,143,353	-122,614	
2015	-10,578,810	3,048,364	3,787,524	3,665,373	0	0	-7,530,445	-122,150	
2016	-10,917,264	3,034,075	3,769,770	3,648,192	0	0	-7,883,189	-121,578	
2017	-11,220,730	3,017,266	3,748,885	3,627,981	0	0	-8,203,464	-120,904	
2018	-11,491,187	2,998,125	3,725,102	3,604,965	0	0	-8,493,062	-120,137	
2019	-11,730,521	2,976,827	3,698,641	3,579,357	0	69,725,672	-8,753,694	69,606,388	
2020	-11,940,528	2,953,542	3,669,709	3,551,358	0	67,367,799	-8,986,986	67,249,448	
2021	-12,122,917	9,430,446	3,975,591	7,489,995	0	65,089,661	-2,692,471	68,604,066	
2022	-11,097,729	9,485,139	4,008,110	7,892,654	0	0	-1,612,591	3,884,544	
2023	-10,128,016	9,525,348	4,033,884	8,259,515	0	0	-602,667	4,225,631	
2024	-9,211,195	9,551,992	4,053,331	8,592,539	0	0	340,797	4,539,208	
2025	-8,344,800	9,565,941	4,066,850	8,893,594	0	0	1,221,140	4,826,744	
2026	-7,526,469	9,568,023	4,074,819	9,164,462	0	0	2,041,554	5,089,642	
2027	-6,753,940	9,559,025	4,077,599	9,406,839	0	0	2,805,085	5,329,241	
2028	-6,025,053	9,539,694	4,075,531	9,622,345	0	0	3,514,641	5,546,814	
2029	-5,337,740	9,510,740	4,068,940	9,812,517	0	0	4,173,000	5,743,578	
2030	-4,690,021	9,472,834	4,058,134	9,978,825	0	0	4,782,813	5,920,691	
2031	-4,080,006	9,426,617	4,043,406	10,122,663	0	0	5,346,611	6,079,257	
2032	-3,497,251	10,642,149	4,654,395	11,847,345	0	0	7,144,898	7,192,951	
2033	-2,365,130	10,439,162	4,651,711	12,024,336	0	0	8,074,032	7,372,625	
2034	-1,295,991	10,238,971	4,645,236	12,180,967	0	0	8,942,980	7,535,731	
2035	-287,125	10,041,586	4,635,191	12,318,272	0	0	9,754,460	7,683,081	
2036	664,071	9,847,013	4,621,791	12,437,246	0	0	10,511,083	7,815,455	
2037	1,560,101	9,655,255	4,605,239	12,538,839	0	0	11,215,356	7,933,599	
2038	2,403,372	9,466,314	4,585,731	12,623,963	0	0	11,869,687	8,038,232	
2039	3,196,197	9,280,189	4,563,452	12,693,491	0	0	12,476,386	8,130,039	
2040	3,940,799	9,096,876	4,538,581	12,748,259	0	0	13,037,675	8,209,679	
2041	4,639,315	8,916,368	3,808,539	9,534,674	0	0	13,555,682	5,726,135	
2042	5,599,443	8,747,236	3,734,587	9,349,535	0	0	14,346,679	5,614,948	
2043	6,499,707	8,580,392	3,661,711	9,167,091	0	0	15,080,098	5,505,380	
2044	7,342,777	8,415,846	3,589,913	8,987,345	0	0	15,758,623	5,397,431	
2045	8,131,223	8,253,607	3,519,191	8,810,292	0	0	16,384,830	5,291,101	
2046	8,867,510	8,093,679	3,449,543	8,635,928	0	0	16,961,189	5,186,385	
2047	9,554,009	7,936,066	3,380,967	8,464,248	0	0	17,490,075	5,083,281	
2048	10,192,995	7,780,767	3,313,459	8,295,242	0	0	17,973,762	4,981,783	
2049	10,786,654	7,627,783	3,247,015	8,128,900	0	0	18,414,437	4,881,885	
2050	11,337,083	7,477,110	3,181,631	7,965,212	0	0	18,814,193	4,783,580	
2051	11,846,298	7,328,742	3,117,302	7,804,162	0	0	19,175,041	4,686,860	
Total	-92,236,909	312,807,945	161,697,186	342,232,673	10,157,038	202,183,133	220,571,036	392,875,658	

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	0.56
NPV	-£172,304,622

**Guided Light Transit (Land Use Option B)
Economic Analysis (Discounted)**

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs		Total Benefits	Total Costs
					CMK	Other		
2011	-8,835,557	3,825,891	3,936,298	3,797,623	10,157,038	0	-5,009,666	10,018,363
2012	-9,655,677	3,823,111	3,933,438	3,794,863	0	0	-5,832,566	-138,574
2013	-10,410,226	3,816,144	3,926,270	3,787,948	0	0	-6,594,082	-138,322
2014	-11,102,701	3,805,277	3,915,088	3,777,160	0	0	-7,297,424	-137,928
2015	-11,736,437	3,790,780	3,900,173	3,762,771	0	0	-7,945,657	-137,402
2016	-12,314,615	3,772,912	3,881,790	3,745,035	0	0	-8,541,703	-136,755
2017	-12,840,269	3,751,918	3,860,190	3,724,196	0	0	-9,088,351	-135,994
2018	-13,316,288	3,728,029	3,835,611	3,700,483	0	0	-9,588,259	-135,128
2019	-13,745,429	3,701,465	3,808,281	3,674,116	0	69,725,672	-10,043,964	69,591,507
2020	-14,130,319	3,672,435	3,778,413	3,645,300	0	67,367,799	-10,457,884	67,234,686
2021	-14,473,459	10,269,687	4,088,414	6,911,342	0	65,089,661	-4,203,772	67,912,589
2022	-13,124,022	10,136,520	4,122,263	7,278,429	0	0	-2,987,502	3,156,167
2023	-11,849,300	10,000,616	4,149,147	7,612,786	0	0	-1,848,684	3,463,639
2024	-10,645,783	9,862,311	4,169,499	7,916,207	0	0	-783,472	3,746,707
2025	-9,510,113	9,721,924	4,183,730	8,190,400	0	0	211,811	4,006,670
2026	-8,439,078	9,579,754	4,192,231	8,436,997	0	0	1,140,676	4,244,766
2027	-7,429,605	9,436,082	4,195,372	8,657,549	0	0	2,006,477	4,462,177
2028	-6,478,754	9,291,172	4,193,507	8,853,536	0	0	2,812,418	4,660,029
2029	-5,583,717	9,145,272	4,186,970	9,026,368	0	0	3,561,555	4,839,398
2030	-4,741,804	8,998,614	4,176,080	9,177,387	0	0	4,256,810	5,001,307
2031	-3,950,447	8,851,418	4,161,139	9,307,869	0	0	4,900,970	5,146,731
2032	-3,400,517	10,064,842	4,790,150	10,891,809	0	0	6,664,325	6,101,659
2033	-2,317,831	9,942,105	4,787,608	11,052,746	0	0	7,624,273	6,265,139
2034	-1,295,330	9,817,979	4,781,150	11,195,069	0	0	8,522,649	6,413,919
2035	-330,425	9,692,650	4,771,006	11,319,724	0	0	9,362,224	6,548,717
2036	579,370	9,566,292	4,757,398	11,427,620	0	0	10,145,662	6,670,223
2037	1,436,448	9,439,072	4,740,535	11,519,629	0	0	10,875,521	6,779,094
2038	2,243,108	9,311,148	4,720,618	11,596,583	0	0	11,554,256	6,875,965
2039	3,001,559	9,182,669	4,697,840	11,659,282	0	0	12,184,228	6,961,442
2040	3,713,926	9,053,774	4,672,384	11,708,491	0	0	12,767,700	7,036,107
2041	4,382,249	7,275,116	3,919,433	8,767,209	0	0	11,657,365	4,847,775
2042	5,300,436	7,137,116	3,843,328	8,596,972	0	0	12,437,552	4,753,644
2043	6,161,419	7,000,984	3,768,330	8,429,214	0	0	13,162,402	4,660,883
2044	6,967,750	6,866,726	3,694,442	8,263,935	0	0	13,834,477	4,569,493
2045	7,721,884	6,734,351	3,621,660	8,101,133	0	0	14,456,235	4,479,473
2046	8,426,177	6,603,861	3,549,984	7,940,805	0	0	15,030,038	4,390,820
2047	9,082,892	6,475,260	3,479,411	7,782,943	0	0	15,558,152	4,303,532
2048	9,694,204	6,348,547	3,409,938	7,627,541	0	0	16,042,752	4,217,603
2049	10,262,200	6,223,723	3,341,560	7,474,589	0	0	16,485,924	4,133,029
2050	10,788,885	6,100,785	3,274,272	7,324,076	0	0	16,889,670	4,049,804
2051	11,276,184	5,979,728	3,208,069	7,175,989	0	0	17,255,912	3,967,920
Total	-120,619,008	301,798,057	166,423,017	318,633,720	10,157,038	202,183,133	181,179,049	364,550,874

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	0.50
NPV	-£183,371,825

Light Rapid Transit (Land Use Option A)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs			Total Benefits	Total Costs
					CMK	Other			
2011	-8,831,998	3,076,223	3,822,138	3,698,871	10,157,038	0	-5,755,775	10,033,771	
2012	-9,722,679	3,074,091	3,819,489	3,696,308	0	0	-6,648,588	-123,181	
2013	-10,543,021	3,068,586	3,812,648	3,689,688	0	0	-7,474,436	-122,961	
2014	-11,296,763	3,059,937	3,801,903	3,679,289	0	0	-8,236,826	-122,614	
2015	-11,987,470	3,048,364	3,787,524	3,665,373	0	0	-8,939,106	-122,150	
2016	-12,618,545	3,034,075	3,769,770	3,648,192	0	0	-9,584,470	-121,578	
2017	-13,193,230	3,017,266	3,748,885	3,627,981	0	0	-10,175,963	-120,904	
2018	-13,714,617	2,998,125	3,725,102	3,604,965	0	76,360,612	-10,716,492	76,240,475	
2019	-14,185,654	2,976,827	3,698,641	3,579,357	0	73,778,369	-11,208,827	73,659,085	
2020	-14,609,150	2,953,542	3,669,709	3,551,358	0	71,283,448	-11,655,608	71,165,097	
2021	-14,987,782	11,166,222	3,975,591	10,041,220	0	68,872,897	-3,821,560	74,938,526	
2022	-13,814,197	11,284,255	4,008,110	10,546,061	0	0	-2,529,941	6,537,951	
2023	-12,702,845	11,381,537	4,033,884	11,005,276	0	0	-1,321,308	6,971,392	
2024	-11,650,860	11,459,335	4,053,331	11,421,372	0	0	-191,525	7,368,041	
2025	-10,655,497	11,518,855	4,066,850	11,796,742	0	0	863,358	7,729,892	
2026	-9,714,130	11,561,246	4,074,819	12,133,663	0	0	1,847,116	8,058,844	
2027	-8,824,246	11,587,598	4,077,599	12,434,307	0	0	2,763,352	8,356,708	
2028	-7,983,438	11,598,946	4,075,531	12,700,743	0	0	3,615,508	8,625,212	
2029	-7,189,406	11,596,276	4,068,940	12,934,939	0	0	4,406,871	8,865,999	
2030	-6,439,946	11,580,523	4,058,134	13,138,772	0	0	5,140,576	9,080,638	
2031	-5,732,954	11,552,574	4,043,406	13,314,027	0	0	5,819,620	9,270,622	
2032	-5,293,995	13,313,508	4,654,395	15,567,411	0	0	8,019,513	10,913,017	
2033	-4,060,974	13,320,207	4,651,711	15,786,040	0	0	9,259,234	11,134,329	
2034	-2,895,288	13,315,222	4,645,236	15,978,727	0	0	10,419,934	11,333,492	
2035	-1,794,061	13,299,227	4,635,191	16,146,798	0	0	11,505,166	11,511,607	
2036	-754,527	13,272,867	4,621,791	16,291,522	0	0	12,518,340	11,669,732	
2037	225,974	13,236,761	4,605,239	16,414,119	0	0	13,462,735	11,808,880	
2038	1,149,998	13,191,499	4,585,731	16,515,753	0	0	14,341,497	11,930,022	
2039	2,020,003	13,137,644	4,563,452	16,597,542	0	0	15,157,647	12,034,090	
2040	2,838,354	13,075,735	4,538,581	16,660,555	0	0	15,914,089	12,121,975	
2041	3,607,319	10,927,250	3,808,539	12,540,663	0	0	14,534,569	8,732,125	
2042	4,652,572	10,719,974	3,734,587	12,297,155	0	0	15,372,546	8,562,569	
2043	5,633,876	10,515,502	3,661,711	12,057,194	0	0	16,149,378	8,395,482	
2044	6,554,070	10,313,847	3,589,913	11,820,778	0	0	16,867,917	8,230,865	
2045	7,415,880	10,115,018	3,519,191	11,587,906	0	0	17,530,899	8,068,715	
2046	8,221,929	9,919,022	3,449,543	11,358,571	0	0	18,140,951	7,909,028	
2047	8,974,731	9,725,863	3,380,967	11,132,765	0	0	18,700,594	7,751,798	
2048	9,676,706	9,535,540	3,313,459	10,910,476	0	0	19,212,247	7,597,018	
2049	10,330,176	9,348,054	3,247,015	10,691,693	0	0	19,678,230	7,444,677	
2050	10,937,371	9,163,400	3,181,631	10,476,398	0	0	20,100,771	7,294,767	
2051	11,500,431	8,981,572	3,117,302	10,264,574	0	0	20,482,003	7,147,273	
Total	-151,457,884	385,022,117	161,697,186	439,005,142	10,157,038	290,295,326	233,564,233	577,760,321	

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	0.40
NPV	-£344,196,088

Light Rapid Transit (Land Use Option B)
Economic Analysis (Discounted)

Year	Travel Time Benefits	Generated Revenues	Operating Costs Do Minimum	Operating Costs Do Something	Capital Costs			Total Benefits	Total Costs
					CMK	Other			
2011	-8,835,557	3,825,891	3,936,298	3,797,623	10,157,038	0	-5,009,666	10,018,363	
2012	-9,693,106	3,823,111	3,933,438	3,794,863	0	0	-5,869,994	-138,574	
2013	-10,482,552	3,816,144	3,926,270	3,787,948	0	0	-6,666,407	-138,322	
2014	-11,207,521	3,805,277	3,915,088	3,777,160	0	0	-7,402,244	-137,928	
2015	-11,871,470	3,790,780	3,900,173	3,762,771	0	0	-8,080,691	-137,402	
2016	-12,477,699	3,772,912	3,881,790	3,745,035	0	0	-8,704,787	-136,755	
2017	-13,029,351	3,751,918	3,860,190	3,724,196	0	0	-9,277,433	-135,994	
2018	-13,529,424	3,728,029	3,835,611	3,700,483	0	76,360,612	-9,801,396	76,225,484	
2019	-13,980,777	3,701,465	3,808,281	3,674,116	0	73,778,369	-10,279,312	73,644,204	
2020	-14,386,131	3,672,435	3,778,413	3,645,300	0	71,283,448	-10,713,696	71,150,335	
2021	-14,748,083	11,812,475	4,088,414	9,611,881	0	68,872,897	-2,935,607	74,396,364	
2022	-13,548,070	11,695,615	4,122,263	10,102,123	0	0	-1,852,455	5,979,861	
2023	-12,412,352	11,573,149	4,149,147	10,548,218	0	0	-839,202	6,399,070	
2024	-11,337,953	11,445,592	4,169,499	10,952,589	0	0	107,640	6,783,090	
2025	-10,322,024	11,313,428	4,183,730	11,317,549	0	0	991,403	7,133,819	
2026	-9,361,840	11,177,113	4,192,231	11,645,301	0	0	1,815,273	7,453,070	
2027	-8,454,793	11,037,081	4,195,372	11,937,944	0	0	2,582,288	7,742,572	
2028	-7,598,386	10,893,737	4,193,507	12,197,478	0	0	3,295,352	8,003,971	
2029	-6,790,231	10,747,467	4,186,970	12,425,807	0	0	3,957,236	8,238,837	
2030	-6,028,046	10,598,632	4,176,080	12,624,745	0	0	4,570,587	8,448,665	
2031	-5,309,644	10,447,573	4,161,139	12,796,019	0	0	5,137,929	8,634,880	
2032	-4,875,517	11,904,295	4,790,150	14,964,793	0	0	7,028,778	10,174,643	
2033	-3,707,566	11,782,482	4,787,608	15,177,800	0	0	8,074,916	10,390,192	
2034	-2,603,515	11,657,667	4,781,150	15,365,703	0	0	9,054,152	10,584,554	
2035	-1,560,632	11,530,127	4,771,006	15,529,785	0	0	9,969,494	10,758,779	
2036	-576,291	11,400,126	4,757,398	15,671,274	0	0	10,823,835	10,913,876	
2037	352,033	11,267,917	4,740,535	15,791,345	0	0	11,619,951	11,050,811	
2038	1,226,770	11,133,739	4,720,618	15,891,128	0	0	12,360,509	11,170,511	
2039	2,050,252	10,997,818	4,697,840	15,971,702	0	0	13,048,070	11,273,863	
2040	2,824,724	10,860,369	4,672,384	16,034,102	0	0	13,685,093	11,361,718	
2041	3,552,341	8,419,283	3,919,433	12,052,744	0	0	11,971,624	8,133,311	
2042	4,542,475	8,259,580	3,843,328	11,818,710	0	0	12,802,054	7,975,383	
2043	5,471,917	8,102,037	3,768,330	11,588,085	0	0	13,573,954	7,819,754	
2044	6,343,363	7,946,665	3,694,442	11,360,867	0	0	14,290,029	7,666,426	
2045	7,159,404	7,793,471	3,621,660	11,137,055	0	0	14,952,875	7,515,395	
2046	7,922,526	7,642,459	3,549,984	10,916,643	0	0	15,564,985	7,366,659	
2047	8,635,122	7,493,632	3,479,411	10,699,622	0	0	16,128,754	7,220,211	
2048	9,299,486	7,346,992	3,409,938	10,485,983	0	0	16,646,478	7,076,045	
2049	9,917,824	7,202,536	3,341,560	10,275,711	0	0	17,120,360	6,934,152	
2050	10,492,253	7,060,263	3,274,272	10,068,793	0	0	17,552,516	6,794,521	
2051	11,024,806	6,920,167	3,208,069	9,865,211	0	0	17,944,974	6,657,142	
Total	-147,913,234	347,151,450	166,423,017	424,236,205	10,157,038	290,295,326	199,238,216	558,265,552	

All figures are in 2002 value, and discounted to 2002

Summary of indicators	
Benefit/Cost Ratio	0.36
NPV	-£359,027,336