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HIGHWAYS AGENCY

M1/M621Chesterfield to Leeds Route Management Strategy

Land Use & Development Control Statement

March 2007

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1 Introduction

1.1 Brief

Hyder Consulting have been commissioned by the Highways Agency to develop and prepare a Route Management Strategy (RMS) for the M1/M621 Motorways from Chesterfield to Leeds. This document is the Land Use & Development Control Statement (LU&DCS) which forms part of that Strategy.

1.2 Land Use & Development Control Statement

The LU&DCS identifies the future land use development pressure upon the M1/M621 Motorways. Taking into account these pressures and the operational performance of the route, a development control strategy is presented which outlines the Highways Agency approach to future development allocations and planning applications that is intended to be consistent with the planning objectives of the regions and local authorities.

The LU&DCS is an integral part of the RMS and the development of RMS outcomes, however it also acts as a stand alone document and is intended to be a source of information for the Highways Agency development teams, Planning Authorities and developers. This document is also intended to identify the role that the Highways Agency has in influencing the location of development to meet Regional and Local planning objectives. National planning guidance has an emphasis on ensuring that Regional and Local planning bodies in land use and transport planning produce consistent objectives.

The strategy presented in this document is reflective of the RMS 10 year time frame of 2005 to 2015.

The LU&DCS is structured as follows:

- Chapter 2 provides a description and limits of the routes covered by the M1/M621 RMS. This chapter also identifies the range of route functions applicable to the M1 and M621.
- Chapter 3 identifies the existing planning context with regards to managing future land use provision.
- Chapter 4 outlines the current and future operating conditions on the route.
- Chapter 5 identifies land use development pressure along the route.
- Chapter 6 evaluates the potential impact of future land use development pressure on the route; and
- Chapter 7 presents the land use and development control strategy for the route.

2 Route Description

2.1 Highway Network

The Route Management Strategy (RMS) for the M1/M621 from Chesterfield to Leeds covers the M1 from Junction 30 northeast of Chesterfield, past Sheffield, Rotherham, Barnsley, Wakefield, continues to the southeast of Leeds, past Garforth to Junction 48 with the A1(M), and includes the section of the A1(M) north to its junction with the A64 trunk road east of Leeds. In addition, the RMS also includes the M621 motorway south of Leeds from the M62 Junction 27 at Gildersome to Junction 43 of the M1 at Rothwell.

The M1 motorway connects to the M18, M62, M621 and the A1(M) motorways and the A616/A628 trunk road and provides access to the urban areas of Sheffield, Rotherham, Barnsley, Wakefield and Leeds. The M621 connects to the M62 and the M1 and is an urban motorway providing access to Leeds City Centre and the wider motorway network.

The motorway covered by the RMS has a total length of 98km (61 miles) and has 25 junctions with an average spacing of 3.9 km with some being much closer. Of the 25 junctions along the route, four along the M621 through Leeds (Junctions 2a, 4, 5 and 6) and one on the M1 north of Sheffield (Junction 35a) have restricted movements.

In March 2005 an announcement was made by the Secretary of State for Transport to widen the M1 from 3 lane dual to 4 lane dual between Chesterfield (M1 J30) and Leeds (M1 J42). This decision was based upon the South West Yorkshire Multi Modal Study (SWYMMS) recommendations and the findings from the South West Yorkshire Motorway Best Use Study (SWYMBUS).

The highway network represented in the RMS is situated within the local sub regions of West Yorkshire, South Yorkshire, North Yorkshire and Derbyshire. A map showing the extent of the M1/M621 RMS is included as Figure 2.1.

2.2 Route Functions

The Route Management Strategy has developed route functions. The motorway serves a range of strategic, regional and local functions. These are presented below.

2.2.1 Strategic (National) Route Functions

The key strategic (national) functions of the M1/M621 are as follows;

The motorways ….

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

2.2.2 Regional Route Functions

The Regional functions of the route are as follows:

The motorways…

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

2.2.3 Local Route Functions

The Local functions of the route are as follows:

The motorways…

- Provide bypasses around urban centres.
- Provide local access for employment and leisure purposes
- Provide main commuter routes for traffic entering the cities of Sheffield, Leeds and Bradford.
- 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).
- Provide local access to long distance commuter traffic.

It is essential that the LU&DCS provides sufficient guidance with regards to assessing future land use development proposals to ensure that the identified route functions are supported.

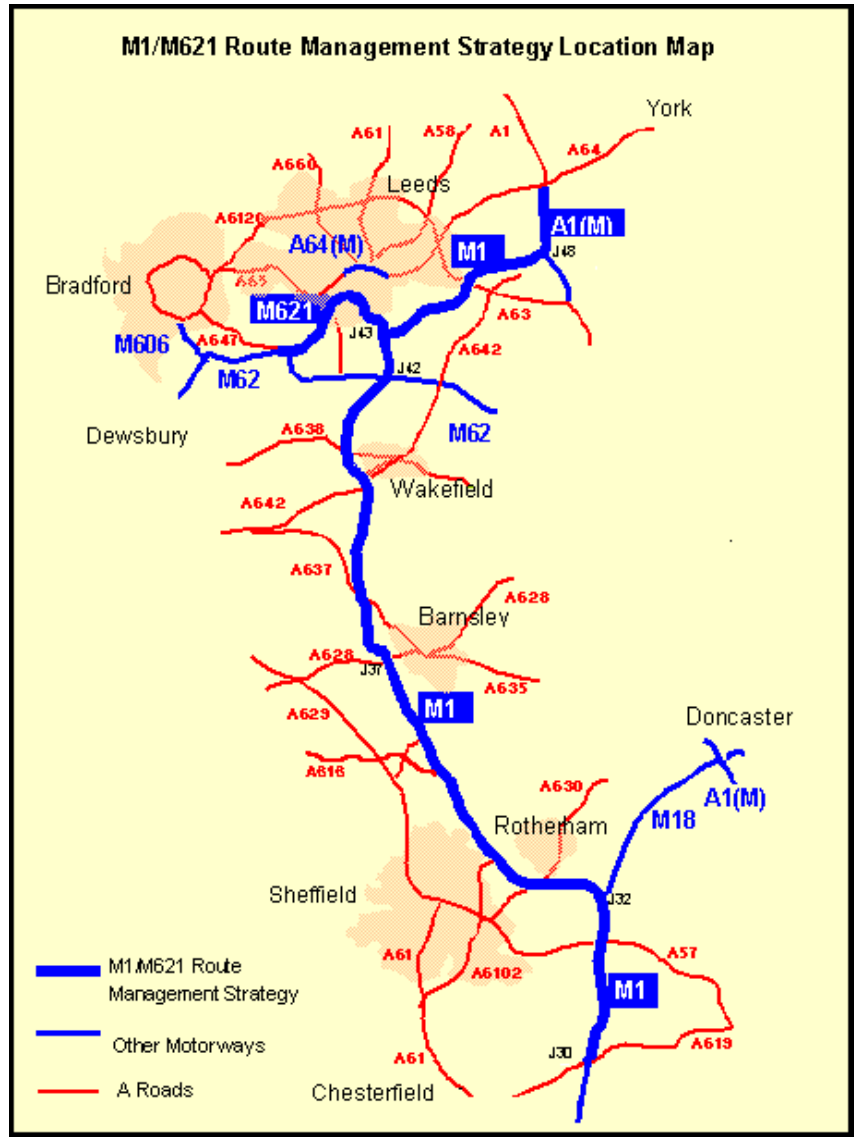

Figure 2.1: M1/M621 Route Management Strategy Location Map

3 Land Use Planning and Transport Policy

3.1 Planning System

Recent changes to planning policy as a result of the introduction of the Planning and Compulsory Purchase Act 2004 has increased the emphasis on a 'top down' approach to development planning.

The planning vision is to have a 'plan led system' whereby local authority planning strategies are consistent with regional planning strategies in identifying areas for future land use and also in the assessment of planning applications.

A simplified overview of the current and future structure of planning policy relevant to the M1/M621 is shown in Figure 3.1. It is a 'top down approach' to planning, whereby national planning objectives infiltrate regional policy and regional policy objectives infiltrate local planning policy.

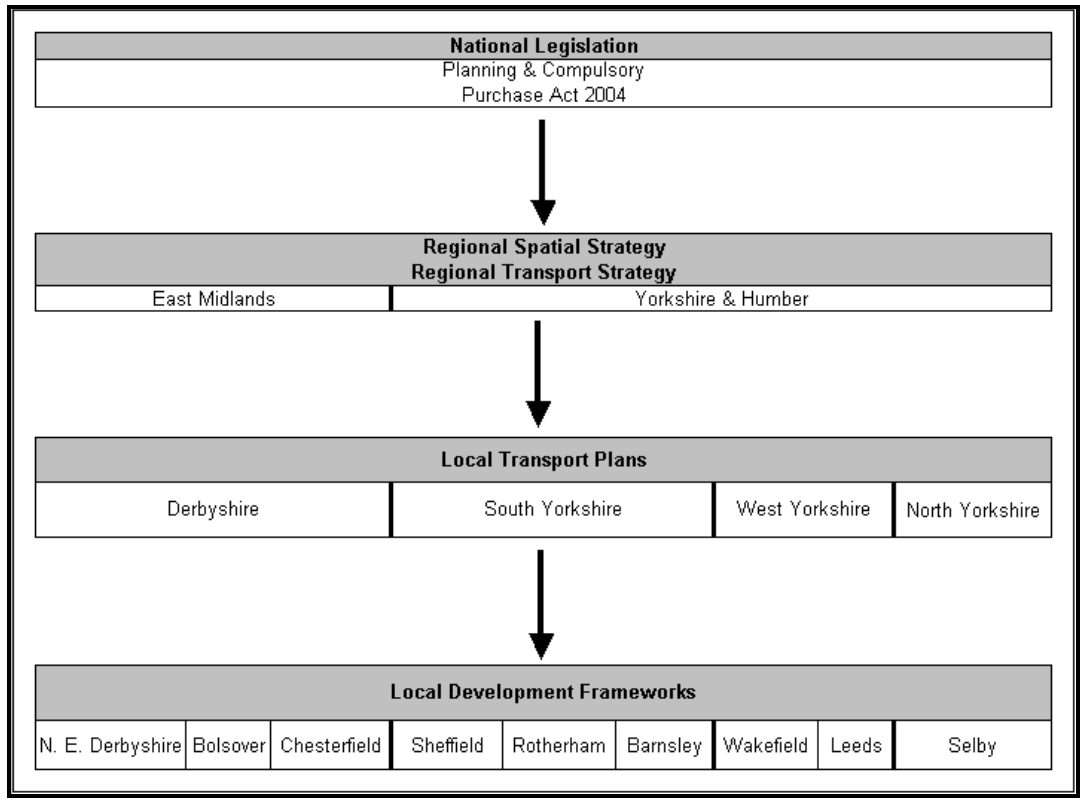

Figure 3.1: Simplified Overview of Planning Structure

3.2 National Policy Guidance

The documents representing current national planning legislation are the Planning and Compulsory Purchase Act 2004 and the Town & Country Planning (Local Development) (England) 2004 Regulations.

Central Government Planning Policy Guidance (PPG) with regards to regional planning is presented in Note 11 (PPG 11). This note provides guidance with regards to the formulation of Regional Spatial Strategies (RSS) and the interaction between RSS and Local Development Frameworks (LDF).

Central Government Planning Policy Guidance with regards to transport is presented in Note 13 (PPG13). This document sets out national planning policy in respect of transport.

The objective of PPG 13 is to integrate planning and transport policy at a national, regional and local level to achieve the following;

1. *'promote more sustainable transport choices for both people and for moving freight'*

2. *'promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling', and*

3. *'reduce the need to travel, especially by car'.*

Annex B of PPG13, 'Planning for Transport', provides guidance with regards to development access to trunk roads and local roads. The Highways Agency is responsible for the implementation of the Government's development control policy on behalf of the Secretary of State.

The guidance implies 'that in support of integrated transport objectives, a graduated approach' should be adopted by the Highways Agency in the assessment of new connections to trunk roads or increased use of existing connections'.

The graduated approach is as follows;

1. *'access will be most severely restricted in the case of motorways. It will be limited to junctions with other main roads, service areas, maintenance compounds and other major transport infrastructure facilities such as airports. The highest standard and most strategic routes on the core network will be subject to restrictions on access almost as stringent as those applying on motorways'; and*

2. *'the remainder of the network will be subject to a less restrictive approach to connections, subject to consultation with the local authorities concerned. This approach should particularly help in the development of urban brownfield sites'.*

The guidance states that the Highways Agency will actively promote integrated transport and sustainable transport through partnerships with the relevant planning bodies.

In particular the Highways Agency should;

1. *'encourage local planning authorities to consider public transport alternatives to access to new developments by car'; and*

2. *'where such alternatives have been agreed and secured, through a planning obligation or condition, take these into account in assessing the scale of or need for relevant highway works'.*

With regards to local roads the guidance states that Local Authorities will need to consult the Highways Agency whereby a potential development access on a local road could affect the operation of a trunk road. The Local Authority should consider the interface between core transport routes and the transport system.

In depth policy guidance that deals with the issue of development control in relation to trunk roads is presented in DTLR circular 4/2001. The circular was developed on the basis of the Governments white paper, titled 'A New Deal for Trunk Roads in England', July 1998.

The Highways Agency use this guidance when assessing planning applications for developments that could potentially affect trunk roads.

The guidance also provides information with regards to securing developer funding for highway improvements under Section 278 of the Highways Act 1980.

3.3 Regional Policy Guidance

The top tier planning document for the region is the Regional Spatial Strategy (RSS). This document consists of, or refers to, regional strategies concerning the economy (RES), housing, built environment, transport (RTS) and social infrastructure. The RSS determines the application of funding programmes such as the European Regional Development Fund (Objective 1 and 2).

RSS is part of an approach based upon;

'a focus on the crucial links between economic, social and environmental progress and the consequent need for joined up thinking'

'a central concern with sustainability: meeting the needs of the present generation without compromising the ability of future generations to meet their needs'

'a more responsive and continuous planning process with greater attention to monitoring and managing change'.

The purpose of the RSS is to provide a spatial framework that provides guidance in the creation of Local Development Frameworks and Local Transport Plans that meet the planning policy objectives of the region. It is intended to be a broad based strategy for the development and use of land. It provides the broad development framework for the region identifying the scale and distribution of housing development and the priorities for the environment, transport, infrastructure and economic development. The

Regional Transport Strategy is fully integrated with the Regional Planning Guidance, this is to ensure the integration as far as possible of land use and transport matters.

The RSS's applicable to the study area of the M1/M621 RMS are the RSS for Yorkshire & Humber (RSS 12) and RSS for East Midlands (RSS 8).

3.3.1 Regional Spatial Strategy for Yorkshire & Humber (RSS12)

The current RSS was introduced in 2004 and outlines regional policy aspirations beyond the year of 2016. At present it is a selective and not comprehensive document that covers the planning guidance outlined in RPG 12.

In relation to the Regional Transport Strategy (RTS) the objectives are as follows;

To integrate transport and land use planning, in particular

- *To support regeneration and economic growth and in particular facilitate development in the main urban areas and regeneration priority areas identified in RSS*
- *To support sustainable development*
- *To reduce the need to travel, especially by car*
- *To reduce the impact of traffic and travel on the environment*
- *To improve access to opportunities in a manner that is equitable and socially inclusive within the transport system itself*
- *To integrate the operation of different transport modes and promote modal shift away from the car*
- *To make efficient use of transport resources*
- *To improve safety*
- *To maximise the use of more energy efficient modes of travel, including cycling and walking*
- *To assist in the achievement of the Government's local air quality targets*
- *To increase the provision of safe traffic free networks for access on foot or cycle within and between town and countryside*
- *To be affordable and achievable in practical terms.*

The policies outlined within the Regional Transport Strategy (RTS) that are applicable to planning decisions undertaken by the Highways Agency are as follows;

Policy T1

Land Use and Transport Integration

a) The following locational criteria should inform the identification of land use allocations:-

i) development that generates a large number of passenger movements should be located at or close to sites which provide, or as a result of measures included as part of the scheme or where there are firm proposals in the LTP will provide, ready and convenient access on foot, by cycle and public transport;

ii) development should be planned in such a way as to make best use of existing transportation networks and to have regard to strategic priorities. The function of the strategic network to provide efficient and convenient long distance travel by road should be protected by preventing the location of development likely to generate high volume person movements close to junctions of the Highways Agency network unless they are located within urban areas well served by public transport;

iii) development should be planned to enhance the viability of existing public transport services and facilitate the use of non road-based freight carriage.

b) Development applications should be accompanied by a strengthened form of Transport Assessment. These should consider the impact of proposals on the overall amount of and need to travel, as well as the impact on the road and public transport systems.

c) Development plans should identify and where appropriate protect sites and routes which could be critical in developing infrastructure for widening choices for passenger travel. They should also include policies to ensure that where a disused rail line, railway land or land adjacent to waterways has the prospect of reuse for transport purposes, it is not severed by new development.

d) Development plans should seek to protect and enhance the vitality and sustainability of existing local centres in both urban and rural areas in order to decrease the need to travel.

Policy T9

Improvements to the Highway Network

There will be a general presumption against increases in the physical capacity of the highway network within the region with the following exceptions:-

a) Proposals following the outcome of the Government's Multi-Modal, Road-based, or similar studies, in conjunction with sustainability appraisals encouraged under Policy S1.

b) Road improvements which result from Highways Agency Route Management Strategies.

c) Localised improvements where these are essential to regeneration or to delivering environmental enhancement or which arise as a result of development which is needed to meet the strategy of the RSS and where it can be demonstrated that there are no feasible alternatives to road investment, where proposals will be considered on their individual merits.

Instead, improvements in the capacity of the highway network will be achieved by better management of existing road infrastructure and improvement in public transport and in accordance with Policy T1. All major improvements to the highway network must be appraised using the New Approach to Appraisal (NATA).

Presented below is a summary of the key planning strategy comments that have been identified in relation to proposed future development within the sub regions.

West Yorkshire

Within the M1/M621 RMS study area, Leeds and Wakefield have been identified as locations in the RSS where there should be a focus upon housing and economic development.

The Regional Spatial Strategy implies that more restrictive demand management measures should be introduced to restrain growth of car trips. Demand management measures should be listed in an appropriate land use planning framework which discourages development of office, retail and leisure uses in peripheral locations and adjacent to motorway junctions, if such development is more appropriately located in town and city centres.

Recent improvements to the Highways Agency network on the M1, south east of Leeds has increased the pressure for the development of business parks and other developments of great trip attraction to be located adjacent to the motorway network. An example of existing highway capacity limitations as a result of high trip development land uses located adjacent to motorway junctions is at M62 Junction 27.

South Yorkshire

The urban areas of Barnsley, Doncaster, Rotherham and Sheffield should be the focus for development in South Yorkshire.

South Yorkshire is the sub region for which an emphasis upon regeneration is directed. The sub region is entitled to European Objective 1 Funding that is to expire in 2006, although there is the potential for some aspects of this funding to carry on beyond this time limit. The current status of European Objective 1 funding is discussed further in section 3.6.1.

In summary, the purpose of receiving Objective 1 funding is to maximise job creation and economic investment in the following areas:

- Sheffield City Centre;
- The urban centres of Barnsley, Doncaster and Rotherham;
- Strategic Economic Zones:
    i. M1 Corridor between junctions 31 and 37
    ii. Dearne Valley
    iii. M18 Corridor from junction 3 to 6.

Of key importance to the functionality of the M1 corridor in this sub region is the Objective 1 Funding area surrounding the M1 corridor between junctions 31 and 37.

A Memorandum of Understanding is in place between local authorities, Highways Agency, Yorkshire Forward and the Government Office Objective 1 team, to help coordinate and facilitate development and transport infrastructure improvements.

Contained within the strategy is a reference to ensuring integrated transport accessibility for these sites. With regards to Dearne Valley, development plans and local transport plans need to have an emphasis on the creation of good public transport provision to existing and future developments.

North Yorkshire

Selby District is located to the east of the A1(M) where this is considered as part of the M1/M621 RMS. Junction 45 of the A1(M) with the A64 is largely within Selby District. Selby is identified within the RSS as an area for economic focus. Employment and housing should be provided on a scale that it is sustainable to the rural area.

Parts of the Selby District are identified as regeneration priority areas as a result of the closure of 'Selby Coalfields', although the areas are not applicable for Objective 1 funding.

3.3.2 Regional Spatial Strategy for East Midlands (RSS8)

The Regional Spatial Strategy for East Midlands (RSS8) includes policies relating to North East Derbyshire, Bolsover and Chesterfield, which are

zones of influence on the M1 covered by this strategy. Junction 30 of the M1 is within Bolsover, and the North East Derbyshire boundary just crosses the M1 where the A618 crosses the M1 between Junctions 30 and 31.

The adopted Regional spatial Strategy for the East Midlands (RSS 8) was approved in March 2005 and covers the period up to 2021. The Regional Plan (RSS 8 review) covers a longer period to 2026. The key planning policies stated in the RSS in relation to the trunk road and motorway network are presented below.

Policy 43

Northern Sub-area

- *N1 Developing the transport infrastructure and services needed to improve access from traditional communities to jobs and services in adjacent urban centres such as Chesterfield.*
- *N2 Making best use of the existing rail infrastructure and proximity to the strategic road network to develop new opportunities for local jobs in the storage and distribution sector.*
- *N3 Reducing congestion and improving safety along the M1 corridor.*

Policy 52

Regional Trunk Road Investment Priorities

The Highways Agency, working closely with regional bodies and individual Transport Authorities and Local Planning Authorities should:

- *work to progress the trunk road investment priorities, subject to full and detailed appraisal;*
- *ensure that any additional trunk road schemes are consistent with RTS Objectives; and*
- *ensure that all highway capacity is managed effectively to reduce congestion and improve safety.*

A future planning aspiration presented in the RSS that is applicable to the RMS is the regeneration of the northern regional sub area which includes the town of Chesterfield.

3.4 Local Development Plans

At present Local Authorities are undertaking a review of their development plans and policies in relation to complying with the new Local Development Framework (LDF) which came into legislation under the Planning and Compulsory Purchase Act 2004 and the Town & Country Planning (Local Development) (England) 2004 Regulations.

The Local Development Framework will replace the existing planning system of local, structure and unitary development plans. The purpose of replacing the existing system is to ensure the following;

- a continuous review of planning
- increased community involvement ('front loading')
- wider spatial planning (acknowledgement of greater resources)
- a requirement for sustainable assessment; and
- annual monitoring.

Local Authorities were requested by the Secretary of State to submit a Local Development Scheme (LDS) policy by March 2005 that details the timescale for completion of all Local Development Documents, which include Local Development Frameworks. It is anticipated that Development Plan Documents are likely to take approximately 2 to 3 years to produce and adopt for the Unitary and Local District Authorities within the influence of the M1/M621 RMS.

In the meantime professional organisations and the public are directed to use the current adopted Development Plans and supporting documents that come on stream as part of the Local Development Framework (LDF). Unitary and Local District Authorities that are within the M1/M621 considered as part of this strategy are shown in Table 3.1 along with the current status of their policies.

	Development Plan			Local Development Framework
Local Authority	**Effective Start Date**	**Effective End Date**	**Status**	**Proposed Adoption Date**
North East Derbyshire	Nov 2005	2011	Adopted	Nov 2008
Bolsover	Feb 2000	Sept 2007	Adopted	June 2008
Chesterfield	Oct 2003	Apr 2011	First Deposit	Spring 2007
Sheffield	Mar 1998	Mar 2008	Adopted	Feb 2008
Rotherham	Jun 1999	Mar 2001	Adopted	Dec 2007
Barnsley	2000	2001	Adopted	April 2007
Wakefield	Jan 2003	Jun 2006	Adopted	2007
Selby	Feb 2005	Feb 2008	Adopted	May 2008
Leeds	Aug 2001	Aug 2005	Adopted	July 2008

Table 3.1: Development Plan Status

3.5 Local Transport Plans

The West Yorkshire, South Yorkshire, North Yorkshire and Derbyshire Local Transport Plans cover the study area of the M1/M621 RMS. Leeds and Wakefield are covered by the West Yorkshire LTP, Rotherham, Barnsley, Doncaster and Sheffield by the South Yorkshire LTP, Chesterfield, Bolsover and North East Derbyshire by the Derbyshire LTP and Selby by the North Yorkshire LTP.

The first LTP policy document, effective for a five-year period from 2001 to 2006 is shortly to be replaced by a second LTP policy document which will be effective between 2006 and 2011.

Local Transport Plans outline the transport objectives of a local authority to improve and sustain the economy and the environment and also to improve the safety, accessibility and integration of the local transport infrastructure. LTPs also identify the funding required from central government to achieve the 'action plan' objectives.

The key targets in the second LTP are to:

- Visibly support local targets for sustainable economic growth
- Focus on the shared priorities of congestion, accessibility, safety and air quality as well as other locally important quality of life outcomes
- Take account of national targets for road safety, public transport patronage and air quality.

With regards to land use development, LTPs need to address demand management issues. Emphasis is upon reducing congestion on the highway network and as a result improving air quality by offering alternative modes to the car. The LTP's need to focus upon improving the level of public transport provision to urban areas and also to regeneration areas. Regional policy states that land use developments should ideally be concentrated in urban areas where public transport provision is in place, and not in peripheral locations where there would be a dependency upon car travel.

3.6 Other Relevant Initiatives

3.6.1 European Objective 1 Funding

The Objective 1 funding programme for South Yorkshire began in July 2000 and is to expire by end of 2006. All programme resources need to be committed to projects by 31 December 2006 and all funds spent by 31 December 2008.

South Yorkshire qualified for the greatest economic funding, 'Objective 1', as a result of the regions Gross Domestic Product (GDP) being less than 75% of the European Average GDP.

Post 2006 it is anticipated that funding to wealthier member states will be less as a result of the increase of European member states from 15 to 25,

with effect from May 2004. Greater funding is likely to go to poorer member states.

Areas within South Yorkshire applicable to European Objective 1 funding are presented in Section 3.3.1 of RSS 12.

3.6.2 Northern Way

The Northern Way is a 20 year Business Strategy to reduce the £30bn economic divide between the northern regions of England and the rest of England.

It covers eight northern city regions which account for 90% of the regions population and 90% of the regions economic output. An investment programme is titled the 'City Region Development Programme (CRDP)'. City regions included within the area of influence of this strategy where investment might be focused are centred on Sheffield and Leeds.

The strategy's economic aspirations for the City Regions of Sheffield and Leeds are presented below;

'The vision for Sheffield City Region in 2025 is that it will be a pivotal international business location and one of the most successful City Regions in the North of England, highly regarded for its innovative and creative economy'.

'The shared vision for the Leeds City Region is to work together differently: to develop an internationally recognised City Region; to raise economic performance; to spread prosperity across the whole of the City Region, and to promote a better quality of life for all of those who live and work there'.

4 Current and Future Route Performance

4.1 Introduction

Current and future route performance has been determined as part of the Route Management Strategy. Motorway link performance in the base year (2004) and future years with and without the South West Yorkshire Multi Modal Study recommendations of widening the M1, and identified current operational and safety problems at junctions, have been assessed and are documented.

An understanding of current and future route performance helps identify where the pressure points are on the motorway and where there is spare capacity.

4.2 Link Performance

4.2.1 Approach

Link performance has been determined through an assessment of congestion reference flow (CRF) ratios. The CRF of a link is the estimate of the annual average daily traffic (AADT) flow at which the carriageway is likely to be congested on an average day. The CRF ratio is the ratio of the AADT to the CRF i.e. the demand to capacity ratio, and can be viewed as a level of service indicator with a value of 1 approximating to congestion in the peak hours.

At CRF ratios above 0.9, flow is at certain times of the day considered to be unstable with stop-start conditions, speeds seldom in excess of 50kph and demand at or near to capacity. At CRF ratios immediately below 0.9, i.e. in the range 0.8 to 0.9, conditions are considered to be approaching unstable flow, with tolerable operating speeds being maintained, though affected considerably by changes in operating conditions. This is sometimes considered as the worst acceptable level of service.

Link performance has been determined for the base year and in the Future Year of 2014. It has been calculated for Do Nothing and Do Something highway conditions. The Future Year of 2014 has been selected for the purpose of this impact assessment.

The Do Something highway network consists of the existing Do Nothing network plus the inclusion of the proposed M1 widening between Junction 30 and Junction 42. The anticipated opening year for the fully widened M1 motorway between Junction 30 and Junction 42 has not yet been determined, but is expected to be post 2013.

Base Year (2004) observed traffic flows for this assessment are forecast to increase by 27% to arrive at traffic demand flows representative of the Future Year of 2014. This growth prediction is based upon local area

growth assumptions for South and West Yorkshire as included in Department for Transport forecasts using computer program TEMPRO Version 4.3.

The future year Do Nothing assessment provides an indication of how the highway network would perform if no action was taken to change land use and transport strategy policy from that pertaining at present.

It must be noted that this level of traffic growth may not occur if the integration of land use and transport strategies reduces the need to travel by car. This could be encouraged by the implementation of demand management measures.

For this assessment it has been assumed that future year traffic flows will be the same for both the Do Nothing and Do Something scenarios. However depending upon the level of traffic growth restriction applied through the adoption of demand management initiatives, Do Something traffic flows could be potentially greater as a result of the attraction of induced traffic to the extra capacity provision between M1 J30 and M1 J42; or alternatively reduced if high levels of demand management restriction are applied.

4.2.2 Results

A graphical presentation of link performance illustrated by Congestion Reference Flow (CRF) ratio in the Base Year (2004) and Future Year (2014) is shown in Figure 4.1 for the M1 and Figure 4.2 for the M621.

Base Year

A summary of links where Base Year traffic conditions are thought to be of concern is presented in Table 4.1.

The operational performance of the existing M1 highway network in 2004 shows that motorway link sections, J31 to J32, J40 to J41 and J41 to J42 are operating with a CRF ratio of greater than 1.0. From the assessment it can also be noticed that the majority of M1 links are operating with a CRF ratio above a value of 0.80.

Operational performance on the M621 shows that motorway link sections J1 to J2 and J6 to J7 are operating with a CRF ratio greater than 1.0.

	Motorway	
	M1	M621
CRF Ratio > 1.0	J31 to J32, J40 to J42	J1 to J2, J6 to J7
CRF Ratio 0.8 to 1.0	J30 to J31, J32 to J35a, J36 to J40, J42 to J43, J44 to J46	M62 J27 to J1, J2 to J2a, J4 to J6, J8 to M1 J43

Table 4.1 Summary of Operational Performance Issues, 2004 Base Year

2014 Do Nothing

A summary of links where future year Do Nothing traffic conditions are expected to be of concern is presented in Table 4.2 below.

	Motorway	
	M1	M621
CRF Ratio > 1.0	J30 to J35a, J36 to J43, J44 to J46	M62 J27 to J2a, J4 to J7, J8 to M1 J43
CRF Ratio 0.8 to 1.0	J35a to J36, J43 to J44, J46 to J47, A1(M) J44 to J45	J3 to J4

Table 4.2 Summary of Operational Performance Issues, 2014 Do Nothing

The majority of motorway link sections on the M1 and M621 corridors would be operating with a CRF ratio of greater than 1.0 under 2014 Do Nothing highway conditions.

2014 Do Something

A summary of links where future year Do Something traffic conditions are expected to be of concern is presented in Table 4.3 below.

	Motorway	
	M1	M621
CRF Ratio > 1.0	J31 to J32, J40 to J43, J44 to J46	M62 J27 to J3, J4 to J7, J8 to M1 J43
CRF Ratio 0.8 to 1.0	J30 to J31, J32 to J35a, J37 to J38, J39 to J40, J43 to J44, J46 to J47 A1(M) J44 to J45	J3 to J4

Table 4.3 Summary of Operational Performance Issues, 2014 Do Something

The CRF ratios calculated for the motorway link sections between M1 J30 to M1 J40 would be below a CRF ratio value of 1.0, except for the link section between M1 J31 and M1 J32. Link sections between M1J40 and M1 J42 would be operating with a CRF ratio above 1.0.

To ensure that Do Something traffic levels do not increase due to induced traffic as a result of M1 widening it will be necessary to cap traffic growth through the application of effective demand management initiatives. Associated with the demand management measures will be the requirement for an effective land use and development control policy.

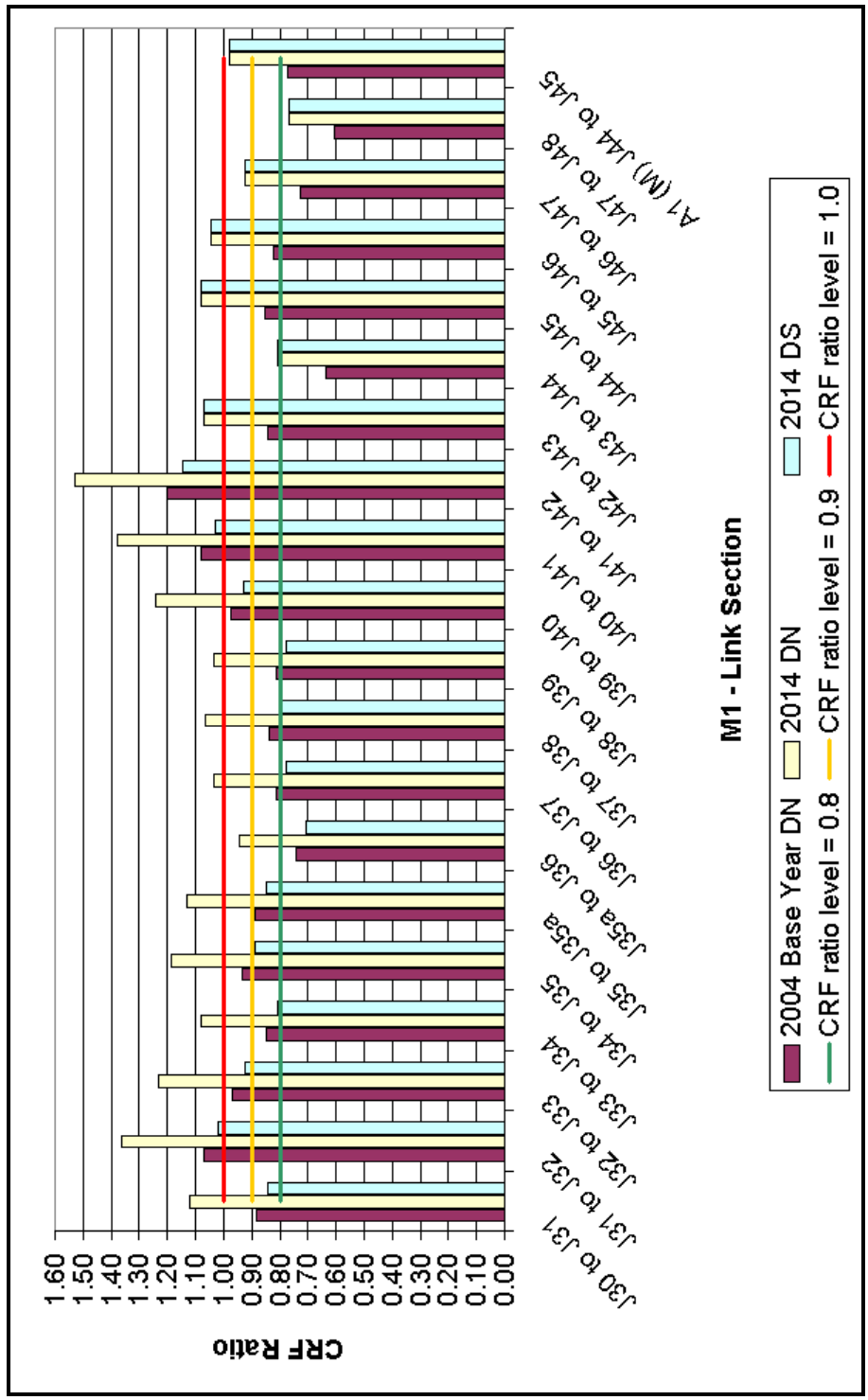

Figure 4.1 M1 Congestion Reference Flow (CRF) Ratios

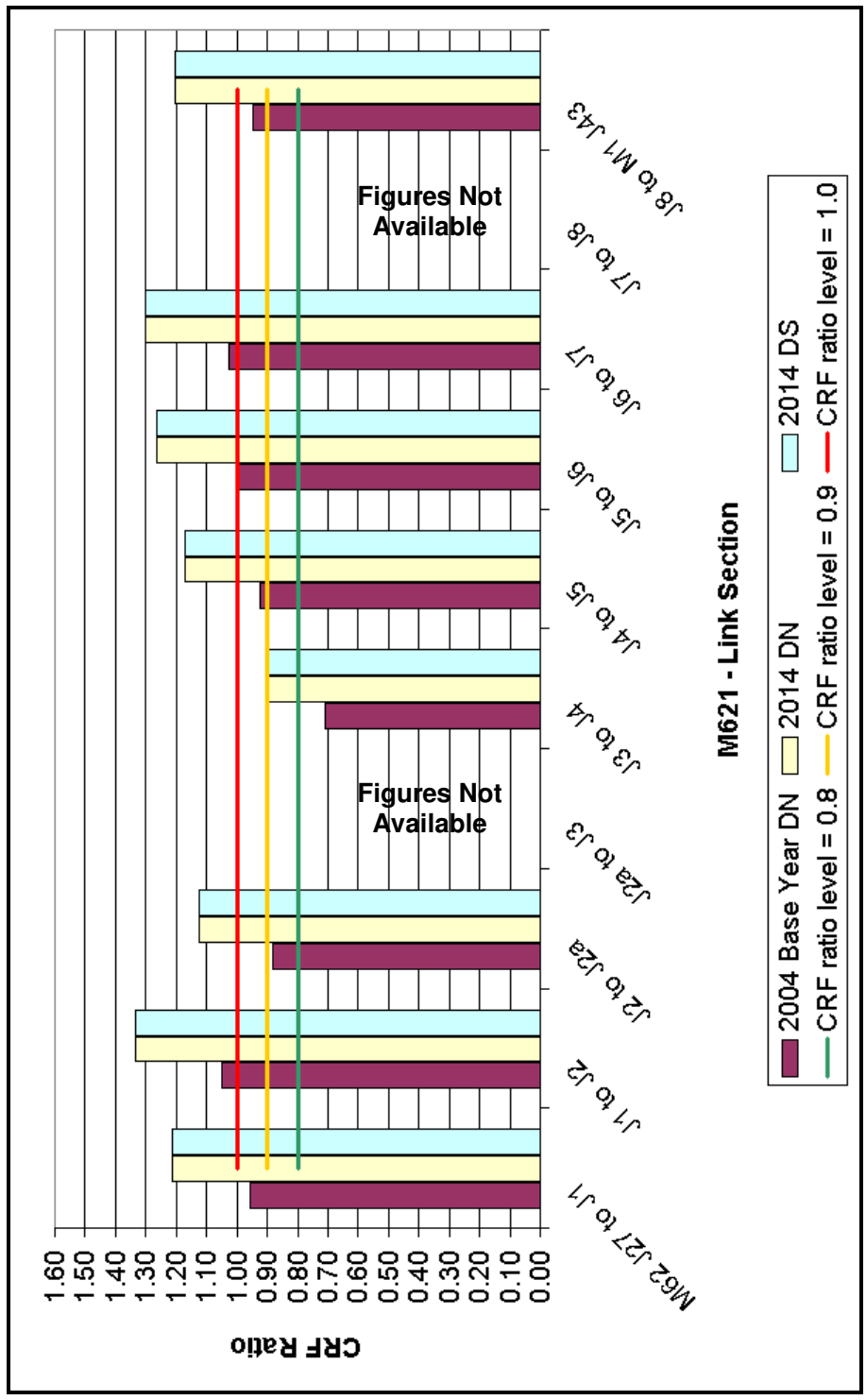

Figure 4.2 M621 Congestion Reference Flow (CRF) Ratios

4.3 Junction Performance

Junctions identified as operating with noticeable capacity problems during the peak periods in the Base Year of 2004 are shown in Table 4.4. Junctions on the M1, within the list, that are encountering severe operational problems during the peak periods are J31, J33, J34, J37 and J41. Junction performance has been identified from visual observations of queues and delays and also from consultation with stakeholders.

Motorway	Junction
M1	J30, **J31, J33, J34,** J35, J36 **J37,** J38, J40, **J41,** J42 J43, J44
M621	J1, J2, J2a, J3, J4, J5, J6, J7
M62	J27

Table 4.4 Location of junction capacity problems

The implementation of M1 widening will require consideration of revisions to the junctions on the route taking into account physical, environmental and economic constraints. This may address some but not necessarily all of the operational issues at these junctions. At certain junctions, for example junction 34 there is little scope for improvement. The detailed design of what happens at each junction will be undertaken as part of the M1 widening project.

5 Land Use Development Pressure

Future land use development locations that could have an impact upon the M1/M621 in Yorkshire and North Derbyshire are presented in Table A1.1 and Figures A1.1 to A1.20, all included in Appendix A.

The land uses identified as having the greatest potential impact upon the M1/M621 study area are discussed below.

5.1 M1 Junction 30

In the vicinity of M1 Junction 29 and Junction 30 predominantly in the Chesterfield Borough but partly within North East Derbyshire and Bolsover District, there is an employment land use referred to as the Markham Employment Growth Zone (MEGZ). The total size of this allocated development plot is 360 hectares. The planning aspiration is that between 2004 and 2014 105 hectares will be utilised. The employment zone is proposed to consist of 13.5 ha B1 business park/offices, 28 ha B2 industrial units and 46 ha B8 warehousing.

Close to the M1 Junction 30 in the district of Bolsover is the Barlborough Links development. This is a 43.31 ha (gross) estate largely committed with 13.33 ha (gross) remaining to be developed.

It has been identified from the unitary development plan for Sheffield City that there are substantial development areas for employment and housing within the Mosborough district. Future aspirations are for 29 ha to be utilised for employment and approx 98 ha of land allocated for housing.

This proposed land use for the Markham Employment Growth zone plus other land use pressures identified from the Chesterfield and Sheffield City unitary development plans could have a potential impact upon the operation of M1 junction 30, and the M1 mainline. A proposal exists for a new M1 access, referred to as Junction 29a.

5.2 M1 Junction 31

It has been identified from the Unitary Development Plan for Rotherham Metropolitan Borough that there is substantial land use development pressure within the vicinity of M1 junction 31. Employment land use covering approx 23 hectares is proposed in Waleswood, and approx 59 ha of housing development plots are allocated within the areas of Dinnington, Anston, Aston Wales and Kiveton Park. Furthermore, the Waverley Business Park will be accessible from M1 Junction 31 if the proposed Waverley Link Road is built. A decision on this will be made in spring 2006.

5.3 M1 Junction 32

This junction provides an interchange between the M1 and M18. No land use pressure has been identified within the vicinity of this junction, although it will be affected by development at nearby junctions.

5.4 M1 Junction 33

To the south west of M1 Junction 33, 120 ha of land has been allocated for the development of an advanced technology park at Waverley to provide land for B1, B2 and B8 employment. To provide access to this key strategic development site, proposals have been made for a new link road from Sheffield Parkway M1 Junction 33 to the Waverley regeneration area. A decision on this will be made in spring 2006.

Furthermore, close to Junction 33 opposite Sheffield Airport is an 80 acre site comprising over 1 million sq ft of warehousing/ distribution facilities including a dedicated inter-modal terminal (SIRFT). Sheffield Business Park is located on the same site as Sheffield City Airport and has planning consent for over 2 million sq ft. 500,000 sq ft is already built and occupied.

5.5 M1 Junction 34

To the east of M1 Junction 34, in the Lower Don Valley, there is an allocated 66 ha employment development site at Templeborough. It is proposed that this development plot should consist of a Business Park of approx 13 ha. To the north-east of Rotherham, there is a development site of approx 57 hectares allocated to employment in the Rawmarsh Parkgate district.

It is evident in the Unitary Development Plan for Sheffield City that there are allocated land use proposals for a total of 76 ha of employment within the east and south east districts of Sheffield, to the west of M1 Junction 34.

A master plan commissioned by British Land and Sheffield City Council has identified 400 ha of development land for employment, housing and leisure purposes over twenty years.

The masterplan proposes to develop land for the following land uses within the Attercliffe, Darnall and Meadowhall areas:

- 218,250 sq m (21.8 ha) of land for business/office use
- 33,940 sq m (3.4 ha) of land for industry/warehousing (B2/B8)
- 40, 170 sq m (4.0 ha) of land for retail; and
- 4,280 housing units

The proposals for land allocations are being considered in the context of forthcoming documents within the LDF.

5.6 M1 Junction 35/M1Junction 35a

Identified within the Rotherham Unitary Development Plan is 46 ha of land allocated for housing development and community facilities within the area of Thorpe Hesley situated adjacent to M1 Junction 35. The land use aspiration for the site is currently being reconsidered following public inquiry.

To the western side of M1 Junction 35, there is 38 ha of land allocated to employment and approx 11 ha allocated for housing within the Chapel Green District of Sheffield. To the South East of M1 Junction 35 is Blackburn Meadows, a 13 ha site allocated for general employment use.

Land at Deepcar, west of the M1 Junction 35a, is proposed for 300 homes and a business park. To the north west of Sheffield City centre there is approx 41 ha of land allocated for housing development. Trips from these housing developments could potentially route via M1 Junction 35, Junction 35a and Junction 36.

5.7 M1 Junction 36

The Unitary Development Plan for Barnsley Metropolitan Borough, identifies land for employment and housing within the vicinity of M1 Junction 36. Barnsley's aspiration is for approx 64 ha of land to be developed for employment and approx 620 dwellings to be built within the areas of Hoyland and Tankersley.

Situated to the north of Rotherham, within the Rotherham Borough, is the former Manvers Colliery. This is a regeneration area in which it is aspired to further develop the area through the provision of 139 ha of land for B1, B2 and B8 employment. Also situated within the same area is 13 ha of land allocated for a Business Park at Cortonwood.

5.8 M1 Junction 37

Situated within the Barnsley Borough, to the east and southeast of Barnsley, is the Dearne Valley Regeneration area. This development has received praise for the successful regeneration of this former colliery area. It is credited as being one of the finest examples of employment regeneration. Trips generated by the development access the motorway network via M1 Junction 37 and M1 Junction 36.

Identified within the Unitary Development Plan for Barnsley, is the aspiration to extend the Goldthorpe Industrial Estate by approx 28 ha. This development is situated within the Dearne Valley Regeneration Area. It is also aspired to develop land for housing within the Dearne Valley area for approx 610 dwellings.

To the north of Dearne Valley, approx 72 ha of land has been allocated for employment uses to regenerate the Grimethorpe Colliery area. Also land

has been allocated for B1, B2 and B8 employment uses at Claycliffe Industrial Estate.

At M1 Junction 37 within the Dodworth area, approx 30 ha of land has been allocated for B1 and B2 employment uses. Also at M1 Junction 37 there is a proposal for a hotel and park & ride site.

The combination of developments listed above could possibly have an implication upon the future operation of M1 Junction 37.

5.9 M1 Junction 38

No land use pressure has been identified within the vicinity of M1 Junction 38, although there is the potential for traffic to be attracted to M1 Junction 38 from possible future developments adjacent to M1 Junction 37.

5.10 M1 Junction 39

The Unitary Development Plan for Wakefield identifies 56.6 ha of land available for employment at M1 Junction 39. This consists of Calder Business Park, a 40 ha site with 28.9 ha remaining for development, Crigglestone Industrial Estate and Potobello Fall/ Ings, also known as Wakefield Waterfront, where significant additional housing is planned but final numbers are unknown.

West of Junction 39 in Horbury there is Horbury Bridge and Hawkingcroft, these are two existing industrial areas. There are proposals to redevelop Horbury Bridge for a mix of employment and housing. There are no proposals to redevelop Hawkingcroft.

There are two sites close to M1 Junction 39 allocated for housing development. In Hendal Lane, Kettlethorpe where there is capacity for 100 dwellings and Denby Dale Road West, Calder Grove which has an allocation for 50 dwellings.

5.11 M1 Junction 40

At the M1 Junction 40 there is a Special Policy Area at Silkwood Park, Dewsbury Road with 24 ha for employment use.

An existing industrial estate is complete at Roundwood as is a housing allocation of 5.1 ha in Church Street, Ossett.

5.12 M1 Junction 41/M1 Junction 42/M1 Junction 43

The Paragon Business Park, Snowhill, is a Special Policy Area with approximately 16 ha identified for a B1 Business Park and 14 ha remaining for development close to M1 Junction 41.

At Newton Hill, Leeds Road, there is a housing allocation for 115 dwellings.

5.13 M1 Junction 44-

As part of the Aire Valley Regeneration proposal in Leeds, a further expansion of the Leeds Valley Business Park to approx 22 ha is proposed. This development is situated close to M1 Junction 44.

Land allocated for employment has also been identified at Hunslet. This development plot of approx 9 ha can be accessed via M1 Junction 44 and M621 Junctions 6 and 7. Also land of approx 6 ha has been allocated for employment purposes at Stourton North, Rothwell area.

To the east of M1 Junction 44, in the Rothwell area, approx 24 ha of land has been allocated for housing.

M1 Junction 44 has been modified under a Section 278 agreement as a result of the Thorpe Park development.

5.14 M1 Junction 45

Traffic volume at M1 Junction 45, could potentially increase significantly without adopting sustainable development as it is proposed that this junction will be linked to the Leeds Inner Ring Road by the implementation of a new highway link referred to as the East Leeds Link Road.

The East Leeds Link Road will facilitate the regeneration of Aire Valley, through the development of some 400 ha of land.

The development plot allocations for the regeneration of Aire Valley are listed below;

- Cross Green, 98 ha
- Skelton Business Park, 72 ha.
- Thornes Farm, 26 ha for office and industrial use.
- Skelton Moor Farm, 19 ha.
- Wholesale Market, 9 ha.
- Pontefract Lane Filter Beds, 8 ha.
- Pontefract Road, 5.6 ha.

In addition to the development plots listed above there is the potential to develop a further 135 ha.

Land has been allocated for entertainment and retail purposes at Clarence Dock, Aire Valley.

5.15 M1 Junction 46

In addition to the allocated employment land uses of Aire Valley, there is the proposal to develop some 45 ha of land for housing in the East Leeds District. This could potentially have an impact upon M1 Junction 46.

5.16 M1 Junction 47

Within the district of Garforth, 28 ha of land has been allocated for employment purposes at North Newhold and 16 ha of land has been allocated for housing at Micklefield.

5.17 M1 Junction 48/A1(M) Junction 44

From reviewing the Selby District Local Plan, no development pressure has been identified within the vicinity of M1 Junction 48/A1(M) Junction 44.

5.18 A1(M) Junction 45/A64

From reviewing the Selby District Local Plan, no development pressure has been identified within the vicinity of A1(M) Junction 45.

5.19 M621 from M62 Junction 27 to M621 Junction 8

At the start of the M621 at M62 Junction 27, 31 ha of land has been allocated for employment at Gildersome and at M621 Junction 1 11 ha of land has been allocated for employment in Pudsey.

Adjacent to M621 Junction 3, is Holbeck Urban Village. This unique development incorporating employment (B1), housing and retail land uses is proposed to be expanded. This development could potentially have an impact upon the operation of M621 Junction 3 and the M621 mainline.

At the end of the M621 at Junction 6 and Junction 7, the M621 could be affected by the development proposals for Aire Valley.

As part of the Leeds regeneration initiative, a proposal exists for the construction of a Supertram link. The proposed Supertram network consists of three main routes that would connect the major development areas and deprived city areas, to the north, south and east of Leeds. The proposed Supertram network would integrate with four proposed park and ride sites. On the southern line there is a proposal for a park and ride site at Stourton. This proposed park ride site could potentially have an impact upon the operation of M621 Junction 7.

With regards to housing development allocation, the M621 could be affected by a housing allocation of 10 ha in the Morley District.

Employment land uses, of some 24 ha have been identified within the Morley District close to M62 Junction 28, which could possibly have an indirect affect upon the M621 and M1 corridors.

6 Land Use Development Impact

This chapter discusses the future development impact upon the operation of the M1 and M621 Corridors.

For the route, divided into four distinctive sections, the operational performance, including the link and junction performance, has been compared with development pressure in the vicinity of the route. Information is presented for the 2004 Base Year situation and for 2014 assuming SWYMMS widening and associated junction improvements have been implemented.

6.1 M1 Junction 30 to Junction 37

Tables 6.1 and 6.2 show the location of identified future development pressure in relation to the operational performance of the highway network from junctions 30 to 37.

Junction	Operational Performance	Development Pressure
	2004	
Junction 30		192 ha = employment land use 125 ha = residential land use
Junction 31		77 ha = employment land use 59 ha = residential land use
Junction 32		
Junction 33		121 ha = employment land use 80 acre = warehousing/ distribution land/ inter-modal freight terminal 2 million sq ft space = Sheffield business park
Junction 34		224 ha = employment land use 153 ha = residential land use 4 ha = retail land use
Junction 35		38 ha = employment land use 63 ha = residential land use 13 ha = general employment 300 house & business park = Deepcar
Junction 35a		
Junction 36		216 ha = employment land use 45 ha = residential land use
Junction 37		158 ha = employment land use 54 ha = residential land use Proposed Park & Ride Site

Junction – Operational Performance Key	
	Congestion Problems
	Operational Problems
	Other Junctions

Table 6.1 M1 J30 to J37 - Junction Operational Performance & Development Pressure

Link Section		Operational Performance	
Junction from	Junction to	2004	2014 DS
J30	J31		
J31	J32		
J32	J33		
J33	J34		
J34	J35		
J35	J35a		
J35a	J36		
J36	J37		
J37	J38		

Link – Operational Performance Key (CRF Ratio)	
	> 1.0
	0.80 to 1.00
	< 0.80

Table 6.2 M1 J30 to J37 - Link Operational Performance

Between Junction 30 and 37 the greatest identified development pressure is adjacent to M1 Junction 34. In this location there is the potential to develop 224 ha of land for employment, and 153 ha of land for residential land use. These estimates account for the Sheffield and Rotherham Lower Don Valley Masterplan proposals, though as previously stated the extent of development is still subject to further detailed consideration in the LDF. South of the M1 Junction 30, MEGZ will generate a significant amount of development pressure on the study route. This site will be accessed via a new junction on the M1, Junction 29a.

The operational performance of M1 Junction 34, observed during the Base Year of 2004, shows that the junction is operating with capacity limitations. Adjoining motorway link sections are shown to be operating with a CRF ratio of greater than 0.80 in the Base Year of 2004 and Future Year of 2014 (This future year operational performance assumes that the proposed M1 widening between Junctions 30 and 42 would be in place).

It can be noticed that M1 Junction 36 and M1 Junction 37, could encounter substantial development pressure. Employment land use is estimated to be 216 ha and 158 ha within the vicinity of M1 Junctions 36 and 37 respectively. Residential land use is estimated to be 45 ha and 54 ha within the vicinity of M1 Junctions 36 and 37 respectively.

Operational performance of M1 Junctions 36 and 37 in the Base Year of 2004 show that M1 Junction 36 is operating with operational problems and M1 Junction 37 is operating under congested conditions. Adjoining motorway sections are shown to be operating below the CRF ratio threshold of 0.80 during the Base Year of 2004 and Future year of 2014.

Substantial development pressure has been identified within the vicinity of M1 Junction 30, as there is the potential to develop 192 ha and 125 ha of land for employment and residential use respectively. The majority of employment land use identified is associated with the Markham Employment Growth Zone (MEGZ) within the Local Borough of Chesterfield. Planning permission for this development is based on the main site access being M1 Junction 29a, this would be built at the start of the development.

It can be noticed that M1 Junction 30 has been observed as operating with operational problems in the Base Year of 2004. Adjacent motorway highway links have been identified as operating with unstable conditions, as the CRF ratios for the Base Year and Future Year are above the threshold of 0.80.

Other locations where future development pressure exists are at M1 Junctions 31, 33 and 35. M1 Junctions 31 and 33 are operating at present under congested conditions.

There is the potential for present year junction capacity problems to be addressed as a part of junction improvement schemes that are to be incorporated as part of the M1 widening.

Overall it can be stated that there is the potential for a significant increase in trip demand to occur between M1 Junction 30 and Junction 37 as a result of future development proposals.

6.2 M1 Junction 38 to Junction 43

Tables 6.3 and 6.4 show the location of future development pressure in relation to the operational performance of the highway network from junction 38 to 43.

It can be noticed that identified development pressure within this section of motorway is low. However, future development proposals have been identified adjacent to M1 Junctions 39 and 40.

Junction	Operational Performance	Development Pressure
	2004	
Junction 38		
Junction 39		40 ha = employment land use
Junction 40		24 ha = employment land use 5 ha = residential land use
Junction 41		
Junction 42		
Junction 43		

Junction – Operational Performance Key	
	Congestion Problems
	Operational Problems
	Other Junctions

Table 6.3 M1 J38 to J43 - Junction Operational Performance & Development Pressure

Link Section		Operational Performance	
Junction from	Junction to	2004	2014 DS
J38	J39		
J39	J40		
J40	J41		
J41	J42		
J42	J43		

Link – Operational Performance Key (CRF Ratio)	
	> 1.0
	0.80 to 1.00
	< 0.80

Table 6.4 M1 J38 to J43 - Link Operational Performance

6.3 M1 Junctions 44 to 48, and A1(M) Junctions 44 to 45

Tables 6.5 and 6.6 show the location of identified future development pressure in relation to the operational performance of the highway network, from M1 Junctions 44 to 48, and A1(M) Junctions 44 to 45.

Junction	Operational Performance 2004	Development Pressure
M1 Junction 44		27 ha = employment land use 24 ha = residential land use
M1 Junction 45		232 ha = employment land use 7 ha = residential land use 6 ha = retail land use
M1 Junction 46		12 ha = employment land use 45 ha = residential land use
M1 Junction 47		28 ha = employment land use 16 ha = residential land use
M1 J48/A1(M) J44		
A1 (M) Junction 45		

Junction – Operational Performance Key	
	Congestion Problems
	Operational Problems
	Other Junctions

Table 6.5 M1 J44 to J48 & A1(M) J44 to J45 - Junction Operational Performance & Development Pressure

Link Section		Operational Performance	
Junction from	Junction to	2004	2014 DS
M1 J44	M1 J45		
M1 J45	M1 J46		
M1 J46	M1 J47		
M1 J47	M1 J48		
A1(M) J44	A1(M) J45		

Link – Operational Performance Key (CRF Ratio)	
	> 1.0
	0.80 to 1.00
	< 0.80

Table 6.6 M1 J44 to J48 & A1(M) J44 to J45 - -Link Operational Performance

Within this motorway section it can be noticed that M1 Junction 45 would encounter the greatest future development pressure. It is estimated that 232 ha could be potentially developed for employment as a result of the regeneration of Aire Valley. Associated with the regeneration of Aire Valley is the proposal to construct an East Leeds Link Road that would connect M1 Junction 45 with the Leeds Inner Ring Road.

At present M1 Junction 45 is closed, however it is possible that the junction may suffer operational problems in the future as a result of the

implementation of the East Leeds Link Road and the Aire Valley Regeneration.

Operational performance of adjoining highway links to M1 Junction 45 show that at present there are no operational problems, although in the Future Year of 2014 it is forecast that these links will operate with congested conditions as the CRF values calculated are above a value of 1.0. However it must be noted that the future year forecast is based upon the existing highway capacity.

There is a potential for future development to take place within the vicinity of M1 Junction 44. It can be noticed from the operational performance that M1 Junction 44 and adjoining highway links could be possibly affected by future development proposals.

Development pressure also exists at M1 Junctions 46 and 47. At present the junctions and adjoining highway links are operating without operational problems. The future year assessment shows that future development proposals in combination with M1 Junction 45 development proposals could have an impact on the operation of highway links.

6.4 M621 Corridor

Tables 6.7 and 6.8 show the location of future development pressure in relation to the operational performance of the highway network.

Junction	Operational Performance 2004	Development Pressure
Junction M62 J27		31 ha = employment land use
Junction 1		11 ha = employment land use 10 ha = residential land use
Junction 2		
Junction 2a		
Junction 3		Holbeck Urban Village
Junction 4		9 ha = employment
Junction 5		
Junction 6		
Junction 7		6 ha = employment land use Stourton Supertram Park & Ride Site
Junction 8		
Junction M1 J43		

Junction – Operational Performance Key	
	Congestion Problems
	Operational Problems
	Other Junctions

Table 6.7 M621 Corridor - Junction Operational Performance & Development Pressure

Link Section		Operational Performance	
Junction from	Junction to	2004	2014 DS
M62 J27	J1		
J1	J2		
J2	J2a		
J2a	J3	Figures not available	
J3	J4		
J4	J5		
J5	J6		
J6	J7		
J7	J8	Figures not available	
J7	M1 J43		

Link – Operational Performance Key (CRF Ratio)	
	> 1.0
	0.80 to 1.00
	< 0.80

Table 6.8 M621 Corridor - Link Operational Performance & Development Pressure

The operational performance of the route shows that all junctions at present suffer capacity limitations during peak periods except for M621 Junction 8. It can be noticed that the majority of highway links are operating with unstable conditions as the CRF ratio is above a value of 1.0.

Future development pressure exists at Gildersome, accessed via M62 Junction 27. It has been identified that there is some 31 ha allocated for employment use.

Significant development pressure exists at M621 Junction 3, as a future expansion of Holbeck Urban Village is proposed.

Development pressure also exists at M621 Junctions 4 and 7.

It can be stated that the future development pressure adjacent to the M621 corridor could have a potential implication upon the operation of the route. It is essential that development proposals contain demand management initiatives to reduce car trips to the developments.

7 Land Use and Development Control Strategy

7.1 Introduction

This section presents the Land Use and Development Control Strategy for the M1/M621. The strategy addresses both development plan representations [e.g. the Regional Spatial Strategy (which is not yet fully developed), Local Development Frameworks and Local Transport Plans] and development proposals close to the M1/M621. It also supports and helps with the delivery of the route outcomes developed as part of the overall Route Management Strategy. The Strategy reflects the overall planning context of Government policies and regional planning and transport strategies (which is going through a period of change), and is designed to assist in integrating planning processes with future Highways Agency investment plans for the route and to encourage the achievement of regional planning, regeneration and economic development initiatives in a sustainable manner. It supports these initiatives and at the same time it protects the integrity of the strategic routes by re-stating the need for development to be located, designed, and implemented in ways that minimise the number of vehicle trips generated, and that maximise the potential of public transport and other more sustainable modes – at the same time ensuring it meets the needs of the users or customers of the Highway's Agency infrastructure. Appendix B Figure 7.1 shows in detail the Highways Agency Development Control Process.

The following outcomes developed as part of the Route Management Strategy are particularly relevant to Land Use and Development Control:

Outcome 13 - To contribute to Regional and Local Transport Development Plans

The Highways Agency needs to contribute with other agencies and authorities to develop the key statutory plans relating to land use and transport in the study area. Plans must take into account existing capacity limitations on the network and capacity problems at junctions along the route and the impact the plans will have on the future operation of the network. The Highways Agency must influence these development plans to prevent the continued safe and free flow operation and safety of the motorway and trunk road network being compromised.

The Highways Agency should influence decisions on the nature and location of development relative to the motorway and trunk road network and promote land use types, including mixed use, and locations that reduce the need to travel, increase the use of more sustainable modes and minimise the impact of development on the trunk road network. This is in line with the principles set out in PPG13.

This joined-up approach also requires the Highways Agency to take an active role in the development of planning policy at the national level. Only by influencing policy at an early stage, i.e. the tools and processes that

guide the overall location aspects of development, can the Highways Agency have a real impact on development control further down the line.

Outcome 14 - Implementation of a land use and development control policy supporting sustainable development and regeneration without introducing further traffic congestion

The Land Use and Development Control policy needs to address the often conflicting aims of supporting development and regeneration without at the same time introducing further capacity limitations.

A key driver in the vicinity of the route, and particularly in South Yorkshire, is the need to support existing business and create new businesses, thereby increasing employment levels and improving the general prosperity of the region.

New development required to support business expansion and creation often leads to increased traffic on the road network which if not managed correctly results in increased capacity limitations

The Highways Agency aims to work in partnership with developers to prevent the trunk road network becoming a constraint on development, whilst at the same time ensuring that the operation of the highway network will not be compromised. The Highways Agency intend to consider as part of this process not only the network, but the surrounding economy and area that it affects albeit in accordance with Secretary of State policy.

Outcome 15 - Continuing use of the Objective 1 Memorandum of Understanding in South Yorkshire to aid regeneration.

To support the regeneration of South Yorkshire, which has been designated European Objective 1 status until 2008; a Memorandum of Understanding (MoU) has been developed between the Highways Agency and the local authorities in the area. Funds are available for allocation until 2006, and projects have to be completed by 2008. For Objective 1-compliant development, the MoU effectively relaxes some of the development control issues in the short term, although ultimately the requirement for transport improvements in the long term remain unchanged. The Land Use and Development Control Strategy reflects the continuing use of the MoU, while Objective 1 funding is in place.

Outcome 16 - Implementation of partnership procedures covering planning and land use similar to those in Objective 1 areas elsewhere

Although the relaxation of development control polices in a manner to the Memorandum of Understanding is not an approach that is to be recommended across the whole network, a partnership approach between the Highways Agency and local authorities would result in a co-ordinated approach in land use planning and ultimately development control.

Outcome 1 – To minimise detrimental impacts on air quality, particularly in Air Quality Management Areas (AQMAs) and to seek to reduce greenhouse gas emissions

Air quality is affected by many factors including traffic flow and capacity limitations. This includes additional development in the vicinity of the M1, which has the potential to cause air quality to deteriorate in existing AQMAs or result in the declaration of additional AQMAs. Air quality issues should be considered as part of the development plan process and must be considered for development proposals within or affecting AQMAs.

7.2 Approach to Development Plan Representations

The Highways Agency input to development plan representations is necessary to ensure that the Highways Agency's concerns and aspirations are taken into account in the preparation of regional and local planning documents and in the creation of Local Development Frameworks (LDFs).

To ensure the necessary influence in the development of these plans the Highways Agency needs to take an active involvement in all stages of the development plan process. There are a number of steps in this process:

- Monitor all policy documents and Local Development Frameworks (LDFs)
- Work in partnership with Regional Government and Local Authorities to influence spatial development plans and Local Transport Plans
- Assess, understand and influence the transport and land use implications of development plans presented in the LDFs
- Implement Development Control at the application stage

Under the 'plan led system' local planning authorities produce Local Development Frameworks that define the areas in which particular types of development should take place. Local transport plans are intended to look specifically at transport issues and to set out the proposals of the local highway authority and public transport authority.

The Highways Agency will monitor the status of all policy documents so they are aware and engaged at an early stage of proposed updates to development plans. They will work in partnership with local planning, highway, and public transport authorities during the drawing up of development plans and local transport plans. This will ensure that due consideration of the Highways Agency network is properly integrated into the wider land use and transport planning process.

When local planning and highway authorities revise their Local Development Frameworks and Local Transport Plans, the Agency will encourage them to introduce policies and/or measures that minimise the impact of development traffic on the Highways Agency network. In all locations requirements for development plans to be considered in the context of PPG 12 and 13 remain.

Local planning authorities must carry out a sustainability appraisal, which includes accessibility, of their LDFs. These appraisals will be reviewed by the Highways Agency to identify the effect on the M1/M621 network. Where they see fit, the Highways Agency will carry out additional traffic assessments to determine the potential effect on the M1/M621.

The assessment of Local Development Frameworks will also take into account the impacts on air quality particularly in AQMAs.

Local Development Frameworks may propose land use allocations that could lead to significant development within or near to the M1/M621 corridor. In some places, they may adversely affect the operation of the motorways.

In these instances development plans should be reviewed and alternatives explored that minimise the impact of development traffic on the M1/M621 and its junctions.

Plans should be reviewed in line with the principles outlined in PPG13. Potential solutions include change of land use to those generating less traffic or traffic outside peak periods, reduced car parking and provision of public transport alternatives to the car.

Where infrastructure is expected to be overwhelmed, with little or no prospect of any longer term improvement, then limitations or restrictions on future land use planning or development may be recommended. This would be discussed with Regional Assembly and Government Office for consideration in the next review of the Regional Spatial Strategy and Regional Transport Strategy, in order to influence other local planning strategies and plans.

In some circumstances it may be appropriate, in consultation with the Regional Assembly, to consider changes to regional transport priorities and pre-emptive investment in the route to accommodate anticipated traffic growth as a result of major land use change.

Chapter 4 of this report identifies the current and future operational performance of the route. The assessment identified large sections of the route which currently experience capacity limitations both on the route and at key junctions along the route.

The Highways Agency will expect policies and proposals in revised plans to lead to peak demand being minimised during the life of the Plan.

7.3 Approach to Individual Planning Applications

The approach to individual planning applications follows the same principles as that adopted for Plan development. Key steps in the process are:

- Monitoring of Local Development Frameworks and planning applications

- Early engagement and partnership approach by developers and local authorities with the Highways Agency, and vice versa
- Identification of development impacts on the Highways Agency's business and trunk road network
- An appropriate level and robustness of assessments
- To ensure promotion of alternative transport mode use to minimise traffic impacts
- To ensure appropriate levels of improvements are implemented to counteract consequences (mitigation)
- Communication of development control decisions to all levels

A consistent and accurate method of identifying and assessing relevant proposals is critical to the effectiveness of this strategy. An initial list of relevant major land use allocations in statutory plans and major development proposals is expected to be prepared as part of the Local Development Frameworks (LDF) strategy. Consideration could be given to the use of a GIS database for the identification of land use allocations, to assist the Highways Agency, local planning authorities and developers. This approach has proven successful in South Yorkshire and could be built upon.

The creation of LDFs by Local Planning Authorities will ensure a continuous review of proposed land use sites. The Highways Agency will review Local Development Frameworks that cover the M1/M621 corridors to ensure that there are no plan representations that would lead to a detrimental impact upon the M1/M621.

The Highways Agency will work closely with Local Planning Authorities so they receive early notification and carry out pre–application discussions of proposed land use changes/developments and their potential effects if they are likely to lead to a material increase in traffic on the M1 / M621 or connecting junctions.

Developers are encouraged to engage in early discussion and consultation with the Highways Agency on the nature, location and scale of proposed developments and planning applications before these are progressed to a detailed level. It is important that a joined up approach takes place and discussions include the local planning and highway authorities. If a development could potentially affect problematic locations along the route then the promoter will be advised accordingly.

Developers should also be encouraged to enter into early discussions with the local passenger transport executives to identify measures to minimise car borne travel.

The Town and Country Planning (General Development Procedure) Order 1995 requires local planning authorities to consult the Highways Agency about planning applications that may affect the operation of the motorway and trunk road network.

The Department for Transport, Local Government and the Regions (DTLR) Circular 04/2001 sets out the Government's national development control

policy for the motorway and trunk road network and requirements for transport assessments, travel plans and safety assessments. This document forms the basis of the development control policy and process for the route.

The Circular sets out the requirements for local planning authorities to consult the Highways Agency on planning applications likely to have implications for the trunk road network, including the following:

(i) Any proposals (including advertising, change of use, etc) adjacent to the route (i.e. within the current 67 metre of the centreline notification distance)

(ii) Any proposals resulting in an increase in traffic on a trunk road, which could include for example;

- an additional 5% traffic or more on trunk road links or junctions
- any smaller increase on congested trunk road links or junctions

(iii) Any development proposal requiring a departure from the approved plan or above the threshold which could trigger a call in by Government Office.

(iv) Combinations and concentrations of other lesser proposals, which could also result in a cumulative material, increase in traffic or safety on the route.

The Highways Agency considers that capacity limitations on the M1/M621 is such that until the widening of the M1 and improvement of associated junctions, any increase in traffic on congested links and junctions (i.e. those that are colour coded red or amber in tables 6.1 to 6.4) should be considered material in accordance with circular 04/2001. This approach requires any development proposal adjacent to these congested parts of the network that would add traffic to be referred to the Highways Agency. In practice, the Highways Agency would review the nature, combinations and concentrations of small development proposals and determine whether they would have a cumulative impact on the performance of the network or possible safety implications.

The whole of the M1 in South Yorkshire falls within the remit of a Memorandum of Understanding (MoU) between the Highways Agency and the relevant Local Planning Authorities that covers “Objective 1” developments. The MoU covers a very special case where the requirements of the DTLR Circular 04/2001; “Control of Development Affecting Trunk Roads and Agreement with Developers under Section 278 Of the Highways Act 1980”, are amended with the Minister’s consent. The Highways Agency will provide it’s response to the proposals for all potentially “Objective 1” compliant developments using the framework of this MoU.

At the end of the Objective 1 period, the Memorandum of Understanding will no longer be applied. At this point it is expected that land use and development control procedures and requirements will revert to that

pertaining elsewhere on the route, which includes the application of DTLR Circular 04/2001.

The Highways Agency will provide advice on the scope and content of any transport assessments, travel plans and safety assessment required together with an understanding of opportunities, conflicts and constraints.

All proposals will need to demonstrate that they have sought to maximise alternative mode use and to minimise trips by private car, particularly single occupancy, associated with sites. It is essential that the Highways Agency, LPAs and developers involve both passenger transport executives (Metro and SYPTE) at this stage to ensure that the developments can maximise the use of public transport (bus, rail and light rail).

All land-use development proposals will be considered in the context of Government policy relating to the control of developments adjacent to trunk roads, as modified by the Memorandum of Understanding between the Highways Agency and the South Yorkshire Local Planning Authorities. Consequently the Highways Agency will normally oppose new development proposals that are predicted to generate an increase in peak period traffic flows on the motorway and trunk road network in excess of its notional capacity. Full consideration of the economic, regeneration, environmental (e.g. air quality, noise etc) and road safety benefits and disbenefits, predicted to result from the development will be given, before any decision to oppose development is made.

If planning application proposals are considered to potentially impair route efficiency or safety (e.g. on links or junctions already experiencing capacity limitations or safety problems), the Highways Agency will ensure that appropriate and sufficient measures are considered to counteract the consequence of development. Consideration of measures should accord with the following hierarchy:

- Soft measures (e.g. demand management, travel planning etc);
- Technology (e.g. demand management by ramp metering);
- Physical mitigation.

If this still results in unacceptable impact on the M1/M621, the traffic generation effects of a proposal in terms of vehicular trips and/or travel distances may need to be reduced.

In order for this to be effective, a detailed travel plan is likely to be required and measures considered that are of proven effectiveness or that are subject to a legally enforceable agreement. This is in line with the changes that have been included in the current selective review of RPG12.

Alternatively, the scale or type of a proposal may need to be reduced – for example if it is not feasible to significantly reduce traffic generation/travel distances.

It may be necessary for timing or phasing of a proposal to be deferred. For example, if network improvements are not deliverable in the short term,

then this may involve preventing or limiting the commencement of development until such time as appropriate measures are introduced. It is necessary to incorporate existing programmed schemes into the appraisal process.

If the Highways Agency oppose the development, it may do this by making representations to proposed land use allocations or, for planning applications where serious potential problems are envisaged, by issuing a Direction of Non-Approval (with recommendation to refuse). This could involve making informal written representations, a formal objection or the Direction of Non-Approval (with recommendation to refuse) in circumstances where the efficiency or safety of the route would be compromised.

Whatever the outcome of the process for individual cases, the Highways Agency will ensure that the development control decision relating to the motorways is fully explained to all parties.