

Accident Benefit Summary

Element	Optimised Package		
Economic Summary (£000s)			
without-Scheme Accident Costs	23,817,888		
with-Scheme Accident Costs	23,698,032		
Accident Benefits	119,856		
Accident Summary			
without-Scheme Accidents	677,046		
with-Scheme Accidents	674,048		
Accidents saved	2,999		
Casualty Summary	Fatal	Serious	Slight
without-Scheme Casualties	7,363	83,540	847,584
with-Scheme Casualties	7,341	82,977	844,342
Casualties saved	22	563	3,242

Purpose	Eastbound	Westbound	Total
NTEM Core			
Business	21604	19877	41481
Commute	2185	2168	4353
Other	9866	8682	18548
Freight	6352	6000	12352
Total	40007	36727	76734
Low Growth			
Business	21955	18822	40777
Commute	1677	1557	3234
Other	9034	7571	16605
Freight	8870	7338	16208
Total	41536	35288	76824
Transformational Growth			
Business	21976	19070	41046
Commute	2298	2612	4910
Other	9947	8617	18564
Freight	7772	6854	14626
Total	41993	37153	79146

Purpose	Eastbound		Westbound		Total	
	Volume	Proportion	Volume	Proportion	Volume	Proportion
NTEM Core						
Car - Business	23,000	54%	19,900	54%	42,900	54%
car - Commute	2,300	5%	2,200	6%	4,500	6%
Car - Other	10,500	25%	8,700	24%	19,200	24%
Freight	6,800	16%	6,000	16%	12,800	16%
Total	42,600	100%	36,700	100%	79,300	100%
Low Growth						
Car - Business	21,900	51%	18,800	51%	40,700	51%
car - Commute	1,700	4%	1,600	4%	3,300	4%
Car - Other	9,000	21%	7,600	21%	16,600	21%
Freight	8,800	21%	7,300	20%	16,100	20%
Total	41,400	97%	35,300	96%	76,700	97%
Transformational Growth						
Car - Business	22,000	52%	19,100	52%	41,100	52%
Car - Commute	2,300	5%	2,600	7%	4,900	6%
Car - Other	9,900	23%	8,600	23%	18,500	23%
Freight	7,800	18%	6,900	19%	14,700	19%
Total	42,000	99%	37,200	101%	79,200	100%

Direction	TOL_2031	TOL_2041	OPT_2041	Diff
Eastbound	18,729	22,883	42,571	-19,688
Westbound	13,869	17,388	36,718	-19,330
Tota	32,598	40,271	79,289	-39,018

TUBA Benefit Summary - VDM

Package	TPTS only			Core Scenario			Low Growth			Transformational			Package 1			Package 2			Package 3		
	VDM	with UDF	%Diff	VDM	with UDF	%Diff	VDM	with UDF	%Diff	VDM	with UDF	%Diff	VDM	with UDF	%Diff	VDM	with UDF	%Diff	VDM	with UDF	%Diff
Consumer User (Commute)		218,666			563,836			505,887			648,768			243,418			402,450			442,181	
Consumer User (Other)		348,259			709,463			525,355			774,426			478,495			505,726			586,374	
Business User and Provider		1,649,827			3,159,913			3,289,299			3,227,477			610,156			763,280			1,513,712	
Private sector provider (Toll revenues)		-3,306			-3,376			-3,408			-2,887			-561			-2,550			-3,028	
Indirect Tax Revenue		187,105			138,049			95,911			100,631			-121,237			-92,313			-42,297	
Greenhouse Gas		-98,816			-255,444			-59,917			-59,088			43,401			20,860			-67,590	
Total		0	2,301,735		0	4,312,441		4,353,128			4,689,326			1,253,672			1,597,452			2,429,352	

WITA Level 2 Benefits

Package	TPTS only		Optimised Package		Low Growth		Transformational		with Toll		Difference		Package 1		Package 2		Package 3	
	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted	WITA	Adjusted
Agglomeration impacts		0	3,056,389	2,445,111	3,506,268	2,805,014	3,018,181	2,414,544	1,944,222	1,555,378	-36%	-36%	689,045	551,236	993,453	794,762	1,260,754	1,008,603
Change in imperfectly competitive market		0	220,752	220,752	216,100	216,100	221,700	221,700	200,524	200,524	-9%	-9%	42,256	42,256	50,810	50,810	97,483	97,483
Labour supply impacts		0	18,315	18,315	24,472	24,472	20,213	20,213	14,452	14,452	-21%	-21%	6,019	6,019	10,258	10,258	11,677	11,677
Move to more/less productive jobs		0	0	0	0	0	0	0	0	0	0%	0%		0	0	0	0	0
Total		0	0	3,295,456	2,684,178	3,746,840	3,045,587	3,260,094	2,656,458	2,159,198	-34%	-34%	737,320	599,511	1,054,521	855,830	1,369,914	1,117,763

Reliability Impacts

Package	TPTS only		Optimised Package		Low Growth		Transformational		Package 1		Package 2		Package 3	
TUBA Time Saving benefits		1,103,584	0	4,412,126	0	4,238,049	0	4,571,176		1,103,584		1,486,509		2,367,912
Reliability Benefits (10 years)	0	110,358	0	441,213	0	423,805	0	457,118		110,358		148,651		236,791

With UDF

Purpose	2034												2037								2041			
	Low Growth				NTEM Core				TfN Transformational				Package 1				Package 2				Package 3			
	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total
Commuting	522,652	-53	-16,711	505,887	594,732	-106	-30,790	563,836	658,801	-72	-9,961	648,768	174,321	-245	69,342	243,418	351,154	3	51,292	402,450	409,612	-84	32,653	442,181
Other	719,545	-199	-193,992	525,355	927,480	-245	-217,771	709,463	951,766	-242	-177,098	774,426	358,858	-109	119,745	478,495	421,798	27	83,901	505,726	561,222	-198	25,351	586,374
Business (Car)	2,069,571	352	91,079	2,161,002	2,115,604	465	91,455	2,207,524	2,129,071	755	87,177	2,217,003	405,197	292	17,066	422,556	491,462	412	16,228	508,102	942,658	279	31,893	974,830
Business (Freight)	926,281	4,089	197,927	1,128,297	774,311	1,751	176,328	952,390	831,538	1,997	176,939	1,010,474	165,208	-376	22,768	187,600	222,094	1,030	32,053	255,177	454,420	2,146	82,315	538,882
Operators				-3,408				-3,376				-2,887				-561				-2,550				-3,028
Greenhouse Gas				-59,917				-255,444				-59,088				43,401				20,860				-67,590
Indirect Tax				95,911				138,049				100,631				-121,237				-92,313				-42,297
Total	4,238,049	4,189	78,303	4,353,128	4,412,126	1,865	19,221	4,312,441	4,571,176	2,437	77,057	4,689,326	1,103,584	-438	228,921	1,253,672	1,486,509	1,472	183,474	1,597,452	2,367,912	2,143	172,212	2,429,352

Purpose	Opening Year 2033				Opening Year 2041															
	Optimised Package without Toll				Optimised Package with Toll				Optimised Package without Toll				Optimised Package with Toll				Optimised vs. Toll			
	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total	Time	Charges	VOC	Total
Commuting	641,950	-149	-32,996	608,806	584,034	-20,866	43,367	606,535	594,732	-106	-30,790	563,836	539,672	-16,957	34,511	557,226	-55,060	-16,850	65,301	-6,610
Other	995,696	-349	-239,659	755,689	742,584	-13,492	38,019	767,111	927,480	-245	-217,771	709,463	686,179	-10,964	30,255	705,470	-241,301	-10,719	248,026	-3,993

Business (Car)	2,270,285	672	80,511	2,351,467	2,443,713	-402,309	93,084	2,134,489	2,115,604	465	91,455	2,207,524	2,258,095	-326,928	74,074	2,005,241	142,491	-327,393	-17,381	-202,283
Business (Freight)	831,223	2,516	88,066	921,804	795,514	-234,716	170,302	731,099	774,311	1,751	176,328	952,390	735,088	-190,737	135,522	679,873	-39,222	-192,488	-40,806	-272,516
Operators				-4,437				724,127				-3,376				588,720				
Greenhouse Gas				-195,078				28,571				-255,444				22,708				278,152
Indirect Tax				372,293				-45,232				138,049				-39,634				-177,684
Total	4,739,154	2,690	-104,078	4,810,544	4,565,844	-671,383	344,772	4,946,699	4,412,126	1,865	19,221	4,312,441	4,219,034	-545,586	274,362	4,519,603	-193,092	-547,451	255,141	-384,934
Method	Optimised Package			Toll Sensitivity 1			Toll Sensitivity 2													
	TUBA	Inflation	GDP	TUBA	Inflation	GDP	TUBA	Inflation	GDP											
PVC																				
CAPEX	225,747	225,747	225,747	225,747	225,747	225,747	225,747	225,747	225,747											
OPEX	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!											
Toll revenues	0	0	0	-588,720	-2,080,591	-2,226,964	-426,477	-1,503,058	-1,608,800											
Total PVC	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!											
Level 1 PVB																				
Time savings	4,412,126	4,412,126	4,412,126	4,219,034	4,219,034	4,219,034	4,446,844	4,446,844	4,446,844											
VOC	19,221	19,221	19,221	274,362	274,362	274,362	250,426	250,426	250,426											
User charges	1,865	1,865	1,865	-545,586	-1,928,153	-2,063,802	-385,323	-1,358,016	-1,453,555											
Greenhouse gas	-255,444	-255,444	-255,444	22,708	22,708	22,708	5,475	5,475	5,475											
Indirect tax	138,049	138,049	138,049	-39,634	-39,634	-39,634	-9,701	-9,701	-9,701											
Total PVB	4,315,817	4,315,817	4,315,817	3,930,884	2,548,317	2,412,668	4,307,721	3,335,028	3,239,489											
Level 1 BCR	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!											
Level 2 PVB																				
Reliability	441,213	441,213	441,213	421,903	421,903	421,903	444,684	444,684	444,684											
WITA	2,684,178	2,684,178	2,684,178	1,770,354	1,770,354	1,770,354	2,182,202	2,182,202	2,182,202											
Total PVB	7,441,208	7,441,208	7,441,208	6,123,141	4,740,574	4,604,925	6,934,607	5,961,914	5,866,375											
Level 2 BCR	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!											

-1,493,227

PVC -592,096

Charges -547,451

Time -193,092

Reliability

VOC 255,141

GHG 278,152

Ind. Tax -177,684

Wider 0

PVB -384,934

NPV 207,162

APEX Summary - from EO Most Likely Costs (£000s) (Factor prices only)													
	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	2			
Optimised package	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	2,416	1,972	1,857	1,419	17,078	32,271	174,187	21,382	15,532	27,918	1,972	21,460	319,465
Supervision	549	986	1,111	774	1,948	3,606	20,180	1,900	2,127	4,880	986	3,313	42,359
Construction	20,523	12,393	19,757	10,437	189,819	357,714	1,303,957	149,638	136,232	114,604	12,393	114,248	2,441,717
Land	23	0	44	16	35,856	36,135	5,288	23,576	6,489	1,307	0	25,840	134,573
Total CAPEX	23,512	15,351	22,769	12,646	244,701	429,726	1,503,612	196,496	160,380	148,710	15,351	164,862	2,938,114

Converted to PVC - CAPEX (£000s)													
scheme	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	1,770	872	868	885	9,713	18,273	94,271	14,387	7,687	14,582	996	15,652	179,955
Supervision	365	416	488	457	979	1,666	8,971	1,087	929	2,137	478	2,143	20,117
Construction	13,717	5,233	8,662	6,179	95,911	167,846	587,022	86,835	60,240	51,259	6,005	74,613	1,163,523
Land	14	0	18	9	17,922	17,236	2,450	13,646	2,831	590	0	17,288	72,005
Total CAPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	68,569	0	0	#REF!
All Schemes	15,866	6,522	10,036	7,531	124,525	205,021	692,714	115,955	71,687	68,569	7,479	109,695	1,435,600

OPEX (£000s)													
Scheme	M67, M60 to A57	M60 J24 to 25	M60 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
OPEX 2010 Cost	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Single Year cost 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Discounted to 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total OPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Package	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	#REF!
All Schemes	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Appraisal Summary	TPTS Only	Optimised Package	Low Growth	Trans-formational
Present Value of Cost (£m)				
CAPEX P2.5	0.00	68.57	68.57	68.57
OPEX	0.00	#REF!	#REF!	#REF!
Total PVC P2.5	0.00	#REF!	#REF!	#REF!
Level 1 PVB (£m)				
User Benefits	2,213.45	4,429.84	4,317.13	4,647.78
Indirect Tax Revenue	187.11	138.05	95.91	100.63

Greenhouse Gas	-98.82	-255.44	-59.92	-59.09
Accident	0.00	119.86	119.86	119.86
Construction	-28.18	-27.34	-27.34	-27.34
Total	2,273.55	4,404.96	4,445.64	4,781.84
Initial BCR	#DIV/0!	#REF!	#REF!	#REF!
Level 2 PVB (£m)				
Reliability	110.36	441.21	423.80	457.12
Wider Impacts - Static Cluster	0.00	2,684.18	2,684.18	3,045.59
Total	2,383.91	7,530.35	7,553.63	8,284.55
Adjusted BCR	#DIV/0!	#REF!	#REF!	#REF!

Costs obtained from EO - Most Likely Cost

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Preparation	13,618	26,955	0	0	0	0	0	0	0	6,240	2,471,357	1,637,035	4,052,167	4,065,103	2,740,759	2,064,463	0	0	0	0	0	0	0	0								
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167,403	1,494,007	286,367	0	0	0	0	0	0								
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,950,691	157,111,863	6,436,028	77,490	77,156	76,824	76,702	12,107									
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,639,341	13,915,352	5,701,067	3,641,684	1,802,832	60,442	51,964	29,192	14,331								
Total CAPEX	13,618	26,955	0	0	0	0	0	0	0	6,240	2,471,357	1,637,035	4,052,167	4,065,103	2,740,759	38,821,897	172,521,222	12,423,461	3,719,174	1,879,988	137,265	128,666	41,299	14,331	0	0	0	0	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%	1%	16%	71%	5%	2%	1%	0%	0%										

M60 to A57																																
Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Preparation	13,688	26,978	4,709	354,409	440,298	524,344	438,033	613,655	0	0	0	0	0	0	0	0	0	0	0													
Supervision	0	0	0	0	0	0	0	85,419	405,153	57,500	1,402																					
Construction	0	0	0	0	0	0	0	5,076,576	15,146,774	258,578	10,207	10,151	10,101	10,083	747																	
Land	0	0	0	0	0	0	0	0	0	5,496	8,507	4,268	1,831	1,228	768	618																
Total CAPEX	13,688	26,978	4,709	354,409	440,298	524,344	438,033	5,775,650	15,551,927	321,575	20,115	14,418	11,932	11,311	1,515	618	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	2%	2%	2%	2%	25%	66%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%										

E16 dualing to M1																																
Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
reparation	13,702	27,006	0	59,537	2,072,060	1,886,084	2,120,527	3,708,371	3,744,555	2,329,840	3,493,421	1,927,375	0	0	0	0	0	0	0	0	0											
upervision	0	0	0	0	0	0	0	0	0	0	0	265,959	1,000,112	461,114	172,342	0	0	0	0	0	0											
construction	0	0	0	0	0	0	0	0	0	0	0	35,673,766	96,970,734	16,598,515	90,103	89,720	89,334	89,192	36,269	0	0											
land	0	0	0	0	0	0	0	10,588,410	6,926,950	3,002,162	2,374,546	618,071	23,365	11,280	8,310	0	0	0	0	0	0											
total CAPEX	13,702	27,006	0	59,537	2,072,060	1,886,084	2,120,527	3,708,371	3,744,555	2,329,840	3,493,421	48,455,510	104,897,796	20,061,791	2,636,990	707,791	112,699	112,151	47,549	8,310	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	1%	1%	1%	2%	2%	1%	2%	25%	53%	10%	1%	0%	0%	0%	0%	0%	0%											

628 + Tunnel																																	
Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	15,367	25,313	0	0	0	0	0	0	0	9,782,567	6,775,872	8,374,752	23,654,332	33,714,569	15,850,513	15,069,566	13,556,734	47,367,571	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,921	2,971,831	7,008,106	6,458,098	1,296,040	2,363,955	0	0	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,728,253	260,548,039	490,834,859	447,496,708	92,757,603	125,596	125,056	124,517	124,320	92,128	0	0	0	0	1	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	805,864	2,649,361	920,899	522,937	388,774	0	0	0	0	0	0	0	0	0	0	
Total CAPEX	15,367	25,313	0	0	0	0	0	0	0	9,782,567	6,775,872	8,374,752	23,654,332	33,714,569	15,850,513	15,069,566	13,556,734	59,983,609	266,169,231	498,763,864	454,477,744	94,442,416	2,489,552	125,056	124,517	124,320	92,128	0	0	0	0	0	1
	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	2%	2%	1%	1%	1%	4%	18%	33%	30%	6%											

Expenditure Bypass																																	
Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	12,052	23,855	0	0	0	0	0	0	0	0	0	0	0	1,189	2,332,737	2,311,714	4,095,158	1,128,251	1,607,994	4,019,150	0	0	0	0	0	0	0	0	0	0	0	0	
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	281,557	1,295,448	537,870	11,808	0	0	0	0	0	0	0	0		
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32,369,638	101,701,621	2,008,776	37,624	37,462	37,301	37,242	2,758	0	0	0	0		
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,978,848	2,597,831	963,299	635,397	313,289	0	0	0	0	0	0	0		

Convert to PVC (£000s)																																
2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
11,891	22,740	0	0	0	0	0	0	0	3,998	1,529,733	979,034	2,341,461	2,269,503	1,478,393	1,075,934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,712,687
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87,245	752,300	139,322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	978,867
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,524,695	79,112,880	3,131,236	36,425	35,042	33,711	32,520	4,959	0	0	0	0	0	0	0	0	95,911,468	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,544,895	7,007,005	2,773,665	1,711,827	818,790	26,522	22,031	11,958	5,672	0	0	0	0	0	0	0	17,922,365	
11,891	22,740	0	0	0	0	0	0	0	3,998	1,529,733	979,034	2,341,461	2,269,503	1,478,393	20,232,769	86,872,184	6,044,223	1,748,252	853,832	60,233	54,551	16,917	5,672	0	0	0	0	0	0	0	124,525,386	

Convert to PVC (£000s)																																
2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
11,952	22,759	3,838	279,105	335,019	385,477	311,135	421,139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,770,423	
0	0	0	0	0	0	0	58,621	268,646	36,838	868	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	364,973	
0	0	0	0	0	0	0	3,483,952	10,043,410	165,658	6,318	6,071	5,837	5,629	403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,717,277	
0	0	0	0	0	0	0	0	0	3,521	5,266	2,552	1,058	686	414	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,811	
11,952	22,759	3,838	279,105	335,019	385,477	311,135	3,963,713	10,312,055	206,017	12,451	8,623	6,895	6,315	817	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,866,458	

M60 J24 to 25 (2037)

[illegible]

Convert to PVC (£000s)

[illegible]

CAPEX Summary - from EO Most Likely Costs (£000s) (Factor prices only)									
	#REF!	#REF!	#REF!	#REF!	#REF!	2			
Optimised pacakge	M60 J24 to 25	A6 to M60	M1 to M18	A628 + Tunnel	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	5,501	41,839	77,677	395,121	35,793	71,855	5,501	29,572	719,123
Supervision	2,507	6,562	10,834	60,544	6,944	14,669	2,507	6,430	124,076
Construction	30,141	474,341	1,053,227	3,812,116	440,905	411,094	30,141	317,559	7,056,325
Land	150	69,709	70,081	23,112	31,940	2,525	151	48,053	292,195
Total CAPEX	38,299	592,451	1,211,820	4,290,893	515,582	500,142	38,300	401,615	8,191,719

Converted to PVC - CAPEX (£000s)									
Scheme	M60 J24 to 25	A6 to M60	M1 to M18	A628 + Tunnel	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	2,405	23,661	43,631	212,544	17,619	37,342	2,753	21,492	398,196
Supervision	1,055	3,272	4,974	26,467	3,006	6,301	1,210	4,086	57,531
Construction	12,684	237,724	491,525	1,689,441	193,279	180,964	14,556	204,262	3,301,270
Land	59	34,829	33,420	10,706	13,932	1,140	68	32,037	153,039
Total CAPEX PVC (converted to market prices and values)									
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	225,747	0	0	#REF!
All Schemes	16,203	299,486	573,549	1,939,158	227,836	225,747	18,587	261,877	3,910,037

OPEX (£000s)									
Scheme	M60 J24 to 25	A6 to M60	M1 to M18	A628 + Tunnel	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
OPEX 2010 Cost	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Single Year cost 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Discounted to 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total OPEX PVC (converted to market prices and values)									
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	#REF!
All Schemes	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Appraisal Summary	Optimised Package	Package 1	Package 2	Package 3
Present Value of Cost (£m)				
CAPEX	225.75	586.27	904.35	1,498.71
OPEX	#REF!	#REF!	#REF!	#REF!
Total PVC	#REF!	#REF!	#REF!	#REF!
Level 1 PVB (£m)				
User Benefits	4,429.84	1,331.51	1,668.91	2,539.24
Indirect Tax Revenue	138.05	-121.24	-92.31	-42.30

Greenhouse Gas	-255.44	43.40	20.86	-67.59
Accident	119.86			
Construction	-27.34			
Total	4,404.96	1,253.67	1,597.45	2,429.35
Initial BCR	#REF!	#REF!	#REF!	#REF!
Level 2 PVB (£m)				
Reliability	441.21	110.36	148.65	236.79
Wider Impacts - Static Cluster	2,684.18	599.51	855.83	1,117.76
Total	7,530.348	1,963.541	2,601.934	3,783.906
Adjusted BCR	#REF!	#REF!	#REF!	#REF!

*use values from NTEM Core
*use values from NTEM Core

Costs obtained from EO - Most Likely Cost

A6 to M60

Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	35,125	0	0	0	0	13,546	5,442,314	3,650,061	9,238,422	9,769,237	7,573,542	6,098,776	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41,838,674
Supervision	0	0	0	0	0	0	0	0	0	0	0	288,418	4,211,067	1,962,443	99,620	0	0	0	0	0	0	0	0	0	0	0	0	0	6,561,548
Construction	0	0	0	0	0	0	0	0	0	0	0	43,431,982	322,122,620	107,867,484	192,637	195,577	198,563	202,143	130,398	0	0	0	0	0	0	0	0	0	474,341,404
Land	0	0	0	0	0	0	0	0	0	0	0	20,702,887	27,067,809	10,525,076	7,377,305	3,619,511	175,537	114,988	70,569	55,472	0	0	0	0	0	0	0	0	69,709,154
Total CAPEX	35,125	0	0	0	0	13,546	5,442,314	3,650,061	9,238,422	9,769,237	7,573,542	70,522,064	353,401,495	120,355,002	7,669,562	3,815,089	374,100	317,131	200,967	55,472	0	0	0	0	0	0	0	0	592,450,780

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Total CAPEX	35,112	0	0	0	0	0	0	0	0	2,390	4,743,517	4,785,844	9,296,588	2,821,850	4,173,116	84,267,022	314,918,736	84,519,820	4,096,875	1,667,378	90,382	92,012	53,971	0	0	0	0	0	0	515,582,259
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	1%	1%	16%	61%	16%												
M1 J35a to 36																														
Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total	
Preparation	36,307	0	0	0	0	374,374	1,873,282	806,364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,108,626	
Supervision	0	0	0	0	0	0	0	916,195	743,523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,659,718	
Construction	0	0	0	0	0	0	0	12,564,041	6,848,175	52,908	53,572	54,393	55,223	13,755	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,642,068	
Land	0	0	0	0	0	0	0	71,520	63,034	31,382	10,406	10,354	5,151	3,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195,684	
Total CAPEX	36,307	0	0	0	0	374,374	1,873,282	14,286,600	7,663,218	115,943	84,954	64,799	65,577	18,906	3,837	0	0	0	0	0	0	0	0	0	0	0	0	0	24,606,096	
	0%	0%	0%	0%	0%	2%	8%	58%	31%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
M1 to M18																														
Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total	
Preparation	35,108	0	0	0	71,191	7,573,112	4,047,935	6,501,426	17,214,068	13,312,776	7,356,103	5,428,524	16,119,494	20,321	1,642,802	3,584,377	3,150,713	1,387,920	0	0	0	0	0	0	0	0	0	0	77,677,381	
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,047,792	1,387,920	0	0	0	0	0	0	0	0	0	0	10,833,924	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	20,497,270	228,234,443	386,434,938	336,562,421	78,988,933	519,552	526,048	534,078	542,230	387,084	0	0	0	0	0	0	1,053,226,996	
Land	0	0	0	0	0	0	0	0	0	0	0	0	10,308,789	33,689,514	11,580,631	6,500,571	5,585,487	1,219,358	598,864	252,036	165,141	101,369	79,702	0	0	0	0	0	70,081,464	
Total CAPEX	35,108	0	0	0	71,191	7,573,112	4,047,935	6,501,426	17,214,068	13,312,776	7,356,103	5,428,524	46,945,874	263,566,758	401,599,946	346,213,705	85,622,213	3,126,830	1,124,912	786,114	707,371	488,453	79,702	0	0	0	0	0	1,211,819,766	
	0%	0%	0%	0%	0%	1%	0%	1%	1%	1%	1%	0%	4%	22%	33%	29%	7%	0%												
M18 J1a to 2																														
Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total	
Preparation	35,597	0	0	0	0	0	0	0	0	0	0	0	0	0	1,786,448	2,413,852	600,122	0	0	0	0	0	0	0	0	0	0	0	4,853,960	
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,984,007	331,802	0	0	0	0	0	0	0	0	0	0	3,315,809	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42,349,917	1,504,140	118,589	120,400	122,237	124,442	10,213	0	0	0	0	0	44,349,938	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102,188	51,034	28,326	11,347	9,916	5,673	2,821	0	0	0	0	211,306		
Total CAPEX	35,597	0	0	0	0	0	0	0	0	0	0	0	0	0	1,786,448	2,413,852	45,934,046	1,938,130	169,624	148,726	133,585	134,358	15,886	2,821	0	0	0	0	52,731,013	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	5%	87%	4%												
M60 J24 to 25																														
Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total	
Preparation	36,189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	2,231,997	0	0	0	0	0	0	0	0	0	0	5,501,107	
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,936,175	570,448	0	0	0	0	0	0	0	0	0	0	2,506,623	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,657,614	5,026,365	107,162	108,798	110,760	112,145	18,488	0	0	0	0	30,141,333	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,188	36,501	20,232	8,093	7,063	4,035	1,005	0	0	0	0	150,118		
Total CAPEX	36,189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	28,825,787	5,670,001	143,664	129,030	118,853	119,208	22,524	1,005	0	0	0	38,299,182	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	75%													
A628 Mottram																														
Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total	
Preparation	35,196	0	0	0	0	0	0	0	9,284,605	6,628,977	9,006,822	14,613,927	12,407,543	10,518,809	9,341,512	0	0	0	0	0	0	0	0	0	0	0	0	0	71,855,079	
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184,945	3,169,737	4,027,997	3,434,394	1,877,977	1,974,133	0	0	0	0	0	0	0	14,669,181		
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,955,069	112,628,509	132,970,171	110,154,778	19,824,239	118,982	120,798	122,976	124,514	73,582	0	0	0	411,093,619		
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	774,210	1,012,373	372,911	119,849	0	0	0	0	0	1,005	0	0	0	0	2,524,609	
Total CAPEX	35,196	0	0	0	0	0	0	0	9,284,605	6,628,977	9,006,822	14,613,927	12,407,543	10,518,809	45,255,736	116,810,619	137,371,079	113,833,433	21,822,065	2,093,115	120,798	122,976	124,514	73,582	1,005	0	0	0	500,142,489	
	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	2%	3%	2%	2%	9%	23%	27%	23%												
Hollingworth to Tintwistle Bypass																														
Expenditure Profile	2019	2022	2023	2024	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	Total	
Preparation	21,666	1,784,546	2,948,529	5,129,595	6,850,354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29,571,976	
Supervision	0	0	0	0	96,761	1,653,570	2,102,314	1,777,852	710,825	88,551	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,429,878	
Construction	0	0	0	0	28,195,831	88,079,104	102,908,356	83,443,493	14,932,672	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	317,559,456	
Land	0	0	3,205,255	4,211,965	11,027,075	13,145,989	4,888,627	3,234,196	2,738,846	1,753,656	870,784	370,187	245,554	152,269	121,153	0	0	0	0	0	0	0	0	0	0	0	0	0	48,053,438	
Total CAPEX	21,666	1,784,546	6,153,784	9,341,560	46,170,021	102,878,663	109,899,297	88,455,297	18,382,344	1,842,207	870,784	370,187	245,554	152,269	121,153	0	0	0	0	0	0	0	0	0	0	0	0	0	401,614,744	
	0%	0%	2%	2%	11%	26%	27%	22%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

15,407	29,621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,334	2,558,700	2,494,234	4,681,250
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M60 J24 to 25 (2037)

Expenditure Profile	2020	2023	2024	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	36,189	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	2,231,997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,501,107
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	1,936,175	570,448	0	0	0	0	0	0	0	0	0	0	0	0	0	2,506,623
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	24,657,614	5,026,365	107,162	108,798	110,760	112,145	18,488	0	0	0	0	0	0	0	0	30,141,333
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,188	36,501	20,232	8,093	7,063	4,035	1,005	0	0	1,005	0	0	0	0	151,123
Total CAPEX	36,189	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	28,825,787	5,670,001	143,664	129,030	118,853	119,208	22,524	1,005	0	0	0	1,005	0	0	0	38,300,187
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	75%	15%	0%	0%	0%	0%	0%	0	0	0	0	1,005	0	0	0	

Convert to PVC (£000s)

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	57,396	1,563,281	1,085,904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,753,037
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	941,982	268,148	0	0	0	0	0	0	0	0	0	0	0	0	0	1,210,129
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,996,344	2,362,716	48,670	47,742	46,959	45,938	7,317	0	0	0	0	0	0	0	14,555,687	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,403	16,578	8,878	3,431	2,893	1,597	384	0	0	0	335	0	0	0	68,500
15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	57,396	1,563,281	14,024,230	2,665,267	65,248	56,620	50,390	48,832	8,914	384	0	0	0	335	0	0	18,587,353	

CAPEX Summary - from EO Most Likely Costs (£000s) (Factor prices only)

	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	2			
Optimised pacakge	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	5,491	5,501	4,854	3,109	41,839	77,877	558,098	42,811	35,793	71,855	5,501	29,572	882,101
Supervision	1,770	2,507	3,316	1,660	6,562	10,834	102,797	6,334	6,944	14,669	2,507	6,430	166,329
Construction	46,415	30,141	44,350	19,642	474,341	1,053,227	5,907,620	376,393	440,905	411,094	30,141	317,559	9,151,829
Land	157	150	211	196	69,709	70,081	33,041	45,909	31,940	2,525	151	48,053	302,124
Total CAPEX	53,833	38,299	52,731	24,606	592,451	1,211,820	6,601,557	471,446	515,582	500,142	38,300	401,615	10,502,383

Converted to PVC - CAPEX (£000s)

Scheme	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	3,996	2,405	2,245	1,928	23,661	43,631	299,341	28,579	17,619	37,342	2,753	21,492	484,993
Supervision	1,164	1,055	1,450	978	3,272	4,974	44,360	3,569	3,006	6,301	1,210	4,086	75,424
Construction	30,792	12,684	19,414	11,592	237,724	491,525	2,581,533	215,038	193,279	180,964	14,556	204,262	4,193,363
Land	94	59	86	108	34,829	33,420	15,306	26,558	13,932	1,140	68	32,037	157,639
Total CAPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	225,747	0	0	#REF!
All Schemes	36,046	16,203	23,195	14,607	299,486	573,549	2,940,540	273,744	227,836	225,747	18,587	261,877	4,911,418

OPEX (£000s)

Scheme	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
OPEX 2010 Cost	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Single Year cost 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Discounted to 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total OPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	#REF!
All Schemes	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Appraisal Summary	TPTS Only	Optimised Package	Low Growth	Trans-formational	Package 1	Package 2	Package 3	Toll
Present Value of Cost (£m)								
CAPEX	0.00	225.75	225.75	225.75	586.27	904.35	1,498.71	225.75
OPEX	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total PVC	0.00	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Level 1 PVB (£m)								
User Benefits	2,213.45	4,429.84	4,317.13	4,647.78	1,331.51	1,668.91	2,539.24	4,536.53
Indirect Tax Revenue	187.11	138.05	95.91	100.63	-121.24	-92.31	-42.30	-39.63

Greenhouse Gas	-98.82	-255.44	-59.92	-59.09	43.40	20.86	-67.59	22.71
Accident	0.00	119.86	119.86	119.86				
Construction	-28.18	-27.34	-27.34	-27.34				
Total	2,273.55	4,404.96	4,445.64	4,781.84	1,253.67	1,597.45	2,429.35	4,519.60
Initial BCR	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Level 2 PVB (£m)								
Reliability	110.36	441.21	423.80	457.12	110.36	148.65	236.79	421.90
Wider Impacts - Static Cluster	0.00	2,684.18	3,045.59	2,656.46	599.51	855.83	1,117.76	1,770.35
Total	2,383.91	7,530.35	7,915.04	7,895.42	1,963.54	2,601.93	3,783.91	6,711.66
Adjusted BCR	#DIV/0!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

*use values from NTEM Core
*use values from NTEM Core

Costs obtained from EO - Most Likely Cost
A6 to M60

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Preparation	17,652	35,125	0	0	0	0	0	0	0	13,546	5,442,314	3,650,061	9,238,422	9,769,237	7,573,542	6,098,776	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288,418	4,211,067	1,962,443	99,620	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,431,982	322,122,620	107,867,484	192,637	195,577	198,563	202,143	130,398	0	0	0	0	0	0	0	0	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,702,887	27,067,809	10,525,076	7,377,305	3,619,511	175,537	114,988	70,569	55,472	0	0	0	0	0	0	0	
Total CAPEX	17,652	35,125	0	0	0	0	0	0	0	13,546	5,442,314	3,650,061	9,238,422	9,769,237	7,573,542	70,522,064	353,401,495	120,355,002	7,669,562	3,815,089	374,100	317,131	200,967	55,472	0	0	0	0	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	2%	1%	12%	60%	20%	1%	1%	0%	0%										

M67, M60 to A57

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	18,052	35,816	8,916	679,482	902,116	1,154,451	1,062,008	1,629,868	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,490,710
Supervision	0	0	0	0	0	0	0	166,157	1,117,732	360,981	125,246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,770,115
Construction	0	0	0	0	0	0	0	9,231,038	28,598,358	8,469,106	24,891	25,241	25,611	26,068	15,087	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46,415,399
Land	0	0	0	0	0	0	0	0	0	76,254	37,959	21,001	8,383	7,304	4,164	2,066	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157,130
Total CAPEX	18,052	35,816	8,916	679,482	902,116	1,154,451	1,062,008	11,027,063	29,716,089	8,830,087	226,391	63,199	46,611	34,451	22,391	4,164	2,066	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53,833,354
	0%	0%	0%	1%	2%	2%	2%	20%	55%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

A616 dualling to M1

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	17,759	35,235	0	101,737	3,586,162	3,314,338	3,787,320	7,008,788	7,216,317	5,262,625	8,014,216	4,466,298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42,810,795
Supervision	0	0	0	0	0	0	0	467,926	2,342,737	2,174,190	999,155	350,313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,334,322
Construction	0	0	0	0	0	0	0	0	0	0	0	58,008,644	157,758,313	139,936,300	18,675,673	448,200	455,042	463,247	469,039	178,104	0	0	0	0	0	0	0	0	0	0	0	0	376,392,563
Land	0	0	0	0	0	0	0	20,636,411	13,494,789	5,521,230	4,655,053	1,340,056	135,823	44,456	43,656	21,437	0	0	0	15,783	0	0	0	0	0	0	0	0	0	0	0	0	45,908,693
Total CAPEX	17,759	35,235	0	101,737	3,586,162	3,314,338	3,787,320	7,008,788	7,216,317	5,262,625	8,014,216	83,579,280	173,595,839	147,631,720	24,329,881	2,138,569	590,865	507,703	512,695	199,541	15,783	0	0	0	0	0	0	0	0	0	0	0	471,446,374
	0%	0%	0%	0%	1%	1%	1%	1%	2%	1%	2%	18%	37%	31%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

A628 + Tunnel

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Preparation	22,641	37,533	0	0	0	0	0	0	0	25,792,961	18,457,359	23,417,530	68,430,267	99,944,721	48,111,021	55,819,559	50,586,764	167,477,963	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	272,174	5,932,138	21,840,975	24,342,961	25,694,439	11,740,861	12,973,628	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,626,717	548,279,337	1,408,809,339	1,479,558,131	1,546,398,414	728,083,932	156,777,328	835,431	854,558	869,209	886,357	641,144	0	0	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,005,759	16,507,591	5,770,456	3,295,756	2,461,854	0	0	0	0	0	0	0	0	0	5
Total CAPEX	22,641	37,533	0	0	0	0	0	0	0	25,792,961	18,457,359	23,417,530	68,430,267	99,944,721	48,111,021	55,819,559	50,586,764	208,382,613	570,719,066	1,436,420,770	1,507,196,848	1,574,554,707	739,824,793	169,750,956	835,431	854,558	869,209	886,357	641,144	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	1%	1%	1%	3%	9%	22%	23%	24%										

Denton Bypass

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Preparation	17,646	35,112	0	0	0	0	0	0	0	0	0	0	0	2,390	4,743,517	4,785,844	9,296,588	2,821,850	4,173,116	9,916,834	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	453,942	4,025,415	1,635,310	829,625	0	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64,238,751	298,142,228	78,111,206	87,685	89,024	90,382	92,012	53,971	0	0	0	0	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,657,495	12,751,093	4,773,303	3,179,566	1,578,354	0	0	0	0	0	0	0	

Convert to PVC (£000s)

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
15,413	29,632	0	0	0	0	0	0	0	8,678	3,368,712	2,182,931	5,338,232	5,454,060	4,085,243	3,178,493	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23,661,394
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,120,461	954,761	46,828	0	0	0	0	0	0	0	0	0	0	0	0	0	3,272,365
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,635,402	162,203,208	52,479,346	90,552	88,825	87,131	85,703	53,416	0	0	0	0	0	0	0	0	237,723,583
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,789,703	13,629,857	5,120,627	3,467,810	1,643,869	77,028	48,751	28,907	21,955	0	0	0	0	0	0	0	34,828,507
15,413	29,632	0	0	0	0	0	0	0	8,678	3,368,712	2,182,931	5,338,232	5,454,060	4,085,243	36,753,913	177,953,527	58,554,734	3,605,189	1,732,694	164,159	134,454	82,323	21,955	0	0	0	0	0	0	0	0	299,485,848

Convert to PVC (£000s)

2019	2020	2021	2022	2023	2024	2025
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	Convert to PVC (£000s)																																
Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
77,677,381	15,405	29,618	0	0	0	0	0	0	47,205	4,851,712	2,505,612	3,888,200	9,946,794	7,432,380	3,967,955	2,829,178	8,116,890	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,630,94
10,833,924	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,232	799,251	1,684,889	1,430,955	459,782	588,438	0	0	0	0	0	0	0	0	0	0	4,973,54
1,053,226,996	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,321,296	111,039,897	181,649,372	152,856,105	34,661,158	220,275	215,487	211,378	207,348	143,014	0	0	0	0	0	0	491,525,33
70,081,464	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,190,938	16,390,515	5,443,644	2,952,356	2,450,969	516,973	245,315	99,751	63,149	37,453	28,452	0	0	0	0	33,419,51	
2,211,819,766	15,405	29,618	0	0	0	0	0	0	47,205	4,851,712	2,505,612	3,888,200	9,946,794	7,432,380	3,967,955	2,829,178	23,639,356	128,229,663	188,777,905	157,239,416	37,571,909	1,325,686	460,803	311,130	270,497	180,467	28,452	0	0	0	0	573,549,34	

Convert to PVC (£000s)																																	
Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
4,853,960	15,666	30,030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	839,746	1,096,296	263,340	0	0	0	0	0	0	0	0	0	0	0	2,245,07
3,315,809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,309,413	140,674	0	0	0	0	0	0	0	0	0	0	1,450,08
44,349,938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,583,580	637,712	48,578	47,652	46,743	45,977	3,646	0	0	0	0	0	19,413,88
211,306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,325	20,905	11,211	4,339	3,664	2,025	973	0	0	0	0	0	86,44
52,731,013	15,666	30,030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	839,746	1,096,296	20,156,333	821,711	69,844	58,863	51,082	49,641	5,671	973	0	0	0	0	23,195,49

Convert to PVC (£000s)																																	
Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
5,501,107	15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,017	1,362,309	946,303	0	0	0	0	0	0	0	0	0	0	2,405,08
2,506,623	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	820,883	233,675	0	0	0	0	0	0	0	0	0	0	1,054,55
30,141,333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,454,121	2,058,970	42,413	41,604	40,922	40,033	6,377	0	0	0	0	12,684,44	
150,118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29,980	14,447	7,737	2,990	2,521	1,392	335	0	0	0	0	59,40	
38,299,182	15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,017	1,362,309	12,221,307	2,322,626	56,859	49,341	43,912	42,554	7,768	335	0	0	16,203,48	

Convert to PVC (£000s)																																	
Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
71,855,079	15,444	29,692	0	0	0	0	0	0	0	0	0	0	5,364,918	3,700,887	4,858,369	7,616,325	6,247,755	5,117,577	4,391,114	0	0	0	0	0	0	0	0	0	0	0	0	0	37,342,080
14,669,181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86,936	1,439,595	1,767,526	1,456,084	769,283	781,326	0	0	0	0	0	0	0	6,300,755	
411,093,619	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,431,140	51,152,340	58,348,681	46,702,466	8,120,685	46,193	45,436	44,448	25,378	0	0	0	0	180,963,855	
2,524,609	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363,929	459,788	163,637	103,560	49,094	0	0	0	0	0	0	0	0	1,140,341	
500,163,499	15,444	29,692	0	0	0	0	0	0	0	0	0	0	5,364,918	3,700,887	4,858,369	7,616,325	6,247,755	5,117,577	21,373,119	53,061,733	60,339,845	48,363,110	8,939,063	828,117	46,193	45,436	44,448	25,378	0	0	0	0	225,717,035

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M60 J24 to 25 (2037)

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	18,240	36,189	0	0	0	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	2,231,997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,501,107
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,936,175	570,448	0	0	0	0	0	0	0	0	0	0	0	0	0	2,506,623
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24,657,614	5,026,365	107,162	108,798	110,760	112,145	18,488	0	0	0	0	0	0	0	30,141,333	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,188	36,501	20,232	8,093	7,063	4,035	1,005	0	0	1,005	0	0	0	0	151,123
Total CAPEX	18,240	36,189	0	0	0	0	0	0	0	0	0	0	0	0	0	110,129	3,104,551	28,825,787	5,670,001	143,664	129,030	118,853	119,208	22,524	1,005	0	0	0	1,005	0	0	0	38,300,187
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	75%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Convert to PVC (£000s)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
07	15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	57,396	1,563,281	1,085,904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,753,037
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	941,982	268,148	0	0	0	0	0	0	0	0	0	0	0	0	0	1,210,129
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,996,344	2,362,716	48,670	47,742	46,959	45,938	7,317	0	0	0	0	0	0	0	14,555,687	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,403	16,578	8,878	3,431	2,893	1,597	384	0	0	0	0	335	0	0	68,500
87	15,926	30,530	0	0	0	0	0	0	0	0	0	0	0	0	0	57,396	1,563,281	14,024,230	2,665,267	65,248	56,620	50,390	48,832	8,914	384	0	0	0	335	0	0	18,587,353	

CAPEX Summary - from EO Most Likely Costs (£000s) (Factor prices only)													
	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	2			
Optimised pacakge	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	9,930	12,506	10,689	5,745	82,980	154,564	767,546	73,154	71,394	149,081	12,506	68,503	1,418,599
Supervision	4,101	6,348	7,827	3,531	20,766	34,349	157,651	16,447	18,591	37,220	6,348	11,765	324,943
Construction	100,779	72,103	95,815	37,869	1,340,139	2,843,024	8,631,012	922,545	1,082,692	1,335,647	72,103	726,973	17,260,699
Land	302	285	386	372	132,685	132,994	45,949	87,661	53,842	293	4,783	99,484	559,036
Total CAPEX	115,111	91,242	114,716	47,517	1,576,571	3,164,931	9,602,158	1,099,807	1,226,519	1,526,730	91,250	906,725	19,563,277

Converted to PVC - CAPEX (£000s)													
Scheme	M67, M60 to A57	M60 J24 to 25	M18 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
Preparation	7,194	5,442	4,921	3,554	46,752	86,259	410,860	48,560	35,000	77,177	6,236	49,640	781,594
Supervision	2,677	2,643	3,409	2,064	10,190	15,306	67,634	9,095	7,981	15,689	3,033	7,385	147,104
Construction	66,468	30,081	41,813	22,195	661,539	1,289,952	3,759,255	518,421	470,963	578,811	34,519	464,498	7,938,515
Land	177	111	158	204	66,234	63,303	21,285	50,689	23,490	2,161	130	66,070	294,012
Total CAPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	673,837	0	0	#REF!
All Schemes	76,516	38,277	50,301	28,017	784,714	1,454,820	4,259,033	626,765	537,435	673,837	43,917	587,593	9,161,225

OPEX (£000s)													
Scheme	M67, M60 to A57	M60 J24 to 25	M60 J1a to 2	M1 J35a to 36	A6 to M60	M1 to M18	A628 + Tunnel	A616 dualling to M1	Denton Bypass	A628 Mottram	M60 J24 to 25 (2037)	Hollingworth to Tintwistle Bypass	Total
OPEX 2010 Cost	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Single Year cost 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Discounted to 2010	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Total OPEX PVC (converted to market prices and values)													
TPTS Only	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	0	#REF!
Optimised Pacakge	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	0	0	#REF!
All Schemes	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Appraisal Summary	TPTS Only	Optimised Package	Low Growth	Trans-formational
Present Value of Cost (£m)				
CAPEX P97.5	0.00	673.84	673.84	673.84
OPEX	0.00	#REF!	#REF!	#REF!
Total PVC P97.5	0.00	#REF!	#REF!	#REF!
Level 1 PVB (£m)				
User Benefits	2,213.45	4,429.84	4,317.13	4,647.78
Indirect Tax Revenue	187.11	138.05	95.91	100.63

Total CAPEX	23,269	46,544	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,227	8,488,016	8,714,876	18,375,710	5,892,006	8,919,327	163,873,527	590,449,547	400,083,419	17,865,881	2,969,550	279,427	289,947	222,220	21,596	0	0	0	0	1,226,519,088	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	0%	1%	13%	48%	33%												
M1 J35a to 36																																						
Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total					
Preparation	24,264	48,455	0	0	0	0	0	0	0	654,316	3,437,499	1,580,228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,744,763					
Supervision	0	0	0	0	0	0	0	0	0	0	0	1,178,035	2,352,822	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,530,857					
Construction	0	0	0	0	0	0	0	0	0	0	0	17,180,370	20,049,318	131,303	135,513	140,242	145,127	86,667	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37,868,540				
Land	0	0	0	0	0	0	0	0	0	0	0	91,111	140,182	29,674	69,710	19,715	12,241	9,754	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372,387					
Total CAPEX	24,264	48,455	0	0	0	0	0	0	0	654,316	3,437,499	19,938,634	22,493,250	271,485	205,223	169,916	164,842	98,908	9,754	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47,516,547				
	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	7%	42%	47%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

Expenditure Profile																																	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	23,269	46,543	0	0	0	0	0	0	123,919	13,364,295	7,286,413	11,888,247	32,509,750	25,474,041	15,867,120	11,866,801	36,113,959	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,304	1,972,409	7,779,096	7,639,856	8,172,920	3,605,028	3,623,915	1,512,204	0	0	0	0	0	0	0	0	0	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,628,326	316,497,408	689,163,691	687,136,558	710,276,618	331,812,553	67,384,879	941,581	974,380	1,011,064	774,896	421,561	0	0	0	0	0	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,630,358	64,115,044	22,014,906	12,343,287	9,079,481	2,185,461	1,904,948	934,675	305,704	224,902	147,188	108,296	0	0	0	0	0	
Total CAPEX	23,269	46,543	0	0	0	0	0	0	123,919	13,364,295	7,286,413	11,888,247	32,509,750	25,474,041	15,867,120	11,866,801	92,415,946	382,584,861	718,957,693	707,119,702	727,529,020	335,417,580	73,194,255	4,358,733	1,909,055	1,316,767	999,798	568,749	108,296	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%	3%	12%	23%	22%	23%	11%											

Expenditure Profile																																	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	23,636	47,202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,777,211	5,449,545	1,391,192	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	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	
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82,779,410	12,012,090	227,977	235,918	244,136	253,327	62,134	0	0	0	0	0	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187,787	93,758	52,025	20,835	18,203	7,787	5,176	0	0	0	0	0	
Total CAPEX	23,636	47,202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,777,211	5,449,545	90,272,412	13,924,775	321,735	287,943	264,971	271,530	69,921	5,176	0	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	5%	79%	12%											

Expenditure Profile																																	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	24,193	48,315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233,737	6,830,364	5,369,768	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,957,384	3,390,483	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,901,082	30,110,308	237,639	245,916	255,175	195,570	156,976	0	0	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70,392	108,596	54,219	23,163	11,563	9,630	7,705	0	0	0	0	0
Total CAPEX	24,193	48,315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233,737	6,830,364	49,228,233	33,571,182	346,235	300,135	278,338	207,133	166,606	7,705	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%	7%	54%										

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Preparation	23,329	46,664	0	0	0	0	0	0	0	0	0	0	17,410,495	12,682,252	18,024,425	30,208,365	26,991,879	23,080,859	20,612,687	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	323,586	4,807,702	9,166,879	8,394,200	5,761,469	4,439,894	4,326,174	0	0	0	0	0	0		
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102,093,083	236,820,377	370,858,437	342,628,525	231,525,693	50,414,402	285,173	295,910	226,790	316,024	182,421	0	0		
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,468,843	1,919,312	706,128	461,927	226,445	0	0	0	0	0	0	0	0	0	
Total CAPEX	23,329	46,664	0	0	0	0	0	0	0	0	0	0	17,410,495	12,682,252	18,024,425	30,208,365	26,991,879	23,080,859	124,498,199	243,547,391	380,731,444	351,484,651	237,513,606	54,854,296	4,611,347	295,910	226,790	316,024	182,421	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%	2%	2%	8%	16%	25%	23%											

Expenditure Profile		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049		
Preparation		17,014	35,204	16,571	4,547,494	3,774,634	6,438,420	11,452,137	25,242,094	16,979,735	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Supervision		0	0	0	0	0	0	0	0	134,434	2,248,904	3,453,542	3,359,921	1,249,873	1,318,074	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Construction		0	0	0	0	0	0	0	0	63,797,978	166,711,135	214,854,417	199,147,481	79,562,779	2,898,835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Land		0	0	0	0	0	6,359,700	8,370,533	4,161,325	22,708,809	27,203,187	10,144,591	6,730,987	3,332,329	5,085,463	2,530,135	1,399,034	558,132	486,015	276,953	137,348	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total CAPEX		17,014	35,204	16,571	4,547,494	3,774,634	12,798,120	19,822,669	29,403,329	103,620,955	196,163,227	228,452,580	209,238,389	84,144,962	9,302,372	2,530,135	1,399,034	558,132	486,015	276,953	137,348	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0%	0%	0%	1%	0%	1%	2%	3%	11%	22%	25%	23%	9%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

M60 J24 to 25 (2037)

Expenditure Profile	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Preparation	24,193	48,315	0	0	0	0	0	0	0	0	0	0	0	0	0	233,737	6,830,364	5,369,768	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,506,377
Supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,957,384	3,390,483	0	0	0	0	0	0	0	0	0	0	0	0	0	6,347,867
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,901,082	30,110,308	237,639	245,916	255,175	195,570	156,976	0	0	0	0	0	0	0	72,102,665	
Land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70,392	108,596	54,219	23,163	11,563	9,630	7,705	0	0	0	0	0	0	292,972	
Total CAPEX	24,193	48,315	0	0	0	0	0	0	0	0	0	0	0	0	0	233,737	6,830,364	49,228,233	33,571,182	346,235	300,135	278,338	207,133	166,606	7,705	0	0	0	0	0	0	91,249,881	

Convert to PVC (£000s)

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
21,124	40,759	0	0	0	0	0	0	0	0	0	0	0	0	0	121,816	3,439,395	2,612,483	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,235,577
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,438,817	1,593,746	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,032,563
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,899,065	14,153,789	107,928	107,911	108,187	80,112	62,128	0	0	0	0	0	0	0	0	34,519,119	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,089	49,321	23,792	9,821	4,736	3,812	2,946	0	0	0	0	0	2,568	0	0	130,084	
21,124	40,759	0	0	0	0	0	0	0	0	0	0	0	0	0	121,816	3,439,395	23,950,364	15,780,623	157,249	131,702	118,007	84,849	65,940	2,946	0	0	0	2,568	0	0	43,917,343	

TPTS Studies - Test Packages		2034	2037	2041	2041										
ID	Scheme	Package 1	Package 2	Package 3	Optimised Package	Reference	End date	Outturn Cost (£m)	CAPEX P50 (£m)	CAPEX P2.5 (£m)	CAPEX P97.5 (£m)	OPEX (£m)	PVC P50 (£m)	PVC P2.5 (£m)	PVC P97.5 (£m)
1	M67, M60 to A57	✓	✓	✓	✓	M67, M60 to	Jul-2028	81.99	36.05	15.87	76.52	#REF!	#REF!	#REF!	#REF!
2	A6 to M60		✓	✓	✓	A6 to M60	Aug-2036	1,093.44	299.49	124.53	784.71	#REF!	#REF!	#REF!	#REF!
3	M60 J24a-J25			✓	✓	M60 J24 to 2	Mar-2041	69.31	16.20	6.52	38.28	#REF!	#REF!	#REF!	#REF!
4	M1 J35a-J36	✓	✓	✓	✓	M1 J35a to 3	Apr-2031	35.91	14.61	7.53	28.02	#REF!	#REF!	#REF!	#REF!
5	Denton Bypass				✓	Denton Bypa	Aug-2040	1,062.53	227.84	71.69	537.43	#REF!	#REF!	#REF!	#REF!
6	A616 to M1	✓	✓	✓	✓	A616 dualling	May-2033	781.04	273.74	115.95	626.77	#REF!	#REF!	#REF!	#REF!
7	A628 to M67	✓	✓	✓		Hollingworth	Aug-2030	641.05	261.88	109.69	587.59	#REF!	#REF!	#REF!	#REF!
8	A628 + Tunnel				✓	A628 + Tunn	Nov-2041	8,779.55	1,939.16	692.71	4,259.03	#REF!	#REF!	#REF!	#REF!
9	M1 to M18			✓	✓	M1 to M18	Sep-2039	2,394.81	573.55	205.02	1,454.82	#REF!	#REF!	#REF!	#REF!
10	M18 J1a-J2			✓	✓	M18 J1a to 2	Feb-2040	92.90	23.20	10.04	50.30	#REF!	#REF!	#REF!	#REF!
11	A628 Mottram				✓	A628 Mottrar	Aug-2041	1,017.08	225.75	68.57	673.84	#REF!	#REF!	#REF!	#REF!
3	M60 J24-J25 (2037)		✓			M60 J24 to 2	Mar-2037	69.31	18.59	7.48	43.92	#REF!	#REF!	#REF!	#REF!

*OPEX assume half of A6-M60 OPEX

*CAPEX profile from EO shifted by 4 years earlier to represent 2037 opening year

Package	Outturn Cost (£m)	CAPEX P50 (£m)	CAPEX P2.5 (£m)	CAPEX P97.5 (£m)	OPEX (£m)	PVC P50 (£m)	PVC P2.5 (£m)	PVC P97.5 (£m)
Package 1	1,539.98	586.27	249.05	1,318.89	#REF!	#REF!	#REF!	#REF!
Package 2	2,702.73	904.35	381.05	2,147.52	#REF!	#REF!	#REF!	#REF!
Package 3	5,190.44	1,498.71	595.15	3,647.00	#REF!	#REF!	#REF!	#REF!
Optimised Package	15,408.55	3,629.57	1,318.43	8,529.72	#REF!	#REF!	#REF!	#REF!

	PK1	PK2	PK3	Opt Pk	Toll_TUBA	Toll_Sensitivity
Outturn Costs (£m)	1,539.98	2,702.73	5,190.44	15,408.55	15,408.55	15,408.55
CAPEX	586.27	904.35	1,498.71	3,629.57	3,629.57	3,629.57
OPEX	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Toll Revenues					-588.72	-2,200.00
PVC (£m) (EO Most Like	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

*from Financial analysis spreadsheet

Level 1 PVB (£m)	1,253.67	1,597.45	2,429.35	4,312.44	3,930.88	2,437.66
Level 1 BCR	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

*Note: Packages 1-3 do not include Accident and Construction delays

Reliability	110.358	148.65	236.79	441.21	421.90	421.90
WITA	599.511	855.83	1,117.76	2,684.18	1,770.35	1,770.35
Total Level 2 PVB	1,963.54	2,601.93	3,783.91	7,437.83	6,123.14	4,629.91
Level 2 BCR	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

Incremental BCR Calculation

PK2 vs. PK1	PK3 vs. PK2	Optimised vs. PK3	Toll_TUBA vs. PK3	Toll_Sen vs. PK3
#REF!	#REF!	#REF!	#REF!	#REF!

Incremental PVC (£m) (EO Most Likely)

Incremental Level 1 PVB (£m)	343.780	831.900	1,883.089	1,501.53	8.30
Incremental Level 1 BCR	#REF!	#REF!	#REF!	#REF!	#REF!

294.612 350.073 1,770.836

Incremental Level 2 PVB	638.392	1,181.973	3,653.925	2,339.23	846.01
Incremental Level 2 BCR	#REF!	#REF!	#REF!	#REF!	#REF!

Note: Excludes Accident Impacts in Level 1 and Construction Impacts in either Level 1 or 2



