



The Lancashire Permit Scheme for Road & Street Activities

Cost Benefit Analysis – Executive Summary

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Executive Summary

This summary report presents the Cost Benefit Analysis results in support of the Lancashire Permit Scheme, relating to road and street works activities on the public highway.

The methodology employed to calculate the benefits of the Permit Scheme is a bottom-up approach, undertaking the evaluation of delays at typical roadwork sites using the DfT software Quadro and Paramics microsimulation modelling suite.

The assessment has been carried out for the 2014 base year and a design year 25 years hence, 2038.

Key details;

- Number of works per annum 27,500
- Average works duration 5.9 days
- Total cost of works first year £72M
- Cumulative cost of works 25 year period £1,631M

Traffic Management Type	Road Closure	Overnight Closure	Lane Closure	Temporary Signals	Stop / Go Boards	Priority Working / Give & Take	None / Signing Only
Number of works p.a.	587	102	212	1,906	696	4,302	19,570
Average duration (days)	19.6	4.3	10.5	10.1	8.4	7.4	4.7
Average user cost of works	£67,320	£9,988	£5,586	£13,017	£10,476	£592	-

Note: all prices quoted at 2010 values.

Operational summary;

- Number of personnel required, 18
- Number currently employed, 7
- Permit Scheme annual operating cost, £1.614M
- Permit Scheme annual revenue, £1.324M

Cost Benefit Analysis;

- Assumed saving in annual cost of works, 5%
- Optimism bias added to all costs, 15%
- First year scheme operational cost £1.92M
- Scheme operational costs increase at 2% year on year

The assessment of the impact on the cost to public accounts includes the first year set-up costs, the annual scheme operating costs, revenue generated by operating the Permit Scheme and indirect tax revenues obtained from the Quadro modelling.

BENEFITS

	First Year	Cumulative 25 Year
5% Reduction in Works Impact		
Environmental;		
Fuel Carbon Emission Benefits	£45,009	£1,032,400
Consumer User;		
Travel Time & Vehicle Operating Cost Benefits	£2,011,517	£47,213,748
Business;		
Business User Travel Time & Vehicle Operating Cost Benefits & Private Sector Provider Impacts	£1,418,519	£34,230,597
Offset Scheme Revenue (cost to business)	-£1,521,447	-£25,953,404
Present Value of Transport Economic Efficiency Benefits (PVB)	£1,953,598	£56,523,341

COSTS

	First Year	Cumulative 25 Year
Public Accounts		
Local Government Funding;		
Scheme Revenue	-£1,521,447	-£25,953,404
Operating Costs	£1,853,896	£39,115,341
First Year Investment Costs	£68,921	£68,921
Central Government Funding;		
Indirect Tax Revenues	£42,490	£757,429
Total Present value of Costs (PVC)	£443,860	£13,988,287

COST BENEFIT

	First Year	Cumulative 25 Year
Cost Benefit Indicators		
Net Present Value (NPV)	£1,509,737	£42,535,055
Benefit to Cost Ratio (BCR)	4.4	4.0

Note: all prices quoted at 2010 values.

Break even in the first year (BCR 1.0 and NPV £1,000) would occur at a 2.8% overall scheme benefit. Over the 25 year assessment period, break even would occur from a 2.4% overall scheme benefit (BCR of 1.0 and NPV £184,000).