7 Human Beings

7.1 Introduction

This chapter of the EIS consists of an assessment of the proposed M7 Osberstown Interchange and R407 Sallins Bypass Scheme under the heading of Human Beings. The chapter initially sets out the methodology used (Section 7.2), describes the existing environment (Section 7.3), discusses the predicted impacts (Section 7.4), details the mitigation measures proposed (Section 7.5) and discusses any residual impacts anticipated (Section 7.6).

7.2 Methodology

7.2.1 Legislation and Guidelines

The following guidelines were referred to while preparing and writing this chapter:

- EPA: Guidelines on the Information to be contained in Environmental Impact Statements, 2002.
- EPA: Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) 2003.
- NRA: Environmental Impact Assessment of National Road Schemes - A Practical Guide (Revision 1, November, 2008).

Assessment of the community impacts has been undertaken broadly in line with these guidelines. The EPA Guidelines provide advice on impact types including cumulative impacts which are often important for human beings assessments, for instance where improved accessibility presents opportunities or demand for new development.

In addition, reference is made to The Design Manual for Urban Roads and Streets (Department of Transport 2013) and the detailed guidelines provided on Community Effects in Volume 11 (Section 3, Part 8) of the UK Department of Transport Publication 'Design Manual for Roads and Bridges' (1993, updated 2009). Although the latter guidelines have not been adopted officially in Ireland, they provide some more detailed information by which to quantify human beings impacts.

7.2.2 Data Sources and Consultations

A human being study requires that an understanding of the community is built up through background research, site visits, and discussions with local people and community representatives. Specifically, in the case of this study, data was collected by means of:

- Primary data sources (e.g. demographic data from Census 2011 and Census 2006 produced by the Central Statistics Office).
- Drawings of the proposed road development including associated junctions.

- Maps of the surrounding area, including Ordnance Survey 1:50,000 maps and landowner files.
- Aerial photographs of selected sections of the proposed road development.
- Other relevant environmental data considered by the EIA, especially traffic volumes, noise and visual impacts.
- A review of secondary sources including Kildare County Development Plan 2011-2017, Naas Town Development Plan 2011-2017, the Sallins Local Area Plan 2009 (including the Review 2013-2019), and the Naas Northwest Quadrant Masterplan 2007.
- Observation of local settlement and travel patterns and identification of community facilities.

In addition, consultations have been undertaken with local organisations in the study area including Sallins Community Council, North Kildare Chamber of Commerce, North Kildare Trout and Salmon Association, and the Kildare Branch of the Inland Waterways Association.

7.2.3 Impact Categories and their Assessment

The purpose of the community assessment is to identify the likely significant impacts as they might affect users of the proposed scheme and local people. Community, or human being, impacts fall into four key categories, namely:

- Journey characteristics: An assessment of potential impacts on local journey time, journey time reliability (i.e. the assurance of completing a journey within a predictable time range) and travel patterns including accessibility and connectivity.
- Community severance: An assessment of potential impacts with regard to any severance from community facilities, particularly those used by older people, children or other sensitive groups. The category includes both new severance and relief from existing severance.
- Amenity: This category includes journey amenity arising from the exposure of pedestrians and cyclists to traffic (i.e. proximity, safety, noise, dirt, air quality) as well as impacts for all road users arising from factors such as spatial legibility, visual intrusion and congestion. In addition, impacts on general amenity are addressed where amenities and residential quality of life are affected.
- Economic impacts: an evaluation of the proposed road development in the context of economic development and employment.

Impacts are compared between the Do-Something scenario (with interchange and bypass) and the Do-Minimum scenario. They can either be negative or positive. Their significance is assigned as Imperceptible, Slight, Moderate, Major or Profound. Significance depends, among other considerations, on the nature of the environment affected, the duration of an impact and the probability of its occurrence.

It usually follows that impacts of a human being nature are a function of:

- The scale of the impact itself.
- The impact on vulnerable or sensitive groups.

The community assessment generally addresses impacts at a community level rather than for individuals or identifiable properties, although impacts for individual businesses are discussed where these are located beside the road or are very dependent on road traffic or accessibility. The significance of impacts as they would affect the worst hit subset of the population are summarised in Table 7.11.

The 'magnitude' of impacts represents the number of people (or businesses) likely to be affected and is labelled as very high, high, medium or low. For example, an impact may be of major significance for a particular population subset, but the number of people concerned could be small and therefore of "low" magnitude.

7.2.3.1 Journey Characteristics

Assessment of journey times and patterns is inevitably dependent on precisely where an individual journey originates and ends, when it is undertaken (e.g. within or outside peak hours) and by whom it is undertaken, i.e. by drivers, cyclists, users of public transport or pedestrians including individuals whose transport options may be restricted. The impact varies for each journey, but typical journeys to particular destinations can usually be identified. Impacts have been assessed in accordance with the significance criteria outlined in Table 7.1 with positive impacts resulting from a decrease in journey length of time and negative impacts resulting from an increase in journey length of time.

Table 7.1: Criteria used in the assessment of changes in Journey Length or Duration

Impact level	Significance criteria
Imperceptible	No appreciable change to present journeys, i.e. <10% change in typical journey length or duration.
Slight	Some inconvenience where impact is negative, but present journey patterns likely to be maintained, i.e. 10-30% change in typical journey length or duration (negative or positive).
Moderate	Journeys become longer where impact is negative and some groups may be dissuaded from making trips, i.e. 31-60% change in typical journey length or duration (negative or positive)
Major	Considerable inconvenience where impact is negative. Many people will be deterred from making trips, i.e. 61-80% change in typical journey length or duration (negative or positive)
Profound	More than 81% increase/decrease in journey length or duration sufficient to cause marked change in behaviour of a sizeable proportion of population.

Journey length refers to the distance associated with a particular journey, whilst duration is the time taken to make the journey. Average walking speed for pedestrians is taken to be 5 km/h. Average cycle speed is assumed at 20 km/hr. Impacts on journey amenity and community severance are addressed separately, although there are obvious interactions between each of these categories and with economic impacts.

In addition, new transport facilities can improve accessibility or connectivity through the combined effect of reduced journey time and reduced severance. Improved connectivity can have implications for choice of transport mode, for land use and economic development.

7.2.3.2 Community Severance

Severance is a typical impact of road development. The effect of severance is to discourage community interaction and occurs where access to community facilities or between neighbourhoods is impeded by a lengthening of journey time or by the physical barrier of a road (e.g. by high traffic volumes or perimeter fencing). Social severance can also occur where communities become identified by their containment within certain road boundaries. This could conceivably occur for busy roads such as motorways even where overbridges or other access is available.

On the other hand, relief from existing severance may be provided by a new road by moderating traffic volumes or speed, by the inclusion of crossing facilities in the design or through the presence of overbridges or underpasses.

The definition of severance is not precise. It depends on the level of use of facilities, the location of community facilities, the time of day or duration when traffic conditions are experienced, the sensitivity of the population affected and the geographical spread of the community. Children, the elderly, people with disabilities and people without access to a private car would be amongst those most affected by community severance and any corresponding loss of neighbourhood interaction.

New Severance

New severance is a negative impact and occurs whenever a barrier is created between people and community facilities. The barrier could take the form of a new road, fencing, additional traffic or the need to detour. The UK DMRB (2009) provides examples of new severance on which the assessment criteria in Table 7.2 are based. The DMRB criteria are specific to pedestrians, although severance will apply also to cyclists and potentially to local vehicle journeys too, particularly for some sensitive population sub-groups. Quantitative criteria have not been included in the table as impact definitions may vary depending on the nature of road trips and crossings (i.e. by car or pedestrian). Similarly, the introduction of crossing facilities could reduce severance even where traffic levels are increased.

Table 7.2: Criteria used in the assessment of New/Increased Severance

Impact level	Significance criteria
Imperceptible	Journey patterns maintained
Slight	Present journey patterns likely to be maintained, albeit with some hindrance to movement.
Moderate	Some residents, particularly children and elderly people, are likely to be dissuaded from making journeys. For others, journeys will be longer or less attractive.
Major	Most residents are likely to encounter severance which, in some cases, will be sufficient to induce a reorganisation of their activities or cause them to make less frequent trips to nearby neighbourhoods or less use of particular community facilities.
Profound	People are likely to be deterred from making trips to an extent that includes permanent loss of access or a change in the location of centres of activity.

Relief from Severance

Relief from severance is a positive impact which can be defined in relation to existing severance. Relief from severance could follow from transference of traffic including heavy goods vehicles (HGVs), from improvements to road design or sightlines, or from the introduction of crossing facilities.

The degree of relief from severance depends on the context in which this change will occur including the existing absolute volume of road traffic, the speed of traffic and number of crossings by pedestrians, cyclists or others.

Table 7.3 has been adapted from the UK DMRB and provides a guide to criteria used in the assessment of relief from severance. Where the assessment varies from the guide due to the context in which the relief occurs, the reasons for the assessment are discussed in the text. In that there are implications for real and perceived safety there are also potential interactions with Journey Amenity.

Table 7.3: Criteria used in the assessment of Relief from Severance

Impact level	Significance criteria
Imperceptible	<10% reduction in daily traffic levels (AADT) or current journey patterns maintained
Slight	10-30% reduction in traffic levels (AADT) or some reduction in severance
Moderate	31-60% reduction in traffic levels (AADT) or a reduction in severance sufficient to encourage some residents to make more frequent journeys to community facilities.
Major	61-80% reduction in traffic levels (AADT) or a reduction in severance such as to allow most residents to make more frequent journeys to community facilities or to switch from car to pedestrian or cycle journeys
Profound	More than 80% reduction in traffic levels (AADT) or reductions in severance such as to provide new access to community facilities or to cause a very significant increase in pedestrian or cycle journeys

These factors have been taken into account when defining impact significance in the chapter. Sensitive groups are identified specifically where they comprise a higher proportion of pedestrian journeys or where specific amenities are associated with these groups. Such facilities would include schools, surgeries, hospitals, churches, post offices and shops.

7.2.3.3 Amenity

The assessment of journey amenity uses the same significance categories as before, but is inevitably descriptive and supported by cross-references where necessary with the Chapter 5 - *Traffic*, Chapter 10 Landscape and Visual or Chapter 11 – Noise and Vibration impacts. The level of traffic on a road, the proximity and separation of footways and cycle tracks, the nature of any crossings/junctions to be negotiated, the legibility of a journey (including signage), visual intrusions (including sightlines) and safety for equestrians, are amongst the factors relevant to the assessment of amenity, as are the number and types of people affected.

The principal concern is with pedestrians or cyclists, but journey amenity impacts also apply to drivers, for example due to the frustration associated with congestion or safety anxiety associated with the crossings of major roads. Such journeys could involve older drivers or school children as passengers.

Changes in the amenity of a journey can also impact on journey patterns and so there are interactions with Journey Characteristics and Community Severance.

Environmental impacts affecting the pleasantness of journeys, such as pollution, noise and visual impacts, also affect the general amenity of people living in the vicinity. The same is true of direct or indirect impacts on particular community facilities and recreational sites.

Typically, these impacts are specifically addressed under the headings of Noise and Vibration, or Landscape and Visual, but they have a community dimension too in that human well-being is affected. This effect can also extend to the level of enjoyment experienced by tourists with possible economic consequences. For these reasons, relevant impact assessments from other chapters may be discussed in the context of human beings.

7.2.3.4 Economic Impacts

Economic and employment impacts occur at both the regional and local scale and can be either positive or negative. Much road development is proposed with the intention of improving national competitiveness and economic/social linkages, for instance in relation to reducing journey time and improving journey time reliability for commercial goods or for travel and commuting by employees. However, there can also be some negative impacts in relation to loss of passing trade to businesses such as newsagents, grocery stores, filling stations, guest houses, etc. Impact levels are defined in Table 7.4 below:

Table 7.4: Criteria used in the assessment of Economic Impacts

Impact level	Significance criteria
Imperceptible	No significant economic impacts are apparent
Slight	A small impact on the business environment can be attributed to the proposed road development.
Moderate	A moderate impact on the business environment can be identified.
Major	An impact that has the potential to substantially affect business performance or to influence the location decisions of new business.
Profound	Impacts of a scale to significantly affect the performance of a major business or several businesses. Where these businesses are important local employers there is the possibility of significant impacts for the general prosperity of the local area or region.

Economic impacts may affect an identifiable local business and such businesses could be important local employers. In this case, impacts on individual companies may be discussed in the text. Other economic impacts could affect the wider community, for example where a number of businesses are affected or where the retail or business environment of a town is impacted. Again, such impacts can be positive or negative.

7.2.3.5 Data Deficiencies

There were no major difficulties or data deficiencies encountered in the production of this assessment.

7.3 Existing Environment

7.3.1 Demographic Profile

In common with other towns within commuting distance of Dublin, the population of Sallins and Naas has expanded significantly in the last ten years.

Figure 7.1 V3 shows the Electoral Divisions (ED) in the study area and Table 7.5 reveals the level of population growth that has been experienced in these EDs. The vicinity of Sallins (centred on Bodenstown ED) has experienced very significant levels of growth especially the suburbs of Naas (Naas Rural) and the ED of Carragh. Table 7.6 confirms the same for the individual private households, numbers of which have increased even more than for population as household size has fallen. Table 7.7 shows that this growth has also been reflected in the population of towns within the Dublin commuter belt of County Kildare. Growth in Sallins remained especially strong during 2006-11.

The increase is represented on the ground by the presence of new residential estates in Sallins some of which were in the process of construction immediately prior to the financial crisis of 2008. This pattern is indicated by Table 7.8, although the figures do reveal a slowdown in the number of new houses built.

Although growth has been substantial it has slowed considerably in recent years. CSO projections (published in December 2008) had allowed for substantial migration to the Mid-East Region with the total population having been projected to increase by 275,000 to 754,000 by 2026 representing an annual increase of 2.3%, the highest forecast for the state.

However, the Population and Migration Estimates (September 2012) acknowledge that, due largely to the effect of emigration, the actual Mid East population in 2011 was 533,800 or 10.1% below that predicted on the basis of the 2006 data. The Sallins Local Area Plan (LAP) 2009 had projected a population of 5,038 by 2016, a figure that was slightly exceeded in 2011 at 5,283.

Table 7.5: Population: local Electoral Divisions

Electoral division	2002	2006	2011	Percent change 2002-06	Percent change 2006-11
Naas Urban	18,288	20,044	20,713	9.6%	3.3%
Naas Rural	1,134	1,717	2,353	51.4%	37.0%
Bodenstown	3,193	3,734	4,643	16.9%	24.3%
Carragh	901	1,487	1,725	65.0%	16.0%
Clane	5,179	6,106	7,527	17.9%	23.3%
Donore	641	756	793	17.9%	4.9%
Downings	2,090	2,573	2,886	23.1%	12.2%
Kill	2,993	3,734	4,449	24.8%	19.1%

Table 7.6: Private households: local Electoral Divisions

Electoral division	2002	2006	2011	Percent change 2002-06	Percent change 2006-11
Naas Urban	5,904	6,502	6,952	10.1%	6.9%
Naas Rural	345	626	867	81.4%	38.5%
Bodenstown	1,011	1,217	1,506	20.4%	23.7%
Carragh	261	443	497	69.7%	12.2%
Clane	1,635	2,070	2,667	26.6%	28.8%
Donore	193	224	244	16.1%	8.9%
Downings	644	842	957	30.7%	13.7%
Kill	923	1,209	1,495	31.0%	23.7%

Table 7.7: Population: Co Kildare towns in Dublin commuter belt

	Naas and environs	Sallins	Newbridge (Droichead Nua) & environs	Clane	Celbridge	Maynooth
2011	23,066	5,283	21,561	6,702	19,537	12,510
2006	21,761	3,806	18,520	4,968	17,262	10,715
2002	19,422	2,922	16,739	4,353	16,016	10,151
% change 2002-06	12.0%	30.3%	10.6%	14.1%	7.8%	5.6%
% change 2006-11	**6.0%**	**38.8%**	**16.4%**	**34.9%**	**13.2%**	**16.8%**

Table 7.8: Year house built

	Pre 1990	1991-00	2001-05	2006-11	NS	Total
Naas Urban	3,036	2,369	937	305	303	6,950
Naas Rural	136	164	327	190	44	861
Bodenstown	382	588	249	221	59	1,499
Carragh	185	69	180	53	9	496
Clane	717	745	579	487	138	2,666
Donore	127	44	39	24	10	244
Downings	310	292	242	91	21	956
Kill	496	344	382	227	45	1,494

A sizeable proportion of the population of Naas and Sallins commutes each day to Dublin, a journey of at least half an hour. However, Table 7.9 demonstrates that there is also a high number of journeys of shorter length. A proportion of these journeys would be to industrial and business parks located on the outskirts of Naas, including the Millennium Park development. Table 7.10 confirms that around half of journeys are by car with figures in excess of the 45% target set by Smarter Travel: A Sustainable Transport Future, the Government's New Transport Policy for Ireland 2009-2020.

The table includes journeys to school and college and so a high proportion of bus journeys will involve these population sub-groups, although there is a private bus service between Clane, Sallins and Naas. The table also shows that over 7% of commutes are by train with Dublin-bound commuters in a position to avoid the busy M7 by using the rail service which stops at the station in Sallins. Although to the north of Naas, the Sallins Train Station represents the main station for the town with 28 trains each day into Dublin.

Table 7.9: Average commuting journey time (including schools and colleges)

	15 mins	¼-½ hr	½ - ¾ hr	¾ - 1 hr	1-1½ hr	>1½ hr	not specified	Total
Naas U	32.3%	30.6%	16.2%	7.2%	8.8%	2.0%	3.6%	13,517
Naas R	25.9%	28.2%	20.1%	9.0%	10.7%	2.1%	3.9%	1,566
Bodenstown	24.3%	31.3%	19.0%	8.3%	10.2%	2.0%	4.9%	3,008
Carragh	37.2%	28.2%	14.4%	6.5%	7.7%	2.1%	4.0%	1,175
Clane	23.5%	33.6%	18.0%	9.5%	9.7%	1.9%	3.8%	4,937
Donore	31.8%	32.0%	17.7%	4.9%	9.0%	1.9%	2.6%	531
Downings	34.4%	24.8%	15.3%	7.3%	11.0%	2.6%	4.6%	1,766
Kill	26.5%	28.2%	22.2%	8.9%	8.3%	1.7%	4.2%	2,940

Table 7.10: Means of travel to work, school or college

	walk	cycle	bus	train	Motor cycle	Car/ van driver	passenger	other	not specified	Total
Naas U	17.9%	1.8%	6.5%	2.9%	0.3%	48.6%	18.4%	1.9%	1.6%	13,742
Naas R	10.1%	0.9%	5.8%	10.3%	0.5%	54.7%	13.4%	2.9%	1.2%	1,607
Bodenstown	10.2%	0.9%	9.7%	7.1%	0.5%	47.0%	19.5%	2.8%	2.3%	3,081
Carragh	16.0%	0.7%	8.8%	3.4%	0.2%	47.2%	19.4%	3.1%	1.3%	1,210
Clane	13.5%	0.5%	8.5%	1.6%	0.3%	53.4%	17.8%	2.3%	2.1%	5,041
Donore	3.1%	0.2%	6.8%	1.7%	0.2%	53.0%	30.5%	3.3%	1.3%	545
Downings	17.5%	0.2%	6.3%	1.4%	0.4%	49.2%	19.5%	3.8%	1.8%	1,820
Kill	8.9%	0.9%	13.5%	0.6%	0.3%	54.2%	17.9%	2.2%	1.5%	2,997

7.3.2 Current Traffic Conditions

The absence of an interchange between Sallins Road and the M7 is one factor that contributes to daily traffic congestion along Monread Road as drivers leave the M7 at the eastern Maudlins interchange with a view to accessing the North-west Quadrant of Naas. Peak morning congestion is at its worst as traffic approaches the roundabout between Sallins Road and Monread Road. On Sallins Road, there are peak hour tail backs from the same roundabout into Sallins town. These roads are used for non-work and school journeys. Congestion encourages some additional use of backroads such as Osberstown Road and Kerdiffstown Road, both of which are minor and unsuitable for anything other than light traffic.

Through traffic on the R407 from the direction of Clane also contributes to congestion and delays on the Main Street through Sallins town centre. This traffic is combined with local traffic and also journeys destined for the Sallins Train Station. The station in Sallins currently acts as the main station for Naas. Local congestion obviously reduces the appeal of train journeys as an alternative to the M7.

Late afternoon peak-time departures from the station car park are also delayed by the volume of traffic on Sallins Road and the difficulty of exiting from the station, although parking is available at the adjacent Waterways Centre.

The Sallins LAP (2009) outlines an objective for a public transport interchange and the development of a public transport corridor from Naas town centre, through Millennium Park to Sallins Train Station. The objective of a public transport corridor between central Naas and Sallins Train Station is reiterated in the Naas Town Development Plan 2011-17 by the reference to the Integrated Framework Plan for Land Use and Transportation (IFPLUT) (NTC & KCC, 2003). Further details are provided in Chapter 2 *Planning and Policy*.

Retail developments contribute to traffic volumes in the vicinity of the Monread Road which is a District Retail Centre possessing a retail park at its western end with two large supermarkets and a comparison shopping park at its eastern end. There are also convenience retail outlets in Sallins at the Waterways Centre.

Although much of the traffic associated with these developments is induced outside of peak hours, they do require a high level of accessibility from Naas suburbs and the M7 including for deliveries. There are three signalised pedestrian crossings facilities on Monread Road, two of which are associated with junctions.

The Sallins Local Area Plan (LAP) remarks that the volume of through traffic in Sallins restricts accessibility for pedestrians and other road users. The LAP's Development Goals include maintenance of the potential for public transport and for convenient circulation of town by foot, bicycle and car. In terms of pedestrian access there is a continuous roadside footpath into central Naas from Sallins. There is a single dedicated pedestrian crossing at Church Avenue in the centre of the town and signalised pedestrian crossing facilities at the junctions with the Waterways Centre and Millbank.

Road markings reserve the edge of the road for cyclists south of the Waterways Centre, although the Main Street does not possess a cycle path. In addition, Canal Bank provides pedestrian and cyclist access into Naas along the Naas Branch Canal. The canal side is a well-used amenity that includes the Naas Historical Trail. Vehicle traffic can use Canal Bank, but use of this road by vehicles is inhibited by speed bumps and awkward access to the principal road network at either end. The same is true of the Grand Canal which is a prospective Natural Heritage Area (pNHA), although parts of the tow-path are in poor condition. As the tow-path does not continue under Sallins Main Street, both walkers and cyclists must cross the main road.

A dedicated cycle path also exists along both sides of the length of the Western Distributor Road (briefly ceasing on the north side at the canal bridge). There are on-road cycle lane markings on both sides of Sallins Road south of the Sallins Road/ Monread Road roundabout, although these are quite faded in places. On Monread Road there is no cycle lane and cyclists must edge alongside queuing traffic if they remain on the road. These cyclists, along with those using Sallins Road, also have to share the road with vehicles when negotiating the busy Sallins Road/Monread Road roundabout.

7.3.3 Community Facilities

As the county town, Naas possesses a full range of community facilities including a hospital, a community college, secondary and primary schools, a sports complex, a theatre, cinema and a range of shops and hotels.

The residential area in north Naas has expanded considerably in recent years. New estates have been built on the south side of the M7 at Oldtown and development has extended north across the M7 into Sallins. The north-eastern quadrant of Naas is comprised of a mix of recent residential development, industrial estates, a park and retail centres. Further development has occurred near the M7 in the form of the Hunters Wood and Oldbridge estates.

The area around the canal in Sallins is attractive location with potential for civic enhancement (Image 7.1). The Sallins LAP (2009) favours a strengthening of the town centre through mixed use development. Sallins is designated as a small growth town within the County Development Plan making it a location for locally financed business enterprises and retail development of a mainly convenience nature. The construction of the Watersides Centre was a step towards this objective. The entrance to the centre is located just south of the railway bridge. The development contains a mix of retail, office and apartments as well as a leisure centre and a Supervalu. Another supermarket chain, Lidl is located on Millbank. A handful of small shops, services and take-aways are located on Main Street along with a couple of pubs. Odlums mill, formerly a large employer, is located on the west side of the road beside the canal.

Secondary schools are located in Naas and Clane. In Sallins, the National School (St. Laurence's) is located on Church Avenue on the edge of the town and has around 600 pupils. There is a growing demand for school and crèche places given the young demographic profile of Sallins. A crèche is also situated on Church Avenue close to Sallins Road. Another crèche (Cocoon) is located on Millbank, a third (Acorn) on Osberstown Cottages road, a fourth crèche/playschool on Sallins Wood, and a Montessori on Chapel Mews. Sallins parish church (Our Lady of the Rosary and Guardian Angels) is located on Church Avenue. The concentration of schools, crèches and community facilities in the vicinity of the canal adds to local congestion, especially given the rather restricted sightlines at the exit from Church Avenue onto the busy Sallins Road at a narrow T-junction.

Sallins GAA is located at the end of Chapel Mews on the north side of the canal. Sallins Celtic Football Club is currently located between Castlesize and Millbank. Naas Golf Course is located to the east of Sallins along Kerdiffstown Road. The LAP contains references to the potential for a linear park along sections of the River Liffey which is also a pNHA. Fishing permits for the River Liffey are issued by the North Kildare Trout and Salmon Association.

There is access to both sides of the river from the canal aquaduct and from other locations such as Castlesize. The canal is another popular amenity and its towpath is used for local walking and cycling. The Community Council has proposed that that the condition of the tow-path from Dublin should be improved and developed into a Dublin to Naas Cycleway.

In Naas, south of the M7, on the Sallins Road, there a relatively new primary school located beside the Naas GAA grounds. Most children at the primary school are dropped off by car. Closer to the centre of Naas, off Sallins Road, is the Naas Parish Church, the Mercy Primary School and St. Mary's College.

At the eastern end of Monread Road there is an ambulance station, Monread Business Park, Monread Industrial Estate and a retail park. Tesco and Aldi are located further along the road towards the roundabout with Sallins Road. Naas Health and Fitness and several shops are located on Monread Avenue between the Sallins Road and Monread Road.

7.4 Predicted Impacts on Human Beings

7.4.1 Construction

Major works include the interchange (M7 crossing), the railway crossing, the two river crossings, and the canal crossing. Of these, the interchange works will produce the largest level of construction traffic. Most construction traffic is expected to access the proposed scheme via the R407 Clane Road, the Western Distributor Road and the M7. The exact source of aggregates will be decided by the contractor, but is likely to be sourced from a quarry to the west. This will involve HGV traffic using the M7 for Section 1 of the proposed road scheme, the Western Distributor Road for Sections 2-3, and the R407 Clane Road for Sections 4-6.

On the R407 Clane Road an increase in HGV construction traffic of 18% compared with the existing levels is expected, but this is predicted to increase AADT by only 1% to 18,700. Consequently, the impact on severance here is imperceptible. However, an increase in HGV traffic is likely on the R403 between Clane and Prosperous. Two schools, a church and Clane General Hospital are located beside the R403 or have access onto this road in the two settlements. This would be a slight to moderate negative impact for a finite period of up to 18 months, although there is the possibility to avoid Clane by use of the local road through Millicent.

The increase in HGV traffic on the Western Distributor Road is expected to increase total AADT by 17% and 1% respectively. This road has a wide roadside footpath and cycle track so impacts on journey amenity will be imperceptible. The absence of community facilities or residential development alongside the road means that the general amenity impact is also imperceptible.

There will be a need to briefly use Canal Road to access the area between the railway and the canal for the purpose of constructing the temporary supports for the railway crossing. For a short period, this will involve around 27 daily HGV movements and a 31% increase in AADT. However, once the supports are in place, construction of the bypass will be able to continue along the route of the proposed road development without use of local roads. On Osberstown Road a temporary parallel road diversion with single lane traffic will be in operation for up to four months.

7.4.2 Operational

7.4.2.1 Journey Characteristics

The proposed road scheme will provide traffic with direct access from the M7 to the Western Distributor Road and to lands zoned for commercial development in the Northwest Quadrant of Naas including Millennium Park. Traffic for these destinations will be able to avoid the Newlands Interchange or the busy Monread Road from Maudlins Interchange. Most traffic for central Naas from the M7 will continue to use either of the two existing interchanges.

On this basis of the criteria given in the methodology section, the impact on journey time and journey time reliability for journeys to the North West Quadrant originating in the vicinity of the M7 and commencing from outside Naas will be slight positive noting the typical length of journeys to the Millennium Park for drivers on the M7. Arguably, the more relevant impact is the improved connectivity for the Northwest Quadrant together with the journey time reliability this will provide. Given the zoning of the location for commercial development, the implications of this impact are addressed in the section dealing with economic impacts.

For journeys between the R407 and the North West Quadrant, the proposed Sallins Bypass will have at least a moderate positive impact on journey times for many trips undertaken at peak hours due to the transference of journeys from Main Street in Sallins where congestion arises at this time. The bypass will particularly benefit local journeys. In addition, a significant reduction in through traffic in the centre of Sallins is predicted of over 37% by the Design Year of 2030 under a medium growth scenario. On average, this reduction in traffic will result in a reduction in overall peak (morning and afternoon) travel times rising to 19% in the Design Year. This will result in a slight positive impact on journey times and journey time reliability for many local trips including those between Naas, Sallins and Clane. This same positive impact will extend to journey amenity benefits including for many school and crèche journeys.

There will also be an improvement in journey time for drivers using Monread Road due to the proposed interchange as some traffic is transferred to - or remains on - the M7 as far as the interchange. In addition, a reduction in AADT is predicted on the Monread Road on the approach to the Sallins Road/Monread Road roundabout of 27% by the Design Year and 46% on the eastern (Maudlins) section of the road compared with the do-minimum scenario. Combined with the reductions in traffic on the R407, this causes the predicted impact to extend to a 36% reduction in AADT on the R407 at the roundabout representing a moderate positive impact on journey times from the direction of Sallins.

The combination of the proposed interchange and bypass will also have a positive impact for cyclists given that Monread Road has no cycle lane and therefore cycle journeys will be less delayed by queuing traffic. For pedestrians, there will be a slight reduction in crossing delay time on both Monread Road and on the Main Street in Sallins away from crossing facilities. These impacts on cyclists and pedestrians are primarily addressed under Community Severance and Journey Amenity.

Integration with Public Transport

The reduced journey time and improved connectivity arising from the combination of the proposed interchange and the bypass should greatly facilitate trips to Sallins Train Station particularly from outside of Sallins including from locations off the M7. This will provide a *moderate positive* impact at peak times. The positive impact will allow rail transport to become a viable alternative for many drivers who might otherwise have travelled to Naas or Dublin on the M7. There are potential benefits for environmental sustainability if planning and transport policy builds on this improvement in connectivity. As noted above, the Naas Town Development Plan 2011-17 reiterates the value of a public transport corridor linking the town centre to the Northwest Quadrant and Sallins Train Station.

7.4.2.2 Community Severance

Relief from severance

Significant reductions in severance can be expected at four principal locations, at Monread Road, at the Sallins Road/Monread roundabout, Osberstown Road and Sallins Main Street.

The combination of the proposed interchange and bypass will have a moderate positive impact in terms of relief from severance on Monread Road due to the transference of some traffic to the M7. The impact will be of most significance in the vicinity of retail outlets and away from crossing facilities, although the dominant means of access to these retail outlets is by motor vehicle. Similarly, at the Sallins Road/Monread Road roundabout, there will be moderate positive relief from severance. However, as there are no community facilities in the immediate vicinity of the roundabout the main impact here relates to journey amenity (see below).

Sallins will experience considerable relief from severance along Main Street and Clane Road as far as northern boundary to the town. The significance of this reduction will be greater in the centre of the town along Main Street and in the vicinity of community facilities such as local convenience shops. The positive impact of the bypass as an alternative to Main Street will be moderated somewhat by the continued use of Main Street by residual and local traffic. Overall, though, there will be a moderate positive impact along the entire length of road. This positive impact applies especially to pedestrians accessing schools, shops and other community facilities in the centre of Sallins, including journeys by sensitive groups such as children and elderly people. There will also be a moderate positive impact for cyclists looking to cross Main Street from connecting side roads noting the absence of crossing facilities for this group away from signalised junctions. For both subgroups there is an interaction with journey amenity due to the perceived hazard of crossing the road.

On the built-up section of Osberstown Road in Sallins there will be a reduction in traffic of 23% by the Design Year under the medium growth scenario compared with the do-minimum scenario as commuting traffic is transferred to the bypass. This will provide for slight positive relief from neighbourhood severance between households and for the crèche located here.

New severance

There is the prospect of an increase in severance at four locations, although the impact is slight at three of these. An increase in traffic is expected on Sallins Road south of the Sallins Road/Monread Road roundabout of 14% by the Design Year under the medium growth scenario compared with the Do-minimum scenario, but this converts to a very slight increase in traffic of 4% on the approach into the centre of Naas where more community facilities are located. Overall, the change in severance here is likely to be imperceptible.

There is potential for new severance between Millbank and Castlesize potentially affecting access to the current grounds of the soccer club, children's informal use of underdeveloped land and access to the Cocoon crèche. There will be a loss of informal car parking on the north side of Millbank, but some new parking will be provided beside the crèche along a residential cul-de-sac connected by a new T-junction with the Sallins Link Road. As predicted traffic volumes are light, the risk of new severance is imperceptible to slight, although this could change in the event that the adjacent land is developed.

The proposed road scheme is expected to attract an increase in traffic on the R407 of 4% by the Design Year. There have been improvements to the R407 in recent years. The road provides a connection to the N4 and a reasonably high amount of traffic does use the R407 (19,200 AADT just north of Sallins), but local and commuting traffic comprises a large proportion of this volume. The approach to the main street in Clane includes a children's playground and the centre of the town contains shops on either side of the road. However, there is the option of using the town bypass at least to avoid the centre of Clane and so the predicted increase in traffic will not have a significant impact on severance.

7.4.2.3 Amenity

The proposed scheme will result in a moderate positive impact on journey amenity for both pedestrians and cyclists using Sallins Road due to a predicted 37% reduction in traffic, including HGVs, by the Design Year under the medium growth scenario. The journey amenity of drivers will also be enhanced by the availability of the alternative route options presented by the proposed road scheme. The reduction in traffic and improved connectivity will also enhance the accessibility of Sallins and Sallins Train Station for both private transport and potentially public transport too.

The relief from severance and the reduction in perceived hazard (particularly for crossings of the road by pedestrians and cyclists) will contribute significantly to this improvement in journey amenity. The positive impact is moderated by continued use of the road by local traffic, but can be advanced to a major positive impact through the provision of additional pedestrian and cyclist facilities and by efforts to discourage use of Main Street by non-local traffic.

Planned improvements to cyclist and pedestrian facilities noted in the LAP, but outside of the scope of the proposed scheme, have the potential to underpin this positive impact.

At the Sallins Road/Monread Road Roundabout, cyclists and pedestrians will experience improved journey amenity due to the proposed road scheme as a proportion of traffic, including HGVs, is transferred. The reduction in traffic on Monread Road due to the availability of the new interchange for M7 traffic will also enhance the journey amenity of cyclists using this road providing a moderate positive impact.

With regard to the proposed road development itself, cyclists and pedestrians will have the alternative of being able to use a segregated shared two-way cycle track and footway along the eastern side of the Sallins Bypass as far as Ch 1+375 from where they will be able to descend on a dedicated cycle track onto Canal Road through Drumlish to Osberstown Road. Cyclist crossings of Osberstown Road will be facilitated by a reduction in traffic on the rural section of the road of 37% in the Opening Year with the bypass. After passing below the M7 using the existing underbridge, cyclists can connect with the cycle lanes on the Western Distributor Road (to Millennium Park) or continue into central Naas along the branch canal. The cycle track from the Sallins Link Road will not continue south along the R407 Sallins Bypass beyond Ch 1+375 as this would present a potential hazard at the M7 crossing given the volume of traffic joining or leaving the interchange.

A segregated cycle track and footway is proposed for both sides of the Sallins Link Road that connects the bypass with the centre of Sallins at Millbank. The Sallins Link Road cycle track will be able to attract cyclists from the centre of town as an alternative to the use of Main Street and the need to negotiate the Sallins Road/Monread Roundabout. As a direct route to Millennium Park or to the centre of Naas, and as a safer alternative to the existing road network, the proposed cycle facilities represent a major positive impact for this user group and for sustainable travel.

As well as providing for cycle journeys, the cycle track connection to Canal Road will also provide an attractive new amenity. In itself, it should have a positive impact on the level of cycling. Cyclists will also be able to connect with the Grand Canal tow-path from a dedicated cycle track descending from the bypass at Ch. 1+350. The same facility provides a walking opportunity for pedestrians from the roundabout connection between the bypass and Clane Road or from the Sallins Link Road. As well as overlooking a green area, the footpath will afford views of the Liffey from the two bridges included in the proposed scheme. As with the cycle track, the footpath will not continue to the interchange for reasons of safety. Pedestrians will also be able to join the slip road to Canal Road and continue onto Millennium Park or to central Naas or be able to undertake a potential circular walk along the towpath of the Grand Canal back into Sallins. The proposed footpath represents at least a *moderate positive* impact as an alternative to routes to Millennium Park or into town.

The improved environmental amenity in the centre of Sallins will benefit residents living alongside Main Street/Clane Road due to the reduction in traffic and associated environmental impacts of noise and visual intrusion as well as improved air quality (see Chapter 12 – *Air Quality*).

This is a major positive amenity impact that will lead to an increase in pedestrian activity combined with a greater tendency to linger in central Sallins.

In turn, this will provide an opportunity to enhance the urban environment of Sallins and has the potential to interact with economic impacts by changing the composition of local retail outlets, social facilities and community structure over time. General amenity will also be enhanced along the rural section of Osbsertown Road west of Canal Bank and along Kerdiffstown Road where midday traffic is light, but where peak hour's traffic reductions will reduce the daily AADT by 73% on average in the Opening Year.

7.4.2.4 Economic

The improved accessibility and connectivity provided by the proposed road scheme, together with the cumulative impact of the M7 Naas to Newbridge By-pass Upgrade Scheme, will have a *major positive* impact on businesses located in the Northwest Quadrant including the Millennium Business Park. This will include future businesses that choose to locate here, including in the near-term the proposed Kerry Foods investment.

Together with the proposed bypass, the reduction in traffic on Main Street and Clane Road in Sallins will improve the accessibility of the town providing a moderate positive impact. The immediate vicinity of the town is not designated for major industrial investment, although modest sized areas within the bypass route have been zoned for future possible industrial and warehousing development. The reduction in traffic and congestion combined with relief from severance for pedestrians and cyclists will greatly improve the general amenity in the town centre as noted above. This will allow the town to realise the potential of its existing assets, especially the canal. Given the large residential catchment, this improved environment should attract more pedestrian activity and social interaction to the town centre which in turn will stimulate new retail and related opportunities. There is therefore potential for the traffic impact to be transformed into a *major positive* impact over time.

The improved accessibility can be expected to have a similar scale of positive impact on local employment. However, while the net position is positive, there is the prospect for reductions in passing trade for a few businesses on Main Street/Clane Road in Sallins, most especially the service station and a grocery store, but also a gradual loss of familiarity for some others including a furniture store. At a community level the impact is slight, but it will be more significant for some of the businesses themselves.

The reduction in traffic on Monread Road and the easing of traffic conditions at the Sallins Road/Monread Road Roundabout will also improve the accessibility of Monread Road and of the various retail and industrial estates located along the road. The improvement here will be further enhanced by the effect of the proposed bypass as traffic is reduced and more evenly distributed at the roundabout reducing the extent of congestion along Monread Road. The reduction in traffic and improved accessibility will have a major positive impact on businesses located in industrial and retail estates.

7.4.2.5 Cumulative Impacts

The M7 Naas to Newbridge By-pass Upgrade Scheme will precede the proposed road scheme and have a positive cumulative impact on accessibility to the NorthWest Quadrant, and the M7 Naas Bypass.

A large area of the Northwest Quadrant of Naas has been zoned for commercial development, but is currently undeveloped. The improved accessibility will stimulate such development in the future along with employment generation.

The new cycle and footpath facilities included in the proposed scheme have the potential to complement proposals for future improvements to amenity and to inter-connect with other cycle tracks and pedestrian facilities in Sallins discussed in the Sallins LAP.

There is the potential for a further positive cumulative impact on amenity should the quality and continuity of the canal tow path be improved. The connectivity and accessibility of Sallins Station will also be significantly improved for private vehicles and potentially for public transport. Taken together, the proposed road scheme contributes to more sustainable transport in Sallins and Naas including commuting and amenity.

7.5 Mitigation Measures

A number of positive design elements are included in the proposed schemes, which have the capacity to improve the local environment and sustainable transport. By way of mitigation, the following are proposed to maximise the net human being positives of the proposed scheme:

- Provide roadside footpath along the R407 Clane Road as far as the roundabout south of the connection with the bypass.
- On-road signage and surfacing on Osberstown Road is needed to alert drivers to cyclists and pedestrians crossing the road at Ch. 0+400.
- Provide for uncontrolled crossing of proposed Sallins Link Road to Millbank from informal path from Castlesize Estate and football pitch.
- Provide for angler or amenity access along both sides of River Liffey beneath bridge crossings.
- Protect and improve tow path in immediate vicinity of the canal crossing.

7.6 Residual Impacts

Overall, the proposed scheme will have a significant net positive residual impact on journey characteristics, community severance, journey and general amenity, and the local economy.

There are numerous interactions between each of these impacts. There are also positive cumulative impacts in terms of the sustainability of transport use and local amenity.

Negative impacts will apply to a few businesses on Main Street and Clane Road in Sallins that are currently patronised by drivers passing through Sallins.

Although significant for these businesses, the net economic impact at community level is moderate to major positive.

A summary of the overall impacts is provided in Tables 7.11 to 7.15.

Table 7.11: Impacts Summary - CONSTRUCTION

Nature of Impact	Location / Sub-Group	Current situation	Impact of the proposed scheme	Significance	Magnitude	Interactions	Mitigation proposed	Residual Impact
Journey amenity General Amenity	R407 Clane	Slight negative impact due to traffic volumes	Deterioration in pedestrian journey amenity and general amenity	Imperceptible	Medium	Amenity and general amenity	n/a	Imperceptible
Severance	R403 Prosperous and Clane	Imperceptible	Potential for some severance in vicinity of schools and hospital for finite period of up to 18 mth	Moderate negative	Low	General amenity	Possible use of Millicent Road to avoid Clane	Slight
Journey amenity General Amenity	Western Distributor Road	Imperceptible impact	Increase in HGV traffic.	Imperceptible	n/a		n/a	Imperceptible
General amenity	Section of Canal Road	Imperceptible	Large proportional increase in HGV traffic for short period, Absolute number is small	Slight negative	Low		n/a	Slight

Table 7.12: Impacts Summary – OPERATION: Journey Characteristics

JOURNEY CHARACTERISTICS (JOURNEY TIME, TIME RELIABILITY AND CONNECTIVITY)								
Nature of Impact	**Location / Sub-Group**	**Current situation**	**Impact of the proposed scheme**	**Significance**	**Magnitude**	**Interactions**	**Mitigation proposed**	**Residual Impact**
Journey time Time reliability Connectivity	Interchange and Bypass. Vehicle journeys R407, M7 and NW Quadrant	Delays experienced in Sallins especially at peak hours.	Direct access to M7, Naas NW Quadrant and Distributor Road to/from R407.	Moderate positive	High	with Economic through improved connectivity	n/a	Moderate positive
Journey time	Monread Road. Vehicle journeys	Delays especially on approach to Sallins Road/Monread Road Roundabout	A proportion of traffic is transferred to or remains on the M7 as far as the proposed interchange.	Slight positive	High		Slight	Slight positive
Journey time Time reliability	Sallins. All vehicles and public transport	Delays experienced in Sallins especially at peak hours.	Reduced traffic on Sallins Main Street and easing of delays on connecting minor roads.	Slight positive	High		n/a	Slight positive
Journey time Time reliability Connectivity	To Sallins (Naas) Railway Station	Poor connectivity. Delays experienced in Sallins especially at peak hours.	Reduced traffic in Sallins. Improved connectivity from the M7.	Moderate positive	High	Sustainability	n/a	Moderate positive
Journey time	Monread Road. Cyclists	Delays especially on approach to Sallins Road/Monread Road Roundabout	A proportion of vehicle traffic is transferred to or remains on the M7 as far as the proposed interchange.	Slight positive	Low	Journey Amenity	n/a	Slight positive

Table 7.13: Impacts Summary – OPERATION: Severance

SEVERANCE								
Nature of Impact	**Location / Sub-Group**	**Current situation**	**Impact of the proposed scheme**	**Significance**	**Magnitude**	**Interactions**	**Mitigation proposed**	**Residual Impact**
Relief from severance								
Relief from severance due to interchange	Pedestrians. Monread Road	Significant severance away from crossing facilities	Reduction in severance especially benefitting sensitive population groups	Slight positive	Medium	Journey Amenity	n/a	Slight positive
Relief from severance due to interchange and bypass	Pedestrians. Monread Road	Significant severance away from crossing facilities	Reduction in severance especially benefitting sensitive population groups	Moderate positive	Medium	Journey Amenity	n/a	Moderate positive
Relief from severance due to interchange and bypass	Sallins Road / Monread Road Roundabout	Significant severance for pedestrians	Reduction in severance as traffic distributed at roundabout	Slight to moderate positive	Low	Journey amenity	n/a	Slight to moderate positive
Relief from severance	Pedestrians. Centre Sallins	Significant severance away from crossing facilities	Reduction in severance due to transference of most traffic to Bypass, especially benefitting sensitive population groups	Moderate positive	Very high	Journey Amenity	n/a	Moderate positive
Relief from severance	Cyclists. Centre Sallins	Significant severance especially when crossing Main Street	Reduction in severance	Moderate positive	Medium	Journey Amenity	n/a	Moderate positive
Relief from severance	Osberstown Road (built-up section)	Road used as a morning rat-run	Reduction in severance due to transference of traffic	Slight positive	Low		n/a	Slight positive

SEVERANCE								
Potential new severance								
New severance	Pedestrians. Between Millbank and Castlesize	n/a	New severance due to Link Road affecting football club and movement between estates.	Imperceptible to Slight negative	Low		Provide uncontrolled crossing (road markings)	Imperceptible
New / Relief from severance	Sallins Road into Naas	Moderate severance mitigated in vicinity of crossings	Small increase in traffic predicted near roundabout, transferring to reduction at southern end of road.	Imperceptible	Medium	Journey Amenity	n/a	
New severance	Clane	Moderate severance mitigated by town bypass and crossings.	Increase in traffic predicted	Imperceptible	High	Journey Amenity	n/a	Imperceptible

Table 7.14: Impacts Summary – OPERATION: Amenity

AMENITY								
Nature of Impact	**Location / Sub-Group**	**Current situation**	**Impact of the proposed scheme**	**Significance**	**Magnitude**	**Interactions**	**Mitigation proposed**	**Residual Impact**
Journey amenity	Central Sallins Pedestrians, Cyclists.	Poor amenity due to visual clutter, perceived hazard and poor environmental quality	Improved amenity due to transference of most through traffic to Bypass	Moderate positive	Very high	Severance Economic	Encourage pedestrian and cycle traffic. Discourage through traffic	Major positive
Journey amenity	Monread Road Cyclists	Poor environmental amenity on Monread Road and potential hazard at roundabout with Sallins Road.	Improved amenity due to transference of a proportion of traffic to the interchange.	Moderate positive	Low	Journey time		Slight positive
Journey amenity	Clane Road /Sallins Road to Distributor Road Cyclists.	As above with hazard also experienced at Sallins Road/ Monread Road roundabout.	Improved amenity due to new cycle track facility to L3012 Distributor Road and Canal Bank.	Major positive	High	Sustainability		Major positive
Amenity	Canal Bank Pedestrians, Cyclists.	Opportunity to walk and cycle on Canal Bank with awkward access.	Access opened up to Canal Bank and Grand Canal by new cycle track.	Moderate positive	High		Protect and improve towpath in immediate vicinity	Moderate positive
Amenity	Anglers Passive recreation	No formal access to Liffey, but location identified as potential linear green space	River will be crossed by Bypass at two locations	n/a	n/a		Provide for pedestrian access under bridge beside river	

Table 7.15: Impacts Summary – OPERATION: Economic

ECONOMIC								
Nature of Impact	**Location / Sub-Group**	**Current situation**	**Impact of the proposed scheme**	**Significance**	**Magnitude**	**Interactions**	**Mitigation proposed**	**Residual Impact**
NW Quadrant. Accessibility / connectivity	Businesses dependent on good transport, links for commuting, sales and deliveries	Poor accessibility from M7 and poor connectivity from much of Naas and Sallins	Much improved accessibility and connectivity due to proposed interchange bypass and segregated cycle track / pedestrian path.	Major positive	Very high	Journey Characteristics and Journey Amenity	n/a	Major positive
Sallins	Businesses dependent on good transport	Congestion and poor accessibility from M7	Reduced traffic volumes and improved connectivity. Improved general amenity stimulates new business.	Moderate to Major positive	Medium	Journey Characteristics and Amenity	n/a	Moderate to Major positive
Sallins (Main Street)	Businesses with high level of passing trade	n/a	Loss of a passing trade as a proportion of traffic transferred to the bypass.	Slight to Major negative for individual businesses.	Low		none proposed	Slight impact at community level.
Monread Road	Businesses dependent on good transport	Congestion	Reduced congestion as a proportion of traffic is transferred to, or remains on, the M7.	Major positive	High	Journey Characteristics	n/a	Slight positive