

N9/N10 Kilcullen to Waterford Scheme: Kilcullen to Powerstown

Non Technical Summary of the Environmental Impact Statement

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1.0 Introduction

The full N9 / N10 Kilcullen to Waterford Scheme, of which the Kilcullen to Powerstown Scheme is a part, extends from the M9 at Kilcullen southwards through the counties of Kildare, Carlow and Kilkenny, terminating at the northwest approaches to Waterford City. The part of the scheme from Kilcullen to Powerstown to which this Environmental Impact Statement applies extends from the M9 at Kilcullen to just north of the River Barrow at Powerstown, passing through the counties of Kildare and Carlow. The location of the N9 Kilcullen to Powerstown Scheme is shown in Figure 1.1 in Volume 2.

The purpose of the proposed N9 Kilcullen to Powerstown Scheme is to provide a high quality dual carriageway road for the transport of people and goods, in safety and comfort, in accordance with national and local objectives and to meet the aspirations of the National Development Plan 2000 to 2006 (NDP). It is especially required to overcome the inadequacies of the existing road network to facilitate long distance interurban travel, as well as the longer journeys generated in the route corridor.

The proposed N9 Kilcullen to Powerstown Scheme is also consistent with the aspirations of the National Spatial Strategy (NSS), which has the development and enhancement of a strategic radial corridor between Dublin and Waterford as a particular objective.

After detailed assessment of a number of route options, and following the holding of non-statutory public consultations in 2001 in addition to the statutory consultations, the preferred route was established. The Preferred Route Corridor, which was published in March 2002, extends from the end of the existing M9 Motorway at the junction with the N78 at Kilcullen to Powerstown on the existing N9 south of Carlow Town.

This is a Non Technical Summary of the Environmental Impact Statement; for more detailed information, reference should be made to the full EIS.

2.0 Background to the Project

Scheme Objectives

In the NRA National Road Needs Study published in 1998, it was recommended that improvements should be made to both the N9 and the N10 between Waterford and Kilcullen. Bypasses were required for Mullinavat, Knocktopher / Ballyhale, Thomastown, Paulstown, Carlow, Castledermot and Moone / Timolin. In addition, the NDP has the objective of providing a uniform carriageway type either to motorway or high quality dual carriageway based on a policy of providing a high quality of service on the national primary road network.

In addition to the National Context, the scheme also addresses local objectives, which include:

- Improving the N9 route and thereby reducing travel times;
- Providing bypasses of Carlow Town and Castledermot;
- Providing a safer route and thus reducing accidents;
- Removing long distance traffic from local roads;

- Improving competitiveness and increasing economic prosperity by improving access to Dublin, Kilkenny and Waterford cities as well as Carlow Town;
- Improving the environment of the area.

Conditions of Existing National Roads

South from Kilcullen the existing N9 comprises a single carriageway road with significant variation with regard to its cross-section along its length. Some sections have been improved to provide a good horizontal and vertical alignment with a standard single carriageway with hard shoulders. On unimproved sections of the N9, the carriageway is narrow with no shoulders provided, and it follows a sub-standard horizontal and vertical alignment.

In general, the existing N9 passes through the rural areas of counties Kildare and Carlow with major / minor priority type junctions linking it to the road network. There are numerous frontages and private accesses connecting onto the existing road along the rural section of the existing route, particularly near Castledermot and Carlow. The existing N9 also passes through the well-populated towns of Carlow and Castledermot where it takes on a typically urban character with a narrower carriageway and adjacent footways.

National speed limits (60 mph) apply on the existing N9 from the M9 southwards. Restricted speed limits of 40 mph have been applied on the approaches to Castledermot and Carlow, reducing to 30 mph within the towns. Speed restrictions are also in place between Ballymount and Crookstown.

Within Castledermot, the route passes through the centre of the town, where on-street parking is permitted in locations through the town. One signal controlled pedestrian crossing is located in the centre of the town. All other junctions within Castledermot, are priority-controlled. These factors combine to induce delays to traffic travelling along the N9 when travelling through the town.

Traffic on the N9 through Carlow currently experiences significant congestion during peak periods, largely due to the four signalised junctions with pedestrian crossing facilities along the route. There are also 3 roundabouts on the northern edges of the town linking the N80 and other important secondary roads and commercial estates.

There are three National Secondary routes surrounding the N9 corridor.

- N78: An alignment west of the N9, separating from the M9 at Kilcullen, which passes through Athy and joins the N77 north of Kilkenny City. This route also provides access to / from Carlow via the N80 and R417.
- N80: A northwest, southeast alignment linking the N6, near Athlone, through Carlow Town to the N11, north of Enniscorthy. This route intersects with the N81 near Ballon, the N9 in Carlow Town, and N78 south of Ballylynan.
- N81: An alignment to the east of the N9, between Dublin and Tullow, and which continues southwards to join the N80 near Ballon.

Conditions of Regional & Local Roads

In addition to the existing N9 National Primary Road and the National Secondary Roads, there are a number of Regional Roads and numerous Local Roads within the route corridor. All of these roads are single carriageways.

The Regional Roads are:

- R415: This route links Kildare Town to Crookstown, intersecting the N9. This road also intersects with the N78, north of Athy.
- R417: This route links Athy to Carlow Town. This road also extends to Monasterevin in the north.
- R418: This route links Athy, with the N78, and Tullow, with the N81. It intersects the N9 at Castledermot.
- R430: This provides a link from Carlow to Abbeyleix to the west, also connecting with the R431 and N78.
- R725: This road links the south east of Carlow Town directly to Tullow and the N81.
- R726: This road connects Carlow with the N81, west of Rathvilly. It also connects with other regional roads in the area including the R418 and R727.
- R747: This route connects the N9, between Timolin and Crookstown, to Baltinglass where it intersects the N81.

Existing Traffic Conditions

The N9 / N10 is an important corridor linking the major centres of Dublin, Carlow, Kilkenny and Waterford, and currently experiences significant volumes of traffic, and in particular large volumes of heavy vehicles.

Two permanent count sites along the N9, one north of Carlow Town and the other north of Leighlinbridge, indicate two way daily traffic flows of the order of 12,300 Annual Average Daily Traffic (AADT) in 2001. The percentage of Heavy Commercial Vehicles recorded was 13% – 14%.

The count data shows the route, outside the urban areas, generally operates in a condition where overtaking is difficult during and outside peak hours. With growth rates extracted from the NRA “National Road Needs Study”, the road would be expected to reach its operational capacity before 2020. However, these volumes of traffic travelling through the urban areas such as Carlow Town result in significant delays.

Accident Data

The N9 between Kilcullen and Powerstown covers a distance of approximately 45 kilometres through counties Kildare and Carlow, and is largely rural with limited hard shoulders. The section of road between Kilcullen and Carlow Town has been identified as a high accident location along the N9 corridor in the NRA report ‘High Accident Locations 1996 - 2000 – The Inter-urban National Route Network’. The N81, a National Secondary route parallel to the N9, has also been classified as a high accident area.

The accident rate on the N9, between Kilcullen and Powerstown, over the last 8 years has reduced significantly with the improved road infrastructure, in particular the Moone bypass. Speed restrictions and restrictions on overtaking have also been introduced in recent years between Calverstown Little and Moone. Despite these improvements, the average accident rate over the last three years is the same as the average for the entire national route network.

The N9 through Carlow Town is currently approaching its operational capacity. The high volume of through traffic interacts with local traffic and pedestrians and this leads to an increased likelihood of both fatal and non-fatal accidents.

The Need for a New Road

The need for a new road in the N9 / N10 corridor is evident from the following:

- the (peak hour) congestion that is evident on the existing N9, particularly at Carlow and Castledermot.
- the need to accommodate future growth of traffic as a result of development within the N9 / N10 corridor
- the consequential inevitable growth of traffic on the existing N9 and N10 if a new road is not provided, thereby creating major safety and environmental problems on the existing road.
- the need for major improvement in safety and comfort of those using the existing road;
- the need for major improvement in the environment for those people living adjacent to the existing N9.
- the need to provide a consistent national standard of road.
- the need to provide better connectivity between major towns and cities in Ireland.
- the need to provide traffic relief within Carlow Town by reducing traffic volumes and reducing local journey times.
- the need to remove through traffic from the local road network in the towns of Castledermot and Carlow, thereby reducing congestion and improving environmental standards and safety along the local road network.
- the need to reduce transport costs to improve competitiveness in the production and export of goods and to offset the negative effects of European Union peripherality by improving access to ports and airports.

The proposed N9 Kilcullen to Powerstown Scheme addresses the above criteria and represents a positive impact on the policies of the National Development Plan (2000 to 2006).

3.0 Description of the Proposed Scheme

General Details

The proposed N9 Kilcullen to Powerstown Scheme will provide a new high quality dual carriageway road for the N9 between the southern end of the existing M9 motorway at Kilcullen, in County Kildare, and the existing N9 at Powerstown, south of Carlow Town, in County Carlow. (See Figure 3.1 in Volume 2) The length of the new road is 46.2 kilometres.

The scheme includes the Athy to R747 Link Road, a new single carriageway link road between the N78 northeast of Athy Town and the existing N9 between Ballitore and Timolin. The Link Road is 11.2 kilometres in length. This link road will intersect the proposed N9 dual carriageway at Mullamast, where a grade separated junction will be provided.

The Athy to R747 Link Road has been included in the scheme to provide improved access between Athy and the eastern counties and to Dublin in particular, in recognition of Athy's designation as a Secondary Development Centre in the Greater Dublin Area. The new link road also forms part of a strategic link between Athy and Baltinglass in County Wicklow.

Five grade-separated junctions have been included in the scheme, details of which are given below. No other public access onto the dual carriageway will be provided, and the existing Regional and Local roads will in general be diverted over or under the proposed new road.

Route Description

The N9 Kilcullen to Powerstown Scheme tends in a general north-south direction between Kilcullen, at the northern limit of the scheme, and Castledermot, which it by-passes on the west side of the town. The road then continues south around the east side of Carlow Town, and then heads in a south-westerly direction to the southern limit of the scheme at Powerstown, south of Carlow Town (See Figures 3.1 to 3.30 in Volume 2).

As well as the Mainline dual carriageway, the scheme also includes the Athy to R747 Link Road, an 11.2 kilometre single carriageway road which connects Athy to the existing N9 at the N9/R747 Junction, and with the Mainline at Junction 2 in Mullamast (see Figure 3.31 – 3.38 in Volume 2).

Also part of the Scheme are the N9-N78 Link Road connecting the existing N9 and the N78 over a length of 1.2 kilometre (see Figure 3.39 in Volume 2) and the Realigned N9 at Junction 3, which consists of the widening of the existing N9 for 1.36 kilometre southwest of the Junction (see Figure 3.40 in Volume 2).

The proposed N9 is designated a High Quality Dual Carriageway and has been designed to be consistent with a design speed of 120 kph. The single carriageway Athy to R747 Link Road has been designed to a National Road standard with a design speed of 100 kph.

In general, the route passes through flat and gently undulating land in the rural areas of counties Kildare and Carlow. The terrain generally lies at levels between 70 metres and 115 metres above Ordnance Datum (AOD). However a short length of the route rises to levels of 150 metres AOD where the route traverses Nine Tree Hill and Mullamast Hill, southwest of Ballitore, while at Powerstown the land falls to a level of 45 metres AOD at the approaches to the River Barrow.

The land use is predominantly agricultural, the majority of this being tillage, though dairy farming and grassland operations with some equestrian enterprises are also evident. A number of disused and working quarries are to be found adjacent to the road corridor. One-off residential plots are also common along the numerous roads crossed by the new road alignment. Some small communities are also passed by the new road.

Grade Separated Junctions

Access onto the main line will be restricted to grade separated junctions, at intervals of 10 kilometres to 20 kilometres. No other public access onto the dual carriageway will be provided. The scheme retains the existing grade separated junction at Kilcullen and provides four new grade-separated junctions. The new grade separated junctions on the scheme will be designed with dumbbell roundabouts provided at the at-grade junctions with the connecting roads.

Junction 1, Kilcullen

The existing junction at the southern end of the M9 motorway comprises a bridge crossing for the N78 over the M9, with four sliproads on a diamond arrangement.

The junctions between the slip roads and the N78, to the east and west of the overbridge are simple Major / Minor junctions, and are not being replaced under the proposed scheme. However, the south facing slip roads of the existing junction will need to be realigned to suit the geometry of the proposed N9 dual carriageway.

Junction 2, Mullamast

Junction 2 is the intersection between the proposed N9 dual carriageway and the Athy to R747 Link Road at Mullamast. Here the mainline will be formed in cutting, some 7 – 8 metres deep, and the Athy to R747 Link Road would be at or slightly raised above ground level where it crosses the dual carriageway.

Junction 2 will serve traffic from Athy and will also provide a connection to the mainline for the communities in the vicinity, including Ballitore, Moone and Timolin, as well as the more rural communities in southeast Kildare. Traffic from southwest County Wicklow would also have easy access to the new road via the R747 and Junction 2.

Junction 3, Prumplestown

The proposed dual carriageway crosses the existing N9 at Prumplestown, some 2.5 kilometres southwest of Castledermot. A grade-separated junction has been included in the scheme at this point to service Castledermot and Carlow Town. The junction would also provide access to Tullow via the R418 at Castledermot, as well as the rural communities between the above towns.

The layout has been designed with the mainline raised to cross over the junction, to minimise disruption to traffic on the existing N9 during construction, and to minimise environmental impacts. The dumbbell junction would be constructed close to ground level, with the junction offset slightly to the south of the existing road, to facilitate the management of traffic during construction, to minimise land take and to preserve trees that line the northern side of the existing N9.

Junction 4, Rathcroogue

Junction 4 is located where the proposed N9 dual carriageway crosses over the existing N80 Carlow to Wexford National Secondary Road at Rathcroogue. The junction has been offset to the north side of the N80, to permit the bridge and the dumbbell junction to be constructed largely independently of traffic on the N80.

Junction 4 would provide ready access to the new road for traffic from the east side of Carlow Town, as well as providing a strategic link between the Midlands, and Enniscorthy and Wexford in the Southeast of the Country.

Junction 5, Powerstown

Junction 5 at Powerstown forms the southern end of the N9 Kilcullen to Powerstown Scheme, where the new road re-connects with the existing N9, approximately 7 kilometres south of Carlow Town. The River Barrow is some 550 metres to the west of the existing N9, and the ground falls away some 11 metres from the N9 to the flood plain of the river. The ground also dips significantly to the south of the junction, to a tributary of the River Barrow. Immediately south of the stream, on the east side of the existing N9, lies the Powerstown landfill site.

The proposed junction has to fulfil the role of a temporary termination to the N9 Kilcullen to Powerstown Scheme, as well as being adaptable to suit any extension of the scheme to Kilkenny and Waterford in the south.

In the layout selected, the mainline is depressed in a cutting, with the existing N9 diverted to the east to pass through a dumbbell junction constructed over the mainline. Slip roads would be provided to connect the dumbbell junction with the dual carriageway on the northeast side.

National Roads

The National Roads affected by the proposed N9 Kilcullen to Powerstown Scheme are discussed below.

N9, Kilcullen

The existing N9 will be severed by the scheme just south of the existing grade separated junction at Kilcullen. To maintain the function of the existing N9 as a local connector / distributor road, a 1200 metre long link road has been provided to divert the existing N9 to the west, connecting to the N78 at a T-junction approximately 700 metres southwest of Junction 1. This junction replaces the existing junction with the L6080 Local road, which will be diverted to connect to the proposed link road 80 metres southeast of the N78 junction. Part of the severed section of the existing N9 will be retained for access to a residential property and for drainage maintenance.

N9, Usk Little

The existing N9 will be reconstructed on line where it crosses over the proposed N9 dual carriageway. A long overbridge of 135 metres is required at this location (See Figure 3.69 in Volume 2).

N9 Prumplestown

The existing N9 will be realigned to the south of the existing road to connect to the dumbbell roundabout on the east side of the new dual carriageway at Junction 3.

The existing N9 would be improved over a length of 1360 metres from the western roundabout at Junction 3 to near the Carlow County boundary, by widening the road on the southeast side.

As part of this improvement, the L4012 Local Road, the northern leg of the Prumplestown Cross Roads, will be realigned slightly to the north of its existing alignment to form a staggered junction on the improved N9.

N80, Rathcroque

The existing N80 will be realigned over lengths of approximately 400 metres on both sides of the proposed junction on the northeast side of the existing road.

On the southeast side of the mainline, the existing road will be retained over a length of 140 metres to provide vehicular access to the Tinryland GFC grounds, which is located close to the junction.

On the northwest side of the mainline, the existing road will be retained to provide access to property, farmland and drainage areas. A footpath / cycleway will be provided along the south side of the realigned road west of the northern roundabouts and along the link road between the two roundabouts under the mainline. The footpath / cycleway will extend to connect to the existing N80 immediately southwest of the south roundabout to provide safe access to the GFC grounds.

The entrance driveway to Rathcrogue House would be realigned along the northwest side of the mainline, and take access from the north roundabout.

N9, Powerstown

The existing N9, north of Junction 5, will be realigned over a length of 400 metres, slightly to the east of the existing road to connect to the north roundabout of the grade separated junction. The existing road will be used to pass traffic during construction of the realignment and will be retained over a short length to serve as access to properties on the west side of the road. The remaining length of road will be broken up and landscaped.

South of Junction 5, the existing N9 will be realigned over a length of 830 metres. From the southern tie-in the realignment lies on the west side of the existing road, and crosses the line of the existing road after 600 metres, bearing to the northeast to connect to the south roundabout of Junction 5. A short length of the existing road in front of the landfill site would be retained to provide access to this operation and to farmland, the remaining length broken up and landscaped.

N78, Athy

The existing N78 will be realigned over a length of 550 metres just north of the junction with the R417, between Castledermot and Athy, to form a three-legged roundabout junction with the Athy to R747 Link Road. Existing private accesses will be retained on the realigned road.

N9, Timolin

The Athy to R747 Link Road will connect to the existing N9 at a new major / minor junction at the eastern end of the Link Road. A ghost island staggered junction will be formed on the N9 with the Athy to R747 Link Road and the existing R747 Regional Road approximately 140 metres to the south.

Regional and Local Roads

Four Regional Roads and 30 Local Roads are affected by the main line of the proposed N9 Kilcullen to Powerstown Scheme. These roads have each been realigned, and, with the exception of three Local roads, bridge crossings have been provided where they cross the proposed N9 dual carriageway. The three road crossings which have not been provided with bridge crossings are:

- **Baronsland:** The L6091 Local Road will be realigned horizontally to the west of the existing road, to connect to the L6090 some 500 metres south west of the bridge over the proposed N9. The severed section of the L6091 on both sides of the mainline will be retained for access to lands and for drainage maintenance.
- **Broomfield:** The L8041 Broomfield Lane will be diverted along the east side of the N9 dual carriageway, over a length of 815 metres. At the north end it will be raised to join the L4004 diversion at a new junction, east of the proposed overbridge, and some 330 metres east of the Broomfield Cross Roads. The section of Broomfield Lane south of Broomfield Cross Roads on the west side of the N9, will be retained to provide access to agricultural lands.
- **Clonmelsh:** The L3044 Ballyloo Road Local road on the south side of the existing junction at Hayes Cross will be realigned along the east side of the mainline, to connect to the realigned L3050 east of the overbridge and some 230 metres east of Hayes Cross. The existing road on the north side of the

mainline will be reconstructed on line and retained as access to residential property.

A further nine Local Roads are crossed by the Athy to R747 Link Road. These roads will be realigned to form staggered T-junctions with the Link Road.

Drainage

The N9 Kilcullen to Powerstown Scheme crosses flat and gently undulating land. The terrain generally lies at levels between 70 metres and 100 metres above Ordnance Datum (AOD).

It is proposed to utilise a system of filter drains and open ditches constructed along the road edge for the main surface water collection. Cut-off filter drains or ditches are also to be provided where required. The road drainage system will be designed to accommodate, without surcharge, a once in 5 year storm event. This approach will enable the road drainage system to accommodate higher rainfall intensities for shorter storms.

There are several places along the proposed road where the combined discharge from the road and the natural catchment would exceed the capacity of the watercourse, and here facilities for temporary storage of surface water runoff will be incorporated as part of the scheme proposals, in order not to overcharge those natural streams.

Pollution control will be provided at all discharge points for surface water run-off from the Dual Carriageway to prevent contamination of the receiving water course. The interceptors are also effective in containing accidental spillages.

Earthworks

The superficial deposits overlying the bedrock are of glacial origin. These materials comprise a mixture of granular deposits and interbedded clays and glacial till (boulder clay). Drift geology is generally of a considerable thickness, typically 5 metres – 20 metres, and up to 37 metres thickness in places. Localised peat, laminated clay and silty alluvium deposits also occur, particularly in the vicinity of the River Greese and its many streams and tributaries.

Cuttings are typically less than 8 metres deep, though depths in excess of 8 metres will be encountered. Blasting will be required to break up the ground in certain locations where hard rock is encountered. The proportion of excavated material which is likely to be acceptable for reuse in embankments has been assessed as 85 – 95% for deposits of clean sands, gravels and granites, and 50 – 80% for the sandy gravelly clays and clayey gravelly sands. The lower proportions of acceptability occur in the wetter deposits in the top 1 – 2 metres below ground surface which are more readily influenced by prevailing weather conditions.

Based on the findings of the Preliminary Ground Investigation undertaken during July to October 2002 and in April / May 2003, the ground conditions are generally believed to be acceptable for forming the proposed earthworks cuttings with side slopes of 1 vertical to 2 horizontal in the sandy gravelly boulder clay / sand and gravels soil overburden. Steeper cutting side slopes are likely to be suitable in the bedrock.

Many small embankments are required along the alignment with typical heights of less than 3 metres, with embankments of up to 10 metres required at certain

locations, particularly where the Mainline crosses over side roads. Side slopes for embankment construction will depend on the quality of available fill material, and it is expected that slopes of 1 vertical to 2 horizontal will be satisfactory given the likely materials excavated along the route.

Bridges and Structures

There are a total of 26 road overbridges, 5 road underbridges, 4 river bridges, a railway bridge, 3 access/accommodation overbridges, 4 accommodation underpasses and 68 significant drainage culverts to be constructed as part of the Scheme.

Only one of these structures will be more than 100 metres in length. Bridge no. A10 overbridge, which will be constructed to carry the existing N9 across the dual carriageway at Usk Little, is heavily skewed and as a result the overall length of the structure is some 135 metres. This bridge is likely to be constructed as a three span structure.

4.0 Alternative Routes Considered

The objective of the route selection process was to select a single optimum route corridor between Kilcullen and Waterford, which would be developed to Preliminary Design Stage as part of the Statutory Procedures for making the CPO.

A preliminary study was carried out by collecting information on major engineering and environmental constraints within the full extent of the initial study area. The issues that were considered included:

- the existing infrastructure, land use, topography and physical features;
- identification of sites or areas of environmental significance or sensitivity;
- planning, development and socio-economic character; and
- engineering constraints.

Following the identification and preparation of the alternative route options, a Public Consultation was held between May and August 2001.

Route Corridors Under Consideration

A wide range of route options were investigated and the most promising were identified on the basis of site visits and the engineering and environmental constraints.

Each of the alternative routes within Route Selection Stage Sections A, B, C and D (which are not the same as sections A, B, C and D in the EIS) was assessed in respect of the environmental, engineering, traffic and economic issues. The route options were compared under the following headings:

- Planning and Socio-Economic;
- Impacts on People;
- Flora, Fauna and Fisheries;
- Archaeology and Cultural Heritage;
- Agricultural Land Use;
- Landscape and Visual;
- Engineering;

- Geology and Hydrogeology; and
- Traffic Predictions, Economic Assessment and Road Safety.

The environmental and engineering impacts of each of the route options were assessed in detail and reported on in the Route Selection Report, and the conclusions of the initial assessments are summarised in the paragraphs below.

Traffic Predictions and Economic Assessment

A road traffic model, which covered the whole N9/N10 Kilcullen to Waterford Scheme, was built. Existing data from origin-destination surveys, carried out at six locations during 1997 and 1998 and new data collected in March / April 2001 were used to provide a base year trip matrix.

A number of initial routes were tested, including routes close to the N9 and N78 and bypasses to the east and west of Carlow Town. The conclusions reached were that an eastern bypass of Carlow Town had advantages in traffic terms, as an eastern bypass could easily distribute the traffic around Carlow with junctions on the N9 to the north and south of the town. Traffic from a western bypass would overload the N80 to the west of Carlow Town and would cause circulation difficulties within the town.

The economic benefits of the route options were compared with the UK COBA (Cost Benefit Analysis) program using default parameters calculated for Irish conditions.

Comparison of Routes

The objective of the route selection process was to select a single optimum route corridor between Kilcullen and Waterford. A formalised process was applied to the evaluation process which produced a refined emerging Preferred Route.

Athy to R747 Link Road

As described above, a high quality link road was included in the draft Preferred Route to improve, significantly, the standard of road connections between Athy and the National Primary Road Network. Four options for the alignment of the Link Road were investigated and an option was selected which avoided demolition of properties and reduced farm severance by adopting a 1.8 kilometre length which follows a section of the existing Local Road.

5.0 Traffic Modelling, Traffic Impacts and Economic Analysis

General Details

A traffic model for the N9 Kilcullen to Powerstown Scheme has been produced by combining data from strategic, local and development traffic sources. Growth of traffic was based on growth factors established in the NRA National Road Needs Study (1998). Using the data available in 2000, a trip matrix was constructed covering the study area. Existing data from origin-destination surveys, carried out at six locations during 1997 and 1998, were used to provide a 1998 base year trip matrix. Using this data and a skeletal network representing the road network in the corridor a traffic assignment model was developed using SATURN (buffer network) and TRIPS suite of programs.

Journey Time Surveys

Journey time surveys were undertaken to allow verification of end-to-end journey times as predicted by the traffic model, providing an additional tool for calibration of the base year model, and to provide appropriate speed-flow functions for each road link, and hence identify the improvements in journey times on existing roads as a result of the proposed route.

Other Transport Links

A number of relevant road schemes are likely to be adopted within the lifetime of the scheme, and these have been incorporated into the study such that the full impact of the proposed alignment can be appreciated. Key road links included are:

- Carlow Southern Ring Road
- Carlow Inner Relief Road
- N25 Waterford Bypass

A summary of traffic flows on key links for 2022 Design Year is shown in Table 5.1.

Table 5.1 Link Flows for 2022 Design Year

	Link	1998 Existing	2022 Do-Minimum	2022 Do-Something
1	J1 – J2	0	0	24,745
2	J2 – J3	0	0	20,180
3	J3 – J4	0	0	13,215
4	J4 – J5	0	0	9,920
5	N78: J1 to R415	5,360	10,415	1,115
6	N78; R415 to Athy	5,300	10,420	780
7	N78: Athy to N80	5,060	10,275	7,110
8	R417: Athy to Carlow	3,400	6,030	5,845
9	Athy Link	0	0	6,310
10	R418: Athy to Castledermot	1,650	3,040	3,040
11	Old N9: J1 to R415	9,390	16,810	2,100
12	Old N9: R747 to Castledermot	9,700	17,275	1,335
13	Old N9: Castledermot to J3	9,340	16,680	4,420
14	Old N9: J3 to Carlow	9,700	16,680	11,385
15	Old N9: Carlow to J5	10,810	19,085	13,010
16	N80: Carlow to J4	5,100	9,410	9,855

In summary, the proposed route is successful in attracting significant volumes of trips from existing parallel routes such as the existing N9 and the N78, as well as marginal additional volumes from the N8 and N11. The result is a significant decrease on the alternative routes, leading to obvious accident savings along with the travel time improvements arising out of the proposed route.

Cost Benefit Analysis

A Cost Benefit Analysis was undertaken during the route selection phase and this provided a key input into the selection of the preferred route. The Cost Benefit

Analysis was then repeated on the N9 Kilcullen to Powerstown Scheme. This provides a comparison of costs and benefits arising out of the construction, maintenance and use of the scheme that accrue to the community each year over the life of the scheme.

The scheme runs a reasonable Benefit : Cost Ratio of 1.33 : 1 indicating that the scheme will provide value for money. The scheme will have a net present value of €79 million.

6.0 Human Beings

Human beings form one of the most important aspects of the environment. The proposed route will pass close to several settlements and through a number of communities. The route is likely to have a number of significant positive impacts on the local community, environment, economic growth and development. The benefits will include significant levels of direct and indirect employment during the construction phase.

The proposed development is also expected to have a positive impact, by stimulating development and reducing levels of through traffic in the urban environment of Athy, Carlow Town and Castledermot. It will facilitate the demographic growth and orderly development of these towns. The proposed route will also improve accessibility to other commercial centres, as well as leisure and recreational facilities further afield.

The proposed scheme will result in a sizeable reduction in traffic movement along the existing N9, onto which a significant number of properties front. For most of the businesses along the existing N9 there will be negligible impact although some businesses that rely predominantly on passing trade may suffer a reduction in trade.

The provision of the route may lead to an element of community severance. While the actual severance of communities will be limited through the continued provision of Local roads, any perceived severance will be more than compensated by the benefit of enhancing links from the route corridor to major centres within Ireland.

7.0 The Natural Environment

7.1 Natural Environment Issues

The issues assessed in terms of the natural environment are:

- Terrestrial Ecology (Flora and Fauna);
- Aquatic Ecology and Water Quality;
- Noise and Vibration;
- Air Quality;
- Soils and Geology; and
- Climate.

7.2 Terrestrial Ecology (Flora And Flora)

The land through which the proposed route passes is mostly good quality farmland and is mainly used for grazing, silage making and tillage, as well as some areas of marginal farmland on poorly drained land. Occasional mixed broadleaf and mixed

conifer woodlands occur along the route. The route also intersects three tributaries of the Barrow and one of the Liffey. Although there are 6 designated conservation areas within 3 kilometres of the route, only the River Lerr proposed candidate Special Area of Conservation (pcSAC) is actually crossed by the route. The River Lerr pcSAC designated area includes the adjacent lands which are of low ecological value, and while they are designated pcSAC, this designation relates to the watercourse. The bridge over the river is proposed as a clear span bridge, which will avoid direct impact on the river channel and riparian habitats and therefore there are no direct impacts on the pcSAC. Cloghrystick Wood proposed Natural Heritage Area (pNHA) and the River Barrow pcSAC are located just south of the study area for this scheme, but would be affected by any extension of the road alignment south of Junction 5. Alternative alignments were developed for Junction 5 in order to minimise the impact of the extension of the scheme on Cloghrystick Wood. Approximately 1200 square metres of the southern tip of the woodland is likely to be impacted, resulting in the loss of 13 semi-mature/mature beech and oak trees, and compensatory planting is proposed to mitigate the impact.

Habitat loss and habitat fragmentation are predicted to be the most significant impacts of the route with regard to terrestrial ecology. The total length of hedgerow to be lost as a result of the scheme is estimated to be 48.8 kilometres. The total loss of treeline is estimated at 6.65 kilometres. The loss of other terrestrial habitats of low ecological value, such as improved grassland, is of minor/insignificant impact.

There will be negative impacts for fauna as a result of the scheme due to: disturbance (mainly during construction but also during operation); loss and fragmentation of areas of suitable habitat for feeding, breeding, roosting and cover; severance of territories and creation of barriers to animal movement; and isolation of populations. The fauna, which are likely to be impacted most, are otters, badger, deer, bats and birds. These impacts will be ameliorated where possible through the provision of mammal passes and otter ledges and the erection of deer fencing. Also specialists will undertake surveys for the presence of bats and otters in order to minimise the likely impact. Of the 19 impacted sites only one is subject to major negative residual impact.

7.3 Aquatic Ecology And Water Quality

The proposed route lies within the catchments of the River Liffey (northern 4 kilometres) and the River Barrow. The main rivers crossed are the River Greese, the River Lerr and the Burren River, as well as their tributaries. The River Lerr pcSAC is crossed by the route. In total the proposed route will cross 15 main watercourses and numerous smaller streams and drainage ditches. The River Greese is a lowland river, which rises in Dunlavin and joins the River Barrow 2km south of Maganey. It is a fast-flowing limestone river with some deeper, slow stretches. The River Lerr is a small clear stream that rises in the hills to the east of Castledermot and joins the River Barrow approximately 4 kilometres north of Carlow Town. The River Burren rises near Myshall in County Carlow and flows in a semi-circle to join the River Barrow in Carlow Town (O'Reilly 2002). The entire Barrow River system is a very important salmonid habitat. It has been developed as a navigable waterway from Athy downstream to St. Mullins and the locks and weirs have greatly altered the character of the river, making it more suitable for coarse fish and pike than for trout and salmon. At present it is a fair to good salmon and trout river (O'Reilly 2002).

Impacts from the route, when operational, would mainly be concerned with disposal of storm water from the road surface and the possibility of accidental spillages on the road and surrounding ground that may subsequently enter watercourses and groundwater. Various activities during the course of the construction of the scheme could also impact on water quality. Potential impacts can arise from the civil works necessary to bridge the watercourses, the installation of culverts for the smaller streams and ditches beneath the route, the diversion of existing watercourses, the construction of the earthworks embankments and cuttings, and from site facilities.

All bridges and culverts will be designed in consultation with the Eastern Regional Fisheries Board (ERFB) / Southern Regional Fisheries Board (SRFB) and should permit the passage of fish under all but extreme flow conditions. Pollution control measures in the form of sediment traps and interceptors will be provided to prevent storm water run-off from the proposed road impacting on watercourses of fisheries value. Diversions of watercourses should be designed to replicate a natural watercourse system, incorporating meanders, riparian vegetation and other features of a natural watercourse. During the construction phase of the scheme adequate protection measures will be put in place to prevent pollution of watercourses (especially salmonid watercourses). This will include careful management of chemical substances, machinery fuel, on site facilities and instream works.

7.4 Noise And Vibration

The construction of the new road will transfer traffic from the existing N9 onto the new dual carriageway. This will thereby reduce the amount of traffic and the traffic induced noise levels in Carlow Town and Castledermot as well as along the rest of the existing route.

Although this will represent an improvement in the towns and along the entirety of the existing N9 there will be a significant increase in noise levels along the new road. Proposed ameliorative measures in the form of bunds and barriers have been included as part of the scheme to reduce these noise levels so as not to exceed the existing noise criterion for new roads (68 dB(A)). The only exception to this occurs along the existing N9 at Powerstown where the predicted noise levels will be above 68 dB(A) but these will be a reduction of the current scenario.

Machinery compounds will, where possible, be sited away from residential areas in order to avoid undue disturbance. Ground vibration from road construction works is not expected to cause disturbance or structural damage. The construction of some of the bridges will involve piling for the foundations, and the noise and vibration during installation will be controlled in order to minimise disturbance. Similarly impacts of noise and vibration will occur when blasting of rock for bulk excavations is required.

7.5 Air Quality

A detailed baseline air monitoring program has been carried out to identify existing baseline levels of NO₂, PM₁₀ and benzene in the region of the existing N9 and the proposed N9 Kilcullen to Powerstown Scheme. Monitoring results from a survey undertaken in 2001/2002 indicate that current baseline concentrations are significantly below the European Union (EU) limit value at all locations along the proposed route.

Screening modelling assessments along the proposed route were carried out using the Design Manual for Roads and Bridges (DMRB) spreadsheet (Volume 11).

Detailed prediction of traffic-derived pollutants was carried out in the worst-case section of the scheme.

Baseline modelling assessments for CO and benzene indicate that concentrations will be significantly within the ambient air quality standards. In addition, the scheme will increase ambient concentrations by no more than 1% of the respective limit values at the worst-case receptor. Cumulatively, levels will be significantly within the ambient air quality limit values under worst-case traffic speeds. Levels of both pollutants range from 2-14% of the respective limit values in 2007 and 2022. Thus, the impact of the scheme for CO and benzene is not significant.

Baseline modelling assessment for PM₁₀ indicates that concentrations will be within the ambient air quality standards. In addition, the scheme will increase ambient concentrations by no more than 1% of the respective limit values at the worst-case receptor. Cumulatively, levels will be significantly within the ambient air quality limit values under worst-case traffic speeds. Predicted levels of PM₁₀, with the scheme in place, will peak at 29% of the limit value for the annual average in 2007. Results also indicate that no exceedence of the maximum 24-hour limit value will occur in either year. Thus, the impact of the scheme for PM₁₀ is not significant.

Baseline modelling assessment for NO₂ indicates that concentrations will be within the ambient air quality standards. In addition, the scheme will increase ambient concentrations by no more than 3% of the respective limit values at the worst-case receptors. Cumulatively, levels will be significantly within the ambient air quality limit values under worst-case traffic speeds. Predicted levels of NO₂, with the scheme in place, will peak at 29% of the limit value for the annual average and at 29% of the maximum 1-hour limit value in 2007. Thus, the impact of the scheme for NO₂ is of not significant.

In summary, levels of traffic-derived air pollutants will not exceed the ambient air quality standards both with and without the scheme in place for both the opening and scheme year. The impact of the scheme in terms of NO₂, PM₁₀, CO and benzene is not significant.

7.6 Soils And Geology

The ground conditions along the route of the construction have been in the main influenced by the last major glaciations. The existing ground conditions are quite varied and comprise of typically 0.1 metres – 0.6 metres of topsoil overlying drift geology of glacial origin comprising mixed, glacial till material and granular deposits of generally between 1 metre and 20 metres in depth. During the preliminary ground investigation depths of granular material up to 37 metres in depth were identified at several locations. Localised peat, laminated clay and alluvium deposits also occur particularly in the vicinity of current watercourses. The nature of the glacial till is typically sandy gravelly clay with varying proportions of gravel, cobbles and boulders.

The bedrock geology along the route of the construction comprises a number of rock types with silurian sandstone and siltstone rock encountered as far south as Mullamast. Lower Carboniferous limestones underly the Athy to R747 Link Road and the mainline area as far south as Coolane / Ballyvass which then extends onto granite. The Granite bedrock along the route of the construction is subject to deep 'onion skin' weathering to varied depths, resulting in granite corestones surrounded by highly weathered residual granite sands. From Ballybar Upper, strong Lower Carboniferous limestone strata once again underlie the route south to Powerstown.

During the Preliminary Site Investigation the landfill site at Usk Little was identified, as being potentially contaminated and this will be further investigated during the Detailed Ground Investigation when an environmental study will be carried out. Further implications including economic, will be assessed should the landfill be found to contain hazardous material. Studies have also been carried out to assess the predicted impacts of the new road on both the Narraghmore Bog and the Narraghmore Group Water Supply Scheme.

7.7 Climate

The predictions for Greenhouse Gas (GHG) emissions from the proposed scheme indicate that there will be an insignificant increase in the levels of CO₂ emissions as a result of the scheme with the impact of the order of 0.00001% of total emissions in Ireland over the period 2007 – 2022. For the "do minimum" scenario, the emissions of GHG will amount to 0.00098%, whilst the "do something" scenario will amount to 0.00099% of the total emissions in Ireland over the period 2007-2022.

8.0 Landscape

General

The primary aspects of landscape assessment are visual impact and landscape character impact. Visual impact is the extent to which a new structure in the landscape can be seen, while landscape character impact covers responses that are felt towards the landscape.

The construction development associated with such a major road will inevitably have significant impacts on the landscape and visual environment, which will be most pronounced during the construction stage and in the short term thereafter, when disturbance in the proximity of properties is at its greatest. However, general negative visual impact will continue to arise at properties close to or adjoining the road boundary through visual intrusion of elevated sections of embankment, and operational traffic.

Landscape Proposals

The proposed scheme crosses a primarily rural and agricultural landscape where residential development is varyingly dispersed. Landscaping is proposed with the aim of protecting the rural and residential amenity and enhancing the rural edge of the roadside landscape. The main objectives for the landscape works will be:

- To develop a landscape strategy, the character of which relates to the patterns, scale and diversity of the existing character of the study area;
- To develop a landscape structure which assists in physically and visually integrating the proposed scheme, its embankments and associated features into the local surroundings;
- To minimise visual intrusion and reduce the negative nature of any visual obstruction;
- In conjunction with terrestrial ecology proposals (Flora and Fauna), to protect, reinstate or enhance elements of the existing landscape, directly or indirectly affected by proposal.

General measures will be applied over the entire scheme to ensure that field boundaries are re-connected with a tree-lined hedgerow along substantial lengths of the proposed scheme. This approach will be locally modified to incorporate

other landscape treatments, such as extensive areas of new woodland planting as screening, using species which are locally indigenous and native. In other areas, landscaping will be designed to allow open sections of carriageway, which will allow for views to the wider landscape.

Visual Intrusion

All properties within 250 metres of the centre-line of the proposed road, as well as certain properties outside the 250 metre band due to their relative elevation, openness or otherwise, were assessed for visual impact. To mitigate the assessed impacts, side slopes of cuttings and embankments, verges and other soft areas will be prepared for planting to reinforce the character of the existing landscape and to soften the features of the proposed road. Where the scheme encroaches on private garden areas, boundary treatment will be prepared in consultation with the property owner.

9.0 Material Assets

9.1 Agriculture

The route of the new road passes through gently undulating farmland, in an area of good agricultural soil. The impact on agriculture due to the new road construction will be limited to those farms directly traversed by the proposed development, which total approximately 200 number. The majority of farms will need new access points as part of the mitigation measures, while accommodation overbridges and underpasses will be required to mitigate the severance of lands on certain farms.

The amount of agricultural land removed by the N9 Kilcullen to Powerstown Scheme (approximately 490 ha of farm land), while significant to individual farmers, is not significant on a local or national level. The impact of the route on farming enterprises is also mitigated by the fact that the main agricultural activity along the route is drystock and tillage farming. Only twelve dairy farms are affected by the route, with impacts ranging from slight to major. The major severance impacts have been mitigated in most cases by provision of access across the route.

9.2 Residential Property

The scheme will require acquisition of land from 52 properties, with only one occupied property and an associated plot to be acquired. Of the remaining 50 properties, 5 are designated Development Land for residential property. 10 properties are severely affected (more than 25% of the curtilage to be acquired), 16 properties are moderately affected (10% to 25% of curtilage to be acquired) and 24 properties slightly affected (less than 10% of the curtilage to be acquired) by the scheme.

9.3 Commercial Property

The scheme will impact on 15 commercial properties, with 1 property severely affected (more than 25% of the curtilage to be acquired). Of the remainder, 6 properties are moderately affected (10% to 25% of curtilage to be acquired) and 8 properties slightly affected (less than 10% of the curtilage to be acquired) by the scheme.

9.4 Recreational Areas

Seven areas of land used for recreational purposes have been identified as being impacted by the proposed scheme. The impact in one case is moderate (10% to

25% of curtilage to be acquired) and is slight in the remaining six cases (less than 10% of the curtilage to be acquired). These areas include five areas of woodland and Tinryland GFC.

9.5 Public Facilities

A small area of land (0.06 Ha) is to be acquired from the Powerstown Landfill Site, operated by Carlow County Council. The impact on this site is slight (less than 10% of the curtilage to be acquired).

10.0 Architectural, Archaeological and Cultural Heritage

The proposed N9 Kilcullen to Powerstown Scheme passes through a countryside that is rich in archaeological remains. However, the landscape has been dramatically altered by humans due to the fact that this area is intensively farmed due to the high quality of the land.

Comments from the Cultural Heritage specialists employed on this scheme were considered during the design of the scheme in such a way as to avoid as far as possible known sites of archaeological, architectural or cultural heritage value.

The proposed N9 Kilcullen to Powerstown Scheme will directly impact on 13 known archaeological sites and the environs of a further 23 archaeological sites. There will be a direct impact on 12 known architectural sites and a direct impact on the boundaries of 21 architectural sites as well as, the environs of a further 30. Fifteen Industrial Archaeological and Cultural Heritage sites will also be directly impacted. The route also impacts on 51 areas of archaeological potential and 18 rivers or streams.

It is recommended that pre-construction phase measures be implemented to resolve the archaeological component of the road corridor where required.

11.0 Construction Phase

Although the works have been designed with a view to minimising the impact of the completed works on the environment, it is inevitable that the construction of the works would have some impact on the local population and on the environment. Consequently, the management of the construction activities would be monitored to ensure compliance with the construction contract. The various construction impacts are discussed below.

Site Construction Compounds

Construction compounds will be required to provide office facilities, the storage of materials and facilities for the maintenance of construction plant. Traffic volumes would increase slightly near these compounds, for the duration of the works. There would also be an associated increase in local noise levels during working hours.

Construction Operations

The various construction operations, including earthworks excavation, hauling and embankment construction could have an impact due to noise and vibration, water pollution, air quality / dust and access.

In order to minimise the impact of haulage of materials to the works, the construction contract would prohibit the use of certain roads, and only those roads deemed suitable for haulage would be available to the contractor.

General Construction Impacts

The potential impact of the construction works on various elements of the environment and measures to mitigate the impacts are discussed below.

Community and Land Severance

The construction of the works should not result in any significant community or land severance in addition to that caused by the scheme itself, though the local population may experience some inconvenience during its construction.

Effects on Pedestrians/Cyclists and Users of Public Transport

The construction of the works should not have a significant impact on pedestrians/cyclists and users of public transport, as the road works are largely off line, and diversions would be constructed to maintain traffic flows on National, Regional and Local roads during construction of the works.

Terrestrial Ecology (Flora & Fauna)

Construction activities can impact on flora and fauna due to dust, construction noise, the use of construction plant, stockpiling of materials and pollution of streams. These impacts will be minimised by the careful design of the works and by good management of site operations.

Aquatic Ecology and Water Quality

Activities, which may cause water pollution, are usually associated with “in-stream” excavation and construction, fuel storage and refuelling, toilet and washroom wastewater and surface water runoff. The Contractor will be required to adopt “best practices” to avoid water pollution and to minimise the impact of such activities.

Construction Noise

Construction noise may arise from many sources including construction plant. Mitigation of noise would be delivered by control of site working hours, and specifying maximum noise levels. The contractor would also be obliged to employ best practice to minimise noise.

Construction Vibration

Construction activities and the mitigation associated with vibration are similar to noise, as discussed above. Vibrations arising from rock blasting will be restricted to prescribed maximum levels.

Contaminated Material

Any contaminated material that arises during excavation for the road or during demolition of structures would be treated using best current practice. Where necessary provision will be made in the contract for the safe removal and transport of contaminated material to approved licensed sites.

Air Quality

Dust generated by plant working on site, together with exhaust smoke/pollutants and gaseous chemicals from the use of chemicals with volatile vapours, would impact on air quality for the duration of the construction activities. The contractor would be required to adopt “best practices” to minimise the potential impact on air quality.

Agriculture

The main impacts of the construction works on agriculture would be from noise and dust.

Archaeological Sites

Known archaeological sites would be investigated ahead of the construction contract, and a watching brief may be required during the contract.

Public Utility Services

Although alteration and diversion of existing utility services would be required, no interruption of services should result other than short breaks at changeover.

12.0 Interrelationships

Each of the various environmental and related topics has been discussed separately. In this clause, the impacts of the mitigation measures included in the N9 Kilcullen to Powerstown Scheme on interdependencies in the existing environment have been identified as follows.

- Increase in Noise and Air Pollution would have a negative interaction with human beings in terms of health and residential amenity. The provision of a screen wall and / or earth mounds to mitigate noise impacts would have a negative interaction with the landscape and Flora, Fauna and Habitats.
- Impacts on Material Assets would interact with Human Beings.
- Visual Obstruction and Visual Intrusion would interact with Human Beings.
- The impact of the road surface water drainage and the changes that would occur to the ground water that would interact and affect Flora and Fauna.
- The impact of mitigation measures used to reduce the impact of dust could interact with the Aquatic Ecology.
- The Landscape mitigation proposals may have a negative impact on the microclimate.

13.0 Mitigation Measures

The principal mitigation measures proposed to mitigate the adverse impacts of the scheme are as follows:

- The scheme will be extensively landscaped and a large numbers of trees and shrubs will be planted to help merge the road into the countryside. An emphasis will be placed on native species in the selection of plants.
- The construction of environmental barriers such as walls or berms will greatly reduce noise levels for nearby dwellings.
- The provision of new farm access points to portions of severed land.
- Access to dwellings along existing roads will be maintained.

- The provision of filter type drains wherever practical will significantly improve the quality of surface water runoff.
- During construction, restrictions will be imposed on the contractor to minimise noise, vibration and dust emissions, to prevent pollution of streams and watercourses, to limit disruption to road users, to minimise damage to soils and, in general, to protect the wider environment.
- Adequate protection measures will be put in place to ensure that all hydrocarbons and other toxic chemicals used during the construction phase are appropriately handled, stored and disposed of in accordance with recognized standards.
- All surface water run-off from the new road to watercourses of fisheries value should be directed through pollution control measures such as hydrocarbon interceptors and sediment traps. These pollution control measures should be designed with adequate storage capacity and in a manner to facilitate maintenance and cleaning.
- Construction of clear span bridges across the main watercourses, with the bridge abutments set a minimum distance of 2 metres from the edge of the riverbanks.
- Use should be made wherever possible of arch-type culverts, leaving the stream-bed undisturbed and maintaining some natural river bank on both sides of the watercourse and all culverts will be designed in consultation with the ERFB / SRFB and should permit the passage of fish under all but extreme flow conditions.
- The soils excavated from the landfill site at Usk Little may require either treatment to reduce the contamination to non-hazardous levels or be exported for treatment / disposal.

14.0 Further Information

The full Environmental Impact Statement may be inspected by appointment by making contact with:

Kildare County Council NRDO
Maudlins
Naas
Co. Kildare
Freephone 1800 201 428

Kildare County Council
St Mary's
Naas
Co. Kildare
Telephone 045-873800

Carlow County Council
County Hall
Athy Road
Carlow
Co. Carlow
Telephone 059-9170300

Copies may also be purchased from Kildare County Council National Roads Design Office (NRDO). Also the various reports prepared during the road design stages (i.e. Constraints Study Report, Route Selection Report and the Preliminary Design Stage Report) and various other specialist reports can be inspected at Kildare County Council National Roads Design Office in Naas.

The full Environmental Impact Statement can also be viewed on the N9/N10 Project Website at www.n9-n10kilcullen-waterford.ie

15.0 What Happens Next?

Construction of the scheme is dependent on approval from An Bord Pleanála. Written submissions relating to the environmental effects of the proposals may be made to the Board prior to the date specified that will be published in newspaper notices. An oral hearing must be held. These written submissions, together with any representations made at any oral hearing, will be considered by the Board in making their decision on whether or not to approve the scheme with or without modifications. The Board's decision will be published in one or more newspapers circulating in the area, including where appropriate, particulars of any modifications to the scheme.