

## **Appendix 3G**

### **Landscape and Visual**



# Proposed N5 Strategic Corridor – Route Selection Assessment

## Landscape and Visual Impact Assessment

### Draft Final Route Corridor Selection Report

Prepared for

Roscommon National Roads Design Office



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## 1. Non-Technical Summary

Roscommon NRDO has proposed a number of alternative routes for the N5 Strategic Corridor realignment between Ballaghadereen and Strokestown. The NRDO commenced initially with four route options which were presented to the design team at the very first project workshop. These initial options were expanded as part of an iterative process to a total of seven route corridor options within the overall Study Area and were assessed based on engineering, environmental and economic criteria to determine the preferred route corridor. In the western end (west of Frenchpark), just one of the corridors passes to the north of the N5. In the middle section (between Frenchpark and Ardakillin Lough), all but one of the corridors passes to the north of the N5 and in the eastern section (near Strokestown) just two options pass to the north of the N5. The corridors tend meander north and south of the N5, therefore.

The overall character of the landscape is gently undulating and relatively low lying with the highest ground found at Rathcroghan, Mullaghnashee and a series of small hills northwest of Strokestown. The landscape comprises of a mix of landcover types, including lakes and turloughs, marginal farmland, boglands and large commercial conifer forests. The Constraints Report has highlighted sensitive areas at Fairymount Hill, Rathcroghan Plateau, the bog areas at Bellangare and Frenchpark as well as the lakes and turloughs located southwest and northeast of Strokestown. The recently drafted Landscape Character Assessment of County Roscommon has highlighted the Rathcroghan Plateau as being of Exceptional value and Castlereagh Bogland Basin as of High value.

Assessment of visual and landscape impact entailed desk studies, workshop meetings involving all members of the design team as well as a number of field trips. Key criteria assessed were (1) proximity of the centre line to houses, (2) the length of each route and (3) encroachment upon specific landscape features including Rathcroghan, nature designated areas, lakes and Strokestown House.

The most preferred route from a visual and landscape impact perspective is Corridor 1A, chosen for the following reasons:

- It is likely to result in the lowest overall level of visual impact for local residents based on the distance of centre line to addresses provided by Roscommon NRDO and sourced from the GeoDirectory (An Post / Ordnance Survey Ireland).
- The parkland landscape of Frenchpark Demesne is avoided and it passes to the south and out of view from Frenchpark village.
- The corridor does not pass through any nature designated areas.
- It will likely have an imperceptible impact on the Rathcroghan constraint area.
- The open grassland and stonewall landscape located south of the N5 and north of Castleplunket is avoided.
- This corridor will not compromise the lakeland constraints area at Fin Lough and Cloonfree Lough.

Careful design of the final route will be required in a number of places to minimise landscape and visual impact, including at Cashel, Mullenduff, Killeen East and at Strokestown House and Strokestown golf club.

## **2. Introduction**

### **2.1 Scope and Objectives**

MosArt was commissioned by the National Roads Design Office in Roscommon to identify potential route corridors and assess the visual and landscape impact of those proposed for the N5 realignment in County Roscommon. The initial scheme proposed by NRDO Roscommon involved four route corridors. This number of options increased to seven following early assessment of the scheme involving helicopter fly-over by the various consultants as well as during the iterative consultation process including three workshop meetings. This Draft Final Route Corridor Selection Report will be used to identify a Preferred Route for the scheme reflecting landscape and visual impact concerns. The assessment by MosArt will be combined with studies by other consultants including those dealing with cultural heritage, noise, property values, flora and fauna. This report focuses solely on predicted visual and landscape impact and does not comment upon other possible impacts such as those listed above. The overall objective is to present a comparative overview of the likely impact of the options.

### **2.2 Landscape Description**

The landscape context for the proposed N5 Strategic Corridor is described below in relation to Character, Image and Sensitivity. Landscape character in this report concerns the physical elements of landform and land cover, images deals with how the landscape is generally perceived and appreciated and sensitivity focuses upon the tolerance to accept change.

This study is taking place at the same time as Roscommon County Council is revising their County Development Plan (2008 – 2012). As part of this process, MosArt were commissioned by Roscommon County Council to prepare a landscape character assessment for the county, including the identification of landscape character types, landscape character areas and landscape values. The Study Area for the N5 Strategic Corridor options passes through 10 of the 36 landscape character areas, as listed in Table 1 below (the areas are listed below running from the west of the scheme to the east of the scheme) and depicted in Figure 1. Also noted in Table 1 is the Landscape

Value<sup>1</sup> of each of the Landscape Character Areas, rated on a scale from Exceptional, Very High, High and Moderate.

**Table 1: Landscape Character Areas Traversed by the Proposed N5 Realignment Study Area**

<b>Ref. no.</b>	<b>Landscape Character Area</b>	<b>Landscape Value</b>
22	Cloona Lough and Lung River Bogland Basin	Moderate
21	Mullaghnashee Wet Farmland Basin	Moderate
27	Castlerea Bogland Basin	High
20	Breedoge Bogland Basin	Moderate
28	Tulsk and Rathcroghan Plateau	Exceptional
19	Elphin Drumlins	Moderate
30	Oran Undulating Open Farmland	Moderate
29	Strokestown Drumlin and Turlough Belt	Moderate
4	Kilglass Drumlin Lakelands	Very High Value
31	Scramoge River basin	Moderate

Referring to Table 1 above, seven of the landscape character areas are classified as of Moderate value, one is of High Value (Castlerea Bogland Basin), one is of Very High Value (Kilglass Drumlin Lakelands) and the remaining area, Tulsk and Rathcroghan Plateau, is of Exceptional value. Special attention in this assessment will be directed towards these three most highly valued landscapes and the degree of impact arising in these areas from the various route corridors will have a bearing on selecting the preferred route corridor.

### **2.2.1 Landscape Character**

The Study Area encompassing the proposed N5 realignment is located in northwest Roscommon between the towns of Ballaghaderreen (in the west) and Strokestown (in the east). The landscape here is gently undulating and relatively low lying. Elevations range between 50m and 180m ASL, with the highest ground found at Rathcroghan (between Bellangare and Tulsk), Mullaghnashee (southeast of Ballaghaderreen) and a series of small hills northwest of Strokestown at Greywood Hill.

The landscape comprises of a mix of landcover types, including lakes (Plate 1), marginal farmland (Plate 2), raised bogs (Plate 3) and large commercial conifer forests (Plate 4). There is a broad diversity of character types to be found in the study area, therefore.

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<sup>1</sup> Landscape value can be rated using a mix of criteria that combine to make an area special, including distinctiveness, quality, rarity and representativeness.



# Proposed Route Corridors for the N5 Realignment

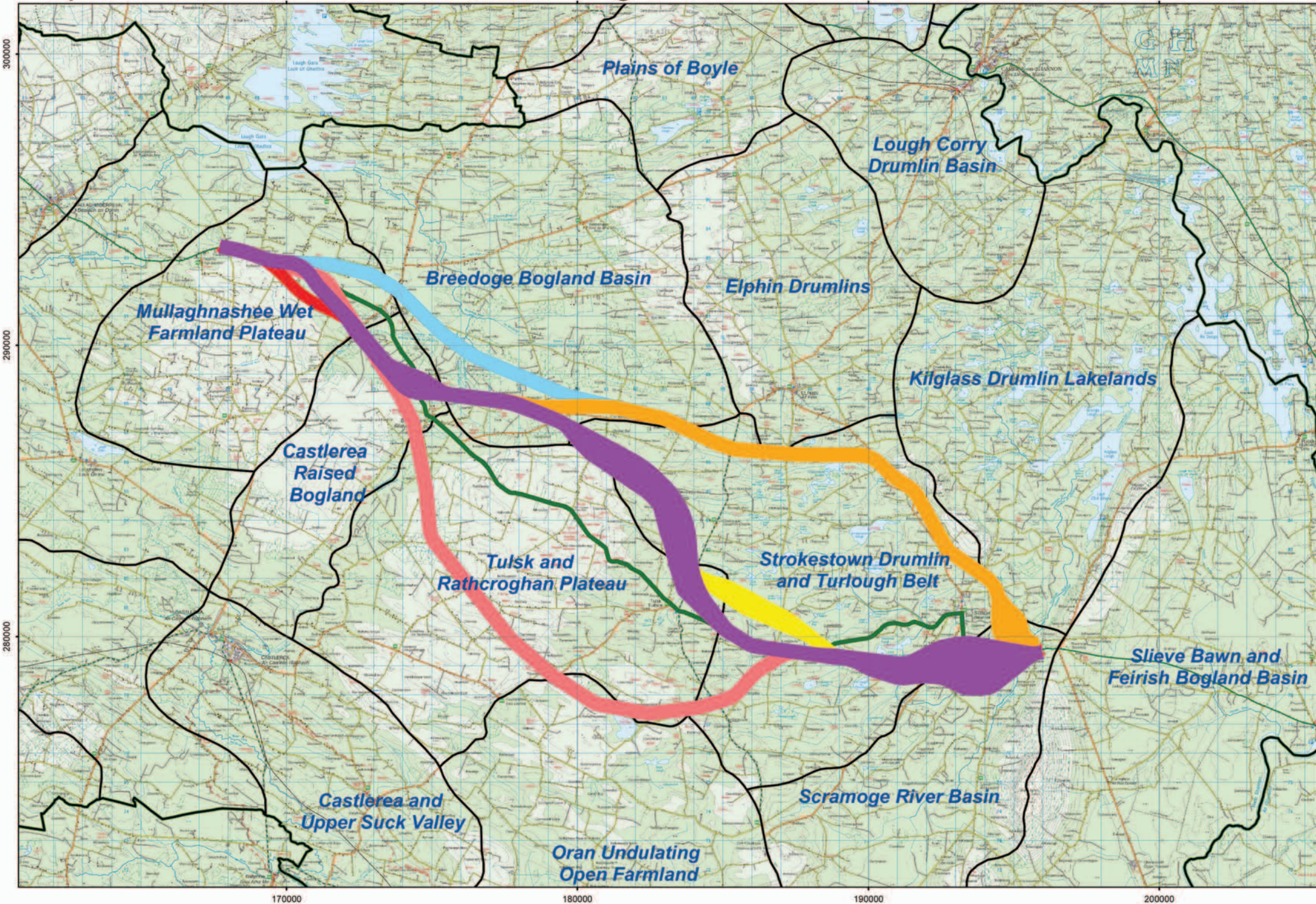




Plate 1: Aerial View of Lakelands



Plate 2: Aerial View of Rolling Farmland



Plate 3: Aerial View of Raised Bogs



Plate 4: Aerial View of Commercial Conifer Forest

### 2.2.2 Landscape Image

The landscape in the Study Area would not be especially renowned on a national or international level for its aesthetic qualities in comparison to such locations as the Burren, Connemara, west Kerry peninsulas and so on. The attraction here is more subtle and principally based on cultural heritage rather than striking physical features. That is not to say that the landscape is without features of distinction and / or importance, however, as the following description conveys:

- **Rathcroghan**, near Tulsk, is Europe's best preserved and largest Celtic Royal Site. It is the location of the burial place of the Kings of Ireland and Connaught. The extent of this site is being defined by the Archaeological Consultants and is described in their report. There are more than 20 ring forts, burial mounds and megalithic tombs, principally Relig na Ri (burial ground of the kings), Rath na dTarbh (fort of the bulls) and Rathbeg. It is now widely accepted<sup>2</sup> that assessment of historical landscape character is a core component of the broader landscape characterisation process and therefore the archaeological and heritage value of Rathcroghan is of direct relevance to assessment of landscape impact of the proposed N5 realignment.
- **Strokestown House**, restored 18<sup>th</sup> Century mansion and comprising the Famine Museum and 4 acre walled pleasure garden.
- The home of **Douglas Hyde**, father of the Gaelic League and elected first President of Ireland in 1938, is located at Ratra House, on the Frenchpark Road in Castlerea. His burial place is in a church on the southern side of the existing N5 near Frenchpark Demesne.
- **Percy French**, engineer, songwriter and journalist, was born in Cloonequin, about 2km northwest of Tulsk village.
- **Frenchpark Demesne**, located northwest of Frenchpark, comprising enclosed stone wall parkland landscape with walled gardens (abandoned) and open stone wall landscape.
- **Distinctive open limestone stone wall landscape**, located south of the N5 between Castleplunket and Tulsk.
- **Drumlin lakeland**, located southwest of Strokestown south of the N5.
- **Mid-Roscommon Drive** – a recommended tourist route connecting Ballaghadereen, Rathcroghan and Cruachan Ai, Tulsk, Elphin and Strokestown and further beyond as far as Roscommon town and Castlerea.
- **Coarse and pike angling**, a very popular tourist activity based on Finlough and Strokestown lakes fishery.

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<sup>2</sup> Landscape Character Assessment in Ireland: Baseline Audit and Evaluation. Final Report to the Heritage Council. Julie Martin Associates and Alison Farmer Associates. March 2006.

### 2.2.3 Landscape Sensitivity

Landscape Sensitivity refers to the inherent sensitivity to change of the landscape resource, in terms of both its character as a whole and its individual elements as well as the visual sensitivity of the landscape in terms of views, visibility, number and nature of viewers and scope to mitigate visual impact. The Study Area would generally be classified as low in terms of sensitivity when considering only the visual or purely aesthetic character of the landscape. However, if the understanding of landscape is broadened to also include cultural heritage, as indeed it should be, then the cluster of archaeological features at **Rathcroghan** is indeed highly sensitive (this landscape is also classified to be of Exceptional value in the draft landscape characterisation study being prepared for Roscommon County Council). Other features which are deemed to be sensitive include those listed under Landscape Image above, including especially **Strokestown House**.

In terms of landscape sensitivity, therefore, MosArt would conclude that while the Study Area as a whole might be of low sensitivity, there are specific areas within it that are highly sensitive and that will have a significant bearing on the selection of the preferred route corridor from a visual and landscape perspective.

### 2.3 Landscape Planning Policy

The current Roscommon County Development Plan (2002) includes a list of Areas of High Amenity (Schedule 10) as well as Views and Prospects (Schedule 11). MosArt has reviewed these and concludes that the closest area to the N5 Strategic Corridor, the **Kilglass Lakes Area** (described as a 'lake-studded landscape of high visual quality' with the Policy being to 'Protect the amenity value of the area') will be unaffected by the proposed scheme.

In the landscape character assessment study carried out for Roscommon County Council by MosArt a number of additional locations were proposed as potential scenic routes and scenic views, as listed below. While these locations have not been formally adopted as designated locations by the Council, MosArt nevertheless took them into consideration in their assessment of likely impacts.

- Fairymount
- Rathcroghan Cross Roads (two locations)
- Carns

## **3. Methods**

### **3.1 Distinction between Visual Impact and Landscape Impact**

A distinction is made by the Landscape Consultants between the terms Visual Impact and Landscape Impact. Visual Impact in this study concerns the impact on views from houses and other sensitive receptor locations within the viewshed or visual catchment of the proposed road. The criteria used in the assessment of visual impact are as follows:

- Intrusion, concerning the sense of visual disruption brought about by either the road or resulting traffic.
- Obstruction, implying the blocking of a view (whether fully, partially or intermittently) by either the road and associated structures or resulting traffic.

Landscape Impact, on the other hand, examines the impact of the scheme in a more macro sense and dealing with the broader implications for landscape character and quality.

### **3.2 Study Approach**

An outline of the methodology used to determine the level of visual and landscape impact is provided below:

- Desk study review of mapping and aerial photography and the Roscommon County Development Plan.
- Field assessment in a fly over by helicopter to get a broad overview of the Study Area and each of different route corridors.
- Collation of data for the purposes of making a semi-quantified initial comparison of different routes (Table 2). This principally involved counting the number of houses within different distance bands of the centreline of each route corridor.
- Field work by two qualified Landscape Architects assessing the likely impact of the routes on-the-ground. This work also examined the opportunity for mitigation of impact as provided by screening with vegetation. Special attention in this regard was directed towards the western and eastern N5 tie-ins as this is likely to have a significant influence on selection of the preferred route corridor.

### **3.3 Assessing Significance and Quality of Impact**

The classification and criteria listed below are used by the Landscape Consultants as a basis to determine the level of significance of impact of the route corridors. The five-level classification used is drawn from the EPA's Guidelines on the Information to be Contained in Environmental Impact Statements as depicted below.

Level of Impact	Description
Imperceptible	An impact capable of measurement but without noticeable consequences.
Slight	An impact which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An impact that changes the character of the environment in a manner that is consistent with existing and emerging trends.
Significant	An impact, which by its character, magnitude duration or intensity alters a sensitive aspect of the environment.
Profound	An impact which obliterates sensitive characteristics.

### Quality of Impact

Visual impact of road schemes will typically result in an adverse (negative) impact. However, there may be situations where impact of the proposed road could be positive. Such an instance might arise where an existing road located very close to a house would be closed or moved further away following implementation of the new scheme.

### Significance of Impact and the Role of Mitigation Measures

The level of impact described in the main body of this report is concerned with that which would arise prior to the implementation of mitigation measures. As might be expected, the level of initial impact would be reduced in many instances once mitigation measures have been put in place and once they start to mature (in the case of screening using trees, for example).

## 3.4 Direct and Indirect Impacts

This report deals principally with direct visual and landscape impacts as likely to be experienced on-the-ground. Indirect impacts are defined by the EPA as those which "*are caused by the interaction of effects, or by associated or off-site developments*". The NRA provides a fuller interpretation of Indirect Impacts as those "*which are not a direct result of the project, possibly produced some distance away from the project or as a result of a complex pathway ... Many indirect impacts are related to the construction process with little information available during the preparation of an EIS*".

Indirect impacts relating to visual and landscape issues arising from road schemes such as the N5 Strategic Corridor might include the following:

- Shifting of existing utilities such as electricity or telephone poles for the purpose of construction.
- Traffic flows of existing roads can change with the introduction of a new road, perhaps increasing visual intrusion for local residents.
- Possible alteration of drainage pattern arising from substantial areas of cut or fill could lead to subtle changes in landcover.

- Sound barriers, if required, may block or curtail views.

### 3.5 Consideration of Constraints Report

The N5 Strategic Corridor Constraints Study (NRDO Roscommon, December 2006) includes a section on Geology and Landscape. Section 13.5 deals with Landscape and Aesthetics under the headings of landforms, landcover and sensitivity.

The primary landscape constraints of the western part of the Study Area include Fairymount Hill, Rathcroghan Plateau and the bog areas at Bellangare and Frenchpark (Cloonshanville Bog). The report highlights that *"these areas will require particular attention during the identification of route option corridors to ensure that alignments sympathetic to the landscape can be developed"*.

The major landscape constraints in the eastern section of the Study Area are represented by the lakes and turloughs. The report highlights that *"these are sensitive locations and care in the development of route corridor options will allow this constraint to be minimised"*.

### 3.6 Description of Scheme

Roscommon National Roads Design Office is proposing a realignment of the existing N5 between Ballaghaderreen and Strokestown. The scheme measures between 33km and 35.5km in length and runs in a northwest – southeast direction. The following seven options are proposed for assessment:

- Corridor 1-Cyan, 33.7km long, the most northern of all corridors;
- Corridor 1a-Orange, 34.2 long, sharing a section of Corridor 2 in the west and following Corridor 1 in the east;
- Corridor 2-Purple, 34.6km long, located between the existing N5 and Corridor 1;
- Corridor 2a-Red, 35.0km long, overlapping with much of Corridor 2 varying however at the western end;
- Corridor 2b-Yellow, 34.5km long, running for the most part along Corridor 2 with a slight variation towards the western third.
- Corridor 3-Green, 35.7km long, comprising of the existing N5; and
- Corridor 4-Pink, 38.0km long, the most southern of all corridors.

It should be noted that a relatively wide tie-in zone has been identified for all corridors except Corridor1 at Strokestown. This has been provided in order allow variation in the exact location for the eastern end of the route.



## 4. Sources

The principle analysis presented in this report is based on desk studies carried out by one of the MosArt Principals with 13 years experience in landscape and visual impact assessment. The analysis is also informed by a helicopter fly-over taken with another member of staff at MosArt along with an Engineer from the Roscommon NRDO. Lastly, two experienced Landscape Architects assessed each of the options on-the-ground in January 2007 to get a detailed impression of likely impacts.

Other desk-study sources that were used include the references that are listed in the Bibliography section towards the end of this report. Lastly, NRDO Roscommon provided a copy of the Corine landcover data for the Study Area which illustrates the extent of vegetation cover and the visual absorption capacity of the landscape.

## 5. Impact Assessment

### 5.1 Desk Study Appraisal

A semi-quantified comparison of each corridor alternative is presented in this section in order to assist in the first stage of identifying a preferred route for the scheme. Field work was required following this desk study in order to assist in deciding finally which corridor would be preferred from a landscape perspective (Section 5.2 below).

Each of the route corridors is described in relation to the indicators listed below (Table 2), arranged under the headings of (1) Visual impact and (2) Landscape impact:

- (1) Visual Impact
  - Local Residents
    - Number of addresses located within the proposed corridor
    - Number of addresses in a 0-50m band of the centre line
    - Number of addresses in a 50-100m band of centre line
    - Number of addresses in a 100-200m band of centre line
    - Number of addresses in a 200-300m band of centre line
    - Number of addresses between 300m of centre line and the corridor edge
- (2) Landscape Impact
  - Structures
    - Length
  - Impact Upon Specific Landscape Features
    - Impact upon Rathcroghan Conservation Area
    - Impact upon cSAC and SPA
    - Impact upon NHA
    - Impact upon lakelands

#### 5.1.1 Local Residents

The Landscape Assessors were given information derived from the Geo-Directory which provides an accurate and up-to-date record of all addresses<sup>3</sup> in rural Ireland. MosArt used this information to ascertain how many houses are located in each of the corridor bands as described above. All other things being equal, the closer a house is to a road, the higher might be the level of adverse visual impact.

Table 2 quantifies the amount of buildings in each of the corridor bands. The overall conclusions from this analysis are as follows:

- When the total number of houses within each corridor is considered, Corridor 1A-Orange passes close to the least number of houses (218 no.) compared to the other

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<sup>3</sup> While the Geo-Directory records all 'addresses' which could include business premises, for example, in reality the vast majority of such addresses are in fact houses.

options. The second preference in this regard would be Corridor 1-Cyan, with 259 houses within the corridor. The corridor with the most houses is unquestionably Corridor 3 (1,064 no.).

- When one considers those houses that are most close to the centre line of the routes (ie. within 0m to 50m of centre line), Corridor 1-Cyan would be the most preferred (27 houses). Corridor 1A-Orange comes a very close second in this respect with 30 houses located within 50m of the proposed centre line. As might be expected, Corridor 3-Green has by far the most houses within 50m of the proposed centre line (488 no.) At this early stage in the assessment, it would appear that Corridor3-Green would likely create the highest level of adverse visual impact. Corridor 1-Cyan and Corridor 1A-Orange would appear to create the lowest visual impact, on the other hand, with very little to differentiate between them.
- The next closest band to the proposed centre line (50-100m) produces a similar result to that described above wherein Corridor 1-Cyan and Corridor 1A-Orange pass close to a lower number of houses than each of the other corridors.
- In the band 100m to 200m, Corridor 4-Pink potentially affects fewer houses than any of the other corridors. In the band 200m to 300m Corridor 2-Purple potentially affects the least number of houses (though there is little difference between this and Corridor 1A-Orange). In the furthest band (300m to edge) Corridor 1-Cyan and Corridor 1A-Orange potentially affect far fewer houses than any other corridor.
- **The most preferred routes considering likely visual impact, therefore, are Corridors 1-Cyan and Corridor 1A-Orange. The least preferred route with regards to visual impact is Corridor 3-Green. The other options would be somewhere in between the most and least preferred.**

Table 2: Draft Comparative Assessment of the N5 Strategic Corridor Options According to Likely Visual and Landscape Impact

Assessment Criteria	Assessment Factor	CORRIDOR 1-CYAN	CORRIDOR 1A-ORANGE	CORRIDOR 2-PURPLE	CORRIDOR 2A-RED	CORRIDOR 2B-YELLOW	CORRIDOR 3-GREEN	CORRIDOR 4-PINK
<b>Local Residents</b>	Total no. of addresses located within the proposed corridor	259	218	301	302	336	1064	281
	No. of addresses 0m to 50m	27	30	39	34	34	488	48
	No. of addresses 50m to 100m	30	33	42	40	38	179	42
	No. of addresses 100m to 200m	87	77	79	78	78	245	65
	No. of addresses 200m to 300m	111	74	72	76	78	152	87
	No. of addresses 300m to edge	4	4	69	74	108	-	39
<b>Structures</b>	Length (km)	33.7	34.2	34.6	35.0	34.5	35.7	38.0
<b>Encroachment upon Specific</b>	Length of corridor within Rathcroghan Conservation Area	0km	0km	1.0km	1.0km	1.0km	4.2km	0.8km
<b>Landscape Features</b>	Length of corridor within Rathcroghan Core Area (NUIG)	0km	0km	0km	0km	0km	3.6km	0km
	Length of route through cSAC / SPA	1.6km	0km	0km	0km	0km	0km	.5km
	Length of route through NHA	0km	0km	0km	0km	0km	0km	2.6km
	Number of lakes within 100m of corridor	1	1	3	3	2	1	3
	Proximity to Strokestown House	.6km	.6km	.8km	.8km	.8km	.3km	.8km

### 5.1.2 Length

Longer routes might be expected to have potentially higher impact upon landscape than shorter ones. The difference between the shortest (Corridor 1) and longest option (Corridor 4) is 4.3km and, thus, could be significant.

The preferred corridor considering length of route in isolation of all other criteria would, therefore, be Corridor 1, with the least preferred being Corridor 4.

### 5.1.3 Impact Upon Specific Landscape Features

#### 5.1.3.1 Length of Corridor within Rathcroghan Conservation Area

The Rathcroghan Plateau is regarded as highly sensitive in this assessment. Routes which pass through this area, or very close to it, might be expected to give rise to higher adverse impacts.

Two zones have been identified at Rathcroghan, namely the Rathcroghan Conservation Area and the Rathcroghan Core Area (NUIG). Referring to the results in Table 2 above an order of preference is provided below commencing with the most preferred and ending with the least preferred:

- Corridor 1-Cyan and Corridor 1A-Orange
- Corridor 4-Pink
- Corridor 2-Purple, Corridor 2A-Red and Corridor 2B-Yellow
- Corridor 3-Green

#### 5.1.3.2 Length of Corridor within cSAC / SPA

Landscapes designated as cSAC or SPA tend to be higher in terms of aesthetic sensitivity due to their inherent sense of the naturalistic. The longer the route through such zones, therefore, the higher generally speaking will be landscape impact.

Just two of the corridors pass through a cSAC or SPA, namely Corridor 1 and Corridor 4. These corridors would thus give rise to a higher impact than the others. The length of Corridor 4 located in a cSAC or SPA is considerably shorter than that of Corridor 1. However, the full width of that specific section of Corridor 4 is located within a cSAC or SPA, whereas in the case of Corridor 1 part of the corridor skirts outside the nature designated area and thus it might be possible to design the horizontal alignment to avoid the designated area.

The most preferred routes considering this aspect of the assessment are (equally) Corridor 1A-Orange, Corridor 2-Purple, Corridor 2a-Red, Corridor 2b-Yellow and Corridor 3-green.

#### **5.1.3.3 Length of Corridor within NHA**

Landscapes designated as NHA's tend to be higher in terms of aesthetic sensitivity due to their inherent sense of the naturalistic. The longer the route through such zones, therefore, the higher generally speaking will be landscape impact.

Just one of the corridors passes through a NHA, namely Corridor 4. This corridor would thus give rise to a higher impact than the others.

#### **5.1.3.4 Number of Lakes Close to the Proposed Corridor**

The presence of lakes in any landscape tends to increase the level of aesthetic quality. The more lakes which come within the visual catchment of any given corridor (in this case taken as within 100m of any lake), therefore, the higher will be landscape impact.

The corridors are listed below in order of preference in regards to likely impact upon lakes, commencing with the most preferred):

- Corridor 1-Cyan, Corridor 1A-Orange and Corridor 3-Green (1 lake each)
- Corridor 2B-Yellow (2 lakes)
- Corridor 2-Purple, Corridor 2A-Red and Corridor 4-Pink (3 lakes each)

The most preferred routes considering this aspect of the assessment are (equally) Corridor 1-Cyan and Corridor 1A-Orange and Corridor 3-Green.

#### **5.1.3.5 Proximity to Strokestown House**

Strokestown House has been identified earlier as a major feature of attraction within the study area. The closer any of the schemes go to this feature, the higher might be the level of adverse landscape.

Corridor 3 passes closest to the house, followed by Corridor 1-cyan and Corridor 1A-Orange with Corridor 2-purple, Corridor 2A-Red and Corridor 2B-Yellow passing the furthest away. None of the corridors would be visible from within the walled garden due to the screening provided by mature trees.

The least preferred options considering just this specific location, therefore, are Corridors 1-Cyan and 1A-Orange.

## 5.2 Field Work Appraisal

Appraisal of the different route options in-the-field is very important in the process of selecting a preferred route. In this regard, special attention was devoted to the western (denoted 'W' below) and eastern (denoted 'E' below) N5 connections as they have a very strong influence on whether the northern corridors or southern corridors are more preferred. A description of likely impacts (both visual and landscape) is presented below, along with photographs for the purposes of illustration.

### 5.2.1 Western N5 Connection

Field work concentrated on some 13 locations (Figure 2) covering each of the corridors in order to ascertain the likely landscape and visual impact of each option. A short discussion of likely impacts in each zone is provided below, highlighting key issues in **red text**. A conclusion is provided at the end of this section regarding selection of a preferred route corridor.

➤ Zone W1

There are very few houses at this location. **Northern Corridors marginally preferred.**

➤ Zone W2

Corridor 3 and Corridor 4 least preferred due to proximity to Douglas Hyde Visitor Centre (Plate 5). **Corridor 2A passes furthest away from the centre and therefore would likely be most preferred.** This route would pass on higher ground, however, and might require some degree of cutting. Corridor 1 is preferred with regards to visual impact from private houses.

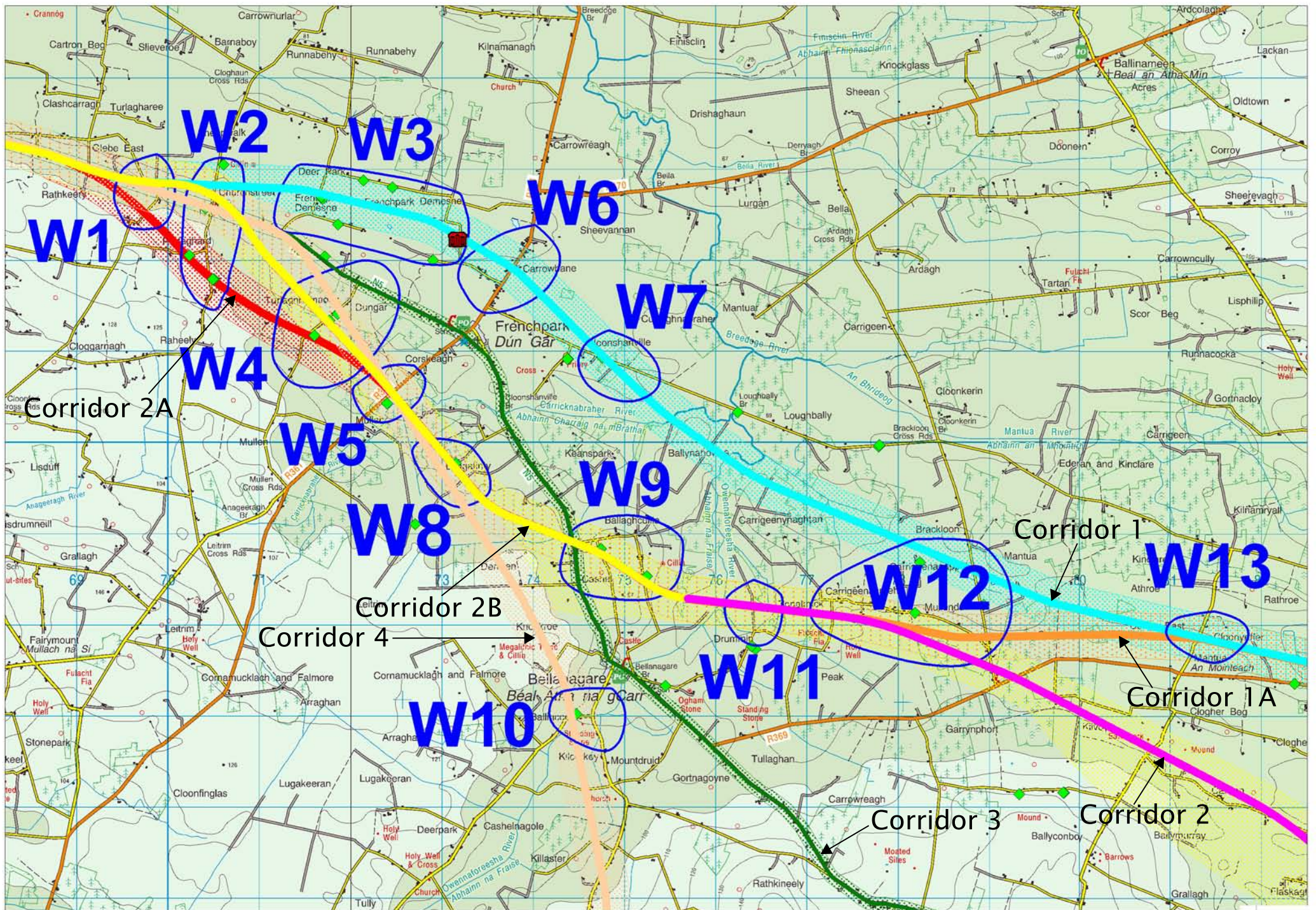


Figure 2: Locations Assessed Near the Western N5 Connection





**Plate 5: Statue of Douglas Hyde**

➤ Zone W3

Corridor 1 passes through Frenchpark Demesne (Plate 6), a flat open landscape with a strong character comprising geometric fields with visually dominant stone walls. The section of the demesne which comprises a folly (Plate 7), walled yards and parkland trees would be unaffected by the proposed realignment.

**Corridor 1 would be highly visible in this zone from approximately 10 houses**, albeit the impact would likely be Moderate. There is a new house under construction as depicted in Figure 8. It would appear that Corridor 1 passes in the immediate vicinity of this dwelling, potentially resulting in a Profound impact.



Plate 6: Open and flat stone wall character of Frenchpark Demesne



Plate 7: Walled yard and stone building at Frenchpark Demesne



Plate 8: Location of a house under construction near Frenchpark Demesne

➤ Zone W4

The overall heritage value of this landscape zone is considerably less than that of Zone 3 above. Furthermore, there is a higher visual absorption capacity in Zone 3 than there is in Zone 4. In principle, therefore, **it would be preferable that the realignment passes through Zone 4 (south of the N5) over Zone 3 (north of the N5).**

Corridor 4 carves through conifer forests which provide screening and thus minimises visual impact (most preferred route in this zone). Corridor 2A would be the second most preferred. Corridor 2 and 1A pass very close to three cottages, likely resulting in a Significant impact.

➤ Zone W5

All of the southern options cross the R361 at the same location, south of Frenchpark. The proposed realignment would not be visible from Frenchpark due to screening by landform as well as forest cover. There are no houses that would have an open view of this crossing. It will be seen from this discussion below that **the southern corridors are more preferable than the northern option in this area.**

➤ Zone W6

Corridor 1 **passes through the northern fringes of Frenchpark** in this zone, close to at least 3 houses (impact likely to be Moderate) (Plate 9). There is less screening in this zone than in Zone 5 and the overall character is of greater value in the former.

➤ Zone W7

This location is very isolated, with just one house in the area. **Corridor 1 would be visible from a ruined church and graveyard** and thus would impact on the amenity value of this location. The corridor also passes very close to the edge of a bog.

➤ Zone W8

There are no houses at this location. Instead, there is a cluster of farm buildings. This location is very remote, has a high visual absorption capacity (ability to screen development) and thus the landscape and **visual impact of the southern corridors would be Slight.**

➤ Zone W9

Corridors 1A, 2, 2A and 2B pass through this zone. There is a farmhouse on the existing N5 that would be very close to these corridors. The alignment would pass on slightly elevated ground in this zone (Plate 10) and thus would likely require some cutting. **There are a few houses close to the alignment but they would likely suffer a Moderate impact.**



Plate 9: Location on the N61 where Corridor 1 would cross



Plate 10: Elevated ground at Cashel where Corridors 1A, 2, 2A and 2B would pass



Plate 11: Routing of Corridor 1A at Mullenduff between private house and school

➤ Zone W10

Corridor 4 passes to the south of Bellangare at this location. **The route would not be visible from the village** but passes close to a two storey stone house (Slight impact). The route also appears to pass close to a standing stone located on a low hill with stone walls.

➤ Zone W11

Corridors 1A, 2, 2A and 2B pass through this isolated zone. There are very few houses, there is a high visual absorption capacity and the landscape is relatively flat. **Overall impact in this zone would thus be Slight.**

➤ Zone W12

Corridors 1, 1A, 2, 2A and 2B pass through this zone. Between Carrigeenacreeha and Mullenduff there are four or five houses located on the northern side of a local road with low visibility of Corridors 2, 2A, 2B and 1A. Further east, Corridor 1A passes between a school and a new bungalow (Plate 11, above), potentially creating a Significant impact. **Corridors 2, 2A and 2B would result in a lower impact than corridor 1A due to the proximity of the school.**

➤ Zone W13

There are no houses in this zone so **Corridors 1 and 1A would create an Imperceptible visual impact.**

**Conclusion regarding western N5 connection**

- Between the western end of the scheme and the R361, the southern options are most preferred. Corridor 1 would be the least preferred of all corridors in this area.
- Between the R361 and the R369 (ie. just east of Bellangare), Corridor 4 would likely result in a lower impact than all of the other options. Of the 'middle' options (1A, 2, 2A, 2B), 1A would be the least preferred due to its proximity to a school at Mullenduff.

### 5.2.2 Eastern N5 Connection

The anticipated impact of the eastern N5 connection is outlined below in relation to five separate zones (Figure 3).

#### ➤ Zone E1

All of the options with the exception of 2B broadly follow the alignment of the existing N5 as viewed from this location (Plate 12). Corridor 2B passes close to a local road with a number of houses located thereon. **Overall visual impact of 2B is likely to be in the order of Moderate, whereas the impact of the other corridors would be in the order of Imperceptible.** Corridor 2B is least preferred in this zone, therefore. There are a number of rivers which pass within the view from this zone, but they do not contribute strongly towards local landscape character.

#### ➤ Zone E2

All of the options with the exception of Corridors 1 and 1A pass through this zone. Corridors 2A and 2B pass very close to a new house (Plate 13) possibly resulting in a Significant impact. They also pass through a cluster of other houses that would be reasonably well screened. Corridor 4 passes through an area of very strong local character, comprising a fine cut stone bridge, old church ruins and graveyard and a mature stand of trees (Plate 14). There are also a number of houses close by, but the level of impact at these would likely be no greater than Moderate. **Corridor 2 follows the existing alignment of the N5 and therefore would result in a lower impact than the other corridors** at this location.

#### ➤ Zone E3

As with the previous zone, all of the options with the exception of Corridors 1 and 1A pass through this zone. The choice to be made in this instance is between the northern Corridor 2 and southern Corridors 4, 2A and 2B. Corridors 2A and 2B pass to the rear (north) of an old large farmhouse which is densely screened with trees. There are also some other one-off houses located close by but these would be unaffected by the realignment. There are no houses where the southern options cross the R368, resulting in a Slight impact. Further west, the southern options pass close to a bungalow at Cloonfinlough but the impact here is likely to be Slight.

The northern option (Corridor 2) in this zone pass very close to a localized area of very strong character and high quality where there is a substantial river (a tributary of the Scramoge River), old stone buildings, a bridge and vernacular buildings one of which stands on its own mature grounds (Plate 15 and 16). A Significant impact would result. **Corridor 2 is therefore least preferred in this zone.**

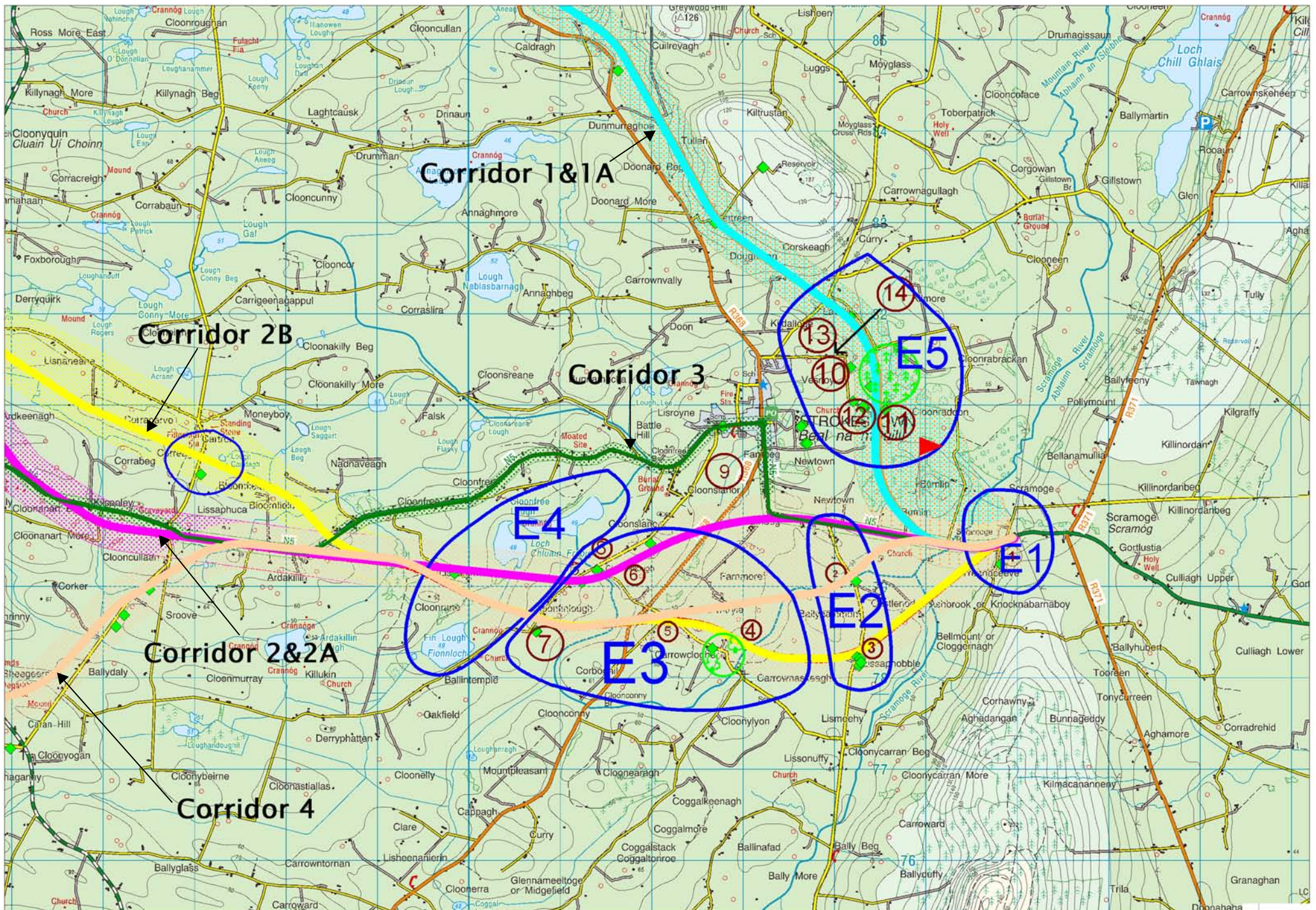


Figure 3: Locations Assessed Near the Eastern N5 Connection



Plate 12: View from Treanaceeve in direction of N5 connection



Plate 13: House under construction at Lissaphobble close to Corridors 2A and 2B



Plate 14: Crossing of Scramoge River tributary near Ballyhammon





Plate 15: Scramoge River tributary crossing at Cloonfinlough



Plate 16: River access point at Cloonfinlough



Plate 17: Aerial views of Fin Lough and Cloonfree Lough

➤ Zone E4

Once again, all of the options with the exception of Corridors 1 and 1A pass through this zone. The issue of concern in this zone is not so much the visual impact but, rather, the landscape impact. As can be seen from the aerial photograph in Plate 17 above, these corridors pass through and over a shallow dip in the landscape that feeds a number of small lakes and rivers. There is a very strong character at this location and there would be a **Profound impact arising from the need to construct a road through what is very high quality Lakeland landscape.**

➤ Zone E5

Corridors 1 and 1A pass through this zone, located in the immediate vicinity of Strokestown House. All of the other options pass on or to the south of the N5. A very careful analysis of the potential impact of these options on the character and context of Strokestown House was carried out as can be seen from Plates 18, 19 and 20 below. The corridors pass to the east of a local road which terminates in a cul-de-sac (Plate 18). There is a substantial hedgerow flanking the west of this lane which will provide significant screening from Strokestown House (Plates 19 and 20). **The level of impact from the house proper, therefore, is estimated to be in the order of Moderate.** A view from the rear (east) of the house also depicts the screening provided by the same hedgerow (Photo 20). The Strokestown Golf Course is located with these corridors and it is likely that any alignment through this zone would be visible from the course. The impact is anticipated to be in the order of Moderate given the nearby location of the existing N5 and the potential for mitigation through screening.

### **Conclusion regarding eastern N5 connection**

- It is challenging to choose between Corridors 1 and 1A, which pass to the north of the N5, and the other corridors which pass to the south of the N5. The choice to be made is between passing (a) between Strokestown House and Strokestown Golf Club or (b) through the lake land and river landscape at Cloonfree Lough and Fin Lough. The former landscape is of human-made parkland character, the latter is more naturalistic. The former also has much fewer residents which could potentially be affected by the scheme.
- In terms of visual impact, the corridors which pass south of the N5 would be more adverse than those to the north.
- Considering landscape impact, a similar level of impact would arise from both corridors.
- In summary, Corridor 1 and 1A are likely to result in a lower overall impact than Corridors 2, 2A, 2B and 4.



Plate 18: View depicting mature ash hedgerow located partially screening Corridors 1 and 1A from Strokestown House

Plate 19: View through hedgerow depicted in Plate 18 with Strokestown House in the distance



Plate 20: View from rear of Strokestown House in the direction of Corridors 1 and 1A



## 6. Comparison of the Route Options

This section will present a relative ranking of each of the seven options presented by Roscommon National Roads Design Office for assessment. This presents a considerable challenge to the Landscape Assessors as one route option might create a high impact for local residents in terms of intrusion and obstruction but a low impact with respect to specific landscape features. The converse can also arise.

The results from Table 2 are clustered below in Table 3 under the following headings wherein each route option is ranked in order of preference:

- Local residents
- Structures
- Encroachment upon specific landscape features
- Field work assessment of impacts.

The results from Table 3 are then finally assimilated into Table 4 below where each route option is ranked in terms of overall impact. The seven options are listed below in order of preference, commencing with the most preferred:

- 1A - Orange
- 1 - Cyan
- 4 - Pink
- 2A - Red
- 2B - Yellow
- 2 - Purple
- 3 - Green.

Table 3: Summary Comparative Analysis of the N5 Strategic Corridor Realignment Options

Assessment Criteria <sup>4</sup>	<b>CORRIDOR 1-CYAN</b>	<b>CORRIDOR 1A-ORANGE</b>	<b>CORRIDOR 2-PURPLE</b>	<b>CORRIDOR 2A-RED</b>	<b>CORRIDOR 2B-YELLOW</b>	<b>CORRIDOR 3-GREEN</b>	<b>CORRIDOR 4-PINK</b>
Desk Study Local Residents	2 <sup>nd</sup> preference	1 <sup>st</sup> preference	4 <sup>th</sup> preference	3 <sup>rd</sup> preference	5 <sup>th</sup> preference	7 <sup>th</sup> preference	6 <sup>th</sup> preference
Desk Study Structures	1 <sup>st</sup> preference	2 <sup>nd</sup> preference	4 <sup>th</sup> preference	5 <sup>th</sup> preference	3 <sup>rd</sup> preference	6 <sup>th</sup> preference	7 <sup>th</sup> preference
Desk Study Encroachment upon Specific Landscape Features	2 <sup>nd</sup> preference	1 <sup>st</sup> preference	Joint 5 <sup>th</sup> preference	Joint 5 <sup>th</sup> preference	3 <sup>rd</sup> preference	4 <sup>th</sup> preference	6 <sup>th</sup> preference
Field Work Assessment of Impacts	2 <sup>nd</sup> preference	1 <sup>st</sup> preference	6 <sup>th</sup> preference	4 <sup>th</sup> preference	5 <sup>th</sup> preference	7 <sup>th</sup> preference	3 <sup>rd</sup> Preference

Table 4: Rank order Preferences of the N5 Strategic Corridor Realignment Options

Assessment Criteria	<b>CORRIDOR 1-CYAN</b>	<b>CORRIDOR 1A-ORANGE</b>	<b>CORRIDOR 2-PURPLE</b>	<b>CORRIDOR 2A-RED</b>	<b>CORRIDOR 2B-YELLOW</b>	<b>CORRIDOR 3-GREEN</b>	<b>CORRIDOR 4-PINK</b>
Overall Impact	2 <sup>nd</sup> preference	1 <sup>st</sup> preference	6 <sup>th</sup> preference	4 <sup>th</sup> preference	5 <sup>th</sup> preference	7 <sup>th</sup> preference	3 <sup>rd</sup> Preference

<sup>4</sup> The criteria 'Desk Study Local Residents' primarily concerns visual impact whereas the other three criteria primarily concern landscape impact

## 6.1 Significance of Impact of the Preferred Route

Corridor 1A has been chosen as the preferred route regarding visual and landscape impact. There will likely be some flexibility in designing the vertical and horizontal alignment of the actual route within the 500m wide (approximate) corridor, so the precise level of significance of impact at various locations is impossible to predict at this stage. In general, the overall impact of Route Option 1A would be between Slight and Moderate. Depending upon the final design, the following nodes are highlighted as locations where impact could possibly be at a higher level (ie. Significant):

- Cashel (where the road crosses the existing N5).
- Mullenduff (where the road passes between a school and a private dwelling);
- Killeen East (where the road passes below a low ridge near a lake and in close proximity to a cluster of private dwellings); and
- Strokestown Golf Club (where the road passes close to the club's boundary).

The above impacts could likely be reduced to the level of Moderate following successful achievement of mitigation measures using screen planting and / or mounding along with adjusting the vertical alignment of the road proper.

## 7. Bibliography

The following references were used in this assessment:

- Landscape Character Assessment of County Roscommon (Draft issued for public consultation). Coordinated by MosArt for Roscommon County Council, April 2007.
- Roscommon County Development Plan (2002)
- Landscape and landscape Assessment Guidelines (Draft). Department of the Environment, Heritage and Local Government. 2000.
- A Guide to Landscape Treatments for National Road Schemes in Ireland. NRA. 2006