

# Road Safety Inspection

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# So What is a Road Safety Inspection?

*“Is an ordinary periodical verification of the characteristics and defects of an operational road that require maintenance work for reasons of road safety.”*

# The Legislation

- EU DIRECTIVE 2008/96/EC - sets out processes for road safety management including periodic Road Safety Inspection
- S.I. No. 472/2011, European Communities (Road Infrastructure Safety Management) Regulations 2011 - expands further and recommends publication of guidelines

# The Irish Perspective



- Standard NRA DMRB NRA HD17
- Guidelines NRA HA 17/12
- Applies to National Routes
- Periodic – motorways/dual c/w less frequently (five yrs), single c/w more frequently (three yrs)
- Assessment of existing roads – differs from RSA
- Pro-active approach

# Current Road Safety Focus in Ireland

- **Self-Explaining Roads** - informing, warning and guiding road users
- **Forgiving Roadsides** - engineering measures to reduce collision severity
- **Combined Affect** - assist the driver in making the correct decision, be forgiving of driver error and lessen the consequences if a collision occurs

# RSI Process in Ireland

- Must be carried out by a competent entity
- Carried out by day and at night in both directions
- Targeted if dominant collision trend - i.e. high percentage of wet skid collisions – inspect in the wet (rarely a problem in Ireland!)
- Supporting information provided - detailed mapping, collision trends, SCRIM
- **No recommendations made in an RSI**

# The Inspection Team

- **Two Members** – Team Leader and Member
- **Leader must have CoC** - recognised by EU Member State
- **Both Members** - must be Chartered Engineers or equivalent with at least 7 years experience and specifically in road design, road safety engineering and collision investigation

# Pilot RSIs Autumn 2012

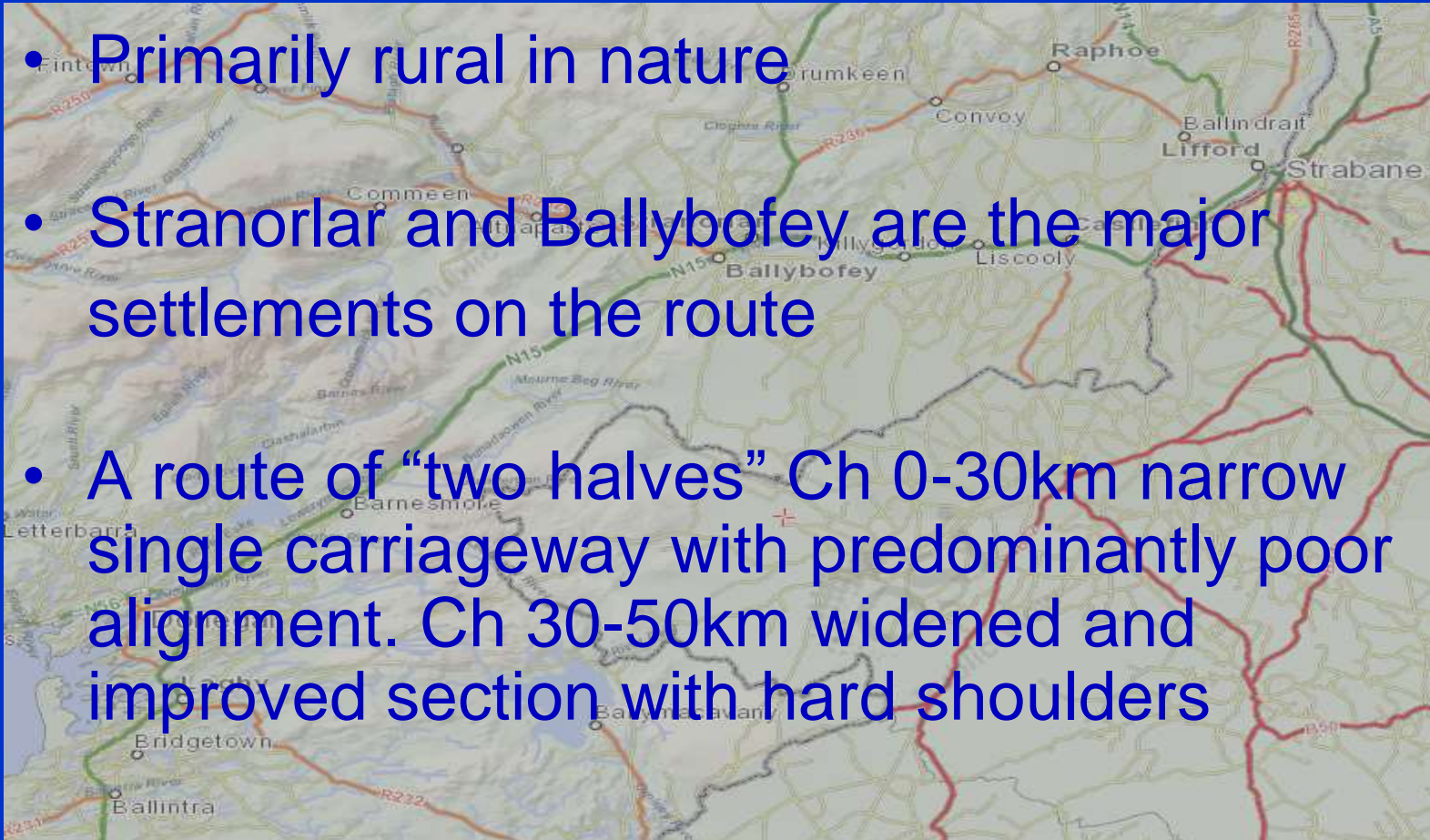


- Halcrow Barry - one of seven appointed consultants on Framework
- Route Chosen - first 50 km stretch of N15 from Lifford to Donegal, Co Donegal



# Route Description

- Primarily rural in nature
- Stranorlar and Ballybofey are the major settlements on the route
- A route of “two halves” Ch 0-30km narrow single carriageway with predominantly poor alignment. Ch 30-50km widened and improved section with hard shoulders



# Methodology



Equipment used: HD Video Camera with GPS and software for data logging

# Methodology 2

- Route driven and videoed in both directions in both daylight and darkness hours – helps to gain thorough understanding of route before starting inspection
- Mainline inspected first (day and night) – hazards recorded on route mapping and via video audio and data logging tool
- Junctions then inspected (day and night) – 43 in total
- Video/data reviewed in order to confirm hazard locations
- Desktop exercise to complete survey sheet/report

# Hazards/Problems Encountered During the Inspection

- Weather!!!
- Not safe to stop on large parts of the route
- Driving at slow speeds on routes with 100 kph speed limit – not creating becoming a hazard particularly in poor visibility/during darkness hours
- How to record hazards that are not site specific

# Collision Trends on the Route

- 19 fatal collisions on the route 2005-2010.
- 12.5% of the total collisions on the route were fatal – 3.2% national average.
- 50% of all collisions occurred on a wet road surface (60% on rural roads 2008-10) – surface deterioration, or that it rains very often!!
- Most common collision type: Rural roads – vehicle overtaking. Urban roads - pedestrian collisions.



# Some Commonly Found Issues



Visibility from side roads –  
difficult to resolve

Signing Inconsistencies –  
sign clutter, less is more!



# Some Commonly Found Issues



Unforgiving/unprotected  
road sides



Old deformed barrier/ramped  
end terminals – evidence of  
historical collisions

# Reporting

Risk Rating		Likelihood of Occurrence		
		Likely	Possible	Unlikely
Severity of Outcome	Severe	High	High	Medium
	Medium	Medium	Medium	Low
	Minor	Medium	Low	Low

- Main Basis of Report is spreadsheet
- Spreadsheet contains location/direction of travel, problem, field notes and risk rating for each problem identified
- General non-site specific problems recorded on separate spreadsheet
- Where possible, hyperlink to photo included
- All data, including photos, uploaded onto NRA collaborative site



# Inspection Spreadsheet

Unprotected drop off from mainline N15 very close to edge of carriageway. Errant vehicle leaving the carriageway - unforgiving road edge	S	P	H
Exposed road boundary - drop off from mainline N15 very close to edge of carriageway. Errant vehicle leaving the carriageway - unforgiving road edge	S	P	H
Insufficient chevrons on tight radius bend. Failing to understand road layout - loss of control	M	P	M
Insufficient lateral clearance to edge of road. Strike from passing vehicles	L	P	L
Exiting visibility obscured by vegetation. Failure to give way collisions - sudden braking on mainline	M	P	M
Conflicting messages between warning signs. Failing to understand road layout-loss of control collisions	S	P	H
Lack of chevrons on tight right hand bend. Failing to understand road layout - loss of control collisions	S	P	H

# The Future?

- What happens to all this data and how will it be managed?
- How to deal with inspection inconsistencies when using a risk matrix and many different Inspection Teams/Consultants
- Time/Cost – took over three days to do 50 km and then a further three for collation/reporting

# Any Questions?

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