

1. Introduction

- 1.1 This report is the outcome of a Constraints Study carried out by the N5 / N17 Project Team for the proposed N5/N17 Charlestown By-Pass. Charlestown/Bellaghy is located at the intersection of two National Primary routes, namely the N5 Westport – Longford and the N17 Collooney – Galway routes.
- 1.2 The N5 National Primary route extends from Westport to Longford. It links parts of the West and Northwest regions to the Dublin region via the N4 National Primary route. The N17 National Primary route extends from Collooney to Galway and is designated part of ‘Western Road Corridor’ linking the Northwest, West and Midwest regions to the Southern Sea Corridor ports of Waterford, Rosslare and Cork.
- 1.3 It is an objective of Mayo County Council as part of its current Development Plan (Feb. 1992) to build a by-pass of Charlestown/Bellaghy. In addition it is County policy to restrict development, which would interfere, or prejudice the construction of a by-pass of Charlestown.
- 1.4 A by-pass of Charlestown/Bellaghy has been included in Phase 1 needs in the 1998 National Road Needs Study published by the National Roads Authority. Improvements on the Castlebar to Charlestown and Charlestown to Ballaghaderreen inter-town sections are included in Phase 3 needs.
- 1.5 During 1993 Mayo County Council carried out some preliminary route selection for the section of the N5 between Swinford and Carracastle. Arising from this work a route corridor to the South of the N5 was determined to be feasible and worthy of further study.
- 1.6 Following the publication of the National Roads Needs Study (1998) and the National Development Plan (2000-2006) it was felt that the scale of the project up to the route selection phase should be expanded to include a full by-pass of Charlestown/Bellaghy on both the N5 and N17 National primary routes. Accordingly the study area has been considerably increased and additional topographical survey information to compliment existing information will be required.
- 1.7 The Design Team in Glenparke House, Castlebar carried out the Study with the assistance of the specialist advice of external sub consultants where necessary. This study along with other information forms the basis for the route selection phase of the scheme, which is presently underway

2. Broad Study Area

- 2.1 The study area extends along the N5 National Primary route from the eastern termination point of the Swinford By-Pass to a location in County Roscommon approximately 3km east of Carracastle and along the N17 National Primary route from a point North of the new Airport road (R376) to Sandyhill in County Sligo. This area is outlined on Drawing No. CH_Study.01.
- 2.2 The corridor spans a width of between 2 – 3 kilometers centered approximately on the existing N5 and N17 respectively.
- 2.3 The area is predominately located in the eastern part of County Mayo but also encompasses a portion of the bordering Counties of Sligo and Roscommon. The area is generally rural in character with a high degree of ribbon development along both the N5 and N17 National Primary routes and along Regional and County roads, which are linked to the National Primary network. The town of Charlestown is located at the intersection of the N5 and N17 National Primary routes.

3. Mapping

- 3.1 This Study was carried out on the basis of mapping available to the Design Team. This mapping consisted of old 6” Ordnance Survey raster sheets and more current 1:50,000 Ordnance Survey Discovery Series mapping. In addition a narrow strip of Ordnance Survey digital mapping and associated aerial photography procured by Mayo County Council during 1993 was used.
- 3.2 The general information available has been augmented/confirmed by means of windscreen surveys of the study area.

4. Planning and Development

- 4.1 The current Mayo County Development Plan adopted in February 1992 has as an objective the construction a by-pass of Charlestown. There is also a less recent development plan specifically for Charlestown entitled '*The Charlestown Development Plan 1988-1993*'. While this plan is somewhat outdated many of the policies and proposals contained therein remain valid.
- 4.2 Mayo County Council is currently revising its County Development Plan and as part of this process active discussion between Regional Road Design Office staff and planning staff will take place in relation to the transportation needs of the area.

- 4.3 The level of frontage development both along the N5 and N17 and other roads adjacent to the National Primary network is a particularly constraining influence.
- 4.2 A study of the Planning Register in the planning office of Mayo County Council has been carried out. The locations of existing and proposed developments within the study area are shown on Drawing No. CH_plancon.01.
- 4.3 A map of the broad study area has been issued to the Planning Office of Mayo County Council with the request that any future planning applications within the area be referred to the Design team for appraisal.
- 4.4 Liaison between the Design Team and the planning office is ongoing with regard to the plans and individual planning applications, which may impact, on any new route for the N5 and N17.

5. Procedural Constraints

- 5.1 As the scheme involves working within the functional area of the neighbouring Local Authorities of Sligo and Roscommon Section 59 Agreements will be required which will enable Mayo County Council to undertake design work.
- 5.2 Initial discussions have taken place between technical staff from Mayo County Council and the adjoining authorities. In principle there is no objection to Mayo County Council carrying out the design work for the scheme.
- 5.3 Formal procedures will be adopted between Mayo County Council and Sligo County Council in the near future. The exact tie-in point for the N5 inside the Roscommon County boundary will be considered, as part of the route selection process for the scheme and further discussions between representatives of Mayo and Roscommon County Councils will take place.

6. Public Consultation

- 6.1 A notice was placed in local newspapers during April 2000 informing the public of the County Council's intention to carry out a study of the N5 and N17 with a view to selecting a particular route. Submissions and observations were invited from the public.
- 6.2 The initial response to the notice was poor and there were few responses, either in person or in writing, concerning the route of the proposed road.
- 6.3 Further public consultation for the scheme will take place in accordance with the '*National Project Management Guidelines*' published by the National Roads Authority.

7. Land/Property Boundaries

- 7.1 A preliminary land search has identified that the land holdings within the study area are generally small.
- 7.2 The Design Team is currently carrying out a detailed land registry search of all properties/holdings within the study area.

8. Physical Constraints

- 8.1 Rivers, which run within the study area, include the Mullaghanoe, Sonnagh, Bracklagh and the Black rivers. The river locations are shown on Drawing No. CH_phycon.01.
- 8.2 The Mullaghanoe and Sonnagh rivers are tributaries of the River Moy; the Black and Bracklagh rivers are tributaries of the River Mullaghanoe. A significant number of river channels within the study area are currently maintained by the O.P.W as part of the Moy Drainage maintenance scheme.
- 8.3 The central watercourse within the study area is the Mullaghanoe River, which runs in a northerly direction relatively close to the existing N17 National Primary route. It crosses under the existing N17 National Primary route approximately 2km South of Charlestown. The Sonnagh River runs in a northwesterly direction. The existing N5 National Primary route is bridged over the river in the townland of Cartron. The Black river runs in a westerly direction and crosses under the existing N17 National Primary route at Bellahy.

- 8.4 There are also numerous streams, which include important salmonid spawning and nursery habitat.
- 8.5 Local staff from the OPW confirmed that there are no records of major flooding within the study area.
- 8.6 It is likely that the rivers within the study area will impose constraints on the design of the proposed alignments. In addition due to the importance of the rivers from a fisheries point of view sensitive design will be required
- 8.7 There is a section of disused rail line, formerly part of the Sligo-Limerick line within the study area. Its location is shown on Drawing No. CH_phycon.01. The track for this line remains largely in place but has not been used for many years. The line crosses the existing N5 outside of the study area approximately 20 km west of Charlestown. It also crosses the N17 north of Charlestown in the village of Bellahy.
- 8.8 The study area lies entirely within the 'outer control zone' for Knock International Airport. The airport is located approximately 6kms south of Charlestown and is linked to the N17 via a recently constructed access road (R376). It is County policy to control development in the vicinity of the Airport.

9. Utilities

9.1 Sanitary Services

- 9.1.1 There is a sewage treatment works located within County Sligo at Bellahy, which primarily serves Charlestown and Bellahy. There is a relatively dense network of pipework within Charlestown that runs into the treatment plant. The foul sewer main extends westwards along the N5 approximately 2km from Charlestown to St. Anne's nursing home and eastwards approximately 700m. The pipe network extends along the N17 both north and south of Charlestown approximately 750m from the town center.
- 9.1.2 There are also a series of watermains along both the N5 and N17 concentrated primarily in and around Charlestown.
- 9.1.3 There are a number of group water schemes within the study area. These services will not pose serious constraints as the pipe network is made up of small diameter pipework, which can easily be altered.

9.2 E.S.B

Contact has been made with the ESB with regard to their existing network. There are a number of overhead power lines within the study area. These overhead lines are shown on Drawing No. CH_utilcon.01

9.3 Eircom

Contact has been made with the Eircom with regard to their existing network. There are a significant number of overhead and underground phone lines within the study area. These lines are shown on Drawing No. CH_utilcon.02

10. Archaeology

- 10.1 Sites of archaeological interest within the study area are shown on Drawing No. CH_archcon.01. These sites are drawn from the OPW National Monuments Database.
- 10.2 Advice from Mr. G. Walsh, Senior Archaeologist, Mayo County Council has been sought. Mr. Walsh advised that the area in east Mayo is relatively rich in archaeology. A brief desktop study of the area indicates that the vast majority of the recorded archaeological sites consist of enclosures or ring forts. Detailed assessment of alternative route options will be carried out as part of the route selection phase of the scheme.

11. Ecology

- 11.1 Dr. Cilian Roden was commissioned by Mayo County Council to carry out a preliminary desktop ecological analysis of the Broad Study Area. This work was undertaken during May 2000. The report is included in Appendix A.
- 11.2 This report concluded that there are few areas of ecological interest within the study area. There are no areas designated as Special Areas of Conservation (SAC) within the study area.
- 11.3 There are however some areas of intact raised bog and a small fen north of the N5 at Cullmore, which will require further investigation at route selection stage of the scheme.

12. Existing Network

- 12.1 The N5 is generally 6.5m wide without hard shoulders over a significant part of its length. The route is characterised by the presence of continuous white lining over much of its length. The road pavement is in a reasonable condition. Due to the deficient cross section and poor alignment characteristics of the existing road there are limited opportunities for overtaking.
- 12.2 The N17 north of Charlestown has relatively recently been improved by Sligo County Council from Bellahy to Curry village. The road is generally 13.5m wide with full hard shoulders. The recent road improvements also include traffic calming measures on the approach to Bellahy.
- 12.3 The N17 South of Charlestown is of variable cross section. The horizontal and vertical alignments are sub-standard and deficient in capacity. There are limited opportunities for overtaking. The road pavement is also in need of improvement.

13. Traffic, Schools & Churches

- 13.1 The annual traffic census carried out by the Road Design Office at Mayo County Council includes two measuring points on the N5 between Swinford and Carracastle and one point (P7) on the N17 south of Charlestown. P5 is located on the N5 near Swinford while P6 is located on the N5 near Carracastle.
- 13.2 Annual Average Daily Traffic (AADT) volumes on the N5 and N17 recorded during August 1999 are indicated in the following table.

<i>Route No.</i>	<i>Census Point Ref.</i>	<i>A.A.D.T</i>	<i>% H.C.V</i>
N5	P5 - Swinford	5301	8
N5	P6 - Carracastle	3946	13
N17	P7 - Charlestown	4134	10

Table 1 – Traffic Data

- 13.3 There is no significant pedestrian use of the N5 or N17 within the study area except in the towns of Charlestown/Bellahy where footpaths are generally in place. There is also a section of footpath on the South side of the N5 in the village of Carracastle.
- 13.4 Excluding Charlestown/Bellahy, there is one National School with direct access onto the N5. This is Cuilmore National School located approximately 7km west of Charlestown. Numerous representations have been made to Mayo County Council expressing concerns for the safety of children attending

this school. School warning signs and flashing warning lights have been erected on the approaches to the school.

- 13.5 Within the village of Carracastle there is one church (St. James's R.C) and a burial ground with direct access onto the N5 National primary route.
- 13.6 There is considerable frontage development onto both the N5 and N17 National Primary routes within the study area. Table 2 below outlines the extent and type of development along each route. In particular there is a significant number of field/farm accesses onto both the N5 and N17 within the study area, which is expected as the area traverses a predominately agricultural region.

Location	No. of house entrance	No. of field/farm entrances	No. of other entrances *	No. of junctions
N5 – Swinford by-pass - Charlestown	56	42	6	14
N5 – Charlestown – Co. Boundary	73	115	7	23
N17 North	15	40	0	9
N17 South	37	64	0	14

Table 1

Note: * Includes all entrances excluding house and field/farm entrances, e.g. commercial and amenity.

14. Accident Data

- 14.1 Accident data for the period 1990 – 1998 in the Broad Study Area is indicated on Drawing No. CH_accide.01.
- 14.2 There have been 6 fatalities and 20 accidents involving serious injury recorded during the period 1990 – 1998.

15. Economy & Business

- 15.1 The local economy along the route of the existing N5 and N17 is generally agricultural in nature. There are a small number of local businesses within the study area.
- 15.2 The economy of Charlestown/Bellaghy is largely dependant on the agricultural sector and primarily acts as a service center for its agricultural hinterland. There are few manufacturing jobs within the town. Commercial outlets in Charlestown/Bellaghy include banks, public houses, hardware, doctor, chemists, drapery and grocery outlets.

16. Aesthetics

- 16.1 The study area is characterised by farmland of variable quality. There are large areas of bog land and also areas of forestry within the study area. Hedge field boundaries predominate throughout the area.
- 16.2 The topography along the study area is generally flat or slightly undulating with few local high spots. There are no recognised scenic views along the existing routes.