

# 1 Introduction

## 1.1 Background to the Scheme

In September 2001, the Department for Regional Development (of which Roads Service is part) formulated “Shaping Our Future: the Regional Development Strategy for Northern Ireland 2025”. This strategy is intended to guide the future development of the region up to 2025 and provides guidance on a range of social, economic and environmental matters which are implemented through the plans and strategies of Government Departments.

An integral feature of the Regional Development Strategy (RDS) was the requirement to develop a Regional Transportation Strategy having a vision of “a modern, integrated and sustainable transportation system which benefits society, the economy and the environment and which actively contributes to social inclusion and everyone’s quality of life”. In July 2002, the Assembly approved the strategic direction and underlying principles of the ‘Regional Transportation Strategy for Northern Ireland 2002-2012’ (RTS). The RTS identifies strategic transportation investment priorities and considers potential funding sources over a 10 year period as well as setting down guidance as to how funding will be split between areas and transport modes.

Delivery of the RTS is being progressed through 3 multi modal transport plans, one of which is the Regional Strategic Transport Network - Transport Plan (RSTN - TP), published in March 2005.

The Regional Strategic Transport Network (RSTN) of Northern Ireland comprises the rail network, 5 Key Transport Corridors, 4 Link Corridors, the Belfast Metropolitan Transport Plan and the remainder of the trunk road network. It comprises 5% of the total road network but carries 35% of the traffic. A number of priority schemes to improve the RSTN were ongoing and appraisal work (based on the Government’s five key criteria of environment, safety, economy, accessibility and integration) was undertaken to identify further Strategic Roads Improvements (SRI) schemes for inclusion in the RSTN - TP. The RSTN TP follows the funding levels envisaged in the RTS, although they were extrapolated to match the longer period of the RSTN TP (2005 – 2015).

Delivery of the Regional Development Strategy received a boost in 2005 with the announcement of the Investment Strategy for Northern Ireland (ISNI). The £16 billion strategy set out a high level view of planned investment up to 2015 with proposals for up to £1.4 billion of strategic road improvement schemes. In July 2006, Roads Service published the consultation document ‘Expanding the Strategic Road Improvement Programme 2015’ which included schemes to the value of the ISNI programme as well as a list of schemes that performed well in assessment but were not affordable within anticipated ISNI funding for the period 2005 - 2015.

The strategy has recently evolved further in conjunction with the Executive’s Programme for Government and 3 year budget plan. In 2008 the Northern Ireland

Executive agreed its first Budget and endorsed a revised 10 year Investment Strategy, covering the period 2008 – 2018. This strategy indicates proposals to invest over £3 billion (which includes a contribution of £400 million from the Irish Government) in the roads infrastructure.

The RSTN TP has 8 primary objectives including the need “to examine access to regional gateways and cross border links with an emphasis on improving connections from the 5 key transport and 4 link corridors”.

One such corridor identified in the RSTN TP is the Western Transport Corridor (WTC) which runs from Londonderry to Aughnacloy. This corridor is also an important all island route as it forms part of the main route from Dublin to the North West. At a meeting of the North South Ministerial Council in July 2007, the Irish Government indicated its intention to help fund major infrastructure programmes in Northern Ireland and in particular the upgrading of the A5 Western Transport Corridor (A5 WTC) and the A8 Eastern Seaboard Corridor (Belfast – Larne) to dual carriageway status.

The Northern Ireland Executive agreed in principle to taking forward these 2 major roads projects which have been included in the Investment Delivery Plan (IDP) for Roads which was published in April 2008.

The A5 WTC starts in the North West of the province at Londonderry and runs for a distance of 88km south to the border, close to the village of Aughnacloy. The A5 WTC feeds into the N2 in the Republic of Ireland at the Moy Bridge border crossing and together the A5 and N2 provide a strategic link between Dublin and the North West. Within the extent of the scheme itself there are strategic links between the urban centres of Londonderry, Strabane, Omagh, and Aughnacloy. The existing corridor, in addition, provides crucial links from both Dublin and Northern Ireland to urban centres in County Donegal.

The route is intersected by 4 key routes, including the A4 Key Transport Corridor (Belfast - Enniskillen – Sligo), the A32 Trunk Road (Enniskillen – Omagh), the A505 Trunk Road (Omagh - Cookstown) and the A38/N14, Lifford/Strabane link Road. At the northern end of the A5 it also links to the A6 Key Transport Corridor (Londonderry - Belfast) and the A2 Key Transport Corridor (Londonderry – Limavady) within the city of Derry.



Figure 1-1: Map of Northern Ireland highlighting the location of the existing A5

The existing A5 WTC comprises a variety of differing width single carriageway roads with intermittent stretches of climbing lanes and overtaking opportunities. This lack of consistency in road standard leads to the use of inappropriate high speeds through the higher standard lengths of the road resulting in a lack of appreciation for the poorer sections of the road ahead. In excess of 200 side road junctions currently connect with the A5 with over 420 domestic/commercial accesses, excluding those in the various urban settlements, adjacent to the route.

In October of 2007 Mouchel were appointed by Roads Service to take the scheme through to Preferred Route Announcement. The first major deliverable of this process, the Preliminary Options Report, was published in October 2008 and is available electronically from the A5 WTC website, [www.a5wtc.com](http://www.a5wtc.com).

This Preferred Options Report will report on the conclusions of the Preliminary Options Report describe the existing engineering, traffic and environmental status of the Preferred Corridor and detail the various routes available to Roads Service for the improvement of the existing A5 as well as the results of the assessment process that has been undertaken in accordance with a Stage 2 Scheme Assessment as described by Roads Service Policy and Procedure Guidelines (RSPPG) E030 Major Road Improvement Schemes - Inception to Construction and TD 37/93 Scheme Assessment Reporting of the Design Manual for Roads and Bridges (DMRB) Volume 5 – Section 1.

The purpose of the report is to compare the different route options in terms of their economic viability, cost and environmental impact and from those comparisons decide on a number of Routes for further consideration before the recommendation for the Preferred Route.

## **1.2 Conclusions and Recommendations from Preliminary Options Report**

### *1.2.1 Introduction*

The Preliminary Options Report came to several conclusions and made recommendations on the basis of those conclusions. These are summarised below.

### *1.2.2 Conclusions*

The 2 study areas, Environmental and Engineering, were refined into a corridor which was considered to be narrow enough for a Stage 2 Scheme Assessment but wide enough to retain a number of potential options for the selection of the Preferred Route.

There remained a number of major constraints within this corridor which would require avoidance or mitigation.

It was anticipated that there would be a significant number of options within the Preferred Corridor that would require a Stage 2 Assessment.

It was also anticipated that there would be significant economic benefits generated by the scheme. These in turn would generate more traffic which would also be taken into account within the Stage 2 economic appraisal.

It was highlighted that users of the new road would experience significantly reduced travel times and improved journey time reliability, compared with their current route via the existing A5.

The accident rate for dual carriageways is generally much lower than for single carriageways and it was therefore stated that the accident rate would be greatly reduced.

### 1.2.3 Recommendations

On the basis of the Stage 1 Assessment described in the Preliminary Options Report, it was recommended that the Preferred Corridor, shown in drawing 796036-0800-D-00481 in Volumes 2, 3 and 4 of the report be taken forward and considered in a Stage 2 Scheme Assessment.

In order to achieve the above, it was decided that a full topographical survey of the Preferred Corridor be carried out. It was also recommended that the Macro-Economic study be completed to identify the wider reaching economic benefits to the region that the proposed scheme would create.

Following Ministerial Announcement (of the Preferred Corridor, which took place in November 2008), it was recommended that the Preferred Corridor be publicised via a press release, a mail-shot and the A5 WTC website and that a further round of Public Consultation should take place in early 2009. At these events the Preferred Corridor identified in this report should be presented along with the rationale behind its selection. Route Options would also be presented and comments invited.

### 1.3 Public Consultation

It is recognised as good practice to consult with as wide a group of Stakeholders as possible from the inception of a development project. At Stage 1 it was considered necessary to inform the public that a scheme was being promoted, advise them of work that was currently being undertaken and what the next steps would be. It was also considered to be an opportunity for the public and landowners to provide useful local knowledge and make the project team aware of their initial views about the proposals. To inform the public of the scheme at that stage, a series of information events were held in the spring of 2008. These events are described in the Preliminary Options Report.

Further Public Consultation events were held in late February 2009 at 4 locations, namely:

Table 1-1: Public Consultation Day Venues and Dates

Venue	Date
Silverbirch Hotel, Omagh	17 February 2009
Smyth Memorial Hall, Ballygawley	18 February 2009
Fir Trees Hotel, Strabane	24 February 2009
Everglades Hotel, Londonderry	25 February 2009

The primary objective of these consultation days was to inform the public of the current proposed route options and seek comments to assist in the Preferred Route selection and design development processes. These events were publicised in press

releases, local publications, on local radio, promotional posters in key locations throughout the study area, leaflet distribution within the Preferred Corridor, personal invitation letters and via the project website.

During the events, information was provided in the form of text and map displays. The project objectives, assessment process, scheme design progress and the programme going forward were presented together with a number of mapping displays, including high resolution aerial photography of the Route Options. The plans also highlighted the key constraints that influenced the choice of the Preferred Corridor and the Route Options. To assist the public to visualise the proposed Route Options, 3D fly-through models were displayed on plasma screens, to depict a realistic impression of the landscape for the respective options and facilitate discussion about the issues involved with the potential Route Options. The fly-through models were also available for viewing in the designated areas for individual landowner consultations. Project brochures summarising key scheme developments were distributed and access to the project website was provided. This allowed the public to accurately locate property in relation to the Preferred Corridor and various Route Options.

Staff from Roads Service and Mouchel were available at the events to respond to project queries, including major factors such as, environment, engineering, economics, traffic and consultation. The events provided an opportunity for the public to come forward with information that would be considered in determining the final proposals.

Feedback from the events was also received via questionnaires which were provided to all attendees to register comments and/or concerns. Approximately 600 questionnaires were returned from a number of sources, including those completed by the public during the events and via mail and website submissions. The questionnaire invited responses on, location of property within the Route Options, specific local issues and/or comments in relation to Route Options within subsections of the 3 main scheme Sections.

The 4 events were attended by over 2500 people which clearly evidenced the huge public interest in the scheme and that the general awareness of the scheme had been successfully increased. Furthermore, the large audiences further demonstrate that it is essential to engage with the public and stakeholders throughout the course of the project.

Over 700 individual consultations were recorded by the lands and engineering teams, over the 4 day event period and were distributed to the wider project team for consideration. This allowed the design team to take advantage of any new information that otherwise may have come to light at a later stage.

## Format of Report

As with the Preliminary Options Report for the purposes of option development and assessment the Preferred Corridor was divided in to 3 Sections as follows:-

Table 1-2: Section Titles

Section	Extents
Section 1	New Buildings to South of Strabane
Section 2	South of Strabane to South of Omagh
Section 3	South of Omagh to Aughnacloy

Following this Introduction are the following chapters:

- Chapter 2 presents the *Existing Conditions described in Sections*;
- Chapter 3 provides a *Evolution and Description of Routes*;
- Chapter 4 details the *Section 1 Engineering Assessment*;
- Chapter 5 details the *Section 1 Environmental Assessment*;
- Chapter 6 details the *Section 2 Engineering Assessment*;
- Chapter 7 details the *Section 2 Environmental Assessment*;
- Chapter 8 details the *Section 3 Engineering Assessment*;
- Chapter 9 details the *Section 3 Environmental Assessment*;
- Chapter 10 will contain the *Cost Estimates* of the Routes including rationale used and assumptions made in their production;
- Chapter 11 presents the *Traffic and Economic Assessments*;
- Chapter 12 reports on the *Preferred Route Selection Process*;
- Chapter 13 contains the *Conclusions and Recommendations* of the report including a recommendation for the Preferred Route.

Although it is evident that several towns and town lands within the Preferred Corridor have local variations in spelling, for the purposes of producing this report the



spellings recorded by Ordnance Survey Northern Ireland (OSNI) will be used in the text and on the drawings.

## 1.4 Focus of Assessment

The primary focus of this assessment is to confirm a Preferred Route that can be developed and progressed through a Stage 3 Assessment in accordance with Roads Service Policy and Procedure Guide (RSPPG) \_E030 Major Road Improvement Schemes - Inception to Construction and TD 37/93 Scheme Assessment Reporting of the Design Manual for Roads and Bridges (DMRB) Volume 5 – Section 1.

The key objectives of the proposed A5 WTC scheme are:

- To improve road safety,
- To improve the road network in the west of the Province and north/south links,
- To reduce journey travel times along the A5 Western Transport Corridor,
- To provide improved overtaking opportunities for motorists along the A5 Western Transport Corridor,
- To develop the final proposals in the light of environmental, engineering, economic and traffic considerations.

The purpose of this assessment procedure is to critically evaluate the various Route Options culminating in the selection of a Preferred Route.

## 1.5 Assessment Process

### 1.5.1 Engineering Process

The Engineering assessment has been undertaken in accordance with the guidance detailed in the Design Manual for Roads and Bridges (DMRB) and RSPPG\_030. The assessment has been reported in accordance with TD37/93.

Using the data collected regarding constraints identified in the Preliminary Options Report, a number of Route Options were developed. Known constraints included topography, settlements, environmental (including legislative areas) constraints and existing ground conditions.

Following initial analysis and comparison of the Route Options, further route variations were developed within the Preferred Corridor and can be seen in drawings 796036-0800-D-10103/10104 in Volume 2 796036-0800-D-20103/20104 in Volume 3 and 796036-0800-D-30103/30104 in Volume 4. Further appraisals in terms of environment, traffic requirements and costs were then completed resulting in approximately 4 Routes being taken forward for comparison in this report.



### 1.5.2 Environment Process

The Environmental assessment has been undertaken in accordance with the guidance detailed in Volume 11 of the Design Manual for Roads and Bridges (DMRB) (as updated August 2008), and reported in this document in accordance with TD 37/93.

Volume 11 provides a framework for taking into account environmental interests and assessing and reporting on environmental impacts and their resultant effects. It provides guidelines in relation to 9 environmental topics. These comprise:

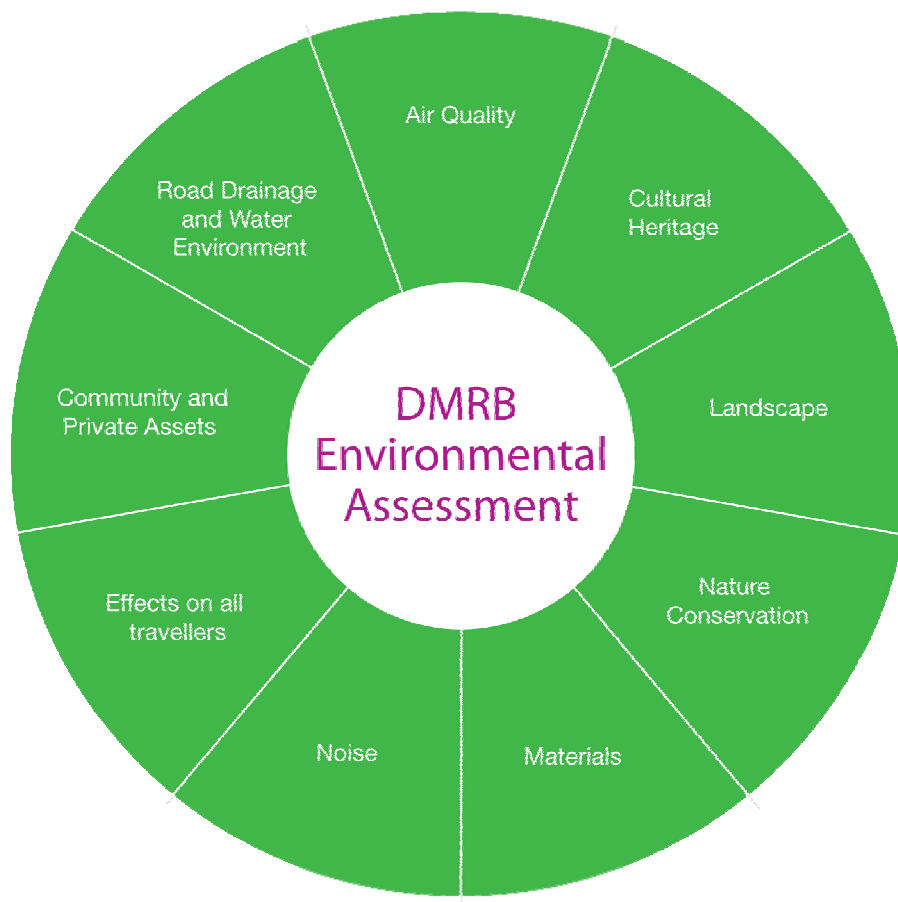


Figure 1-2: DMRB Environmental Assessment

#### 1.5.2.1 Key tasks

The options appraisal has involved the following key tasks:

- Review and update of preliminary environmental constraints data involving a combination of desk based review and analysis, consultations and further site surveys within the Stage 1 environmental study area.
- Further detailed desk based review, surveys and evaluation of the existing environment within the Preferred Corridor (PC).

- Analysis and comparison of the emerging Route Options against the enhanced baseline data to inform the development of potential Routes within the Preferred Corridor.
- Review, appraisal and identification of Routes (approximately 4 no. per Section) to be taken forward to the detailed comparison phase.
- Comparison of the identified Routes (approximately 4 no. per Section) against baseline data.

Please note that full details of methodologies utilised in the Environmental Assessment of the various Routes are included in Chapters 5, 7 and 9 of this report.

### *1.5.3 Economic Appraisal*

The economic appraisal of the scheme will be prepared in accordance with the Green Book Appraisal and Evaluation in Central Government (“the Green Book”) (HM Treasury, 2003) and The Northern Ireland Practical Guide to the Green Book (“the NI Practical Guide”) (DFP, 2003), both of which aim to provide value-for-money government schemes by encouraging a more thorough, long-term and analytically robust approach to appraisal and evaluation. The NI Practical Guide supplements the requirements of the Green Book to the procedures followed in Northern Ireland, though the Green Book remains the authoritative guide to appraisal. By carrying out the WebTAG process, which was designed to satisfy the 5 assessment criteria of the Green Book, the appraisal will be in compliance.

The five criteria are: environment, safety, economics, accessibility and integration.

### *1.5.4 The Assessment Process*

During the early phases of the project, the focus on delivery was by discipline (i.e. highways, structures, geotechnics, drainage, traffic, landscape, noise, ecology, costs, etc). This enabled each discipline to establish its comprehensive database of constraints through which Route Options were identified and assessed. During this process Route Options were assessed in accordance with DMRB under 4 main headings of engineering, environment, economics and traffic. This resulted in Routes being developed and taken forward for assessment using the DMRB criteria.

These Route assessments were reported in accordance with the five WebTAG assessment criteria as outlined in paragraph 1.5.3 above, as the five WebTAG assessment criteria highlight the same issues as the four DMRB criteria.

The relationship between the DMRB assessment criteria used during the development of Route Options and five WebTAG ASTs criteria used during the Route assessment process are outlined in Table 1-3 below.

Table 1-3: Relationship between Initial Assessment and WebTAG Criteria

Relationship Between Initial Assessment and WebTAG Criteria				
WebTAG Criteria	Initial Corridor And Option Assessment Criteria			
Objective	Engineering	Environment	Economics	Traffic
Environment	1	1	3	2
Economy	1	2	1	1
Safety	1	2	1	1
Accessibility	1	1	2	1
Integration	1	1	3	1

1 = Primary contributor; 2 = secondary contributor; 3 = minor contribution