

M1 Junction 19 Improvement

Environmental Statement Volume 2

Chapter 7 Effects on All Travellers

Final

REPORT CONTROL SHEET

PROJECT NAME: M1 Junction 19 Improvement
REPORT TITLE: Environmental Statement
 Chapter 7 Effects on All Travellers
REPORT REFERENCE NO: B0531000/ID/68

Version	Detail	Prepared By: Date	Checked By: Date	Reviewed By: Date	Approved by: Date
Draft	Rev 0	Simon Hayton Susan Moore 18/08/09	Barry Moore 08/09/09	Andrew Drake 29/09/09	Tim Worrall 29/09/09
Final	Rev 1	Robert Peatfield 19/10/09	Barry Moore 17/11/09	Andrew Drake 19/11/09	Tim Worrall 19/11/09
Final	Rev 2	Andrew Drake 06/01/10	Susan Moore 07/01/10	Barry Moore 08/01/10	Tim Worrall 12/01/10
Final	Rev 3	Andrew Drake	Susan Moore	Barry Moore	Tim Worrall
Final	Rev 4	John Hickey Feb 2010	Robert Peatfield Feb 2010	Andrew Drake Feb 2010	Tim Worrall Feb 2010

Page Not Used

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7.1 INTRODUCTION

- 7.1.1 This chapter is an assessment of the potential effects of the Preferred Route for the M1 Junction 19 Improvement on journeys made by 'All Travellers' 'All Travellers' consist of pedestrians, cyclists and equestrians, collectively known as 'vulnerable users' and those travelling in motorised vehicles, on both local and strategic roads. This assessment is divided between two groups into:-
- Part A - Vulnerable users and local vehicle travellers
 - Part B - Long distance vehicle travellers
- 7.1.2 This enables local and strategic issues to be considered separately. As described below there are also different objectives and methods to be employed.
- 7.1.3 This chapter is one of nine dealing with environmental topics as set out in the Design Manual for Roads and Bridges (DMRB) Volume 11, Environmental Assessment¹, which together comprise Volume 2 of the Environmental Statement (ES) for the scheme.
- 7.1.4 Junction 19 of the M1 currently forms an interchange between the M1, M6 and A14 Trunk Road. In addition it provides access to two local roads, Rugby Road to Swinford and Swinford Road to Catthorpe.
- 7.1.5 In common with other Chapters the assessment of Effects for all Travellers recognises that the Catthorpe Viaduct, which carries the M6 to M1 Southbound link over the M1, is being replaced as a maintenance project. The scope of this work includes the replacement of the bridge on a new alignment immediately to the south west of the existing. It also requires the creation of new approach embankments either side of the M1. The work is programmed to begin in June 2010, for completion in November 2011.
- 7.1.6 The bridge and earthworks either side of the M1 would be retained in the proposed layout for the M1 Junction 19 Improvement, as would the alignment of the M6 to M1 Southbound link east of the M1. To the west of M1 this link would have to be amended to accommodate the proposed M6 to A14 link.
- 7.1.7 A separate environmental assessment¹⁴ has been carried out for the bridge replacement as a stand alone maintenance project.
- 7.1.8 This EIA for the M1 Junction 19 Improvement takes into account the new bridge both:-
- as part of the existing junction, assuming the M1 Junction 19 Improvement is not built, the 'do-minimum' scenario; and
 - as part of the completed M1 Junction 19 Improvement, the 'do-something' scenario.
- 7.1.9 In terms of Part A of this assessment, vulnerable users and local vehicle travellers, it is not anticipated that the bridge replacement will have any impact except for the temporary use of Rugby Road Swinford to access a site compound.
- 7.1.10 In terms of Part B, some traffic management will be required during the construction works which would affect long distance vehicle travellers.
- 7.1.11 These issues are dealt with in Sections 7.6 and 7.14 respectively.

Objectives

Vulnerable users and local vehicle travellers

7.1.12 The objectives for vulnerable users and local vehicle travellers are set out in the Scoping Report¹¹ as follows:-

- To promote accessibility for pedestrians, cyclists and equestrians, to reduce severance and encourage physical fitness
- To minimise inconvenience for local traffic, travelling between the villages or accessing the strategic highway network

7.1.13 To respond to the safety problems of the existing junction and that the layout and high volume of traffic make it unattractive for pedestrians, cyclists and equestrians; the following general objectives have been applied to the scheme:-

- Safety would be improved for road users on the M1, M6 and A14 and local roads and other user groups including cyclists, pedestrians and equestrians
- Accessibility around the junction by pedestrians, cyclists and equestrians would be improved

7.1.14 In addition there is the following specific scheme objective:-

- The details of diverting local road links away from the junction and any enhancements to the local footpath and bridleway network will need further consultation with the local planning authorities and the local community / interest groups during the design process

Long distance vehicle travellers

7.1.15 The objective is:-

- To improve conditions for long distance vehicle travellers

Study Area

Vulnerable users and local vehicle travellers

7.1.16 The study area for vulnerable users consists of the network of public rights of way (PROW) shown on Figure C, the Environmental Resources Plan, in Appendix 1 to Volume 1 of the ES. Those most directly affected are identified on Figure 7.1 of this chapter. In particular the assessment considers the links between the three villages of Shawell, Swinford and Catthorpe.

7.1.17 The area for local vehicle travellers is more widespread and includes the links between the villages, connections to local community facilities and access to the strategic road network. Here the potential study area extends west to Rugby and M6 Junction 1, north to Lutterworth and M1 Junction 20, east to A14 Junction 1 and south to Crick and M1 Junction 18.

7.1.18 Figures 7.3 and 7.6 indicate the extent of the wider area considered.

Long distance vehicle travellers

7.1.19 The assessment for long distance vehicle travellers is applied to all vehicle journeys through the junction using M6, M1 and A14.

The Project

7.1.20 The project is illustrated by a series of plans bound into a separate Appendix 1 to Volume 1 of the ES as follows:-

- Figure A : Location Plan
- Figure B : Environmental Master Plan
- Figure C : Environmental Resources Plan
- Figure G : Areas Required During Construction
- Figure H : Cross Sections

7.1.21 In particular Figure B illustrates the proposals for local roads and new or diverted PROW which are taken into account in the assessment and described in more detail in Section 7.5 Mitigation.

7.1.22 Appendix 1 to Volume 1 of the ES also contains a series of photomontages showing the view from selected viewpoints:-

- before the project is built
- immediately upon completion
- 15 years after completion

7.1.23 Illustrations of some of the main structures required for the project are also included in that appendix.

Effects on All Travellers Assessment

7.1.24 The term 'All Travellers' was introduced by the August 2008 amendment to Section 1 of DMRB Volume 11 (HA 200/08)¹. Although detailed guidance for assessing all travellers collectively is not yet available it is assumed that the scope of the assessment would be similar to that presently set out in:-

- Part 8 of Section 3 of DMRB Volume 11, Pedestrians, Cyclists, Equestrians and Community Effects²
- Part 9 of Section 3 of DMRB Volume 11, Vehicle Travellers³

7.1.25 These in turn are supplemented by further guidance on appraisal in WebTAG^{4,5,6} (Transport Appraisal Guidance) dealing with impacts on pedestrians, cyclists and others, severance, physical fitness and journey ambience.

7.1.26 This chapter draws upon all of these strands to provide an overall assessment for all travellers. To make the best use of the current methodologies a distinction has been made between users of the local network of side roads and PROW on the one hand and users of the trunk road and motorway network on the other.

- Pedestrians, cyclists and equestrians, collectively known as 'Vulnerable Users' (VU's) are combined with Local Vehicle Travellers (LVT's) and considered in terms of:-

- journey times
 - severance
 - amenity
 - physical fitness (vulnerable users only)
- Users of the trunk road and motorway network i.e. long distance vehicle travellers are considered in terms of:-
 - traveller care
 - travellers' views
 - traveller stress

7.1.27 Vulnerable users and local vehicle travellers are assessed in Part A of this chapter and long distance travellers are assessed in Part B.

Interactions

7.1.28 There are interactions between this chapter and other chapters as follows:-

- Chapter 1 Air Quality and 6 Noise and Vibration deal with the implications of traffic changes on local roads for adjacent dwellings
- Chapter 3 Ecology and Nature Conservation deals with the impact of potential VU routes for wildlife
- Chapter 4 Landscape considers the visual impact of the project from PROW
- Chapter 8 Community and Private Assets deals with the land use implications for community facilities, as opposed to access to them, which is covered in this chapter.

7.1.29 Care has been taken to avoid significant overlap or double counting of adverse impacts or benefits resulting from the proposals.

PART A - VULNERABLE USERS AND LOCAL VEHICLE TRAVELLERS

7.2 METHODOLOGY

Consultations

Vulnerable Users

7.2.1 Consultations were carried out with several user groups, Leicestershire County Council and Northamptonshire County Council in 2005 for the previous preferred improvement scheme, now referred to as the Blue Junction.

7.2.2 More recent consultations were carried out in 2008 and 2009 with representatives of the various VU groups including:-

- British Horse Society
- Cyclists' Touring Club
- Byways and Bridleways Trust
- Local Access Forum
- Ramblers Association

7.2.3 In addition footpaths and rights of way officers at Leicestershire, Northamptonshire and Warwickshire County Councils and Natural England have been consulted. Although they chose not to be present at meetings, both Sustrans and Living Streets have been kept informed of discussions.

7.2.4 The consultations have focused on identifying priorities and concerns held by the various groups and developing an appropriate network of routes for VU's to be considered for the improvement scheme. They took into account the objectives set at the beginning of this chapter, the need to close routes which would be no longer feasible and the opportunity to create new or improved routes. The end result is the VU network illustrated on Figure B of the Environmental Master Plan and Figure 7.4 of this chapter, Proposals for Vulnerable Users, which provides the basis of this assessment.

7.2.5 A workshop¹² was held with the user groups in September 2008 as part of the general Public Consultation held on the five options being considered at the time for the improvement of M1 Junction 19. The workshop considered:-

- what are the problems with the existing network?
- what are the main desire lines?
- what kind of network are the VU's seeking?

7.2.6 Those attending were also invited to comment on the alternative options for improvement of the junction presented for Public Consultation.

7.2.7 Issues arising from the workshop included:-

- Concerns that the existing junction seriously disrupts the substantial VU network in the area and that there is a need to improve accessibility and repair the disrupted connections
- Amendments to the network should be considered in two tiers, 'utility' to provide functional links from place to place and 'recreation' to provide more informal access. The recreational network should provide the opportunity of a bridleway circuit

- A direct utility link between Swinford and Catthorpe villages was considered to be of particular importance and, given the placement of community facilities, could encourage use, for example, for journeys to school
- Some 'rationalisation' (i.e. closure) of existing routes was considered to be acceptable, but only within the context of an overall enhancement including, for example, a replacement bridleway link following the River Avon between Swinford and Catthorpe
- Where VU routes are shared with the Local Road Network (LRN), the safety of VU's needs to be considered

7.2.8 The workshop identified a strategy for the various junction options, including the Red Junction and Orange LRN, now the Preferred Route. This identified both a multi-use utility network linking the villages and recreational network including a new bridleway along the River Avon. This was subsequently developed in more detail for presentation at a second consultation meeting in March 2009, which also considered the scope of the assessment for 'All Travellers', presented in this chapter. Further consultations were carried out with the Parish Councils in April 2009.

7.2.9 In June 2009 the proposals were discussed with landowners and further refined to take account of issues raised.

7.2.10 The proposals for the VU network arising from these consultations included:-

- closures of existing PROW
- proposals for new PROW as recreational routes
- utility provision within the proposed LRN either in the form of a paved footway or widened grass verge

7.2.11 These proposals as indicated on Figure 7.4 were presented at a further consultation meeting with the VU groups in November 2009.

Local Vehicle Travellers

7.2.12 Feedback in terms of LVT's was received in response to the Public Consultation held between June and September 2008.

7.2.13 General feedback from respondents living in the 'inner local area' (within 5km radius of the junction) was that the most important factors when selecting a junction improvement were:

- Traffic safety
- Noise and air quality

General Approach to the Assessment

7.2.14 The methodology for this assessment was developed in accordance with DMRB Volume 11, Section 3, Part 8 ('*Pedestrians, Cyclists, Equestrians and Community Effects*')² and supplemented by TAG Unit 3.5.5 ('*Impacts on Pedestrians, Cyclists and Others*')⁴, TAG Unit 3.6.2 ('*The Severance Sub-Objective*')⁵ and TAG Unit 3.3.12 ('*The Physical Fitness Sub-Objective*')⁶.

7.2.15 The study area for VU's consists of the network of PROW and local roads and focuses in particular on the links between the three villages, Shawell, Swinford and Catthorpe. The existing routes are illustrated on Figure 7.1 and the proposals including new PROW are shown on Figure 7.4. Although there are PROW in the Lilbourne area, it is the

connections between these three villages that would be most directly affected by the scheme.

- 7.2.16 The area for LVT's is more widespread and includes the links between the villages, connections to local community facilities and access to the strategic road network. Here the potential study area extends west to Rugby and M6 Junction 1, north to Lutterworth and M1 Junction 20, east to A14 Junction 1 and south to Crick and M1 Junction 18.
- 7.2.17 This assessment considers both 'utility' and 'recreational' movements within the study area. The routes assessed as utility routes are those used by VU's and LVT's travelling to key community facilities such as schools, churches, shops, etc. It has been assumed that the utility route for each link would be the route with the shortest journey time.
- 7.2.18 The routes assessed as recreational routes are alternative routes between the villages used by VU's only for recreational journeys, avoiding the LRN where possible.
- 7.2.19 Networks of likely routes for VU's and LVT's in the local area have been developed focusing on movements between the villages of Swinford, Shawell and Catthorpe as shown on Figures 7.2 & 7.5.
- 7.2.20 Here, three links (in both directions) have been assessed for VU's and LVT's between:-
- Shawell and Swinford
 - Swinford and Catthorpe
 - Catthorpe and Shawell
- 7.2.21 Networks of likely utility routes for LVT's only have also been developed, focusing on journeys to the strategic road network and key community facilities in the wider area, as shown on see Figures 7.3 & 7.6.
- 7.2.22 Here connections to the wider area have been considered in terms of:-
- routes from Shawell
 - routes from Swinford
 - routes from Catthorpe
- 7.2.23 Focusing on the links and connections identified above, comparisons can be made between:-
- Journey Time
 - Amenity
 - Severance
 - Physical Fitness (VU's only)
- 7.2.24 These criteria have been assessed for the existing situation to establish the 'baseline conditions' which have been used to develop the 'do-minimum' situation. This is the situation in 2014 without the M1 Junction 19 Improvement, but assumes that the existing Catthorpe Viaduct, which carries the southbound M6 over the M1, has been replaced including the associated highway works. 2014 is selected because it is the proposed opening year for the project. This has allowed an assessment of effects of the 'do-something' situation for both the construction and operational phases of the project. As set out in the introduction, the 'do-something' assessment also includes the replaced Catthorpe Viaduct.

- 7.2.25 Forecast and observed traffic flows have been used where appropriate to assist the classification of impacts. The traffic flows included within this report are those presented in the Stage 3 Traffic Forecasting Report¹⁰ and have been expressed as Annual Average Daily Traffic (AADT) flows i.e. the traffic flows that could be expected on a typical day.
- 7.2.26 The results of the assessment are set out in Sections 7.6 to 7.8. The detailed methodology for each strand of the assessment is set out below.

Vulnerable Users

Journey Times

- 7.2.27 Journey times have been estimated for each of the three links for pedestrians, cyclists and equestrians. It has been assumed that the effects on journey times to key community facilities, as listed in DMRB 11.3.8² (such as schools, churches, etc) from each of the three villages can be represented by the effects on journeys between the villages themselves (the 'links'). A detailed assessment of the routes to the individual key community facilities for VU's has therefore not been undertaken.
- 7.2.28 Two alternative methods are presented in DMRB 11.8.3² for evaluating the duration, distance and pattern of local VU travel. The first caters for travel patterns considered to be straightforward; the second method is for complex travel patterns.
- 7.2.29 To assess complex travel patterns the methodology requires counts of actual use. A number of surveys of VU movements were undertaken in 2003, 2004 and 2005 within the study area in accordance with the requirements of DMRB. Location details are shown on Figure 7.1 and the results are included within Appendix A.
- 7.2.30 The results of the surveys are inconclusive due to the very low levels of use encountered, which therefore precluded a complex analysis of VU movements. In accordance with DMRB 11.8.3², in the absence of sufficient local data the following assumptions for VU speeds have been applied:-
- Pedestrian – 5 (kilometres/hour)
 - Equestrian – 10 (kilometres/hour)
 - Cyclist – 20 (kilometres/hour)
- 7.2.31 Applying the above parameters does not allow for increased journey times as a result of delays due to severance of VU routes by heavy traffic. This is a particular issue where existing routes assessed for the baseline and do-minimum conditions utilise the existing dumbbell roundabout at M1 Junction 19. Therefore the actual changes in journey time as a result of removing the interaction of local routes with the strategic network (and therefore removal of traffic conflicts) are not captured as part of this assessment, but an approximation can be provided. Changes in severance resulting from changes in vehicle traffic flows are dealt with under *severance* as described below.
- 7.2.32 The significance of the effect on journey time has been estimated using Table 7.1 below. In accordance with TAG Unit 3.5.5⁴, journey time changes have been defined as follows:-
- *Small* - less than 5 mins
 - *Moderate* – 5-10 mins
 - *Large* - greater than 10 mins

Table 7.1: Significance Criteria for Assessing Change in Journey Times

Change in Journey Time	No. Travellers Affected		
	<i>Low</i>	<i>Moderate</i>	<i>High</i>
<i>Small</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Slight</i>
<i>Moderate</i>	<i>Neutral</i>	<i>Slight</i>	<i>Moderate</i>
<i>Large</i>	<i>Slight</i>	<i>Moderate</i>	<i>Large</i>

7.2.33 In accordance with TAG Unit 3.5.5⁴, the number of travellers affected would generally be classified as either *Low* (less than 200 total journeys per hour), *Moderate* (between 200 and 1000) or *High* (greater than 1000). In this case however, owing to the lack of available survey data, the number of travellers assessed has been assumed as *Low* in all cases.

7.2.34 In accordance with TAG Unit 3.5.5⁴ the impacts on journey times are considered *Beneficial* if journey times are reduced and *Adverse* if journey times are increased.

Amenity

7.2.35 Amenity is defined within DMRB 11.3.8² as the ‘*relative pleasantness of a journey*’.

7.2.36 To establish the degree of change, amenity has been assessed by comparing the ‘do-minimum’ scenario against the ‘do-something’ (i.e. with the project in place) in the opening year (2014). The following criteria are used:-

- separation of users from the carriageway and duration of exposure to traffic
- the visual presence of the project (including structures) and open countryside
- road crossing facilities and safety provision

7.2.37 With consideration of the above criteria and in accordance with DMRB 11.3.8², a ‘descriptive approach’ has been employed based on local knowledge to classify the assessment of amenity as either:-

- *Good*
- *Fair*
- *Poor*

7.2.38 The assessment of change in amenity for the project has been made, assigning one of the following classifications:-

- *Removal* – where a route is no longer available as part of the project
- *Reduction* in amenity
- *No Change* in amenity
- *Improvement* in amenity

Severance

7.2.39 Severance is defined within DMRB 11.3.8² as the ‘separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows’.

- 7.2.40 The change in severance has been assessed in terms of the potential for the project to induce further severance, or the potential for relief, compared to that experienced in the do-minimum scenario.
- 7.2.41 The concept of severance is concerned with the level of hindrance to movements likely to be created by the scheme.
- 7.2.42 Severance can affect anything from the difficulty in crossing a road, accessing community facilities or the workplace, or dissuading people from making recreational journeys within the area. Pedestrians are the main focus for the methodology as cyclists and equestrians are generally less susceptible because they can travel more quickly than people on foot. However for the purpose of this assessment all VU's have been assessed using the criteria set out below.
- 7.2.43 In accordance with TAG Unit 3.6.2⁵ the assessment of both existing and potential severance has been classified within one of four levels which are as follows:-
- *None* – little or no hindrance to pedestrian movement
 - *Slight* – all people wishing to make pedestrian movements are able to do so, but with some hindrance to movement
 - *Moderate* – children, elderly or disabled are likely to be dissuaded from making journeys on foot. For other users, journeys would be longer and less attractive
 - *Severe* – people are deterred from making pedestrian journeys to such an extent to induce a reorganisation of their activities
- 7.2.44 Relief from severance is identified as a positive impact of a development and its significance is the same criteria as set out in the matrix at Table 7.2.
- 7.2.45 Where traffic flows have been used to assess the degree of severance, they have been classified as either *Low*, *Moderate* or *High* based on the guidance included within DMRB 11.3.8 which specifies approximate traffic flows that could induce various degrees of severance. The classifications of traffic flow in terms of the average number of vehicles per day in both directions are summarised below.
- *Low* – below 8000 vehicles AADT, sufficient to contribute to *Slight* severance
 - *Moderate* – 8000 to 16000 vehicles AADT, sufficient to contribute to *Moderate* severance
 - *High* – over 16000 vehicles AADT, sufficient to contribute to *Severe* severance
- 7.2.46 It has been assumed that the utility route for each link would be the route used by all VU's with the shortest journey time. The utility route is the only route assessed for severance for each link.
- 7.2.47 The assessment of changes in the level of severance experienced by VU's has been based on an examination of:-
- likely journey routes and length
 - frequency of journeys made
 - importance of journeys made
 - vulnerability of user i.e. disabled, elderly, child
 - arrangement and standard of the proposed route
 - access to alternative facilities

7.2.48 In accordance with TAG Unit 3.6.2⁵ the overall conditions have been assessed using the significance criteria indicated in Table 7.2.

Table 7.2: Significance Criteria for Assessing Changes in Severance

	Do-something Severance Scoring			
Do-minimum severance Scoring	<i>None</i>	<i>Slight</i>	<i>Moderate</i>	<i>Severe</i>
<i>None</i>	<i>None</i>	<i>Slight Negative</i>	<i>Moderate Negative</i>	<i>Large Negative</i>
<i>Slight</i>	<i>Slight Positive</i>	<i>None</i>	<i>Slight Negative</i>	<i>Moderate Negative</i>
<i>Moderate</i>	<i>Moderate Positive</i>	<i>Slight Positive</i>	<i>None</i>	<i>Slight Negative</i>
<i>Severe</i>	<i>Large Positive</i>	<i>Moderate Positive</i>	<i>Slight Positive</i>	<i>None</i>

Physical Fitness

7.2.49 The assessment method recommended by TAG Unit 3.3.12⁶ for physical fitness is based on the achievement of a 30-minute per person, per day physical exercise threshold. It is suggested that this threshold is the minimum level of activity required for the Government to reach its proposed target for reducing coronary heart disease and strokes in England (DOH, 1998). Consequently, the significance of potential changes in physical activities should be classified into one of four categories:-

- *Minor Reduction* – for existing walking and cycle trips, where the journey times fall below 30 minutes
- *Largely Unchanged* – for existing walking and cycle trips where the journey times remain above 30 minutes
- *Minor Benefits* – for new walking and cycle trips where journey times are below 30 minutes
- *Significant Benefits* – for new walking and cycle trips where journey times are above 30 minutes

Local Vehicle Travellers

7.2.50 As set out in the DMRB, impacts on LVT's are also being assessed using the same principles. This has been undertaken to assess the implications of the project requirement to remove the local access to the strategic road network at M1 Junction 19.

7.2.51 As for VU's, the effects on journey time, amenity and severance have been assessed for LVT's. However, the following paragraphs highlight any specific methodology that applies to the assessment of LVT's only.

7.2.52 This assessment takes into account the links between the three villages and also routes to key community facilities in the wider area, shown on Figures 7.3 and 7.6, including access to the strategic road network.

Journey Time

7.2.53 Journey times have been derived using assumed vehicle speeds, based on a breakdown of the character and standard of parts of the particular route.

Table 7.3: Assumed Average LVT Speeds

	Character / Standard of Road				
	Motorways	Principal Roads	Upgraded Rural Roads	Rural Roads	Residential Roads
Average LVT Speed (Assumed)	60mph	50mph	50mph	40mph	25mph

7.2.54 As discussed above, it is assumed that only LVT's will utilise routes to the key community facilities in the wider area, shown on Figures 7.3 and 7.5. It has also been assumed that the effects on journey times to key community facilities located within each of the three villages can be represented by the effects on journeys between the villages themselves (the 'links'). A detailed assessment of the routes to individual facilities within the villages has therefore not been undertaken.

Amenity

7.2.55 The same methodology as that used for VU's has been applied to assess effects on amenity for LVT's. When assessing the likely wider area routes, amenity has been considered for journeys to key community facilities and also for access to the strategic road network.

Severance

7.2.56 The same methodology as that used for VU's has been applied to assess effects on severance for LVT's. When assessing the likely wider area routes, severance has been considered for journeys to key community facilities and also for access to the strategic road network.

Physical Fitness

7.2.57 Physical fitness is not applicable to LVT's and therefore has not been assessed.

7.3 LEGISLATION AND POLICY FRAMEWORK

7.3.1 This section identifies the relevant policies and legislation.

National Policies

7.3.2 Planning Policy Guidance 17 – Open Space and Sport and Recreation⁸ Provision identifies the long-term aim to create networks of accessible, high quality open spaces and sport and recreation facilities, in both urban and rural areas. These are intended to meet the needs of residents and visitors, be fit for purpose and be both economically and environmentally sustainable. It also identifies a necessity to achieve an appropriate balance between new development and the enhancement of existing provision.

7.3.3 Planning Policy Guidance 21 – Tourism⁹ outlines the aim both to maximise the economic and employment benefits that tourism can bring, whilst simultaneously safeguarding the environment. It notes that there are benefits gained through the promotion of a variety of linkages including footpaths, cycleways and equestrian provisions which encourage tourists to use the countryside in general, as opposed to specific resorts or attractions.

7.3.4 The Countryside and Rights of Way Act⁷ (The CROW Act) 2000 is divided into four categories: 1. Access to Open Countryside; 2. Public Rights of Way; 3. Nature Conservation; and 4. Management of Areas of Outstanding Natural Beauty.

7.3.5 The initial two categories are relevant to the assessment of impacts on accessibility. The CROW Act entrusts local authorities through 'Local Access Forums' and other specific bodies with responsibilities and powers to enhance the PROW network. The Act has its foundations in the National Parks and Access to the Countryside Act, 1949, with an aim to acquire increasing amounts of open land for open public access. It includes a variety of strict byelaws and powers to ensure land is acquired, routes are well maintained, access is easily available to a wider variety of users and amenity is not degraded through development.

Regional Policies

West Midlands Regional Spatial Strategy (2008)

7.3.6 The Regional Spatial Strategy for the West Midlands was adopted in 2008 and includes policies covering transport and VU's. These policies include CC1: Climate Change, T1: Developing Accessibility and Mobility Within the Region to Support the Spatial Strategy, T2: Reducing the Need to Travel, and T3: Walking and Cycling. These policies aim to improve accessibility across the region, reduce the need to travel, especially by car, and provide greater opportunities for walking and cycling.

East Midlands Regional Plan (2009)

7.3.7 The East Midlands Regional Plan was adopted in 2009 and includes the provision of up to date policies for transport; such as policies 44: Sub-Area Transport Objectives, 45: Regional Approach to Traffic Growth and Reduction and 54: Regional Major Highway Priorities. These policies aim to improve accessibility, reduce travel by car and promote a behavioural change towards transport choice. Policy 54 looks at Major Highway Priorities which include ensuring that highway capacity is managed effectively to reduce congestion and improve safety.

Milton Keynes and South Midlands Sub-Regional Strategy 2005

- 7.3.8 The Milton Keynes and South Midlands Sub-Regional Strategy was adopted in 2005 and provides amendments and additional information to that provided in the regional spatial strategies for the East of England, the East Midlands and the South East of England. Within this document there are two policies relevant to all travellers which are Strategic Policy 2: The Spatial Framework – Strategic Transport Infrastructure, and Northamptonshire Policy 4: Corby, Kettering and Wellingborough.
- 7.3.9 Strategic Policy 2 covers improvements to the A14, including its junction with the M1. Northamptonshire Policy 4 covers the growth areas of Corby, Kettering and Wellingborough and seeks to ensure that their infrastructure requirements consider approved schemes within the region.

Local Policies

Warwickshire Local Transport Plan 2006-2011 (2006)

- 7.3.10 The Warwickshire Local Transport Plan (LTP) was adopted in 2006 and is the second transport plan produced for Warwickshire. The LTP contains three Core Strategies which are relevant to all travellers. These Core Strategies are not policies but set out the aims of Warwickshire regarding certain aspects of transport planning. These strategies include the Accessibility Strategy, Road Safety Strategy and Congestion Strategy.

Northamptonshire Local Transport Plan 2006-2011

- 7.3.11 The Northamptonshire LTP was adopted in 2006 and sets out strategic aims rather than individual policies. Among these key aims are the reduction of congestion and the improvement of accessibility. In conjunction with the LTP Northamptonshire have also produced a sister document called Northamptonshire Transport Strategy for Growth (2007). This document contains specific policies that are relevant to All Travellers. These policies are WA1: Walking Audits, WA2: Walking Master Plans, WA3: Future Opportunities for Routes, CY1: Cycle Master Plans and CY2: Future Opportunities for Routes. These policies cover issues regarding modal shift and encouraging other forms of transport through the improvement of walking and cycling routes among others. In addition to these policies the strategy also lists the M1 Junction 19 Improvement as a prioritised strategic link.

Daventry District Council Local Plan 1997

- 7.3.12 The Daventry District Council Local Plan was adopted in 1997. In September 2007 any policies not “saved” expired, there is only one relevant policy which was saved and that is policy CM8: Cyclists and Pedestrians. This policy states that large scale developments are dependant on the retention and provision of safe and convenient cyclist and pedestrian routes.
- 7.3.13 These policies are to be eventually replaced with emerging policies under the Local Development Framework (LDF). Daventry are producing a joint Core Strategy as part of the LDF which is the West Northamptonshire Joint Core Strategy (2007) which is currently at the issues and options stage. This means that any policies are currently only in draft form. As the Core Strategy is currently at Issues and Options Stage there are not yet any policies but the strategy does set out Strategic Objectives which will inform the basis of future policies. Strategic Objective 8 of the Core Strategy aims to ensure that development is sensitive to its environment.

Harborough District Council Local Plan 2001

7.3.14 The Harborough District Local Plan was adopted in 2001 and as mentioned above all policies that were not formally saved expired in September 2007. There are no saved policies which are relevant to all travellers. Harborough are in the process of producing their Core Strategy which is currently at alternative options stage. Within this document Core Spatial Policy 3: Promoting Sustainable Development and Core Spatial Policy 4: Options for Improving Transport in Market Harborough are relevant.

Rugby Borough Council Local Plan 2006

7.3.15 The Rugby Borough Local Plan was adopted in 2006 and contains a number of saved policies. Of these saved policies GP7: Public Rights of Way Network and T4: Cycle and Pedestrian Facilities are relevant to all travellers. Policy GP7 seeks to protect the existing public rights of way network and Policy T4 requires development to include facilities for pedestrians and cyclists.

7.3.16 In addition to the saved policies in the Local Plan, Rugby are also in the process of writing their Core Strategy which is currently at the preferred options stage. Within the Core Strategy, there are no specific policies which relate to all travellers.

North Northamptonshire Core Strategy (2008)

7.3.17 The North Northamptonshire Core Strategy was adopted in 2008 and is a joint Core Strategy covering the areas of Corby, Kettering, Wellingborough and East Northamptonshire. Within this document there is only one policy which is relevant to all travellers and this is Policy 13: General Sustainable Development Principles. The policy aims to improve accessibility and promote the transport hierarchy of pedestrian-cyclist-public transport-private car.

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7.4 BASELINE CONDITIONS

General

- 7.4.1 Information regarding PROW in the vicinity of M1 Junction 19 has been obtained from Leicestershire County Council (LCC) and Northamptonshire County Council (NCC). The existing network is illustrated by Figure 7.1.
- 7.4.2 As described under consultations above, a workshop involving vulnerable user groups and County Councils was held in September 2008¹². The attendees were asked to consider the problems with the existing situation. The overall feedback from the groups was as follows:-
- The PROW network is badly fragmented by the existing junction, which discourages its use
 - Routes crossing the strategic network at grade are unsafe
 - Severance between Catthorpe and Swinford was described as 'Total', with 'Partial' severance between the other villages
- 7.4.3 In general routes radiate from the settlements of Shawell, Catthorpe and Swinford. Several routes were diverted following the construction of the M1 and this has resulted in a disjointed network, especially in the immediate vicinity of M1 Junction 19. It should be noted that the motorways and the junction represent both a physical and psychological barrier to movement between these settlements for LVT's and VU's.
- 7.4.4 Surveys of VU movements have been undertaken within the area in 2003, 2004 and 2005. The results in Appendix A show that use is at a *Very Low* level and suggests that changes are not likely to have an adverse effect on many users.
- 7.4.5 Vulnerable user groups attending the September 2008 workshop were asked whether they had further data on use, but they confirmed that none is available.
- 7.4.6 Several routes that terminate at the junction are immediately adjacent to major roads or cross them at grade and therefore the amenity values are considered to be *Poor*. Such routes are compromised in terms of noise, visual impact, air quality and safety. Travellers are likely to be deterred from making journeys, as indicated by the *Very Low* survey results.
- 7.4.7 At present LVT's can access the junction directly via Rugby Road (from Swinford) and Swinford Road (from Catthorpe). The same route can also be used as a link between the villages, though the heavy traffic and accompanying safety risks at the dumbbell roundabout reduces the amenity value of such a journey. The ability to access the strategic network from the LRN would be removed as part of the project, although the link between the villages would be maintained and should improve in amenity.

Vulnerable Users

Journey Times

- 7.4.8 The existing key community facilities within the local area, as listed in DMRB 11.3.8², are shown on Figure 7.2. Currently, all of these facilities are accessible via the existing LRN or the PROW network as shown on Figure 7.1.
- 7.4.9 The journey lengths and times (assessed using assumptions stated in Section 7.2) for VU routes between the villages of Swinford, Catthorpe and Shawell are shown below in Table

7.4. The utility and recreational routes assessed are those illustrated on Figure 7.2 for pedestrians only, or all VU's as indicated. For the purpose of the assessment each route is identified by a number R-01, R-02, etc. This is distinct from the numbers given to individual PROW by the local highway authority, which is also referred to in the detailed description below, and labelled on Figure 7.2. Within Leicestershire, these use the prefix 'X' and within Northamptonshire, 'EX' or 'FC'.

7.4.10 Although these routes do not cover all movements between the three villages and key community facilities, they represent the likely routes and those which would be most affected by the project. It is also considered likely that these routes would also be used by people from the wider area.

7.4.11 As discussed, the applied parameters do not allow for added journey time due to heavy traffic at the dumbbell roundabout. Therefore, the highlighted journey times are likely to be underestimated.

Table 7.4: Journey Lengths and Times for VU's (Baseline Conditions)

Link	Shawell and Swinford		Swinford and Catthorpe					Catthorpe and Shawell		
	Route No.	R-01	R-02	R-03	R-04	R-05	R-11	R-12	R-06	R-07
Route Type	Utility	Recreation	Utility	Recreation				Utility	Recreation	
User	All VU's	Peds Only	All VU's	All VU's	Peds Only	All VU's	Peds Only	All VU's	Peds Only	
Journey Length (km)	2.9	3.2	2.2	3.9	3.5	4.1	3.6	2.7	2.5	
Journey Time (mins)	Pedestrians	34.8	38.4	26.4*	46.8*	42	49.2	43.2	32.4	30
	Equestrians	17.4	-	13.2*	23.4*	-	24.6	-	16.2	-
	Cyclists	8.7	-	6.6*	11.7*	-	12.3	-	8.1	-

* Route passing through the existing dumbbell roundabout suffering from heavy traffic.

Amenity

7.4.12 The routes assessed for amenity, in accordance with the methodology set out in Section 7.2, are those illustrated on Figure 7.2.

Shawell and Swinford

7.4.13 Route R-01 (Utility Route - All VU's) - From Shawell the route follows Swinford Road / Shawell Road east to Swinford. The road and verge width varies throughout with no footway provision. There are several bends with restricted visibility, reducing safety for VU's. Other than the crossing over the M1 there is minimal exposure to the strategic road network. There is *Low* traffic flow and scenic views for much of the route, so the amenity is considered *Fair*.

7.4.14 Route R-02 (Recreational Route - Pedestrians only) – The route runs east along existing Footpath X10. The footpath is mainly across farmland with expansive views, but is mostly unmetalled. This reduces the amenity as the footpath is less likely to be used in winter months due to mud and hazardous conditions. The footpath crosses a bridge over the M1, approximately 500m north of the existing Shawell Road Bridge. It then follows Footpath X10 south for 300m, adjacent to the M1, with considerable exposure to noise and air pollution before bearing east to Swinford. Although the road has exposure to the M1, for

the most part it provides an attractive route between the villages and so the amenity of the route is *Good*.

Swinford and Catthorpe

- 7.4.15 Route R-03 (Utility Route - All VU's) – From Swinford the route follows the existing LRN, along Rugby Road, through the existing M1 Junction 19 dumbbell roundabout (which forms part of the A14 Trunk Road) and Swinford Road. A footway exists for pedestrians through Junction 19, but they must still cross the roundabout arms at-grade. The amenity of the route is considered *Poor* due to the safety issues of using/crossing the roundabout which currently experience *High* traffic flows.
- 7.4.16 Route R-04 (Recreational Route - All VU's) – The route follows Rugby Road from Swinford, and crosses the eastern dumbbell roundabout, before following Bridleway X12 south adjacent to the M1. Despite its close proximity to the M1, existing planting shields visual intrusion, but the route remains exposed to noise. The route passes beneath the M1 viaduct, approximately 1km south of the dumbbell roundabout adjacent to the River Avon and heads north on Bridleway X13 and then left along Swinford Road. On the west side of the M1, existing woodland and planting masks visual intrusion. Despite being preferable to Route R-03 (above), the amenity of the route is considered *Poor* due to the roundabout crossing and proximity to the M1.
- 7.4.17 Route R-05 (Recreational Route - Pedestrians only) – The route utilises existing Footpaths X9 and X8, and joins on to Route R-04 described above. The route runs southwest from Swinford through attractive countryside but with views of the strategic road network, in particular the A14 Trunk Road. There is an at-grade crossing of the A14, accessed across highway verges. Although there are signs warning motorists of a pedestrian crossing, it is likely that users consider it too dangerous to cross the four lanes of the A14 (*High* traffic flows). For this reason, the amenity of the route is *Poor*.
- 7.4.18 Route R-11 (Recreational Route - All VU's) - The route follows Shawell Road / Swinford Road west from Swinford, crossing over the M1 using Shawell Road Bridge, to existing Bridleway X14. Bridleway X14 is then followed south to Shawell Lane and then follows Shawell Lane southeast to Catthorpe. The two sections of road have varying verge widths throughout, with no footway provision. There are several bends with restricted visibility, reducing safety for VU's. Bridleway X14 is unmetalled, and so is less likely to be used in winter months due to mud and hazardous conditions. The *Low* traffic flows contribute to the amenity being considered *Fair*.
- 7.4.19 Route R-12 (Recreational Route - Pedestrians only) – The route follows Shawell Road / Swinford Road west from Swinford, crossing over the M1 using Shawell Road Bridge, to existing Footpath X21a. Footpaths X21a and X21b are then followed south to join Shawell Lane southeast to Catthorpe. The two sections of road have varying verge widths throughout, with no footway provision. There are several bends with restricted visibility, reducing safety for VU's. Footpath X21a is unmetalled, and so is less likely to be used in winter months due to mud and hazardous conditions. Footpath X21b, however, runs along a paved access track. The *Low* traffic flows contribute to the amenity being considered *Fair*.

Catthorpe and Shawell

- 7.4.20 Route R-06 (Utility Route - All VU's) – From Catthorpe the route runs along the existing Shawell Lane south of the M6, and Catthorpe Road north of the M6. The road and verge width varies throughout with no footway provision and the road is considered to be narrow.

There is *Low* traffic flow, minimal exposure to the strategic road network and attractive views of the countryside. However, there are several bends with restricted visibility. The amenity of the route is considered *Fair*.

- 7.4.21 Route R-07 (Recreational Route - Pedestrians only) – The route is very similar to Route R-06 with the exception of a section north of the M6, where part of Catthorpe Road can be avoided using Footpath X19, which cuts through farmland. Due to its similarity with Route R-06 the amenity is *Fair*.

Severance

- 7.4.22 Severance is defined in Section 7.2 and has been assessed with respect to likely routes between the three villages as shown on Figure 7.2. In accordance with paragraph 7.2.45, the assessed route for each link is the utility route with the shortest journey time, as shown in Table 7.4.

Shawell and Swinford

- 7.4.23 Route R-01 - The existing amenity for VU's is *Fair*, with a *Low* number of travellers using the route. In terms of access to community facilities the only potential use for this link would be the primary school in Swinford, but due to the amenity of the route and the distance involved (over 2km) this link could deter its most likely users (parents and children). It is considered that the existing link suffers from *Slight* severance.

Swinford and Catthorpe

- 7.4.24 Route R-03 - The existing amenity for VU's is *Poor*, due to the need to cross the dumbbell roundabout. Currently a *Low* number of VU's use the route although, as previously discussed, this may be indicative of the perceived dangers of using the route. This severs routes to key community facilities such as the primary school in Swinford, and the aged persons home and the farm shop in Catthorpe. It is considered that this link suffers from *Severe* severance.

Catthorpe and Shawell

- 7.4.25 Route R-06 - The existing amenity for VU's is *Fair*, with a *Low* number of VU's using the route. Key community facilities in the area include the aged persons home and the farm shop in Catthorpe. The lack of segregated VU provision along this route is likely to be a deterrent to potential users therefore it is considered that this route suffers from *Slight* severance.

Physical Fitness

- 7.4.26 Physical fitness is defined in Section 7.2 and has been assessed based on the journey times shown on Table 7.4, with respect to routes between the three villages as shown on Figure 7.2.

Shawell and Swinford

- 7.4.27 Route R-01 - This link offers *Significant* health benefits for pedestrians and some *Minor* health benefits for cyclists.

- 7.4.28 Route R-02 - This link offers *Significant* health benefits for pedestrians.

Swinford and Catthorpe

- 7.4.29 Route R-03 - This link offers *Minor* health benefits for pedestrians and some *Minor* health benefits for cyclists.
- 7.4.30 Route R-04 - This link offers *Significant* health benefits for pedestrians and some *Minor* health benefits for cyclists.
- 7.4.31 Route R-05 - This link offers *Significant* health benefits for pedestrians.
- 7.4.32 Route R-11 - This link offers *Significant* health benefits for pedestrians and some *Minor* health benefits for cyclists.
- 7.4.33 Route R-12 - This link offers *Significant* health benefits for pedestrians.

Catthorpe and Shawell

- 7.4.34 Route R-06 - This link offers *Significant* health benefits for pedestrians and some *Minor* health benefits for cyclists.
- 7.4.35 Route R-07 - This link offers *Significant* health benefits for pedestrians.

Local Vehicle Travellers

Journey Times

- 7.4.36 The likely routes for LVT's between the three villages are shown on Figure 7.2. Likely routes to key community facilities in the wider area are shown on Figure 7.3. As well as facilities such as schools and Rugby Hospital, these include the access points to the strategic highway network. It should also be noted that access to the strategic highway network provides access to community facilities outside the limits of Figure 7.3, for example Kettering General Hospital. Access to the strategic highway network is also likely to be important for access to employment, cultural and recreational facilities such as cinemas or sports centres and shopping.
- 7.4.37 Existing access to the strategic network is currently via M1 Junction 19 and a key issue for the assessment is the loss of local access. In considering the baseline journey times below, access to the junctions listed is assumed to be via M1 Junction 19 where appropriate, ensuring that the removal of access at M1 Junction 19 is taken into account in assessing the scheme.
- 7.4.38 Journey lengths and times are shown in Table 7.5 below. Journey times have been calculated using the assumptions listed in Section 7.2. As discussed for VU's in relation to heavy traffic, the applied parameters do not allow for added journey time due to existing congestion at the dumbbell roundabout. Therefore, the highlighted journey times are likely to be underestimates.

Table 7.5: Journey Lengths and Times For LVT's (Baseline Conditions)

Destination	Swinford		Catthorpe		Shawell	
	Journey Length (km)	Journey Time (mins)	Journey Length (km)	Journey Time (mins)	Journey Length (km)	Journey Time (mins)
Swinford	-	-	2.2*	2.3*	2.9	2.9
Catthorpe	2.2*	2.3*	-	-	2.7	2.8
Shawell	2.9	3.0	2.7	2.8	-	-
A – Doctors	6.4*	6.7*	4.2	4.5	5.9	6.0
B – Rugby Hospital	11.4*	12.6*	8.8	11.4	9.6	11.4
C – Aged Persons Home	2.7*	2.8*	0.5	0.5	3.2	3.3
D – Swinford Primary School	-	-	2.2*	2.3*	2.9	2.9
E – Lutterworth College	8.5*	7.4*	8.1*	6.8*	5.4	6.0
F – Farm Shop	2.2*	2.3*	-	-	2.7	2.8
G – Post Office	6.8*	5.0*	6.2*	5.0*	3.9	3.5
N – Sports Centre	10.6*	11.4*	8.0	10.2	8.8	10.2
O – M1 J18 (Southbound)	10.1	8.6	7.9	6.3	9.6	7.7
P – M1 J20 (Northbound)	6.3*	4.4*	6.3*	4.4*	4.4	4.3
Q – M6 J1 (Westbound)	5.7*	4.1*	5.3*	3.7*	3.4	3.3
R – A14 J1 (Eastbound)	11.6*	9.0*	12*	9.3*	14.5*	11.9*

* Route passing through the existing dumbbell roundabout suffering from congestion. Also denotes access assumed to be via Junction 19.

Amenity

Shawell and Swinford

7.4.39 Route R-08 – The likely route for LVT's between Shawell and Swinford is Shawell Road, as described for Route R-01 (See paragraph 7.4.13). The road is a quiet, rural route passing over the M1. The amenity of the route is considered to be *Good*.

Swinford and Catthorpe

7.4.40 Route R-09 – The likely route for LVT's between Swinford and Catthorpe is Rugby Road and Swinford Road via the dumbbell roundabout as described for Route R-03 (See paragraph 7.4.15). The amenity of the route is considered to be *Poor*, as local users have to negotiate the dumbbell roundabout used by strategic road network traffic.

Catthorpe and Shawell

7.4.41 Route R-10 – The likely route for LVT's between Catthorpe and Shawell is Shawell Lane and Catthorpe Road, as described for Route R-06 (See paragraph 7.4.20). Both roads are quiet, rural routes, with Shawell Lane passing beneath the M6. Whilst Catthorpe Road

contains some tight bends with restricted visibility, the *Low* traffic flows mean safety is not significantly reduced and so the amenity of the route is considered to be *Good*.

Shawell and Wider Area

7.4.42 Shawell has access to all key community facilities in the wider area. The likely routes use a combination of rural, residential, and strategic roads. The amenity of these routes using only rural and residential roads is considered to be *Good*. For journeys using strategic roads, the amenity would be *Fair*.

Swinford and Wider Area

7.4.43 Swinford has access to all key community facilities in the wider area. Currently, the likely routes use a combination of rural, residential and strategic roads. The amenity of these routes is considered to be *Fair* due to the use of strategic roads.

Catthorpe and Wider Area

7.4.44 Catthorpe has access to all key community facilities in the wider area. For the aged persons home, doctors and the hospital, the likely routes use rural and residential roads. The amenity of these routes is *Good*. For all other facilities the likely routes use a combination of rural, residential and strategic roads. The amenity of these routes is considered to be *Fair* due to the use of strategic roads.

Severance

Shawell and Swinford

7.4.45 The link between these villages is direct, without many bends, with a *Good* amenity, and *Low* traffic flows. The severance of this link is considered to be *None*.

Swinford and Catthorpe

7.4.46 The amenity of this link is considered to be *Poor*. Currently traffic flows are *Low* despite the traffic flow on the dumbbell roundabout being *High*. Less confident drivers may be deterred by the need to negotiate the dumbbell roundabout, therefore severance is considered to be *Moderate*.

Catthorpe and Shawell

7.4.47 The amenity of this link is considered to be *Good*, with *Low* traffic flows. The severance is considered to be *None*.

Shawell and Wider Area

7.4.48 The amenity of these routes is *Good*, using roads with *Low* traffic flows. The severance of these routes is considered to be *None*.

Swinford and Wider Area

7.4.49 The amenity of these routes is considered to be *Fair*, with use of the strategic roads with *High* traffic flows. Other routes exist using local roads, therefore severance is considered to be *Slight*.

Catthorpe and Wider Area

7.4.50 For the routes with *Good* amenity, the routes are direct with *Low* traffic flows. The Severance of these routes is considered to be *None*. For the routes with *Fair* amenity, the routes are direct with *High* traffic flows in places. The severance of these routes is considered to be *Slight*.

Environmental Impact Do-Minimum

7.4.51 The do-minimum option for both VU's and LVT's is considered to be identical to the existing situation (baseline conditions) but assessed for the opening year (2014). As set out in the introduction the do-minimum includes the replacement of Catthorpe Viaduct but, as this will not affect VU or LVT routes, it is considered to have no impact.

7.4.52 Forecast traffic flows using central growth factors at the opening year (2014), as presented within the Stage 3 Traffic Forecasting Report¹⁰, suggest a general increase in use of both the strategic road network and LRN in the opening year. However, as the flows on the local roads would remain *Low* for all assessed routes there would be no changes to journey times and the reduction in safety is considered to be negligible.

7.4.53 The increase in strategic road network traffic would affect routes passing through the dumbbell roundabout, but these are already *Poor* in amenity which is the lowest classification in DMRB 11.8.3¹ and would therefore remain *Poor* in amenity.

7.4.54 Due to the similarities in journey times and amenity, severance and physical fitness for the do-minimum option would be as the baseline conditions.

7.4.55 Based on the above the changes between the baseline conditions and the do-minimum option are negligible, therefore the baseline conditions as described in Section 7.4, have been used as the conditions for the do-minimum option.

7.5 MITIGATION

Objectives

7.5.1 Objectives to promote accessibility for VU's and to minimise inconvenience for local traffic are set out in the introduction to this chapter. There is also a general objective to improve safety for all road users and VU's. These objectives have been taken into account in designing the proposed network for VU's and LVT's.

Strategy for Vulnerable Users

Development of Strategy

7.5.2 The strategy for VU's has been developed in consultation with the user groups.

7.5.3 The workshop held in September 2008¹² identified potential strategies for each of the main junction options then under consideration, and concluded that options based on the Red Junction provided the best potential for VU's in the light of the objectives above. As set out in Section 7.2 key issues for the strategy were as follows:-

- a two tier network should be provided including 'utility' to provide functional links from place to place and recreation for more informal access
- the recreation network should provide the opportunity for a bridleway circuit
- a direct utility link between Swinford and Catthorpe is of particular importance and given the placement of community facilities could encourage for example, journeys to school
- some 'rationalisation' (i.e. closure) of existing routes is acceptable, but only within the context of an overall improvement
- where VU routes are shared with the LRN, the safety of VU's needs to be considered

7.5.4 The design strategy for the project, which forms the basis of this assessment, has been developed in consultation with the user groups, taking on board suggestions made at the September 2008 workshop and subsequently in March 2009. It is illustrated on Figure 7.4 and the lengths utilised for the assessment, together with their route numbers, are illustrated on Figure 7.5.

7.5.5 The main elements are set out below, with the relevant route numbers used in the assessment indicated in brackets.

Proposed Closures

7.5.6 As shown on Figure 7.4 the following sections of PROW are proposed to be closed:-

- Footpaths X7 and X8 (R-05) which cross the A14 at grade. An at-grade crossing of the M6-A14 link and associated slip roads would not be acceptable
- Bridleway X12 (R-04 and R-05). Retention of this route would require bridges at the A14-M1 Northbound Link and across the M6-A14 Link which are not considered to be cost effective, given alternative routes which would provide a better bridleway circuit
- Sections of footpaths X21c, X21a and Bridleway X13, which would be on land required to construct the Local Road Network (LRN)

Proposed Utility Network

- 7.5.7 An improved, direct link for all users (R-03) would be provided between the villages of Swinford and Catthorpe utilising the existing verges of Rugby Road, Swinford, and Swinford Road, Catthorpe, and the new LRN within the extent of the works. utilising proposed bridges below the junction improvement.
- 7.5.8 A 4m verge consisting of 2.5m grass and 1.5m paved footway to accommodate equestrians and pedestrians respectively would be provided for the Catthorpe-Swinford utility link within the extents of the works. Beneath structures the verge would be hard surfaced. A typical cross-section can be found in Appendix B. The local roads beyond the extents of the works extending to Catthorpe and Swinford would also be amended to include a raised and paved footway provision of 1.2m and 1.5m respectively.
- 7.5.9 New structures have been designed to be as open as possible to suit the widened verges.
- 7.5.10 Pedestrians would be accommodated on a paved footway throughout. It is anticipated that cyclists would use the local road in any event. Equestrians would have the opportunity to use the verges either side of the local road, within the extent of the new works, or the local road. Use of the verge by equestrians may be restricted in some locations due to the presence of street furniture such as signs and in particular any safety barrier that is required. These locations would have to be determined at detailed design stage, but in these instances equestrians would use the local road.
- 7.5.11 This new link would enable conflicts with strategic traffic at the existing junction to be avoided.
- 7.5.12 The other main utility routes, R-01 between Shawell and Swinford utilising Shawell Road, and R-06 between Catthorpe and Shawell, utilising Shawell Lane and Catthorpe Road, remain unchanged by the proposals.

Proposed Recreational Routes

- 7.5.13 For route R-04 between Swinford and Catthorpe, bridleway X12 would be replaced by an upgrading of footpaths FC5 and X6 to the south of Swinford to bridleway, and a new section of bridleway adjacent to the River Avon between the A14 and M1 viaduct. This route would then join existing bridleway X13 to reach Catthorpe. The new route would require two new bridleway bridges of the River Avon and would utilise the existing PROW beneath the A14 and M1. Given the nature of the low lying ground adjacent to the river this section would be strengthened with a stone foundation, though soiled over to retain a natural appearance. The proximity to the river also introduces a potential impact in terms of disturbance to otters. This issue is dealt with in Chapter 3 Ecology and Nature Conservation. A spur is also proposed along the dismantled railway between the M1 and Station Road Lilbourne to provide wider connections with the PROW network to the south west of the junction improvement. It is known from consultations that the user groups would like to see the dismantled railway turned into a multi-user route as far west as Rugby, but that lies outside the scope of this project.
- 7.5.14 For route R-05 between Swinford and Catthorpe, footpaths X7 and X8 would be diverted for pedestrians only, initially adjacent to A14, then across the field to join X6 at the proposed bridleway bridge across the River Avon. Thereafter R-04 and R-05 share a common alignment.

7.5.15 The new local link road west towards the A5, to the north of the M6 would also include provision for VU's with a widened verge on the north side of 3.0m metres, connected to PROW, footpaths X19, X21b, X21c, X21a and bridleways X14 and X13. As above cyclists would be able to use the local road. Equestrians would have the choice to use the verge on either side or the road. This provision, assessed as a new route R-13 between Shawell and Swinford, would replace the closed footpaths X21c, X21a and bridleway X13 described above.

Strategy for Local Vehicle Travellers

7.5.16 Closure of direct access to M1 Junction 19 for local traffic necessitates the provision of alternative access arrangements and the Public Consultation, held in 2008, considered three alternative options for a new LRN; Green, Purple and Orange.

7.5.17 The Orange LRN selected as part of the Preferred Route announced in February 2009 contains two components:-

- a direct route below the junction between Swinford and Catthorpe (R-09)
- a new local link road connecting Rugby Road Swinford to the A5 initially running immediately north of the M6, then improving existing sections of Shawell Lane and Catthorpe Road

7.5.18 The objectives of the LRN are to provide local access between the villages and to the wider strategic network. The first component would allow local traffic to travel between Swinford and Catthorpe without the conflicts with strategic traffic created by the existing junction. The second component has several benefits:-

- It would allow local traffic seeking access to the wider network to avoid passing through Catthorpe and Shawell villages and access the A5 at a junction with good visibility. It is estimated that the local link road would avoid 2,000 vehicles per day, including Heavy Goods Vehicles, from using the route through Catthorpe
- It would provide access for local businesses including the development at Old Barn Farm, where there is a planning restriction preventing access through Catthorpe village. This issue is dealt with in more detail in Chapter 8 Community and Private Assets
- As described above under VU's, it provides the opportunity to link several PROW
- The link would provide a suitable route for event traffic visiting Stanford Hall, avoiding Catthorpe and Shawell
- It would reduce the response time for emergency vehicles to access the strategic routes from the communities

7.5.19 Two other components of the network for LVT's are R-08 between Shawell and Swinford utilising Shawell Road, and R-10 between Catthorpe and Shawell utilising Shawell Lane. These would remain generally on line, though R-08 would be subject to a bridge replacement over M1, and R-10 to an extension of the bridge carrying M6 over the link and to the improvement of part of Catthorpe Road described above.

7.5.20 A common standard of a six metre wide carriageway has been adopted for the LRN to ensure that it would fit in with the existing local roads in the area. This is illustrated by the typical section in Appendix B.

7.5.21 The appearance of the LRN is considered in Chapter 4 Landscape Effects. The environmental implications of traffic using the local roads are dealt with in Chapter 1 Air Quality and Climate Change and Chapter 6 Noise and Vibration respectively.

Mitigation of Potential Construction Impacts

7.5.22 The potential impacts on VU's and LVT's during construction are discussed in Section 7.6. General impacts are as follows:-

- removal of amenity and increased severance of links due to temporary local road closures, for example the loss of direct access to the junction for R-09 between Swinford and Catthorpe and the impact of bridgeworks for R-08 between Shawell and Swinford and R-10 between Catthorpe and Shawell
- increase in journey time / temporary severance as a result of temporary diversions during local road closure
- reduced amenity and increased severance for VU travellers within close proximity to construction work activities (increased exposure to noise, dust, visual impact, etc)
- interaction of VU's and local LVT's movements with construction traffic

7.5.23 Throughout the construction works, access along PROW would be maintained where practicable. Appropriate diversionary routes utilising existing PROW or local roads would be clearly demarked and segregated from strategic traffic and construction activities where this is not possible.

Mitigation of Potential Operational Impacts

Vulnerable Users

7.5.24 Potential impacts for pedestrians, cyclists and equestrians are likely to include:-

- changes in journey times due to the diversion of existing routes
- changes in severance, i.e. the degree of hindrance to movement. Conditions may be improved by the removal of obstacles such as crossing heavily trafficked roads (*Beneficial*) or made worse, for example by the addition of new road crossings (*Adverse*)
- changes in amenity, in terms of exposure to traffic, visual impact or the quality of road crossing facilities and safety provision
- changes in physical fitness, for example if opportunities for new journeys are introduced

7.5.25 As described above the strategy for VU's is to promote accessibility for utility and recreational routes. In particular it is considered that, where applicable, the removal of conflicts between VU's and strategic traffic at the junction is likely to improve conditions in terms of severance and amenity and to increase opportunities for physical fitness.

Local Vehicle Travellers

7.5.26 It is considered likely that separation of local traffic and strategic network traffic would also improve severance and amenity for local LVT movements. However, it is considered likely that severance and journey time would be increased for those wishing to access the strategic network from the local area, due to the loss of direct access to the junction. The proposals for the LRN described above are intended to reduce such impacts as far as possible.

7.6 ENVIRONMENTAL IMPACT

Catthorpe Viaduct Replacement

- 7.6.1 As set out in the introduction, it is not anticipated that the works to replace Catthorpe Viaduct will have any significant impact for vulnerable users or local vehicle travellers. No public rights of way will require closure or diversion. Construction vehicles will use the southern section of Rugby Road Swinford to access a site compound, but traffic management will be carried out to ensure that local traffic is not disrupted. Although the existing links between local roads and M1 Junction 19 would be severed by the junction improvement as described below, this will not be required for the works to replace Catthorpe Viaduct.
- 7.6.2 The detailed assessment that follows takes account of the junction improvement and the replaced Catthorpe Viaduct.

Vulnerable Users Construction Impacts

- 7.6.3 The routes assessed are illustrated on Figure 7.5.

Shawell and Swinford

- 7.6.4 The main impact on the R-01 utility link for all users would be the construction of the new Shawell Road bridge over the M1. However, construction would be offline which would reduce the potential impact as the link would remain open while the new bridge is being constructed. The link would have increased traffic flow following the closure of the dumbbell roundabout and prior to opening the new LRN, however, traffic flows would remain low, so this impact would be negligible.
- 7.6.5 There would be no impact on the recreational route for pedestrians R-02 following footpath X10.
- 7.6.6 As set out in Section 7.5, sections of PROW to the north of the M6, X21c, X21a and X13 would be closed to allow for construction works. At present these routes do not provide the continuous east-west link that would be created by R-13 on completion and no temporary diversions are proposed. Local severance for these infrequently used paths would be *Severe* until construction works were complete and the new link introduced.

Swinford and Catthorpe

- 7.6.7 During the construction period the utility link R-03 through the junction would be severed for a period of approximately 12 months before the new LRN can be completed. The only paved alternative would be via Shawell village using Shawell Road, Catthorpe Road and Shawell Lane, an increase in distance from 2.2km to 8.7km. Although this can be considered as a *Large* change in journey time, given the *Low* number of travellers likely to be affected, the impact is considered to be *Slight Adverse*. The diversion would be likely to deter use but, given the nature of the existing junction, baseline severance is already considered to be *Severe* and no change is anticipated.
- 7.6.8 As described in Section 7.5, the proposed closure of Bridleway X12 and Footpaths X7 and X8 would affect recreational routes R-04 and R-05. However it is currently anticipated that the existing routes can remain open until the replacement links are provided. In these terms there would be no specific impacts due to construction, impacts would be as for the operational scenario as described below.

7.6.9 Routes R-11 and R-12 utilising Shawell Road, Shawell Lane and intervening field paths are also considered as links between Swinford and Catthorpe. Both would be affected by the replacement of the Shawell Road bridge and lengthening of the Shawell Lane bridge below M6. It is anticipated that the links would remain open at all times during construction, although there would be some temporary reduction in amenity due to the close proximity of construction works. As described above for R-01 there would also be a temporary increase in traffic on Shawell Road, though this would have a negligible impact.

Catthorpe and Shawell

7.6.10 The main impact on this link would be the widening of the M6 over Shawell Lane bridge. However, with suitable mitigation (segregation) the route would remain open, though with some loss of amenity due to the proximity of construction works. The link would have increased traffic flow following the closure of the dumbbell roundabout and prior to opening of the new LRN, however, traffic flows would remain low, so this impact would be negligible.

Other Recreational Routes

7.6.11 The site area around M1 Junction 19 would be fenced off to prevent public access into it, and this would impact on a number of the footpaths and bridleways that form recreational routes and circuits that are not covered by the above links. In addition, the haul roads around the perimeter of the site would also impact on the PROW network.

7.6.12 Amenity value would be likely to decline where public footpaths and other routes come close to or intersect the works, as a result of construction noise, dust and visual intrusion. Even where such routes are diverted it is likely that a loss of amenity would result, with a reduction in aesthetics and increased disturbance and dust due to the close proximity of construction activities. However, traffic flows would remain low, so this impact would be negligible.

Local Vehicle Travellers Construction Impacts

7.6.13 The removal of access to and from the strategic road network at M1 Junction 19 occurs during the construction period. However, as this is a permanent feature of the Preferred Route, it is not considered a detrimental impact resulting from the construction activities and is dealt with under operational impacts below.

Shawell and Swinford

7.6.14 The main impacts on LVT's for this link would be due to the reconstruction of Shawell Road bridge over the M1. As described above, the new bridge would be constructed offline, enabling the existing road to remain open, as such any delays would be minimal.

Swinford and Catthorpe

7.6.15 Route R-09 would be severed for a period of approximately 12 months. During this time, LVT's would have to travel on the existing LRN via Shawell. The main impact would be a journey time increase of around four minutes giving a journey time of seven minutes during the 12 month period. This would affect a low number of travellers. This is regarded as a *Small* change in journey time, for a *Low* number of travellers, resulting in a *Neutral* impact.

Catthorpe and Shawell

7.6.16 The main impacts on LVT's for this link R-10 would be due to the works required to extend the bridge carrying the M6 over Shawell Lane and to the on-line improvements to Shawell Lane between the bridge and Catthorpe Road. Traffic management would be put in place, allowing the route to stay open, but there would be some *Small* delays for a *Low* number of travellers for a temporary period, resulting in a *Neutral* impact.

Shawell and Wider Area

7.6.17 Access to the wider area network would have no specific impacts result from the construction activities and the routes would be as discussed for the operational section of this report.

Swinford and Wider Area

7.6.18 Once access to the junction is closed, access to A14 Junction 1, M1 Junction 20 and the Lutterworth College would be as described under operational impacts below. For access to other wider area facilities LVT's would first have to make the journey to Shawell via existing route R-08, and then use the routes described under operational impacts for Shawell and Wider Area. The main impact would be on journey times. For the journeys via Shawell, journey times would be as the operational times (for Shawell), plus an additional 3.6 minutes. This would affect a *Low* number of travellers, and is considered to have a *Neutral* impact for the construction period. Once the LRN was completed there would be alternative routes to the west via the new link and Catthorpe village.

Catthorpe and Wider Area

7.6.19 Access to the wider area network would have no specific impacts from the construction activities, and the routes would be as discussed for the operational section of this report.

Vulnerable Users Operational Impacts

7.6.20 The likely routes between the three villages are shown on Figure 7.5.

Journey Times

7.6.21 The journey lengths and times for VU routes between the three villages are shown below in Table 7.6 and the change from the do-minimum noted. Journey times have been calculated and assessed using the methodology and assumptions described in Section 7.2. As set out in 7.2.31 the baseline journey times have not allowed for delays due to the severance of VU routes by heavy traffic.

Table 7.6: Journey Lengths and Times for VU's (Operational Conditions)

Link		Shawell and Swinford			Swinford and Catthorpe					Catthorpe and Shawell	
Route No.		R-01	R-02	R-13 (n)	R-03	R-04 (n)	R-05 (n)	R-11	R-12	R-06	R-07
Route Type		Utility	Recreation		Utility	Recreation				Utility	Recreation
User		All VU's	Peds Only	All VU's	All VU's	All VU's	Peds Only	All VU's	Peds Only	All VU's	Peds Only
Journey Length (km)		2.9	3.2	3.9	2.3	4.2	4.9	4.1	3.6	2.7	2.5
Journey Time (mins)	Pedestrians	34.8	38.4	46.8	27.6	50.4	58.8	49.2	43.2	32.4	30
	Equestrians	17.4	-	23.4	13.8	25.2	-	24.6	-	16.2	-
	Cyclists	8.7	-	11.7	6.9	12.6	-	12.3	-	8.1	-
Change in Journey Length (km)		0	0	n/a	+0.1	+0.3	+1.4	0	0	0	0
Change in Journey Time (mins)	Pedestrians	0	0	n/a	+1.2	+3.6	+16.8	0	0	0	0
	Equestrians	0	-	n/a	+0.6	+1.8	-	0	-	0	-
	Cyclists	0	-	n/a	+0.3	+0.9	-	0	-	0	-

(n) Denotes new routes / routes diverted onto new PROWs

7.6.22 The *Small* changes in journey time for what is anticipated to be a *Low* number of travellers would result in a *Neutral* effect with the exception of route R-05 where the diversion resulting from the closure of footpaths X7 and X8 would result in a *Slight Adverse* impact. By contrast, the new route for R-04 replacing bridleway X12 with an upgraded X6 and new section adjacent to the River Avon would only result in a *Small* change in journey time.

Amenity

7.6.23 The routes assessed for amenity are those shown on Figure 7.5.

Shawell and Swinford

7.6.24 Route R-01 (Utility Route - All VU's) – *No Change* to the existing *Fair* amenity for a *Low* number of VU's. The route would remain unchanged in principle from that described in Section 7.4, except for the replacement of Shawell Road bridge on the M1.

7.6.25 Route R-02 (Recreational Route - Pedestrians only) – *No Change* to the existing *Good* amenity for a *Low* number of VU's. The route would remain unchanged from that described in Section 7.4.

7.6.26 Route R-13 (Recreational Route – All VU's) – this is a new route, not previously available and not assessed for the baseline. This route runs south along Catthorpe Road from Shawell. The road and verge width varies along this section with no footway provision, however the re-alignment of the junction with Shawell Lane to increase visibility on Catthorpe Road would improve amenity for all VU's, particularly cyclists and equestrians. The route for pedestrians then follows the widened verge on the new Local Link Road east alongside the M6, then passing under the M1 and following Rugby Road into Swinford, where paved footways would be provided increasing the safety and amenity of the route. As previously described it is anticipated that cyclists would use the local road. Equestrians would have the option to use verges on either side of the road through the new works, or

the road. As previously noted, there may be some locations at which the presence of street furniture or safety barriers would mean that equestrians would have to use the road. There are attractive views of the countryside to the north, but the close proximity to the M6 and M1 Junction 19 would result in exposure to noise and air pollution. Due to the exposure to the strategic road network, the amenity of the route is considered to be *Fair* for a *Low* number of users.

Swinford and Catthorpe

7.6.27 Route R-03 (Utility Route - All VU's) – *Some Improvement* in amenity from *Poor* to *Fair* for a *Low* number of VU's. The route would follow the new alignment of Rugby Road and Swinford Road. The removal of the dumbbell roundabout, and the expected *Low* traffic flow, would improve the safety of the route. In particular pedestrians would benefit from the provision of a paved footway for the entire length between the two villages. The footway would provide the opportunity for safe pedestrian journeys between the villages, including those to and from Swinford primary school. It is anticipated that cyclists would use the local road. Equestrians would also use the local road, except through the new works where they would have the option to use verges on either side. However the removal of conflicts with strategic traffic would result in an improvement in amenity for VU's sharing the road with relatively low volumes of traffic. The Traffic Forecasting Report¹⁰ confirms a daily flow of 1700 vehicles departing Swinford on Rugby Road in the opening year of 2014. The report also confirms a daily flow of 200 vehicles travelling south towards Catthorpe on Swinford Road in the opening year. The route would pass beneath the M6 (and associated connector roads) and also the M1. It would therefore be intrusive (visually and audibly). Users would go through a series of bridges beneath the junction. The bridges have been designed to be as open and wide as possible. Structures have also been kept separate to limit the length of enclosure. The effect of the bridges on the character of the route has been taken into account in the assessment of *Fair* amenity.

7.6.28 Route R-04 (Recreational Route – All VU's) – *Large Improvement* in amenity from *Poor* to *Good* for a *Low* number of VU's. The revised route utilises existing Footpath X6 which would be upgraded to a bridleway as part of the scheme. The route runs south from Swinford through attractive countryside but with views of the strategic road network, in particular the A14 Trunk Road, before connecting into the existing Bridleways FC3/EX7 to utilise the existing bridge crossing under the A14. The route then runs west following a new bridleway in an attractive setting beside the River Avon and crosses under the M1 approximately 1km south of the existing dumbbell roundabout. The route then follows Bridleway X13 to Swinford Road and uses the LRN into Catthorpe. Alongside the west side of the M1, existing woodland and planting masks visual intrusion although there is exposure to noise and air pollution due to the proximity to the motorway. Although the route has some exposure to the M1 and A14, for the most part it would provide an attractive route between the villages and so the amenity of the route is *Good*.

7.6.29 As previously noted the new bridleway adjacent to the River Avon could have an adverse impact on the local otter population therefore the design of the new bridleway corridor incorporates measures to protect and enhance otter habitat. This is discussed in detail in Chapter 4 - Ecology and Nature Conservation.

7.6.30 Route R-05 (Recreational Route - Pedestrians only) – *Some Improvement* in amenity from *Poor* to *Fair* for a *Low* number of VU's. This revised route follows Footpath X9 and then Footpath X8 until it is stopped up prior to crossing the A14, a new footpath alongside the A14 would connect Footpath X8 to the upgraded (to bridleway) Footpath X6 and then follows route R-04 as described above. Due to the proximity to the strategic road network

for a section of the route and the additional journey time the amenity of the route is considered to be *Fair*.

7.6.31 Route R-11 (Recreational Route – All VU's) – *No Change* to existing *Fair* amenity for a *Low* number of VU's.

7.6.32 Route R-12 (Recreational Route - Pedestrians only) – *No Change* to existing *Fair* amenity for a *Low* number of VU's.

Catthorpe and Shawell

7.6.33 Route R-06 (All VU's) – *Some Improvement* in existing *Fair* amenity for a *Low* number of VU's, but remaining *Fair*. The route would be similar to that described in Section 7.4, but would reduce the tight bends, and re-align the T-junction to increase visibility on Shawell Lane / Catthorpe Road. This would improve amenity for all VU's, particularly cyclists and equestrians.

7.6.34 Route R-07 (Pedestrians only) – *No Change* to existing *Fair* amenity for a *Low* number of VU's.

Severance

7.6.35 Severance is defined in Section 7.2 and has been assessed with respect to utility routes between the three villages as shown on Figure 7.5. In accordance with paragraph 7.2.45, the likely utility route for each link is the route for all VU's with the shortest journey time, as shown in Table 7.6.

Shawell and Swinford

7.6.36 Route R-01 -The change to routes between these villages would be negligible, and so severance would remain *Slight*.

Swinford and Catthorpe

7.6.37 Route R-03 –The proposals provide a direct and safer route removing existing conflicts with strategic traffic and with a negligible change in journey time. The severance would improve from *Severe* to *None*.

Catthorpe and Shawell

7.6.38 Route R-06 -The change to routes between these villages would be negligible, and so severance would remain *Slight*.

Physical Fitness

7.6.39 Physical fitness is defined in Section 7.2 and has been assessed using Table 7.6, with respect to routes between the three villages as shown on Figure 7.5. This has been compared to the do-minimum conditions as follows:-

Shawell and Swinford

7.6.40 Route R-01 - The health benefits offered by this link would be *Largely Unchanged*

7.6.41 Route R-02 - The health benefits offered by this link would be *Largely Unchanged*

7.6.42 Route R-13 (new route) - This link offers *Significant* health benefits for pedestrians and some *Minor* health benefits for cyclists.

Swinford and Catthorpe

7.6.43 Route R-03 - The health benefits offered by this link would be *Largely Unchanged*

7.6.44 Route R-04 - The health benefits offered by this link would be *Largely Unchanged*

7.6.45 Route R-05 – This link would offer a *Minor Increase* in health benefits for pedestrians.

7.6.46 Route R-11 - The health benefits offered by this link would be *Largely Unchanged*

7.6.47 Route R-12 - The health benefits offered by this link would be *Largely Unchanged*

Catthorpe and Shawell

7.6.48 Route R-06 - The health benefits offered by this link would be *Largely Unchanged*

7.6.49 Route R-07 - The health benefits offered by this link would be *Largely Unchanged*

Local Vehicle Travellers Operational Impacts

Journey Times

7.6.50 The likely routes for LVT's to key community facilities in the local area for the project are shown on Figure 7.5 and those in the wider area are shown on Figure 7.6.

7.6.51 The estimated journey lengths and times are shown in Table 7.7 below together with the changes anticipated. Journey times have been calculated using the methodology and assumptions described in Section 7.2.

Table 7.7: Journey Lengths and Times For LVT's (Operational Conditions)

Destination	Swinford			Catthorpe			Shawell		
	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)
Swinford	-	-	-	2.2	2.3	0.0	2.9	2.9	0.0
Catthorpe	2.2	2.3	0.0	-	-	-	2.7	2.8	0.0
Shawell	2.9	2.9	-0.1	2.7	2.8	0.0	-	-	-
A – Doctors	7.4	6.7	0.0	4.2	4.5	0.0	5.8	5.7	-0.3
B – Rugby Hospital	11.0	12.2	-0.4	8.8	11.4	0.0	9.6	11.3	-0.1
C – Aged Persons Home	2.8	2.9	+0.1	0.5	0.5	0.0	3.2	3.4	+0.1
D – Swinford Primary School	-	-	-	2.2	2.3	0.0	2.9	2.9	0.0

Destination	Swinford			Catthorpe			Shawell		
	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)	Journey Length (km)	Journey Time (mins)	Change in Journey Time (mins)
E – Lutterworth College	6.9	7.5	+0.1	9.3	9.3	+2.5	5.4	6.0	0.0
F – Farm Shop	2.2	2.3	0.0	-	-	-	2.7	2.8	0.0
G – Post Office	7.4	6.3	+1.3	6.2	5.0	0.0	3.9	3.5	0.0
N – Sports Centre	10.2	11.0	-0.4	8.0	10.2	0.0	8.8	10.1	-0.1
O – M1 J18 (Southbound)	11.2	8.6	0.0	7.9	6.3	0.0	9.6	7.7	0.0
P – M1 J20 (Northbound)	6.1	6.3	+1.9	8.3	7.3	+2.9	4.4	4.3	0.0
Q – M6 J1 (Westbound)	7.7	6.5	+2.4	6.1	5.3	+1.6	3.4	3.3	0.0
R – A14 J1 (Eastbound)	12.1	12.2	+3.2	21.3	14.7	+5.4	19.3	13.3	+1.4

7.6.52 Based on Table 7.1 in Section 7.2, the changes in journey times would result in a *Neutral* effect on all journeys.

Amenity

Shawell and Swinford

7.6.53 Route R-08 – *No Change* to existing *Good* amenity for a *Low* number of users.

Swinford and Catthorpe

7.6.54 Route R-09 – An *Improvement* in amenity from *Poor* to *Fair* for a *Low* number of users. The route would be as Route R-03. The removal of the dumbbell roundabout and *Low* predicted traffic flows would make the route safer for LVT's.

Catthorpe and Shawell

7.6.55 Route R-10 – *Some Improvement* in amenity, as described for Route R-06. This route would be safer for LVT's, with the removal of tight bends and increased visibility at junctions. The amenity of this route would remain *Good*.

Shawell and Wider Area

7.6.56 *No Change* to existing *Good* amenity for a *Low* number of LVT's for routes to key community facilities in the wider area. These routes would be as the do-minimum scenario utilising residential, rural and principal roads. This would cause *No Change* in journey time.

7.6.57 *No Change* in amenity for a *Low* number of LVT's for access to the strategic road network. These routes would utilise existing residential, rural and principal roads. The potential

benefits in amenity are considered to be offset by the increase in journey time so the amenity would still be *Fair*.

Swinford and Wider Area

7.6.58 *No Change* to the existing *Fair* amenity for a *Low* number of LVT's for routes to key community facilities in the wider area. These routes would utilise existing residential, rural and principal roads. The proposed routes are already available in the existing situation but are considered to be slower and to a lower standard and therefore not preferable to those assessed for the baseline conditions. It is considered that the increase in journey time would be offset by lower traffic flows and improved visual presence of the routes. Based on this the amenity would remain *Fair*.

7.6.59 *No Change* in existing *Fair* amenity for a *Low* number of LVT's for access to the strategic road network. The routes are currently available in the existing situation but are considered slower and to a lower standard and therefore less desirable than those routes assessed for the baseline conditions. As above the potential benefits in amenity are considered to be offset by the increase in journey time.

Catthorpe and Wider Area

7.6.60 *No Change* to existing *Good* amenity for a *Low* number of LVT's for routes to wider area facilities. These routes would utilise existing residential, rural and principal roads.

7.6.61 *No Change* in amenity for a *Low* number of LVT's for access to the strategic road network. These routes would utilise existing residential, rural and principal roads. As above the potential benefits in amenity are considered to be offset by the increase in journey time so the amenity would still be *Fair*.

Severance

Shawell and Swinford

7.6.62 The link between these villages would remain direct with a *Good* amenity for *Low* number of LVT's. The severance of this link would remain *None*.

Swinford and Catthorpe

7.6.63 The link between these villages would have an *Improvement* in amenity for a *Low* number of LVT's. The severance would reduce from *Moderate* to *None*.

Catthorpe and Shawell

7.6.64 This link would retain a *Good* amenity with minimal journey time changes, for a *Low* number of LVT's. The severance would remain *None*.

Shawell and Wider Area

7.6.65 For access to key community facilities in the wider area there would be *No Change* in amenity with minimal journey time changes. It is considered that severance would remain *None* for access to the wider area.

7.6.66 For access to the strategic road network, there would be a *Small* increase in journey time. The severance of these routes would increase to *Slight*.

Swinford and Wider Area

- 7.6.67 For access to key community facilities in the wider area there would be a *Moderate* increase in journey time for some of the routes, although the deterrent of congestion at the dumbbell roundabout would be removed. Therefore it is considered severance would remain *Slight*.
- 7.6.68 For access to the strategic road network, there would be a *Small/Moderate* increase in journey time. The severance of these routes would increase to *Moderate*.

Catthorpe and Wider Area

- 7.6.69 For access to key community facilities in the wider area there would be a *Moderate* increase in journey time for some of the routes, although the deterrent of congestion at the dumbbell roundabout would be removed. It is considered severance would remain *Slight*.
- 7.6.70 For access to the strategic road network, there would be a *Small/Moderate* increase in journey time. The severance of these routes would increase to *Moderate*.

Implications for Planning Policies

Regional Policies

- 7.6.71 Policies T3 of the West Midlands Regional Spatial Strategy and 45 of the East Midlands Regional Plan seek to encourage alternative modes of transport such as walking and cycling. The proposed improvement to M1 Junction 19 incorporates a number of improvements to the PROW which will increase accessibility between the local communities and reduce severance. These improvements would have a beneficial impact on encouraging walking and cycling and would therefore have a *Beneficial Impact* on these policy objectives.
- 7.6.72 The proposed Local Road Network would provide local access between the villages and also improve access to the wider strategic network by removing the need to pass through the villages of Catthorpe and Shawell. These improvements would have a *Beneficial Impact* on the objectives of policies T1 of the West Midlands Regional Plan and 44 of the East Midlands Regional Plan which aim to improve accessibility.
- 7.6.73 Strategic Policy 2 of the Milton Keynes and South Midlands Sub-Regional Strategy covers improvements to the A14 including its junction with the M1. The proposed improvement at Junction 19 of the M1 would provide the improvement of the A14's junction with the M1 and would therefore have a *Beneficial Impact* on this policy objective.
- 7.6.74 Overall the proposed Junction improvement would have a *Beneficial Impact* on Regional policy objectives.

Local Policies

- 7.6.75 The proposed Local Road Network would remove an estimated 2,000 vehicles per day, including HGV from using the route through Catthorpe. This reduction in the number of vehicles passing through the village would reduce congestion and improve safety within the village. These improvements would have a *Beneficial Impact* on the Road Safety Strategy and Congestion Strategy of the Warwickshire Local Transport Plan.

- 7.6.76 Policies WA1, WA2, WA3, CY1, and CY2 of the Northamptonshire Local Transport Plan, CM8 of the Daventry District Local Plan, T4 of the Rugby Borough Local Plan and 13 of the North Northamptonshire Core Strategy all seek to encourage and promote cycling and walking including through the provision of suitable routes. The proposed improvement to M1 Junction 19 incorporates a number of improvements to the PROW network such as safer routes that avoid conflict between strategic traffic and other travellers and additional links which join onto the wider PROW network as discussed above. These improvements would have a *Beneficial Impact* on policy objectives.
- 7.6.77 Policy GP7 of the Rugby Borough Local Plan aims to protect the existing PROW network. The proposed improvement to M1 Junction 19 would result in the loss of some existing footpath and bridleway routes as set out in paragraph 7.5.6. This would therefore result in an *Adverse Impact* on the policy objectives. However, the existing PROW network is badly fragmented which discourages users. The existing network also suffers from severance with the villages of Catthorpe and Swinford suffering from total severance and the remaining villages suffering partial severance.
- 7.6.78 The proposed Junction improvement incorporates a number of PROW and Local Road Network improvements which would improve accessibility, reduce severance and encourage greater use of the PROW network. With these improvements and mitigation measures in mind the impact on policy objectives can be assessed as *Neutral*.
- 7.6.79 Overall there would be a *Beneficial Impact* on Local policy objectives.

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7.7 SIGNIFICANCE EFFECTS

7.7.1 This section reviews the findings of this assessment and ascertains the significance of any positive, neutral or negative effects resulting from the project.

7.7.2 Table 7.8 summarises the operational effects of the project on all routes within the key village links, the wider area and the strategic network for both VU's and LVT's. The criteria set out in Tables 7.1 and 7.2 in Section 7.2 have been applied to assess the effects of the project relative to the do-minimum scenario. Physical fitness has also been presented.

Table 7.8: Assessment of Significance

Link	Significance Criteria							
	Change in Journey Time		Change in Amenity		Change in Severance		Change in Physical Fitness	
	VU's	LVT's	VU's	LVT's	VU's	LVT's	VU's	LVT's
Shawell and Swinford	Neutral	Neutral	No Change	No Change	None	None	Significant Benefits	N/A
Swinford and Catthorpe	Slight Negative	Neutral	Improvement	Improvement	Large Positive	Moderate Positive	Minor Benefits	N/A
Catthorpe and Shawell	Neutral	Neutral	Improvement	Improvement	None	None	Largely Unchanged	N/A
Shawell and Wider Area (Key Facilities/Strategic Road Network)	N/A	Neutral/Neutral	N/A	No Change	N/A	None/Slight Negative	N/A	N/A
Swinford and Wider Area (Key Facilities/Strategic Road Network)	N/A	Neutral/Neutral	N/A	No Change	N/A	None/Slight Negative	N/A	N/A
Catthorpe and Wider Area (Key Facilities/Strategic Road Network)	N/A	Neutral/Neutral	N/A	No Change	N/A	None/Slight Negative	N/A	N/A
Overall Assessment Score	Slight Negative	Neutral	Improvement	Improvement	Large Positive	Neutral	Moderate Benefits	N/A

Journey Times

7.7.3 The project offers a *Slight Negative* change for VU's with regard to journey times based on the small increase in journey time for route R-05 between Swinford and Catthorpe, although this is a conservative assessment as it does not take account of the existing severance of this route due to heavy traffic, which would be removed. However, this increase also represents a *Minor Benefit* for physical fitness, which considering route R-05 is a recreational route, may be considered more relevant. As all other routes have a *Neutral* outcome the overall changes to journey times for VU's would not be considered significant.

7.7.4 The effect on LVT's with regard to journey times is *Neutral* and not considered significant.

Amenity

- 7.7.5 There would be *Improvements* in amenity for VU's, on Route R-03, the utility route between Swinford and Catthorpe and particularly on Route R-04, the recreational route between the villages which follows the line of the River Avon.
- 7.7.6 For LVT's there would again be *Improvements* between Swinford and Catthorpe due to the new direct link between the villages, which avoids traffic conflicts associated with the existing junction. There would also be some *Improvements* to amenity due to better visibility along the local road between Catthorpe and Shawell.

Severance

- 7.7.7 The project offers a *Large Positive* change for VU's for the relief of severance between the local communities. This is considered to be a significant change as it addresses a number of the key concerns brought up during the consultations and meets the objectives set out for the scheme.
- 7.7.8 The project also offers a *Moderate Positive* change for LVT's for the relief of severance between the local communities in Swinford and Catthorpe but this is offset by the *Slight Negative* change for all villages by removing access to the strategic network. However, the overall *Neutral* score is significant as it shows the key objectives to remove severance and improve safety in the local area can be achieved whilst maintaining an overall *Neutral* impact on LVT's.

Physical Fitness

- 7.7.9 The project offers *Moderate Benefits* for health due to the addition of recreational route R-13.

7.8 INDICATION OF ANY DIFFICULTIES ENCOUNTERED

- 7.8.1 The key difficulty encountered during this assessment was the existing low level of use of the PROW network as indicated by the surveys. Given the problems for the existing network, including conflicts with strategic traffic, the low level use is not surprising, but given the location of the three communities of Shawell, Swinford and Catthorpe, it indicates that there is likely to be some level of suppressed demand. However the actual level of likely demand cannot be quantified. Nor have consultations with user groups been able to confirm any likely level of use.

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7.9 SUMMARY

- 7.9.1 The results from this assessment show that the objectives for both VU's and LVT's can be met in terms of:-
- promoting accessibility for pedestrians, cyclists and equestrians, reducing severance and encouraging physical fitness
 - minimising inconvenience for local traffic travelling between the villages, or accessing the strategic highway network
- 7.9.2 It is also considered that by removing conflicts with strategic traffic safety, in addition to amenity and severance, has been improved for VU's and LVT's.
- 7.9.3 The separation of strategic traffic from the LRN combined with VU provisions on the new Local Link Road and the improved sections of Swinford Road and Rugby Road would have a *positive* impact on amenity for a number of routes and a *large positive* impact on severance between Swinford and Catthorpe.
- 7.9.4 In addition, the verge and footway provided by the Local Link Road would connect a number of existing footpaths and bridleways together, creating numerous recreational routes and circuits which are not assessed within this report and would provide additional positive benefits to the community.
- 7.9.5 The objective to encourage physical fitness is shown to be achieved with a *Moderate Benefit* following the implementation of the scheme. However, this is based on journey times and does not take into account those who are currently discouraged from using the existing routes. It is considered that with improved amenity and reduced severance VU's would be further encouraged to use the utility and recreational networks resulting in a greater number of users walking or cycling. This would provide additional positive changes that are not shown by the assessment based on journey time.
- 7.9.6 For LVT's travelling to/from the wider area there would be some inconvenience due to removal of access to the strategic road network at M1 Junction 19, however, the resultant effect has been shown to be *Neutral* and is offset by the positive changes to safety and amenity for the links between the villages.

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PART B – LONG DISTANCE TRAVELLERS

7.10 METHODOLOGY

- 7.10.1 The methodology for this part of the assessment was in accordance with the following guidelines:-
- Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 9 Vehicle Travellers³
 - Department For Transport (2003) Transport Analysis Guidance (TAG) Unit 3.3.13¹³
- 7.10.2 The methodology for the assessment of vehicle travellers in the DMRB Volume 11, Section 3 Part 9³ addresses the following areas:-
- the view from the road
 - driver stress
- 7.10.3 TAG Unit 3.3.13¹³, which deals with journey ambience, also addresses these sub-topics in the context of impact on travellers as a whole. The factors presented in TAG are:-
- traveller care
 - traveller views
 - traveller stress
- 7.10.4 Impacts may be defined as:-
- changes in the view from the road
 - the stresses on drivers and other motorised travellers using the route
 - the effect on the provision and quality of information and facilities for travellers
- 7.10.5 The methodology used for the assessment follows the approach required by the DMRB supplemented where necessary by guidance in the relevant TAG Unit 3.3.13¹³ where the topics correspond. It takes into account the predicted effects for each factor and the significance of those effects. For consistency the TAG terminology is used throughout this chapter with the 'view from the road' and 'driver stress' equating to 'traveller views' and 'traveller stress' respectively. There is no category in DMRB for traveller care.
- 7.10.6 The assessment of the effect on long distance travellers is qualitative. For each factor, the change resulting from the proposals is described. A three point scale is then used to indicate whether the change would lead to the factor becoming *Better*, *Neutral* or *Worse*. Traveller care and traveller stress are further divided into sub-factors as discussed below.
- 7.10.7 As set out in the introduction, the assessment also considers the implications of the Catthorpe Viaduct, both as a stand alone project and in combination with the junction improvement.

Traveller Care

- 7.10.8 The experience of a journey along a stretch of road is affected by the provision of facilities and information. These can include services, roadside toilets, lay-bys, road signs, and the assessment is affected by both their spacing and quality as determined by four sub-factors of cleanliness, facilities, information and environment related to the services.

7.10.9 The assessment considers the implications for existing traveller care facilities and those proposed as part of the junction improvement. Development of a trunk road service area with an access from the eastbound carriageway of the A14 to the east of Junction 19 has been proposed. A planning application in 2003 was given consent by Harborough District Council, but there is some uncertainty at this stage as to whether the development will proceed in advance of the scheme. As a result two alternative scenarios have been assessed, one with and one without the service area in place. The implications of the junction improvement for the service area site are considered in Chapter 8, Community and Private Assets.

Travellers' Views

7.10.10 Whilst the need to minimise the visual impact of highways is considered a key environmental consideration in the design and assessment of proposals, the effect on road users of the "view from the road" is also taken into account. This is defined as the extent to which travellers are exposed to the different types of scenery through which a route passes. The aspects considered are:-

- the type of scenery or the landscape character
- the extent to which travellers may be able to view the scene
- the quality of the landscape
- features of particular interest or prominence in the view

7.10.11 The views from the existing route are described and compared with the views from each of the five options.

7.10.12 The extent to which travellers can see the landscape through which they are passing is categorised as follows:-

- no view – where the route is in a deep cutting, a tunnel or surrounded by environmental barriers (such as existing dense planting, fencing, walls or hedgerows)
- restricted view – where there are frequent cuttings, tunnels or barriers
- intermittent view – where there are shallow cuttings or barriers
- open view – where the view extends over many miles

7.10.13 Due to the speed of travel normally available to road users, different features may be experienced as having particular prominence in the view than for people on foot or viewing the scene from buildings. Equally, features which may be seen as intrusive to people living nearby may add interest to travellers along the route.

Traveller Stress

7.10.14 The amenity of a journey is affected by the levels of stress experienced by both drivers and passengers. This is influenced by external factors such as the age or skill of the driver, and the health or mood of the traveller generally, but also by issues associated with the road itself. Three aspects of traveller stress are considered in relation to the assessment of highway projects.

Frustration

7.10.15 This is related to:-

- road layout and geometry
- the condition of the road network
- the ability to make good progress along a route

Fear of Accidents

7.10.16 This results from the design of the road, the presence of safety features and interaction with other vehicles.

Route Uncertainty

7.10.17 This relates to the quantity and quality of information provided along the route.

7.10.18 The more complex a road layout, the greater the potential contribution to frustration. The inclusion of tight bends in a route makes greater demands on the driver and results in a less comfortable journey for passengers. Conversely, the complete absence of bends reduces interest and may affect drivers' ability to concentrate. The condition of a road is defined by its physical characteristics, including smoothness, the effectiveness of its drainage, whether oncoming headlights are screened, etc. Factors inhibiting progress include lack of overtaking opportunities and traffic management. This assessment also makes qualitative reference to congestion.

7.10.19 The fear of accidents on a stretch of road depends mainly on the physical characteristics of the road such as sight distances, the possibility of pedestrians stepping into the road and the quantity and composition of traffic. The degree of separation of traffic travelling in opposite directions, the effectiveness of lighting, the width of lanes, and the provision of safety barriers, markings, cats eyes and hard shoulders also contribute. Fear is generally higher when the speed and volume of traffic is high, and where heavy goods vehicles comprise a large proportion of the volume. However, where a highway scheme enables higher speeds and flows, the higher standard of the new road may offset some of these effects.

7.10.20 Uncertainty for drivers over how a junction should be negotiated in order to follow their desired route may contribute to both driver and passenger stress. This uncertainty is addressed by the provision of direction signs. The assessment takes account of the likely frequency and standard of proposed directional signage for each option.

Overall Impact Scoring

7.10.21 Overall impact assessment for Long Distance Travellers has been derived by considering the balance of the assessment for each sub-factor as indicated at Table 7.9 below.

Table 7.9: Factors and Sub Factors for Assessing Impact

Factor	Sub-factor	Better	Neutral	Worse
Traveller Care	Cleanliness			
	Facilities			
	Information			
	Environment			
Travellers' Views	-			
Traveller Stress	Frustration			
	Fear of potential accidents			
	Route uncertainty			

7.10.22 The impact is assessed as follows:-

- if the assessment for all or most sub-factors is neutral, or if improvements in some sub-factors are balanced by deterioration in others, the overall assessment is likely to be *Neutral*
- if the change in impact across sub-factors is, on balance, for the better – i.e. the beneficial effects on some sub-factors outweigh the adverse effects on others - the assessment is likely to be *Beneficial*
- conversely, if the change in impact across sub-factors is, on balance, for the worse, the assessment would be *Adverse*
- if a beneficial or adverse impact is derived, the significance of the effect is judged by the number of travellers likely to be affected
- for an overall impact on fewer than 500 travellers/day, a *Slight Beneficial* or *Adverse* effect is recorded
- for an overall impact on a number of travellers/day between 500 and 10,000, a *Moderate Beneficial* or *Adverse* effect is recorded
- for an overall impact greater than 10,000 travellers/day, a *Large Beneficial* or *Adverse* effect is recorded

7.10.23 The Traffic Forecasting Report ⁴ indicates Annual Average Daily Traffic (AADT) flows for the “Do-Something” scenario to be approximately 200,900 in the “opening year” of 2014 for the motorway and trunk road network.

7.11 LEGISLATION

- 7.11.1 No legislation specifically sets out standards required for traveller care, travellers' views or traveller stress. Standards of highway design are regularly updated by the Department for Transport, and are based on the principles set out in the DMRB.

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7.12 BASELINE CONDITIONS

- 7.12.1 The description of the development given in the landscape and visual impact assessment in Chapter 4 is used as the basis for an assessment of view from the road, driver stress and traveller care.

Traveller Views

- 7.12.2 Existing views for travellers, using the free flow-links between the M1 and M6 and along the M1, are reasonably attractive. These include views over the Avon Valley and sections of the established native tree planting that has developed in the last 30 years, particularly along the links and on the northbound section of the M1.
- 7.12.3 For travellers on the A14 there are also widespread and open views in both directions. The views for westbound traffic in particular are out across the Avon Valley towards M1 Junction 19, with its associated semi-mature native vegetation, and the wooded background of Catthorpe Hill. The masts of Rugby Radio Station also provide a distant notable landmark.
- 7.12.4 For travellers making the connection between the A14 and the motorways, and vice versa, the visual amenity is very poor. Heavily congested traffic, including a high number of heavy goods vehicles (HGV's) is required to negotiate a system of small roundabouts and under-bridges that are cluttered with an array of hazard warning signs, traffic lights, lighting poles and direction signs. The sudden change of visual scale from the large one expected within the motorway and high speed road network to the small visual scale experienced approaching the dumbbell roundabout is confusing and disorientating to any driver unfamiliar with the junction.

Traveller Stress

- 7.12.5 In terms of traveller stress the experience is similar.
- 7.12.6 The existing junction causes travellers stress in a number of ways. There are often long delays, high traffic volumes converging upon a restricted junction, resulting in queues and numerous accidents. These lead to increased traveller frustration, annoyance and discomfort. Mixing users of the local traffic network with vehicles travelling along the strategic motorway and trunk road network further exacerbates these problems.
- 7.12.7 The geometry of the existing junction is complicated.
- 7.12.8 Fear of potential accidents is primarily due to queuing on the A14 and on the exit slip roads on the M6 and M1, where high speeds are unexpectedly interrupted. There have been several serious accidents, including fatalities, associated with queuing on the M6 approaching the junction from the west. These have received media attention and travellers are likely to be aware of them. Fear of accidents at the dumbbell roundabout is due primarily to the high numbers of vehicles and confusing layout. This includes HGV's, which do not easily negotiate road layouts on this scale. Drivers of smaller vehicles can be at a physical disadvantage particularly when negotiating the dumbbell roundabout alongside much larger and high sided vehicles. Travellers could experience the fear of not being seen and potential collision.
- 7.12.9 The likelihood of meeting pedestrians, cyclists or equestrians at the junction may increase the fear of accidents for some road users. However evidence suggests, as

detailed at Part A of this Chapter, Vulnerable users and Local Vehicle Travellers, that existing numbers for such users are low.

Traveller Care

- 7.12.10 The Preferred Route for the M1 Junction 19 Improvement proposes changes to an existing road layout and structures, whilst the LRN would provide a new length of local road between Swinford and Catthorpe, plus improvements to existing roads. There are no toilets or roadside services available at present close to the existing junction, except for lay-bys on both sides of the A14 as it approaches the M1.
- 7.12.11 As set out in Section 7.10, there are proposals for a trunk road service area with an access from the eastbound carriageway of the A14 to the east of Junction 19. There is some uncertainty at this stage as to whether the development will proceed in advance of the scheme. The proposals for the junction have an impact on the land included in the application and upon the location of the access, as set out in Chapter 8, Community and Private Assets. This assessment therefore considers alternative scenarios with and without the service area. In terms of the baseline, there is no service area at present but it is possible that at a future date east bound A14 travellers could have the benefit of care facilities with or without the junction improvement, that is in both the 'Do-Something' and 'Do-Minimum' situation.

7.13 MITIGATION

- 7.13.1 The driver's view is always considered in overall design terms to ensure the journey remains a reasonably pleasant experience, with sufficient interest and visual stimulation to maintain the driver's concentration. Where other factors allow, gaps are left in roadside planting to allow long views out to the surrounding countryside and enable the driver to identify landmarks and his location. A "tunnelled" effect from tall fencing or continuous planting is normally avoided.
- 7.13.2 As set out in Chapter 4 Landscape, the detailed design for the Preferred Route would seek to retain as much roadside vegetation as possible to maintain the mature settings.
- 7.13.3 Mitigation for impacts on driver stress during the period of construction and roadworks is an effective traffic management plan as noted in the Outline Construction Environmental Management Plan (OCEMP) for the project. During operation, effective signage and traffic information services, together with free-flowing traffic from the improved junction should minimise driver stress.
- 7.13.4 The main objectives in the traffic management proposal would be:-
- maintain safe routes for all traffic for the duration of the works
 - minimise delays and disruption to local and trunk road / motorway traffic whilst allowing the works to be completed
 - minimise the disturbance to the local community by minimising the construction traffic on the LRN for the duration of the works
 - segregate local traffic from the trunk road / motorway traffic where possible
- 7.13.5 A public relations plan would be drawn up to ensure traffic management proposals received wide publicity and would include the following methods:-
- regular updates on the works to local press and radio
 - a telephone line for reporting traffic incidents would be available at all times
 - Highways Agency advanced signage would be used as appropriate including message signing
 - a website would be set up providing comprehensive information about the works
 - information leaflets would be available in local service areas
 - local meetings would be held in villages (Swinford, Shawell, Catthorpe, Lilbourne and Welford) to advise communities of proposed works and deal with concerns and enquiries
 - notices would be published in local papers and trade publications
 - the road haulage association would be kept informed
- 7.13.6 In terms of traveller care, there are few existing facilities within the area affected by the proposals, there are no existing service areas and just two laybys on the A14 close to the junction. As described below the assessment confirms that the laybys would be lost due to the proposals and not replaced.

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7.14 ENVIRONMENTAL IMPACT

Catthorpe Viaduct Replacement

- 7.14.1 Traffic management works will be required during the works to replace the Catthorpe Viaduct as a separate project. Since the new viaduct is to be constructed alongside the existing structure, which will remain in use until the new one is complete, this will be limited to where the realigned carriageways tie in to the existing alignment.
- 7.14.2 As set out below for the junction improvement, traffic management, speed restrictions and the requirement to negotiate a temporary road layout will contribute to driver stress, with a temporary *Worse* impact, but this will be minimised by effective management of the changes.
- 7.14.3 In operation, the new viaduct will make no difference for long distance travellers.

Construction

- 7.14.4 Traffic management would be sequenced to minimise disruption to road users as described above. However, it would not be possible to entirely avoid adverse effects on travellers.
- 7.14.5 There would be no toilets, service areas or other facilities affected during the construction period. Two laybys would be lost on the A14 initially during construction, but also into the long term. A small unofficial layby along Rugby Road, Swinford, would also be lost during construction.
- 7.14.6 The provision of advance signage and public information on alternative routes should help to reduce the potential inconvenience to travellers using the route, by removing some long distance traffic from the potential works areas. Information available to travellers in advance may also help to inform decisions on whether to break their journey at services prior to, during or after encountering the road works.
- 7.14.7 The effect on views from the road is closely related to landscape and visual impact. As noted in Chapter 4 Landscape, the main impacts of this nature during construction works would arise from:-
- clearance of vegetation opening up new views
 - general disruption to landform before final earth shaping is complete
 - presence of site compounds, storage areas and associated fencing
- 7.14.8 Travellers may not be as sensitive to these impacts as people living in the area, but some features, such as compounds, storage heaps, temporary earthworks and haul roads, may be considered unattractive from any perspective. The loss of existing vegetation and general greenery would represent an immediate deterioration in the view.
- 7.14.9 The location of the site compound is shown on Figure G Areas Required During Construction in Appendix 1 to Volume 1 of this ES. This would have a detrimental but temporary impact on views from the road.
- 7.14.10 Temporary storage, earthworks and haul roads would cause a similar deterioration in view.

- 7.14.11 Overall, the balance of impact on travellers' views is considered to be *Worse*.
- 7.14.12 During construction, any congestion, traffic management, speed restrictions and the requirement to negotiate a temporary road layout would all contribute to driver stress. Each of these effects would increase driver frustration due to the impact on ability to make progress. Likewise, the concentration required of drivers in negotiating the temporary layout may increase wariness of other road users and heighten fear of accidents. Finally, at a localised level, those drivers moving through a new temporary layout for the first time would have to rely entirely on direction signs and traffic management to assist in finding their route. There would be route uncertainty due to temporary diversions and signs that change the familiar route and vary through the period of construction.
- 7.14.13 The potential effect would be minimised by an efficient construction sequence and traffic management plan as proposed.
- 7.14.14 The overall impact of construction on driver stress, however, is considered to be *Worse*.

Overall Impacts During Construction

- 7.14.15 Overall the construction works would have a temporary *Worse* impact on travellers than the existing situation.

Operation

Travellers Views

- 7.14.16 Views would be generally similar to those existing for travellers approaching the improved M1 Junction 19 on the M1 (northbound and southbound) and M6 (southbound) and from the A14 (westbound). As described at Chapter 4 Landscape it would be possible to keep a proportion of roadside vegetation, particularly to the west of the M1-M6 Northbound Link, therefore retaining the existing mature setting for the junction.
- 7.14.17 The key differences to the views would be:-
- loss of some existing vegetation to M6-M1 Southbound Link embankments, opening up views to the north. These would eventually be screened by replacement planting
 - loss of existing vegetation to the east of the M1 and either side of the A14. Again these would eventually be screened by replacement planting
 - the new higher level structure for the A14-M1 Northbound Link
- 7.14.18 There would be panoramic views from the joint highest link, the A14-M1 Northbound Link, particularly to the east towards Swinford, with retained vegetation breaking up views to the west. Views would eventually become more screened as new planting matures. This is an improvement over the current situation where traffic performing this manoeuvre must pass through the cluttered and congested dumbbell roundabout arrangement.
- 7.14.19 Views to Swinford from the M1-A14 Eastbound Link and M6-A14 Link would be constrained initially by proposed 2m high mounding, eventually becoming further screened by maturing vegetation, much as views are screened from the A14 towards Swinford at present. It is therefore considered that there would be no change over the existing situation.
- 7.14.20 West of the junction there would be views to the north from the M6 – M1 Southbound Link as vegetation is removed, but these would be initially constrained by mounding and then

replacement planting resulting in no change. Within the junction, views to the east would be towards the adjacent A14 – M1 Northbound Link which would be at the same level. A low level visual barrier may be required at this point to screen oncoming traffic for both links. Such a barrier may be considered to be a worsening of the existing situation, which is a view of mature vegetation.

- 7.14.21 Views from the M6 - A14 link through the junction would be much improved from the existing route through the cluttered and congested dumbbell roundabout though contained by cuttings and adjacent slip roads. Views would be to new structures and existing and new roadside planting.
- 7.14.22 Views for travellers along the M1 - M6 Northbound Link would remain largely unchanged, as does the line of the road in this location, and a large proportion of existing vegetation would be retained.
- 7.14.23 With the exception of a potential barrier between the two high-level links, all aspects of travelling within the junction arrangement would be likely to improve. New structures would be clearly visible but aesthetic considerations are being taken into account in their design, including keeping bridge spans open where possible and adopting a common design approach to provide some visual unity.
- 7.14.24 In summary:-
- Views from the new A14 to M1 Northbound Link and along M6 - A14 link would be *Better* than through the current dumbbell roundabout
 - Views would open up to the north and east due to the initial loss of roadside vegetation. These views would be initially contained by mounding and eventually become as screened as existing and it is considered therefore that there would be no change
 - Travelling within the junction arrangement from all aspects, with the exception of the potential barrier described above, would be *Better* than the current situation
- 7.14.25 In overall terms traveller views would be *Better* for the Preferred Route.

Traveller Stress

- 7.14.26 The Preferred Route would not provide turning movements between the M6 and M1 north of the junction, and between the A14 and M1 south of the junction in both directions. However there are many alternative routes for travellers and the traffic model forecasts there would be low demand for the above turning movements. It is also noted that there would be clear, well designed, advance signage approaching the junction. It is therefore considered that these omissions would not result in increased traveller stress. The key traffic movements between the M6 and the M1 south of the junction (in both directions) and the M6 to the A14 (both directions) and the M1 north of the junction to A14 (both directions) would be direct and free-flow. This would be a significant improvement over the existing situation for movements between the motorways and the A14, resulting in reduced traveller stress.
- 7.14.27 The main anxiety for vehicle travellers would be over selecting the correct traffic lane. However, this would be managed by the provision of clear motorway standard signage through the junction. It is possible that traffic speeds would remain high through the junction, which may increase driver fear. However, an increased perception of danger is likely to be more than offset by the reduction in actual danger resulting from the removal of queuing on motorway slip roads, avoiding the dumbbell roundabout and the superior

design and construction standards required for the Preferred Route. Driver stress in terms of frustration and fear of accidents across the junction would therefore be considerably *Better*.

- 7.14.28 Overall it is considered that, given the operational improvements, Traveller Stress would be *Better*.

Traveller Care

- 7.14.29 Proposals for the junction would include gantry mounted road signs and variable message signs to provide drivers with current, accurate information about road conditions ahead to the latest standards. This enhanced communication would improve traveller care for strategic road users. The overall assessment therefore, is *Better*.
- 7.14.30 Lay-bys (on trunk roads and other roads below motorway standard) and service areas are provided at regular intervals along the strategic road network to meet the needs of travellers. There are no new lay-bys proposed and the layout of the Preferred Route would involve the loss of two lay-bys located on the A14 eastbound and westbound.
- 7.14.31 Retention of these two lay-bys, or replacement at a similar location, is not compatible with the proposed improvement as the westbound layby would fall within the new extent of the M6 motorway and the eastbound lay-by would conflict with a new junction with an interchange link. Provision of new lay-bys further to the east is not considered necessary as existing lay-bys are present within 2.5km of the proposed termination of the A14 (the frequency recommended by TD 69/07, the applicable standard). In addition, the minimum interval required between lay-bys and the interchange link junctions proposed would result in any new lay-bys being provided at an interval as low as 600m from the adjacent existing lay-bys.
- 7.14.32 Despite the existing nearby alternative provision, as the lay-bys to be lost are well used, their removal represents a definite loss of facilities, resulting in a *Worse* impact.
- 7.14.33 As set out above, the future of the proposed trunk road service area is uncertain and alternative scenarios have been considered with and without the facility in place. Provision of the service area with or without the junction improvement would be a benefit to travellers compared with the current baseline. However, this benefit would occur in any event and is not attributed as an effect of the proposals. If the service area development did not go ahead for reasons unconnected with the junction improvement, there would be no change from the baseline or the 'do-minimum', a *Neutral* assessment. However, if the service area development could not go ahead as a direct result of the junction improvement, due to its impact on land take or the access location, there would be an adverse impact for A14 eastbound travellers compared with a 'do-minimum' which includes a service area. This would have the effect of making traveller care *Worse*.
- 7.14.34 In overall terms, if the service area goes ahead, or is not provided for reasons unconnected with the junction improvement, the effect on traveller care is balanced between the lost laybys and enhanced driver information. In this scenario the overall impact on traveller care for the Preferred Route would be *Better* given improvements in driver information.
- 7.14.35 In the second scenario it should be noted that a potential service area in this location would not be available to all travellers. For example, the facility would not be available to those remaining on the M1 or M6 motorways. Facilities for these travellers would remain unchanged and in accordance with current guidelines in terms of frequency of location.

However, in overall terms, if the opportunity of a service area was lost as a direct result of the junction improvement, then combined with the lost lay-bys, the overall impact would be *Worse*.

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7.15 SIGNIFICANCE OF EFFECTS

- 7.15.1 The section above considers that impacts for long distance travellers due to the junction improvement would be *Better* in terms of Travellers' Views and Traveller Stress. For most of the scenarios discussed above the improvement would also be *Better* in terms of Traveller Care.
- 7.15.2 As set out in Section 7.10 Methodology, the significance of effect is derived from the number of travellers / day.
- 7.15.3 Given the 200,900 vehicles predicted to be using the improved junction in the opening year with the project in place, the overall significance of effect for long distance travellers is considered to be *Large Beneficial*.
- 7.15.4 In one scenario where it would not be possible to provide the proposed service area development as a result of the junction improvement, and on the assumption that alternative proposals were not feasible, the effect for Traveller Care would be *Worse*.
- 7.15.5 However, in considering the overall balance for this scenario, it should be noted that Travellers Views and Traveller Stress would be *Better* and an important element of Traveller Care, driver information, would also be *Better*. These benefits would be shared by all travellers using the junction each day. In comparison the use of a service area would be limited to a relatively small number of travellers. There are also several other service facilities available to long distance travellers, elsewhere on the M1, M6 and A14.
- 7.15.6 In these terms it is considered that for this scenario, the overall balance for all travellers would still be *Better* and result in a *Large Beneficial* significance of effect.

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7.16 INDICATION OF DIFFICULTIES ENCOUNTERED

- 7.16.1 In terms of traveller care, there is some uncertainty as to whether the proposals for a trunk road service area development will proceed in advance of the scheme. For this reason alternative scenarios have been assessed, with and without a service area.

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7.17 SUMMARY

- 7.17.1 Part B - Long Distance Travellers of this chapter has assessed the impact of the Preferred Route for improvement of M1 Junction 19 on vehicle travellers using the strategic road network (M1, M6, A14, slip roads and the roundabout).
- 7.17.2 The proposals for the Preferred Route would allow travellers' views to be improved given the removal of the current cluttered dumbbell roundabout. The landscape proposals would be designed to create visual interest and reduce visual intrusion, with conservation, where possible, of existing vegetation retaining some of the mature woodland setting for travellers. Rural views would be retained with an attractive outlook over the local landscape and glimpses of historic buildings and the River Avon Valley.
- 7.17.3 Traveller stress would be improved by the reduction in congestion and separation of local and strategic traffic. Fear of accidents would be reduced along with a significant reduction in route uncertainty.
- 7.17.4 In terms of traveller care, there are no laybys proposed and the Preferred Route would involve the loss of two laybys located on the A14. These are well used and their removal would represent a definite loss of facilities for travellers in both directions along the A14. However this loss would be offset proposals would include better signs and improve the speed and quality of information available to drivers by the introduction of more variable message signs.
- 7.17.5 As set out above, for most scenarios regarding the proposed service area development, this balance remains. If it were not possible for the service area development to go ahead there would be an impact on a relatively small number of travellers and the effect in terms of Traveller Care would be *Worse*.
- 7.17.6 However, overall, the assessment of impact on long distance vehicle travellers is *Better* taking into account either scenario for the service area development. The objective to improve conditions for vehicle travellers would be met, though during the construction period there would be some temporary worsening.

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7.18 REFERENCES

1. Environmental Assessment, Introduction, Design Manual for Roads and Bridges, Volume 11, Section 1, Part 1, Department for Transport, 2008.
2. Pedestrians, Cyclists, Equestrians and Community Effects, Design Manual for Roads and Bridges, Volume 11, Section 3, Part 8, Department for Transport, 1994.
3. Vehicle Travellers, Design Manual for Roads and Bridges, Volume 11, Section 3, Part 9, Department for Transport, 1994.
4. Impacts on Pedestrians, Cyclists and Others, TAG Unit 3.5.5, Transport Analysis Guidance (TAG), Department for Transport, June 2003.
5. The Severance Sub-Objective, TAG Unit 3.6.2, Transport Analysis Guidance (TAG), Department for Transport, June 2003.
6. The Physical Fitness Sub-Objective, Impacts on Pedestrians, Cyclists and Others, TAG Unit 3.3.12, Transport Analysis Guidance (TAG), Department for Transport, June 2003.
7. Countryside and Rights of Way Act (CROW) 2000.
8. Planning Policy Guidance 17 – Open Space and Sport and Recreation Provision.
9. Planning Policy Guidance 21 – Tourism.
10. Stage 3 Traffic Forecasting Report, Highways Agency
11. M1 Junction 19 Improvement. Environmental Impact Assessment Scoping Report. Highways Agency. March 2009
12. M1 Junction 19 Improvement. Public Consultation. Report of a Workshop for Pedestrians, Cyclists and Equestrians. Highways Agency. November 2008
13. The Journey Ambience Sub-Objective, TAG Unit 3.3.13 Transport Analysis Guidance (TAG), Department for Transport, June 2003
14. Cattothorpe Viaduct Replacement Environmental Assessment. Highways Agency. January 2010

Page Not Used