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Assembly

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An overview of key road traffic collisions statistics in Northern Ireland

1 Overview

This paper has been produced to support members in their scrutiny of the Road Traffic (Speed Limits) Bill. The primary objective of the bill is to reduce the number of accidents and fatalities caused by road traffic collisions by reducing the speed limit on residential (unclassified) roads from 30mph to 20mph. This paper examines a number of key trends in road traffic collisions within Northern Ireland, including:

- What road users are most likely to be involved in road traffic collisions;
- On what type of roads collisions occur; and
- The causes of road traffic collisions

2 Road Traffic Collision Statistics

The Police Service of Northern Ireland (PSNI) produces statistics on injuries resulting from road traffic collisions (IRTCs) that are reported to the Police. It is possible that some collisions or casualties were not brought to the PSNI's attention for a variety of reasons. Damage only collisions or those collisions resulting in no injuries are excluded from these statistics.

Collisions involving personal injury occurring on the public highway (including footpaths) in which a vehicle is involved are categorised as either ‘Fatal’, ‘Serious’ or ‘Slight’ according to the most severely injured casualty. The definitions of these terms are as follows:

- Killed: Died within 30 days from injuries received in a collision
- Serious Injury: An injury for which a person is detained in hospital as an ‘in-patient’, or any of the following injuries whether or not the person is detained in hospital: fractures, concussion, internal injuries, crushing’s, burns, severe cuts and lacerations or severe general shock requiring medical treatment.
- Slight Injury: An injury of a minor character such as a sprain, bruise or cut not judged to be severe or slight shock requiring roadside attention.

3 Key trends

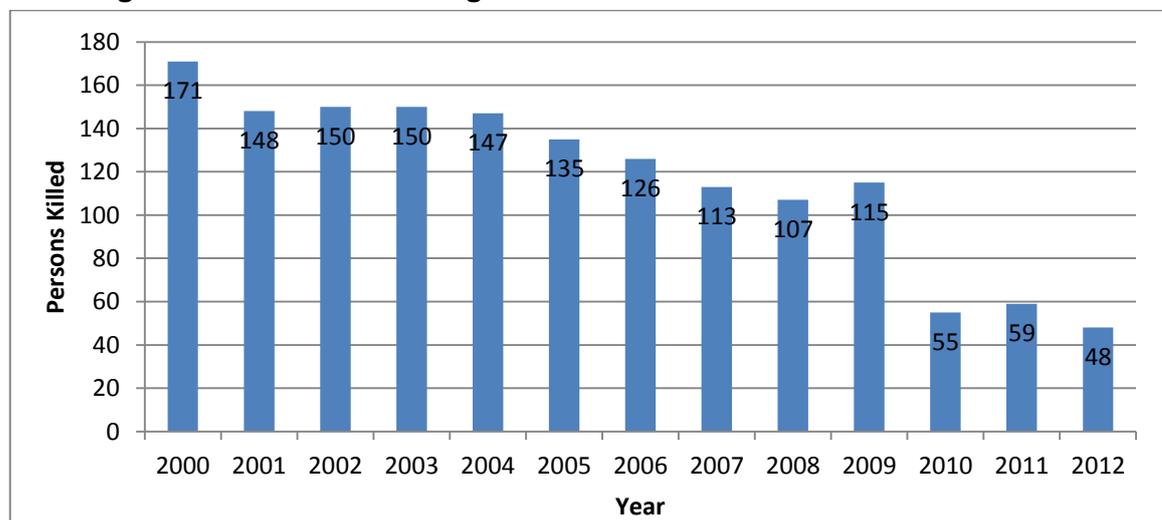
In general the greatest percentage of accidents occur on both A (45% in 2012) and B (21% in 2012) class roads where the speed limit can range from 30mph (in built up areas) to 70mph (dual carriageway). 17% of all casualties in 2012 were killed or injured on unclassified roads.

90% of the 1,540 IRTC recorded on unclassified roads in 2012 were categorised as slight injury, 9.7% serious and less than 1% (6 = 0.4%) resulted in a death (see table 5).

Over the last 13 calendar years the number of persons killed annually on Northern Ireland roads has reduced significantly (see figure 2 below):

- Between 2000 and 2009 the number of fatalities resulting from IRTC fell from 171 to 115 – this represents a 33% reduction;
- Between 2009 and 2010 fatalities reduced by a further 52%;
- Overall fatalities resulting from road traffic collisions have fallen by 72% between 2000 and 2012 from 171 to 48.

Figure 1: Fatalities resulting from Road Traffic Collisions 2000 to 2012



Source: Statistics Branch, Police Service of Northern Ireland, Lisnasharragh

Although the number of people killed has declined significantly over the past decade, between 2005 and 2012 the number of casualties has actually increased; this is due to an increase in slight injuries (see table 1 below).

Table 1: Number of persons injured by severity and class of road – January 2005 to 31st December 2012

Severity of	Road Class	2005	2006	2007	2008	2009	2010	2011	2012
Killed	A	68	73	58	44	65	32	31	22
	B	35	31	29	31	24	16	14	12
	C	16	8	12	18	8	3	3	6
	Motorway	1	2	0	2	1	0	0	1
	Unclassified	14	12	12	11	17	4	11	6
	Unknown	1	0	2	1	0	0	0	1
	Total	135	126	113	107	115	55	59	48
Seriously injured	A	489	501	441	404	453	391	342	313
	B	253	310	274	245	260	241	220	207
	C	129	186	139	130	105	111	94	101
	Motorway	15	22	17	15	8	10	10	18
	Unclassified	178	179	213	184	198	134	150	149
	Unknown	9	13	13	12	11	5	9	7
	Total	1,073	1,211	1,097	990	1,035	892	825	795
Slightly injured	A	3,202	3,596	3,578	3,742	3,969	3,749	3,686	3,732
	B	1,537	1,702	1,731	1,696	1,830	1,632	1,632	1,659
	C	717	848	876	994	1,016	939	884	1,040
	Motorway	181	242	281	271	249	234	251	260
	Unclassified	1,290	1,395	1,661	1,667	1,493	1,387	1,348	1,385
	Unknown	24	62	99	84	60	69	75	91
	Total	6,951	7,845	8,226	8,454	8,617	8,010	7,876	8,167
Total	A	3,759	4,170	4,077	4,190	4,487	4,172	4,059	4,067
	B	1,825	2,043	2,034	1,972	2,114	1,889	1,866	1,878
	C	862	1,042	1,027	1,142	1,129	1,053	981	1,147
	Motorway	197	266	298	288	258	244	261	279
	Unclassified	1,482	1,586	1,886	1,862	1,708	1,525	1,509	1,540
	Unknown	34	75	114	97	71	74	84	99
	Total	8,159	9,182	9,436	9,551	9,767	8,957	8,760	9,010

Source: Statistics Branch, Police Service of Northern Ireland, Lisnasharragh

3.2 What road users are most likely to be involved in IRTCs?

Drivers of motor vehicles were the single largest casualty class among fatalities in 2012, accounting for 21 casualties killed. There were also 10 passengers, 9 pedestrians, 4 motorcyclists, 2 pedal cyclists and 2 other road users killed in road traffic collisions in 2012. There were 5 child (under 16) fatalities recorded from 1st January to 31st December 2012 compared with 2 child fatalities recorded in 2011.

Table 2: Number of road traffic fatalities by road user type in Northern Ireland 2008 – 2012

	Persons Killed				
	2008	2009	2010	2011	2012
Pedestrians	19	24	10	13	9
Drivers of motor vehicles	45	42	21	23	21
Motorcyclists	15	16	8	6	4
Pedal Cyclists	2	0	0	2	2
Passengers	23	29	13	11	10
Pillion Passengers	1	0	2	1	0
Other road users	2	4	1	3	2
Total	107	115	55	59	48

Source: Statistics Branch, Police Service of Northern Ireland, Lisnasharragh

Vulnerable road users, i.e. pedestrians, pedal cyclists and motor cyclists represent just over one third of the total number of fatalities between 2008 and 2012 and this has remained relatively constant for each year. (15 out of 48 in 2012 (31%) compared with 36 out of 107 (34%) in 2008). In general it appears that the highest numbers of IRTC involving vulnerable road users are recorded on A roads.

Table 3: Number of vulnerable road users injured by road user and class of road 2005 to 2012

Type of	Road	2005	2006	2007	2008	2009	2010	2011	2012
Pedestrians	A	242	282	265	339	324	255	316	312
	B	135	133	135	134	150	124	120	130
	C	61	89	69	76	83	91	90	82
	Motorway	1	3	0	0	0	2	1	0
	Unclassified	223	275	280	281	275	247	297	257
	Unknown	5	17	19	14	19	16	10	23
	Total		667	799	768	844	851	735	834
Pedal cyclists	A	60	56	92	70	79	80	109	112
	B	24	33	37	35	35	38	38	50
	C	11	17	16	18	18	32	25	29
	Motorway	0	0	1	0	1	1	1	0
	Unclassified	51	63	70	79	64	61	73	77
	Unknown	1	2	4	4	8	2	9	9
	Total		147	171	220	206	205	214	255
Motorcyclists	A	179	186	203	200	206	181	161	141
	B	92	86	83	78	75	69	80	67
	C	49	55	40	61	43	44	38	24
	Motorway	3	2	7	6	7	2	3	5
	Unclassified	85	76	110	108	82	75	61	49
	Unknown	3	4	7	4	1	4	3	3
	Total		411	409	450	457	414	375	346

Source: Statistics Branch, Police Service of Northern Ireland, Lisnasharragh

The proportion of vulnerable road users killed or seriously injured (KSI) has increased from 34% in 2008 to 41% in 2012;

- the number of pedal cyclists Killed or Seriously Injured has increased from 28 in 2008 to 57 in 2012;
- There were 795 persons seriously injured in 2012, down from 990 in 2008. Almost one quarter of those seriously injured in 2012 were pedestrians (23%);

- In total 804 pedestrians were killed or injured in 2012, of which 9 were killed and 182 were seriously injured;
- One third of pedestrians involved in KSIs were under 16 (30%) and 17% were aged over 65;
- The proportion of those seriously injured that were pedal cyclists has more than doubled in five years, representing 2.6% of the total in 2008 compared with 6.9% of the overall total in 2012;
- The number of pedal cyclists killed or seriously injured in 2012 was 57, which is double the figure from five years ago in 2008 when 28 were killed or seriously injured;
- Of all pedal cyclist casualties injured as a result of a road traffic collision in 2012, 20% were aged under 16 and 27% were aged 35-49.¹

3.2.1 Age

- The five children killed in 2012 is more than the total for 2010 and 2011 combined when two were killed in each year. There were 4 children killed in 2009 and 7 in 2008.
- The total number of children injured as a result of a road traffic collision was 952 in 2008. This fell to 844 in 2010 then rose again to 1,048 in 2012.
- The number of under 16's slightly injured in road traffic collisions has increased by 14% from 837 in 2011 to 956 in 2012.
- The 16-24 year old age group has historically been overrepresented in the casualty statistics, especially amongst males of this age group.
- Between 2008 and 2012 the number of casualties has reduced by over 70%, this reflects the overall downward trend in fatalities over the last five years.
- Slight injuries incurred by both under 16s and over 65s have increased by 12% and over 11% respectively.

Table 3: comparison casualties in the U16, 16-24 and 65+ cohorts (NI, 2012)

Year	Under 16				16-24				65+			
	Killed	Serious	Slight	Total	Killed	Serious	Slight	Total	Killed	Serious	Slight	Total
2008	7	94	851	952	41	278	2,283	2,602	17	102	494	613
2009	4	116	860	980	39	295	2,384	2,718	20	98	550	668
2010	2	93	749	844	15	228	2,175	2,418	6	100	519	625
2011	2	91	837	930	18	198	1,988	2,204	12	110	510	632
2012	5	87	956	1,048	12	206	1,909	2,127	12	86	549	647

¹ PSNI (2013) Police Recorded Injury Road Traffic Collisions and Casualties Northern Ireland: Detailed Trends Report 2012 [online] available from: <http://nia1.me/1v3>

3.3 Where do most collisions occur?

Most road traffic collisions occur on urban roads, however, most deaths and serious injuries happen on rural roads.²

- Of the 5,775 injury collisions recorded by the police in 2012, 3,535 (61.2%) occurred (on urban) roads with a speed limit of 40 mph or less;
- of the 48 people who lost their lives as a result of road traffic collisions in 2012, 35 of these individuals, or 73% of the total fatalities, occurred on rural roads (rural roads are defined as roads with a speed limit greater than 40mph, except motorways and dual carriageways);
- The 2,240 collisions which occurred on roads with a speed limit of over 40 mph accounted for 41.5% of total casualties and 79.2% of all fatalities in 2012.
- This urban rural split has remained fairly constant over the last decade (see table 4).^{3 4}

Table 4: Road traffic collision fatalities 2004-2012 (All NI and Rural)

Year	All Fatalities	Rural Fatalities	Rural Fatalities as a % of total
2004	147	111	76
2005	135	90	66
2006	128	97	76
2007	113	89	79
2008	107	74	69
2009	115	84	73
2010	55	43	78
2011	59	37	63
2012	48	35	73

Source: DoE (2013)

Map one on page 7 shows the number of persons killed or seriously injured in each Police Area in 2012:

- Within Belfast most KSIs occurred in South Belfast (45); and
- The police areas, outside of Belfast, where most deaths and serious injuries occurred in 2012 are Newry and Mourne (46), Fermanagh (37), Lisburn (62) and Craigavon (39).

Map two on page 8 shows all the fatal and serious road traffic collisions in Northern Ireland in 2012:

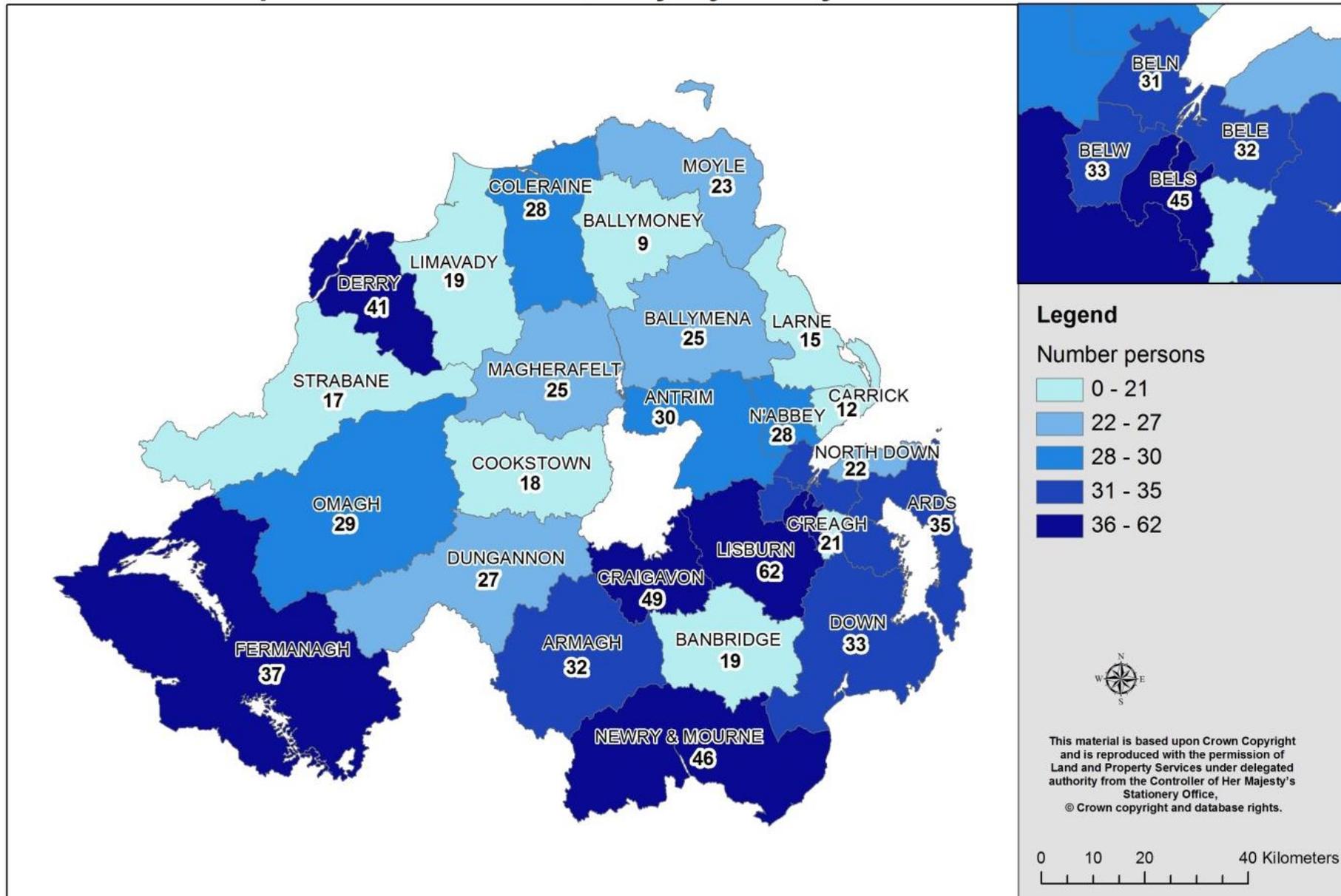
- 7 out of 48 (15.6%) total fatalities occurred on unclassified roads (purple squares);
- 147 out of 669 (22.0%) serious collisions occurred on unclassified roads; and
- Combined there were a total of 714 people killed or seriously injured in 2012 with 154 occurring on unclassified roads.

² DoE (2010) Northern Ireland Road Safety Strategy to 2020 [online] available from: <http://nia1.me/1u6>

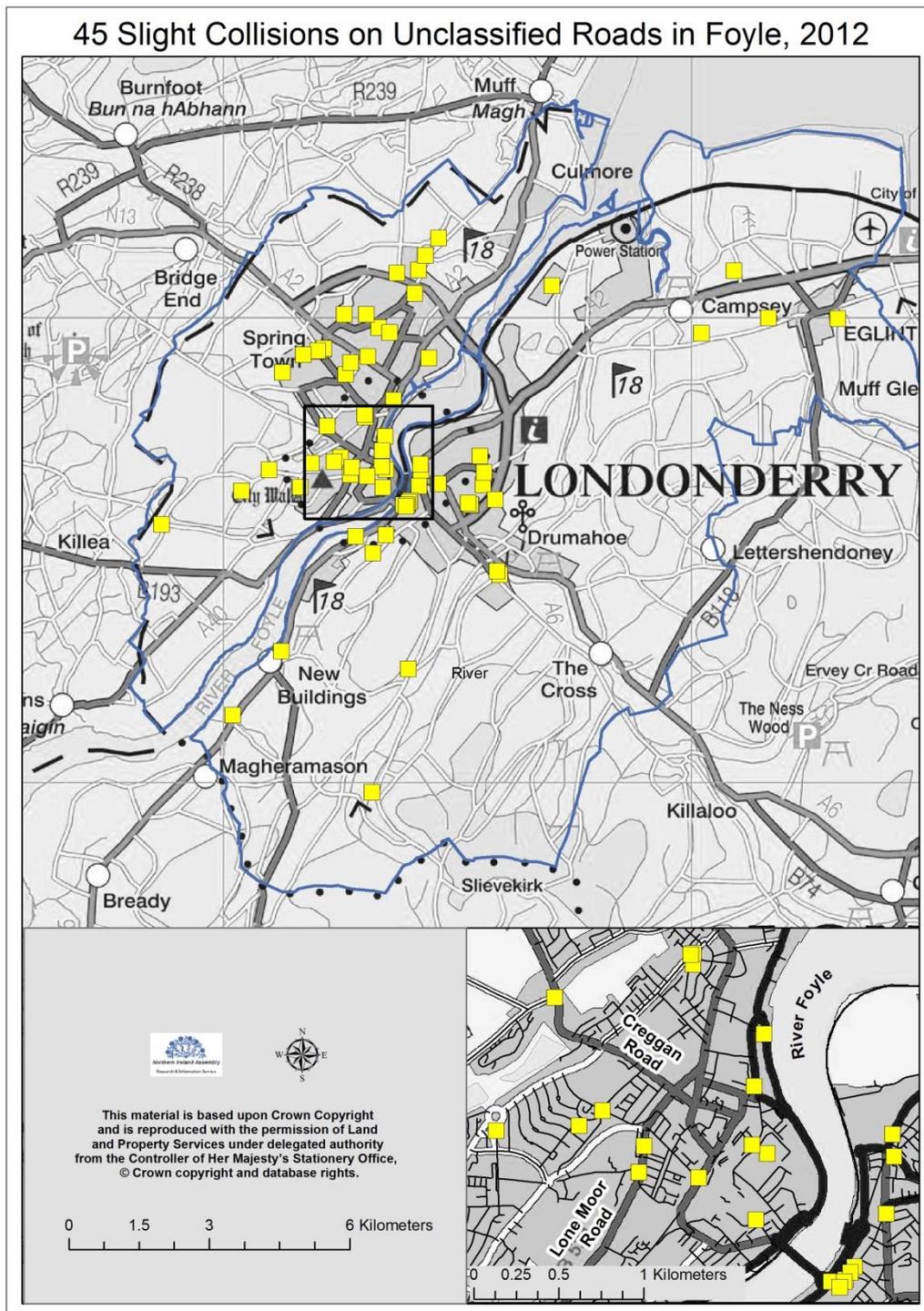
³ PSNI (2013) Police Recorded Injury Road Traffic Collisions and Casualties Northern Ireland: Detailed Trends Report 2012 [online] available from: <http://nia1.me/1v3>

⁴DoE (2013) Northern Ireland Road Safety Strategy to 2020: Statistical Report [online] available from: <http://nia1.me/1w7>

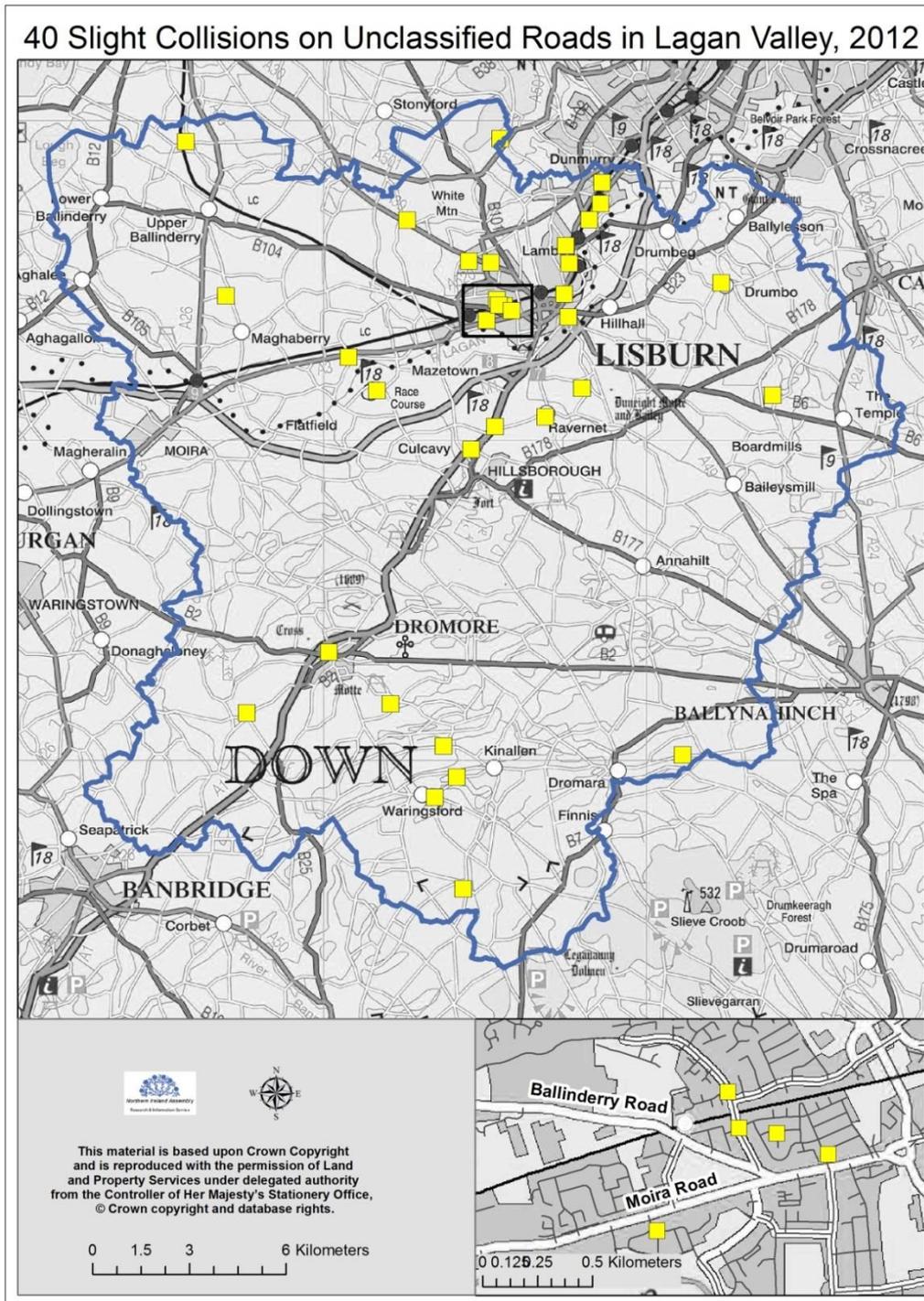
Number of persons killed or seriously injured by Police Area 2012



Map three below shows the location of the 45 slight collisions in the Foyle parliamentary constituency in 2012. In 2012, 45 out of 299 (15.1%) slight collisions in Foyle occurred on unclassified roads. A cursory analysis of this map shows a concentration of slight collisions in the L/Derry city centre area. While this is to be expected, due to the higher levels of road users, it could be used to demonstrate the benefits of introducing a 20mph speed limit across the city centre.



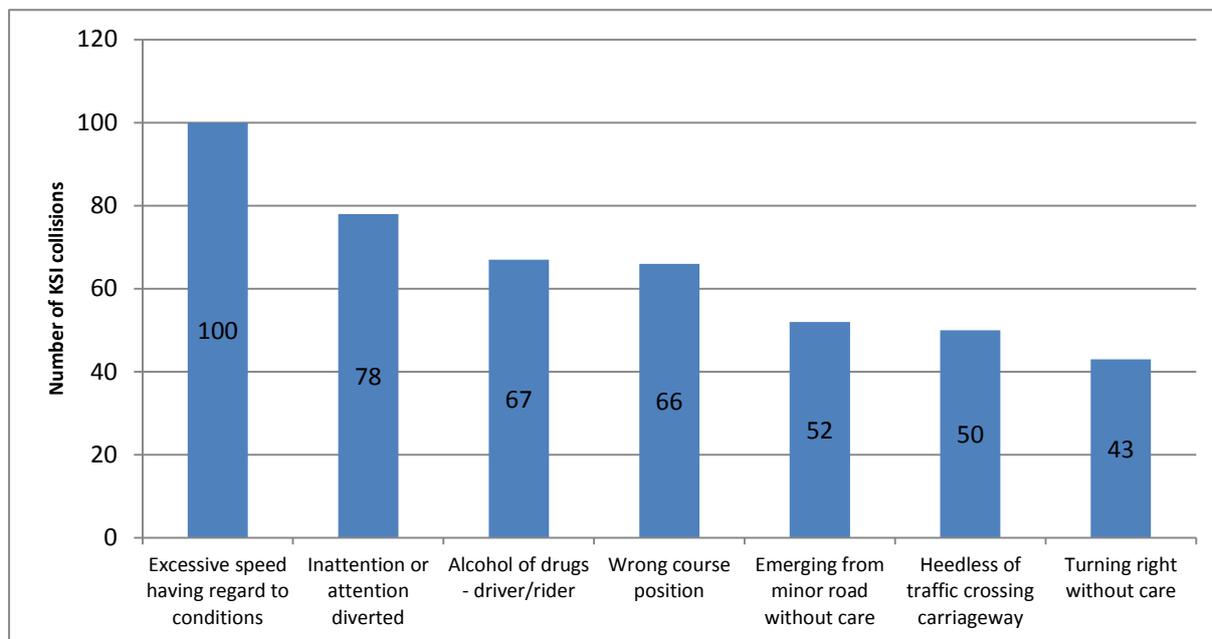
Map four shows the location of the 40 slight collisions in the Lagan Valley parliamentary constituency in 2012. In 2012, 40 out of 322 (12.4%) slight collisions in Lagan Valley occurred on unclassified roads. The fact there is no real pattern to the location of accidents supports an area wide approach to managing road safety.



3.4 What factors contribute most to accidents?

In Northern Ireland excessive speed was the main correlating factor for KSI collisions during 2012 (100 casualties or 16% of all KSI casualties), followed by ‘Inattention or attention diverted’ (78 KSI casualties) and ‘Impaired by alcohol/drugs – driver/rider’ (67 KSI casualties).⁵ Pedestrians are at fault for 15% of all KSI Casualties.

Figure 2: Main factors correlating with fatal and serious collisions in Northern Ireland, 2012



The main correlating factor of slight collisions and injuries is careless driving, this is a composite causation factor comprised of several causation factors including ‘inattention or attention diverted’ and ‘driving too close’. Speed is the main correlating factor in 6% of all IRTC while pedestrian fault is the main factor in 5.6% of IRTC.

Table 5: Police recorded injury road traffic collisions and casualties by causation factor type 2012

	KSI Collision	Slight Collision	Total	KSI Casualties	Slightly Injured	Total
Driver/Rider Fault						
Alcohol or drugs	53	209	262	67	388	455
Excessive Speed	76	227	303	100	448	548
Careless Driving	334	3,577	3,911	401	5,839	6,240
Other driver fault	42	202	244	54	389	443
Total	505	4,215	4,720	622	7,064	7,686
Passenger Fault	8	34	42	8	38	46
Pedestrian Fault	126	349	475	126	376	502
Vehicle Defects	13	46	59	17	75	92
Obstructions	4	22	26	4	46	50
Physical/Road	18	143	161	21	199	220
Weather	28	186	214	32	276	308
Miscellaneous	12	66	78	13	93	106
Total	714	5,061	5,775	843	8,167	9,010

⁵ Statistics Branch, Police Service of Northern Ireland, Lisnasharragh

4 Key points

- Overall Northern Ireland Roads are becoming safer, but while the number of KSIs is reducing, slight injuries are increasing.
- These are most likely to occur on A and B roads followed by U roads;
- Vulnerable road users are the worst affected:
 - Between 2005 and 2012 the number of pedestrians injured has increased by 20%;
 - In the same period there has been an 88% increase in the number of cyclists being injured;
 - The total number of IRTCs involving children and elderly people has increased by over 10% between 2008 and 2012;
- While you are more likely to be involved in an IRTC in an urban area, the severity of injury increases in rural areas;
- 21% of KSIs in 2012 occurred on unclassified roads, with the main concentration of IRTCs in town and cities;
- Speed is the main factor in fatalities and serious injuries; however overall it is the main correlating factor in only 6% of all IRTCs.

Annex 1: Police Recorded Injury Road Traffic Collision Statistics - Northern Ireland by Police District and Area 2011/12 and 2012/13

District	Area	Killed	Seriously Injured	Slightly Injured	Total Casualties	Killed	Seriously Injured	Slightly Injured	Total Casualties
A District	North Belfast	2	28	515	545	1	35	496	532
	West Belfast	0	25	457	482	1	31	454	486
	Total	2	53	972	1,027	2	66	950	1,018
B District	East Belfast	2	30	378	410	0	30	424	454
	South Belfast	1	47	564	612	1	40	548	589
	Total	3	77	944	1,022	1	70	972	1,043
C District	Ards	2	32	393	427	2	36	392	430
	Castlereagh	0	20	247	267	1	23	272	296
	Down	3	26	288	317	2	33	324	359
	North Down	0	18	311	329	1	21	295	317
	Total	5	96	1,239	1,340	6	113	1,283	1,402
D District	Antrim	4	19	254	277	4	26	240	270
	Carrickfergus	0	9	97	106	1	13	147	161
	Lisburn	2	53	599	654	4	59	578	641
	Newtownabbey	4	30	388	422	1	23	343	367
	Total	10	111	1,338	1,459	10	121	1,308	1,439
E District	Armagh	4	42	234	280	4	29	201	234
	Banbridge	0	18	160	178	2	19	172	193
	Craigavon	4	58	400	462	4	41	365	410
	Newry and Mourne	3	61	343	407	2	38	429	469
	Total	11	179	1,137	1,327	12	127	1,167	1,306
F District	Cookstown	1	17	139	157	0	12	131	143
	Dungannon	3	29	241	273	2	17	251	270
	Fermanagh	1	30	250	281	5	38	248	291
	Omagh	6	25	207	238	2	25	183	210
	Total	11	101	837	949	9	92	813	914
G District	Foyle	1	29	455	485	3	35	493	531
	Limavady	0	13	114	127	1	24	144	169
	Magherafelt	3	11	147	161	5	17	150	172
	Strabane	0	22	139	161	0	11	140	151
	Total	4	75	855	934	9	87	927	1,023
H District	Ballymena	2	29	233	264	3	24	293	320
	Ballymoney	1	18	85	104	0	9	102	111
	Coleraine	2	33	194	229	0	24	214	238
	Larne	1	26	105	132	0	22	88	110
	Moyle	0	8	35	43	1	24	70	95
	Total	6	114	652	772	4	103	767	874
NI Total		52	806	7972	8,830	53	779	8,187	9,019

Annex 2: Number of persons injured by road user and class of road – 1st January 2005 to 31st December 2012

Type of	Road	2005	2006	2007	2008	2009	2010	2011	2012
Pedestrians	A	242	282	265	339	324	255	316	312
	B	135	133	135	134	150	124	120	130
	C	61	89	69	76	83	91	90	82
	Motorway	1	3	0	0	0	2	1	0
	Unclassified	223	275	280	281	275	247	297	257
	Unknown	5	17	19	14	19	16	10	23
	Total	667	799	768	844	851	735	834	804
Drivers of motor vehicles	A	1,950	2,119	2,091	2,163	2,413	2,228	2,112	2,190
	B	1,003	1,106	1,119	1,112	1,166	1,085	1,033	1,011
	C	482	539	572	630	618	560	521	635
	Motorway	114	161	188	174	173	152	174	184
	Unclassified	633	654	823	807	734	661	589	678
	Unknown	17	30	57	48	24	31	33	42
	Total	4,199	4,609	4,850	4,934	5,128	4,717	4,462	4,740
Motorcyclists	A	179	186	203	200	206	181	161	141
	B	92	86	83	78	75	69	80	67
	C	49	55	40	61	43	44	38	24
	Motorway	3	2	7	6	7	2	3	5
	Unclassified	85	76	110	108	82	75	61	49
	Unknown	3	4	7	4	1	4	3	3
	Total	411	409	450	457	414	375	346	289
Pedal cyclists	A	60	56	92	70	79	80	109	112
	B	24	33	37	35	35	38	38	50
	C	11	17	16	18	18	32	25	29
	Motorway	0	0	1	0	1	1	1	0
	Unclassified	51	63	70	79	64	61	73	77
	Unknown	1	2	4	4	8	2	9	9
	Total	147	171	220	206	205	214	255	277
Passengers	A	1,308	1,510	1,398	1,403	1,429	1,399	1,330	1,282
	B	559	667	645	603	668	558	577	613
	C	254	330	323	344	353	309	300	362
	Motorway	78	100	102	102	77	85	81	90
	Unclassified	472	496	582	565	537	467	473	467
	Unknown	8	21	25	23	17	19	26	21
	Total	2,679	3,124	3,075	3,040	3,081	2,837	2,787	2,835
Pillion passengers	A	6	12	11	9	10	6	6	7
	B	3	6	0	2	4	6	4	3
	C	2	4	1	2	2	5	1	0
	Motorway	1	0	0	2	0	0	0	0
	Unclassified	6	7	9	8	4	2	4	3
	Unknown	0	1	0	1	0	0	0	1
	Total	18	30	21	24	20	19	15	14
Other road users	A	14	5	17	6	26	23	25	23
	B	9	12	15	8	16	9	14	4
	C	3	8	6	11	12	12	6	15
	Motorway	0	0	0	4	0	2	1	0
	Unclassified	12	15	12	14	12	12	12	9
	Unknown	0	0	2	3	2	2	3	0
	Total	38	40	52	46	68	60	61	51
Total	A	3,759	4,170	4,077	4,190	4,487	4,172	4,059	4,067

	B	1,825	2,043	2,034	1,972	2,114	1,889	1,866	1,878
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	Total	8,159	9,182	9,436	9,551	9,767	8,957	8,760	9,010

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