Chapter 3  Constraints Study

3.1  Introduction

The Constraints Study was carried out during the early stages of the planning of the project (April 2009 to September 2009) with the objective of gathering as much background information relating to the study area as possible. This data collection was focused on determining the constraints including physical, environmental and engineering constraints that exist and could affect the location, design and progress of the scheme. The Report recorded the collection of data to the end of September 2009. A number of assessments were undertaken to identify the physical, environmental and engineering constraints both through surveys and consultations.

3.2  Defining the Constraints Study Area (Northern Section)

The first element of research examined the area either side of Carrick-on-Shannon from the north-western tie in at Cloongownagh to the existing Drumsna-Jamestown Bypass. In order to develop the limits of the study area the innermost and outermost boundaries are defined for the area to the north of the existing N4 and the area to the south of the existing N4.

3.2.1  Area to the north of the Existing N4

Innermost Boundary

In an attempt to determine the innermost boundary of the Constraints Area north of the town, a possible route corridor option N-1 was developed as close as feasible to the town (refer to Drawing RCSR 301 in Volume 2). This route is limited by the existing urban development of Carrick-on-Shannon as it was considered that any route through the built up area should be avoided. As such it is considered that there is no other potential route closer to the town on the north side.

Outermost Boundary

To the northwest of the town, the River Shannon and Lough Eidin represent a major constraint which limits realistic route corridor options for a bypass. To the west of the River Shannon at Corryolus is the large body of water called Lough Eidin which extends over 3km to the west. A route corridor which would cross the Shannon and would also cross the lough is not considered to be viable on cost and environmental grounds and is not feasible for detailed consideration. Accordingly, the most westerly realistic tie-in point along the N4 West for a northern bypass is at Guiltyconeen and the most outermost feasible boundary is considered as the route N-2 (refer Drawing RCSR 301 in Volume 2).

Reduced Outermost Boundary

Because route corridor option N-2 is very remote from the town, particularly to the north and east of the town, a less remote option was further developed to see if the outermost boundary of the Constraints Study Area could be reduced. This altered route corridor, N-3, is basically the outermost northern route identified in 2002 (Route Corridor Option E) but altered at the southern end to tie into the Drumsna / Jamestown Bypass at Mountcampbell.
Extent of the Constraints Study Area to the North

The innermost Route Corridor Option N-1 defines the innermost realistic option. Accordingly, the innermost boundary for the study area was confirmed as 300m inside the line represented by the N-1 line.

In terms of the outermost line, Route Corridor Option N-3 has a shorter off-line construction length and a shorter travel distance between A to B than Route Corridor Option N-2. Therefore there is no reason to go as far out as the line represented by Route Corridor Option N-2 as there is no benefit to be accrued by the longer route. Accordingly, the outermost boundary was confirmed as 300m beyond the line represented by the N-3 line. The resulting Constraints Study Area to the north of the town is shown in Drawing RCSR 302 in Volume 2.

3.2.2 Area to the South of the Existing N4

Innermost Boundary

In order to determine the innermost boundary of the Constraints Study Area south of the town, a possible route corridor option S-1 (refer Drawing RCSR 301 in Volume 2) was developed as close as feasible to the town. At the western tie-in with the existing N4, the route corridor commences at Cloonmaan and passes to the south of industrial / warehouse buildings as far as the railway line. The route corridor runs parallel to the railway line but does not cross the line. From the railway line the route corridor goes nearly due east, on higher ground as much as possible, as far as the proposed river crossing at Cordrehid / Attirory. At Attirory the route skirts housing developments to tie into the existing N4 East at Lisseeghan.

Outermost Boundary

Lough Corry is a major constraint on the location of any road crossing of the river to the south of the town. The lough is about 2.2km in length and varies in width from 200m to over 800m. The 200m width is located between the northern and southern portions of the lough. However, the flood plain width in this area and in other areas is in excess of 800m.

Route Corridor Option S-2 crosses the river to the south of Lough Corry at Runnafarna / Cornacorroo. The river crossing is about 100m wide and the banks of the river rise quickly to higher ground on both sides. The route crosses about 1.5km of peat bog on the western side of the river in Curries.

The layout of Route Corridor Option S-2 starts on the N4 West close to Hughestown. It crosses the railway line twice and both the regional roads (R370 and R368). After crossing the river, it continues north-eastwards through Pollnagappul and Sallaghan to join the N4 East at Tully.

Extent of the Constraints Study Area to the South

The innermost boundary is determined by route corridor option S-1. The Constraints Study area boundary was confirmed as 300m on the town side of this line.

Although Route Corridor Option S-2 would result in a considerable off-line length which would add to construction cost and potential impacts on flora and fauna, the outermost boundary was confirmed as 300m beyond the line of Route Corridor Option S-2.

The resulting Constraints Study Area is shown on Drawing RCSR 302 in Volume 2.
3.3 **Defining the Constraints Study Area (Southern Section)**

Within the Southern Section of the proposed scheme it was apparent that it may be feasible to upgrade the existing N4 to Type 2 Dual Carriageway should that be the appropriate road cross section. As such, a Feasibility Study on retro-fitting the existing N4 was undertaken. This study examined the physical constraints and utilities, the existing junctions and access issues and subsequently confirmed that upgrading the existing N4 was viable (with an off line section around the village of Aghamore) and should be subject to further studies. Confirmation of the potential of this route allowed a zone along the N4 to form the initial element of the Constraints Study area in the Southern Section.

However, in order to examine a comprehensive study area and to assess the implications of providing Type 2 Dual Carriageway off-line as much as possible, route corridor options to the west and east of the existing N4 north of Faulties were developed.

### 3.3.1 Area to the West of the Existing N4

The south-eastern tie-in point of the proposed scheme is in the townland of Faulties where the proposed route is to connect to the recently opened Dromod Roosky Bypass Scheme (a Type 2 Dual Carriageway scheme). Route corridors to the west of the N4 would also need to connect with southern bypass options around Carrick-on-Shannon.

In order to identify a feasible study area to the west of the N4 in the first instance the significant physical constraints were identified, as outlined below:

- As the Dublin-Sligo Railway Line crosses the River Shannon in this area, a route corridor option parallel and adjacent to the railway line was examined. However, because of potential settlement impacts on the railway line, such a route was not considered to be feasible.
- Any route corridor options north of the railway line between the townlands of Curries and Derrybrack would involve two new road crossings of the River Shannon. Two road crossings of the Shannon is not considered to be viable.
- Off-line route corridor options west of the N4 but east of the River Shannon between Faulties and Mountcampbell are constrained by Gortinty Lough and are therefore not considered to be feasible.

As a consequence of the above noted constraints and the further constraints of Lough Tap and Lough Boderg, the only feasible road crossing of the Shannon is between Derrybrack and Mullagh.

Route corridor option W-1 is located at the most southern boundary of this gap (refer Drawing RCSR 303 in Volume 2 and has been progressed to avoid the residential development in Kilmore and passes to the north of Ballagh Lough. It ties in with Route Corridor Option S-2. 300m to the west/south of this line was confirmed as the boundary of the Constraints Study area.

### 3.3.2 Area to the East of the Existing N4

Even with the retrofit option, the N4 through the village of Aghamore was identified as being unsuitable and would need a bypass around the village. To tie in with the recently opened Dromod-Roosky Bypass and to remain off-line of the original N4 / existing N4 north of Faulties, the eastern route corridor option needs to cross the
local road LP-1475 at the gap between the residential houses and the industrial complex.

To keep the travel distances as short as practicable, the route east of the existing N4 should not be too far east. Accordingly, the route corridor option should be west of the hill top at Fearnagh; while at Aghamore, the route would need to cross the local road LP-3467 between the school and the village of Antfield.

Continuing north, at Drumsna, the Gortconnellan Lough provides a significant constraint to the east of the existing N4. Route corridor option E-1 goes to the east of the lough continuing north where it connects with N-3 at Aughriman South. A variant to this route to the east of Gortconnellan Lough has been developed to connect to Route Corridor Option N-2.

The resultant road option layout (route corridor option E-1) to the east of the existing N4 is shown on Drawing RCSR 303 in Volume 2 and 300m east of the variant to this route has been confirmed as the eastern limit of the Constraints Study Area.

3.3.3 Conclusions of Constraints Study

Using the above method of identifying innermost and outermost feasible boundaries and significant and obvious physical constraints the Constraints Study Area was developed. The complete Constraints Study Area is mapped on Drawing RCSR 304 in Volume 2.

3.4 Public Consultation No. 1

The first public consultation was undertaken during May and June 2009 and presented the Constraints Study Area for the proposed road scheme.

The consultation involved the presentation of information on the scheme through an advertisement in the following local newspapers:

- The Roscommon Herald on 12th May 2009; and
- The Leitrim Observer on 15th May 2009.

The Constraints Study brochure was circulated to the local representatives by staff of the Roscommon County Council NRDO and copies of the brochure were placed at the following public buildings:

- Leitrim County Council Offices, Áras an Chontae, Carrick-on-Shannon, Co. Leitrim; and

Comments were invited from the public by 4th June 2009, with responses to be submitted, by email or in writing, to the NRA Liaison Officer, N4 Carrick-on-Shannon to Dromod Road Project, Leitrim County Council, Park Lane House, Carrick-on-Shannon.

A copy of the Constraints Study Brochure is attached in Appendix 3.1 at the end of this chapter.
3.5 Collection of Environmental Data

Considerable data collection was carried out and is recorded in the individual chapters and drawings of the Constraints Study Report. The data included information on:

- engineering and topography including major utilities crossing the study area;
- geology, hydrology and hydrogeology;
- socio-economic data from the Census of Population and County Development Plans;
- flora, fauna and fisheries, obtained from the National Parks and Wildlife Service (NPWS) database and from aerial photography as well as previous ecological studies;
- archaeology, architecture and cultural heritage sites using DoEHLG and Record of Monuments and Places (RMP) websites;
- land use and agriculture;
- landscape and visual aspects.

Full details can be found in the Constraints Study Report.
Appendix 3.1

Constraints Study Brochure
What is a Constraints Study?
A Constraints Study is a gathering of information on the study area before the Route Selection Process begins. The information sought is focused on determining the potential environmental, social, economic and engineering constraints which may influence the selection of the preferred route corridor within the study area.

Public Consultation
The purpose of this information leaflet is to inform the public of the Scheme and to invite written submissions on any aspects of the study area, i.e., matters of local concern, subjects requiring special attention. All comments will be recorded and considered during the Constraints Study.

What Happens Next:
On completion of the Constraints Study, which will include a review of the information gathered during this Public Consultation, a number of Route Options will be developed. A second Public Consultation (PC2) will be held later in the year when the Route Options will be displayed for your comment. Following PC2 a review of the comments received on these route options will be considered. This will lead to the selection of a Preferred Route Corridor which will be brought to a further Public Consultation (PC3).

Programme of Public Consultations

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<td>Constraints Stage (PC1)</td>
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<tr>
<td>Route Selection Stage (PC2)</td>
<td>Q3 2009</td>
</tr>
<tr>
<td>Emerging Preferred Route (PC3)</td>
<td>Q4 2009</td>
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Contact Information
If you have any observations or submissions to make relating to the Constraints Study Area as shown overleaf please forward them in writing to the undersigned on or before Thursday 4th June 2009:

NRA Liaison Engineer,
N4 Carrick-on-Shannon to Dromod Road Scheme,
Leitrim County Council,
Park Lane House,
Carrick-on-Shannon,
Co. Leitrim.
Phone: 071 9620005 Email: srynn@leitrimcoco.ie

Leitrim County Council in conjunction with Roscommon County Council has commenced the planning process to advance the development of the N4 National Primary Route and associated infrastructure from west of Carrick-on-Shannon/Cortober in the townland of Cloongownagh, Co. Roscommon to the northern tie-in of the recently completed N4 Dromod Roosky Bypass in the townland of Faulties Co. Leitrim.

The scheme will comprise the improvement of approximately 18.5km of existing N4 National Primary Route and will include a bypass of Carrick-on-Shannon/Cortober and a new river Shannon crossing.

The planning stages of the development will involve:
- The identification of a number of route options from which a preferred route will be selected;
- Environmental studies leading to the publication of an Environmental Impact Statement; and
- Completion of the statutory planning process including the publication of a Compulsory Purchase Order.

The first stage in this process is the identification of a study area and the compilation of a Constraints Study Report which identifies potential environmental, social, economic and engineering constraints which may influence the selection of the preferred route corridor within the study area.

The Constraints Study Area highlighted on the map above was developed as a viable study area within which feasible route options can be developed.