

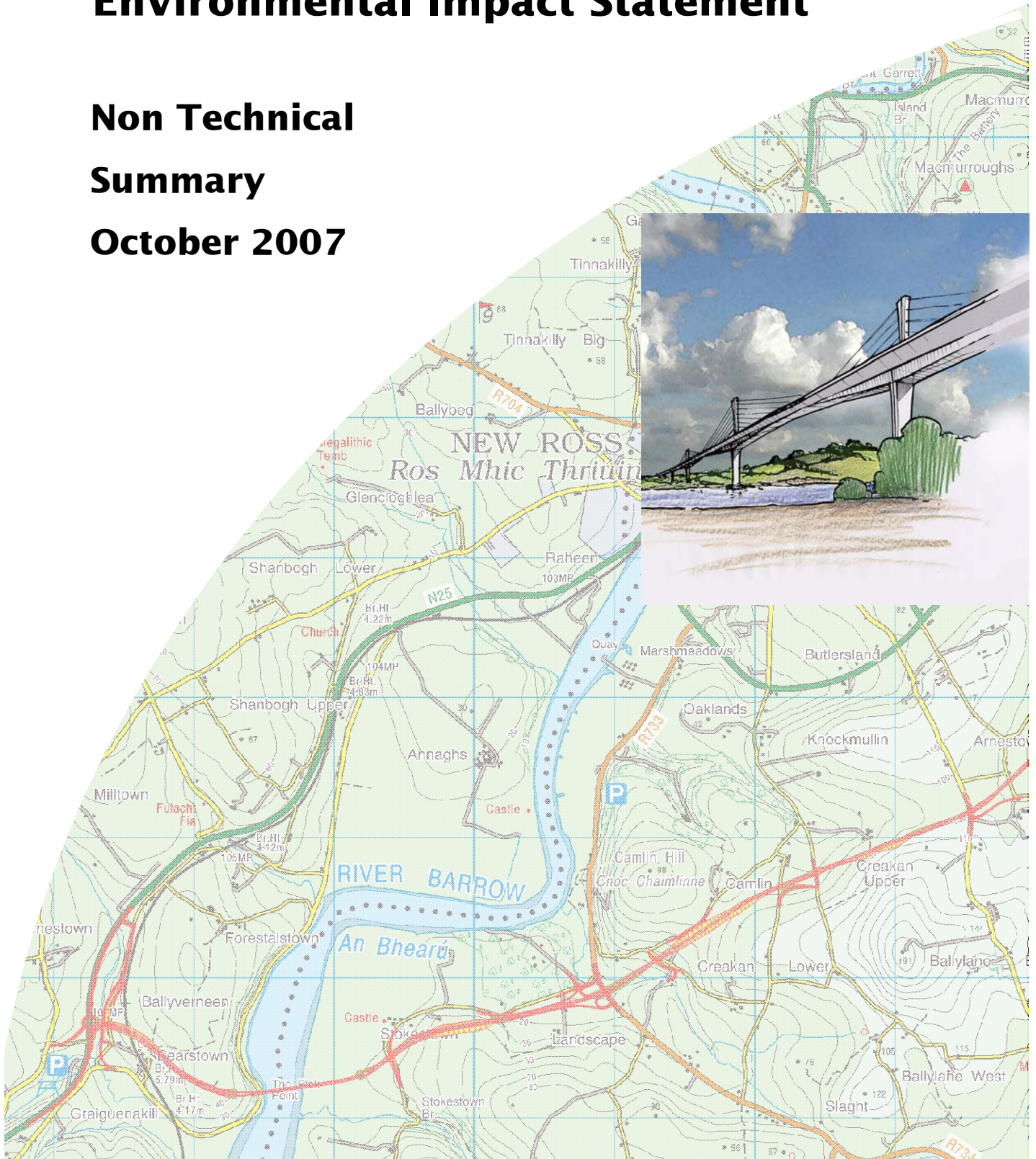
# New Ross Bypass

## Environmental Impact Statement

**Non Technical**

**Summary**

**October 2007**







Kilkenny  
County  
Council



National  
Roads  
Authority



Wexford  
County  
Council

# **New Ross Bypass**

## **Environmental Impact Statement**

### **Non Technical Summary**

### **October 2007**



Mott MacDonald Pettit



Tramore House  
Regional Design Office



ERM Ireland Ltd



# **New Ross Bypass**

**Non-Technical Summary of the  
Environmental Impact Statement**

Final

October 2007

[www.erm.com/ireland](http://www.erm.com/ireland)



Wexford County Council

**New Ross Bypass: *Non-Technical Summary of the Environmental Impact Statement***

October 2007

Reference 0028699

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For and on behalf of  
Environmental Resources Management

Approved by: **Bruce Davidson**

Signed:



Position: **Partner**

Date: **19th October 2007**

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## **Preface to the NTS of the New Ross Bypass Environmental Impact Statement**

This Environmental Impact Statement (EIS) for the New Ross Bypass comprises the following volumes:

### ***Volume 1 Non-Technical Summary (NTS) and Main Text***

Volume 1 contains the following:

- NTS;
- List of Abbreviations Glossary of Terms;
- Main EIS Assessment Text (Chapters 1 to 19); and
- List of References.

A Table of Contents for Volume 1 page can be found at the front of Volume 1.

### ***Volume 2 Drawings (containing engineering and environmental drawings)***

Volume 2 contains a series of drawings and figures in A3 format. A full listing of all the figures in the EIS can be found in Volume 1 and Volume 2.

### ***Volume 3 Annexes***

Volume 3 contains four annexes to the EIS. These provide additional and supporting information to the chapters in Volume 1. The annexes are as follows:

- Annex A Landscape & visual;
- Annex B Ecology;
- Annex C Agronomy; and
- Annex D Archaeological heritage and Architectural, artistic, cultural & historic environment

This document is a stand-alone version the NTS and duplicates the version in Volume 1 of the EIS.

### **Note on Stage of Design**

All proposed road levels indicated in this Environmental Impact Statement or shown on drawings are based on preliminary stage designs and may be revised at detailed design stage. Modifications may be made to avail of opportunities to improve the design in the light of the experience of ground conditions or other innovations, provided this has no significant adverse environmental effect.



## NTS 1

## INTRODUCTION

## NTS 1.1

## BACKGROUND TO THE PROPOSED BYPASS

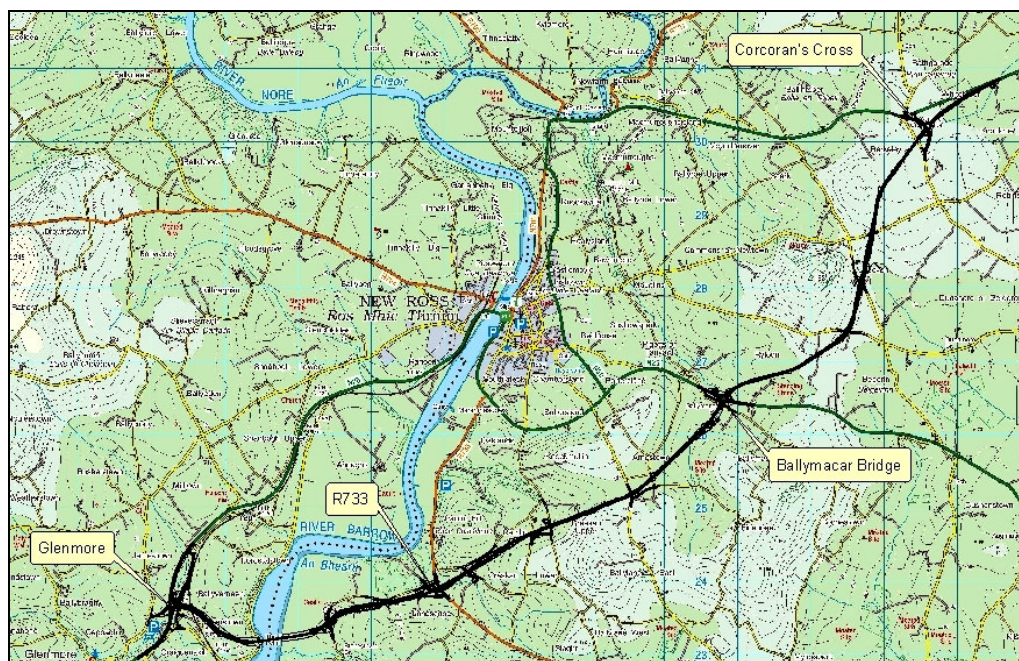
*Environmental Resources Management (ERM)* was commissioned in January 2005 by *Mott MacDonald Pettit Limited (MMP)* to prepare an Environmental Impact Statement (EIS) for the proposed New Ross Bypass (the Bypass) on behalf of *Wexford County Council*.

This document is the Non-Technical Summary (NTS) of the Environmental Impact Statement (EIS), which is a statement of the likely significant effects, if any, that the proposed Bypass will have on the environment, if carried out. The EIS is the statement which is prepared as part of the Environmental Impact Assessment (EIA) process, which is a process for examining the environmental effects of a proposed development. The EIS will be submitted to An Bord Pleanála, whose approval is required before the proposed Bypass can be constructed.

The proposed Bypass is approximately 14.8km in length, starting at the eastern border of Kilkenny and crossing over the River Barrow via a new bridge into Wexford, as shown below in *Figure 1*.

Figure 1

General alignment of the proposed Bypass



The concept of a Bypass for New Ross was first proposed in the National Road Needs Study, published in 1998 by the *National Roads Authority (NRA)*, and in the National Development Plan (NDP) 2000 - 2006, published by the Government of Ireland in 1999. The latest version of the NDP (2007 - 2013) confirms the importance of the New Ross Bypass by designating the road scheme as a key project in the delivery of the Key National/Primary Routes.

**NTS 1.2*****ROADS LEGISLATION***

The EIS has been prepared in accordance with Sections 50 and 51 of the Roads Act, 1993, as amended. Under Section 50 of the Roads Act, a road authority (e.g. a County Council) is required to prepare a statement (i.e. an EIS) of the likely effects on the environment of any proposed road development consisting of the construction of a motorway, a busway, or any prescribed type of proposed road development consisting of the construction of a proposed public road or the improvement of an existing public road.

The determination of the need to undertake the EIA process in relation to a proposed road development is called the EIA screening process. The need for a preparation of an EIS is either mandatory or discretionary, depending on the type and extent of the road development being proposed. The EIA screening process identified that the proposed Bypass falls into the mandatory EIA category because:

- there will be over 8 km of a new road of four or more lanes in a rural area; and
- the length of the bridge crossing the River Barrow is over 100m in length.

Furthermore, the road scheme crosses the River Barrow, a candidate Special Area of Conservation (cSAC), which is a European Protected Site under the Habitat Regulations. A potential significant effect on such sites usually requires the application of EIA.

**NTS 2****PROPOSED BYPASS****NTS 2.1****GENERAL SCHEME**

The new proposed bypass of New Ross will connect the N25 from Waterford on the Kilkenny side of the River Barrow, with the N25 to Rosslare and the N30 to Enniscorthy in Wexford east of New Ross town.

The Bypass commences at Glenmore in County Kilkenny with an At-Grade Roundabout and crosses over the River Barrow via a proposed Extrados type bridge between Pink Point in County Kilkenny and Stokestown in County Wexford. Continuing in a north easterly direction to Ballymacar Bridge, the Bypass interfaces with the R733 in Landscape by way of a Grade Separated Junction, and with the N25 at Ballymacar Bridge with an At-Grade Roundabout. From Ballymacar Bridge the Bypass continues to the northeast and interfaces with the existing N30 at Corcoran's Cross, finishing with an at-grade roundabout to the east of Corcoran's Cross with connecting roads to the existing N30 and severed Local Road L 4003-3.

The Bypass consists of:

- Approximately 4 km of Type 1 Dual Carriageway, which will link the existing N25 in Glenmore to the R733 in Landscape via the new River Barrow Bridge Crossing;
- Approximately 9.6 km of Type 2 Dual Carriageway, which links the R733 in Landscape to the existing N25 at Ballymacar Bridge and continues to the proposed junction southeast of Corcoran's Cross on the existing N30;
- Approximately 1.2 km of Standard Single Carriageway (S2), which links the roundabout southeast of Corcoran's Cross to the existing N30 to the east of Corcoran's Cross;
- Three at grade junctions, at Glenmore (N25), Ballymacar Bridge (N25) and Corcoran's Cross (N30);
- A grade separated junction, at Landscape (R733);
- River Barrow Crossing comprising an Extrados Type Bridge Crossing, connecting Pink Point in County Kilkenny and Stokestown in County Wexford;
- 10 local road bridges, 1 at Ballyverneen, 1 at Stokestown, 1 in Landscape (part of the grade separated junction), 1 in Camlin, 1 at Creakan Upper, 1 at Arnestown, 1 at Ballymacar and 3 at Lacken;
- A railway bridge at Ballyverneen (this proposed railway structure may be built as part of this scheme, or may be constructed in the future as a separate contract), where the Bypass intersects with a railway line that Iarnród Éireann has advised as having the status of being "closed but not abandoned";

- Retaining wall structures adjacent to the LS-7513 at Ballyverneen, and the R733 at Camlin;
- Various realignments and tie-ins of sections of National, Regional and Local roads affected by the proposed scheme; and
- Associated ancillary works.

## NTS 2.2

### **BARROW BRIDGE**

The Barrow Bridge will be an Extrados Type Bridge and is illustrated in *Figure 2* below. Three of the bridge piers will extend through the bridge deck, with the centre pier extending approximately 25m above the bridge deck and the two side piers extending approximately 15m above the bridge deck. Inclined stay cables will link these three piers to the centre of the bridge deck. The overall length of the bridge is approximately 900m with the two main central spans approximately 230m in length. The vertical alignment for the Barrow Bridge allows a 36m clearance envelope above Mean High Water Spring (MHWS) for the navigation channel of the river.

**Figure 2**

***Visualisation of the proposed River Barrow 2nd crossing***



*Image courtesy of Mott MacDonald Pettit*

## NTS 2.3

### **CONSTRUCTION**

The construction of the Bypass is estimated to be 36 months. It is estimated that the Bypass will be open by 2013. It will result in the generation of construction traffic on the local and regional road network. Due to the nature of the construction work involved, a high percentage of this traffic will involve the movement of large volumes of HGVs, heavy machinery and plant. Typical plant and machinery to be used includes diggers and earth movers, concrete vehicles, small scale plant and machinery. Typical construction activities will include site clearance works; earth and spoil movement; cutting activities; construction of the various elements of the Bypass (Main line, bridges, underpasses, culverts etc.) and their associated sub-elements (e.g. sub-base, road surface, pavements, landscape elements etc.); and planting works.

Construction traffic data as provided by MMP indicates that the maximum construction movements could be 366 per day (which includes the maximum

movements for earthworks, deliveries and internal movements, plus the maximum perceived amount of vehicles required for the delivery of concrete).

## NTS 2.4

### TRAFFIC

The Bypass will result in the removal of a significant volume of traffic from New Ross. An estimate of the extent of traffic removal is illustrated in *Tables 1* and *2* below. The road links for which traffic flows are provided are shown in *Figure 3*. The traffic flow data was provided by MMP. The Do-nothing column refers to the traffic conditions that are likely to arise if the Bypass is not built.

**Table 1** *Traffic flow projections for the Opening Year (2013)*

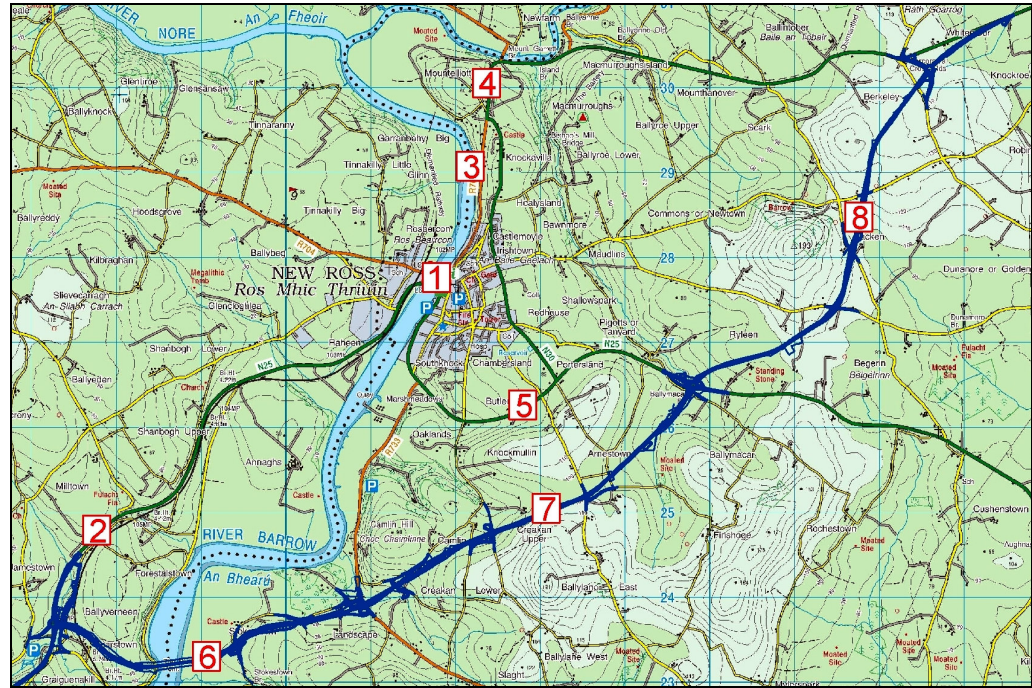
Road link	Do-nothing	With scheme	% Reduction
1. O'Hanrahan Bridge	22,175	10,158	54.19%
2. N25 Waterford Road	16,204	4,156	74.35%
3. R700 New Ross - N30	8,505	3,597	57.71%
4. N30 Enniscorthy Road	13,283	6,626	50.12%
5. N25/N30 Wexford Road	9,869	4,854	50.82%
6. New Bridge Crossing (Bypass)	0	12,048	n/a
7. R733 - Ballymacar (Bypass)	0	9,697	n/a
8. Ballymacar - Corcoran's Cross (Bypass)	0	6,658	n/a

**Table 2** *Traffic flow projections for the Design Year (2028)*

Road link	Do-nothing	With scheme	% Reduction
1. O'Hanrahan Bridge	27,909	12,746	54.33%
2. N25 Waterford Road	20,371	5,208	74.43%
3. R700 New Ross - N30	10,996	4,081	62.89%
4. N30 Enniscorthy Road	16,709	8,290	50.39%
5. N25/N30 Wexford Road	12,306	6,089	50.52%
6. New Bridge Crossing (Bypass)	0	15,173	n/a
7. R733 - Ballymacar (Bypass)	0	12,188	n/a
8. Ballymacar - Corcoran's Cross (Bypass)	0	8,419	n/a

Figure 3

## Road modelling links



## NTS 3 *POLICY CONTEXT*

### NTS 3.1 *INTRODUCTION*

This section presents the policy context within which the road development is being proposed. There is policy guidance at a national, regional and local level that specifically relates to the road.

### NTS 3.2 *NATIONAL POLICY*

The *National Development Plan (NDP)* set's out the Government's investment framework for the period 2007 to 2013. There are five main Investment Priorities of the NDP, one of which is Economic Infrastructure. The Economic Infrastructure Investment Priority includes funding for roads. The NDP specifically refers to the Bypass. It notes that investment priorities include "*completion by 2010 of the M/N9 Dublin - Waterford road and N25 Bypass*". In addition, The Road and Rail Network Map in the NDP include the Bypass as part of the Key National/Primary Routes.

The *National Spatial Strategy (NSS)* is the national planning framework for Ireland for the next 20 years. The NSS aims to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning. Although New Ross is not designated as a Gateway or Hub, the town is along the alignment of the National Transport corridor. The NSS notes that "*the critical mass of Waterford as a gateway, supported by Kilkenny and Wexford as hubs, will be complemented by development in surrounding and adjacent towns. The extensive network of county towns and other large towns in the South East provides a key resource, which, combined with the gateway and hub approach, provides a strong platform for balanced development throughout the region*".

*"Towns such as Clonmel and Carrick-on-Suir in South Tipperary, Dungarvan and Tramore in Waterford, Carlow town, New Ross and Enniscorthy in Wexford provide good bases for population and services which will attract investment and employment activities additional to those that need to be located in or near a gateway".*

The Bypass will assist with the growth and development of the Waterford Gateway in that it will greatly facilitate the faster, easier and greater movement of people, goods and services in the South East Region. Such movement is essential to achieving the stated NSS objectives of achieving a better balance of social, economic and physical development across Ireland.

### NTS 3.3 *REGIONAL POLICY*

The South-East Regional Authority adopted its *Regional Planning Guidelines (RPG)* in May 2004. The RPG represents a planning framework for the period

2004 - 2020 designed to achieve a better spatial balance of social, economic and physical development throughout the South-East Region. The RPG specifically refers to the New Ross Bypass with regards to it being part of the "*east coast route from Dublin to the South-East*" and notes that the bypass is "*essential to the development of the eastern section of the region and would significantly improve access to the Rosslare Europort from the region and from the country as a whole*". The RPG goes on to state that the New Ross Bypass is one of the "*infrastructural development priorities in relation to roads*".

#### NTS 3.4 COUNTY POLICY

The *Draft Wexford County Development Plan 2007 - 2013* sets out Wexford County Council's intentions for the future development of land including measures for the conservation and improvement of the natural and physical environment and the provision of infrastructure. The County Development Plan fully supports the development of the New Ross Bypass. The County Development Plan lists the New Ross Bypass as one of seven Major Roads Proposals which Wexford County Council will support. The draft Plan states that it is the policy of the Council "*To facilitate and enable the development of major National Road proposals within the lifetime of the Plan*" and "*to provide a dual carriageway by-pass to the N25 at New Ross which will include an additional river crossing at New Ross*".

The *Kilkenny County Development Plan 2002* fully supports the development of the Bypass. Specific policy objectives include the completion of "*major road improvement projects over the plan period*" including "*the upgrading of the N25 route between Waterford and New Ross with a bypass for New Ross*".

#### NTS 3.5 LOCAL POLICY

The New Ross Town & Environs Development Plan 2004 fully supports the New Ross Bypass. The Development Plan lists a number of policy intentions of New Ross Town Council, one of which is to "*have a second river crossing to serve the town*".

To conclude, the proposed Bypass is supported by national, regional, county and local-level policy.

**NTS 4****CONSULTATION****NTS 4.1****PUBLIC CONSULTATION**

Public consultation has been undertaken since 1999. In September 1999, preliminary consultations were undertaken. A preliminary consultation brochure was prepared and distributed with local newspapers. The brochure requested submission and general views from the public. At the end of March 2000, a public exhibition event was held in New Ross and was facilitated by *Wexford County Council* and *Kilkenny County Council*. A presentation was also made to a joint meeting of the elected members of the two local authorities. Some one thousand people are estimated to have attended the public exhibition event.

A Public Consultation update meeting took place in New Ross in mid-July 2000. A presentation was made, updating the public on progress to date on the project. This was followed by a question and answer session. In excess of 2,500 responses were received. A second public consultation event was undertaken at the end of November 2001 and took place in New Ross. Display boards were used to present the preferred route for the Bypass. These boards were then placed in the New Ross Public Library after the second public consultation event and comments from the public were invited.

In addition to the public consultation events outlined above, consultation was also undertaken with landowners likely to be impacted during the route selection stage. Once the preferred route was identified, further consultation was undertaken with the landowners whose land will be acquired under the compulsory purchase order (CPO) process.

**NTS 4.2****EIS SCOPING CONSULTATION**

Scoping is a stage in the EIS process where the key issues of relevance to the EIS are identified. The process is usually assisted by consultation with various statutory and public organisations. ERM wrote to 23 public bodies and authorities (ranging from Local Authorities and Government Departments, to national and local organisations) in June 2005 and invited these consultees to input into the scope of the EIS. A number of submissions were received and these were considered in the scope of the EIS.

**NTS 4.3****EIS CONSULTATION**

Consultation was also undertaken in parallel with the preparation of the EIS. The form of the consultation ranged from written communications to on-site meetings. Organisations consulted include National Parks and Wildlife Service; Department of Environment, Heritage and Local Government; National Roads Authority (NRA); and Southern Regional Fisheries Board.

## NTS 5 *ALTERNATIVES*

### NTS 5.1 *INTRODUCTION*

The consideration of alternatives is a requirement of Section 50(2) of the Roads Act, 1993, which states that the EIS should provide "*the main alternatives studied by the road authority concerned and an indication of the main reasons for its choice, taking into account the environmental effects*".

Considerable work has been undertaken on this topic. *Mott MacDonald Pettit* produced a Constraints Report in February 2001 and a Route Selection Report in October 2002.

### NTS 5.2 *CONSTRAINTS STUDY*

The purpose of the Constraints Study was to determine the constraints (be they physical, procedural, legal or environmental) that currently exist and which may affect the design of the scheme,.

The issues considered in the Constraints Study included:

- ecology,
- water quality and fisheries
- archaeology and heritage,
- landscape,
- recreation/amenity,
- geology and hydrogeology,
- traffic,
- land ownership,
- planning,
- utilities, and
- preliminary site investigations.

All the identified issues and data collected were used in the identification of route options during the preparation of the Route Selection Report (*Section 5.2*).

### NTS 5.3 *ROUTE SELECTION REPORT*

The Route Selection Report was prepared in October 2002 by MMP and was broken down into two phases. The first phase considered 46 scheme options (comprising various combinations of twelve different route corridors) and these were subject to an assessment with regards to:

- traffic performance;
- economic returns;
- cost estimates; and
- environmental factors.

This assessment resulted in the 46 options being reduced to five options. The majority of the scheme options were eliminated on the basis that they did not meet some or all of the requirements (traffic, economic and cost).

The second phase then focused on five emerging preferred routes (identified in the first phase), which, were examined in greater detail and resulted in two specific routes being taken forward to the second phase of the route selection study.

The two routes were split into two sub-sections to assist greater examination and all four sub-sections were subjected to assessment under the following criteria:

- Agriculture;
- Air quality;
- Alignment/engineering;
- Archaeology;
- Construction risk;
- Ecology;
- Economics;
- Geology/hydrogeology;
- Ground conditions;
- Human environment;
- Hydraulics;
- Journey length;
- Landscape;
- National Primary Route;
- Navigation;
- Noise;
- Traffic performance;
- Underwater archaeology;
- Water quality/fisheries;  
and
- Development of town.

On the basis of the assessment results, a decision was made by Wexford County Council to proceed with the scheme as shown in *Figure 1*.

#### **NTS 5.4      *BARROW BRIDGE ALTERNATIVES***

Nine alternative bridge crossing options were considered with regards to the new crossing of the River Barrow. Following discussions with the Project Steering Committee, four bridge options were selected for more detailed consideration and these were:

1. box girder option;
2. three-arch bridge option;
3. single-arch bridge with approach viaduct option; and
4. three-tower extrados bridge option.

These four bridge options were then subjected to an examination against the following criteria:

- Geometry;
- Navigation clearance;
- Loading;
- Ground Conditions;
- No. of Piers;
- Environmental;
- Construction Programme;
- Construction complexity;
- Cost Comparisons;
- Whole Life Cost; and
- Architectural/Aesthetic Considerations.

The Extrados option was selected as it offered the best balance of overall performance across the criteria above.

## **NTS 6 ENVIRONMENTAL IMPACTS**

### **NTS 6.1 INTRODUCTION**

This section summarises the predicted impacts of the Bypass. Impacts have been summarised under the various environmental topic headings as used in the EIS. Both construction and operation impacts are described.

### **NTS 6.2 HUMAN BEINGS**

For the duration of construction, the local economy will receive a positive impact of slight significance due to local spending by construction workers and indirect/spin-off, positive, economic impacts as a result of the construction of the scheme.

The residual impact of construction is a negative impact of moderate significance due to disruption and nuisance resulting from the construction of the scheme. While the various mitigation measures and the development of an Environmental Operating Plan by the contractor will reduce the significance of these impacts to slight, they will still remain for the duration of the construction phase, which will be 36 months.

The opening of the Bypass will result in positive impacts of moderate significance for New Ross due to traffic flow reductions of 50 - 57% for the Opening Year (2013) and positive impacts of moderate to major significance (50 - 62%) by the Design Year (2028). The reduction in traffic flows will result in reduced severance, visual impacts, noise and air quality emissions.

A COBA Cost Benefit appraisal has been carried out using COBA 11 (Release 6) in accordance with National Road Authority Guidelines for Cost Benefit Analysis (June 2005). This analysis has indicated a positive cost benefit ratio with saving to both travel time and fuel consumption. The scheme costs were Discounted to 2002 with a Discount Rate of 4.0% and have an Evaluation Period of 30 YEARS with the First Scheme Year (Opening Year) being 2013.

The opening of the scheme is likely to result in short-term negative impacts of slight significance regarding the economy of New Ross and the surrounding areas. However, in the medium to longer-term, positive impacts are likely to arise as a result of reduced traffic flows, which will benefit the town and its inhabitants, potentially resulting in greater economic activity in the town in the long-term due to overall improvements in the urban streetscape of the town and improved quality of life.

The provision of the Bypass will not result in any significant negative impacts for the majority of the various road users along the existing roads which will interact with the Bypass alignment. While these road users will be impacted during temporary road closures, once the scheme is completed the

replacement structures will ensure that there is no significant impacts for the majority of roads. However, there are anticipated to be some negative impacts due to increased journey times and longer distances. These impacts are primarily confined to the key junctions on the alignment (Glenmore roundabout, R733 junction, Ballymacar Bridge roundabout and N-30 East tie-in at Corcoran's Cross) and along two of the local road realignments.

### NTS 6.3

#### AIR QUALITY AND CLIMATE

Various mitigation measures have been identified to address potential negative air quality impacts during construction. These measures are focused on dust control to minimise dust generation during construction. The implementation of these measures will ensure that no significant air quality effects will arise during construction. These mitigation measures will be contained in the Environmental Operating Plan.

There will be a positive impact to air quality along the existing road network in the town of New Ross as a result of the Bypass. One road where PM<sub>10</sub> concentrations are predicted to exceed the air quality limit value (without the Bypass) is brought within the limit values as a direct result of the Bypass removing traffic from New Ross.

There will be a small increase in pollutant concentrations adjacent to the proposed route. However, no air quality limit values are predicted to be exceeded. There will be no exceedance of the air quality limit value for NO<sub>x</sub> for the protection of vegetation and sensitive habitat at the cSAC and NHA.

There will be a reduction in greenhouse gas emissions from the traffic network in the area as a result of the Bypass.

### NTS 6.4

#### NOISE AND VIBRATION

The area along the Bypass is predominantly rural, agricultural land. Noise levels in these areas are typically very low with little or no man made noise sources. Baseline noise measurement was carried out at 17 locations along the proposed alignment. Parameters recorded during the baseline monitoring for the project were L<sub>Aeq</sub>, L<sub>A90</sub>, L<sub>A10</sub>, L<sub>Amax</sub> and L<sub>Amin</sub>. A design goal of Day-evening-night 60 dB L<sub>den</sub> (free field residential façade criterion), was developed by the NRA for which, *"all future national road schemes should be designed, where feasible"*.

Noise and vibration impacts arising out of construction activities have been estimated to establish the likely impact on sensitive receptors during the construction period. In an effort to accurately estimate the noise levels likely to be experienced at noise sensitive receptors once the road is operational and taking into consideration guidance given within the NRA guidelines, a noise model was constructed of the Bypass.

Mitigation measures have been suggested where impacts were identified to exceed criteria. At two locations, it has been identified that the Noise Criteria may be exceeded by 8 dB which would be a significant impact but is likely to be short term. No significant residual vibration impacts from the construction phase are likely.

The design Noise Criteria for operational roads will be met at all noise sensitive locations, although it is noted that the change in the noise environment will result in significant impacts on some receptors along the Bypass. It is also noted that there would be a moderate and permanent positive impact for all the houses facing the roads where traffic flow will be reduced due to the Bypass. It is predicted that there will be no vibration impacts from the operation of the Bypass.

## **NTS 6.5**      **LANDSCAPE AND VISUAL**

The impact of the proposed New Ross Bypass on both landscape character and visual amenity was assessed. The direct negative impacts on the receiving landscape include the loss of vegetation and localised changes to topography as a result of the scheme earthworks. The introduction of the Bypass together with proposed earthworks, junctions, structures and lighting will also indirectly, and in many cases negatively affect the character of the receiving landscape and the setting of particular designated landscape sites.

Mitigation measures are outlined and include ecologically sensitive integration of the road into the receiving environment together with the use of native species in the proposed planting and seeding of the scheme. The engineering design sought to route the proposals around significant hills in order to mitigate adverse effects on landscape character and visual amenity. A preliminary landscape design has been prepared and this illustrates, in conceptual format, many of the mitigation measures outlined.

The visual impact of the proposals was assessed with reference to a visual envelope which maps the area within which the proposals are likely to have an influence upon visual amenity. Visual impact was assessed from 205 selected viewpoint locations. Negative visual impacts will be experienced by viewers at many of these locations. The significance of the impact will generally be less at the post establishment stage than at the pre establishment stage. This reduction in visual impact significance is based on the successful establishment and growth of the landscape mitigation treatments which will contribute to the screening of the proposals.

## **NTS 6.6**      **TERRESTRIAL ECOLOGY**

An assessment of the terrestrial ecological baseline associated with the New Ross Bypass was carried out by undertaking a review of desktop information

relating to the site and ecological field surveys. The Bypass passes through a predominantly agricultural landscape characterised by pasture and arable farmland. Designated conservation areas and specific habitats of ecological value were identified throughout the proposed scheme. One candidate Special Area of Conservation (River Barrow and Nore cSAC – Site Code 002162) and proposed Natural Heritage Areas (Lower River Barrow pNHA – Site Code 000689) are intersected by the proposed scheme. Another pNHA (Oaklands Wood pNHA – Site Code 000744) is located within close proximity to the scheme. Eight Ecological Sites were identified along, or adjacent to, the Bypass, while a number of species, protected under national and EU Legislation, were also recorded.

There will be no significant permanent impacts to the terrestrial qualifying interests of the site. Impacts to Ecological Sites will range from permanent, moderate negative to permanent, major, negative. Impacts to terrestrial fauna identified along the proposed scheme will also range from permanent, moderate negative to permanent, major, negative.

Mitigation measures are outlined to reduce the impacts to the designated conservation areas, ecological sites and terrestrial fauna. Provided all mitigation measures are implemented, the proposed scheme will result in temporary moderate impacts to the designated conservation areas during construction. The recreation of habitats associated with the designated conservation areas with replacement planting will offset any long-term impacts associated with the loss of habitat to the landtake. As the replacement woodland planting will take a number of years to establish, there will be short to medium-term minor negative impacts.

One ecological site (Ecological Site 1 at Glenmore Junction) will experience permanent, major negative impacts while the remaining sites will undergo permanent minor negative impacts. The residual impacts to fauna movement will constitute a minor, permanent, negative impact. Once faunal species become habituated to mammal underpasses these residual impacts will be further reduced over time. Similarly, residual impacts arising from disturbance to fauna will also reduce over time, following habitualisation to the new road.

## **NTS 6.7**      ***AQUATIC ECOLOGY***

An assessment of the aquatic ecological baseline associated with the New Ross Bypass was carried out by undertaking a review of all desktop information relating to the site and ecological field surveys. While seven watercourses are located within the scheme study area (i.e. route corridor) only five are directly intersected by the proposed scheme, one of which is the River Barrow cSAC. The Camlin Stream, which forms part of the cSAC boundary is also directly impacted by the proposed scheme. The Graiguenakill River is another river, located within the scheme study area that forms part of the cSAC. Each stream occurring within the study area was evaluated and assigned an ecological

quality rating. Of the seven streams assessed, two are of international conservation value, four are of high ecological value and one is of moderate ecological value. Species associated with each watercourse, some of which are protected under national and European legislation, were recorded during fieldwork.

An assessment of the potential of the Bypass to adversely impact upon the integrity of the qualifying interests of the cSAC was undertaken. Pre-mitigation impacts to the River Barrow and Nore cSAC and pNHA have the potential to constitute permanent, major negative impacts. Pre-mitigation impacts to other watercourses assessed throughout the scheme will range from neutral to permanent, major negative impacts. Permanent major negative impacts will also affect aquatic fauna if mitigation measures are not implemented.

Mitigation measures have been outlined to reduce and/or avoid potential impacts to the aquatic ecological resources. The implementation of specific mitigation measures within the cSAC will ensure that construction phase and operation phase impacts are reduced. On the basis of the information currently available and reviewed, and assuming the proposed mitigation measures are adopted it is not anticipated that there will be a significant impact on the qualifying interests of the cSAC.

Specific mitigation measures have been outlined for each watercourse affected by the scheme. Following implementation of these measures the impacts of the Bypass to watercourses located outside the designated conservation areas will range from neutral to moderate negative impacts. The implementation of mitigation measures will avoid significant impacts to fauna during the construction and operation phase of the Bypass.

## **NTS 6.8 WATER, SOILS AND GEOLOGY**

An assessment was carried out of the potential impact of the Bypass on surface and ground waters, soils and bedrock geology with respect to quality and quantity. A comprehensive desk study to review relevant published and unpublished reports on the hydrology, geology and hydrogeology of the region was carried out. Ground conditions were investigated in the field by drilling boreholes and excavating trial pits. The findings of the field investigation were used to identify the soils and geology underlying the proposed route. This borehole and trial pit information was cross referenced with the data published by the *Geological Survey of Ireland* (GSI).

Construction of the Bypass, if not properly managed, could lead to major impacts on surface water quality. The main source of contamination is suspended sediment in runoff waters from the work site and accidental spillage of liquid cement, fuel oils and lubricants from construction. Operational impacts will constitute a major negative impact and will include changes to the existing hydrology, which may increase the potential for

flooding in the area. They will also include the reduction of infiltration rates of rainfall to groundwater arising from the impermeable nature of the road surface. Impacts will also occur on surface water and groundwater quality due to the pollutants contained within the road drainage.

The Bypass drainage system will be collected and discharged to watercourses at eight proposed outfall sites, resulting in potential localised water quality impact at these outfall sites. The proposed development will increase the potential for: soil erosion during flooding events; and a reduction in the quality of groundwater locally, as a result of contaminated road runoff infiltration via proposed filter drains.

Mitigation measures have been identified to reduce the significance of the potential impacts to waters, soils and geology. The residual impacts of discharges from storm control areas to the water quality of local watercourses will be minor negative. The implementation of storm control measures will result in a minor to moderate local negative residual impact. Similarly the risk of flooding caused by the installation of culverts will be minimised by increasing the capacity of the culvert and providing a regular programme of inspection and maintenance.

The implementation of mitigation measures will ensure that the interference with groundwater by the Bypass will result in minor negative local residual impact to receiving groundwater quality and quantity. Finally, the risk of serious contamination of the soil and groundwater from accidental spillage will be low. A slight residual impact will remain to soils and water following the installation of oil/petrol interceptors at outfall locations.

## **NTS 6.9**

### ***AGRICULTURAL PROPERTIES***

A total of 44 farms will be directly affected by the Bypass and approximately 117 hectares of agricultural land will be required to implement the scheme. The majority of farming along the proposed route is intensive and the majority of farmers work full-time on their farms. Of the 44 farms affected, 10 are dairy farmers, 13 are beef farmers, 3 mainly tillage, 17 are mixed crops and livestock farmers, 1 is categorised as other (horse rearing & dog rearing enterprise). The quality of the land for farming along the alignment of the scheme is generally very good.

Construction of the Bypass will impact on local farm operations. Construction traffic may impact on the movement of tractors, farming equipment and animal movements. Other temporary impacts will occur during the construction phase. The activity of earth moving machinery, transport lorries and other ancillary vehicles will generate noise and dust during construction. While farm animals may be sensitive to sudden unexpected noises they generally have a high tolerance to noise emissions from construction machinery.

Severance will affect 52% of the farms and will create 30 new land segments. The majority (73%) of farms are in the not significant to moderate impact categories (which is defined as the farm enterprise can be continued as before but with increased management or operational difficulties). However, 12 farms (27% of the total farm numbers) will be in the major and severe impact categories. These impacts are defined as the farm enterprise cannot be continued without considerable management or operational changes or where the farm enterprise cannot be continued as a result of the scheme. These farms comprise of approximately 418 hectares or 20% of the affected land studied.

The impacts from land loss and severance are permanent residual impacts and financial compensation will be necessary and this will be undertaken as part of the Compulsory Purchase Order process. There may be a gradual increase in the net worth of farmers affected by the new route due to proximity of the new route to other parts of their farm.

#### **NTS 6.10**      *ARCHAEOLOGICAL HERITAGE*

The aim of the archaeological heritage assessment was to identify all known archaeological and cultural heritage constraints within c. 50 metres of the Bypass, as well as to assess the likelihood of significant archaeology being uncovered. The National Roads Authority's Guidelines for the Assessment of Archaeological/Heritage Impacts of National Roads Schemes (2005) was used in the preparation of this assessment.

The Bypass will have a direct impact on six recorded archaeological monuments and places. The sites are as follows:

- a castle site in the townland of Lacken;
- the site of an earthwork in the townland of Lacken;
- a tower house in the townland of Stokestown;
- an enclosure in the townland of Lacken;
- the site of an enclosure in the townland of Rathgaroge; and
- a Fulacht Fiadh in the townland of Rathgaroge.

The Bypass will have an indirect impact on one recorded archaeological monument and place, an enclosure in the townland of Lacken.

The Bypass will have a direct impact on six sites of archaeological potential. The sites are as follows:

- a curving field boundary in the townland of Ballyverneen;
- two river crossing points in the townland of Ballyverneen and Stokestown
- a group of possible mounds in the townland of Arnestown; and
- two settlement locations at Ryleen and Lacken.

The proposed scheme will have an indirect impact on three sites of archaeological potential:

- an enclosure in the townland of Stokestown;
- a settlement site at Lacken, and
- possible mounds in the townland of Arnestown.

Furthermore, additional archaeological sites and features are likely to be encountered during further stages of the assessment.

Mitigation measures will involve either preservation by record or preservation in-situ. All mitigation measures will be carried out in accordance with current best practice. Methods of preservation by record will involve a combination of the following:

- archaeo-geophysical survey;
- aerial survey;
- site specific test excavations;
- centreline test excavation;
- townland boundaries survey;
- archaeological excavation; and
- archaeological monitoring.

It is not anticipated that any significant residual impacts will remain if the appropriate archaeological mitigation measures are put in place.

#### **NTS 6.11**      *ARCHITECTURAL, ARTISTIC, CULTURAL AND HISTORIC ENVIRONMENT*

The aim of the assessment was to identify all known architectural heritage constraints within c. 50m of the Bypass. Guidelines for the assessment of Architectural Heritage Impacts of National Roads Schemes (2005), prepared by the NRA, were used in the preparation of this study.

The alignment will have a direct impact on eight architectural heritage features (four significant impacts and four moderate) and will have an indirect impact on five architectural heritage features (one significant and four moderate) and will have no predicted impact on two architectural heritage features.

The significant direct and indirect impacts are predicted to arise for:

- Ballymacar Bridge (direct impact);
- Stokestown Estate (direct impact);
- Landscape Estate (direct impact) ;
- Arnestown Estate (direct impact); and
- A folly in Stokestown (indirect impact).

Mitigation measures will involve either preservation by record or preservation in-situ. All mitigation measures will be carried out in accordance with current best practice. Methods of preservation by record will involve a combination of the following:

- archaeo-geophysical survey; and
- archaeological recording.

It is not anticipated that any significant residual impacts will remain if the appropriate archaeological mitigation measures are put in place.

## **NTS 6.12 MATERIAL ASSETS**

A total of four properties are to be acquired as part of the construction of the Bypass. Compensation will be provided through the CPO in the terms of the material assets affected. Nonetheless, it is recognised that the acquisition of property, particularly residential property, will cause disruption to those directly affected. Further measures to compensate affected parties due to land acquisition, drainage works, reinstatement of boundaries and loss of facilities are also part of the compensation under the CPO process.

Table 3 summarises the utility conflicts along the proposed Bypass.

**Table 3 Utility conflicts with the proposed Bypass**

Utility	No. of conflicts
10 kV overhead powerline (ESB)	28
38 kV overhead powerline (ESB)	1
220 kV overhead powerline (ESB)	1
Overhead Eircom lines	24
Underground Eircom cables	6

Consultation with Wexford County Council and Kilkenny County Council indicates that there is no known water services located along the proposed route or in the surrounding area.

The 10kV and 38 kV lines will be either diverted underground via ducting or carried over the Bypass. The 220kV line will require a major alteration.

NTL/Chorus has been contacted to confirm if any of their services are present in the area. At present no known services are conflicting with the proposed route.

BT Ireland (Formally Esat) has been contacted to confirm if any of their services are present in the area. At present no known services are conflicting with the proposed route.

The Eircom services will be either carried under or over the Bypass at the conflicts points.

All proposed diversion works will be agreed in advance with the appropriate utility provider.

With the undertaking of an appropriate utility diversity strategy, there is not predicted to be any significant impact on utilities during construction.

#### **NTS 6.13**      *INTERRELATIONSHIPS AND INTERACTIONS OF THE PREDICTED IMPACTS*

Effect interactions are predicted for the following environmental topics:

- Human beings and noise & vibration;
- Human beings and air quality & climate;
- Landscape & visual and terrestrial & aquatic ecology;
- Terrestrial ecology and aquatic ecology;
- Archaeological heritage & architectural heritage and human beings;  
and
- Water, soils & geology and aquatic ecology.

The consideration of such interactions has been assessed in the individual impact chapters.

There is the potential for cumulative impacts to arise during the construction and operation of the Bypass. However, given the rural location of the Bypass, cumulative impacts arising with another major construction project are unlikely.

Any expansion and growth of New Ross may potentially result in additional traffic flows. Furthermore, changes to commuting patterns to the larger towns in the region (which may arise as a result of the reduced journey times) may also increase flows on the Bypass.

**NTS 7                   WHAT HAPPENS NEXT****NTS 7.1               CONSULTATION ON THE EIS**

The EIS will be on display and available for inspection/purchase for not less than one month at the locations as outlined in the published newspaper notices. A digital version of the EIS is available for purchase on CD.

**NTS 7.2               CONSULTATION PROCESS**

Written submissions in relation to the proposed Bypass and this EIS may be made to An Bord Pleanála (the Board) by the public or by prescribed bodies within the specified period.

An Oral Hearing maybe held, with the Board appointing an Inspector who will conduct and oversee the oral hearing. Following the conclusion of the hearing, the Inspector will prepare an Inspectors Report into the conduct of the oral hearing. Based on the EIS, submissions, and information received during the oral hearing, the Inspector will make a recommendation in relation to the proposed road development. The Board will then consider the Inspectors Report in making their decision (approval, approval with modifications or refusal) on the proposed road development. Approval from An Bord Pleanala is required before the proposed Bypass can be constructed.

All submissions in relation to the Bypass and EIS should be sent to the Board at the following address:

An Bord Pleanála  
64 Marlborough Street,  
Dublin 1.