



An Roinn Iompair
Turasóireachta agus Spóirt

Department of Transport,
Tourism and Sport

ROADS Services Training Group

LOCAL AUTHORITY ROADS CONFERENCE and EXHIBITION - 2017

SAFER ROADS

Radisson Blu Hotel, Rosses Point Road, Sligo, May 2017

LOCAL AUTHORITY ROADS CONFERENCE and EXHIBITION – 2017 SAFER ROADS

Collision Reporting and Analysis

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National Road network

- ❑ 5,400km
- ❑ 6% of network

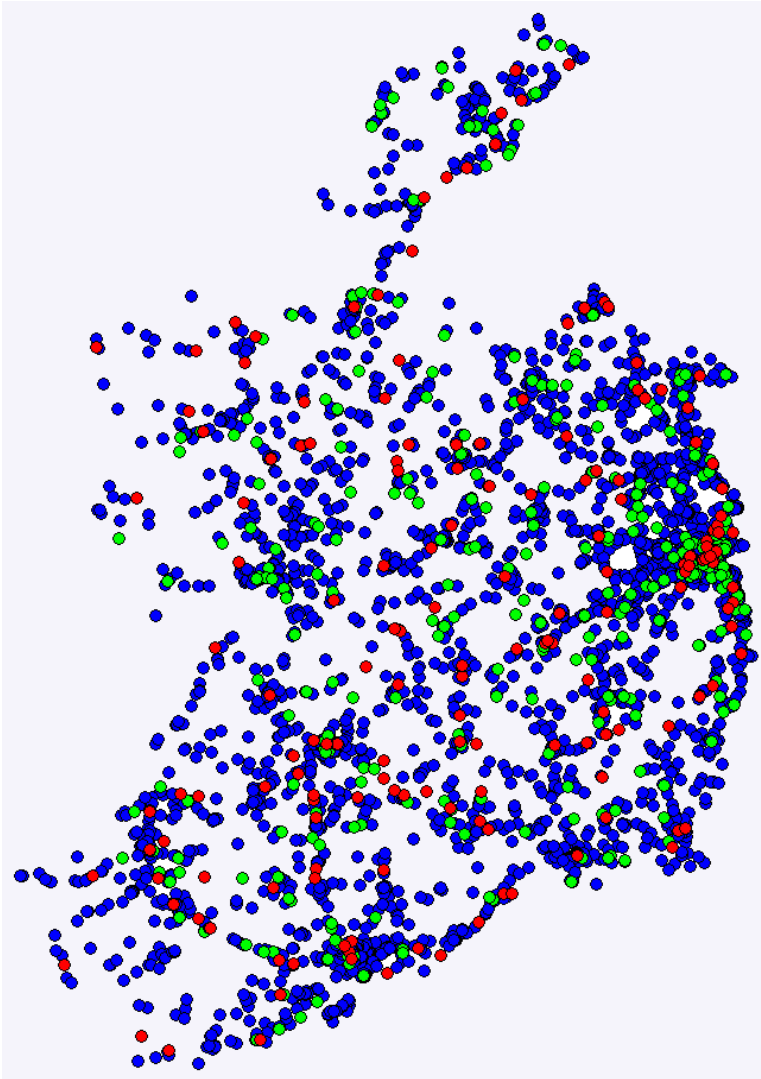
- ❑ 40% of traffic
- ❑ 40% of all fatal injury
- ❑ 25% of all injury
- ❑ 25% of all collisions



Network Safety Ranking HD15

- ❑ Method of identifying High Collision Locations
- ❑ Examine complete National Road network
- ❑ Identify all sites with poor collision history
- ❑ Consider what measure of risk a site must exceed to warrant intervention
- ❑ Analyse collisions at those sites
- ❑ Devise measures to address, if feasible

Mapping collisions from PULSE data



- ❑ In one year (2014)
- ❑ Roughly 4840 collisions
- ❑ 180 fatal injury
- ❑ 330 serious injury
- ❑ 4,330 minor injury
- ❑ 26,000 material damage not shown

2014 injury collisions



All collisions – including material damage



Collision rate analysis

- ❑ National Road network broken down into “sites” – each site a length of roughly 1km
- ❑ Collision rate calculated for each site
- ❑ Injury collisions per veh km
- ❑ Collisions from past 3 years – currently 2014-2016

Network divided into 4 separate reference populations



Collision rate

- ❑ Collision rate of each kilometre compared with average for its road type
- ❑ Falls into 4 bands

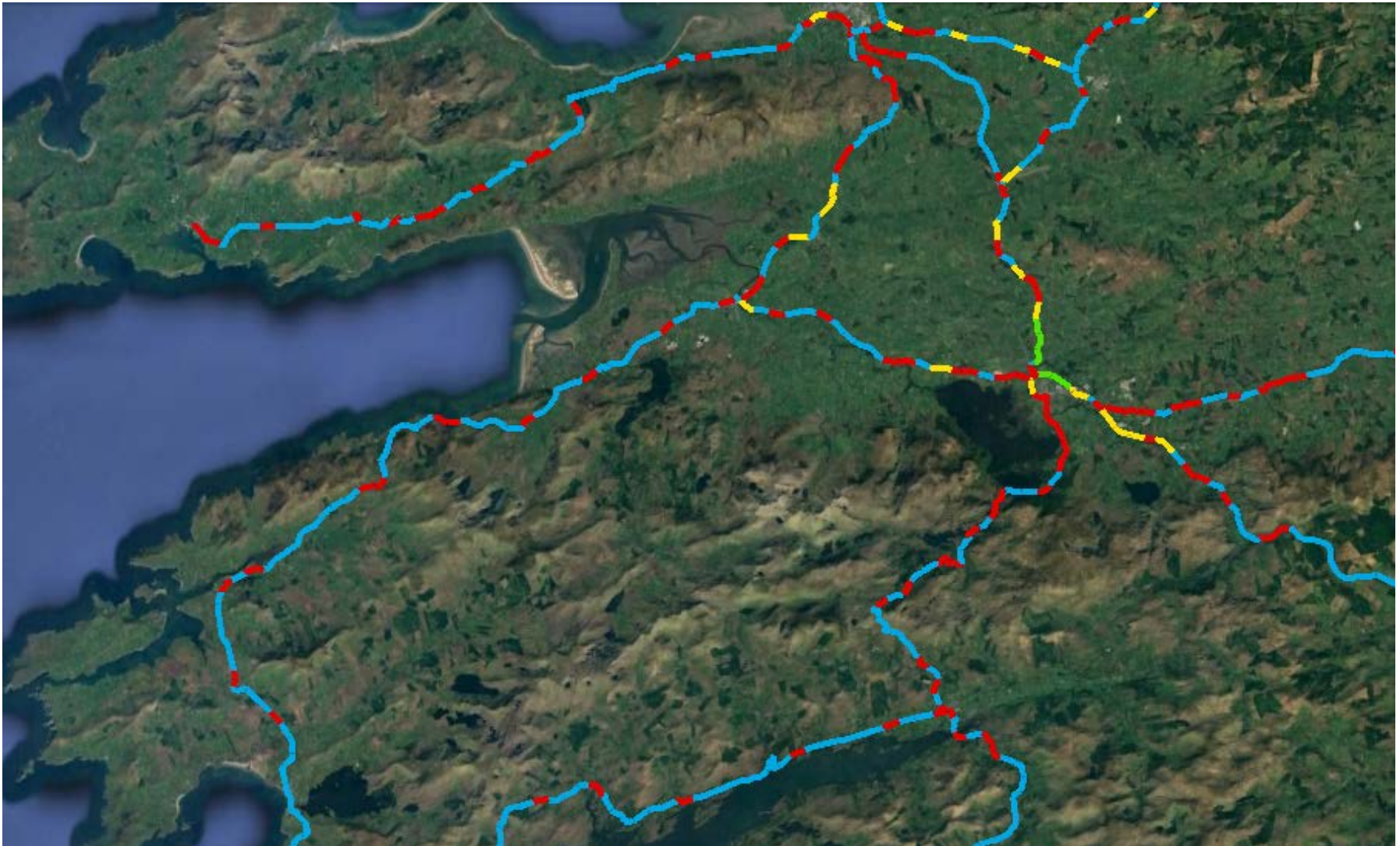
Twice Above

Above

Below

Twice Below

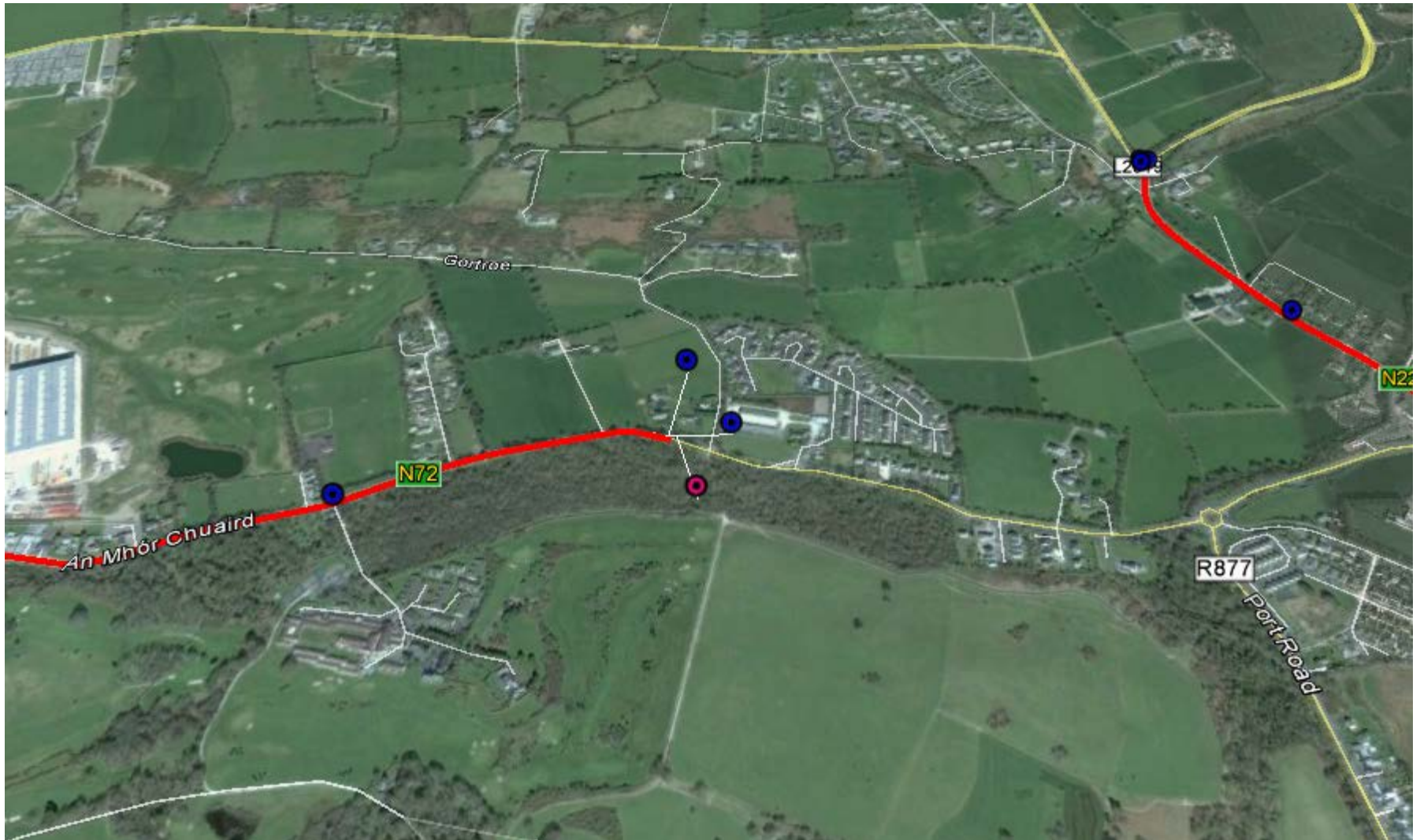
Collision rate bands



High collision location

- Any 1km length on network with
 - Collision rate twice above the average for that road type
 - 3 or more injury collisions in previous 3 years

High collision locations - Clusters



HD15 review – site description

Review of NRA HD15 High Collision Locations - Assessment

[Update Assessment](#)

Site ID: N69LK_038.0

Local Authority: Limerick County Route Number: N69 Chainage: DP 37 To 38 Length: 0.999 km



Site Information

Lastest AADT	2928
Injury Collision Rate	157.83
Material Damage Collision Rate	210.44
Threshold	Twice Above Rate
Cluster	Yes

Collision Data

2014-2016 Collisions	7
# Killed	0
# SI	0
# MI	3
# MD	4

Site Summary

[View Assessment History](#)

Description of the Site

Mount Trenchard.
Rural single carriageway with poor horizontal and vertical alignment

HD15 review – collisions

Description of the Collisions

9 collisions, 4 minor injury, 5 material damage,
8 collisions are single vehicle loss of control on a wet surface.

Minor on Fri 22 Jul 2016 @ 12:30. No Junction. Cyclist.
Collision Occurred at Mount Trenchard on a Dry Surface in the Dry in Day-Good Visibility.
Cyclist sideswiped by vehicle, westbound.

Material on Fri 15 Jan 2016 @ 01:30. No Junction. Road Edge - Ditch.
Collision Occurred at Mount Trenchard on a Frost/Ice Surface in the Frost/Ice in Dark-No Lighting.
Single vehicle westbound, hit ditch.

Material on Sat 12 Dec 2015 @ 19:30. No Junction. Wall - Stone.
Collision Occurred at Mount Trenchard on a Wet Surface in the Dry in Dark-No Lighting.
Single vehicle westbound, hit wall.

Minor on Thu 14 May 2015 @ 09:00. No Junction. Road Edge - Ditch.
Collision Occurred at Mounttrenchard on a Wet Surface in the Dry in Day-Good Visibility.
Single vehicle eastbound, hit ditch, overturned.

Minor on Thu 29 Jan 2015 @ 20:00. No Junction. Road Verge - Embankment.
Collision Occurred at Mount Trenchard on a Snow Surface in the Wet in Dark-No Lighting.
Single vehicle westbound, hit embankment.

Material on Thu 13 Nov 2014 @ 09:00. No Junction. Wall - Stone.
Collision Occurred at Mount Trenchard on a Wet Surface in the Dry in Day-Good Visibility.
Single vehicle eastbound, hit stone wall.

Material on Fri 10 Jan 2014 @ 15:45. No Junction. Road Edge - Ditch.
Collision Occurred at Mount Trenchard on a Wet Surface in the Wet in Day-Good Visibility.
Single vehicle westbound, hit ditch.

Material on Sat 06 Dec 2014 @ 20:45. No Junction. Wall - Stone.
Collision Occurred at Mountrenchard on a Wet Surface in the Wet in Dark-No Lighting.
Single vehicle westbound, hit stone wall.

Minor on Wed 30 Apr 2014 @ 16:40. No Junction. Road Edge - Ditch.
Collision Occurred at Mount Trenchard on a Wet Surface in the Dry in Day-Good Visibility.
Single vehicle westbound, hit ditch.

Primary Collision Type Pedestrians Head On Single Vehicle Mixed

Other

Problem Type Layout Surface Definition Sight Distance Width Marking Signs

Description of the Problem

Distinct pattern of single vehicle collisions occurring on a wet surface, occurring in both directions of travel.

HD15 review – analysis & proposal

Primary Collision Type Pedestrians Head On Single Vehicle Mixed

Angle

Problem Type Layout Surface Definition Sight Distance Width Marking Signs

Description of the Problem

Strong pattern of turning collisions at junction involving vehicles approaching from the east. Poor sight distance appears to be a major factor.

Description of the Solution

Review sight distance at junction and the conspicuity of the junction on approach.

Engineering Education

Enforcement

Not Selected or Not An Enforcement Issue

Proposal

Local authority to carry out a detailed review of the site and collisions.

Measures

- Network Safety Ranking last year identified 186 cluster sites for review
- After analysis, each site put forward for
 - Engineering
 - Enforcement
 - Education
- 98 identified for engineering measures. Forwarded on to LA or MMaRC contractor for detailed review, and design & construction of a remedial measure

Measures: Low cost scheme

- Treatment typically a local low cost scheme
 - junction improvements
 - treatments of bends
 - removal of hazards in verges
 - electronic vehicle feedback signs
 - pedestrian facilities
 - cyclist facilities
 - road widening/narrowing
 - signing and roadmarking
 - surfacing
- Typical costs from €10,000 to €50,000

HCL Treatment

BEFORE



Telegraph poles

Post and rail fencing

Worn surface

Reasonable Alignment

AFTER



Telegraph poles removed

Tensioned mesh,
rail-less fence

Revised super-elevation

HCL Treatment

PEDESTRIAN IMPROVEMENTS



HCL Treatment

BEFORE



AFTER



Minor Improvement



LA16

Collision Reporting

Radisson Blu Hotel, Rosses Point Road, Sligo,

May 2017

What is the LA16 - Collision Reporting Form?

- The LA16 – Collision Reporting is a form used to collect data at serious and fatal road traffic collision sites.

LA 16 Collision Report
The information provided below is for collision location, reporting and statistical purposes only. The road related information collected and recorded here is visual only at the collision site.

Georgia PIUSE No. _____ Collision Date & Time _____ Review Date _____
Number on Georgia Investigation Team _____ Investigating Engineer _____
Description of Location: _____

Collision Type: Fatal Serious non-Fatal Serious Road Encroachment Other _____ Road No. _____ Road Name _____ RD Width = _____ m
GPS Collision Location: Latitude = _____ N Longitude = _____ W

Visual Check of Road at Site of Collision

Reviewed	Comment	Reviewed	Comment
Surface <input type="checkbox"/>		Regulatory Signs <input type="checkbox"/>	
Edge Lining <input type="checkbox"/>		Direction Signs <input type="checkbox"/>	
Centre Lining <input type="checkbox"/>		Sign Distance 0-40 <input type="checkbox"/>	
Alignment <input type="checkbox"/>		Sign Distance 40-80 <input type="checkbox"/>	
Warning Signs <input type="checkbox"/>		Advance Forgive <input type="checkbox"/>	
		Advance Roadside <input type="checkbox"/>	

The following information is based on verbal briefing by member of Garda Investigation Team.
Description of Pedestrian/Vehicle(s) Actions Prior Impact. Include Surface, Weather and Lighting Conditions Where Relevant.

Use the check boxes below to supplement the SINGLE VEHICLE or MULTI VEHICLE COLLISION DESCRIBED ABOVE.
Indicate Vehicle(s) direction prior to impact: 1 to 8

SINGLE VEHICLE COLLISION WITH ...

Buildup / Spill <input type="checkbox"/>	Parked Vehicle <input type="checkbox"/>	Vehicle Direction	Vehicle Class
Parked Truck / Van <input type="checkbox"/>	Pole / Tree <input type="checkbox"/>	A	Vehicle 1: <input type="checkbox"/> PUV / Pedestrian <input type="checkbox"/>
Wall / Gate <input type="checkbox"/>	Object / Fence <input type="checkbox"/>	B	Vehicle 2: <input type="checkbox"/> PUV Bus <input type="checkbox"/>
		C	Motorcycle <input type="checkbox"/> Goods Vehicle <input type="checkbox"/>
		D	Private Car <input type="checkbox"/> Tractor <input type="checkbox"/>
		E	Taxi <input type="checkbox"/> Van <input type="checkbox"/>
		F	Other <input type="checkbox"/>

MULTI VEHICLE COLLISION INVOLVING ...

Check ALL APPROPRIATE BOXES TO DESCRIBE THE ROAD ENVIRONMENT AT OR NEAR THE COLLISION SITE

General Information

Road and Environs

The Collision

Background – Why was this Form & Procedure Introduced?



‘Implement a joint reporting collision procedure between An Gardaí, Local Authorities and the NRA’



The District Officer (Local Garda Superintendent) in whose area a fatal collision occurs or where there is a collision which is likely to be fatal, will as soon as practical, inform the Senior Roads Engineer for the Local Authority where the collision occurred. Arrangements will be made for an Area Engineer from the Local Authority and a member of the investigating team to visit the collision scene as soon as possible.

CT68 Reports

- ❑ Problems with inaccurate recording of locations
- ❑ Comments by non-technical staff concerning technical traffic/road related issues
- ❑ The variability in the quality of collision sketches.

LA16 Form - Objectives

- ❑ Improve data (especially GPS co-ordinates) and information on fatal and serious injury collisions. (very few Serious Injury collisions have been reported on to date)
- ❑ Improve the relationship between An Garda Síochána and Local Authority Engineers whose function is to carry out effective investigations into fatal and serious injury collisions.
- ❑ Enable road safety strategies at local level to be implemented to prevent such collisions occurring in the future.
- ❑ Improvement measures can be identified immediately, rather than waiting over 12 months for the CT68 form to be analysed as part of the annual review for collision clusters.

LA16 Form - Warning



Where road collisions result in fatal or serious injury which may become a fatal, An Garda Síochána treat the collision location as a “crime scene”. For reasons of preservation of evidence it will **not** be possible for the Area Engineer to enter the cordoned area at the time of the collision, until such time as the Forensic Collision Investigation is completed and clearance is given by the Forensic Collision Investigator to proceed.

LA16 Form – It's Your Opinion

“The information provided below is for collision location, reporting and statistical purposes only. The road related information collected and recorded here is only a visual check at the collision site”.

The LA16 Form Itself

General information and relevant personnel details

- ❑ Garda Pulse Number
- ❑ Date, time and exact location of the collision and its environs (GPS Co-Ordinates)
- ❑ Name of the Investigating Garda Team Member
- ❑ Name of Area Engineer (Investigating Engineer)
- ❑ Description of Location

GARDA PULSE NO.		COLLISION DATE & TIME		REVIEW DATE	
MEMBER OF GARDA INVESTIGATION TEAM			INVESTIGATING ENGINEER		
DESCRIPTION OF LOCATION:					
COLLISION TYPE FATAL... <input type="checkbox"/> SERIOUS NOW FATAL... <input type="checkbox"/> SERIOUS... <input type="checkbox"/> ROAD ENVIRONS URBAN... <input type="checkbox"/> RURAL... <input type="checkbox"/> RD WIDTH = m					
GPS COLLISION LOCATION		LATITUDE =		LONGITUDE =	
COUNTY =		TOWNLAND =		ROAD No. =	
					PHOTOS INCLUDED <input type="checkbox"/>

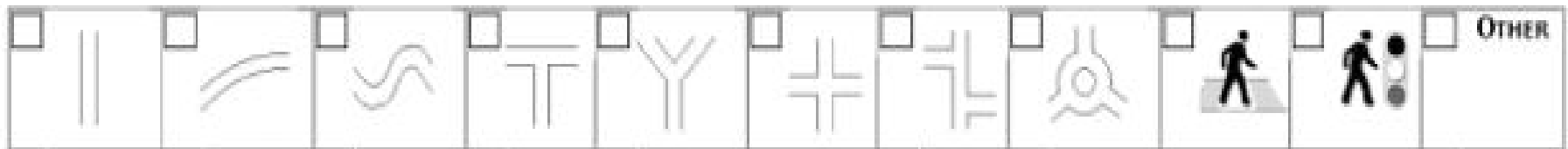
The LA16 Form Itself (cont'd)

Road and Environs	<input type="checkbox"/> Road details and environment at collision location
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VISUAL CHECK OF ROAD AT SITE OF COLLISION:

REVIEWED	COMMENT
SURFACE <input type="checkbox"/>	
EDGE LINING <input type="checkbox"/>	
CENTRE LINING <input type="checkbox"/>	
ALIGNMENT <input type="checkbox"/>	
WARNING SIGNS <input type="checkbox"/>	

REVIEWED	COMMENT
REGULATORY SIGNS <input type="checkbox"/>	
DIRECTION SIGNS <input type="checkbox"/>	
SIGHT DISTANCE (L ; R) <input type="checkbox"/>	
SIGHT DISTANCE AHEAD <input type="checkbox"/>	
FORGIVING ROADSIDE <input type="checkbox"/>	



The LA16 Form Itself (cont'd)

The Collision

Collision description – based on verbal briefing from member of the Garda Investigating Team, recorded on form by means of check boxes.

SINGLE VEHICLE COLLISION WITH ...

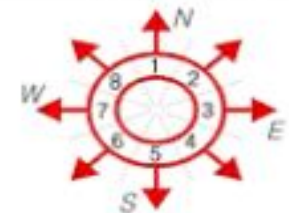
BOLLARD / ISLAND <input type="checkbox"/>	PARKED VEHICLE <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARKED TRAILOR / SKIP <input type="checkbox"/>	POLE / TREE <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WALL / GATE <input type="checkbox"/>	DITCH / FENCE <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INDICATE VEHICLE(S) DIRECTION PRIOR TO IMPACT; 1 TO 8

VEHICLE	DIRECTION	CLASS	VEHICLE CLASS	
A			BICYCLE 1	PSV MINIBUS 7
B			MOPED 2	PSV BUS 8
C			MOTORCYCLE 3	GOODS VEHICLE 9
			PRIVATE CAR 4	TRACTOR 10
			TAXI 5	OTHER 11
PED			VAN 6	
			PED(ESTRIAN)	

MULTI VEHICLE COLLISION INVOLVING ...

<input type="checkbox"/> VEHICLE WITH PEDESTRIAN	<input type="checkbox"/> VEHICLE BICYCLE	<input type="checkbox"/> HAND ON PARTIAL HO	<input type="checkbox"/> REAR END	<input type="checkbox"/> RIGHT TURN REAR END	<input type="checkbox"/> SIDE SWIPE
<input type="checkbox"/> LEFT TURN REAR END	<input type="checkbox"/> ANGLE STRAIGHT	<input type="checkbox"/> ANGLE TURN HO	<input type="checkbox"/> ANGLE TURN REAR	<input type="checkbox"/> FRONT HEAD ON	<input type="checkbox"/> OVERTAKING
					<input type="checkbox"/> OTHER



LA16 Form - Gathering Information

- ❑ A member of the Garda Investigating Team must brief the Area Engineer on what happened at the location – they then carry out a joint review of the collision scene, and the Area Engineer should complete the LA16 Form.
- ❑ The road related information collected and recorded on the LA16 is visual only at the collision site.
- ❑ Signing of the forms is not required. The name of the Area Engineer and the name of the member of the Garda Investigating Team is only required.
- ❑ It is imperative that photographs of the location are submitted with the LA16 form - the LA16 form can be used for either a rural or urban location.
- ❑ The completed form along with the photographs should be sent to la16@dttas.ie and cc the Senior Engineer and the Member of the Garda Investigating Team.

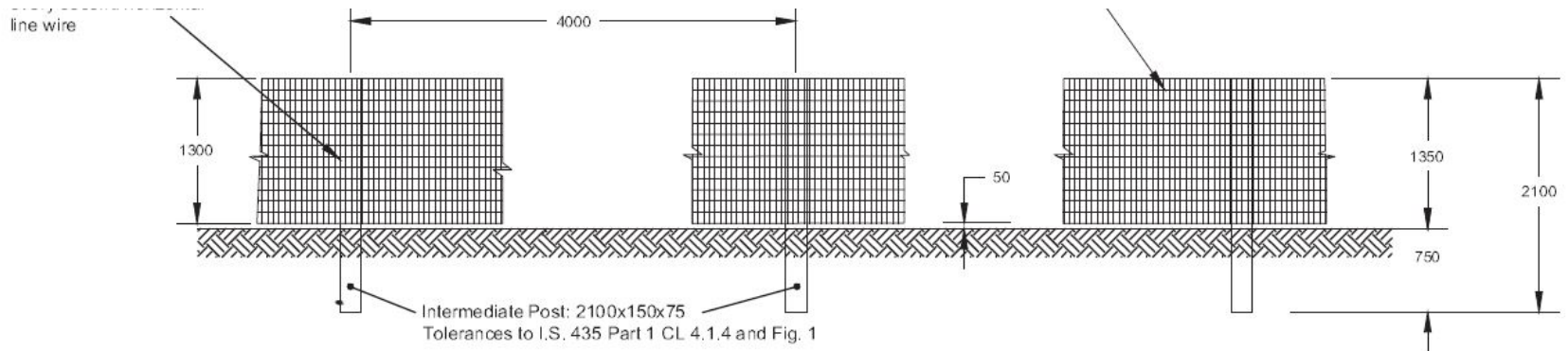
LA16 - Completing the Form

- ❑ Each collision location should be jointly reviewed by the Area Engineer and the Member of the Garda Investigating Team as soon as practical after a collision occurrence. If contact has not been made by An Garda Síochána within 3 days of the incident then the Local Authority Senior Engineer should make contact with the Garda District Officer (Superintendent) to start the process.
- ❑ If Area Engineer has concerns about road safety at the location, they should contact their Road Safety Engineer and arrange for a site visit. The LA should prioritise this work with all their other work and decide when it can be done. By prioritizing the work you are identifying the problem, planning for a solution and programming the solution, thus minimizing any liability implications.

LA16 Form - Please Remember!!

- ❑ A copy of the LA16 should be forwarded to the Garda District Officer (Superintendent) of the area where the collision occurred for inclusion in the CPP meeting.
- ❑ Collision reporting should be an item for discussion at every Collision Prevention Programme (CPP) meeting with An Garda Síochána. Annual reports on the Collision reporting procedure should be produced by the Local Authority and presented to the CPP meeting.
- ❑ A contact list with details (phone, mobile and email) of all Senior Engineers and Superintendents, who are the LA contacts for this procedure in the various Garda Districts, has been circulated. This list must be monitored and updated as required by Local Authorities and the local Gardaí, an update of the list should be sent by the Senior Engineer in the Local Authority to TII every 6 months.

LA16 Form – Data Matters



LA16 Form – Data Matters (cont'd)



End