Additional time Cost (for Heavy Maintenance Option)

Mode of Transport	Additional Average no. Of Passenger p.a. gained as a result of not implementing full renewal	Minutes saved	Cost per minute (deflation rate of 3.23% applied to convert to 2010 value)	Total
Rail (30% reamain)	51,990	9	0.52595685	**246,101**
Move to Bus (60% of the 70% that leave rail)	72,786	9	0.52595685	**(344,541)**
Move to cars and other (40% of the 70% that leave rail)	48,524	9	0.52595685	**(229,694)**
Total	**173,300**			**(328,134)**

Calculation of Additonal Passenger numbers expected under the Heavy Maintenance Option

Projected Annual Usage of the Derry Line (2009/10 – 2034/35)		From PM Info of Similar Project (Projected Passenger Numbers)			
Year	Projected Annual Usage	Heavy Maintenance Option	Do Something Option	% Difference	% Difference Applied to Our projeted Annual Usage
2009/2010	1,428,378	1,203,000	1,203,000	0%	0
2010/2011	1,452,661	1,251,000	1,251,000	0%	0
2011/2012	1,491,882	1,301,000	1,301,000	0%	0
2012/2013	1,515,753	1,288,000	1,301,000	1%	15,146
2013/2014	1,530,910	1,301,000	1,353,000	4%	58,838
2014/2015	1,546,219	1,314,000	1,408,000	7%	103,228
2015/2016	1,561,681	1,301,000	1,429,000	9%	139,885
2016/2017	1,577,298	1,314,000	1,450,000	9%	147,940
2017/2018	1,589,917	1,327,000	1,472,000	10%	156,615
2018/2019	1,602,636	1,340,000	1,494,000	10%	165,198
2019/2020	1,615,457	1,353,000	1,516,000	11%	173,694
2020/2021	1,626,765	1,367,000	1,539,000	11%	181,809
2021/2022	1,638,153	1,381,000	1,562,000	12%	189,824
2022/2023	1,649,620	1,394,000	1,586,000	12%	199,702
2023/2024	1,659,517	1,408,000	1,609,000	12%	207,311
2024/2025	1,669,474	1,422,000	1,634,000	13%	216,603
2025/2026	1,681,161	1,437,000	1,658,000	13%	224,087
2026/2027	1,691,248	1,451,000	1,683,000	14%	233,137
2027/2028	1,701,395	1,466,000	1,708,000	14%	241,064
2028/2029	1,708,201	1,480,000	1,734,000	15%	250,221
2029/2030	1,716,742	1,495,000	1,760,000	15%	258,487
2030/2031	1,725,325	1,510,000	1,786,000	15%	266,624
2031/2032	1,732,227	1,510,000	1,786,000	15%	267,690
2032/2033	1,739,156	1,510,000	1,786,000	15%	268,761
2033/2034	1,744,373	1,510,000	1,786,000	15%	269,567
2034/2035	1,749,606	1,510,000	1,786,000	15%	270,376
			Average Passenger Increase		**173,300**

To calculate this the following formula is used: **L = A + Bv + Cv ^2 + Dv ^3**

L	consumption (expressed in litres per kilometre)
v	average speed in kilometres per hour
A, B, C, D	parameters defined for each vehicle type

The part of track concerned is 30 miles (18.75 km), 15.625km of this is rural road, 3.125 is urban road

Average spped for Road Type (v)	km/h	Length of Track (km)
Urban road	20	3.125
Rural Road	80	15.625

Vehicle Operating Costs (for an average car)

Parameters	Road Type	A	Bv	Cv ^2	Dv ^3	L (pence per km)	Pence per journey (L * Length of Track)
		3.358941551	-0.076406459	0.00086576	-2.77689E-06		
v	Urban road (20 km/h)	-	20	400	8000	2.154900897	6.734065302
	Rural Road (80 km/h)	-	80	6400	512000	1.365516571	21.33619643
							28.07026

Expected no of passengers to use cars	Additional Cost (£) (Pence per Journey * Additional Passengers)
48,524	13,621