Chapter 4

Alternatives Considered

4.1 Legislative Requirement

Section 50(2)(d) of the Roads Act, 1993, as amended, states that an EIS shall contain: “an outline of 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”.

The development of the route was undertaken in three stages: A Constraints Study undertaken in 2008, a Route Selection Study undertaken in 2008 / 2009 and the development of the Preliminary Design and Environmental Impact Assessment through 2010 / 2011 updated in 2012 / 2013. An outline of the examination of alternatives at each stage of the development of the scheme is summarised below and can be found in full in the above listed studies.

4.2 Development of the Scheme

In July 1998 the NRA published the “NRA National Road Needs Study” (Road Needs Study). In Annex 4: Schedule of Improvement Needs it identifies the N5 Westport – Castlebar Route as “Backlog” requiring a Wide 2 Lane standard road. The term ‘backlog’ refers to those routes not included in the Operational Programme for Transport 1994 – 1999 which with projected traffic growth would not be capable of delivering 80kph average inter-urban speed by the end of 1999. The Road Needs Study stated that improvement of this route to a Wide 2 Lane would provide a Level of Service D at the design year of 2019 with predicted traffic volumes of 13,000 AADT.

The study further identified that the part of the N5 from Castlebar to Charlestown, specifically between Ballyvary and Bohola, required upgrading with implementation within the 2010 – 2014 period and a recommended road type as Standard Single Carriageway.

Therefore the need for the scheme had already been identified as far back as 1998.

4.2.1 Previous Schemes

In response to the above Road Needs Study, four road projects had previously been developed along the corridor of the N5 and N59. These four earlier road projects were the N5 Westport – Castlebar Road Project, the N5 Castlebar Ring Road Project, the N5/N59 North – Westport Relief Road and the N5 Ballyvary – Bohola Road Project. All of these had been developed by the Mayo National Roads Design Office, on behalf of Mayo County Council and the National Roads Authority.

N5 Westport – Castlebar Road Project

Following Constraints Study and Route Selection studies, a Design Report was completed for the N5 from the Allergan Junction in Westport to the Inner Relief Road in Castlebar. This report recommended a mainline Wide Single Carriageway with a crossing over Lough Lannagh. Since then the NRA policy has changed and Wide Single Carriageway’s are no longer permitted due to their poor safety record. Consequently the typical cross-section for the mainline was revised to that of a Type 2 Dual Carriageway.
N5 Ballyvary – Bohola Road Project
The N5 Ballyvary – Bohola Road Project was developed to facilitate the intersection of the proposed N26 Ballina to Bohola – Stage 2 Road Project with the N5. Following Constraints Study and Route Selection studies, a preferred route had been adopted by Mayo County Council.

N5/N59 North – Westport Relief Road
Following the development of the route of the N5 Westport – Castlebar Road Project and the concurrent Westport Transportation Study a need was seen in Westport for the development of a link to the N59 Newport Road from the N5 Castlebar Road. Following Constraints Study and Route Selection studies, a preferred route for the N5/N59 North – Westport Relief Road had been developed.

Castlebar Ring Road Project
This study identified a proposed route for a ring road around Castlebar Town with the northern bypass to be developed as a Local/Regional road and the southern bypass forming the N5. Following Constraints Study and Route Selection studies, a route was selected to the south of the town linking the east and west ends of the N5 with connections to the N84 and N60. Cognisance was also taken of the preferred route of the proposed N60 Castlebar – Claremorris Road Scheme. The Castlebar Ring Road Project was developed as a Type 1 Single Carriageway.

Relationship between Schemes
These road projects had been developed independently of one another; however, where anticipated and practicable all four projects took cognisance of each other’s planning, location and design of the adjacent projects, namely the N26 Ballina to Bohola - Stage 2 Road Scheme and the N60 Castlebar – Claremorris Road Project.

Following an NRA Peer Review in July 2007 it was concluded that a single project would be developed in its entirety from the N59, Newport Road in the townland of Deerpark East, Westport, to the N5, East of Bohola in the townland of Clooneen. This new scheme was called the N5 Westport to Bohola Road Project.

4.2.2 N5 Westport to Bohola Road Project
The planning and design of the N5 Westport to Bohola Road Project commenced in early 2008 and was developed through a constraints study, route selection and preliminary design of the proposed route. The majority of the route was developed as a Type 2 Dual Carriageway, with the section between the junction with the N59 at Deerpark East and Knockranny, to the east of Westport, developed as a Type 2 Reduced Single Carriageway.

4.2.3 Constraints Study and Public Consultation
Public Consultation No. 1
The constraints study for the N5 Westport to Bohola Road Project commenced in early 2008. Public Consultation No.1 (PC1) was undertaken during April 2008 which presented the Constraints Study Area for the proposed road project. The consultation involved the presentation of information on the scheme through an advertisement in the following local newspapers:

- Western People
- The Mayo News
- The Connaught Telegraph
The Constraints Study brochure was circulated to the local representatives by staff of the Mayo NRDO at meetings with the Ballina, Swinford, Castlebar and Westport council and staff. The Constraints Study was advertised in the local papers on the 8th and 9th April and copies of the consultation brochure were placed at the following public buildings:

- Mayo County Council Offices, The Mall, Castlebar
- Westport Town Council, Civic Offices, Altamount Street, Westport
- Ballyvary Post Office
- Bohola Post Office

Comments were invited from the public by 2nd May 2008, with responses to be submitted to the Project Engineer, N5 Westport to Bohola Road Project at the NRDO offices. An e-mail address was also established specifically for any responses or submissions. No responses to the public consultation were received either by post or e-mail.

4.2.4 Route Selection and Public Consultation

The Route Selection commenced for the N5 Westport to Bohola Road Project on completion of the constraints study and involved the production of a number of route options that could best suit the scheme objectives while taking into account the assessment criteria in terms of impact on – Environment, Economy, Traffic Safety, Accessibility and Social Inclusion and Integration.

Public Consultation No. 2

Public Consultation No. 2 (PC2) was undertaken between September 2008 and October 2008 with the public consultation exhibitions being held from the 9th of September 2008 to the 12th of September 2008 at the following locations:

- Westport: Westport Civic Office 9th September 2008
- Castlebar: Macalla Hall, Lough Lannagh Holiday Village 10th September 2008
- Ballyvary: Ballyvary National School 11th September 2008
- Bohola: Bohola Community Centre 12th September 2008

The objectives of the consultation were to:

- Present the route corridor options to the public
- Inform them of the process and programme for the project
- Invite submissions on these options
- Gather local information, which may not already be known to the design team.

The displays consisted of background information on the scheme, the project programme, a cross section of a typical Type 2 Dual Carriageway and the Route Corridor Options on Discovery Series mapping at a scale of 1:50,000. Aerial photography, with the Route Corridor Options overlaid, was also available at the consultation.

Following the weeklong exhibitions, the exhibition material was put on display at the Mayo National Roads Design Office, the Westport Civic Offices, Ballyvary Post Office and Bohola Post Office from 15th September to 3rd October 2008. These displays were available for inspection, but not attended by the project team.
During the attended consultations the staff endeavoured to obtain as much local information as possible. One of the key pieces of information gathered at the consultations was that of agricultural holdings, whereby boundaries were marked on the aerial photography and the landowner’s details were also recorded.

A total of 116 people attended over the 4 days. Those wishing to make a written submission were requested to do so by the closing date of the 10th of October 2008 with a total of 179 individual responses received. All individual submissions received were evaluated and the information they contained was recorded and considered as part of the route selection process.

**Public Consultation No. 3**

Following the route options public consultation (PC2), the information gathered was used to refine the route options and to determine the Emerging Preferred Route. The Emerging Preferred Route was displayed at Public Consultation No. 3 (PC3) between December 2008 and January 2009, with the public consultation exhibitions being held from the 10th of December 2008 to the 12th of December 2008 at the following locations.

- **Westport** Westport Civic Office 10th December 2008
- **Castlebar** Macalla Hall, Lough Lannagh Holiday Village 11th December 2008
- **Ballyvary** Ballyvary National School 12th December 2008

The objectives of this consultation were to:

- Present the Emerging Preferred Route to the public
- Further inform the public of the process and the programme for the project
- Invite submissions on the Emerging Preferred Route
- Gather local information including land ownership, which may not be known to the design team.
- Answer questions from the public
- Consider and review the information received.

As with PC2, a publicity campaign was undertaken by Mayo National Roads Design Office (MNRDO) prior to the consultation.

The display information for the scheme during PC3 consisted of the following:

- Aerial Photography for the scheme showing the Emerging Preferred Route
- OS Mapping showing the Route Corridors and Options as shown at Public Consultation No. 2 (PC2)
- Plans showing the Emerging Preferred Route and known landownership Information for comment.

A total of 365 people attended the consultation exhibitions over the 3 days. Information regarding landownership was obtained along with comments from attendees regarding the route.

Those wishing to make a written submission were requested to do so by the closing date of the 16th of January 2009 with a total of 85 individual responses received. Following Public Consultation No. 3 (PC3) and an NRA Peer Review, the Emerging Preferred Route was presented to Mayo County Council and adopted as the
Preferred Route at the Council meeting, held on the 9th of March 2009. This route has been refined and developed to produce the Preliminary Design as presented in this EIS.

4.2.5 Re-definition of the Scheme - N5 Westport to Turlough Road Project

As discussed in Section 1.7 of this EIS one of the objectives of the N5 Westport to Bohola Road Project was to complement the N26 Ballina to Bohola Phase 2 Road Scheme which addressed the development of the N26 and N58 corridors from Ballina, to support the National Spatial Strategy for Castlebar and Ballina to act as Linked Hubs.

Development of the N26 scheme led to the planning of the previous N5 Ballyvary – Bohola scheme, which as part of its objectives, would provide a good connection between the N26 and the N5. The brief for the N5 Westport to Bohola Road Project took this into account in the development of the project.

The N26 scheme was designed as a Type 2 Dual Carriageway of approximately 19 km in length. The Preliminary Design was carried out, and an Oral Hearing into the CPO and EIS was held during February 2008. On the 23rd of February 2010 a decision to refuse planning of the N26 Ballina to Bohola Stage 2 Road Scheme was reached by An Bord Pleanála.

Following the decision to refuse the N26 Ballina to Bohola Phase 2 scheme, the following were concluded in relation to the N5 Westport to Bohola Road Project:

- The selection of the Preferred Route of the N5, from Westport to east of Castlebar (Turlough) remains unaffected by any potential reconsideration of the N26 / N58 that may occur.
- The Preferred Route selected for the section of the scheme from east of Castlebar (Turlough) to Bohola was founded on the expectation that the N26 would connect with the N5 at Bohola, which could potentially change if the route of any future N26 / N58 route was altered.
- It would be prudent to terminate the current scheme at Turlough, pending future consideration of the N26 /N58 corridor.

Based on the above conclusions it was decided to terminate the N5 Westport to Bohola Road Project east of Turlough village. The new scheme resulting from this decision, the N5 Westport to Turlough Road Project, is the subject of this EIS.

4.3 Scope, Constraints and Interfaces

The scope for the project and brief for the scheme were largely defined by the previous four N5 Mayo road projects described in Section 4.2.1 and the desire to establish how best they should be combined into a single continuous scheme.

Initially a constraints study was undertaken to gather data that would be used in the development of potential routes. The general principle that was used to define the extents of the study area was that it should be large enough to include all reasonable route options, but that it should be informed by the previous studies to avoid becoming excessively large. Where areas had been defined in previous Constraints and Route Selection studies, these were scrutinised to determine if the findings were still valid for the combined scheme and adopted where applicable.
The extent of the study area is approximately 106 square kilometres and extends from Westport to approximately 1.5 kilometres East of Bohola. The extent of the study area is shown in Figure 4.1 in Volume 3 and covers the extent of the entire N5 Westport to Bohola Road Project, not only the extent of the reduced N5 Westport to Turlough Road Project.

This data collection focused on determining the extent and location of the existing physical, engineering and environmental constraints, which exist and could affect the location, design and progress of the scheme.

4.4 Existing Conditions and Constraints

4.4.1 Topography

The western half of the study area is situated in predominantly undulating topography, characterised by drumlins and low hills. The eastern half of the scheme is generally flatter with low hills and areas subject to flooding. The study area envelops a number of water bodies including a large part of Lough Lannagh and also, to a lesser extent, Islandeady Lough and a number of smaller lakes. These include Black Lough (south of Islandeady Lough) and Cloondeash Lough (north of the Derrinlevaun locality).

The existing N5 route also crosses and runs adjacent to the Castlebar River (between Castlebar and Turlough). Isolated wooded areas are located within the study area.

Within the study area there are a number of bogs, fens and other lowland wet areas and poor ground conditions.

4.4.2 Roads

The study area has a road system ranging from National Primary and Secondary roads to a network of Regional and Local roads. The existing National Primary N5, Westport to Dublin route runs from Westport to Turlough within the constraints area passing through the town of Castlebar. Further details of the roads within the constraints area are described in Chapter 2 of this EIS.

4.4.3 Railways

The Dublin - Westport Railway line generally runs to the south of the existing N5 from Westport through to Castlebar. Leaving Westport the railway line generally runs parallel to the R330 as far as Meneen where it then curves in a north-easterly direction merging towards the existing N5 in the townland of Keeloge. Between the townlands of Keeleges and Dooleague the line runs parallel to the existing N5, approximately 10 metres from one another, before the line diverges again to the south of the existing N5. The line then runs parallel to the N5 approximately 1km to the south of the existing N5 through to Castlebar where it merges towards the existing N5 again. Along this section of the line it crosses the L-1710 (Derrywash Road), the L-5756 (Horsepark Road) and the N84 National Secondary Road. From Castlebar the line runs in a south-easterly direction, approximately 1 kilometre to the south and parallel to the N60, to Manulla Junction station. From here the line continues through to Claremorris, Roscommon and then on to Athlone where it continues east through to Dublin.
4.4.4 Environmental Issues

During the compilation of environmental constraints the following potential environmental constraints were identified relating to development, humans and the natural environment:

- Existing development, existing properties and planning permissions
- Land Zoning
- Community facilities and recreational areas
- Known archaeological sites, protected structures and national monuments
- Environmental conservation areas including: SACs (Special Areas of Conservation), SPAs (Special Protection Areas) and NHAs (National Heritage Areas)
- Other areas of ecological interest such as watercourses, wetlands and woodland habitats
- The landscape features including areas of woodland, estate landscapes, and particular landscape types

4.4.5 Existing Services

A record of existing services and utilities was compiled including water supply, sewers, electricity supply, telecommunications and gas. Significant utilities located, included:

- A Bord Gáis transmission main which crosses the N5 in the townland of Clogher to the east of Castlebar
- A Bord Gáis distribution main along the L-5874 (Windsor Road), to the north of the Castlebar River, crossing the existing N5, and running in the westbound hard shoulder of the existing N5 towards Castlebar
- A Bord Gáis distribution main along the length of the existing N5 between Westport and Castlebar
- A treated sewer effluent pipeline running from Castlebar through to the east of the village of Turlough parallel to and in the westbound verge of the N5
- High Voltage overhead ESB lines to the south east of Castlebar and at other locations
- Bord Gáis distribution main located between Westport & Castlebar along the route of the existing N5
- A Regional Water Main that is crossed by the proposed project in Cloondeash (Horsepark Road)

4.4.6 Settlements

The existing N5 passes through the centre of County Mayo. The main settlements adjacent to the scheme and their respective populations from the 2006 Census of Population, by District Electoral Division (DED) are given below. The preliminary figures from the 2011 census are given in brackets.

Westport: Westport town is located to the west of the scheme on the Atlantic coast. The town lies to the east of Clew Bay and is overlooked by Croagh Patrick to the south west. In the 2006 census, the Westport Urban area had a population of 5,163 (5,543) while the Westport Rural area had a population of 1,463 (1,577).
Islandeady: Islandeady is located 9 km to the east of Westport and 9 km to the south west of Castlebar town centre. The village itself is located on the shore of Islandeady Lough and north of the existing N5. In 2006, the Islandeady area had a population of approximately 1,000 (1,009) with a significant amount of the population located outside of the village itself along and to the south of the N5.

Castlebar: Castlebar is the County Town of Mayo and has the largest urban population of any town in County Mayo. In 2006, the Castlebar urban area had a population of 6,185 (6,055) while the Castlebar Rural areas had a population of 6,841 (7,207).

Breaghy: Breaghwy lies approximately 4 km to the south east of the Castlebar town centre. In 2006, Breaghwy and its hinterland had a population of 1,703 (1,753).

Turlough: Turlough lies approximately 6 km to the east of the Castlebar town centre. Turlough village is located along the L-1719 (Turlough Road – “Old N5”). In 2006, Turlough had a population of 1,229 (1,464).

4.4.7 Land Use

The entire study area with the exception of the urban areas and the 18 hole Castlebar Golf Course situated 2.5 km south-east of Castlebar near Lightford can be classified as agricultural lands. The farmland is generally of average to good quality resulting in a significant level of grassland-based farming enterprises across the study area. There are also significant areas of poor quality farmland present along the route with much reduced levels of agricultural activity. The grassland-based activities comprise beef, sheep and dairy with beef and sheep being the predominant farm enterprises. It is common for farms to have a combination of some or all of these categories while no tillage crops are evident along the entire length of the route.

4.5 Route Selection Process

The route selection for the scheme and the process that resulted in the selection of the preferred route are detailed in full in the N5 Westport to Bohola Road Project, Route Selection Report, March 2009. The route selection process discussed in this section of the EIS summarises the process and findings for the entire scheme between Westport and Bohola undertaken prior to the decision to terminate the scheme at Turlough.

A number of initial route options were developed based on information recorded in the Constraints Study and taking into account the preferred route corridors from each of the previous four schemes. The previous preferred route corridors had been protected from planning since the completion of the previous route selections and as such formed the basis for the initial route assessment. Further route options were investigated based on engineering and environmental constraints and extensive windshield surveys. The development of alternative routes particularly around Westport and Castlebar was significantly constrained by the extensive ribbon development along the existing road network.

4.5.1 Route Assessment

The route options assessments were undertaken in line with the NRA Project Appraisal Guidelines under the headings of:
Environment
The Environmental Assessment was subdivided into the following assessments:

- Impacts on People
  - Proximity to residential properties and granted planning permissions with respect to Noise and Air Quality
  - Community Severance,
  - Community Facilities,
  - Number of Residential Properties Acquisitions
- Flora, Fauna and Fisheries
- Archaeology and Cultural Heritage
- Agricultural Land Use
- Landscape and Visual

Economy
Under the heading of Economy the assessment was subdivided as follows:

- Engineering Assessment
  - Route Lengths
  - Junctions
  - Bridges
  - Earthworks
  - Construction Difficulties
- Geological and Hydrogeological features requiring special measures
- Estimate Costs
- Traffic Functionality & Economic Benefits

Traffic Safety
One of the primary purposes of the scheme is to replace a length of road with poor alignment, junction and access standards with one designed to the latest standards for safety on high volume high speed roads. As such all route options considered produce similar improvements in safety.

Accessibility & Social Inclusion
Accessibility is divided into impact on vulnerable groups and impact on deprived geographic areas. The objective of the scheme in these respects is to avoid any impact on vulnerable groups and at the same time meet the objectives of the following policy documents in their aims to revitalise The Western Region:

- National Spatial Strategy
- Regional, County and Local Development Plans
In this regard all routes were considered equal.

Integration
Under integration the scheme was assessed in terms of compatibility with transport, land use, geographical and government policy integration. In all cases the route options were similar due to all the route options having similar aims within the scheme and similar geographical locations.

4.5.2 Comparison of Alternative Routes

Node and Link Numbering System
In order to facilitate the comparison of different options, the scheme was divided into five sections numbered 1 to 5 from west to east. (See Figure 4.1 in Volume 3).

Within each section, each route was divided into a number of links between common points. Nodes were established where route options merged or diverged and at the start/end points of each section. Each link between nodes was considered separately under the five headings. The effects were aggregated within each section and then within each route option. New route options could be generated easily by aggregating links between different nodes. A total of 41 individual route elements were identified and assessed as shown in Figure 4.2 in Volume 3.

Route Selection
The comparison of different route options was carried out on the basis of the Department of Transport Project Appraisal Balance Sheet. Alternatives were ranked with respect to Environment, Economy, Safety, Accessibility and Social Inclusion, and Integration. Each of these criteria was given a score on a 7 point scale, as follows:

- +3 Highly Positive
- +2 Moderately Positive
- +1 Slightly Positive
- 0 Neutral
- -1 Slightly Negative
- -2 Moderately Negative
- -3 Highly Negative

Having assessed the 41 route elements between nodes A-V (See Figure 4.2 in Volume 3), the large number of route options that arose from the potential combinations of route elements were reduced by a process of elimination. The first stage of this was to select the best route between any two sequential nodes. Ten such two node decisions were assessed with the least preferred route discounted leaving a reduced number of route options. For example Decision 1 Node A to Node B via Route 1.0, 1.1 and 1.2 led to Route 1.2 being selected as the Preferred Route.

The next stage was to select the best route between common points that involved options that passed through intermediate nodes. Eight such decisions were assessed with the least preferred route discounted leaving a reduced number of route options. For example Decision 11 Node F to Node H directly via route 3.5 or via node G following routes 3.2 and 3.4.

The final stage of route selection involved the remaining route options between nodes D and P which intersected the N84 and N60 at varying distances from
Castlebar and as such required specific traffic modelling to estimate the relative traffic benefits. Similarly the remaining route options between nodes P and V involve different journey lengths for Castlebar-Dublin and Castlebar-Ballina traffic, and therefore required specific traffic modelling (See Figure 4.3 in Volume 3). The three final decisions to be made were therefore as follows:

**Decision 19**  Node G to Node L via node I following routes 3.1B and 4.1 or via nodes H, J and K following route 3.4

**Decision 20**  Node D to Node P via nodes E, M and N following routes 2.0, 3.0, 4.5 and 4.4B or via nodes F, G, I, M and N following routes 3.2A, 3.2, 3.1B, 3.1A, 4.5 and 4.4B or via nodes F, G, I, L and O following routes 3.2A, 3.2, 3.1B, 4.1 and 4.6

**Decision 21**  Node P to Node V via nodes S and U following routes 5.3A and 5.3, or via nodes R and T following routes 4.3 and 5.0. As a check two other routes using previously rejected elements were also compared over the full length P to V, via nodes S and U but this time following routes 4.6, 5.3 and 5.2 and finally via nodes R, T and U via routes 4.3, 5.0 and 5.2.

In order to assess the remaining three decisions an economic assessment was undertaken. Resulting from this assessment and the expressed public preference to maximise the use of the existing N5, together with the initial cost savings in terms of construction, the route that utilised the nodes through D - F - G - I - M - N - P was preferred. (Refer to the N5 Westport to Bohola Road Project Route Selection Report, May 2009 for further details)

### 4.6 Route Development

#### 4.6.1 Emerging Preferred Route to Preferred Route

The Emerging Preferred Route (EPR) corridor was displayed on mapping and brochures for the purpose of Consulting with interested third parties as part of the Public Consultation Exercise No.3 (PC3). (See Figure 4.4 in Volume 3).

Information received as part of PC3 informed certain changes to the route of the corridor which resulted in the layout presented as the Preferred Route. The changes to the EPR resulting in the Preferred Route were as follows:

- Between the Westport GAA Sports Ground and the existing N5 Link Road Junction roundabout, the corridor has been moved by up to 25m to the south. This change was made to move the corridor further away from a residential house and to facilitate an altered connection to the old railway (now a driveway access to a house).

- Between the Lodge Road crossing and the proposed Knockranny Junction (North), the corridor has been moved by up to 30m to the north. This change was made to better utilise the existing section of the N5 Link Road through the Industrial Estate and to move the corridor further north from dwellings.

- At Pheasanthill, on the western approach to the existing N5 intersection at Derrylea, the corridor has been moved by about 10m to the south in order to accommodate an improved horizontal alignment on the approach to the junction.

- At Derrylea, immediately to the east of the existing N5, the corridor has been moved about 30m to the north. The reason for the change is to better accommodate the proposed junction in the confined site resulting from driveway accesses and the like.
between Derrynashask (east of the railway crossing) and Aghadrinagh (west of the N84 crossing), the corridor was moved southwards by up to 30m away from dwellings at Cloondeash.

- Between Shanvally (north of the railway crossing) and Drumaleheen (to the south of the N60 crossing), the corridor was moved by up to 50m to the west to provide for a better alignment in the area and to accommodate a revision to the corridor as it crosses the N60 (see note following).

- Between Drumaleheen and Doogary, the corridor as it crosses the existing N60 was moved by up to 30m to the east to reduce the impact on dwellings in the vicinity.

- Between Liscromwell and the existing N5, the corridor was moved by up to 50m to the east on the approach to the proposed junction on the existing N5. The reason for the change was to move the proposed junction eastward to avoid a direct impact on the adjacent Castlebar River.

4.6.2 Preferred Route to Preliminary Design

Since the adoption of the Preferred Route, design development and environmental assessment has led to various further amendments to the proposed alignment. The most significant change to the route is the curtailed termination point of the scheme at Turlough which does not significantly affect the alignment of the remaining route. There have been a number of other refinements and modifications to the alignment as a result of further surveys, ground investigation work and consultation with landowners and other affected parties.

The amendments to the preferred route are reflected in the developed alignment now presented as the proposed design in this EIS and detailed below.

Ch. 2,050 – Ch. 2,400

The alignment has been realigned in a more northerly direction between Ch. 2,050 – Ch. 2,400 along the N5 Link Road, with the maximum shift in alignment of approximately 12 metres. This alteration is aimed at reducing the impacts on Westport GAA Club’s pitches.

Ch. 2,400 – Ch. 3,800 and the N5 Link Road Junction

Between Ch. 2,400 – Ch. 2,760 and Ch. 3,000 – Ch. 3,800 the alignment has shifted northward by up to 200 metres along with the N5 Link Road Junction.

This change was necessitated by the purchase of the IDA Westport Business Park by Allergan Inc. and their announced strategic investment of €350M to expand the Allergan Westport Operation in January 2012. The original preferred route, bisected the now enlarged pharmaceutical campus, restricting development and creating safety and security difficulties. Alternative route options were investigated to reduce the impact on the expansion of the pharmaceutical campus, resulting in the selection of a preferred option located along the northern edge of the enlarged site.

Ch. 17,800 – 19,500 (Black Lough)

From the consultation and submissions received in relation to the selected route at Public Consultation 3, it was concluded that further investigation was required regarding the selection of the preferred route at this location. Archaeological investigations were undertaken to establish the significance or otherwise of the potential crannóg within Black Lough. This established that the site had not been a crannóg and therefore this constraint to the Preferred Route alignment was removed.
enabling further alignment options to be considered. The resulting modified alignment has resulted in reduced impacts in terms of severance and the quality of land effected.

**Ch.36,300 – 36,600 (Shanvally)**

During the environmental impact assessments undertaken on the Emerging Preferred Route an area of fen with an adjacent woodland copse was identified to the north of the railway line in the townland of Shanvally. This was in a particularly difficult location due to the interaction of a number of constraints such as the housing estate at Balloor, the Castlebar Golf Club and the railway line. Alternative alignments were identified and a route to the west was developed which avoids the area of fen completely. This realignment has been adopted and developed as the preliminary design.

**Ch.37,100 – 39,386 (N60 to Castlebar East Junction)**

Following the advertisement of the Emerging Preferred Route at Public Consultation No. 3 the Design Team investigated a number of issues in the section of the scheme between the N60 Junction and the N5 east of Castlebar. Firstly the design of the Keeloges / Doogary Road (L1711) was revised to provide a bridge over the proposed N5. This resulted in a much shorter length of local road requiring realignment which significantly reduced the impact on properties along the L1711.

In conjunction with the agricultural consultant the design was also modified to reduce the level of severance on a number of agricultural holdings.

The modifications to the Preferred Route are shown on See Figure 4.5 in Volume 3. All landowners affected by these modifications have been consulted with, by the Design team since Public Consultation No. 3.

**4.7 Public Information Days**

Following the adoption of the preferred route in March 2009 and the redefinition of the scheme with the termination at Turlough in early 2010 further development of the scheme was undertaken particularly at the tie-in at Turlough and at Allergan in Westport.

To inform the Public on the status of the N5 Westport to Turlough Road Project and on changes to the project since the last Public Consultation in December 2008, three Public Information days were held. The Public Information days were held on the 12th, 13th and 14th of June 2012 at the following locations.

- Westport: Westport Civic Office, 12th June 2012
- Turlough: Turlough House, 13th June 2012
- Castlebar: Macalla Hall, Lough Lannagh Holiday Village, 14th June 2012

The purpose of the public information exercise was to ensure that all concerned parties were presented with any changes which had occurred since the last public exhibition in 2008.

A Notice was sent to all affected landowners along the proposed route while a number of properties adjacent to the scheme but not affected by land acquisition received a flyer informing them of the exhibitions. The exhibitions were advertised on Mid-West Radio and a notice also appeared in the following local newspapers:
Attendees were requested to sign a register on arrival, handed an information brochure and could then view the displays of the proposed scheme. Besides larger scale colour mapping of the scheme a number of 3D animations of the junctions were available for the public to view to gain a better appreciation of the project at these locations. Staff, from the Mayo National Road Design Office and Roughan & O'Donovan - Faber Maunsell Alliance, was available to answer the public queries and to assist parties locating their properties or areas of concern.

In total 257 people attended the three days of exhibitions at the above venues while a further number viewed the exhibition which remained on display at the Mayo National Roads Design Office, for a period following the exhibitions.