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Meta Evaluation of Local Major Schemes

Final Report Supplementary Appendices

Highways Agency/DfT
Framework for Transport Related Technical and Engineering Advice and Research Lot 2

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1	Final Report Supporting Appendices	GO	NDM	RR	NDM	25/03/14
2	Final Report Supporting Appendices	GO	NDM	RR	NDM	01/04/14
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Appendix A: Programme and Cost Data

Meta Evaluation of Local Major Schemes
Task Ref: SB937 (4/45/12))

Scheme	Forecast at Programme Entry Stage							Forecast at Full Approval Stage							Actual						
	Date of PE	Spend £m			Total Outturn	Start of Works	Scheme Opening	Date of FA	Spend £m			Total Outturn	Start of Works	Scheme Opening	Spend £m			Total Outturn	Start of Works	Scheme Opening	
		DfT	LA	3rd Party					DfT	LA	3rd Party				DfT	LA	3rd Party				
Darlington Eastern Transport Corridor	Dec-00	5.700	0.000	0.000	5.700	Jul-02	?	Dec-06	12.040	0.477	0.000	12.517	Jan-07	Early 2008	13.269	1.747	0.000	15.016	Jan-07	Mar-09	
Walsall Town Centre Transport Package	Dec-02	11.000	0.000	0.000	11.000	?	?	Apr-06	21.225	0.000	0.000	21.225	Jul-06	Sep-08	21.225	3.307	0.104	24.636	Jul-06	May-09	
Owen Street Level Crossing Relief Road, Tipton	Dec-00	8.810	0.000	0.000	8.810	2005/06	?	Mar-07	18.317	1.400	2.683	22.400	Sep-07	Feb-10	22.191	2.297	2.683	27.171	Sep-07	Feb-10	
B1115 Stowmarket Relief Road	Dec-99	7.505	0.000	5.695	13.200	2002	?	Nov-07	12.000	0.000	9.000	21.000	Feb-08	Jul-09	12.000	0.000	5.700	17.700	Jun-08	Jun-10	
BIA/NEC Public Transport Scheme	Aug-06	10.600	0.000	0.000	10.600	Apr-09	Jan-12	Jan-09	11.113	0.000	1.500	12.613	Apr-09	Dec-10	11.113	0.024	1.500	12.637	Jul-09	Mar-11	
Brierley Hill Sustainable Access Network	Dec-03	17.370	6.940	0.000	24.310	Spring 05	Spring 07	Dec-06	20.320	7.100	0.000	27.420	Feb-07	Jul-08	20.320	3.000	4.100	27.420	Apr-07	Oct-08	
Cambridgeshire Guided Busway	Dec-03	74.000	0.000	9.000	83.000	?	?	Aug-06	92.500	7.500	16.000	116.000	Jul-06	Feb-09	92.500	?	?	92.500	Jul-06	Aug-11	
Cudworth and West Green Bypass	Jan-02	17.198	0.000	0.000	17.198	2002/03	2004/05	Sep-08	20.209	1.052	0.000	21.261	Nov-08	Aug-10	20.209	1.446	0.000	21.655	Nov-08	Aug-10	
A688 Wheatley Hill to Bowburn Link Road	Dec-00	6.241	0.000	0.000	6.241	Nov-02	?	Mar-07	10.500	0.930	0.000	11.430	May-07	Aug-08	10.500	0.930	0.000	11.430	May-07	Oct-08	
M4 Junction 11 and Mere oak Junction Improvement	Dec-01	43.520	0.000	0.000	43.520	Early 04	?	Mar-08	62.046	0.449	3.000	65.495	May-08	Mar-10	62.046	0.449	3.000	65.495	May-08	Feb-11	
Manchester Metrolink Phase 1 and 2 Capacity and Renewals	Jun-05	58.000	44.000	0.000	102.000	Summer 07	Spring 08	Jan-08	58.000	44.000	0.000	102.000	May-07	Nov-10	58.000	44.000	0.000	102.000	May-07	Jan-10	
A638 Quality Bus Corridor	Dec-02	15.306	3.794	0.000	19.100	?	?	Dec-06	15.921	0.000	0.000	15.921	Apr-07	Nov-08	15.921	1.289	3.200	20.410	Apr-07	Apr-09	
Scarborough Integrated Transport Scheme	Dec-02	26.895	0.000	0.000	26.895	?	?	Sep-06	29.786	0.750	0.000	30.536	Oct-07	Jul-08	29.786	5.506	0.000	35.292	Oct-07	Jun-09	
A1073 Spalding to Eye Improvement	Dec-01	23.750	0.000	0.000	23.750	2002/03	?	Nov-07	69.800	10.500	0.000	80.300	Apr-08	Sep-10	69.800	11.618	0.823	82.241	Apr-08	Mar-11	
A158/C541 Coastal Access Improvement Burgh Le Marsh	Dec-00	7.180	0.000	0.000	7.180	2005/06	?	Jul-06	13.575	1.500	0.000	15.075	Sep-06	Dec-07	12.939	1.413	0.050	14.402	Sep-06	Nov-07	
Tunstall Northern Bypass	Dec-03	2.640	4.090	0.000	6.730	Jan-05	Jan-06	Oct-06	3.127	4.542	0.000	7.669	Dec-06	Dec-07	6.057	4.463	2.183	12.703	Jan-07	Jul-08	
A4123/ A461 Junction Improvement Burnt Tree	Jul-06	10.303	0.000	0.000	10.303	Oct-07	Dec-10	May-09	11.786	0.494	0.000	12.280	Aug-09	Feb-11	11.786	0.494	0.000	12.280	Sep-09	Oct-11	
Weymouth 2012	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Mar-10	9.068	1.560	0.000	10.628	Mar-10	Jul-11	9.068	1.560	0.000	10.628	Mar-10	Jul-11	
Greater Bristol Bus Network	Aug-06	42.343	0.000	26.260	68.603	Jan-07	Mar-10	May-08	42.343	2.241	25.726	70.310	Apr-08	Jun-11	42.343	7.526	29.495	79.364	Apr-08	Mar-12	
A631 West Bawtry Road Improvement	Dec-00	5.028	0.000	0.000	5.028	Jan-04	?	Sep-06	5.028	0.000	0.000	5.028	Jan-07	Oct-07	6.130	2.938	0.000	9.068	Feb-07	Mar-09	
Glasshoughton Coalfields Link Road	Dec-00	5.792	0.000	2.600	8.392	Jan-03	?	Jun-07	6.512	0.000	5.424	11.936	Jul-07	Sep-08	6.512	0.000	5.424	11.936	Sep-07	Mar-09	
Hemsworth - A1 Link Road	Dec-00	11.261	0.000	0.000	11.261	May-04	?	Nov-07	22.800	1.457	0.000	24.257	Feb-08	Nov-09	22.800	1.457	0.000	24.257	Feb-08	Nov-09	
Kirklees - Strengthening and Maintenance Work	Jul-06	15.200	0.000	0.000	15.200	?	?	Nov-07	13.592	0.000	0.130	13.722	Jul-06	Sep-10	15.197	0.170	0.130	15.497	Jul-06	Mar-11	
North Middlesbrough Accessibility	Dec-02	12.930	0.000	0.000	12.930	Summer 05	Summer 06	Jun-08	12.264	0.797	0.470	13.531	Jun-08	Dec-09	12.264	0.797	0.470	13.531	Jun-08	Feb-10	
Poole Bridge Regeneration Initiative-Core Scheme Element	Dec-01	14.140	0.000	19.860	34.000	Autumn 04	?	Mar-10	15.341	10.138	10.460	35.939	May-10	Jan-12	15.341	11.638	9.960	36.939	May-10	Feb-12	
Weymouth Relief Rd	Dec-03	54.567	0.000	0.000	54.567	2007	2010	Dec-08	79.223	8.219	0.000	87.442	Apr-09	Oct-11	80.696	8.575	0.000	89.271	Apr-09	Jan-12	
Taunton Third Way	Mar-2007	6.16	2.029	?	8.189	?	?	Aug-2009	Mar-2010	5.465	0.000	2.029	7.494	Mar-2010	Feb-2011	5.884	0.646	2.029	8.559	40269	Sep-2011
West Midlands Red Routes	?	?	?	?	?	?	?	Dec-2004	28	0.000	0.000	28	?	?	28	0.000	0.000	28	38353	Dec-2012	

Notes:

1. Data for Programme Entry costs derived from Conditional Approval or Full Approval submissions to Ministers
2. Data for Full Approval costs and dates derived from Full Approval submissions to Ministers
3. Data on forecast Start of Works and Scheme Opening Dates at PE stage derived from electronic records available. Those records tended not to include scheme opening dates.
4. Data on Actuals derived from the last Quarterly Monitoring Report received from scheme promoter.

Appendix B: Scheme Templates

Scheme Details				
Scheme Name		B1115 Stowmarket Relief Road		
Opening Date		August 2010		
Scheme Location		Stowmarket, Suffolk County Council (SCC)		
Mode		Highway		
Location Description		Semi Urban		
Evaluation Documentation supplied		B1115 Relief Road, Stowmarket Evaluation Report – Brief evaluation of scheme using comparison of pre-scheme and post-scheme data.		
Evaluation Time Period		Three Years After Opening		
Scheme Description		A new link across the London-Norwich mainline at Stowmarket to relieve the level crossing immediately north of the station on the existing route of the B1115 and to link the Stowmarket Development Area (SDA) with the town centre.		
Scheme Objectives		<ul style="list-style-type: none"> Relieve level crossing to north of railway station Beneficial to the development of Stowmarket Development Area 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£7.5m	£12.0m	£12.0m
	LA	-	-	-
	3rd Parties	£5.7	£5.7m	£6.7m
	Total	£13.2m	£17.7m	£18.7m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	On the existing B1115 Station Road East in the AM peak, traffic flows for 2016 were predicted to reduce by 26% when compared with 2005 actual flows. Traffic flows of 570 vehicles were predicted on the relief road in 2016 resulting in a net rise of 428 vehicles. A similar situation occurred in the PM peak.		
	Actual	A traffic survey conducted in June 2012 in the AM peak showed that the reductions predicted for Station Road East were accurate with 403 vehicles observed compared with the 2016 predicted flow of 410 vehicles. An observed 2012 flow of 769 on the Relief Road is 35% higher than the 2016 predicted flow of 570 vehicles. A similar situation occurred in the PM peak.		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	Scheme delivered 11 months after date proposed at full approval stage.		
Are LMS delivered on budget (and if not why not)?	Comprehensive	Full approval forecast and actual costs presented, scheme costs increased due to extra works required by Network Rail. Additional costs were covered by interest gained from developer contributions.		
How well do LMS deliver stated objectives?	None	No objectives stated		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Connection of Stowmarket Development Area to Town Centre. Improved safety.		
Do LMS deliver value for money?	Partial	No JT analysis, limited accident analysis		
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Partial	Traffic count and accident survey undertaken pre-scheme post-scheme.		

Is there evidence LMS impact on modal choice?	Partial	Pedestrian and cycle flow survey indicated low NMU usage
How do LMS impact on the environment (including carbon)?	None	No evaluation. It will be some years before this impact can be measured.
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Partial	Traffic flows were predicted with reasonable accuracy.
What are the reasons for the differences between forecast and outturn impacts?	Partial	Slight increase in scheme costs due to extra work required by Network Rail, flows on Relief Road higher than expected possibly due to new supermarket
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	More emphasis on economic benefits
What lessons can be learnt to improve LMS evaluation?	Comprehensive / Partial / None	Economic benefits of scheme need to be analysed (journey times, accident savings)
Potential for stakeholder engagement?	What work was done pre-scheme to determine the provision of a cycle lane?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Traffic flows were observed in AM and PM peak periods in 2005, month of survey not given; Accidents on Gipping way between Station Road and Relief Road surveyed from July 2005 and July 2008; Frequency and duration of level crossing closures in the AM peak, June 2005 Range of data quite limited in its ability to provide results on schemes benefits	
Post Opening	Traffic flows were observed in AM and PM peak periods in June 2012; Accidents on Gipping way between Station Road and Relief Road surveyed from August 2010 and August 2013; Frequency and duration of level crossing closures in the AM peak, Sept 2011 Pedestrian and Cycle Flows on Relief Road Range of data quite limited in its ability to provide results on schemes benefits	

Scheme Details				
Scheme Name		A4123/A461 Junction Improvement, Burnt Tree		
Opening Date		August 2010		
Scheme Location		Tivdale, West Midlands		
Mode		Highway		
Location Description		Urban		
Evaluation Documentation supplied		A4123/A461 Junction Improvement, Burnt Tree Scheme Evaluation Report – Brief evaluation of scheme using comparison of pre-scheme and post-scheme data.		
Evaluation Time Period		One Year After Opening		
Scheme Description		The A4123 / A461 Burnt Tree Improvement Scheme was a major joint project between Dudley and Sandwell Metropolitan Borough Councils that saw the junction transformed from a five-arm roundabout into a new four-arm traffic signal controlled crossroads. A further linked signalised junction was introduced to accommodate the fifth arm of the roundabout Tivdale Road to the southeast of the main junction. Further access improvements were delivered in partnership with Tesco to the adjacent Towngate Retail Park.		
Scheme Objectives		<ul style="list-style-type: none"> • reduce delays and congestion for motorists and bus services • improve local connectivity • improve road safety (accident reduction) • improve air quality 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£10.303m	£11.786m	£11.786m
	LA	-	£0.494m	£0.494m
	3rd Parties	-	-	-
	Total	£10.303m	£12.280m	£12.280m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	No pre-scheme forecasts presented in report.	
		Actual	Traffic flows reduced by 12% post-scheme, partly due to recession partly due to traffic displacement because of disruption during construction. Reduction in journey times by up to 51% in peak periods, reduction in accident rate from 1.75 to 0.3 per month, improvement in air quality. NB - Post scheme evaluation period less than 12 months.	
Suitability for Meta-Analysis				
Line of Enquiry		Depth of evidence presented?	Brief description of evidence presented	
Are Local Major Schemes (LMS) delivered on time (and if not why not)?		Partial	Scheme delivered 8 months after date proposed at full approval stage. Construction phase forecast to be 18 months, actually 25 months. Delay not mentioned in evaluation report	
Are LMS delivered on budget (and if not why not)?		Partial	Scheme delivered on budget.	
How well do LMS deliver stated objectives?		Comprehensive	Evaluation report signals that scheme delivered its objectives.	
What are the main benefits of LMS (and how does this differ by scheme context/type)?		Comprehensive	Improved journey times, improved safety, improved connectivity.	
Do LMS deliver value for money?		None	Economic benefit of improved journey times/reduced accidents not analysed	
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		Partial	Improved journey times, reduced safety, improved connectivity.	

Is there evidence LMS impact on modal choice?	None	No evidence of modal shift presented in report.
How do LMS impact on the environment (including carbon)?	Full	Report presents an improvement in air quality although this could be attributed to reduced traffic flows at the junction.
How do LMS impact on the local economy?	None	Impact on local economy not presented in report
How do LMS have an impact on local bus operations?	Partial	No specific data on improved bus operations due to scheme although improved journey times signify improved bus journeys
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No forecasts included in report
What are the reasons for the differences between forecast and outturn impacts?	None	No forecasts included in report
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	More emphasis on economic benefits
What lessons can be learnt to improve LMS evaluation?	Comprehensive / Partial / None	Pre-scheme forecasts should be included to enable a better evaluation of post-scheme results.
Potential for stakeholder engagement?	Was there any traffic modelling carried out pre-scheme that predicted journey time savings?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Journey times, traffic flows, accident numbers, air quality.	
Post Opening	Journey times, traffic flows, accident numbers, air quality.	

Scheme Details				
Scheme Name		Cambridgeshire Guided Busway		
Opening Date		7 th August 2011		
Scheme Location		Cambridgeshire		
Mode		Public Transport		
Location Description		Urban centre to urban centre passing through rural areas.		
Evaluation Documentation supplied		Consultation response report Summary pamphlet		
Evaluation Time Period		One year after opening.		
Scheme Description		25km of guided busway constructed on disused railway lines as part of a 40km route between Huntingdon, St Ives and Cambridge. Includes stops at the following key locations: Cambridge Regional College, Cambridge Science Park, Railway Station, Addenbrooks Hospital, P&R sites.		
Scheme Objectives		<ul style="list-style-type: none"> To address congestion problems in the Cambridge to Huntingdon corridor. Enable bus services to avoid congestion on the A14 and attract car users from the A14. Support growth of employment in the nationally important technology based area centred on Cambridge. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£74.000m	£92.500m	£92.500m
	LA	-	£7.500m	Final cost unclear due to dispute between LA and contractor.
	3rd Parties	£9.000m	£16.000m	
Total	£83.000m	£116.000m		
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	1.75m passengers in first year. 2.625m passengers in 2 nd year. 3.5m passengers in 3 rd year.	
		Actual	2.5m passengers in first year. Bus ridership in corridor up 33%.	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None			
Are LMS delivered on budget (and if not why not)?	None			
How well do LMS deliver stated objectives?	None			
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Report states that busway users are contributing to: fewer vehicles on the road, increased mode share, less congestion. No evidence.		
Do LMS deliver value for money?	None			
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Partial	Some evidence from a survey of circa 900 users.		
Is there evidence LMS impact on modal choice?	Partial	Some evidence from a survey of circa 900 users. The Busway is contributing to reducing the number of private vehicle trips in the area as 24% of the passengers who made the		

		same journey before the Busway opened had switched from car (as driver), and 13% had changed to the Busway from being given a lift;
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	Partial	Service frequencies increased on 22nd July and services were extended to serve a range of additional destinations
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Partial	Some evidence showing forecast vs. observed passenger numbers. In the first year, there were 2.5 million journeys on the Busway – 750,000 more than forecast. This demand led to a rapid increase in service provision with operators providing more buses per hour on the Busway.
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?	None	
Potential for stakeholder engagement?		Potentially limited opportunity to discuss forecast vs. actual spend due to ongoing legal dispute between local authority and contractor.
Depth of Evaluation Supporting Evidence		
Pre Construction		No data presented.
Post Opening		Opening year passenger numbers. Outputs and analysis from a survey involving approximately 900 users of the guided busway. No other observed data presented.

Scheme Details				
Scheme Name		Darlington Eastern Transport Corridor		
Opening Date		27 th August 2008		
Scheme Location		Darlington		
Mode		Highway		
Location Description		Urban		
Evaluation Documentation supplied		Darlington Eastern Transport Corridor Monitoring Report - Report evaluating flows, accidents and air quality before and after construction		
Evaluation Time Period		One Year After Opening (19 months post-scheme accident data)		
Scheme Description		The DETC a two lane road and shared use cycle/footway linking the A66, East of Darlington with Houghton Road, ¼ mile North East of the Town Centre. The road was constructed to relieve traffic flows on the section of Houghton Road, North East of the new DETC junction and to improve access to new employment land on the eastern fringes of Darlington.		
Scheme Objectives		<ul style="list-style-type: none"> Reduction in flows on Houghton and Yarm Roads Reduction of traffic accidents. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£5.700m	£12.040m	£13.269m
	LA	-	£0.477m	£1.747m
	3rd Parties	-	-	-
Total		£5.700m	£12.517m	£15.016m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	No pre-scheme forecasts presented in report.	
		Actual	Traffic on Houghton Road reduced by up to 51% in the AM peak. Reduction in accidents on Houghton Road and Yarm Road	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	No evidence.		
Are LMS delivered on budget (and if not why not)?	None	No explanation given.		
How well do LMS deliver stated objectives?	Partial	Objectives not explicitly stated, main aims to reduce traffic flows through residential areas improve access to new employment land		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Achieved redistribution of traffic, reduced accidents in residential areas, no other direct benefits analysed.		
Do LMS deliver value for money?	None	No economic benefits presented.		
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Partial	Reduced flows through residential areas, improved safety, increased cycle usage.		
Is there evidence LMS impact on modal choice?	Partial	Increase in cycle usage although questionable as to whether this is a direct result of scheme.		

How do LMS impact on the environment (including carbon)?	Partial	Air quality investigated, no change as result of scheme.
How do LMS impact on the local economy?	Partial	Scheme potentially held local employment level during economic downturn
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No pre-scheme forecasts in report
What are the reasons for the differences between forecast and outturn impacts?	None	No pre-scheme forecasts in report
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		Objectives needed to understand main aims of scheme.
What lessons can be learnt to improve LMS evaluation?		Journey time analysis and traffic model predictions required.
Potential for stakeholder engagement?	Reason for scheme going over budget. How has scheme affected employment levels five years on?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Data provided – traffic flows, cycle flows, accident numbers, air quality. Good range of ATC sites and accident locations, air quality sites quite far from scheme so of limited use. No journey time analysis or traffic model predictions.	
Post Opening	Data provided – traffic flows, cycle flows, accident numbers, air quality. Good range of ATC sites and accident locations, air quality sites quite far from scheme so of limited use. No journey time analysis.	

Scheme Details				
Scheme Name		M4 Junction 11 and Merooak Improvements		
Opening Date		February 2011		
Scheme Location		Reading		
Mode		Highway		
Location Description		Semi-rural		
Evaluation Documentation supplied		M4 Junction 11 and Merooak POPE – Full POPE		
Evaluation Time Period		One Year After Opening (18 months accident data)		
Scheme Description		<p>A major junction improvement. In summary, the Scheme provides:</p> <ul style="list-style-type: none"> • New four lane signalised gyratory around the previous M4 Junction 11 with two new motorway over bridges and improvements to all 4 motorway slips • a dedicated pedestrian / cyclist route across the retained eastern motorway bridge with new footbridge links to the north, east and south • a segregated busway across the retained western motorway bridge under bus priority at signal conflict points • improvements to the A33 Imperial Way Roundabout (southern approaches) • improvements to the Reading International Business Park gyratory • replacement of the small A33 Merooak roundabout on the A33 south of Junction 11 with two signal controlled T junctions • increased carriageway capacity to the A33 to the north, ensuring effective tie ins to the existing local highway network • a dedicated East to North (B3270 to A33) general traffic link • central control from the Reading UTMC control room including full CCTV coverage and variable message signing • provision of bus priority linking to Merooak Lane to serve the future Park & Ride site at Merooak • installation of a scheme of high quality landscaping at this key access portal to the Reading urban area • new HA Highway Maintenance Depot and Thames Valley Police Compound 		
Scheme Objectives		<ul style="list-style-type: none"> • Deliver a reduction in injury accidents and help meet national and local accident reduction targets. • Deliver positive pedestrian/ cyclist facilities forming a Right of Way between the north and south • Deliver effective bus priority facilities to support the committed Merooak Park and Ride project located off the A33 to the south as well as local bus services. • Provide for a growth in trip demand by all modes arising from major Structure and Local Plan commitments locally – many of these immediately to the north are either occupied or under construction. • Remove traffic running through residential areas along Whitley Wood Lane. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£43.520	£62.046	£62.046
	LA	-	£0.449	£0.449
	3rd Parties	-	£3.000	£3.000
	Total	£43.520	£65.495	£65.495
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	2.8 per annum accident saving,	
		Actual	Traffic flows; 19% increase in AM peak and 45% in PM peak	
Suitability for Meta-Analysis				
Line of Enquiry		Depth of evidence presented?	Brief description of evidence presented	

Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Comprehensive	No. Scheme opened 11 months late. Construction duration at Full Approval stage was 22 months, actual duration was 33 months. Due to contractor having difficulties maintaining productivity and managing costs.
Are LMS delivered on budget (and if not why not)?	Comprehensive	Scheme constructed to budget set out at Full Approval Stage.
How well do LMS deliver stated objectives?	Comprehensive	<ul style="list-style-type: none"> • Deliver a reduction in injury accidents and help meet national and local accident reduction targets. - Too early to evaluate • Deliver positive pedestrian/ cyclist facilities forming a Right of Way between the north and south - Achieved • Deliver effective bus priority facilities to support the committed MereOak Park and Ride project located off the A33 to the south as well as local bus services. - Achieved • Provide for a growth in trip demand by all modes arising from major Structure and Local Plan commitments locally – many of these immediately to the north are either occupied or under construction. - Achieved • Remove extraneous traffic running through residential areas along Whitley Wood Lane. Limited evidence.
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Improved journey times, traffic flows, as with other LMS.
Do LMS deliver value for money?	None	Pre-scheme PVB of £378.874m, evaluation period considered too short to assess post-scheme economic benefits.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Comprehensive	Responses from stakeholders confirm that all aspects of traveller experience have been greatly improved.
Is there evidence LMS impact on modal choice?	Partial	Reduction in NMU's due to school closure. Bus services increased from 28 to 41 over peak periods due to new routes (although it's unclear if this is directly due to improvements). It is hoped more change will occur with future development.
How do LMS impact on the environment (including carbon)?	Comprehensive	Air quality has reduced due to increased traffic flows as predicted, changes in carbon are negligible.
How do LMS impact on the local economy?	None	Impact on economy can't be fairly assessed due to economic downturn.
How do LMS have an impact on local bus operations?	Partial	Bus services have increased due to new services although it's unclear if this is because of scheme. Occupancy on existing route has remained the same.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Full	Forecast vs. Observed for all key indicators.
What are the reasons for the differences between forecast and outturn impacts?	Partial	Main difference is due to lack of associated development.
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	Partial	Lesson learnt on contractor issue in Process Evaluation.
What lessons can be learnt to improve LMS evaluation?		A post-scheme cost benefit analysis would have been useful in determining the success of the scheme.
Potential for stakeholder engagement?	Has proposed park + ride been constructed? What progress has been made with development/creation of jobs in local area?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Full POPE + Process evaluation	
Post Opening	Full POPE + Process evaluation Comparison of flows and journey times useful in highlighting main benefits of scheme, however, the absence of post-scheme accident savings and cost benefit analysis limits the reports ability to evaluate the success of the scheme.	

Scheme Details				
Scheme Name		Owen Street Relief Road Scheme		
Opening Date		March 2010		
Scheme Location		Tipton, West Midlands (Urban)		
Mode		Highway		
Location Description		Urban		
Evaluation Documentation supplied		Owen Street Relief Road, Tipton Post Evaluation Report July 2011 Report evaluating flows, accidents and air quality before and after construction		
Evaluation Time Period		One Year After Opening		
Scheme Description		A new length of highway from Owen Street, passing the West Coast Main Line (WCML) through a new underbridge beneath the railway, to Alexandra Road which allowed the level crossing previously in place to be closed. Park and Ride car park moved north and capacity increased. Rail passenger subway also refurbished. Pedestrians can also access Tipton from the south side of the railway by using footways either side of the new relief road.		
Scheme Objectives		<ul style="list-style-type: none"> • Relieving congestion along the route • Improve air quality • Improve public transport reliability • Remove the potential for serious accidents • Improve access into the town centre • Assist in the economic regeneration of Tipton Town Centre by removing serious delays caused by barrier down-time. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£8.810	£18.317m	£22.191m
	LA	-	£1.400m	£2.297m
	3rd Parties	-	£2.683m	£2.683m
	Total	£8.810m	£22.400m	£27.171m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	No pre-scheme forecasts presented in report.	
		Actual	Journey times reduced by up 66% in the PM peak Traffic flows at weekday peak times have tripled The scheme hasn't improved PT links in the area or assisted the economic regeneration of Tipton	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Comprehensive	Yes		
Are LMS delivered on budget (and if not why not)?	Comprehensive	No. No explanation given.		
How well do LMS deliver stated objectives?	Comprehensive	Objectives of congestion and access have been met, as has the potential of serious accidents due to level crossing removal, wider objectives not met.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Journey times improved, traffic flows increased, safety improves, similar to other LMS, economic objectives not met similar to other LMS		
Do LMS deliver value for money?	None	No economic benefits presented		
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Comprehensive	Traveller experience considerably improved		

Is there evidence LMS impact on modal choice?	Partial	Pedestrian survey undertaken pre-scheme and post-scheme, no evidence of modal shift.
How do LMS impact on the environment (including carbon)?	Comprehensive	Air quality investigated, no change as result of scheme
How do LMS impact on the local economy?	Partial	Scheme has not had economic effect on Tipton
How do LMS have an impact on local bus operations?	Partial	A bus route was previously re-routed to avoid level crossing, scheme has not encouraged operator to revert back to original route
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No pre-scheme forecasts in report
What are the reasons for the differences between forecast and outturn impacts?	None	No pre-scheme forecasts in report
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		If one of the objectives is to improve public transport reliability/links early involvement with PT operators should be sort to ensure schemes full benefits are realised. Some sort of modelling/predictions to assess benefits pre-scheme.
What lessons can be learnt to improve LMS evaluation?		More emphasis on economic benefits Increased use of car parks must mean that use of Tipton station has increased due to scheme. This point was not raised in report.
Potential for stakeholder engagement?	Reason for scheme going over budget. How has scheme affected regeneration five years on?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Data provided – traffic flows, journey times, accident locations, air quality. No pre-scheme predictions included.	
Post Opening	Data provided – traffic flows, journey times, accident locations, air quality. Journey time analysis and traffic flows give concrete proof of improvements due to scheme. Success of elements such as PT and economy a grey area.	

Scheme Details				
Scheme Name		A1073 Spalding to Eye Improvement		
Opening Date		October 2011		
Scheme Location		Spalding, Lincolnshire		
Mode		Highway		
Location Description		Rural		
Evaluation Documentation supplied		Evaluation Study (Report) – Report presents results obtained from a questionnaire taken from members of the public along the route and from Stakeholders.		
Evaluation Time Period		Available report was produced during construction (November 2008) and presented the public’s and stakeholders perceived benefits of the scheme.		
Scheme Description		<p>New highway link between north-east Peterborough and Spalding. The previous route (A1073) ran through numerous villages and the cross-section and drainage ditches were considered unsuitable and unsafe for the level/type of traffic using the route.</p> <p>The new route, named the A16 was built to a higher standard and bypassed villages to provide a more reliable route for motorists and to improve the environment within the villages. Upon completion of the new the A1073 was declassified.</p>		
Scheme Objectives		<ul style="list-style-type: none"> • To assist in the sustainable growth of Peterborough • To develop a strategic network between Peterborough and Spalding that will tie south-east Lincolnshire into the national trunk road network. • To improve public transport along the corridor in order to reduce reliance on the car and reduce social exclusion • To improve the quality of life for communities along the A1073 that are adversely affected by community severance • To support the operation of the green wheel • To safeguard the food production, processing and distribution industries in south-east Lincolnshire and promote economic development in the area • To develop transport infrastructure schemes which enhance economic development, safety and local amenity whilst safeguarding the built and natural environment • Improve transport links between Eye, Crowland, Cowbit and their rural hinterlands 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£23.750m	69.800m	£69.800m
	LA	-	£10.500m	£11.618m
	3rd Parties	-	-	£0.823m
	Total	£23.750m	£80.300	£82.241m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	None	
		Actual	The scheme had not opened at the time of the evaluation.	
Suitability for Meta-Analysis				
Line of Enquiry		Depth of evidence presented?	Brief description of evidence presented	
Are Local Major Schemes (LMS) delivered on time (and if not why not)?		Partial	Scheme delivered six months late. Construction phase at Full Approval stage was 29 months, actual construction phase was 35 months.	
Are LMS delivered on budget (and if not why not)?		Partial	Scheme increased massively in budget between Programme Entry and Full Approval. Slight increase between Full Approval and Actual.	

How well do LMS deliver stated objectives?	None	
What are the main benefits of LMS (and how does this differ by scheme context/type)?	None	
Do LMS deliver value for money?	None	
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	None	
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?	None	
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	None presented	
Post Opening	None presented.	

Scheme Details				
Scheme Name		A688 Wheatley Hill to Bowburn Link		
Opening Date		2008		
Scheme Location		County Durham		
Mode		Highway		
Location Description		Rural		
Evaluation Documentation supplied		No evaluation supplied – 1 page letter from Parish Council.		
Evaluation Time Period		No evaluation supplied – 1 page letter from Parish Council.		
Scheme Description		The scheme consists of a southern section and northern section; the southern section is 2.3km of new 7.3m wide single carriageway linking from the B6291 near the A1(M) Bowburn junction with the C12a at Cassop Moor. The northern section from Cassop Moor to the A181 involves the improvement of the existing C12a to 7.3m wide single carriageway.		
Scheme Objectives		<ul style="list-style-type: none"> To assist in the regeneration and revitalisation of the East Durham economy; subsequent to mining closures, by attracting industrial and commercial development through improvements to the road network. 		
		<ul style="list-style-type: none"> To provide improved access to the proposed regional freight interchange facilities and other proposed commercial development between Bowburn and TurSDale. 		
		<ul style="list-style-type: none"> To remove a substantial volume of heavy good vehicles from unsuitable local roads in residential areas, thereby improving road safety and environmental conditions. 		
		<ul style="list-style-type: none"> To complete the Principal/Primary Road link between East Durham and the Trunk Road A19 with the Motorway A1(M) at Bowburn, the centre of the county, Bishop Auckland and beyond to the west. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£6.241m	£10.500m	£10.500m
	LA	-	£0.930m	£0.930m
	3rd Parties	-	-	-
	Total	£6.241m	£11.430m	£11.430m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	None provided	
		Actual	None provided	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	Scheme delivered 2 months late, no explanation given.		
Are LMS delivered on budget (and if not why not)?	Comprehensive	Scheme delivered to Full Approval forecast		
How well do LMS deliver stated objectives?	None	No evidence presented.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	None	No evidence presented.		
Do LMS deliver value for money?	None	No evidence presented.		

How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	None	No evidence presented.
Is there evidence LMS impact on modal choice?	Partial	Letter from PC Clerk suggests an increase in journeys by cycle due the new road/facilities provided by the scheme
How do LMS impact on the environment (including carbon)?	None	No evidence presented.
How do LMS impact on the local economy?	None	No evidence presented.
How do LMS have an impact on local bus operations?	None	No evidence presented.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No evidence presented.
What are the reasons for the differences between forecast and outturn impacts?	None	No evidence presented.
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	No evidence presented.
What lessons can be learnt to improve LMS evaluation?	None	No evidence presented.
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	No evidence	
Post Opening	No evidence	

Scheme Details				
Scheme Name		Metrolink Track Renewal & Blockade		
Opening Date		12 September 2007 (not clearly mentioned in report, but retrieved from timescales as report suggests that project delivered on time)		
Scheme Location		Bury and Altrincham Line of the Manchester Metrolink network, Greater Manchester		
Mode		Public Transport		
Location Description		Conurbation		
Evaluation Documentation supplied		Final Summary Report		
Evaluation Time Period		One year after		
Scheme Description		Investment in track renewal for 20km of the Bury and Altrincham lines on the existing Greater Manchester Metrolink network; part of a planned £102 million of improvements to the Metrolink network		
Scheme Objectives		<ul style="list-style-type: none"> To improve public satisfaction with Metrolink – particularly in terms of ride quality and reduced noise levels To manage the engineering works (track renewal) in a manner that minimised passenger inconvenience and hence loss of patronage. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£58.000m	£58.000m	£58.000m
	LA	£44.000m	£44.000m	£44.000m
	3rd Parties	£0.000m	£0.000m	£0.000m
	Total	£102.000m	£102.000m	£102.000m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	£200,000 revenue per month on replacement bus service £1.25m revenue loss forecast during blockade		
	Actual	£150,000 revenue per month on replacement bus service £3.4m revenue loss outturn during blockade		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	In various parts of the report it is suggested that the project was delivered on time. However, it is not clearly mentioned in the report and the opening day can only be directly extracted from initial timetables.		
Are LMS delivered on budget (and if not why not)?	Partial	In various parts of the report it is suggested that the project was delivered on budget. This was also implied by implied by the costs data PDF file provided. However, the actual cost of the project is not clearly mentioned in the report and the costs quoted in the costs data file (and quoted above in 'Scheme Cost Information') refer to the wider Metrolink improvements project, only part of which is the track renewal and blockade project.		
How well do LMS deliver stated objectives?	Objectives: 1: Comprehensive 2: Comprehensive	<p>1: The comparison between the before and after scheme household surveys suggest an increase in the level of satisfaction with Metrolink of 10% (from 79% to 89%). This is against a background of little change in other modes. All aspects of Metrolink's performance have improved; the biggest improvement being in smoothness of ride (from 47% to 88%) and noise levels (from 56% to 87%).</p> <p>2: The full blockade option as opposed to a series of weekend closures was the preferred option in the both in the pre and after scheme household surveys. However, the support for this approach was much greater after the scheme completion, rising to 62% of responses, compared to an initial 46%. A demand elasticity model was developed to estimate the level of retention of passengers that could have been</p>		

		<p>achieved. The model estimated a market share for the replacement buses of 56% of existing Metrolink users. However, evidence suggest that only around a quarter (23%, equivalent to 39% of weekly or more frequent users) used the replacement busses at least weekly</p> <p>Also, a time lag of six weeks after the blockade ended has been observed for the demand on the Bury Line to reach the counterfactual (forecasted without project scenario) level, while on the Altrincham Line patronage had not recovered even after several months.</p>
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Comprehensive	<p>Significant increase in satisfaction levels for Metrolink passengers and inhabitants of areas around the Metrolink network.</p> <p>Overall satisfaction from 82% to 93%</p> <p>Frequency from 89% to 93%</p> <p>Reliability from 82% to 90%</p> <p>Cleanliness and comfort from 75% to 84%</p> <p>Safety from 67% to 78%</p> <p>Noise levels from 56% to 87%</p> <p>Smoothness of ride from 47% to 88%</p>
Do LMS deliver value for money?	None	No economic efficiency indicators (BCR, IRR or NPV) provided or evidence on how they have been achieved.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Comprehensive	Please see above ('What are the main benefits of LMS (and how does this differ by scheme context/type)?')
Is there evidence LMS impact on modal choice?	Comprehensive	<p>All scenarios were assesses against a counterfactual 'without project' scenario determined by demand forecasting techniques.</p> <p>Ticket sales data (including those of the replacement bus services) suggest a drop of 50% of demand on both lines affected during the blockade period. Rail ticket sales show a dramatic increase on the Altrincham/Navigation Rd to Manchester Piccadilly corridor. Evidence from NCP car parks in central Manchester suggests an extra 1,000 cars per weekday. In terms of alternative modes to used by Metrolink passenger, only around a quarter (23%, equivalent to 39% of weekly or more frequent users) used the replacement busses at least weekly, suggesting that other modes benefitted from the blockade.</p>
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	Partial	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Comprehensive	There has been a difference in the forecast level of patronage retention for the bus replacement service (56%) to the observed retention (39%).
What are the reasons for the differences between forecast and outturn impacts?		<p>Pure model calibration that did not consider reductions in frequencies in non-blockaded sections, competition between replacement and commercial buses not detailed enough, penetration of commercial bus routes to city centre, inappropriate modelling of fare reduction;</p> <p>Replacement bus services not visually different to commercial routes;</p>
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		

<p>What lessons can be learnt to improve LMS evaluation?</p>	<p>The need for a common reference structure that would allow the evaluation approach to be – to some extent – standardised, improve the ability of the reader to compare among projects and make the dissemination of knowledge easier.</p>
<p>Potential for stakeholder engagement?</p>	
<p style="text-align: center;">Depth of Evaluation Supporting Evidence</p>	
<p>Pre Construction</p>	<p>Household surveys along the Bury and Altrincham corridors, within catchments of the 18 Metrolink stops along the corridors increasing from 1km radius for the inner area to 2km radius for the outer area.</p>
<p>Post Opening</p>	<p>Household surveys along the Bury and Altrincham corridors, within catchments of the 18 Metrolink stops along the corridors increasing from 1km radius for the inner area to 2km radius for the outer area.</p>

Scheme Details				
Scheme Name		Scarborough Integrated Transport Scheme		
Opening Date		14 February 2009		
Scheme Location		Scarborough, North Yorkshire		
Mode		Highway		
Location Description		Semi-urban		
Evaluation Documentation supplied		POPE One Year After Report		
Evaluation Time Period		One year after		
Scheme Description		<ul style="list-style-type: none"> • A165 Scarborough Leebberston Diversion • A165 Park & Ride construction • A64 Park & Ride construction • Extension and upgrade of the Urban Traffic Control System in Scarborough • Introduction of bus priority measures on the A64 and A165 approaches to Scarborough. <p>(evaluation report provided focuses on first three aspects of project)</p>		
Scheme Objectives		<ul style="list-style-type: none"> • reduce the traffic congestion on the southern approach to Scarborough • reduce the number and severity of road traffic casualties • provide a net improvement in the environment for residents • encourage alternative modes of transport 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£26.895m	£29.786m	£29.786m
	LA	£0.000m	£0.750m	£5.506m
	3rd Parties	£0.000m	£0.000m	£0.000m
	Total	£26.895m	£30.536m	£35.292m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	<ul style="list-style-type: none"> • Reduction in traffic by 70% on Filey Rd and anticipated accidents benefits. • Less people annoyed by noise and improved air quality. 		
	Actual	<ul style="list-style-type: none"> • Reduction in Filey Rd by 76% but marginal increase in accidents. • Significantly lower noise levels in 5 sites (out of 6 surveyed) but no data on air quality levels. 		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	No evidence provided about the scheme planned open date. Also, actual opening date reported differs to the one presented in the project costs file.		
Are LMS delivered on budget (and if not why not)?	Partial	Evidence from the projects costs file suggests that there has been an increase in costs between the programme entry and the full approval forecast and between the later and the actual delivery cost.		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: Partial 4: Partial	1: Traffic on the A165 Filey Road reduced by 76% since the opening of the A165 diversion road compared to the year before. Traffic on the A64 reduced by 15%. Due to lack of data, the after scheme traffic levels on the A64 Seamer Road and the A165 Filey Road (South) were compared to traffic levels two years prior to the scheme opening showing 1-15% reduction and 75% reduction respectively. Similar comparison for the A170 Stepney Hill revealed inconclusive data due to fluctuation. 2: Accident rates on the major roads into Scarborough suggest a marginal increase after the scheme construction from an average of 42 per year in the 4-year period leading to the project opening to 44 accidents in the year after the opening. 3: No data on local air quality improvement.		

		<p>Comparison of noise levels in 6 locations before and after the scheme suggests reduction in noise level in 5 of them and marginal increase in one.</p> <p>4: Bus routes serving the park and ride facilities have had an increase in patronage compared to the year prior to the scheme opening.</p>
What are the main benefits of LMS (and how does this differ by scheme context/type)?		
Do LMS deliver value for money?	None	Outturn TEE calculation to be undertaken at five year after opening stage.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		
Is there evidence LMS impact on modal choice?	Partial	There has been no specific modal choice specific part of the report, however, the use of the park and ride facilities and the bus routes that serve them implies some shift from car into PT usage.
How do LMS impact on the environment (including carbon)?	Partial	The project is expected to improve the local air quality in 833 properties and deteriorate it in 375. It is also expected to result in 69 fewer people being annoyed by noise levels. Finally, it is expected to create an extra 39 tonnes of CO2 per year.
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	Partial	It is suggested that the patronage of some bus services has increased as a result of the scheme.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	It is suggested that the assessment of the forecasts, using data collected after the scheme will be considered as part of the 'Five-Year After' study.
What are the reasons for the differences between forecast and outturn impacts?	N/A	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		The importance of knowing in advance the data required to assess the scheme's objectives and planning the correct timing and location to collect them so as to maximise the potential of attributing any potential changes to the scheme.
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	ATCs on 5 sites around Scarborough Accidents data on 4 key routes into Scarborough Bus patronage data on the park and ride routes Noise surveys in 6 locations around scheme	
Post Opening	ATCs on 5 sites around Scarborough Accidents data on 4 key routes into Scarborough Bus patronage data on the park and ride routes Noise surveys in 6 locations around scheme	

Scheme Details				
Scheme Name		Tunstall Northern Bypass		
Opening Date		July 2008		
Scheme Location		North of Tunstall, City of Stoke-on-Trent, Staffordshire, West Midlands		
Mode		Highway		
Location Description		Semi-urban		
Evaluation Documentation supplied		Before and After Report		
Evaluation Time Period		One year after		
Scheme Description		Single carriageway road extending from the existing roundabout on the A50 High Street at Sandyford for 0.8km to a new roundabout, then separated to two links until St Michael's Road. The scheme provides bus priority measures to St. Michel's Road and a shared use pedestrian cycle path along it.		
Scheme Objectives		<ul style="list-style-type: none"> To complete a strategic link (part of which has already been constructed as the Tunstall Western Bypass) from the A527 to the A50, A500 trunk road and thence the M6 motorway. To relieve the overloaded A5271 and A50 strategic routes in the Tunstall area and, in particular, relieve Tunstall town centre from the effects of heavy through traffic. To allow pedestrian, traffic management and bus priority improvements in Tunstall. To reduce accidents on the existing highway network. To improve access to industrial areas. To improve and allow access to proposed industrial and residential sites identified in the City Plan to the north of Tunstall. To provide measures to encourage cycling and improve public transport to the north of the City. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£2.640m	£3.127m	£6.057m
	LA	£4.090m	£4.542m	£4.463m
	3rd Parties	£0.000m	£0.000m	£2.183m
	Total	£6.730m	£7.669m	£12.703m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	Not available	
		Actual	<ol style="list-style-type: none"> Less traffic through Tunstall town centre Some journey time savings 	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	No indication of planned opening date.		
Are LMS delivered on budget (and if not why not)?	Comprehensive	Scheme cost information suggests that actual cost was 88% higher than the programme entry cost forecast and 66% higher than the full approval forecast cost. (It is assumed that the costs quoted as in constant prices, as there are projects in the list for which no change in costs has been applied).		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: Comprehensive 4: Partial 5/6/7: None	<ol style="list-style-type: none"> This is a project output. Analysis of the available traffic flow data suggests that the traffic on the A5271 has reduced between 12.6% and 19.9% and on the A50 between 5.5% and 23.5%. As in 1 		

		4: Numbers of accidents and casualties by severity have decreased after the scheme implementation by an average of 19.2% across all accidents and 16.6% across all casualties. However, the after scheme data are based on one year only and do not allow for trend identification. It is also suggested in the report that an overall downwards trend in accident is apparent in the wider Stoke-on-Trent area.
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Traffic rerouting: comprehensive Journey time savings: comprehensive Safety savings: partial	<ul style="list-style-type: none"> • See objective 1 above ('How well do LMS deliver stated objectives?') • Journey time surveys on a north-south direction were conducted before and after the scheme, on three different routes (the third being the new link added) both for the peak and the off-peak traffic. The third option was faster between 8% and 27% in most cases with the exception of the south-bound direction in the am peak which was 21.9% slower when compared to alternative 1 and 5.9% slower when compared to alternative two. • See objective 4 above (How well do LMS deliver stated objectives?)
Do LMS deliver value for money?	None	No economic efficiency indicators (BCR,IRR of NPV) provided
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No forecasts have been provided.
What are the reasons for the differences between forecast and outturn impacts?	N/A	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?		Set objectives that can be measured.
Potential for stakeholder engagement?	a) Is a post 5 years evaluation report to be produced for this project?	
Depth of Evaluation Supporting Evidence		
Pre Construction	ATC & MTC Journey time surveys using a moving car Accident data	
Post Opening	ATC & MTC Journey time surveys using a moving car Accident data	

Scheme Details				
Scheme Name		Walsall Town Centre Transport Package		
Opening Date		24 May 2009		
Scheme Location		Walsall, West Midlands		
Mode		Integrated Transport Package		
Location Description		Urban		
Evaluation Documentation supplied		Project evaluation report, covering letter, App A development plan, App B One year After Study		
Evaluation Time Period		One year after		
Scheme Description		<ul style="list-style-type: none"> • Capacity improvements to the ring road to remove existing bottlenecks; • Introduction of additional UTC facilities at key junctions to assist in coordinating traffic flows and to facilitate bus priority measures; • New bus priority measures linked to junction improvements, including bus gates, SVD, bus only links and additional bus lanes; • Improved access to regeneration sites; • Access restrictions for private vehicles within the town centre; and • Improved road crossing facilities for pedestrians and cyclists. 		
Scheme Objectives		<ul style="list-style-type: none"> • Enhance Walsall town centre as a place to work, live and visit for shopping, leisure and cultural activities; • Assist in achieving economic regeneration and the vitality of the town centre; • Improve access to the town centre for public transport, cyclists and pedestrians; • Maintain access to the town centre for car borne visitors and goods vehicles; • Facilitate removal of the remaining through traffic from the town centre; • Facilitate access to development sites adjacent to the ring road; • Safeguard the operation of the strategic highway network; • Reduce accidents on the highway network; • Reduce rat-running on inappropriate routes and to improve the environment for local communities; and • Enhance the visual appearance of the ring road corridor. • Improve environmental conditions • Reduce severance & enabling greater mode integration • Reduce accidents – both in terms of occurrence and severity • Improve travel conditions • Support regeneration 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£11.000m	£21.225m	£21.225m
	LA	£0.000m	£0.000m	£3.307m
	3rd Parties	£0.000m	£0.000m	£0.104m
	Total	£11.000m	£21.225m	£24.636m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	Benefits worth £142.9m against costs worth £20.9m and a BCR equal to 6.85	
		Actual	Benefits worth £78.9m against costs worth £20.9m and a BCR equal to 3.78	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Comprehensive	The construction period lasted 152 weeks, an overrun of 51 days from initial plans. The reasons for this delay were: <ul style="list-style-type: none"> • The performance of statutory undertakers • The ground conditions being worse than the site investigation had indicated 		

		<ul style="list-style-type: none"> The weather conditions, indirectly affecting the scheme by calling away statutory undertakers for emergency repairs The change in design for the new road-over-rail bridge that Network Rail imposed.
Are LMS delivered on budget (and if not why not)?	Partial	<p>There has been a significant increase in the cost between all stages of the cost. There is a contradiction between the evaluation report and the cost data file in that the latter quotes a final total cost, but the report reads “Final project costs are not yet known”.</p> <p>One of the reasons quoted for the cost uplift is the elapse of 13 months between the tender and the announcement of the funding which meant that the preferred bidder required inflationary cost uplift.</p>
How well do LMS deliver stated objectives?	<p><u>Objectives</u></p> <p>1: None 2: None 3: None 4: None 5: None 6: None 7: None 8: Partial 9: None 10: None</p>	<p>All the objectives are listed and each one is accompanied by a short comment. The comment is generally a statement that confirms the achievement of the objective. However, no evidence is provided to support the statement.</p> <p>The accident reduction objective (objective 8) is an exception to the above, as some evidence is provided to support accident reduction after the scheme opening.</p>
What are the main benefits of LMS (and how does this differ by scheme context/type)?	None	The main expected benefits of the scheme are savings in travel time and accidents.
Do LMS deliver value for money?	Comprehensive	The predicted economic benefits of the scheme resulted in a BCR equal to 6.85. After scheme analysis of outturn benefits suggest that the BCR needs to be adjusted to 3.78. The latter is based on the forecasted costs, as the actual, outturn costs were unknown at the time of the report.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	None	There is no observed evidence prior to the scheme opening. It is therefore not possible to assess the impact of the scheme on the traveller experience.
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	Partial	A number of development projects in the vicinity of the project have taken place. However, it is unclear whether the completion of the project had a direct effect on their realisation.
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Comprehensive	Outturn travel time benefits were 53% of the predicted benefits.
What are the reasons for the differences between forecast and outturn impacts?	Comprehensive	<p>Two reasons were provided for the above difference:</p> <ul style="list-style-type: none"> The general economic downturn that generally suppressed demand. The fact that the after scheme surveys took place just after a month of the scheme opening, implying that some of the regular users have not re-routed their trips away from the alternatives and into the scheme.
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	Comprehensive	The authors of the report have put significant effort in identifying lessons that can be learnt from their experience, regarding the form of the contract, the methods of payment (engage staff with accounting background), the handling of underground services

		(use of ground radar), the timing of the DfT releasing, the cooperation with statutory undertakers (use incentives in contracts, and control costs), the involvement of Network Rail.
What lessons can be learnt to improve LMS evaluation?		There should be a clear focus on a data based approach that can be used to directly attribute observed outcomes/impacts to the project. It should be clarified that both a before and an after project data collection exercise is needed as part of this process.
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	No additional information was provided on the source of the accident data or the area which was considered in the analysis. Other data used in the forecast were based on an earlier transport model of the area.	
Post Opening	No additional information was provided on the source of the accident data or the area which was considered in the analysis. Turning counts and journey times surveys	

Scheme Details					
Scheme Name		Weymouth Transport Package for the 2012 Games			
Opening Date		26 July 2011			
Scheme Location		Weymouth/ Dorchester area, Dorset, South West			
Mode		Integrated Transport Package			
Location Description		Semi-urban			
Evaluation Documentation supplied		One year after evaluation report			
Evaluation Time Period		One year after			
Scheme Description		<p>Traffic Management Improvements</p> <ul style="list-style-type: none"> Junction Improvements in King Street Corridor. Junction Improvements in Boothill Corridor and at Portland Road/Wyke Road. Urban Traffic Management Control in the two improvement corridors to achieve: 1) Bus priorities, 2) Increased capacity and reduced delays/queue lengths for all traffic <p>Local Traffic Regulation Orders to effect</p> <ul style="list-style-type: none"> Turning bans at critical locations Removal of on-street parking at critical locations <p>Bus Service Improvements</p> <ul style="list-style-type: none"> Fleet renewal for Weymouth town centre services <p>Bus/rail Interchange</p> <ul style="list-style-type: none"> Bus/rail interchange at Weymouth Central Station in King Street 			
Scheme Objectives		<ul style="list-style-type: none"> To relieve or reduce traffic congestion in Weymouth town centre and between Weymouth and Portland focussing on the King Street and Boothill corridors where the impact of congestion is most significant. To achieve a step change in the quality of public transport services in Weymouth through the introduction of better traffic management and user information and improvements to the quality and age of the bus fleet. To improve the interchange facilities at Weymouth railway station to ensure that it operates as a multi-modal interchange and becomes the focus of the public transport network in Weymouth. N/A 			
Scheme Cost Information	Stage →		Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓		Scheme went directly to full approval stage in view of Olympics timetable	£9.068m	£9.068m
	DfT			£1.560m	£1.560m
	LA			£0.000m	£0.000m
	3rd Parties			£10.628m	£10.628m
Total					
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	Not available		
		Actual	<ol style="list-style-type: none"> A 26% reduction in average journey time per mile through the corridor A 28% improvement in journey time reliability A general reduction in the level of NO2 No improvement to bus punctuality and reliability. An increase in the average age of the bus fleet Bus service to the Railway Station has not yet been implemented 		
Suitability for Meta-Analysis					
Line of Enquiry		Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?		Comprehensive	Project opened on planned date.		
Are LMS delivered on budget (and if not why not)?		Comprehensive	Yes. Actual spend (£9.34m) less than planned spend (£9.76m). However, costs quoted in report differ to those provided in accompanying costs data file		

<p>How well do LMS deliver stated objectives?</p>	<p><u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: None</p>	<p>1: Traffic counts before and after the scheme were provided; Boot Hill corridor AADT has decreased by 5,200 suggest and King Street corridor AADT by 5400. An aggregated value for the traffic through the city centre was not provided. The total of the before and after scheme traffic at the sites surveyed suggests an increase in the AADT by 5,200. 2: The step change in PT quality was defined as improved bus punctuality and reliability, enhanced satisfaction levels from bus services and reduction in average age of fleet. Data suggest that the project failed to deliver all aspects of the objective, with the exception of bus stops and raised kerbs for which satisfaction levels met targets. 3: The Major Scheme Bid only included the facilitation of the access to and from the rail station. Further funds needed to upgrade the interchange facilities at the station were not found and the scheme did not move forward.</p>
<p>What are the main benefits of LMS (and how does this differ by scheme context/type)?</p>	<p>Bus punctuality and reliability Bus quality Journey time and reliability Air quality Road safety (comprehensive in all cases)</p>	<ul style="list-style-type: none"> • Bus punctuality and reliability: the project has ended up in disbenefits in terms of bus punctuality. It is mentioned however, that the after scheme surveys were undertaken in a week of heavy rain and flooding. • Bus quality: there is a mixed performance in terms of bus quality, with the overall level of services improving but not meeting the set target and individual aspects both improving and deteriorating. Average age of fleet has increased. • Journey time and reliability: there has been a 26.6% reduction in average journey time per mile against a target of 10% reduction and 28.1% reduction in standard deviation of journey time against a target of 20%. • Air quality: there has a significant reduction in the levels of NO2 at both Boot Hill and King Street corridors, to 38.9 and 26.5 µg/m3 from 49.6 and 35.5 µg/m3 respectively. • Road safety: an average of 2.4 casualties per year is saved due to scheme (from 9.4 to 7 casualties annually). However, the after scheme data are only based on one year, not allowing for a robust analysis and identification of long term trends.
<p>Do LMS deliver value for money?</p>	<p>None</p>	<p>No economic efficiency indicators (BCR,IRR of NPV) provided</p>
<p>How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?</p>	<p>Travel time Increased demand Improved comfort Improved safety (comprehensive in all cases)</p>	<p>Travel time</p>
<p>Is there evidence LMS impact on modal choice?</p>	<p>None</p>	
<p>How do LMS impact on the environment (including carbon)?</p>	<p>Yes</p>	<p>Pre and post opening air quality measurements.</p>
<p>How do LMS impact on the local economy?</p>	<p>None</p>	
<p>How do LMS have an impact on local bus operations?</p>	<p>Comprehensive / Partial</p>	<p>The scheme aimed to improve PT provision and quality. However, evidence presented (see What are the main benefits of LMS section above) suggest that it has failed to do so. Reduced journey times through the corridors of intervention will most likely have had an impact on bus operations. However, specific impacts are not reported as such.</p>
<p>How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?</p>	<p>Travel demand: Comprehensive Others: None</p>	<p>The aggregate traffic forecast has overestimated traffic by 3%. However, there is significant variance in the difference between observed and forecasted traffic on a link based approach, ranging from -56% to +31%</p>

<p>What are the reasons for the differences between forecast and outturn impacts?</p>	<p>Comprehensive</p>	<ul style="list-style-type: none"> • Economic downturn • A proposed development of 384 apartments was not completed at the time of the surveys. • Further reasons are provided for the difference in traffic at individual links
<p>What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?</p>		
<p>What lessons can be learnt to improve LMS evaluation?</p>		<p>In some cases there was no obvious logical link between the scheme outputs and the intended objectives (e.g. fleet age). In some cases, it was difficult to attribute the observed changes to the scheme directly (e.g. bus stops / raised kerbs when the surveys were not restricted to scheme location)</p>
<p>Potential for stakeholder engagement?</p>		<p>a) When is the further “two-Year-After” assessment set for 2013/4 planned to be undertaken? b) If the promoters of the scheme could explain why they expected the scheme to result in reduction in the bus fleet age?</p>
<p>Depth of Evaluation Supporting Evidence</p>		
<p>Pre Construction</p>		<ul style="list-style-type: none"> • Low Season On-Bus Tracker Surveys 2005 & High Season Punctuality Surveys 2008 • Bus Quality Resident Bus Service Satisfaction Survey 2008 & Weymouth Bus Fleet Age Profile • Continuous ANPR Data King Street and Boot Hill Corridors 2009 • Air Quality Annual NO2 Monitoring Surveys • Pedestrian Safety Annual Casualty Data • ATC
<p>Post Opening</p>		<ul style="list-style-type: none"> • As above with exception of bus reliability being based on surveys for Local Transport Plan rather than On-BusTracker Surveys.

Scheme Details				
Scheme Name		Brierley Hill Sustainable Access Network (BHSAN)		
Opening Date		October 2008 (sourced from cost data file)		
Scheme Location		Brierley Hill, Borough of Dudley, West Midlands		
Mode		Highway		
Location Description		Urban		
Evaluation Documentation supplied		Scheme evaluation report and appendix		
Evaluation Time Period		Data reported is 2009 so assumed less than 1 year post opening		
Scheme Description		A new parallel route to the old High Street and 11 signalised junctions (2 upgrades, and 9 brand new installations). Unclear whether this is the full scheme as this was collated from a number of sections within the evaluation report.		
Scheme Objectives		<ul style="list-style-type: none"> • Improve access • Improve environmental conditions • Reduce severance & enable greater mode integration • Reduce accidents – both in terms of occurrence and severity • Improve travel conditions • Support regeneration 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£17.370m	£20.320m	£20.320m
	LA	£6.940m	£7.100m	£3.000m
	3rd Parties	£0.000m	£0.000m	£4.100m
	Total	£24.310m	£27.420m	£27.420m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	None presented. Only observed 2005 and 2009 data used.		
	Actual	As above		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	Evidence from the projects costs file suggests that the project was delivered with two months delay compared to the revised schedule of the Full Approval forecast, but no further evidence to support this is provided in the evaluation report.		
Are LMS delivered on budget (and if not why not)?	Partial	Evidence from the projects costs file suggests that there has been an increase in costs between the programme entry and the full approval forecast and that after that the project has been delivered on budget. However, no evidence to support this is provided in the evaluation report.		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: None 4: Comprehensive 5: Comprehensive 6: Partial	1: ATCs have shown that the main High Street running parallel to Venture Way has seen a 34% reduction in the AM peak and 43% reduction in the PM peak traffic post completion of the BHSAN. Similarly, the High Street, Mill Street, Moor Street, Cottage Street junction has seen a reduction of 37% in traffic in the AM and 39% in the PM Peak. 2: Air Quality Management Area data have shown around the area of the scheme have shown that the limit of 40µg/m ³ of NO ₂ has been exceeded in various location prior to the scheme opening. After BHSAN results have indicated significant improvements in air quality at all locations with only one site next to a bus stop exceeding the air quality objective. 4: In the three years before construction of BHSAN, there were a total of 80 accidents of which 71 were of a slight nature and		

		<p>9 serious. Post construction monitoring shows that for the three years after BHSAN, accidents have significantly dropped to 48 of which 45 were slight and 3 serious, an overall 40% reduction in the total injury accidents.</p> <p>5: Journey time analysis took place on the key route from The Boulevard roundabout near Merry Hill Shopping Centre along Mill Street, High Street and Dudley Road to Waterfront Way. The soundbound direction show an improvement of journey time of 15 sec in the AM and 32 sec in the PM peak. On the contrary, the northbound direction is faced with slight increases in journey time in both peaks. Neutral 3 month period taken for monitoring in both periods.</p> <p>6: Some investment into the local area has taken place but it is unclear how it is connected to the BHSAN scheme. Please see below ('How do LMS impact on the local economy?')</p>
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Comprehensive	<ul style="list-style-type: none"> Rerouting of traffic, improvement of local air quality and reduction in accidents around the scheme. Please see above ('How well do LMS deliver stated objectives?')
Do LMS deliver value for money?	None	No economic efficiency indicators (BCR, IRR or NPV) provided or evidence on how they have been achieved.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	<p>Travel time: Comprehensive</p> <p>Safety: Comprehensive</p>	Please see above ('How well do LMS deliver stated objectives?')
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	Partial	Investments in local economy (Brierley Hill Health & Social Care Centre, Stourbridge College Art & Design Centre - Brierley Hill Campus, Higgs & Sons Solicitors move to Brierley Hill)
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No forecasts have been provided.
What are the reasons for the differences between forecast and outturn impacts?	N/A	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?		An attempt should be made to establish some sort of causal relationship between observed changes (especially in the wider economy) to the scheme itself.
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	ATC flow survey West Midlands Strat-e-gis Congestion database Journey time loggers fitted onboard buses Air Quality Management Area monitoring stations SPECTUM accident database	
Post Opening	ATC flow survey West Midlands Strat-e-gis Congestion database Journey time loggers fitted onboard buses Air Quality Management Area monitoring stations SPECTUM accident database	

Scheme Details				
Scheme Name		A158 Burgh Le Marsh Bypass		
Opening Date		November 2007		
Scheme Location		Burgh Le Marsh, Lincolnshire		
Mode		Highway		
Location Description		Rural		
Evaluation Documentation supplied		A158 Burgh Le Marsh Bypass Evaluation and Monitoring Report – Report presents results obtained from a questionnaire taken from members of the public along the route and from Stakeholders.		
Evaluation Time Period		One Year After Opening		
Scheme Description		A new 2-lane single carriageway bypass of the town of Burgh Le Marsh between Lincolnshire and Skegness to reduce journey times, remove unsuitable HGV traffic from the town and improve the situation for residents.		
Scheme Objectives		<ul style="list-style-type: none"> Reduce community severance, noise, air pollution and vibration; enhance general quality of life for residents in Burgh Le Marsh; 		
		<ul style="list-style-type: none"> Aid tourism and regeneration in the Lincolnshire coastal area, reduce issues of remoteness and peripherally; 		
		<ul style="list-style-type: none"> Positive contributions to health objectives through improved walking and cycling conditions on the original A158; 		
		<ul style="list-style-type: none"> Reduce journey times and improve journey time reliability; 		
		<ul style="list-style-type: none"> Reduce the number of accidents and casualties; Support the safeguarding of the food production, processing and distribution industries in eastern Lincolnshire. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£7.18m	£13.575m	£12.939m
	LA	-	£1.50m	£1.413m
	3rd Parties	-	-	£0.050m
	Total	£13.2m	£15.075m	£14.402m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	Evaluation report comprises of results based on responses from a questionnaire taken from members of the public and stakeholders post-scheme. No factual data for safety, journey times etc available in evaluation report.		
	Actual	Evaluation report comprises of results based on responses from a questionnaire taken from members of the public and stakeholders post-scheme. No factual data for safety, journey times etc available in evaluation report.		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	Evidence from the projects costs file suggests that the project was delivered one month early delay compared to the Full Approval forecast, but no further evidence to support this is provided in the evaluation report..		
Are LMS delivered on budget (and if not why not)?	Comprehensive	Scheme delivered under budget.		
How well do LMS deliver stated objectives?	Partial	Based on responses to questionnaire the scheme seems to have delivered its objectives. However there is no factual data to back up these responses.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	The transfer of approximately 80% of traffic onto the new A158 away from the village.		
Do LMS deliver value for money?	None	No factual data available for comparison.		

How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Partial	Responses from questionnaire signal that the scheme has greatly improved conditions in the village for locals.
Is there evidence LMS impact on modal choice?	None	No evidence of modal shift presented in report
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	More emphasis on economic benefits
What lessons can be learnt to improve LMS evaluation?	Comprehensive / Partial / None	Stakeholder engagement should be enhanced with quantitative data to improve the usefulness of the evaluation.
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	Stakeholder engagement, including a questionnaire taken over three days post-scheme.	
Post Opening	Stakeholder engagement, including a questionnaire taken over three days post-scheme.	

Scheme Details				
Scheme Name		A628 Cudworth and West Green Bypass		
Opening Date		05 July 2010		
Scheme Location		Between Shafton and Cudworth and Cudworth and Carlton in Metropolitan Borough of Barnsley, South Yorkshire		
Mode		Highway		
Location Description		Semi-urban		
Evaluation Documentation supplied		One Year After report		
Evaluation Time Period		One year after		
Scheme Description		Cudworth and West Green bypass comprises a 5.2km single carriageway road with new road & rail bridges, 5 roundabouts, 3 underpasses, 3.6km of footway/cycle way, 2km of footway, 2.4km of bridleway & major drainage works to minimize flooding and the effect on the local environment.		
Scheme Objectives		<ul style="list-style-type: none"> Remove through traffic from Cudworth centre Improve the reliability of public transport Improve public transport provision and encourage its greater use Assist regeneration in the area, including the former Grimethorpe and Houghton Main Collieries Improve access for development sites to the strategic transport network 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£17,198m	£20,209m	£20,209
	LA	£0	£0	£1,446
	3rd Parties	£0	£0	£0
	Total	£17,198m	£21	£21,655
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	<ol style="list-style-type: none"> Improved Transit times (vehicle hours) Reduced severance for villages of Cudworth and West Green Savings in Accidents 		
	Actual	<ol style="list-style-type: none"> Improved Transit times (vehicle hours) Reduced severance for villages of Cudworth and West Green No savings in Accidents 		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	Initial timescale not provided. Only opening day mentioned.		
Are LMS delivered on budget (and if not why not)?	Partial	In the Economic Efficiency Table, it is mentioned that no revisions of costs were needed as works were delivered within budget.		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Partial 3: None 4: None 5: Partial	<ol style="list-style-type: none"> Traffic counts before and after the scheme suggest a reduction of traffic through Cudworth centre, from 10-15,000 vehicles per day down to approximately 5,300. Based on ex post data only, the analysis compares journey time via two sets of two different routes. The options via the scheme yield savings. It is then <u>assumed</u> that this results in increased reliability of PT journey time. As in 2, <u>assuming</u> this is the route to the strategic network. 		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Comprehensive	Monetised values of scheme benefits (in 2002 values & prices) <ul style="list-style-type: none"> Travel time savings: £183m VOC savings: £33m Noise: £5.5m Greenhouse: £7m Accidents: £9.5m (revised to £7.2m, post opening revised to £6.2m) 		

Do LMS deliver value for money?	Comprehensive	Economic Efficiency Table provided; forecasted BCR: 3.58, revised forecast BCR: 3.13, post opening forecast BCR: 3.05
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Travel time: Comprehensive Safety: comprehensive Other: None	Travel time: Based on ex post comparing journey time via two sets of two different routes. The options via the scheme yield savings. Safety: The number of PIA has remained unchanged but it is suggested that the rates (PIA/mvkm) have decreased because of extra traffic on the extended road network.
Is there evidence LMS impact on modal choice?	None	No evidence
How do LMS impact on the environment (including carbon)?	<u>Noise</u> : Partial <u>Local air quality</u> : Partial <u>CO2</u> : Partial	<u>Noise</u> : number of people annoyed before and after scheme, 621 and 467 respectively. (forecast) <u>Local air quality with scheme</u> : number of dwellings experiencing better air quality: 1,683; number of dwellings experiencing worse air quality: 180; (forecast) CO2 savings: 204,261 tonnes in appraisal period (forecast)
How do LMS impact on the local economy?	None	No evidence
How do LMS have an impact on local bus operations?	None	No evidence
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc.)?	Safety: Comprehensive Other: None	Safety impacts similar to forecast.
What are the reasons for the differences between forecast and outturn impacts?	Travel demand: Partial Safety: Partial	Travel demand: 1) the transfer of traffic to the bypass has been slow; 2) a major local business user has not adjusted its access to the bypass, therefore not redirecting traffic through the bypass. The number of PIA has remained unchanged but it is suggested that the rates (PIA/mvkm) have decreased because of extra traffic on the extended road network. It is also suggested that this unexpected performance is not setting a trend (therefore implying that accident rates will decrease in the future, but no further evidence on which the assumption is based is provided).
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?	None	
Potential for stakeholder engagement?	a) Why was the current journey time savings approach preferred over one that would compare the pre- and post- constructions status? b) Has the local business user currently adjusted its access to use the bypass? What prevented this adjustment to take place in time for the scheme opening? c) If positive to the above, is there evidence to support the anticipated redistribution of traffic and its effect on time savings? d) Was there any further work done to evaluate whether PT reliability has improved due to the scheme opening? e) How was objective 4 (improved PT provision and use) evaluated?	
Depth of Evaluation Supporting Evidence		
Pre Construction	ATCs and classified turning counts for travel demand (some from HA, some commissioned by Metropolitan Borough of Barnsley) Accident data No journey time savings survey in the pre construction period	
Post Opening	ATCs and classified turning counts for travel demand (some from HA, some commissioned by Metropolitan Borough of Barnsley) Accident data Post opening data were used to estimate the travel time savings, comparing different routes both in the post opening period.	

Scheme Details				
Scheme Name		A638 Quality Bus Corridor		
Opening Date		April 2009		
Scheme Location		Doncaster, South Yorkshire		
Mode		Public Transport		
Location Description		Urban		
Evaluation Documentation supplied		2012 Evaluation Report		
Evaluation Time Period		2011 data so 1 year post opening in effect		
Scheme Description		<ul style="list-style-type: none"> A 1.86km inbound bus lane to the south and a 2.9km to the north of Doncaster Minimal carriageway widening to retain right turns at some junctions and central refuges for pedestrians was required. The bus operator agreed to provide 32 new vehicles. Some other interventions were described but it is unclear if they were part of the final scheme. 		
Scheme Objectives		<ul style="list-style-type: none"> Time savings for bus users in the am peak Improve Bus Reliability in the am peak Better quality bus services Improved access by provision of low floor buses by First Group Improved pedestrian facilities to overcome perceived severance Improved access to Dome from nearest bus stop 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£15.306m	£15.921m	£15.921m
	LA	£3.794m	£0.000m	£1.289m
	3rd Parties	£0.000m	£0.000m	£3.200m
	Total	£19.100m	£15.921m	£20.410m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	<ul style="list-style-type: none"> Bus journey time savings: 6 minutes Bus reliability: improvement only Other metrics of quality buses, improved access, improved pedestrian facilities not forecast 		
	Actual	<ul style="list-style-type: none"> Bus journey time savings: 10 and 13.3 minutes Bus reliability: 57% and 28% improvement 		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	It is suggested that the schedule slipped by a year. The main reasons mentioned were the extended public consultation period and the additional archaeological work required at the Park and Ride sites.		
Are LMS delivered on budget (and if not why not)?	Comprehensive	It is worth noting that there is discrepancy between the costs provided in the project costs file and the costs quoted in the report. It is possible that this is due to difference in base year. However it remains to be examined. The report quotes a forecasted cost of £16.42m in 2005 prices and an actual cost of £17.04m. The 4% over-spend was mainly due to the extended public consultation period and the additional archaeological work required at the Park and Ride sites (as the delay in delivery). However, at a later section the report reads that the "total capitalised costs of construction and operation are now twice Annex E levels" (Annex E = forecast) therefore contradicting the above statement.		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: Comprehensive 4: Comprehensive 5: None	1: 2.9mins savings in the northern and 5.2mins in the southern access of Doncaster 2: 57% increase in reliability in the northern and 28% increase in reliability in the southern Access of Doncaster 3: 88% satisfaction score among bus users 4: 19 new Euro 4 low floor vehicles		

	6: Comprehensive	6: Walk time savings from the nearest bus stop are between 2m9sec and 2m27sec.
What are the main benefits of LMS (and how does this differ by scheme context/type)?		Travel time benefits, travel time reliability enhancements, improved access to local leisure centre.
Do LMS deliver value for money?	Partial	The forecasted BCR for the project was 2.42. There is no revised BCR estimation after the scheme. However, in the conclusions of the report it is implied that it is unlikely that the outturn BCR is close to the forecasted.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	Comprehensive	Travel times have decreased and bus reliability has increased (see above 'How well do LMS deliver stated objectives?') However, evidence suggested that the scheme positively influenced bus patronage on the corridor north south corridor, by reversing the negative trend. In particular, prior to the scheme the south access corridor experience an average 2.6% decline in patronage and the north access 3.9%. This was retained at 0.6% in the former and reversed to a 4.1% increase in patronage in the north access. In the same period the wider area had a 14% decline in bus patronage.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	No forecast	
What are the reasons for the differences between forecast and outturn impacts?	N/A	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		The report needs to be comprehensively structured to allow for evidence to be easily accessible to stakeholders and other interested parties.
Potential for stakeholder engagement?	1) Why did the bus operator provide a smaller number of new buses than originally envisaged?	
Depth of Evaluation Supporting Evidence		
Pre Construction	Data from in-vehicle tracking equipment for busses Cordon counts and DfT AADF	
Post Opening	Data from in-vehicle tracking equipment for busses Cordon counts and DfT AADF Park & Ride users survey	

Scheme Details				
Scheme Name		BIA NEC Public Transport Scheme		
Opening Date		March 2011		
Scheme Location		Around Birmingham Airport, West Midlands		
Mode		Public Transport		
Location Description		Semi-Urban		
Evaluation Documentation supplied		<ul style="list-style-type: none"> • Summary Note. Very brief and poor level of evidence. 		
Evaluation Time Period		<ul style="list-style-type: none"> • Note written 18 months post construction. 		
Scheme Description		<ul style="list-style-type: none"> • Birmingham International Interchange – bus station are amended to handle higher frequency services and improved passenger information • On highway bus priority measures (mainly bus lanes) in four locations in the Birmingham Airport/National Exhibition Centre area • Passenger waiting facilities improved on the corridors served by higher frequency services • Higher frequency services themselves • GPS equipment introduced on buses to enable automatic location by centralised control system • Real time passenger information installed at bus stop locations • Vehicle (bus) detection at traffic signal controlled junctions, to provide more bus priority • Active traffic management – ‘switch on – switch-off’ bus lanes. Achieved through control system and variable message signage • Pedestrian and cycle improvements in the form of minor highway improvements 		
Scheme Objectives		<ul style="list-style-type: none"> • Not Stated and original business case not available 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£10.600m	£11.113m	£11.113m
	LA	£0.000m	£0.000m	£0.024m
	3rd Parties	£0.000m	£1.500m	£1.500m
	Total	£10.600m	£12.613m	£12.637m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	Not stated		
	Actual	Not stated		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	It is mentioned that the project was delivered on time.		
Are LMS delivered on budget (and if not why not)?	Partial	It is mentioned that the project was delivered to budget.		
How well do LMS deliver stated objectives?	None	A number of targets are mentioned in the letter. However it is unclear if this is a finite list.		

What are the main benefits of LMS (and how does this differ by scheme context/type)?	None	
Do LMS deliver value for money?	None	
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	None	
Is there evidence LMS impact on modal choice?	None	
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	Partial	A number of development projects in the vicinity of the project have taken place. However, it is unclear whether the completion of the project had a direct effect on their realisation.
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc.)?	None	Forecast not available
What are the reasons for the differences between forecast and outturn impacts?	Not applicable	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	Not available	
Post Opening	Not available	

Scheme Details				
Scheme Name		Taunton Third Way Major Scheme		
Opening Date		27 th September 2011		
Scheme Location		Taunton, Somerset		
Mode		Highway		
Location Description		Urban		
Evaluation Documentation supplied		One Year After report		
Evaluation Time Period		One year after		
Scheme Description		Major road improvement including a new bridge , providing a strategic north-south routes adjacent to the town centre. This important route would open up development and regeneration land within the town centre. The scheme includes: <ul style="list-style-type: none"> • A new bridge of the River Tone • A new bridge over Mill Stream • Construction of 150meter of new carriageway, and realignment of 300m more • Provision of two signalised junctions • Improve existing bridges • Provision of pedestrian and cyclists facilities 		
Scheme Objectives		<ul style="list-style-type: none"> • Improve access to development and regeneration land in the city centre • Relieve traffic in the town centre • Improve accessibility for pedestrian and cyclists to the town centre • Reduce congestion on north-south routes • Reduce road casualties in the town centre • Improve bus journey times 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£6.16m	£5.465m	£5.884m
	LA	£2.029m	£0	£0.646m
	3rd Parties	£0	£2.029m	£2.029m
	Total	£8.189m	£7.494m	£8.559m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	4. Reduce traffic 5. Increase accessibility 6. Reduce road casualties 7. Improve bus journey times		
	Actual	1. Reduce traffic – 37% reduction in AADT in North Street. Forecasts were overestimating traffic flows, both in background due to economic recession, and on TTW potentially due to regeneration build out not proceeding as expected. 2. Increase accessibility – pedestrian flows too variable, reduction in cycling but from very low base 3. Reduce road casualties – 50% reduction in collisions and casualties, but from very low base. 12.Improve bus journey times – buses departing as per timetable increased from 25% to 50%.		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	Scheme build period of 17months, compared to 12 months planned. Reasons given including additional works on behalf of other organisations (not stated). Unforeseen delays with stats and weather also influenced delivery.		
Are LMS delivered on budget (and if not why not)?	Partial	£8.18m outturn costs against forecast of £8.19m. Final account for construction works still to be settled.		
How well do LMS deliver stated objectives?	Objectives 1: Comprehensive 2: Comprehensive 3: Partial 4: Comprehensive	1. Reduce traffic – 700 vehicles (37%) reduction in AADT in North Street within the town centre. Re-routing not occurring as forecast. It is claimed that objective has been met, despite rationale for poor forecasting being put down to contextual economic recession.		

	5: Partial	<p>2. Reduced journey times by 4.8% am peak and 11% pm peak achieved due to reduced traffic. Saturn model forecast smaller reductions.</p> <p>3. Increase accessibility – pedestrian flows too variable, reduction in cycling but from very low base. It is reported that there is no evidence that the schemes has had a detrimental impact on pedestrian accessibility. Cycling levels reduced.</p> <p>4. Reduce road casualties – 50% reduction in collisions and casualties, but from very low base.</p> <p>5. Improve bus journey times – buses departing as per timetable increased from 25% to 50%.</p>
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	<p>Monetised values of scheme benefits</p> <ul style="list-style-type: none"> • £145m PVB with 93% due to journey time savings • Assumed that carbon savings in line with forecast but no real evidence
Do LMS deliver value for money?	Comprehensive	Economic Efficiency Table provided; forecasted BCR: 19.1 compared with the ex-ante forecast of 15.0
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		
Is there evidence LMS impact on modal choice?	None	No evidence
How do LMS impact on the environment (including carbon)?	<p><u>Local air quality:</u> Comprehensive</p> <p><u>CO2:</u> None</p>	<p><u>Local air quality with scheme:</u> NO₂ values highly variable year on year in central Taunton; PM10 monitoring did not identify any significant issues.</p> <p><u>CO2 savings:</u> assumption made on reduction due to reduced traffic and assumed congestion. No compelling evidence.</p>
How do LMS impact on the local economy?	BRES and IBR Data	Business numbers in Taunton reduced from 1525 to 1320 between 2008 and 2010 (9.2% reduction). Somerset reduction only 3.2%. No compelling evidence on impacts of the scheme.
How do LMS have an impact on local bus operations?	Partial	Improved journey times and reliability compared to timetable.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc.)?	<p>Safety: Comprehensive</p> <p>Other: None</p>	
What are the reasons for the differences between forecast and outturn impacts?	<p>Travel demand: Partial</p> <p>Safety: Partial</p>	Stated as the economic recession influencing travel demand, regeneration investment and re-routing.
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?	None	
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	<p>Journey times</p> <p>Accidents</p> <p>Traffic flows</p> <p>Pedestrian/cyclist counts</p> <p>Air quality</p>	
Post Opening	<p>Journey times</p> <p>Accidents</p> <p>Traffic flows</p> <p>Pedestrian/cyclist counts</p> <p>Air quality</p>	

Scheme Details				
Scheme Name		Weymouth Relief Road		
Opening Date		17 th March, 2011		
Scheme Location		Weymouth, Dorset		
Mode		Highway		
Location Description		Semi-urban		
Evaluation Documentation supplied		One Year After report		
Evaluation Time Period		One year after		
Scheme Description		<ul style="list-style-type: none"> • Single carriageway 7km in length • Park and ride site • New road alignment on A353 		
Scheme Objectives		<ul style="list-style-type: none"> • Reduce delay/congestion on the A354 • Reduce impact of rat running and protect environment • Improve safety on corridor • Improve quality of life • Encourage modal shift away from the car 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	£54.567m	£79.223m	£80.696m
	LA	£0	£8.219m	£8.575m
	3rd Parties	£0	£0	£0
	Total	£54.567m	£87.442m	£89.271m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast			
	Actual	<p>Transport model was not re-run as part of the one year post opening assessment therefore many of the observations are based on count data but no monetised assessment.</p> <p>4. Modelled traffic flows are 'generally representative of the observed flows'. 5. Noise varied from forecasts by area but not consistently 6. Air quality varied from forecasts due to traffic routing being different</p>		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	33 month delivery programme compared with 30 stated at Full Approval. No reason stated for delay.		
Are LMS delivered on budget (and if not why not)?	Partial	Scheme delivered over budget with only detail of cause being protestors on the route.		
How well do LMS deliver stated objectives?	<u>Objectives</u> 1: Comprehensive 2: Comprehensive 3: Partial 4: Comprehensive 5: Partial	6. Traffic flows reduced across the study area but not consistent. 7. Traffic on minor roads reduced 14%. 8. Safety not reported as only 1 year post opening. 9. Journey time reliability has improved (stand dev per trip). Pollution and noise reduced on Dorchester Road but increased on other links. 10. Park and ride use 220 per day.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Partial	Monetised values of scheme benefits (2002 costs) <ul style="list-style-type: none"> • PVB business users £184m forecast • PVB Consumers £135m forecast • No updated values provided in year one assessment as modelling not undertaken. 		
Do LMS deliver value for money?	Partial	No BCR provided in year one assessment. Individual PVB and PVC provided but not brought together.		

How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		No data presented on accidents due to one year post construction.
Is there evidence LMS impact on modal choice?	None	No evidence
How do LMS impact on the environment (including carbon)?	<p><u>Noise:</u> Comprehensive</p> <p><u>Air Quality:</u> Partial</p> <p><u>CO₂</u> Partial</p>	<ul style="list-style-type: none"> Noise monitoring has shown varied results, with many sites reporting an increase in traffic related noise. Air quality better than forecast on the Relief Road, but higher than expected on Dorchester Road. CO₂ higher than forecast as the traffic model under-estimated traffic flows Townscape, landscape, heritage, biodiversity, water all estimated impacts using WebTAG units.
How do LMS impact on the local economy?	Partial	Data on wider economic impacts included tourism, house prices, and wages. No real attribution analysis undertaken.
How do LMS have an impact on local bus operations?	None	None provided
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Partial	No consistent data provided
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?	None	
What lessons can be learnt to improve LMS evaluation?	None	
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction		
Post Opening		

Scheme Details				
Scheme Name		West Midlands Red Routes – Package One		
Opening Date		Various		
Scheme Location		Birmingham, Sandwell, Solihull, Walsall, Wolverhampton		
Mode		Integrated Transport		
Location Description		Conurbation		
Evaluation Documentation supplied		West Midlands Red Routes – Monitoring and Evaluation Report; The report evaluates six of the schemes in the package which represents around 24% of the total Package One network.		
Evaluation Time Period		One year after completion of all routes.		
Scheme Description		The scheme consists of implementing red routes on 130km on 25 strategic routes in the West Midlands. The scheme entailed signing and lining, junction improvements, side road entry treatments as well as the relocation of some bus stops, upgrading of pedestrian crossings and the construction of additional parking.		
Scheme Objectives		<ul style="list-style-type: none"> • Reduced journey times for buses and other vehicles • Improved journey reliability • Improvements in bus punctuality • Increased bus patronage • Reduction in accidents and casualties 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	-	£27.970m	£27.970m
	LA	-	-	-
	3 rd Parties	-	-	-
Total		-	£27.970m	£27.970m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)	Forecast	PVC= £36m, PVB (Acc & JT)= £149m, NPV=£113m, BCR= 4.2		
	Actual	No economic benefits presented. Up to 18% reduction in journey times, up to 33% increase in reliability, up to 29% reduction in accidents, up to 20% increased bus patronage, improved levels of TRO enforcement.		
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Partial	Originally programmed to be delivered in 3 to 4 years, actually took seven years. Not enough forethought into planning/approval process.		
Are LMS delivered on budget (and if not why not)?	Comprehensive	Scheme delivered to budget.		
How well do LMS deliver stated objectives?	1= Comp 2= Comp 3= Comp 4= Comp 5= Comp	Scheme delivered all objectives, in many cases benefits exceeded forecast.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Comprehensive	Improved journey times and safety.		
Do LMS deliver value for money?	None	No evidence presented.		

How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Comprehensive	Scheme has improved all aspects of traveller experience
Is there evidence LMS impact on modal choice?	Comprehensive	Up to 20% increase in bus patronage/
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	None	
How do LMS have an impact on local bus operations?	Comprehensive	Improved reliability of bus services.
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	None	No forecasts presented.
What are the reasons for the differences between forecast and outturn impacts?	None	No forecasts presented.
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction		
Post Opening		

Scheme Details				
Scheme Name		Glasshoughton Coalfields Link Road		
Opening Date		March 2009		
Scheme Location		Castleford, West Yorkshire		
Mode		Highway		
Location Description		Conurbation		
Evaluation Documentation supplied		Wakefield Monitoring Glasshoughton Coalfields Link Road – August 2013		
Evaluation Time Period		3 years after		
Scheme Description		New 7.3m single carriageway highway approximately 3.4km in length linking the A655 Normanton bypass to the A6359 Leeds Road at Glasshoughton, Castleford. The scheme passes through the Normanton Industrial Estate Extension UDP development site and facilitates the comprehensive development of that site by creating additional highway capacity at M62 Junction 31. There is an inextricable link between the schemes and the development site in that the site cannot proceed to full development potential unless the new link is provided, because of traffic capacity constraints at M62 Junction 31.		
Scheme Objectives		<ul style="list-style-type: none"> • Economic regeneration of the area particularly Normanton Industrial Estate Expansion; • Reduction in traffic and Congestion at Junction 31 of the M62; • Reduction in traffic on sensitive local roads; and • Environmental and safety benefits. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	-	£6.512m	-
	LA	-	-	-
	3 rd Parties	-	£5.424m	-
	Total	-	£11.936m	£11.950
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast		
		Actual	Traffic has been re-distributed away from residential areas, JT's have improved 60% between Castleford and the Industrial Estate, Accident rate reduced by 16%	
Suitability for Meta-Analysis				
Line of Enquiry	Depth of evidence presented?	Brief description of evidence presented		
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	None	No details given.		
Are LMS delivered on budget (and if not why not)?	Partial	Scheme slightly over budget due to overspend in construction phase.		
How well do LMS deliver stated objectives?	1= Comp 2= Comp 3= Comp 4= Comp	Scheme delivered all objectives.		
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Comprehensive	Redistribution of traffic, improved safety and journey times.		
Do LMS deliver value for money?	None	No evidence presented.		

How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Comprehensive	Evidence in report suggests that all aspects of traveller experience have been improved by the scheme.
Is there evidence LMS impact on modal choice?	None	None presented.
How do LMS impact on the environment (including carbon)?	Partial	Air quality and noise based on changes in traffic volumes
How do LMS impact on the local economy?	Partial	
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Partial	Forecast traffic flows & safety.
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	Traffic counts for study area Nov 2008, JT for 2007 and 2008, accidents 3 years before.	
Post Opening	Traffic counts for study area Nov 2012, JT for eight months from Jan 2011, accidents 3 years after.	

Scheme Details				
Scheme Name		Hemsworth-A1 Link Road		
Opening Date		November 2009		
Scheme Location		Castleford, West Yorkshire		
Mode		Highway		
Location Description		Conurbation		
Evaluation Documentation supplied		Wakefield Monitoring Hemsworth-A1 Link Road – August 2013		
Evaluation Time Period		Data used in report is three years after		
Scheme Description		<p>The scheme provides a new link road between the A628 Hemsworth Bypass and the A639/A1 at Barnsdale Bar. The route is approximately 8km in length and is of single carriageway standard.</p> <p>The project includes upgrading of Wrangbrook Lane between Barnsdale Bar and the A638 at Upton, together with a new off road section from the A638 to Hemsworth. The route includes two railway bridges and four roundabouts, including one to provide a new access into the South Kirkby Business Park on the former colliery site.</p> <p>The scheme is intended to assist in the regeneration of the area around Hemsworth, South Kirkby and Upton and completes the link between the Barnsley Coalfields Link Road and the A1. The scheme provides a good east west route from the M1 in South Yorkshire to the A1 in Wakefield.</p>		
Scheme Objectives		<ul style="list-style-type: none"> Economic regeneration of the area by providing fast and reliable journey times; Improved access to South Kirkby Industrial park; Reduction in traffic through the villages; and Environmental and safety benefits. 		
Scheme Cost Information	Stage →	Programme Entry Forecast	Full Approval Forecast	Actual
	Contributor ↓			
	DfT	-	£22.800m	-
	LA	-	£1.457m	-
	3rd Parties	-	-	-
	Total	-	£24.257m	£28.560m
Headline Summary of key impacts (e.g. traffic, safety, environment, economy)		Forecast	None available due to relocation of Wakefield Council offices and turnover of staff	
		Actual	JTs have reduced up to 60% between Castleford and the Industrial Estate, Accident rate reduced by 16%	
Suitability for Meta-Analysis				
Line of Enquiry		Depth of evidence presented?	Brief description of evidence presented	
Are Local Major Schemes (LMS) delivered on time (and if not why not)?		Partial	Scheme overrun by 6 months, no details why.	
Are LMS delivered on budget (and if not why not)?		Comprehensive	Scheme over budget due to increase in land costs, construction phase overrun and CEs from the contractor.	
How well do LMS deliver stated objectives?		1= Partial 2= Partial 3= Comp 4= Comp	Scheme delivered all objectives.	
What are the main benefits of LMS (and how does this differ by scheme context/type)?		Comprehensive	Economic development, improved safety and journey times.	

Do LMS deliver value for money?	Partial	Outturn safety benefits based on the observed change in accidents numbers over a three year period are estimated at £15 million, nearly three times higher than predicted. Benefits associated with journey time and vehicle operating costs benefits are not possible to analyse given the information currently available.
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?	Partial	Evidence of reduced travel times and improved safety.
Is there evidence LMS impact on modal choice?	None	None presented.
How do LMS impact on the environment (including carbon)?	None	
How do LMS impact on the local economy?	Partial	The opening of the road has resulted in a number of planning permissions being granted for housing and employment developments along the corridor.
How do LMS have an impact on local bus operations?	None	
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc.)?	Partial	Forecast safety and traffic flow impacts.
What are the reasons for the differences between forecast and outturn impacts?	None	
What key learning points should be communicated to future LMS promoters, particularly in a future where funding is devolved?		
What lessons can be learnt to improve LMS evaluation?		
Potential for stakeholder engagement?		
Depth of Evaluation Supporting Evidence		
Pre Construction	Traffic counts for study area Nov 2008, JT for 2007 and 2008, accidents 3 years before.	
Post Opening	Traffic counts for study area Nov 2012, JT for eight months from Jan 2011, accidents 3 years after.	

Appendix C: Review of Data Quality (by Scheme)

Appendix D: Review of Data Quality (by Attribute)

DfT Evaluation Question		Data Attribute								
Main Question	Sub Question (if applicable)	Accuracy	Data Availability	Data Completeness	Data Consistency	Conformality	Credability	Processability	Relevance	Timeliness
		Is the correct measure used to answer question?	Is all the data readily available?	Does the sample contain all the data needed to answer the core research question?	Does the data set lend itself for like for like comparisons	Has the analysis been completed to the necessary standard and is it correct?	Is the data supplied from robust sources?	How easily can the data be handled and aggregated?	Is the data available relevant to the answering the question?	Is now the right time to evaluate?
Are Local Major Schemes (LMS) delivered on time (and if not why not)?	Delivered on time?	3	3	3	3	N/A	N/A	3	3	3
	If not, why not?	1	0	0	0	N/A	N/A	0	0	0
Are LMS delivered on budget (and if not why not)?	Delivered on budget?	3	3	2	3	N/A	N/A	2	3	2
	If not, why not?	1	1	1	0	N/A	N/A	0	0	0
How well do LMS deliver stated objectives?	Journey time savings	2	2	2	1	N/A	N/A	1	2	3
	Journey time reliability	0	0	0	0	N/A	N/A	0	0	3
	Reduce traffic / congestion	1	1	1	1	N/A	N/A	1	1	3
	Safety	2	2	2	1	N/A	N/A	1	2	2
	Improve accessibility	0	0	0	0	N/A	N/A	0	0	1
	Environment	0	0	0	0	N/A	N/A	0	0	1
	Economic impacts	0	0	0	0	N/A	N/A	0	0	2
What are the main benefits of LMS (and how does this differ by scheme context/type)?	Journey time savings	2	2	2	1	N/A	N/A	1	2	1
	Journey time reliability	0	0	0	0	N/A	N/A	0	0	3
	Reduce traffic / congestion	2	2	2	1	N/A	N/A	1	2	3
	Safety	2	2	2	1	N/A	N/A	1	2	2
	Improve accessibility	0	0	0	0	N/A	N/A	0	0	3
	Environment	0	0	0	0	N/A	N/A	0	0	2
	Economic impacts	0	0	0	0	N/A	N/A	0	0	3
Do LMS deliver value for money?		0	0	0	0	N/A	N/A	0	0	1
How do LMS impact on traveller experience (e.g. reduced travel times, increased demands, improved comfort, improved safety, etc.)?		0	0	0	0	N/A	N/A	0	0	3
Is there evidence LMS impact on modal choice?		0	0	0	0	N/A	N/A	0	0	1
How do LMS impact on the environment (including carbon)?		1	1	1	1	N/A	N/A	1	1	1
How do LMS impact on the local economy?		0	0	0	0	N/A	N/A	0	0	2
How do LMS have an impact on local bus operations?		1	1	1	1	N/A	N/A	1	1	1
How well have the impacts of LMS been forecast (e.g. travel demands, journey times, safety, reliability, etc)?	Travel demand	1	1	1	1	N/A	N/A	1	1	3
	Journey time reliability	0	0	0	0	N/A	N/A	0	0	3
	Journey times	0	0	0	0	N/A	N/A	0	0	3
	Safety	0	0	0	0	N/A	N/A	0	0	2
	Environment	0	0	0	0	N/A	N/A	0	0	0
What are the main differences between forecast and outturn impacts?	Travel demand	1	1	1	1	N/A	N/A	1	1	3
	Journey time reliability	0	0	0	0	N/A	N/A	0	0	3
	Journey times	0	0	0	0	N/A	N/A	0	0	3
	Safety	0	0	0	0	N/A	N/A	0	0	2
	Environment	0	0	0	0	N/A	N/A	0	0	2
Total Score		23	22	21	16	0	0	15	21	70

3	Sufficiently demonstrated by >17 schemes	> 17 schemes have data readily available	Complete data is available for >17 schemes	Like for like comparisons feasible for > 17 schemes	N/A	N/A	Little or no manipulation is required to achieve sufficient sample size	Relevant information to answer the question is available for >17 schemes	The timing is correct to answer the research question for >17 schemes
2	Sufficiently demonstrated by 10-16 schemes	10-16 schemes have data readily available	Complete data is available for 10-16 schemes	Sufficiently demonstrated by 10-16 schemes	N/A	N/A	Sample size almost achieved. Some low cost manipulation required to standardise a sufficient sample size	Relevant information to answer the question is available for 10-16 schemes	The timing is correct to provide an initial answer to the research question for >17 schemes
1	Sufficiently demonstrated by 5-10 schemes	5-10 schemes have data readily available	Complete data is available for 5-10 schemes	Sufficiently demonstrated by 5-10 schemes	N/A	N/A	Cost of processing dataset would be high - significant standardisation required	Relevant information to answer the question is available for 5-10 schemes	The timing is correct to answer the research question for 5-16 schemes
0	Sufficiently demonstrated by less than 5 schemes	Less than 5 schemes have data readily available	Complete data is available for less than 5 schemes	Sufficiently demonstrated by less than 5 schemes	N/A	N/A	No data consistency at all and data mostly missing	Relevant information to answer the question is available for less than 5 schemes	The timing is correct to answer the research question for less than 5 schemes

Appendix E: SCHEME PROMOTER QUESTIONNAIRE

Meta Evaluation of Local Authority Major Schemes -

Background

The DfT is responsible for demonstrating that its funding for local-level investment has provided value for money for the taxpayer. We are also responsible for ensuring that lessons are learnt to inform future decision making. To this end we have commissioned research, being carried out by Atkins/AECOM, to provide evidence and analysis from evaluations that have been carried out by Local Authorities on Local Major Schemes.

The ultimate objective of this research project is to improve our understanding of the evaluation results so far obtained - at a programme level. Ultimately, this will help us to identify and disseminate key learning points to assist scheme promoters and their delivery partners respond to devolved scheme prioritisation and local delivery responsibilities.

We are therefore getting in touch with you as you are our primary contact for one of the schemes where a Major Scheme Evaluation Report has been provided to the Department. As our main contact for one of the schemes listed below, we would like you coordinate a response to the short questionnaire below on behalf of your promoting organisation.

Local Major Schemes with evaluations provided	
A158 Burgh Le Marsh Bypass	Walsall TCTP
B1115 Stowmarket Relief Road	Weymouth Transport Package for 2012 games
A4123/A461 Burnt Tree	A628 Cudworth and West Green Bypass
Cambridgeshire Guided Busway	A638 Quality Bus Corridor
Darlington Eastern Transport Corridor	BIA NEC Public Transport Scheme
M4 J11 and Mere oak Improvement	Brierley Hill SAN
Owen Street Relief Road	Weymouth Relief Road
A1073 Spalding to Eye	Taunton Third Way Major Scheme
A688 Wheatley Hill to Bowburn Link	Glasshoughton Coalfields Link Road
Metrolink Track Renewal and Blockade	Hemsworth - A1 Link Road
Scarborough Integrated Transport Scheme	West Midlands Red Routes - Package 1
Tunstall Northern Bypass	

Note: This is not an audit process – we are simply looking to take a programme level approach to overall analysis such that common lessons learnt can be drawn out. We are hoping to clarify/enhance and hopefully expand on some of the information provided in the scheme evaluation and monitoring reports through this (and potentially further) engagement.

The questionnaire focuses on collecting more consistent evidence relating to the following key themes:

- Cost Management;
- Programme Management and Scheme Delivery; and
- Unintended Outcomes.

Should you no longer be the main contact please speak to John Collins on (0207) 944 6990 or email (johnj.collins@dft.gsi.gov.uk) with updated details. If you have further queries or require clarification of any aspects of this research or the questionnaire below please feel free to make contact.

In some cases we expect Atkins/AECOM to carry out more detailed, but targeted engagement (e.g. through an expanded questionnaire or through telephone or face to face interview). We wouldn't expect this to take a significant amount of your time – and we would be grateful if you could make clear in your return who would be the best point of contact for any further engagement.

Deadline for Response: Friday 31st January

Cost Management

1. Where applicable, what were the main reasons for any cost changes between:

Programme entry and full approval:
Full approval and scheme completion:

2. To what extent could factors resulting in cost variances have been foreseen and mitigated at an early stage?

Response:

Programme Management and Scheme Delivery

3. What were the main causes of programme slippage or change and how were these managed?

Response:

4. How could programme slippage have been forecast and managed/mitigated and what lessons can be learned for future scheme delivery?

Response:

5. If there were changes in the outturn scheme design compared with full approval, what were the main causes of this?

Response:

Unintended Outcomes

6. What are the residual issues and problems in the scheme area and how would you have designed the scheme differently to assist in mitigating these?

Response:

7. What unanticipated impacts have been observed following the scheme's delivery?

Response: