

APPENDIX 2

SAFETY AUDITS

N5
Strategic Corridor
Strokestown to Lung

Road Safety Audit
Stage F, Phase 1



Donegal National Roads Design Office
Drumark
Donegal Town
Co. Donegal

Tel: 073 40500
Fax: 073 23469
e-mail: info@dl-roads.ie





1 INTRODUCTION

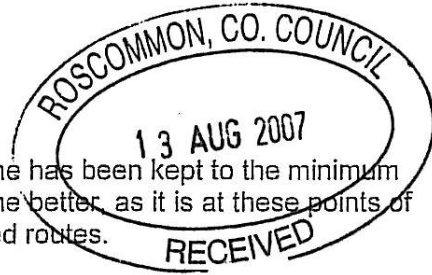
- 1.1 This report describes a stage F Phase 1 Route Selection stage road safety audit carried out on the N5 Strategic Corridor from Scramoge to Lung, bypassing Strokestown, Tulsk, Ballanagare and Frenchpark in County Roscommon. The section will join the proposed Ballaghaderreen Bypass and improved section of the N5 at Scramoge.
- 1.2 The audit team members were as follows:
Stephen Lambert, Donegal National Roads Design Office team leader,
Stephen McCrory, Donegal County Council, Road Design Office team member
- 1.3 The audit comprised an examination of the drawings and documents relating to the scheme on 1st February 2007, and a site visit during daytime on 1st February 2007. Roscommon National Roads Design Office supplied the drawings.
- 1.4 The N5 Strategic Corridor consists of a realignment of N5 for approximately 35km between Scramoge in the east and Lung in the west.
- All routes except the Green Route are substantially off-line alignments. Short sections of some of the other routes are on the old alignment.
- 1.5 This Stage F audit has been carried out in accordance with the relevant sections of NRA HD 19/01. The team has examined only those issues within the design relating to the road safety implications of the scheme, and has therefore not examined or verified the compliance of the design to any other criteria.
- 1.6 All of the problems described in this report are considered by the audit team to affect the safety of the scheme.
- 1.7 Appendix A describes the drawings and other information examined by the audit team. Appendix B contains photographs illustrating the points made in this report.



2 ITEMS ARISING FROM THE AUDIT

2.1 Junctions.

On all options the number of junctions on the scheme has been kept to the minimum possible. In road safety terms the fewer junctions the better, as it is at these points of conflict that accidents tend to occur on new realigned routes.



The drawings and constraint Study submitted gave a detailed description of the junction strategy for the scheme with a clear focus on minimising at grade junctions and accesses. The obvious exception was the improvement along the existing route, which would have maintained most, probably all the existing junctions and all the existing entrances and exits.

Based on the comparison of the junction treatments Options 1 and 1a scored best. The full table is shown below.

2.2 Private Accesses.

In road safety terms the fewer private accesses the better. The existing road has 374 private accesses and 518 field accesses. From the drawings supplied, there is no indication of the proposed strategy for these accesses but it can be assumed the design will be working to secure as access free a route as possible.

While not indicated on these drawings it is assumed there will be farm access roads provided and that any new realignment will be protected from current or future on-line development. On this basis the existing route with over 900 entrances and exits scored last by a considerable margin and would be very difficult to improve on. Those options that are partially co-incident with the existing route also scored poorly, proportionate to length of the over-laid sections.

The team assumes that there will not be any more accesses than those shown, and have based the route choices on this assumption. If it is envisaged that more field and house accesses will be added to the design at a more detailed stage, then the number of accesses in each option should be taken into account when choosing between route options.

2.3 Length of Schemes.

There is a considerable range in the lengths of the schemes from 33.72 to 38.00 Km. Accident or crash rates are estimated as a product of the length of a section of road the crashes that occur on it and the AADT. On that basis the shorter the section of road required to be travelled the shorter the time an individual driver is on the road and so the lower the risk to road users. There are other factors to be considered such as the vertical and horizontal and vertical alignments and the effects they have on visibility and speed. However, apart from the Green route, along the existing alignment, it is assumed all the new proposed routes are similar regarding the radii of vertical and horizontal curves.

2.4 Vertical Alignment and Overtaking opportunities.

There is no vertical alignment information provided with any of the options but from the site visit and the generally flat terrain in the corridor region it is assumed the vertical alignment will not be a problem.

3 PREFERENCE OF OPTIONS

- 3.1 The problems described in the previous chapter are only those problems that occur to different degrees in the different options, and thus have some influence on the preference of options. The team discussed other problems that occur to the same extent in all options, but these have not been set out in this report. These will be described in more detail in the Stage F Phase 2 report on the preferred route.
- 3.2 Based on the number and position of **junctions and accesses** on the routes, the Option 1 is the preferred route; the 1A and 2 are next preferred options.
- 3.3 Based on the **length** of the scheme the preferred option is 1 followed by 1A and 2.
- 3.4 Overall the team's preference of options in road safety terms is as given below in order of preference based on the table below.

Criteria	Ranking							
Length	1	1A	2	2A	2B	3	4	
Junctions and Accesses	1	1A	2B	4	2	2A	3	
Over laid on existing road	1	1A	2B	4	2	2A	3	

Preferred Order:

- 1, Blue
- 1A, Orange
- 2B, Yellow
- 2, Purple
- 2A, Red
- 4, Pink
- 3, Green



4 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement that in our opinion should be studied for implementation.

signed Stephen Lambert Stephen Lambert
date 20th Feb 2007

signed Stephen McCrory Stephen McCrory
date 16/12/06



APPENDIX A

LIST OF DRAWINGS AND OTHER INFORMATION EXAMINED:

Drawings

N5 Strategic Corridor – Route Options

RN04250-05-279 LAYOUTS 1 TO 8

N5 Strategic Corridor

1

Other Information

Draft Constraints Study Report, Dec 2006

R:\RN04250 N55C\11 Constraints Report \ Draft



SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORTS

Scheme: N5 Corridor Lung to Strokestown

Road Safety Audit Stage: F/1

Date Audit Completed: 1st February 2007

	Ranking Agreed (yes/no)	Alternative Ranking (Safety Issues only)	Alternative ranking accepted by Safety Auditor (yes/no)
Length	Yes	It should be noted that there is little difference in length between 1, 1A, 2A, 2B. Option 2 is slightly longer (3%).	yes
Junctions and Exits	Yes	It should be noted also that there is very little difference in the likely no. of junction between options 1, 1A, and 2B	yes
Overlaid on Existing Road	Yes	As per junctions, there is little difference between options 1, 1A and 2B.	yes

Signed Mark Kearney Project Team Leader

Date 23-03-07

Please complete and return to safety auditor.

Road Safety Audit Signed off: Stella Audit Team Leader

Date 10th August 2007



N5 Strategic Corridor

Road Safety Audit

Stage F-2

Report Number:



Donegal Road Design Office
Donegal Public Service Centre,
Donegal Town,
Co. Donegal.

Tel: 074 9724500
Fax: 074 9723470
e-mail: info@donegalcoco.ie

1 INTRODUCTION

- 1.1** This report describes a stage F-2-safety audit carried out on the N5 Strategic Corridor, Route corridor selection. The audit was carried out on the 17th September 2007.
- 1.2** The audit team members were as follows:
- | | |
|---|--------------|
| Stephen Lambert, Donegal Road Design Office | Team Leader, |
| Hugh Morrow, Donegal Road Design Office | Team Member |
| James Curran, Donegal Road Design Office | Trainee |
| Sandra Tinney, Donegal Road Design Office | Trainee |
- 1.3** The audit comprised an examination of the drawings relating to the scheme supplied by Roscommon NRDO, and a site visit during daytime on 29th August 2007.
- 1.4** The Audit involves the assessment of a proposed corridor and draft junction strategy for the proposed realignment of the N5 from the Ballaghaderreen Bypass to the east of Strokestown.
- 1.5** This Stage F audit has been carried out in accordance with the relevant sections of NRA HD 19/04. The team has examined only those issues within the design relating to the road safety implications of the scheme, and has therefore not examined or verified the compliance of the design to any other criteria.
- 1.6** All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise accident occurrence.
- 1.7** Appendix A describes the drawings and other information examined by the audit team.

2 ITEMS ARISING FROM THE AUDIT

2.1 Problem: Tie in with existing N5 at Teenacreava.

Comment: The audit team are concerned that there may be potential problems with the location of the proposed tie in. It is currently unclear if the existing three local roads and the existing N5 will all have access to the proposed N5 at this location. Clarification of this is required.

3 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement that in our opinion should be studied for implementation.

signed.....*SL*..... Stephen Lambert

date.....*25/9/07*.....

signed.....*[Signature]*..... Hugh Morrow

date.....*25/9/07*.....

APPENDIX A

LIST OF DRAWINGS EXAMINED:

Drawings:

RN04250 N5 Strategic Corridor – Route Corridor Selection

Other Information:

Draft Junction Strategy

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORTS

Scheme: N5 Strategic Corridor, Co. Roscommon

Stage: F – Route Selection

Date Audit Completed: 17th September 2007

Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative Measures accepted by Auditors (yes/no)
2.1				

Signed Project Team Leader Date

Please complete and return to safety auditor.

Road Safety Audit

Signed Off:..... Audit Team Leader Date
 (Stephen Lambert)

R104 250-05-7482.



Oifis Ohearcha Boithre Náisiúnta Tán na nGall
Donegal National Roads Design Office

Le dea-mheir
With Compliments

Donegal Public Services Centre,
Drumlonagher, Donegal Town,
Co. Donegal
Tel: 074-9724500 Fax: 074-9723535
Email design@dnrdo.ie

Céim,
Sínir D'fian Appel
StyA'

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORTS

DESIGN TEAM RESPONSE (RN04250-05-7465)

Scheme: N5 Strategic Corridor, Co. Roscommon

Road Safety Audit Stage: F Phase 2 – Route Selection

Date Audit Completed: 17th September 2007

Paragraph No. In Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative Measure Accepted by Safety Auditor (yes/no)
2.1	No	No	Local Primary LP1210 and LP1225 and Local Secondary LS5545 are being addressed as part of the proposed N5 Ballaghaderreen Bypass Scheme. It is anticipated that the N5 Ballaghaderreen Bypass scheme will be completed in advance of the N5 Strategic Corridor Scheme. Please find attached drawing number RN04250-05-418 indicating the proposed junction strategy at Teevnacreeva for the N5 Ballaghaderreen Bypass Scheme. It is proposed that the N5 Strategic Corridor alignment will tie in to the end of the Ballaghaderreen alignment.	

Signed: Mark Keany Project Team Leader

Date 28th September 2007

Please complete and return to safety auditor.

Road Safety Audit
Signed off: Stephen Lambert Audit Team Leader
(Stephen Lambert)

Date 4/10/2007

