

7. Community

7.1 Introduction

This Chapter of the EIS details the study of the impact of the proposed road development on the community (socio-economic) environment.

The aim of the study was to identify, describe and assess the impacts of the proposed road development on the social and economic functioning of the affected community in general. Other aspects that affect communities (noise, air quality and visual aspects) are addressed in chapters 8, 9 and 10 respectively. The impact on agriculture is considered in Chapter 15.

The community impact of the proposed road development was assessed at a regional, sub-regional, and local level. Particular attention was given to:

- Assessing the impact of the proposed road network on the journeys which people make. Such impacts can include changes in journey lengths and travel patterns as well as changes in amenity. In this context, amenity is defined as the relative pleasantness of a journey.
- Evaluating the impact of the proposed road network with regard to community severance. Essentially community severance is 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.

Beneficial effects result when existing severance is relieved, as for example occurs when a road development diverts traffic and makes an existing road easier for people to cross.

Adverse effects can occur when a new road forms a barrier deterring people from using certain facilities, or when traffic flows increase sharply on an existing road.

- Assessing the impact of the proposals on community facilities, with particular emphasis being given to the effects on schools and recreational facilities.
- Addressing in general terms the impacts for businesses existent along the existing N9 and N10 routes.

7.2 Methodology

The assessment was carried out having regard to the guidelines given in *Volume 11 Environmental Assessment of the UK Design Manual for Road and Bridges*⁽¹⁾ for community effects, and the EPA's *Guidelines on the Information to be Contained in Environmental Impact Statements*⁽²⁾.

The guidelines presented in Table 7.1 were used to categorise the impact of the road development in relation to recreational/community resources. The broad guidelines presented in Table 7.2 and Table 7.3 were used to categorise severance impacts and the impacts on journey amenity respectively. Further, more specific guidelines that were adopted to assess severance effects are presented in Table 7.4 to Table 7.6 inclusive.

Site visits enabled the existing community facilities to be mapped and an evaluation to be made of the existing environment with regard to social functioning.

School principals and representatives of recreational and similar facilities that were identified as being likely to be significantly affected by the road development were consulted in order to assess/verify the likely impacts.

Traffic data was supplied by the Design Consultants (refer to Chapter 6 of this EIS for details)

Changes in journey lengths were determined based on drawings supplied by the Design Consultants.

The identification of the existing business activity along the route corridor was based on windshield surveys.

The demographic characteristics of the area were ascertained from Census of Population data published by the Central Statistics Office.

The existing land use pattern along the proposed route corridor was deduced from aerial photography provided by the Design Consultants, and on-the-ground observations.

Significant sub-regional amenity and tourism sites were identified based on data published by the various tourism authorities, including the web sites of Kilkenny Tourism and Carlow Tourism.

7.3 The Existing Environment

7.3.1 General Regional Context

The existing N9 extends from the M9 at Kilcullen in County Kildare to Waterford City centre. The N10 connects Kilkenny City to the existing N9, both to the north and the south of the city. The N9/N10 serves as the main access between Carlow, Kilkenny and Waterford as well as the main link between Dublin and counties Carlow, Kilkenny and Waterford.

Waterford is the fifth largest town in Ireland and the largest in the south east. It is an important educational, commercial, administrative, and tourist centre. Waterford City also boasts a major port and regional airport.

Kilkenny City and Carlow Town are the largest urban centres in their respective counties and both are administrative and shopping centres. Kilkenny is a designated heritage town and accordingly tourism is an important industry. Carlow has an Institute of Technology and many industrial functions.

7.3.2 Sub Regional Environment

The sub-regional area is shown in Figure 7.1. The study area includes the existing N9 and N10 from Leighlinbridge in Co. Carlow to Kilkenny/Waterford County Boundary.

Landuse and Transportation (macro context)

The landuse of the sub-regional study area is generally agricultural. The study area includes the second largest towns in counties Carlow and Kilkenny, namely Bagenalstown (Muine Bheag) and Thomastown respectively. There are a number of other small towns/villages and outside of these, development is sporadic and mainly comprises once off residential and commercial properties. The Kildare-Kilkenny-Waterford railway line passes north-south through the study area. The Limerick-Waterford-Rosslare line passes east-west at the southern boundary of the study area. Other key infrastructural features within the study area are sections of the existing N9 and N10 routes. A number of regional routes as well as numerous county or local roads also traverse the study area.

Population/Demographics

The demographics of the sub-regional study area is examined by reference to the population of the census towns. For census purposes, a town is defined as one with a legally defined

boundary, or one containing a cluster of 50 or more occupied dwellings.

The population of the census towns for 1991, 1996 and 2002 in the study area and comparable data for the state are presented in Appendix 7.1, Table A7.1, including the percentage increase and decline of populations in each town. There are 10 census town in the study area listed here in decreasing order of size: Bagenalstown (Muine Bheag), Thomastown, Bennettsbridge, Leighlinbridge, Kilmacow, Gowran, Mullinavat, Paulstown, Lawcus and Kells.

Between 1991 and 1996, Thomastown experienced the strongest growth in population, increasing by 6.3 percent. The only other town that showed growth during this period was Kilmacow, whose population increased by 0.5 percent. Paulstown had the greatest population decline between 1991 and 1996, falling by 5.5 percent. Other towns that experienced significant population declines were Bennettsbridge (-4.9 percent) and Mullinavat (-2.8 percent).

For the 1996 to 2002 intercensal period, the population growth rates were considerably more varied, ranging from -5.5 percent in Kilmacow to +32.1 percent in Paulstown. The growth rate in Paulstown for this period is more notable given that Paulstown showed the greatest percentage decrease during the 1991-1996 intercensal period. Coincidentally, the population of the two largest towns in the study area (i.e. Bagenalstown and Thomastown) increased by the same percentage (+1.2 percent) between 1996 and 2002. Aside of Paulstown, other towns that experienced growth rates in excess of the 8.0 percent recorded nationally between 1996 and 2002 were Leighlinbridge (+27.2 percent), Bennettsbridge (+22.3 percent) and Mullinavat (+12.4 percent). Meanwhile, Gowran had negative population growth between 1996 and 2002, its population declining by 4.6 percent.

Community Facilities

There are post primary schools at Bagenalstown (Muine Bheag), Thomastown and Ballyhale/Knocktopher. Grennan Mill Craft School in Thomastown is under the auspices of the Kilkenny Vocational Education Committee (VEC). South-Eastern Health Board community care centres are situated in Leighlinbridge, Bagenalstown (Muine Bheag), Paulstown, Gowran, Bennettsbridge, Thomastown, Kells and Ballyhale. There is one hospital (for the elderly) located in Thomastown. There are branch

libraries at Bagenalstown (Muine Bheag) and Thomastown.

Amenity Facilities

The area has many recreational and heritage facilities, some of them of regional/national importance.

Attractions of regional importance include Gowran Park racecourse (flat and national hunt), the River Barrow (boating and angling), the River Nore (angling), the River Suir (boating and angling) and Mount Juliet golf course and equestrian centre.

Two major way-marked walks pass through the study area, namely the Barrow Way and the South Leinster Way.

Other notable amenities include Gowran Park Golf Course, Mountain View Golf Club (Ballyhale), Waterford Golf Club, Kiltorcan Raceway Karting Circuit (near Ballyhale), the Nore Valley Park Open Farm (Bennettsbridge) Kilfane Glen and Waterfall (1790's romantic era garden, waterfall and restored cottage orné, situated to the north-west of Thomastown), and the Watergarden at Thomastown.

GAA pitches are common throughout the study area. There are a small number of soccer pitches. Kilkenny Rugby Club's grounds are situated adjacent to the N10 to the south of the Kilkenny ring road.

One of the most significant heritage sites is Jerpoint Abbey (12th century Cistercian monastic ruins), located immediately adjacent to the N9, 2km south of Thomastown. Other noteworthy sites include:

- Old Leighlin (13th century St. Lazerian's Cathedral);
- Leighlinbridge (16th century castle, bridge);
- Dunleckney Manor (17th century) near Bagenalstown (Muine Bheag);
- Ballymoon Castle (14th century) near Bagenalstown (Muine Bheag);
- Gowran (13th century medieval church and remains of 14th century castle);
- Tullaherin (9th century round tower and 11th-13th century church), situated 5km north of Thomastown;
- Kilfane Church (14th century ruin), situated 2km north of Thomastown;
- Thomastown (13th century church, castle);

- Kells Priory (a major monastic settlement founded in 1193);
- Kilree (Round Tower and 9th century Celtic cross), situated 3km south west of Stoneyford;
- Aghaviller (Church and Round Tower);
- Knocktopher (Gothic church); and
- Granagh Castle (13th century) on the banks of the River Suir.

A commemorative garden for the victims of the famine is located at Knocktopher.

Economic Functions

Bagenalstown (Muine Bheag) and Thomastown have important economic function, both with a range of banking, retail and professional services. In Bennettsbridge the craft industry is particularly noteworthy. The other villages in the study area have a more limited range of enterprises, primarily servicing the local communities.

Outside the villages, agriculture is the dominant economic function. However there are other non-agricultural enterprises such as quarries, garden centres, service stations, shops and public houses. Tourism is also significant with many accommodation/guest houses scattered through the study area and a caravan/camping park near Bennettsbridge.

The findings of a windshield survey of business activity along the existing N9/N10 is summarised in Appendix 7.1, Table A7.2.

Impact of Current Traffic Volume on Community Environment

The N9/N10 routes form the main streets in Paulstown, Gowran, Dungarvan, Thomastown, Stoneyford, Knocktopher, Ballyhale and Mullinavat. In many of these towns and villages, community and amenity facilities are often directly accessed from the N9/N10. The accessibility of these facilities is negatively impacted upon by the passing traffic. In particular the schools at Paulstown, Thomastown, Stoneyford and Ballyhale either front directly onto, or are situated immediately adjacent to the N9/N10 compromising the schools children's safety. This passing traffic contributes to community severance. The safety of pedestrians and cyclists is compromised. Significant delays for motorists can occur at Thomastown due to the narrow streets and sharp corners.

7.3.3 Local Environment

This section provides an overview of the existing community environment locally along the proposed N9/N10 under the following headings:

- Landuse and Transport Infrastructure;
- Population and Demographics;
- Community and Recreational Facilities; and
- Economic Functions.

LANDUSE AND TRANSPORT INFRASTRUCTURE

Waterford to King's River

This study area is predominantly rural in character, with the landuse being almost exclusively agricultural.

South of Ballyhale, the existing N9 road and the Kildare-Kilkenny-Waterford railway line, running north south, are the dominant infrastructural features. North of Ballyhale, the existing N10 is the major infrastructural feature, running north south and located to the east of the proposed N9/N10. The N24 Waterford-Limerick skirts the southern perimeter of the study area. Regional routes include the R701, the R699 and the R701. The R704 to New Ross commences at a junction with the N9 at the northern end of Mullinavat village. The R699 (N9-Knocktopher-Callan) crosses east west through the study area. The R701 to Kilmaganny commences at a junction with the R699, 2.5 km to the west of Knocktopher. In addition, several third class roads criss-cross the study area.

Villages include Mullinavat, Kilmacow, Ballyhale, Knocktopher and Stoneyford. Minor settlements include Hugginstown, Newmarket and Kells.

Mullinavat has developed in a ribbon-like manner along the N9. Within the village, development on the eastern side of the N9 is largely constrained by the close proximity of the railway line.

Development in Kilmacow is also linear in form. Unusually, this development has taken place in two main areas situated approximately 1km apart, yielding an upper village and a lower village. Its close proximity to Waterford City ensures that Kilmacow and its environs is an attractive residential location and there is extensive development pressure in the locality.

The remaining villages are also linear in form; Ballyhale having developed along the existing N9, while both Knocktopher and Stoneyford straddle the existing N10.

Outside of the above-mentioned settlements, development is generally sporadic, chiefly consisting of single residential properties and a few commercial premises. Ribbon-type development is evident in a number of locations, particularly on approaches to Mullinavat and Kilmacow.

In addition to the Kildare-Kilkenny-Waterford railway line, the Limerick-Waterford-Rosslare railway line passes east-west near the southern boundary of the study area. Iarnród Éireann operates passenger services on both of these lines. However, there are no stations on either of the railway lines within the local study area.

King's River to Ballyquirke

The land along this corridor is largely agricultural land. The area is characterised by a dispersed pattern of settlement; this settlement generally consists of one-off housing and commercial premises.

The proposed N9/N10 crosses two national primary routes, namely the existing N9 and the existing N10, and two regional roads, namely the R700 and the R702. The R700 extends from Kilkenny to New Ross, via Thomastown. The R702 links the N10 (near Clara) to Enniscorthy in Co. Wexford. A small number of county roads traverse the study area.

The principal settlement is the village of Bennettsbridge, located on the R700 road to the south of the proposed N9/N10.

A minor settlement exists at Danesfort, situated on the existing N10, to the north of the proposed N9/N10. A small concentration of community facilities and commercial premises occurs at Clara, on the N10.

The proposed route of the Kilkenny link road crosses the existing N10 and two county roads, terminating at a proposed roundabout on the proposed Kilkenny ring road. Agricultural holdings predominate along the corridor of the proposed Kilkenny link road. Other than at the western end of the proposed link road, where it fringes Kilkenny City, there are no major settlements. However, a small number of residential and business properties straddle the existing N10.

Ballyquirke to Powerstown

The proposed N9/N10 crosses the existing N10 just south of Ballyquirke and crosses the existing N9 at Powerstown where a grade-separated junction is proposed. Between Ballyquirke and Paulstown, the proposed N9/N10 passes to the west of the existing N10, while between

Paulstown and Powerstown it passes to the west of the existing N9. Whilst there are no regional roads within the study corridor, there are several county roads.

At Paulstown, the proposed N9/N10 is situated immediately to the west of the Kildare-Kilkenny/Waterford railway line. The proposed N9/N10 crosses the River Barrow, a navigable waterway, near Powerstown.

Two villages are situated in proximity to the route in this section, namely Paulstown and Leighlinbridge. The village of Paulstown has evolved around the junction of the existing N9 and N10 roads, with most of the development concentrated in an area to the south of the N10 and to the west of the N9. A number of new housing developments are under construction in the village. Leighlinbridge is located on the River Barrow. The existing N9 now bypasses the village to the west.

Minor settlements include Royal Oak, Oldleighlin and Ballinabranna. (The town of Bagenalstown (Muine Bheag) is located to the east of the study area).

Population/Demographics

The smallest division for which population data is available is at the Electoral Division (ED) level (formerly known as District Electoral Division (DED)). The proposed road development, including the proposed Kilkenny Link road, passes through twenty-five Electoral Divisions namely, Dunkitt, Rossinan, Farnoge, Killahy, Kilbeacon, Castlegannon, Kilkeasy, Ballyhale, Knocktopher, Dunamaggan, Stoneyford, Kells, Ennisnag, Danesfort, Outrath, Dunbell, Clara, Kilkenny Rural, Gowran, Shankill, Paulstown, Leighlinbridge, Old Leighlin, Rathornan and Clogrenan.

The population of the twenty-five Electoral Divisions, as determined from the Census of Population data for 1991, 1996 and 2002 published by the Central Statistic Office (CSO), is summarised in Appendix 7.1, Table A7.3.

A total of 26,399 persons were recorded in the twenty-five Electoral Divisions in the study area in 2002, an increase of 12.4 percent on the 23,480 persons recorded in 1996. In comparison, for the State as a whole, there was an 8.0 percent increase during the 1996-2002 intercensal period.

The population densities as ascertained from the results of the 2002 Census are summarised in Appendix 7.1, Table A7.4. The population

densities of the individual EDs are relatively wide-ranging, varying from 9.3 persons per square kilometre in Castlegannon to 336.4 persons per square kilometre in Kilkenny Rural.

When all twenty-five EDs are aggregated together, the mean population density, at 56.5 persons per square kilometre, is virtually identical to that of the State (55.8 persons per square kilometre). If the data for Kilkenny Rural ED is neglected, however, the mean population density for the other twenty-four EDs is 30.1 persons per square kilometre. This relatively low population density exemplifies the rural setting of the majority part of the road development.

COMMUNITY AND RECREATIONAL FACILITIES

Community and recreational facilities located within the study corridor are shown in Figures 7.2 to 7.5 and are described as follows.

Waterford to King's River

In Kilmacow, facilities include St. Joseph's Girls National School, St. Senan's Boys School, St. Senan's catholic church, Rosedale Home for Elderly People (Medical Missionaries of Mary), sports complex (gaelic games, soccer, athletics, tennis, etc), a post office, a Garda station and a local health centre.

Within the village of Mullinavat, amenities include St. Beacon's Catholic Church, St. Beacon's primary school, Mullinavat GAA club, Mullinavat Community Preschool Playgroup, a local health centre, a post office and a Garda station. The church is situated to the east of the railway line, while the school and the GAA pitches are located to the west of the main street. The remaining facilities are located on the main street (i.e. the N9).

Community and amenity facilities in Ballyhale include a primary school, post office, GAA pitch (Ballyhale Shamrocks), community hall, Garda station, a SEHB health centre and church. All are accessed directly by the main street (the N9).

The community/amenity facilities in Knocktopher comprise a secondary school, Carmelite Friary, church, post office and soccer pitches.

Stoneyford possesses a Garda station, community hall, a SEHB health centre and GAA and soccer pitches. The primary school is located to the south of the village, adjacent to the N10.

There is a church and a GAA centre (Carrickshock GAA club) in Hugginstown, while

facilities in Newmarket consist of a school, a church and a memorial garden for the famine.

Community and amenity facilities in Kells include a museum, hall, squash and handball club, a SEHB health centre and churches. The ruins of Kells priory are an imposing heritage feature in the village.

Outside of the settlements, community and amenity facilities include Granny Castle, St. Patrick's National School (Strangsmills), St. Colmcille's National School (Bigwood), St. Paul's Catholic Church (Bigwood), Poulanassy waterfall, Tory Hill (walks), the Blackwater River (recreation/angling), the South Leinster Way (a long-distance way-marked walk), Knockmoylan Catholic Church, Monroe National School and King's River (angling).

King's River to Ballyquirke

Most of the community/amenity facilities on this section of the route corridor are concentrated in Bennettsbridge. The facilities in Bennettsbridge include a museum, GAA pitch, soccer pitch (East End AFC), school, church, a SEHB health centre and a post office. The River Nore, an important angling river, flows through the town.

There is a school, a church and a GAA pitch at Danesfort, all situated to the west of the existing N10.

Facilities situated adjacent to the N10 at Clara include Clara Church and a sports complex comprising GAA pitches, tennis and basketball courts. Clara National School is located 1.5km to the north of the existing N10.

Facilities located in the rural area include the River Nore and two soccer pitches both situated adjacent to the N10, one on the line of the proposed N9/N10 (Ormonde Villa AFC), the other situated just over 1km to the west of the proposed N9/N10 crossing point of the existing N10 (Clifden United).

Amenities existent along the broad corridor of the Kilkenny link road include those listed at Clara above, and a new nursing home situated immediately to the north of the proposed link road at Archersrath. Facilities to the west of the proposed Kilkenny ring road roundabout include Nowlan Park (GAA) and O'Loughlin Gaels (GAA) pitches.

Ballyquirke to Powerstown

Facilities situated at Paulstown include GAA (Barrow Rangers) and soccer (Paulstown United) pitches, a school, a church and a post office. The GAA and soccer pitches are

effectively severed from the village by the existing N10. Shankill Church Of Ireland is located 0.5km to the north of the village, adjacent to the N9.

In the village of Leighlinbridge, facilities include a school, a church, a post office, a GAA pitch and a nursing home.

The community/recreational facilities at Oldleighlin include a school, church (Col), a post office and a GAA pitch. There is a school, a church and a GAA pitch at Ballinabranna.

Outside of the settlements, amenity facilities include the River Barrow (boating/angling) and the Barrow Way (waymarked walk), both located at Powerstown.

ECONOMIC FUNCTIONS

Waterford to King's River

The villages of Mullinavat, Kilmacow, Ballyhale, Knocktopher, Stoneyford, Kells, and to a lesser extent Hugginstown, serve as local services centres.

Several business premises are located on the rural section of the N9 to the south of Mullinavat. Elsewhere agriculture is the dominant economic function. Once-off non-farm businesses include public houses, accommodation and industrial premises.

King's River to Ballyquirke

Bennettsbridge with a variety of businesses, including several craft enterprises, cafés, public houses and shops are the principal services centre.

Outside of Bennettsbridge, the main economic activity is agriculture. There is a public house and a garage at Danesfort. Other non-agricultural businesses dotted around the study area include quarries, public houses, accommodation and a garden centre.

Ballyquirke to Powerstown

The villages of Paulstown and Leighlinbridge have a small range of businesses, including shops and public houses, and serve as local services centres.

The minor settlements have limited numbers of commercial enterprises. At Royal Oak, businesses include two public houses, a shop and an auctioneer. Businesses in Oldleighlin include a public house, a filling station and a shop. There is a shop at Ballinabranna.

The study area includes two quarries, one located 2km to the west of Paulstown and the other located 1km to the south of Oldleighlin.

Elsewhere agriculture is the principal economic function. Non-agricultural enterprises include bed-and-breakfast businesses on the existing N9 near Royal Oak, and a public house at Tomard Lower.

7.4 Predicted Impacts – Construction

The community impacts that can potentially be generated during the construction phase are considered in this chapter under the headings:

- Road Users;
- Rail Users;
- Facilities and their Users; and
- Local Economy.

7.4.1 Road Users

Depending on the nature of the works, construction activities taking place on or close to existing roads can disrupt road users, including pedestrians and cyclists.

As the proposed dual carriageway is located largely off-line, and as it is proposed that most existing roads crossed by the road development will be maintained by the use of temporary diversions, there should be minimal disruption for motorists. Nonetheless, motorists will experience some inconvenience where temporary traffic signals are utilised or, in particular, if temporary road closures are made.

Roads used to access the works site will experience increased traffic flows. Motorists will be inconvenienced by the presence of this construction traffic, and in particular by heavy commercial vehicles (HCVs) travelling to/from the site.

Cyclists and pedestrians will be subjected to nuisances due to construction activities and the presence of construction traffic similar to the above. However, the provision of the aforementioned temporary diversions will help to minimise the disruption to pedestrian and cyclist journeys. If road closures are proposed, and reasonable alternative access routes for pedestrians and cyclists cannot be maintained, there will be a significant impact on pedestrian and cyclist journeys. In turn, this may result in

temporary community severance.

The increased traffic flows on roads used to access the works will lead to a reduction in journey amenity for pedestrian and cyclists. Noise, mud and dust may also be a cause for annoyance.

Large construction vehicles travelling on minor roads can cause damage to the pavement structure and verges.

7.4.2 Rail Users

Speed restrictions and temporary track possessions may be required during bridge construction at the railway crossings.

7.4.3 Facilities and their Users

Users of facilities can be affected by nuisances caused by construction activities e.g. noise, vibration, mud or dust (refer to Chapter 8 and 9 of this EIS). Construction works can also result in occasional disruptions to water and electricity supplies, and can temporarily disrupt access to, or use of, property and facilities.

Waterford to King's River Section

Facilities that may be affected by some of the above impacts are St Beacon's Church (Mullinavat), the South Leinster Way and Kings River. All other facilities will be a minimum of 200m from the main construction works and will not be significantly affected by construction activities. However there may be some disruption of journeys to all facilities in this section of the local study area for the reasons stated for 'Road Users' above.

King's River to Ballyquirke Section

Facilities that may be affected by some of the above impacts are Kings River, River Nore and Archer's Rath nursing home. All other facilities will be a minimum of 200m from the main construction works and will not be significantly affected by construction activities. However there may be some disruption of journeys to all facilities in this section of the local study area for the reasons stated for 'Road Users' above.

Ballyquirke to Powerstown Section

Facilities that may be affected by some of the above impacts are Paulstown Cemetery, the Barrow Way and the River Barrow. All other facilities will be a minimum of 200m from the main construction works and will not be significantly affected by construction activities. However there may be some disruption of

journeys to all facilities in this section of the local study area for the reasons stated for 'Road Users' above.

7.4.4 Local Economy

The construction of the road development will create employment opportunities for construction personnel. Spending by these personnel will lead to additional consumption and will foster further employment creation opportunities in the non-construction sectors. Some local businesses will be expected to experience increased turnover from the supply of goods and services required for the construction of the road development.

However, some economic functions may be adversely affected as a result of changes to travel patterns caused by temporary road closures and the rerouting of journeys.

7.5 Predicted Impacts-Operational

The impacts of the road development on the community when the scheme is operational, is presented under the following headings:

- Regional Impacts;
- Sub-Regional Impact; and
- Local Impact.

7.5.1 Regional Impact

At a regional level, the completion of the *N9/N10 Waterford – Powerstown Scheme* will benefit communities along the N9 and N10 corridors from Dublin to Waterford. It will provide a more reliable road network with increased traffic capacity between Powerstown – Kilkenny – Waterford. This will assist in facilitating the freer and more efficient movement of people and goods between Dublin/Kildare/Carlow and Kilkenny/Waterford. The accessibility of Dublin Airport and Dublin Port will be increased for the communities of Counties Waterford, Kilkenny and South Carlow.

For communities in County Waterford, the accessibility of amenity facilities located in Dublin and its surrounding counties will be increased. Similarly, communities north of Powerstown will benefit from the improved accessibility of amenity facilities situated in County Waterford.

7.5.2 Sub-Regional Impact

Introduction

The impacts of the road development for the sub-regional study area are addressed under the headings:

- General Impacts;
- Community Impact of Reduced Traffic Volumes on Existing N9 and N10;
- Impact on Community and Amenity Facilities;
- Impact on Public Transport; and
- Impact for Businesses of Reduction in Traffic Volumes.

General Impacts

Journey times, either via the proposed dual-carriageway or via the less-trafficked existing N9 and N10 routes, will be improved. This will have a positive impact for both the business and non-business communities.

The improved road network, and in particular the improved accessibility of Waterford City and Kilkenny City, will increase demand for housing within the sub-regional study area. This will particularly be the case for roads that facilitate quick access onto the proposed dual carriageway.

There is also likely to be increased pressure for retail and other commercial development in areas adjacent to the proposed junctions. These developments may include businesses that are new to the area as well as existing businesses in the nearby towns seeking to relocate to avail of opportunities/advantages presented by ready access to the proposed dual carriageway.

It should be noted that the nature and extent of any proposed development would be conditional on obtaining the appropriate planning approval. Accordingly, the ultimate decision on what development, if any, will take place rests with the relevant planning authority.

Community Impact of Reduced Traffic Volumes on Existing N9 and Existing N10

Traffic flows are predicted to decrease on the existing N9 and the existing N10 roads on completion of the road development (refer to Chapter 6 of this EIS for details). This section considers the impact of these reduced traffic flows on the communities along the existing N9 and N10 corridors.

Reducing traffic volumes on existing roads gives rise to relief from existing severance. To categorise the relief of severance in accordance with the scale of impacts given in Table 7.2, the guidelines presented in Table 7.6 were used. These guidelines are adapted from those suggested in the UK Department of Transport publication *Design Manual for Roads and Bridges: Volume 11: Environmental Assessment*. The guidelines in Table 7.6 are applicable to roads with an existing traffic flow of more than 8,000 vehicles AADT (Annual Average Daily Traffic) in the opening year of the scheme.

The impacts of the road development in relation to relieving severance along rural sections of the N9 and N10, and in towns and villages are summarised in Table 7.7 and Table 7.8 respectively.

Reduced traffic flows also have beneficial effects as regards journey amenity. In this regard, the reduced traffic volumes on the N9 and N10 roads in the towns and villages, as well as along the rural sections of these roads, will result in journeys for pedestrian and cyclists becoming more pleasant.

Impact on Community and Amenity Facilities

In general terms, the improved road network as a result of the construction of the road development should lead to increased accessibility of many of these facilities, both for regular patrons and visitors/tourists.

Impact on Public Transport

In general terms, for regional bus services currently operating along the N9 and N10 routes, the enhanced road network should improve journey time and reliability. However, should some of these services transfer onto the proposed dual carriageway for all or part of their journey, communities along the affected sections of the existing N9 and N10 routes would witness a reduction in service.

Impact on Businesses from Reduction in Traffic Volumes

The transfer of traffic to the proposed dual carriageway will lead to a loss in passing trade for businesses along the existing N9 and N10 corridors. The greatest loss in passing trade will be experienced by those businesses that have frontage directly onto the existing N9 and N10. The most vulnerable of these will be ones situated in rural areas.

Table A7.2 of Appendix 7.1 categorises businesses along the existing N9 and N10 as identified by a windshield survey. For some of these businesses, particularly those in the pub/restaurant/take-away, shop, filling station/car sales categories, it is likely that a significant proportion of their turnover depends on passing trade from N9 and N10 traffic. The negative impact of reduced passing trade will be most significant for these businesses, particularly for the ones situated in rural areas.

In towns, the reduced congestion and improved traffic circulation resulting from bypass schemes can create a more attractive shopping environment. This may be true for Thomastown and new customers may be attracted to the town. These new customers would help to negate some of the loss in business associated with the reduced passing trade.

Due to their smaller catchment areas compared to Thomastown, businesses in the villages of Leighlinbridge, Paulstown, Gowran, Stoneyford, Knocktopher, Ballyhale and Mullinavat are likely to be more acutely affected by the loss in passing trade.

7.5.3 Local Impact

General

This aspect of the study addresses the impact of the proposed road development on the communities living and working along the corridors of the proposed dual carriageway and ancillary roads. The effects of the proposed alterations to the existing road network as well as the impacts of altered traffic flows (if any) on existing roads are considered.

These impacts are examined under the headings:

- a) Impact on road users;
- b) Impact on local community groups;
- c) Impact on local community facilities;
- d) Impact on local economic functions; and
- e) Impact on public transport.

7.5.3a Impact on Road Users

Introduction

In this section, the impact of the scheme on road users is considered in terms of changes in journey lengths (for pedestrians, cyclists, and

motorists) and changes in amenity (for pedestrians and cyclists).

Journey length is used to cover both the distance travelled and the time taken. When used in connection with journeys, *amenity* is defined as the relative pleasantness of the journey.

CHANGES IN JOURNEY LENGTHS RESULTING FROM PHYSICAL ALTERATIONS TO THE EXISTING ROAD NETWORK

The proposed road development affects several national, regional and county roads as illustrated in Figures 7.6 to 7.9. The alterations proposed for these roads include the provision of bridges, local realignments, and new roundabouts. This section examines the effect that these road alterations will have on road users (including pedestrians and cyclists) who are travelling on “through” journeys (i.e. journeys commencing and terminating at points outside any realigned sections, if any, of the roads under consideration). The impact on journeys made by residents on bypassed sections of roads resulting from road realignment proposals is considered in the next section.

Tables 7.8 a, b and c outline the main alterations at each road crossing and summarises the impact on road users based on the four-point scale *major negative*, *moderate negative*, *minor negative*, *not significant* as described in Table 7.2. The guidelines used in determining the impacts are given in Table 7.4. These guidelines are adapted from those suggested in the U.K. Department of Transport publication *Design Manual for Roads and Bridges: Volume 11: Environmental Assessment*.

Waterford Kings River Section (Table 7.9a)

In the majority of the cases, the impact of the proposed alterations to the road network for all road users will be *not significant*. Impacts other than *not significant* will occur for pedestrians and cyclists as follows:

Pedestrians

There will be *major negative* impacts for pedestrians making the following journeys (the locations are mapped on Figures 7.6 to 7.9):

- At LS7463 Ballincurragh [Location 2] (*Increased journey lengths*).
- At LS5073 Danganbeg [Location 22] (*Increased journey lengths for some trips*).

There will be no *moderate negative* impacts.

There will be *minor negative* impacts for pedestrians making the following journeys:

- At LS7460 Rossinan [Location 5] (*Increased journey lengths for some trips*).
- At R704 New Ross road [Location 9] (*Grade-separated junction*).
- At LS8256 Coolmore [Location 16] (*Increased journey lengths*).
- At LS8255 Carrickshock [Location 19] (*Increased journey lengths for some trips*).
- At R699 Callan road [Location 21] (*Grade-separated junction*).

Cyclists

There will be *minor negative* impacts for cyclists making the following journeys:

- At LS7463 Ballincurragh [Location 2] (*Increased journey lengths*).
- At R704 New Ross road [Location 9] (*Grade-separated junction*).
- At R699 Callan road [Location 21] (*Grade-separated junction*).
- At LS5073 Danganbeg [Location 22] (*Increased journey lengths for some trips*).

Kings River to Ballyquirke Section (Table 7.9b)

In the majority of the cases, the impact of the proposed alterations to the road network for all road users will be *not significant*. Impacts other than *not significant* will occur for pedestrians and cyclists as follows:

Pedestrians

There will be *major negative* impacts for pedestrians making the following journeys:

- At LP2631 Roughfield [Location 33] (*Increased journey lengths*).
- At LP2621 Blanchvillespark [Location 40] (*Increased journey lengths*).

There will be *minor negative* impacts for pedestrians making the following journeys:

- At the existing N10 at Danesfort [Location 27] (*Grade-separated junction*).
- At LP2627 Blanchfieldsland [Location 34] (*Roundabout*).

Cyclists

There will be *minor negative* impacts for cyclists making the following journeys:

- At the existing N10 at Danesfort [Location 27] (*Grade-separated junction*).
- At LP2631 Roughfield [Location 33] (*Increased journey lengths*).
- At LP2627 Blanchfieldsland [Location 34] (*Roundabout*).
- At LP2621 Blanchvillespark [Location 40] (*Increased journey lengths*).

Ballyquirke to Powerstown Section (Table 7.9c)

In the majority of the cases, the impact of the proposed alterations to the road network for all road users will be *not significant*. Impacts other than *not significant* will occur for pedestrians and cyclists as follows:

Pedestrians

There will be *major negative* impacts for pedestrians making the following journeys:

- At L6673 Shankill [Location 48] (*Increased journey lengths*).
- At L7118 [Location 51] (*Increased journey lengths*).
- At L7119 [Location 52] (*Increased journey lengths*).

There will be *minor negative* impacts for pedestrians making the following journeys:

- Existing N10 at Paulstown [Location 46] (*Roundabout*).
- Existing N9 at Paulstown [Location 47] (*Roundabout*).
- Existing N9 at Powerstown [Location 57] (*Grade-separated junction*).

Cyclists

There will be *minor negative* impacts for cyclists making the following journeys:

- Existing N10 at Paulstown [Location 46] (*Roundabout*).
- Existing N9 at Paulstown [Location 47] (*Roundabout*).
- At L6673 Shankill [Location 48] (*Increased journey lengths*).
- At L7118 [Location 51] (*Increased journey lengths*).
- At L7119 [Location 52] (*Increased journey lengths*).

- Existing N9 at Powerstown [Location 57] (*Grade-separated junction*).

CHANGES IN JOURNEY LENGTHS RESULTING FROM INCREASED TRAFFIC ON THE EXISTING ROAD NETWORK

As defined in Section 7.5.3a, the term *journey length* is used to cover both the distance travelled and the time taken. Table 7.5 provides guidelines that can be used to assess the impact of increased traffic flows on the journey lengths for pedestrians whose journeys involve crossing an existing road.

Waterford to King's River

The traffic flows in the opening year on any existing road that is likely to experience significantly increased traffic flows (i.e. flows increase by 30 percent or more) will be less than 8,000 vehicles/day (AADT). Accordingly, any negative impact of the road development on pedestrian journeys will be, at worst, only minor.

King's River to Ballyquirke

The traffic flows in the opening year on any existing road that is likely to experience significantly increased traffic flows (i.e. flows increase by 30 percent or more) will be less than 8,000 vehicles/day (AADT). Accordingly, any negative impact of the road development on pedestrian journeys will be, at worst, only minor.

Ballyquirke to Powerstown Section

The traffic flows in the opening year on any existing road that is likely to experience significantly increased traffic flows (i.e. flows increase by 30 percent or more) will be less than 8,000 vehicles/day (AADT). Accordingly, any negative impact of the road development on pedestrian journeys will be, at worst, only minor.

Changes in Amenity

The assessment of changes in amenity includes consideration of changes in the degree and duration of pedestrians' and cyclists' exposure to traffic.

For this road development, the need to negotiate additional junctions and/or changes in traffic flows resulting from the scheme will affect the amenity value of certain routes as described below under the headings:

- Additional Junctions;
- Changes in Traffic Flows; and,
- Changes in Traffic Flows *plus* Additional Junctions.

The rating of impacts is based on the guidelines presented in Table 7.3.

Waterford to Kings River Section

Additional Junctions

No significant impacts

Changes in Traffic Flows

Increased traffic flows can have a negative impact on amenity. However with the exception of the R704 New Ross Road and the R699 Callan Road for which new junctions will also have to be negotiated and are discussed below, the road development is not expected to generate any significantly increased traffic flows on any of the other existing roads.

Changes in Traffic Flows plus Additional Junctions

The presence of the proposed grade-separated junctions at the following locations, coupled with the increased traffic flows, will give rise to a *moderate negative* impact for pedestrians and cyclists making trips along these roads:

- R704 New Ross Road [Location 9]
- R699 Callan Road [Location 21]

Kings River to Ballyquirke Section

Additional Junctions

The presence of the proposed grade-separated junction on the existing N10 at Danesfort will give rise to a *minor negative* impact for pedestrians and cyclists making trips along this road.

Changes in Traffic Flows

Increased traffic flows can have a negative impact on amenity. However with the exception of the LP2627 Blanchfieldsland for which a new junction will also have to be negotiated and is discussed below, the road development is not expected to generate any significantly increased traffic flows on any of the other existing roads.

Changes in Traffic Flows plus Additional Junctions

The presence of the proposed roundabout at Blanchfieldsland [Location 34], coupled with the increased traffic flows, will give rise to a *moderate negative* impact for pedestrians and cyclists making trips along this road.

Ballyquirke to Powerstown Section

Additional Junctions

The presence of new roundabouts at the following locations will have a minor negative amenity impact for pedestrian and cyclist journeys:

- Existing N10 at Paulstown [Location 46]
- Existing N9 at Paulstown [Location 47]

The presence of the proposed grade-separated junction on the existing N9 at Powerstown [Location 57] will give rise to a minor negative impact for pedestrians and cyclists making trips along this road.

Changes in Traffic Flows

The road development is not expected to generate any significantly increased traffic flows on any of the existing roads in this section.

Changes in Traffic Flows plus Additional Junctions

No significant impact.

7.5.3b Impact on Local Community Groups

This section examines the impact the road development will have on the social interaction between neighbours and on their accessibility to community facilities. Negative impacts can occur if, for instance, alterations to the road network necessitate the rerouting of existing journeys, or if there are major increases in traffic flows. In particular, major negative impacts can be experienced when road severance or realignment results in the creation of cul-de-sacs. In these situations, residents can often be faced with lengthy detours, and in general, the further in along a cul-de-sac a residence is located, the greater the impact.

For convenience, local communities are considered in sub-areas as illustrated in Figures 7.10 to 7.13. The impacts for each of these groups are summarised in Tables 7.10 a, b and c, based on the four-point scale *major negative*, *moderate negative*, *minor negative* and *not significant* as described in Table 7.2. The guidelines presented in Table 7.4 were used to assess the impact. Where cul-de-sacs are proposed, a worst case scenario approach is adopted whereby the impact is rated based on the additional travel distance required by the occupiers of those properties that will be situated furthest in along the proposed cul-de-sacs.

In assessing the impacts, it is assumed that all journeys to visit neighbours are made by

pedestrians. For journeys to community facilities, it is assumed that shorter trips are made predominantly by pedestrians while longer trips are made predominantly by cyclists. (In reality many, if not all, of the longer trips are likely to be made by vehicle. The assumption that these trips are made by cyclists should therefore be conservative). It is also assumed that people use the nearest available community facilities.

Sub-areas shown by a continuous line in Figures 7.10 to 7.13 generally enclose proposed cul-de-sacs/major realignments; however, where appropriate, these sub-areas are extended to include houses on adjacent sections of the existing roads for which moderate or major impacts might be anticipated. The limits of these sub-areas are *defined* by the continuous lines and the numbers of houses, etc. recorded in Tables 7.10 a, b and c are those enveloped by the line. Sub-areas shown by a broken line in Figures 7.10 to 7.13 are those for which the predicted impacts are not significant or minor; the limits of these sub-areas are *undefined* and accordingly houses are not enumerated in Tables 7.10 a, b and c.

Waterford to Kings River Section (Table 7.10a)

Accessibility of Neighbours

In terms of the accessibility of neighbouring residences, the road development will have *major negative* impacts for local community groups *B, E, F, I, U* and *V* and *moderate negative* impacts for local community groups *G* and *N*. The impacts for the remaining local community groups (i.e. *A, C, D, H, J, K, L, M, O, P, R, S, T, W, X* and *Y*) will be *not significant*.

The local community groups referred to above are mapped on Figures 7.10 to 7.13.

Accessibility of Community Facilities

With regards the accessibility of community facilities, there will be *major negative* impacts for some residents of local community groups as follows:

- Local Community Group *I* – Residents to east of proposed grade-separated junction making trips to Mullinavat village.
- Local Community Group *U* – Residents to west of proposed grade-separated junction making trips to Knocktopher village.

There will be *minor negative* impacts for some residents of the following local community groups making trips to their community facilities:

- Local Community Group *B* – Residents to west of proposed N9/N10 making trips to Strangsmills school.
- Local Community Group *E* – Residents to east of proposed N9/N10 making trips to Kilmacow.
- Local Community Group *U* – Residents to east of proposed grade-separated junction making trips to Newmarket village.
- Local Community Group *V* – All residents making trips to Knocktopher village.

For the remaining local community groups, the road development will not have any significant negative impact on their accessibility of local community facilities.

Note: The impacts are based on the assumption that the trips are made by pedestrians and/or cyclists. Should the trips be made by motor vehicle, the impact in all cases will be *not significant*).

Kings River to Ballyquirke Section (Table 7.10b)

Accessibility of Neighbours

In terms of the accessibility of neighbouring residences, the road development will have *major negative* impacts for local community group *AG*, *moderate negative* impacts for local community groups *AF, AK, AL* and *AN*, *minor negative* impacts for local community groups *AA* and *AH*. The impacts for the remaining local community groups (i.e. *Z, AB, AC, AD, AE, AI, AJ, AM* and *AO*) will be *not significant*.

The local community groups referred to above are mapped on Figures 7.10 to 7.13.

Accessibility of Community Facilities

With regards the accessibility of community facilities, there will be *major negative* impacts for some residents of local community groups as follows:

- Local Community Group *AG* – Residents to west of proposed N9/N10 making trips to public house.

There will be *moderate negative* impacts for some residents of the following local community groups making trips to their community facilities:

- Local Community Group *AG* – Residents to east of proposed N9/N10 making trips to facilities on the existing N10 (Clara church, GAA, shop, etc)

- Local Community Group *AL* – Residents to east of proposed N9/N10 making trips to facilities on the existing N10 (Clara church, GAA, shop, etc).
- Local Community Group *AN* – Residents to west of proposed N9/N10 making trips to public house on the existing N10.

There will be *minor negative* impacts for some residents of the following local community groups making trips to their community facilities:

- Local Community Group *AA* – Residents to east of proposed N9/N10 making trips to Danesfort (school, church, GAA, etc), and residents to west of proposed N9/N10 making trips to Ennisnag/Stonyford.
- Local Community Group *AH* – Residents to east of proposed roundabout making trips to Kilkenny, and residents to west of proposed roundabout making trips to nursing home.
- Local Community Group *AK* – Residents to east of proposed N9/N10 making trips to facilities on the existing N10 (Clara church, GAA, shop, etc).

For the remaining local community groups, the road development will not have any significant negative impact on their accessibility of local community facilities.

Note: The impacts are based on the assumption that the trips are made by pedestrians and/or cyclists. Should the trips be made by motor vehicle, the impact in all cases will be *not significant*.

Ballyquirke to Powerstown Section (Table 7.10c)

Accessibility of Neighbours

In terms of the accessibility of neighbouring residences, the road development will have *major negative* impacts for local community groups *AV*, *AW*, *AY* and *BC*, *moderate negative* impacts for local community group *BD*, and minor negative impacts for local community groups *AT*, *AU*, *AX*, *BA* and *BE*. The impacts for the remaining local community groups (i.e. *AP*, *AQ*, *AR*, *AS* and *BB*) will be *not significant*.

The local community groups referred to above are mapped on Figures 7.10 to 7.13

Accessibility of Community Facilities

With regards the accessibility of community facilities, there will be *major negative* impacts for some residents of local community groups as follows:

Local Community Group *AV* – Residents to west of proposed N9/N10 making trips to Shankill church and Paulstown village.

There will be *moderate negative* impacts for some residents of the following local community groups making trips to their community facilities:

Local Community Group *AW* – Residents to west of proposed N9/N10 making trips to Shankill church and Paulstown village.

There will be *minor negative* impacts for some residents of the following local community groups making trips to their community facilities:

- Local Community Group *AT* – Residents to south of proposed roundabout making trips to Paulstown village, and residents to north of proposed roundabout making trips to cemetery.
- Local Community Group *AU* – Residents to south of proposed roundabout making trips to Paulstown village.
- Local Community Group *AY* – Residents to west of proposed N9/N10 making trips to Royaloak/Bagenalstown (Muine Bheag), and residents to east of proposed N9/N10 making trips to Oldleighlin
- Local Community Group *BC* – Residents to west of proposed N9/N10 making trips to Leighlinbridge village.
- Local Community Group *BD* – Residents to east of proposed N9/N10 making trips to public house.
- Local Community Group *BE* – Residents to north of proposed grade-separated junction making trips to Leighlinbridge village.

For the remaining local community groups, the road development will not have any significant negative impact on their accessibility of local community facilities.

Note: The impacts are based on the assumption that the trips are made by pedestrians and/or cyclists. Should the trips be made by motor vehicle, the impact in all cases will be *not significant*.

7.5.3c Impact on Local Community/Recreational Facilities

Local community/recreational facilities are shown in Figures 7.2 to 7.5. Most of these facilities are situated more than 500m from the proposed N9/N10. Furthermore, the existing road network is being maintained (with slight rationalisation). Consequently no significant negative impacts are

anticipated for the majority of the facilities shown in Figures 7.2 to 7.5. The impacts on facilities situated within 500m of the proposed N9/N10 are summarised in Tables 7.11a, b and c. The grading of the impacts is based on the guidelines presented in Table 7.1.

(Note: The impacts (if any) on archaeological/cultural heritage sites, and historical buildings are not considered in this section as these aspects are addressed in Chapters 17 and 18 of this EIS.).

7.5.3d Impact on Local Economic Functions

Existing businesses, particularly those situated in close proximity to the proposed grade-separated junctions, should benefit from the improved accessibility of markets, etc. resulting from the completion of the scheme.

Some businesses, including public houses located at Dunbeg and Tomard Lower, may experience some loss of trade as a result of the proposed road rationalisation in their vicinity.

7.5.3e Impact on Public Transport

Apart from minor rationalisation, the existing road network is largely being retained. In general, there should be no significant adverse impacts on bus routes. However, should some of the bus services currently operating along the existing N9/N10 transfer onto the proposed dual carriageway for all or part of their journey, communities along the affected sections of the existing N9 and N10 routes would witness a reduction in service.

Bridges will be provided at each of the railway line crossings. Accordingly the road development will not have any significant negative impacts on rail services.

7.6 Proposed Mitigation Measures

7.6.1 General

This section outlines the mitigation measures to overcome or minimise negative social and economic impacts of the road development.

7.6.2 Mitigation Measures for Construction Phase

The following measures will reduce the negative impacts associated with the construction phase:

- The LP3424 will not be used as a haul route because of the presence of St. Beacon's church.

- Temporary diversions will be provided around bridge sites.
- The number and duration of temporary road closures will be limited.
- Reasonable and safe temporary alternative facilities for pedestrians and cyclists will be provided, as appropriate.
- The contractor for the works will be obliged to take precautions to control noise and prevent the spread of mud and dust onto public roads, etc. (See Chapter 8 and 9)
- Any damage to existing roads specified for access and their verges caused by construction traffic will be repaired.
- Where the temporary disruption of services is unavoidable, the duration of the disruption will be limited and advance notice will be given to affected parties.
- To minimise any hindrance to local businesses during the construction phase, particularly with regarding access, local businesses will be consulted and advance warning will be given of any necessary route diversions, etc. Any such diversions will be clearly signed.
- To minimise disruption to rail services, the construction of the proposed railway bridges will be done by agreement and in consultation with Iarnród Éireann.
- To minimise disruption to the use of river Barrow for navigation, the construction of the proposed bridge will be done by agreement and in consultation with Waterways Ireland.

7.6.3 Mitigation Measures for Operational Phase

Specific mitigation measures proposed for the operational stages of the road development are presented in Tables 7.12a, b and c. Further, more general, mitigation measures are listed in Table 7.13.

7.7 Residual Impacts

7.7.1 Regional and Sub-Regional Impacts

In general, the improved road network brought about by the completion of the road development will have benefits at the regional and sub-regional levels. Travel times will be reduced, benefiting both the business and non-business communities.

The inhabitants of Thomastown will enjoy the benefits resulting from the reduction in traffic volumes through the town, i.e. the relief from existing severance and the improvement in amenity and safety. The accessibility of schools, recreational facilities, etc. will also be significantly improved.

The communities in Mullinavat, Ballyhale, Knocktopher, Stoneyford, Gowran and Paulstown will likewise benefit from the improved social environment resulting from the reduced traffic volumes travelling through the villages.

Elsewhere along the rural stretches of the N9 and N10, the reduced traffic volumes will create a more pleasant environment for the local communities. The accessibility of neighbouring properties, etc will be enhanced.

Certain businesses, particularly those situated in the villages and on the rural sections of the existing N9 and N10, will be negatively affected as a result of the loss of passing trade.

The improved road network will increase the attractiveness of the sub-regional study area for residential, retail and other commercial development. Areas in close proximity to access points onto the new roads will be particularly targeted. However, any such development would be subject to the usual development control policies/approvals of the planning authorities.

7.7.2 Local Impacts

Some road alterations resulting from the construction of the road development will have negative impacts on road users and the local communities. In the main, given that the scheme passes through a rural area, the proposed road alterations will affect relatively few individuals.

In relation to amenity facilities, one amenity facility, namely a soccer pitch (Ormonde Villa) is significantly affected by the road development.

Mitigation measures to reduce some of these negative impacts have been identified (Tables 7.12a, b and c and Table 7.13). Moderate or major negative impacts remaining after implementation of these mitigation measures are summarised in Tables 7.14a, b and c.

7.7.3 Overall

On balance, with the provision of the mitigation measures, the positive impacts of the road development will outweigh the negative impacts. The community as a whole will benefit from the completion of the scheme.

7.8 Limitations, Assumptions and Difficulties Encountered

The study is limited to the assessment of the impacts of the proposed road development on the socio-economic functioning of the affected communities. Communities are taken to constitute groups of people and the study does not assess the impact of the road development on particular persons/households/businesses.

In assessing the impact of the proposed road development on local communities, it is assumed that all journeys to visit neighbours are made by pedestrians. For journeys to community facilities, it is assumed that shorter trips are made predominantly by pedestrians, while longer trips are made predominantly by cyclists. It is also assumed that people use the nearest available facility.

In accordance with guidelines contained in *Volume 11 Environmental Assessment* of the UK *Design Manual for Road and Bridges*⁽¹⁾, the assessment of traffic-related impacts is based on opening year traffic volumes.

7.9 References

- (1) DoT (1994) *DMRB: Volume 11 Environmental Assessment*; DoT, UK
- (2) EPA (2002) *Guidelines on the Information to be included in Environmental Impact Statements*; EPA

Table 7.1 Guidelines for the Categorisation of the Effects on Recreational/Community Resources

Category of Impact	Guidelines
Severe Negative	Off-site relocation or removal of a recreational/community facility of regional importance.
Major Negative	Permanent loss of recreational/community facility of local value, or complete removal of access to such facilities for patrons, or considerable hindrance to accessibility of such facilities for a majority of the patrons.
Moderate Negative	Off-site relocation/re-provision of recreational/community facility of local value, considerable hindrance to accessibility of the existing facilities for a minority of the patrons. Significant encroachment onto site of recreational/community facility such that functionality of the facility is impaired.
Minor Negative	On-site relocation/re-provision of recreational/community facility of local value, or some hindrance to the accessibility of such facilities for a majority of the patrons. Some encroachment onto the site of a recreational/community facility but no effect on function. Some reduction in general amenity of facility caused by proximity of new major roadway.
Not Significant	No encroachment onto site of amenity or community facility, and little or no alteration to existing access. A new major roadway is located sufficiently far away from the facility so that any reduction in amenity is likely to be only barely noticeable.
Beneficial	Improved accessibility of recreational/community facility, or improvement in amenity.

Table 7.2 Guidelines for the Categorisation of Severance Effects

Category of Impact	Guidelines
Major Negative	Considerable hindrance will be caused to people trying to make their existing journeys. People are likely to be deterred from making trips.
Moderate Negative	Trips will become longer or less attractive. Some people, particularly children and elderly people, will be dissuaded from making trips.
Minor Negative	Some hindrance is caused to current journeys. Some people, particularly children and elderly people, will be dissuaded from making trips.
Not Significant	No appreciable change is caused to present journeys.
Minor Beneficial	Present journeys will become safer and more attractive thereby offering some relief from existing severance.
Moderate Beneficial	Existing roads will be much easier to cross. Existing severance will be considerably relieved.
Major Beneficial	Traffic flows will reduce to such an extent that they will no longer hinder trips and existing severance will be substantially eliminated.
Specifically, the categorisation of impacts as <i>major negative</i> , <i>moderate negative</i> , <i>minor negative</i> and <i>not significant</i> is based on the guidelines presented in Table 7.4 and Table 7.5, while <i>minor beneficial</i> , <i>moderate beneficial</i> and <i>major beneficial</i> impacts are categorised using the criteria given in Table 7.6.	

Table 7.3 Guidelines for Assessing Changes in Amenity Value of a Route (Degree/duration of pedestrians/cyclists' exposure to traffic)

Category of Impact	Guidelines
Major Negative	Considerably increased traffic flows coupled with the presence of several new grade-separated junctions and/or major at-grade junctions will greatly diminish the pleasantness of a journey.
Moderate Negative	Pleasantness of journey diminished as a result of sharply increased traffic flows and/or or the presence of a new grade-separated junction.
Minor Negative	Pleasantness of journey somewhat diminished as a result of slightly increased traffic flows, or the presence of a new roundabout or major at-grade junction.
Not Significant	No appreciable change in pleasantness of existing journey
Beneficial	Pleasantness of journey increased because of reduced traffic flows
The above are broad guidelines only as factors such as the presence of footpaths, the footpath and road widths, the distance from traffic, and the presence of barriers between traffic and pedestrians can be important determinants of amenity for pedestrians. Similarly, factors such as whether cyclists and vehicles are separated, the width of the roadway, etc. can be important factors for cyclists.	

Table 7.4 Guidelines for Assessing the Impact on Road Users of Changes in Journey Lengths Resulting from Alterations to the Road Network

Category of Impact	Group Affected	Guidelines
Not Significant	P,C,V	No appreciable change in journey distance.
Minor Negative	P	<ul style="list-style-type: none"> Journeys increased by 100m-250m. <i>or</i> Grade-separated junction or roundabout to be negotiated, or at-grade crossing of new major road (AADT<8000veh/day).
	C	<ul style="list-style-type: none"> Journeys increased by 400m-1000m. <i>or</i> New roundabout or major junction to be negotiated.
	V	<ul style="list-style-type: none"> Journeys increased by up to 5 minutes
Moderate Negative	P	<ul style="list-style-type: none"> Journeys increased by 100-250m <i>plus</i> grade-separated junction or roundabout or at-grade crossing of new major road. <i>or</i> Journeys increased by 250m-500m.
	C	<ul style="list-style-type: none"> Journeys increased by 400-1000m <i>plus</i> new roundabout or major junction to be negotiated. <i>or</i> Journeys increased by 1000m-2000m.
	V	<ul style="list-style-type: none"> Journeys increased by 5-10 minutes.
Major Negative	P	<ul style="list-style-type: none"> Journeys increased by 250-500m <i>plus</i> grade-separated junction or roundabout or at-grade crossing of new major road. <i>or</i> Journeys increased by over 500m.
	C	<ul style="list-style-type: none"> Journeys increased by 1000-2000m <i>plus</i> new roundabout or major junction to be negotiated. <i>or</i> Journeys increased by over 2000m.
	V	<ul style="list-style-type: none"> Journeys increased by more than 10 minutes.
<p>Key to letters P = Pedestrian; C = Cyclist; V = Vehicles (motorists).</p> <p>Notes</p> <ul style="list-style-type: none"> In compiling the above guidelines for cyclists, the average journey speeds for pedestrians are taken as 5km/hr and 20km/hr respectively and therefore the journey length criteria for cyclists are four times the values for pedestrians. These guidelines are adapted from those given in the UK Department of Transport publication <i>Design Manual for Roads and Bridges: Volume 11: Environmental Assessment</i>. Table 7.4 was used in situations where the proposed road development would result in some physical alteration to an existing route (e.g. a new junction would have to be negotiated). Generally, Table 7.4 is applicable to journeys made by road users in the immediate vicinity of the scheme. 		

Table 7.5 Guidelines for Assessing the Impact on Pedestrians of Changes in Journey Lengths Resulting from Increased Traffic Flows on Existing Roads

Category of Impact	Guidelines
Not Significant	No appreciable increase in traffic flows.
Minor Negative	Journey necessitates crossing a road with new AADT < 8000 vehicles.
Moderate Negative	Journey necessitates crossing a road with new AADT between 8000 and 16000 vehicles.
Major Negative	Journey necessitates crossing a road with new AADT > 16000 vehicles.
Notes	<ul style="list-style-type: none"> • Table is applicable only if traffic flows increase by 30% or more in the opening year. • AADT = Annual Average Daily Traffic. • These guidelines are adapted from those given in the UK Department of Transport publication <i>Design Manual for Roads and Bridges: Volume 11: Environmental Assessment</i>. • Table 7.5 was used to assess the impacts of altered traffic flows on persons whose journeys would involve making at-grade (i.e. uncontrolled) crossings of an existing road – these impacts can be experienced at locations far remote from the road development).

Table 7.6 Guidelines for Assessing Relief From Severance by Reductions in Existing Traffic Levels

LOCATION	LEVEL OF RELIEF FROM SEVERANCE		
	Minor Beneficial	Moderate Beneficial	Major Beneficial
BUILT-UP AREAS (Including villages/small towns substantially bisected by existing road)	c.30%	37-60%	>60%
RURAL AREAS	60-75%	75-90%	>90%
Notes	<ul style="list-style-type: none"> • Relief of severance is not significant where traffic flows are relatively low, therefore the guidelines do not apply to roads with an existing AADT (Annual Average Daily Traffic) of less than 8000 vehicles. • Guidelines are based on the reduction in traffic in the opening year of the road development and are adapted from those given in the UK Department of Transport publication <i>Design Manual for Roads and Bridges: Volume 11: Environmental Assessment</i>. • Table 7.6 was also used to assess the impacts of altered traffic flows on persons whose journeys would involve making at-grade (i.e. uncontrolled) crossings of an existing road – these impacts can be experienced at locations far remote from the road development). 		

Table 7.7 Relief of Severance along Rural Sections of Existing N9 and N10 Resulting from Reductions in Existing Traffic Levels

ROAD	SECTION	OPENING YEAR TRAFFIC VOLUME (AADT)*		REDUCTION IN TRAFFIC VOLUME	IMPACT
		DO MINIMUM	DO SOMETHING		
N9	Waterford – Mullinavat	12,052	2,648	78%	Moderate Beneficial
	Mullinavat – N9/N10 junction	10,090	68	99%	Major Beneficial
	N9/N10 junction – Thomastown	8,573	4,061	53%	Not Significant
	Thomastown – Gowran	6,332	1,908	70%	Not Significant (AADT<8000)
	Gowran – N9/N10 junction (at Paulstown)	5,518	1,214	78%	Not Significant (AADT<8000)
	N9/N10 junction (at Paulstown) – Bagenalstown	14,785	4,451	70%	Minor Beneficial
	Bagenalstown – Leighlinbridge	19,051	7,718	60%	Minor Beneficial
	Leighlinbridge – Powerstown	20,989	9,655	54%	Not Significant
N10	N9/N10 junction – Danesfort	7,662	1,754	77%	Not significant (AADT<8000)
	Danesfort – Kilkenny Ring Road	7,662	7,709	0%	No impact
	Kilkenny Ring Road – R702	19,880	14,666	26%	Not Significant
	R702 – N9/N10 junction (at Paulstown)	12,361	7,027	43%	Not Significant

* *Do Minimum* = No scheme in place. *Do Something* = With proposed scheme in place.

Table 7.8 Relief of Severance in Towns/Villages along Existing N9 and N10 Resulting from Reductions in Existing Traffic Levels

ROAD	TOWN/VILLAGE	OPENING YEAR TRAFFIC VOLUME (AADT)*		REDUCTION IN TRAFFIC VOLUME	IMPACT
		DO MINIMUM	DO SOMETHING		
N9	Mullinavat	12,052	2,648	78%	Major Beneficial
	Ballyhale	10,090	68	99%	Major Beneficial
	Thomastown (south)	8,659	4,147	52%	Moderate Beneficial
	Paulstown (N10)	12,361	7,027	43%	Moderate Beneficial
<p>*Do Minimum = No scheme in place. Do Something = With proposed scheme in place.</p> <p>NOTE: Traffic flows in other towns/villages are below the threshold flow of 8000 AADT (See Table 2.6)</p>					

Table 7.9a Proposed Alterations to Existing Roads and Impact on Road Users From Resulting Changes in Journey Lengths
(Waterford to King's River Section)

REF (Figs. 7.6 to 7.9)	ROAD	PROPOSED ALTERATIONS	IMPACT ON USERS	COMMENT
1	N9 Dunkitt	Underbridge	All: Not Significant	
2	LS7463 Ballincurragh	Major realignment	P: Major C: Minor V: Not Significant	
3	LS7464 Ballynamorahan	Underbridge	All: Not Significant	
4	LS7462 Ballykeoghan	Overbridge	All: Not Significant	
5	LS7460 Rossinan	Realignment + overbridge	P: Minor C: Not Significant V: Not Significant	Impact relates to certain journeys only. (Other journeys will become shorter)
6	LT74592 Scart	Realignment + overbridge	-	Existing road is a cul-de-sac.
7	LS7453 Glendonell	Underbridge + slight realignment	All: Not Significant	
8	LP3424 (Mullinavat Church)	Underbridge + slight realignment	All: Not Significant	
9	R704 New Ross Road	Grade-separated junction	P: Minor C: Minor V: Not Significant	
10	LS7450 Ballylusky	Overbridge + slight realignment	All: Not Significant	
11	LS8270 Manselcourt	Underbridge + slight realignment	All: Not Significant	
12	N9 Lukeswell	Underbridge	All: Not Significant	
13	LS8262 Knockmoylan	Overbridge + slight realignment	All: Not Significant	
14	LS8259 Monroe	Overbridge + realignment	All: Not Significant	
15	LS8260 Kilkeasy	Overbridge	All: Not Significant	
16	LS8256 Coolmore	Realignment	P: Minor C: Not Significant V: Not Significant	Impact relates to certain journeys only. (Other journeys will become shorter)
17	<i>NOT USED</i>			
18	LS8255 Hugginstown	Realignment + overbridge	All: Not Significant	

**Table 7.9a (Cont'd) Proposed Alterations to Existing Roads and Impact on Road Users From Resulting Changes in Journey Lengths
(Waterford to King's River Section)**

REF (Figs. 7.6 to 7.9)	ROAD	PROPOSED ALTERATIONS	IMPACT ON USERS	COMMENT
19	LS8255 Carrickshock	Major realignment	P: Moderate C: Not Significant V: Not Significant	Impact relates to certain journeys only. (Other journeys will become shorter)
20	LP4211 Ballygearda	Underbridge	All: Not Significant	
21	R699 Callan Road	Grade-separated junction	P: Minor C: Minor V: Not Significant	
22	LS5073 Danganbeg	Major realignment	P: Major C: Minor V: Not Significant	Impact relates to certain journeys only. (Other journeys will become shorter)
23	LS8247 Knockadrina	Underbridge	All: Not Significant	
24	LS8201 Stonecarthy	Overbridge	All: Not Significant	
25	LP1023 Rathduff	Overbridge + slight realignment	All: Not Significant	
<p>Key to letters: P = Pedestrians; C = Cyclists; V = Vehicles; All = All users</p> <p>Notes:</p> <p>1) Impact has been assessed on the following four-point scale:</p> <ul style="list-style-type: none"> i) Not Significant ii) Minor Negative iii) Moderate Negative iv) Major Negative <p>2) The impacts quoted are for "through" journeys only (i.e. journeys commencing and terminating at points outside any altered sections of the road under consideration).</p>				

Table 7.9b Proposed Alterations to Existing Roads and Impact on Road Users From Resulting Changes in Journey Lengths
(King's River to Ballyquirke Section)

REF. (Figs 7.6 to 7.9)	ROAD	PROPOSED ALTERATIONS	IMPACT ON USERS	COMMENT
26	LS5067 Kellsborough	Underbridge	All: Not Significant	
27	Existing N10 Danesfort	Grade-separated junction + slight realignment	P: Minor C: Minor V: Not Significant	
28	LT42002 Croan	Overbridge	–	Existing Road is a cul-de-sac
29	LP4200 Rathclough	Underbridge	All: Not Significant	
30	R700 Kilree	Underbridge + slight realignment	All: Not Significant	
31	LP2632 Dunbell Big	Underbridge	All: Not Significant	
32	LS6706 Holdenstown	Overbridge	All: Not Significant	
33	LP2631 Roughfield	Major realignment	P: Major C: Minor V: Not Significant	Impact relates to certain journeys only. (Other journeys will become shorter)
34	LP2627 Blanchfieldsland	Roundabout + slight realignment	P: Minor C: Minor V: Not Significant	
35	LS6652 Templemartin	Overbridge	All: Not Significant	
36	Existing N10 Ballynamona	Underbridge	All: Not Significant	
37	LS6707 Rathcash	Overbridge + slight realignment	All: Not Significant	
38	R702 Talbotshill	Overbridge	All: Not Significant	
39	Existing N10 Blanchvillespark	Underbridge	All: Not Significant	
40	LP2621 Blanchvillespark	Major realignment	P: Major C: Minor V: Not Significant	Impact relates to certain journeys only.
41	LP2619 Ballyquirke	Overbridge	All: Not Significant	
Key to letters: P = Pedestrians; C = Cyclists; V = Vehicles; All = All users				
Notes:				
1) Impact has been assessed on the following four-point scale:				
v) Not Significant				
vi) Minor Negative				
vii) Moderate Negative				
viii) Major Negative				
2) The impacts quoted are for “through” journeys only (i.e. journeys commencing and terminating at points outside any altered sections of the road under consideration).				

Table 7.9c Proposed Alterations to Existing Roads and Impact on Road Users From Resulting Changes in Journey Lengths*(Ballyquirke to Powerstown Section)*

REF (Figs 7.6 to 7.9)	ROAD	PROPOSED ALTERATIONS	IMPACT ON USERS	COMMENT
42	L6676 Ballyquirke Road	Bridge+ slight realignment	All: Not Significant	
43	L760 Monefelim Road	Bridge	–	Existing road is a cul-de-sac
44	L2623 Ballyvalden Road	Bridge	All: Not Significant	
45	L2625 Jordanstown Road	Bridge	All: Not Significant	
46	Existing N10 Paulstown	Roundabout	P: Minor C: Minor V: Not Significant	
47	Existing N9 Paulstown	Roundabout	P: Minor C: Minor V: Not Significant	
48	L6673 Shankill	Severance	P: Major C: Minor V: Not Significant	
49	L6674 Lower Shankill	Bridge + slight realignment	All: Not Significant	
50	L7117 Moanmore Road	Bridge + slight realignment	All: Not Significant	
51	L7118	Major realignment	P: Major C: Minor V: Not Significant	
52	L7119	Major realignment	P: Major C: Minor V: Not Significant	
53	L3036 Closutton Road	Bridge + slight realignment	All: Not Significant	
54	L3037 Ballynolan Road	Bridge	All: Not Significant	
55	L7124 Seskin Road	Bridge + slight realignment	All: Not Significant	
56	L3038 Tomard Lower Road	Bridge + slight realignment	All: Not Significant	
57	Existing N9 Powerstown	Grade-separated junction	P: Minor C: Minor V: Not Significant	
<p>Key to letters: P = Pedestrians; C = Cyclists; V = Vehicles; All = All users</p> <p>Notes:</p> <p>1) Impact has been assessed on the following four-point scale:</p> <ul style="list-style-type: none"> i) Not Significant ii) Minor Negative iii) Moderate Negative iv) Major Negative <p>2) The impacts quoted are for “through” journeys only (i.e. journeys commencing and terminating at points outside any altered sections of the road under consideration).</p>				

Table 7.10a Impact on Local Community Groups*(Waterford to King's River Section)*

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
			Visiting neighbours	Community facilities		
A	Bridge at N9 Dunkitt	None	Not significant	Not significant		
B	Major realignment at LS7463 Ballincurragh	Increased journey lengths.	Major	<i>Minor</i> for community to west of proposed N9/N10 making trips to Strangsmills school	Two houses to west of proposed N9/N10.	
C	Bridge at LS7464 Ballynamorahan	None	Not significant	Not significant		
D	Bridge at LS7462 Ballykeoghan	None	Not significant	Not significant		
E	Realignment + bridge at LS7460 Rossinan	Increased journey lengths for some trips.	Major	<i>Minor</i> for community to east of proposed N9/N10 making trips to Kilmacow	Two houses to east of proposed N9/N10. One house to west of proposed N9/N10.	
F	Realignment + bridge at LT74592 Scart	Increased journey lengths for some trips.	Major	Not significant	One house to east of proposed N9/N10. One house to west of proposed N9/N10.	
G	Bridge + slight realignment at LS7453 Glendonell	Increased journey lengths for some trips.	Moderate	Not significant	Two houses to east of proposed N9/N10. One house to west of proposed N9/N10.	
H	Bridge + slight realignment at LP3424	None	Not significant	Not significant		

Table 7.10a (Cont'd) Impact on Local Community Groups

(Waterford to King's River Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
I	Grade-separated junction at R704 New Ross Road	Grade-separated junction to be negotiated. Increased journey lengths for some trips.	Major	Major for community to east of proposed grade-separated junction making trips to Mullinavat village.	Six houses to east of proposed N9/N10.	
J	Bridge + slight realignment at LS7450 Ballylusky	None	Not significant	Not significant		
K	Bridge + slight realignment at LS8270 Manselcourt	None	Not significant	Not significant		
L	Bridge at N9 Lukeswell	None	Not significant	Not significant		
M	Bridge + slight realignment at LS8262 Knockmoylan	None	Not significant	Not significant		
N	Bridge + realignment at LS8259 Monroe	Increased journey lengths for some trips.	Moderate	Not significant	One house	
O	Bridge at LS8460 Kilkeasy	None	Not significant	Not significant		
P	Realignment at LS8256 Coolmore	Increased journey lengths for some trips.	Not significant	Not significant		
Q	<i>NOT USED</i>					

Table 7.10a (Cont'd) Impact on Local Community Groups

(Waterford to King's River Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
R	Bridge + realignment at LS8255 Hugginstown	None	Not significant	Not significant		
S	Major realignment at LS8255 Carrickshock	Cul-de-sac created to east of proposed N9/N10	–	–	No houses are situated on proposed cul-de-sac.	
T	Bridge at LP4211 Ballygearda	None	Not significant	Not significant		
U	Grade-separated junction at R699 Callan Road	Grade-separated junction to be negotiated. Increased journey lengths for some trips.	Major	<i>Major</i> for community to west of proposed grade-separated junction making trips to Knocktopher village. <i>Minor</i> for community to east of proposed grade-separated junction making trips to Newmarket.	Two houses to west of proposed N9/N10. One house to east of proposed N9/N10.	

Table 7.10a (Cont'd) Impact on Local Community Groups

(Waterford to King's River Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
V	Major realignment at LS5073 Danganbeg	Cul-de-sac created to east of proposed N9/N10. Increased journey lengths for some trips.	<i>Major</i> for community to west of proposed N9/N10 making trips to neighbours on Knockadrina Road (to the east of the proposed N9/N10 crossing)	<i>Minor</i> for trips to Knocktopher.	Four houses to west of proposed N9/N10.	No houses are situated on the proposed cul-de-sac.
W	Bridge at LS8247 Knockadrina	None	Not significant	Not significant		
X	Bridge at LS8201 Stonecarthy	None	Not significant	Not significant		
Y	Bridge + slight realignment at LP1023 Rathduff	None	Not significant	Not significant		
Note 1: A <i>defined area</i> is one delineated with a continuous line on Figure 7.10 to 7.13						

**Table 7. 10b Impact on Local Community Groups
(King's River to Ballyquirke Section)**

Map Ref (Figs 7.10 to 7.13)	Proposed road alterations	Implications of proposed road alterations	Main impacts on trips made by community in sub-area		Approx. No. of houses, etc, in defined area (See Note 1)	Comment
			Visiting neighbours	Community facilities		
Z	Bridge at LS5067 Kellsborough	None	Not significant	Not significant		
AA	Grade-separated junction + slight realignment at existing N10 Danesfort	Grade-separated junction to be negotiated.	Minor	<i>Minor</i> for community to east of proposed N9/N10 making trips to Danesfort school, church, GAA. <i>Minor</i> for community to west of proposed N9/N10 making trips to Ennisnag/ Stoneyford.		
AB	Bridge at LT42002 Croan	None	Not significant	Not significant		
AC	Bridge at LP4200 Rathclough	None	Not significant	Not significant		
AD	Bridge + slight realignment at R700 Kilree	None	Not significant	Not significant		
AE	Bridge at LP2632 Dunbell Big	None	Not significant	Not significant		
AF	Bridge at LS6706 Holdenstown	Existing cul-de-sac realigned. Increased journey lengths for some trips.	Moderate	Not significant	Two houses	Impacts relate only to the houses on the existing cul-de-sac.

Table 7.10b (Cont'd) Impact on Local Community Groups

(King's River to Ballyquirke Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
AG	Major realignment at LP2631 Roughfield	Cul-de-sac created. Increased journey lengths for some trips.	Major	<i>Moderate</i> for community to east of proposed N9/N10 making trips to facilities situated on the existing N10 (Clara church, GAA, shop, etc.). <i>Major</i> for community to west of proposed N9/N10 making trips to public house.	Three houses to east of proposed N9/N10. Five houses to west of proposed N9/N10.	
AH	Roundabout + slight realignment at LP2627 Blanchfieldsland	Roundabout + slight realignment	Minor	<i>Minor</i> for community to east of proposed roundabout making trips to Kilkenny. <i>Minor</i> for community to west of proposed roundabout making trips to Archer's Rath nursing home.		
AI	Bridge at LS6652 Templemartin	None	Not significant	Not significant		
AJ	Bridge at existing N10 Ballynamona	None	Not significant	Not significant		

Table 7.10b (Cont'd) Impact on Local Community Groups

(King's River to Ballyquirke Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
AK	Bridge + slight realignment at LS6707 Rathcash	Cul-de-sacs created. Increased journey lengths for some trips.	Moderate	<i>Minor</i> for community to east of proposed N9/N10 making trips to facilities situated on the existing N10 (Clara church, GAA, shop, etc.)	Two houses to east of proposed N9/N10. Two houses to west of proposed N9/N10.	
AL	Bridge at R702 Talbotshill	Increased journey lengths for some trips.	Moderate	<i>Moderate</i> for community to east of proposed N9/N10 making trips to facilities situated on the existing N10 (Clara church, GAA, shop, etc.)	One house to east of proposed N9/N10. Two houses to west of proposed N9/N10.	
AM	Bridge at existing N10 Blanchvillespark	None	Not significant	Not significant		
AN	Major realignment at LP2621 Blanchvillespark	Increased journey lengths for some trips.	Moderate	<i>Moderate</i> for community to west of proposed N9/N10 making trips to public house on existing N10.	Two houses to east of proposed N9/N10. One house to west of proposed N9/N10.	
AO	Bridge at LP2619 Ballyquirke	None	Not significant	Not significant		

Note 1: A *defined area* is one delineated with a continuous line on Figures 7.10 to 7.13

Table 7. 10c Impact on Local Community Groups
(Ballyquirke to Powerstown Section)

Map Ref (Figs 7.10 to 7.13)	Proposed road alterations	Implications of proposed road alterations	Main impacts on trips made by community in sub-area		Approx. No. of houses, etc, in defined area (Note 1)	Comment
			Visiting neighbours	Community facilities		
AP	Bridge + slight realignment at L6676 Ballyquirke Road	None	Not significant	Not significant		
AQ	Bridge at L760 Monefelim Road	None	–	–	–	No occupied houses to west of proposed N9/N10
AR	Bridge at L2623 Ballyvalden Road	None	Not significant	Not significant		
AS	Bridge at L2625 Jordanstown Road	None	Not significant	Not significant		
AT	Roundabout at existing N10 Paulstown	Roundabout to be negotiated	Minor	<i>Minor</i> for community to south of proposed roundabout making trips to Paulstown village. <i>Minor</i> for community to north of proposed roundabout making trips to cemetery.		
AU	Roundabout at existing N9 Paulstown	Roundabout to be negotiated	Minor	<i>Minor</i> for community to south of proposed roundabout making trips to Paulstown village.		

Table 7.10c (Cont'd) Impact on Local Community Groups

(Ballyquirke to Powerstown Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
AV	Severance at L6673 Shankill	Increased journey lengths	Major	<i>Major</i> for community to west of proposed N9/N10 making trips to Shankill Church and Paulstown village.	Two houses to west of proposed N9/N10. One house to east of proposed N9/N10.	
AW	Bridge + slight realignment at L6674 Lower Shankill	Increased journey lengths for some trips	Major	<i>Moderate</i> for community to west of proposed N9/N10 making trips to Shankill Church and Paulstown village.	Two houses to west of proposed N9/N10. One house to east of proposed N9/N10	
AX	Bridge + slight realignment at L7117 Moanmore	Increased journey lengths for some trips.	Minor	Not significant	One house to west of proposed N9/N10	
AY	Major realignments of L7118/L7119	Increased journey lengths for some trips.	Major	<i>Minor</i> for community to west of proposed N9/N10 making trips to Royaloak/ Bagenalstown (Muine Bheag). <i>Minor</i> for community to east of proposed N9/N10 making trips to Oldleighlin.	Seven houses to west of proposed N9/N10. Six houses to east of proposed N9/N10	
(AZ)						NOT USED

Table 7.10c (Cont'd) Impact on Local Community Groups

(Ballyquirke to Powerstown Section)

MAP REF (Figs 7.10 to 7.13)	Proposed Road alterations	Implications on proposed road alterations	Main impacts on trips made by community in sub-area		Approx. Number of houses, Etc. in defined area. (See note 1)	Comment
BA	Bridge + slight realignment at L3036 Closutton Road	Increased journey lengths for some trips.	Minor	Not significant	Two houses to east of proposed N9/N10	
BB	Bridge at L3037 Ballynolan Road	None	Not significant	Not significant		
BC	Bridge + slight realignment at L7124 Seskin Road	Increased journey lengths for some trips.	Major	<i>Minor</i> for community to west of proposed N9/N10 making trips to Leighlinbridge village.	One house to west of proposed N9/N10. Two houses to east of proposed N9/N10.	
BD	Bridge + slight realignment at L3038 Tomard Lower Road	Increased journey lengths for some trips.	Moderate	<i>Minor</i> for community to east of proposed N9/N10 making trips to public house.	Two houses plus Wooden Tavern to west of proposed N9/N10. Two houses to east of proposed N9/N10.	House to be acquired not included.
BE	Grade-separated junction at existing N9 Powerstown	Grade-separated junction to be negotiated.	Minor	<i>Minor</i> for community to north of proposed grade-separated junction making trips to Leighlinbridge		

Note 1: A *defined area* is one delineated with a continuous line on Figures 7.10 to 7.13.

Table 7.11a Impact on Local Community/Recreational Facilities**(Waterford to King's River Section)**

Facility	Description	Impact	Comment
St. Beacon's Church, Mullinavat	Roman Catholic Church	The loss of some car parking space, coupled with the proximity of the proposed N9/N10, will have a minor negative impact.	
South Leinster Way	Long distance way-marked walk	Proximity of the proposed N9/N10 will have a minor negative amenity impact.	The proposed underbridge at Manselcourt will maintain the walking route.
King's River	Angling river	Proximity of the proposed N9/N10 will have a minor negative amenity impact.	

Table 7. 11b Impact on Local Community/Recreational Facilities**(King's River to Ballyquirke Section)**

Facility	Description	Impact	Comment
King's River	Angling river	Proximity of the proposed N9/N10 will have a minor negative amenity impact.	
River Nore	Angling river	Proximity of the proposed N9/N10 will have a minor negative amenity impact.	The section of the River Nore at the Ballyreddin Weir is a traditional bathing area. The proximity of the proposed N9/N10 will have a <i>minor negative</i> amenity impact.
Archer's Rath Nursing Home	Nursing Home	Proximity of the proposed Kilkenny Link Road will have a minor negative amenity impact.	
Ormonde Villa	Soccer pitch	The loss of the pitch will have a major impact.	

Table 7. 11c Impact on Local Community/Recreational Facilities***(Ballyquirke to Powerstown Section)***

Facility	Description	Impact	Comment
Cemetery at Paulstown	Cemetery	Proposed roundabout on the existing N10 will have a <i>minor negative</i> impact on pedestrian/cyclist journeys from Paulstown village.	
Barrow Way (near Ballyquirke)	Long distance way-marked walk	Proximity of the proposed N9/N10 will have a <i>minor negative</i> amenity impact.	Sufficient clearance will be provided beneath the proposed N9/N10 to maintain access for ramblers.
River Barrow (near Ballyquirke)	Boating and angling river	Proximity of the proposed N9/N10 will have a <i>minor negative</i> amenity impact.	Sufficient clearance will be provided beneath the proposed N9/N10 for the passage of boats.

**Table 7.12a Specific Mitigation Measures
(Waterford to King's River Section)**

No.	Location	Measure	Reason	Comment
1	Glendonnell	Provide pedestrian access between the existing and the realigned local road immediately to the west of the proposed N9/N10.	To minimise the magnitude of increased journey lengths for the residents to the west of the proposed N9/N10 visiting neighbours to the east of the proposed N9/N10.	Impact reduced from moderate to minor for Local Community Group G in Table 7.10a.
2	St. Beacon's Church, Mullinavat .	Provide retaining wall in front of car park	To minimise the loss of car parking space.	
3	Ballyluskey.	Provide pedestrian access between the existing and the realigned R704 immediately to the east of the proposed N9/N10	To minimise the magnitude of increased journey lengths for the residents to the east of the proposed N9/N10 visiting neighbours to the west of the proposed N9/N10. Also to minimise the magnitude of increased journey lengths for trips to the community facilities in Mullinavat for the residents to the east of the proposed N9/N10.	Impact reduced from major to minor for Local Community Group I in Table 7.10a. Impact reduced from major to minor for Local Community Group I in Table 7.10a
4	Ballylusky	Provide footpath alongside the realigned R704 between the proposed grade-separated junction at Ballyluskey and the existing N9.	To minimise the reduction in pedestrian journey amenity associated with the scheme.	
5	King's River	Maintain access along the river banks	Angling river	
6	Proposed N9/N10	Provide generic signs (in accordance with the DOE Traffic Signs Manual) on the proposed N9/N10 advising passing motorists of the range of facilities and services available remote from the scheme.	Such signage would help to encourage passing motorists to stop and avail of the facilities in the villages.	This would help to mitigate against any reduction of business due to the loss of passing trade.

**Table 7. 12b Specific Mitigation Measures
(King's River to Ballyquirke Section)**

No.	Location	Measure	Reason	Comment
7	King's River	Maintain access along the river banks	Angling river	
8	River Nore	Maintain access along the river banks	Angling river	
9	Blanchfield-sland	Provide footpath alongside the proposed Kilkenny Link Road for c. 200m (To extend between the proposed roundabout with the LP2627 and the proposed Kilkenny Ring Road roundabout).	To minimise the reduction in pedestrian journey amenity associated with the scheme.	No houses/access on Kilkenny Link Road
10	R702 Talbotshill.	Provide pedestrian access between the existing and the realigned R702 immediately to the east of the proposed N9/N10	To minimise the magnitude of increased journey lengths for the residents to the east of the proposed N9/N10 visiting neighbours to the west of the proposed N9/N10. Also to minimise the magnitude of increased journey lengths for trips to the community facilities located on the existing N10 for the residents to the east of the proposed N9/N10.	Impact reduced from major to minor for Local Community Group AL in Table 7.10b Impact reduced from moderate to minor for Local Community Group AL in Table 7.10b.

**Table 7. 12c Specific Mitigation Measures
(Ballyquirke to Powerstown Section)**

No.	Location	Measure	Reason	Comment
11	Existing N10 at Paulstown	Extend the existing footpath as far as the cemetery at Paulstown.	To minimise the reduction in pedestrian journey amenity associated with the scheme	
12	L7124 Seskin Road.	Provide pedestrian access between the existing and the realigned L7124 immediately to the east of the proposed N9/N10	To minimise the magnitude of increased journey lengths for the residents to the east of the proposed N9/N10 visiting neighbours to the west of the proposed N9/N10.	Impact reduced from major to minor for Local Community Group BC in Table 7.10C.
13	Barrow Way	Maintain access along path.	To prevent severance of the way-marked walk.	

Table 7.13 General Mitigation Measures
(Applicable for all sections of Scheme)

No.	Measure	Reason
1	Reinstate any existing footpath affected within the land acquisition of the scheme.	To maintain present standards of pedestrian facilities.
2	Provide drop kerbs at roundabouts.	To enhance pedestrian safety.
3	Provide public lighting at proposed roundabouts.	To enhance pedestrian/cyclist/motorist safety.

Table 7.14a Moderate or Major Impacts Remaining after Implementation of Mitigation Measures
(Waterford to King's River Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Road Users	Increase in journey lengths resulting from road alterations	Major realignment at LS7463 Ballincurragh. [Ref. 2 on Fig. 7.6]	Pedestrians	Major	
		Major realignment at LS5073 Danganbeg. [Ref. 22 on Fig. 7.7]	Pedestrians	Major	Impact relates to certain journeys only. (Other journeys will become shorter)
	Reduction in amenity due to increased traffic flows + major junction to be negotiated	Grade-separated junction at R704 New Ross road. [Ref. 9 on Fig. 7.6]	Cyclists	Moderate	
		Grade-separated junction at R699 Callan road. [Ref. 21 on Fig. 7.7]	Pedestrians & cyclists	Moderate	

**Table 7.14a (Cont'd) Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(Waterford to King's River Section)**

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Local Community Groups	Visiting Neighbours	Major realignment at LS7463 Ballincurragh <i>[Ref. B on Fig 7.10]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at LS7460 Rossinan <i>[Ref. E on Fig 7.10]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at LT74592 Scart <i>[Ref. F on Fig 7.10]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at LS8259 Monroe <i>[Ref. N on Fig 7.10]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Grade-separated junction at R699 Callan road. <i>[Ref. U on Fig. 7.11]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at LS5073 Danganbeg. <i>[Ref. V on Fig 7.11]</i>	Residents west of proposed N9/N10 visiting neighbours on Knockadrina Road (to the east of proposed N9/N10.	Major	

Table 7.14a (Cont'd) Moderate or Major Impacts Remaining after Implementation of Mitigation Measures
(Waterford to King's River Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
	Visiting Community Facilities	Grade-separated junction at R699 Callan road. [Ref. U on Fig. 7.11]	Residents west of proposed grade-separated junction making trips to Knocktopher.	Major	

Table 7. 14b Moderate or Major Impacts Remaining after Implementation of Mitigation Measures
(King's River to Ballyquirke Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Road Users	Increase in journey lengths resulting from road alterations	Major realignment at LP2631 Roughfield. [Ref. 33 on Fig. 7.8]	Pedestrians	Major	Impact relates to certain journeys only. (Other journeys will become shorter)
		Major realignment at LP2621 Blanchvillespark. [Ref. 40 on Fig. 7.8]	Pedestrians	Major	Impact relates to certain journeys only.
	Reduction in amenity due to increased traffic flows + major junction to be negotiated	Roundabout at LP2627 Blanchfieldsland. [Ref. 34 on Fig. 7.8]	Cyclists	Moderate	

Table 7. 14b (Cont'd) Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(King's River to Ballyquirke Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks	
Local Community Groups	Visiting Neighbours	Realignment of existing cul-de-sac at LS6707 Holdenstown <i>[Ref. AF on Fig 7.12]</i>	Residents east of proposed N9/N10 visiting neighbours to west of proposed N9/N10.	Moderate		
		Major realignment at LP2631 Roughfield <i>[Ref. AG on Fig 7.12]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major		
		Realignment at LS6707 Rathcash <i>[Ref. AK on Fig 7.12]</i>	Residents east of proposed N9/N10 visiting neighbours to west of proposed N9/N10.	Moderate		
		Realignment at LP2621 Blanchvillespark <i>[Ref. AN on Fig 7.12]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Moderate		
	Visiting Community Facilities	Major realignment at LP2631 Roughfield <i>[Ref. AG on Fig 7.12]</i>	Residents east of proposed N9/N10 making trips to facilities on the existing N10 (Clara church, GAA, shop, etc.).	Residents west of proposed N9/N10 making trips to public house.	Moderate	
					Major	
		Realignment at LP2621 Blanchvillespark <i>[Ref. AN on Fig 7.12]</i>	Residents west of proposed N9/N10 making trips to public house.	Moderate		

Table 7. 14b (Cont'd) Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(King's River to Ballyquirke Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Community/ Recreational Facilities	Ormonde Villa	Acquisition of soccer pitch	Club members	Major	

Table 7. 14c Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(Ballyquirke to Powerstown Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Road Users	Increase in journey lengths resulting from road alterations	Severance of L6673 Shankill. <i>[Ref. 48 on Fig. 7.9]</i>	Pedestrians	Major	
		Major realignment of L7118. <i>[Ref. 51 on Fig. 7.9]</i>	Pedestrians	Major	
		Major realignment of L7119. <i>[Ref. 52 on Fig. 7.9]</i>	Pedestrians	Major	

**Table 7. 14c (Cont'd) Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(Ballyquirke to Powerstown Section)**

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
Local Community Groups	Visiting Neighbours	Severance of L6673 Shankill. <i>[Ref. AV on Fig 7.12]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at L6674 Lower Shankill Road <i>[Ref. AW on Fig 7.12]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Major realignments of L7118 and L7119 <i>[Ref. AY on Fig 7.12]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at L7124 Seskin Road <i>[Ref. BC on Fig 7.13]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Major	
		Realignment at L3038 Tomard Lower <i>[Ref. BD on Fig 7.13]</i>	Residents west of proposed N9/N10 visiting neighbours to east of proposed N9/N10.	Moderate	
	Visiting Community Facilities	Severance of L6673 Shankill. <i>[Ref. AV on Fig 7.13]</i>	Residents west of proposed N9/N10 making trips to Shankill Church and Paulstown village.	Major	

Table 7. 14c (Cont'd) Moderate or Major Impacts Remaining *after* Implementation of Mitigation Measures
(Ballyquirke to Powerstown Section)

Sub Group	Interest	Description of Effect	Principal Persons Affected	Impact	Remarks
		Realignment at L6674 Lower Shankill Road [Ref. AW on Fig 7.13]	Residents west of proposed N9/N10 making trips to Shankill Church and Paulstown village.	Moderate	