

M1/M621 Chesterfield to Leeds Route Management Strategy

Strategy Impact Statement

November 2005

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Appendix A

Full List of Route Functions

1 Introduction

The Strategy Impact Statement (SIS) sets out the likely impact of the Route Outcomes on the performance of the M1/M621 Chesterfield to Leeds route.

The report provides tables to illustrate the impact of all the Route Outcomes on:

- Route Problems and Issues;
- Route Functions;
- Development Control and Land Use; and
- Policy Objectives.

Potential Actions have been identified from the draft Route Outcomes Detailed Statements. These have been considered and their impact is set out. The outcomes have not been prioritised, but a timescale for achievement of the outcomes is indicated in the Detailed Statements for each outcome, published in the final Route Management Strategy Document.

2 Route Outcomes

Route Outcomes set out what the Highways Agency will seek to obtain from the route over the 10-year period of the RMS. The Route Outcomes are derived from our understanding of the route and identify the relationship between the Route Functions, Objectives, Problems and Issues.

The Route Outcomes for the M1/M621 RMS are listed in Table 1.

Table 1 Route Outcomes

HA Criteria	Ref	Description
Environment	RO1	To minimise detrimental impacts on air quality, particularly in Air Quality Management Areas, and to seek to reduce green house gas emissions
	RO2	To identify locations where noise levels are high and mitigate where appropriate
	RO3	To ensure effective measures are in place to protect watercourses from pollutants in drainage run off from the M1 and M621
	RO4	To seek to maintain a clean and tidy route
	RO5	Operation of the HA Biodiversity Action Plan in respect of flora and fauna for the whole route
	RO6	Operation of the Landscape Management Plan with regard to visual intrusion
	RO7	To use environmentally friendly clean lighting when replacing existing or providing new systems
Safety	RO8	Application of a methodology to identify collision clusters and causation factors, and to implement preventative actions to reduce collisions
	RO9	To seek to improve safety for vulnerable users
	RO10	To encourage improved driver behaviour (e.g. to encourage road users to travel at an appropriate speed)
	RO11	To achieve a consistently high standard of signing along the route
Safety	RO12	Provision of service area facilities that better meet the needs and demands of all road users, and in particular HGV facilities

HA Criteria	Ref	Description
Economy	RO13	To contribute to Regional and Local transport and development plans
	RO14	Implementation of a Land Use and Development Control Policy supporting sustainable development and regeneration without introducing further traffic congestion
	RO15	Continuing use of the Objective 1 Memorandum of Understanding in South Yorkshire
	RO16	Implementation of partnership procedures covering planning and land use similar to those in Objective 1 areas elsewhere
Accessibility	RO17	To improve facilities for non-motorised users a) at grade separated junctions and b) at crossings of the M1 and M621
	RO18	To reduce community severance
Integration	RO19	Changes to Travel Behaviour to reduce traffic growth through a driver information strategy
	RO20	A strategy to encourage and formalise the use of park & share
	RO21	Partnerships with Passenger Transport Executives (PTEs) to influence and aid the implementation of Park & Ride Strategies
Maintenance	RO22	Application of 'best practice' traffic management
	RO23	To maximise the serviceability of the road, structures and other highway infrastructure
	RO24	To minimise adverse effects on the environment during maintenance
Operate	RO25	To improve the facilities on the route for abnormal loads
	RO26	Network control improvements to maximise the availability for use of the route for users
Operate	RO27	Implementation of measures (e.g. access/egress management) to give priority to 'strategic traffic' and 'important traffic'
	RO28	Implementation of measures (e.g. access/egress management) to control growth in traffic flows on the M1 and M621 to meet West Yorkshire LTP targets
	RO29	Demand Management measures, to deliver an achievable and defensible balance between future demands and constraints, to protect increased capacity provided by TPI schemes.
Improvement	RO30	A strategy for TPI schemes to increase the capacity of sections of the M1 where appropriate
	RO31	LNMS schemes (e.g. climbing lanes, merge/diverge improvements) and Technology schemes to make better use of and improve the safe operation of the network

3 Route Outcome Analysis

The following tables will illustrate the 'positive' impact of Route Outcomes (Table 1) on the route in relation to Route Problems and Issues (Table 2), Route Functions (Table 3), the Land Use and Development Control Statement (Table 4) and Route Objectives (Tables 5-12). In all the tables, the Route Outcome reference number is displayed across the top row and all shaded boxes indicate that the Route Outcome has a positive impact on the corresponding Route Problem and Issue, Function, Objective or Land Use and Development Control Issue. The impact is a qualitative rather than a quantitative measure.

Route Problems and Issues		Route Outcome																															
		ENVIRONMENT							SAFETY					ECON				ACC		INT			MAIN			OPERATE					IMP		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SAFETY	Unclear Signage																																
	Speeding																																
	Spray/ Water on carriageway																																
	Uneven Surfacing																																
ECONOMY	Lack of alternative transport modes																																
	High peak hour flows																																
	Lack of priority for strategic traffic																																
	Congestion (see also Operating Issues)																																
ACCESSIBILITY	Poor facilities for Non-Motorised User Crossings																																
	Severance																																
INTEGRATION	Lack of Park and Share facilities																																
	Dodworth Rail Station																																
	Lack of Park and Ride facilities																																
	Lack of alternatives for freight																																
	Poor signage to existing opportunities																																
	Need for Supertram extensions																																

Route Problems and Issues		Route Outcome																																				
		ENVIRONMENT						SAFETY						ECON				ACC		INT			MAIN			OPERATE					IMP							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
MAINTENANCE	Need to review programme																																					
	Lack of public information during maintenance																																					
	Quality of traffic management																																					
	Response times for maintenance																																					
	Misleading VMS																																					
OPERATION	Lack of abnormal load facilities																																					
	Lack of cameras for traffic management																																					
	Understanding of level of service																																					
	Lack of driver information																																					
	Poor incident management																																					
	Poor journey time reliability																																					
	Congestion when Leeds United Stadium is in use																																					
	Merging/ Diverging problems																																					
	VMS information not relevant/ up to date																																					
	Congestion Locations (M621 AM Peak)																																					

Route Problems and Issues		Route Outcome																															
		ENVIRONMENT							SAFETY					ECON				ACC		INT			MAIN				OPERATE					IMP	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OPERATION	Congestion Locations (M621 PM Peak)																																
	Congestion Locations (M1)																																
	Congestion Locations (M1 AM Peak)																																
	Congestion Locations (M1 PM Peak)																																
	Operation of Lofthouse Interchange																																
	Rat running on A637																																
	Need for variable speed limits																																
IMPROVEMENT	Confusing junction numbering																																
	Poor visibility of signage																																
	Need to prioritise widening																																

5 Route Outcomes in relation to Route Functions

Table 3 Route Outcomes in relation to Route Functions

A shaded selection equates to the Route Function being positively influenced by the Route Outcome.

A full list of Route Functions is provided in Appendix A

Route Function		Route Outcome																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
NATIONAL	A																																	
	B																																	
	C																																	
	D																																	
	E																																	
	F																																	
	X																																	
	U																																	
REGIONAL	G																																	
	H																																	
	T																																	
	V																																	
	Y																																	
LOCAL	I																																	
	J																																	
	K																																	
	S																																	
	Z																																	

6 Route Outcomes in relation to Land Use and Development Control Statement

Table 4 Route Outcomes in relation to Land Use and Development Control Statement

A shaded selection equates to an issue referred to in the Land Use and Development Control Statement being positively influenced by the Route Outcome

Issue in the Land Use and Development Control Statement	Route Outcomes																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Maintain the safety and efficiency of the route																																	
Maximise the use of public transport and other alternatives to the car																																	
Promote policies, plans and measures that minimise the impact of development traffic on the trunk road network																																	
Promote policies and plans that lead to peak demand on the route being kept below full capacity at all times during the life of the plan																																	
Appropriate and sufficient measures are provided to counteract the consequences of development																																	
Apply the Memorandum of Understanding to facilitate appropriate development in Objective 1 areas																																	

Policy Objective		Route Outcome																															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ENVIRONMENT	ENV5: To respect the landscape character and quality of the area when improving or maintaining the M1/M621 and to use a townscape plan to enhance townscape quality and minimise the adverse effects of trunk roads in urban areas																																
	ENV6: To ensure that in the planning and resourcing of work on the M1 and M621 there is an appropriate response to any adverse effects on the historic environment and that the historic fabric of our landscape is respected																																

Table 6 Route Outcomes in relation to Safety Policy Objectives

A shaded selection equates to the Safety Objective being positively influenced by the Route Outcome.

Policy Objective		Route Outcome																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
SAFETY	KEY SAF: To improve safety for all road users and contribute to the Government's new safety strategy and targets for 2010																																		

Table 8 Route Outcomes in relation to Accessibility Policy Objectives

A shaded selection equates to the Accessibility Objective being positively influenced by the Route Outcome.

Policy Objective		Route Outcome																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
ACCESSIBILITY	KEY ACC: To improve access to everyday facilities for those without a car and to reduce community severance																																		
	ACC1: To improve access to and from Public Transport and Park and Ride facilities																																		

Table 9 Route Outcomes in relation to Integration Policy Objectives

A shaded selection equates to the Integration Objective being positively influenced by the Route Outcome.

Policy Objective		Route Outcome																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
INTEGRATION	KEY INT: To work with others to ensure passengers and freight operators can switch efficiently and smoothly between different modes of transport, and to broaden the choices available																																		
	INT1: To make better use of the route by working in partnership with road users, transport providers and operators, local authorities and those affected by the network																																		
	INT2: To contribute to Regional and Local transport and development plans																																		

8 Conclusions

All Route Outcomes, apart from Route Outcome 3, have a positive impact on at least one of the identified Problems and Issues.

Route Outcome 3, '*To ensure effective measures are in place to protect watercourses from pollutants in drainage run off from the M1 and M621*' does not have a positive impact on any of the Route Issues. Although this has not been an issue raised through consultation the outcome is included as it is an objective taken from the Highways Agency Environmental Strategic Plan.

Route Outcomes 1-8, 10-13, 17, 18, 23, 24, 26, 29 and 31 have a positive impact on all the Route Functions identified for the study route. Route Outcomes 15 and 25 on the other hand have a positive impact on very few Route Functions. Overall, all Route Outcomes have a positive impact on at least one Route Function.

The issues identified in the Land Use and Development Control Statement are addressed by at least one of the Route Outcomes.

All Route Outcomes have a positive impact on Route Objectives. The Safety Objective is impacted on by the greatest number of Route Outcomes.

All Route Outcomes impact on at least one of the Route Issues, Functions, Objectives and/or Land Use and Development Control Statement. The Route Outcomes therefore achieve their aim of securing progress towards the objectives, functions and issues referred to in the Route Management Strategy.

9 What happens next?

The Highways Agency, at the next stage, will prioritise future implementation of the outcomes through development of a route management plan.

The Highways Agency will follow the procedures set out in the Programme Objectives Guide (POG) in order to develop the appropriate actions using the guidance on the Route Outcome Development Sheets within the Route Management Strategy to prioritise actions, and deliver the Route Outcomes.

The POG provides direction to the Operations Directorate (OD), Managing Agents (MAs) and Managing Agent Contractors (MACs) on the type of Maintenance and Making Better Use (MBU) projects that should be identified to extend forward programmes and to deliver the outcomes set down in the Government's 10 Year Plan for Transport, and other Ministerial commitment, towards which the Route management Strategy contributes.

Appendix A

Full List of Route Functions

Strategic (or National)

The Strategic (or National) functions of the route are:

The Motorways....

- A. Are part of the two Trans-European network routes for North-South movements in Yorkshire (Routes E13 and E15)
- B. Provide a major transport link between the North and North East of England and the East Midlands, London and Continental Europe.
- C. Are a part of the national motorway Strategic core network.
- D. Provide an all weather link to important North-South and East-West corridors (A1, M62, M18, A616/A628) including the North European Trade Axis.
- E. Are a strategic link between the M62 and the A1 for TransPennine traffic to and from the North East of England
- F. Are part of the national strategic diversion system for the Yorkshire motorway box.
- X. Provide an abnormal load route, subject to restrictions.
- U. Provide access to national events/venues and attractions within a region.

Regional

The Regional functions of the route are:

The motorways...

- G. Provide a major transport link between the regional centres of population, employment, tourism, recreational areas and national and international gateways.
- H. Are of vital importance to the economic performance and growth of the Yorkshire and Humber region, and the East Midlands.
- T Provide intra-regional movement from Bradford and Sheffield to Leeds and vice versa.
- V Provide access to multi modal transport interchanges
- Y Support Objective 1 programme in South Yorkshire.

Local

The Local functions of the route are:

The motorways...

- I. Provide bypasses around urban centres
- J. Provide local access for employment and leisure purposes
- K. Provide main commuter routes for traffic entering the cities of Sheffield, Leeds and Bradford.

- S. Act as part of the Leeds Outer Ring Road (M621 J1 to J7 and M1 J44 to J46) and will act as part of the Leeds Inner Ring Road (M621 J2 to J4)
- Z. Provide local access to long distance commuter traffic.