



# Galway (Rathmorrissy) to Tuam Motorway

## Environmental Impact Statement Non-Technical Summary

November 2007



# **M17 Galway (Rathmorrissy) to Tuam**

## **Non-technical Summary**

### **Introduction**

- 1 The National Development Plan (2000 – 2006) and (2006 – 2013) both promote the establishment of an Atlantic Corridor in the West of Ireland as part of an integrated transport strategy for future sustainable development. The establishment of the Atlantic Corridor requires the upgrading of existing national roads including the N17.
- 2 Galway County Council is promoting the construction of a new motorway, the M17, which would replace the strategic function of the existing N17 between Galway and Tuam in support of the strategy. The proposal includes the introduction of a new motorway service area at the junction of the proposed motorway scheme, the N6 and the N18.
- 3 The proposed upgrading would involve the introduction of a new motorway running from a new grade - separated interchange 4km west of Athenry in the townland of Rathmorrissy. The interchange provides a link between the new N6, M17 and N18 and is included as part of the proposals for the N18 scheme. The proposed scheme provides for new slip roads between the interchange and the proposed M17 Galway to Tuam dual carriageway.
- 4 The motorway would extend for some 26km north of the interchange as far as the western edge of Tuam where it would terminate at a junction with the existing N17 and proposed M17 Tuam bypass at a new roundabout. In addition to the two terminal junctions there would be a grade-separated junction with the N63 at Annagh Hill.
- 5 The location and extent of the proposed motorway scheme is shown in Figure 1.

### **Environmental Impact Assessment**

- 6 The proposed motorway scheme has been subject to a process of Environmental Impact Assessment (EIA) in accordance with European Directives as transposed into Irish legislation. The findings of the EIA for the project have been reported in the M17 Galway (Rathmorrissy) – Tuam Environmental Impact Statement (EIS). This Non Technical Summary outlines the principal environmental impacts identified during the assessment and the predicted residual effects reported in the EIS taking the proposed mitigation into account.

### **Consultation**

- 7 A number of public consultations have been held during the planning and preliminary design of the proposed motorway scheme. These have assisted the County Council and their design team as they have established engineering and environmental constraints and opportunities within the study area. These have then been used to compare options for the proposed alignment of the motorway.
- 8 Consultations have also been held with statutory bodies, environmental agencies and landowners. This has ensured that information relating to the local environment and potential issues associated with the introduction of a motorway scheme have been informed by established knowledge of the area, its resources and assets

## **The Existing Environment**

- 9 The landform associated with the area, generally rises from the River Clare as it runs in a north-south direction to the east, across a limestone plain to gently undulating plateaus and local peaks at Knockroe and Corrafaireen. This landform is dissected in the north of the area by the Suileen, Grange and Abbert Rivers as they run east to west. Distinct, isolated, rounded limestone hills are located throughout the area.
- 10 It is a rural area dominated by pastoral farming and small-scale, irregular shaped fields which are grazed by sheep, cattle and occasionally horses. Lower lying peat bogs and wetland landscapes are located in the north of the area. Field boundaries consist of low level drystone walls. To the south the walls tend to be supplemented by hedgerows dominated by hawthorn and bramble. In places, the walls have been replaced with post and wire fencing.
- 11 Small, irregular deciduous and broadleaved woodland copses are scattered sparsely throughout the landscape. In contrast to these small areas of woodland, there are two large conifer plantations, one each at the northern and study ends of the proposed motorway corridor.
- 12 The result is a generally open landscape, which can be extensively viewed from the elevated plateau and nearby local peaks. Views from within the area are generally open and relatively extensive in the northern part of the area, becoming more intimate and enclosed as the field and vegetation pattern increases in complexity to the south.
- 13 The main areas of settlement are at Athenry, Tuam and Corrofin. Smaller settlements are scattered throughout the area, usually forming ribbon developments and clusters along secondary roads with increasing density near to Galway. Properties consist of scattered farm buildings and a mix of residential two-storey homes and dormer bungalows. Houses are generally well-maintained and externally painted in a range of pastel colours, particularly to the south, whereas farm holdings tend to be more traditionally styled.

## **The Proposed Motorway Scheme**

- 14 The motorway would link into a major interchange with a proposed improvement of the N6, and recently approved proposal for the N18 at Rathmorrissy at the southern end of the corridor. At the northern end of the corridor, it would tie into a new roundabout on the existing N17 west of Tuam. There would be a single intermediate junction at Annagh Hill. Here, the motorway would be in a deep cutting through a prominent local ridge. The junction would be formed by a single bridge with dumbbell roundabouts to each side and new sections of link road, which would provide access onto the existing N63 via new roundabouts to the west and east of the settlement. All these three junctions and the service area would be lit; the remainder of the motorway would not be lit.
- 15 Where the motorway crosses existing local roads between the principal junctions, continued access along the local roads would generally be provided for by bridges over the motorway or the local road. Open span bridges would carry the motorway over the Abbert and Grange Rivers; both rivers have recently been included in the Lough Corrib candidate Special Area of Conservation (cSAC), an internationally important nature conservation designation. Other local watercourses and drains in the northern part of the area, would be continued beneath the motorway in culverts of varying size.

- 16 Other significant areas of earthworks would be located where the motorway would cut through locally high ground at Sheeaunpark, and where high embankments and deep cuttings would be formed to provide for the passage of the motorway, either over or beneath local roads. At the northern end of the corridor, the motorway would be on low embankment as it would cross an area of cutover bog.
- 17 Road related drainage would be discharged to existing watercourses in the northern part of the corridor. In the southern part of the corridor, there are no existing watercourses available. Here, the drainage would be achieved by allowing the collected run-off to infiltrate the ground. There would be a combined total of 15 surface water and infiltration discharge points.
- 18 The drainage proposals recognise that the existing watercourses and an underlying limestone aquifer would be sensitive to potential contamination. This would relate to pollutants derived from vehicles using the motorway carried in road related run-off. Extensive sustainable drainage features (SuDs) have accordingly been included in the design. These include balancing and treatment ponds in advance of each discharge point, and a network of grass channels, swales, filter drains and infiltration trenches. These would control flow rates to maintain existing green field rates and intercept water borne pollutants.
- 19 Environmental barriers have been provided for in locations where the EIA has identified a need to consider reduction of potential noise associated with motorway traffic.
- 20 Measures focused on the safeguarding of animals and fish found within the area, include dedicated underpasses and design of the bridges and culverts to provide for passage by otters, badgers and fish. Other measures provide for pre-construction surveys and programming of works to minimise potential impacts on a wide range of fauna.
- 21 The service area would provide comprehensive facilities for users of the motorway and associated national roads. It would include re-fuelling for cars and heavy goods vehicles, a restaurant and café, a shop and toilets, picnicking facilities and parking for all categories of vehicle. The service area would be located immediately south east of the Rathmorrissy interchange, with access of a central roundabout to the interchange.
- 22 The proposals include a comprehensive landscape and planting strategy, with new woodland, scrub, hedgerows and open areas of tree planting and a mix of grassland types with semi-natural characteristics. The objective has been to establish a new planting structure along the motorway and framing the service area. This would help the integration of the motorway scheme as a whole into the local, landscape. The strategy and resultant proposals recognise the variations in openness and intimacy of the local landscape. They also seek a balance between essential screening in some locations and the retention of views over areas of attractive open landscape.

### **Environmental Impacts and Mitigation**

#### *Human Environment*

- 23 Potential impacts on the local population and the economics of local land use, would primarily relate to potential severance of communities by the motorway alignment, benefits to communities located along the existing N17 and implications for existing businesses associated with the existing road.

- 24 The assessment has concluded that there would be strategic economic benefit related to the economic objectives, which form part of the wider scheme objectives. It has concluded there would be local disbenefits to some existing businesses associated with the existing road network, particularly where traffic on the proposed motorway would no longer use existing local petrol stations. It has also recognised that the introduction of the proposed service area would provide a locally substantial source of new employment.
- 25 The assessment has concluded that the proposals to provide for continued access for all but a small number of existing local roads would avoid potentially significant impact. It has also concluded that where the few existing roads would be closed, alternatives in the form of existing roads or a new section of road would not prove significantly disruptive.

#### *Ecology*

- 26 The assessment has shown that the area is one in which the principal nature conservation interests relate to fauna, aquatic habitats and fish associated with the watercourses in the northern part of the corridor.
- 27 The proposed motorway would be bridged over the Abbert and Grange Rivers; watercourses included in the Lough Corrib cSAC and would encroach into the easternmost edge of the designated area at Cloonkeen. It would also marginally encroach into an area of degraded calcareous grassland at Caherateemore South; initial planning of the alignment ensured that the motorway would avoid a local area of limestone pavement, an Annex 1 Habitat under the EU Habitats Directive.
- 28 The surveys during the assessment identified badger, otter, a number of species of bat, and a range of birds typical of such agricultural areas. The rivers were found to support salmon, trout and lamprey.
- 29 The assessment concluded that with the proposed open span design for the river crossings, and in light of a marginal encroachment into the cSAC at Cloonkeen there would not be an impact on the integrity of the cSAC. It highlighted the need for a number of mitigation measures in addition to the design measures associated with river crossings. These include underpasses for badgers, ledges in culverts, fencing to exclude badgers, and programming to avoid impacts on birds, breeding badgers, and bats.
- 30 It was also concluded that the proposed planting and grassland would both compensate habitat loss and enhance the extent and diversity of habitats within the area.

#### *Watercourses and Groundwater*

- 31 Existing drainage of the area varies significantly in the northern and southern parts of the proposed motorway scheme corridor. In the north, the land drains to the two principal rivers and their tributaries via a network of ditches and drains. In the south, there are no such watercourses. Drainage of the land is primarily dependant on infiltration of surface water into the soil and ultimately the underlying aquifer within the limestone bedrock. Both are sensitive environmental resources, the rivers being included within the Lough Corrib cSAC and the limestone being classified as a major and highly vulnerable aquifer.
- 32 The proposed motorway scheme recognises these sensitivities. It provides for a combination of traditional piped drainage and a series of sustainable drainage measures. These would regulate flows of road related run-off to achieve discharge rates reflecting existing greenfield run-off. They would also ensure that pollutants associated with the road drainage would be intercepted prior to discharge. Where sections of the drainage

would be close to the underlying aquifer they would be sealed or filtered to prevent release of concentrations of the pollutants to the watercourses and groundwater.

- 33 The design of the two open span bridges and other culverts would be in accordance with guidelines published by the NRA and the requirements of the OPW. This would ensure that there would be minimal potential disturbance to the watercourse within the cSAC. The combination of these two approaches would ensure that the value of the watercourses and their fisheries interests would be appropriately safeguarded.

#### *Air Quality & Climate*

- 34 The relocation of existing traffic on the N17 to a new line to the east, would result in a reduction in concentrations of traffic related pollutants along the existing road. There would be a resultant improvement in local air quality for residents close to the road. It would result in potential increases in concentrations of these pollutants where the new motorway would be introduced close to properties currently not associated with such flows of traffic.
- 35 The EIA has assessed the predicted changes in concentrations of these traffic related pollutants and their potential implications for human health. The assessment has been based on limit values for the pollutants adopted by the EU and within Ireland. This has demonstrated that there would be increases in concentrations of the recognised indicator pollutants, nitrogen dioxide and fine and coarse particulates close to the proposed motorway alignment. These would be slight and would result in overall concentrations well within the defined limit values.
- 36 It has further demonstrated that the proposed motorway scheme would not significantly affect Ireland's international commitments to reduction and control of greenhouse gases.

#### *Noise & Vibration*

- 37 In common with air quality, the relocation of existing traffic on the N17 to a new line to the east would result in a reduction in traffic related noise along the existing road corridor, and an increase in noise for some properties close to the proposed motorway.
- 38 The assessment has been based on a prediction of the resultant noise levels for properties that would be close to the proposed motorway, and comparison of these with a design goal of 60 decibels adopted for new national road schemes. The assessment demonstrated that there would be a number of locations in excess of the design goal. Mitigation has accordingly been proposed in the form of environmental barriers along the side of the proposed motorway, to reduce the potential levels in these locations. Re-assessment of the predicted levels with these measures in place has indicated that the affected properties would not exceed the goal.
- 39 The assessment has concluded that the proximity of the proposed motorway to potential sensitive buildings and structures, and construction of the new road to modern standards, would not result in potential impacts associated with traffic related vibration.

#### *Landscape*

- 40 The alignment of a modern motorway through a pastoral landscape of generally ordinary quality would inevitably result in discernible impact on the pattern and perception of the landscape of the area. This would particularly be the case where there are localised areas of higher quality landscape. The alignment of the motorway has been carefully planned to ensure that the impact would be minimised, whilst providing for essential design

requirements appropriate to the design speed of the road and retention of access along the existing local road network. Existing planting would be lost and field patterns would be severed. Cuttings and embankments would appear in and on the landform. Local features, such as walls would be lost. The traffic associated with the motorway would appear in views, which are currently not significantly affected by significant flows of traffic.

- 41 The EIA has identified principal areas of sensitivity within the landscape. These relate to an open area of landscape to the west of Laragh More, the proposed cuttings through ridges at Sheeaunpark and Annagh Hill, where embankments and cuttings would provide for passage of local roads and at the two principal river crossings. There would also be an impact on the Demesne of Cloonkeen North House, where the alignment would sever part of the demesne lands.
- 42 Resultant visual impacts on residents would be generally most marked where properties are associated with crossings of existing local roads, where farmsteads are located in open areas of the local landscape and where the motorway would run to the west of Laragh More.
- 43 Mitigation in addition to that associated with the alignment of the proposed motorway has been proposed in the form of woodland, scrub and hedgerow planting. This would respect the existing areas of intimate and open landscape along the proposed corridor. Mass planting has been proposed to soften the impact of the larger scale earthworks at Sheeaunpark and Annagh Hill. In some instances, planting has been specifically proposed to screen views from properties which would potentially be subject to significant visual impact.
- 44 Taking the proposed mitigation into account, the EIA has concluded that the residual effects on much of the local landscape would be generally slight and adverse. There would be moderately significant impacts at Sheeaunpark, Laragh More, Annagh Hill and the Demesne of Cloonkeen North House.

#### *Archaeology & Cultural Heritage*

- 45 The assessment has identified a total of 58 recorded archaeological sites potentially associated with the proposed motorway scheme. Preliminary consideration of the detailed alignment of the proposed motorway and siting of the service area has ensured that none would be directly impacted by the proposed motorway scheme. The closest recorded archaeological site, a partially destroyed ringfort, is within 5m of the edge of the proposed carriageways. Five additional recorded archaeological sites; two enclosures, a possible crannóg, a ringfort and a well lie within 50m of the proposed motorway boundary. A previously unrecorded souterrain lies 30m beyond the proposed boundary.
- 46 It has been established that the proposed motorway would impact on a number of fields identified as Areas of Archaeological Potential (AAP). These fields may contain archaeological features, which remain buried.
- 47 Mitigation for known features and AAP has been identified and agreed with the County Council archaeologist, in accordance with statutory requirements in the form of further field investigations and recording procedures.

#### *Architectural Heritage*

- 48 The EIA has demonstrated there would be no significant impacts on Architectural Heritage interests. There would be moderate to slight impact on a small number of

features/structures, all of which have been assessed as being of local or “record-only” value.

#### *Land Use and Utilities*

- 49 Following discussions with owners and operators of utilities within the area associated with the proposed motorway scheme, appropriate measures for the diversion continuation of relevant services have been identified.
- 50 It would be necessary to demolish one existing residential property.
- 51 There would inevitably be impacts of varying significance for the many agricultural holdings, which are active within the area and substantially frame the land use pattern of the area. Loss of land to the proposed motorway scheme and severance of holdings would, in some instances, prove significant. The assessment has, however, concluded that there would not be a profound impact for any of the active agricultural holdings, such that it would not be possible to continue activity. Some would have to consider changes in existing management and operation,
- 52 Mitigation has been proposed in the form of access tracks and underpasses. Provision would also be made for intercepting and continuing essential services, which would be severed by the proposed works.
- 53 Whilst the impacts would be moderate to slight for the majority some 124 holdings identified, there would be a significant residual effect for 19 of the holdings.
- 54 The assessment has considered the implications for sustainable land use in keeping with national land use policy. It has concluded the proposed scheme would contribute to the securing of a strong and more equitably dispersed economic prosperity for the future, whilst recognising and safeguarding important environmental resources.

#### *Disruption Due to Construction*

- 55 Construction of the proposed motorway and service area would involve disturbance and temporary impacts for residents, landowners and land use during an anticipated three year construction period. There would be disturbance to access, impacts associated with noise, dust and visual impact as earthworks proceed and structures are erected, drainage is installed and road surfaces and parking areas are completed.
- 56 There would be the potential for impact on fauna, local watercourses and groundwater, where construction activities are required close to these interests.
- 57 There would be the potential for disturbance to communities and property outside of the proposed motorway scheme corridor, as materials required for the construction are imported and materials unsuitable for use on site are disposed to approved locations off-site.
- 58 Mitigation of construction related impacts would be addressed through a wide range of project specific, measures related to statutory obligations and best practice measures. These would include the implementation of a traffic management plan, a waste management plan and noise and dust minimisation plans. It would also include procedures for handling and storage of materials and working in close proximity to sensitive locations, such as watercourses and habitats supporting local fauna.
- 59 These measures and plans would be formalised in an Environmental Operating Plan (EOP) for the contract. This would be prepared by the contractor and agreed with Galway



County Council and statutory bodies prior to commencement of the works. The plan would include procedures for monitoring the effectiveness of the measures by way of regular internal auditing by the contractor and external auditing by the client's agent.

- 60 Taking the mitigation measures and monitoring requirements into account, the assessment has concluded that construction of the proposed motorway scheme would not result in significant residual effects for residents, landowners and other environmental interest associated with the area. It has also noted that, in light of the length of the corridor, the works would be likely to be completed in sections and that disturbance in any one location would be unlikely to occur for the anticipated three- year construction period.