



City of Melbourne Crash Statistics Analysis

Crash Analysis Report

Client:

City of Melbourne

Project No. 190501

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1 INTRODUCTION

Trafficworks has been engaged by the City of Melbourne to analyse the crash statistics within the municipality using the past 10 years (2010 – 2019) of available data from the Road Crash Information System (RCIS). The purpose of this analysis is to understand the trends and nature of road crashes within the municipality and compare it to the wider Melbourne Metropolitan area.

Factors taken into consideration for the analysis include number of crashes, crash type, severity, location, age and number of persons involved, road user type, type of road where crashes have occurred and time of day that the crashes have occurred.

2 Methodology

2.1 Data source

Information used for the crash statistics analysis was sourced from Road Crash Information System (RCIS). This provides detailed information on individual road accidents that have occurred over the requested time period and locations. The last 10 years of crash information (2010-2019) over the whole Melbourne Metropolitan area was provided to Trafficworks from the City of Melbourne to determine crash trends and characteristics in the relevant area. As the records from RCIS for the year 2019 only includes the first six months of the year, this data was doubled as a means of extrapolation to represent the dataset for 2019.

2.2 Crash details

Number of crashes

Each crash is determined by their unique accident number. Each person involved in a crash with the same accident number are treated as being involved in the same crash. Thus, the number of crashes is lower than the number of persons involved.

Location

Crash trends across the City of Melbourne are compared to the overall Melbourne Metropolitan area. Crashes in the Hoddle Grid are also analysed as a subset of the data and compared to the overall City of Melbourne.

Road type

Analysis of road type where crashes have occurred include arterial roads, against council managed roads, intersection against midblock and little streets in the CBD against their equivalent major streets. Little streets include Flinders Lane, Little Bourke Street, Little Collins Street and their equivalent major streets include Flinders Street, Little Bourke Street, Collins street and Lonsdale Street. Where an arterial road intersects a council managed road, crashes at the intersection are taken to be on the arterial road.

Time

The time of crashes are classified by the year and time of day it occurred. Times of day are broken into hourly intervals over the 24-hour period. Crashes were also broken down into daytime or night crashes based on individual report as retrieved from RCIS.

Crash characteristics

Crashes are analysed based on type and severity. Crash types were determined based on Definition for Classifying Accidents (DCA) as reported for each accident in the dataset. Crash severities were broken into fatal crashes, serious injury crashes (injuries requiring hospitalization) and other injury crashes (not a fatal or serious crash).

Road user characteristics

Road users involved in crashes are classified based on type - driver, passenger, motorcyclist (including pillion), cyclist or pedestrian, and age of persons involved.

Daily population

The daily population estimate for each year was plotted against crash numbers. Data was taken from the City of Melbourne Daily Population Estimates and Forecasts (2017).

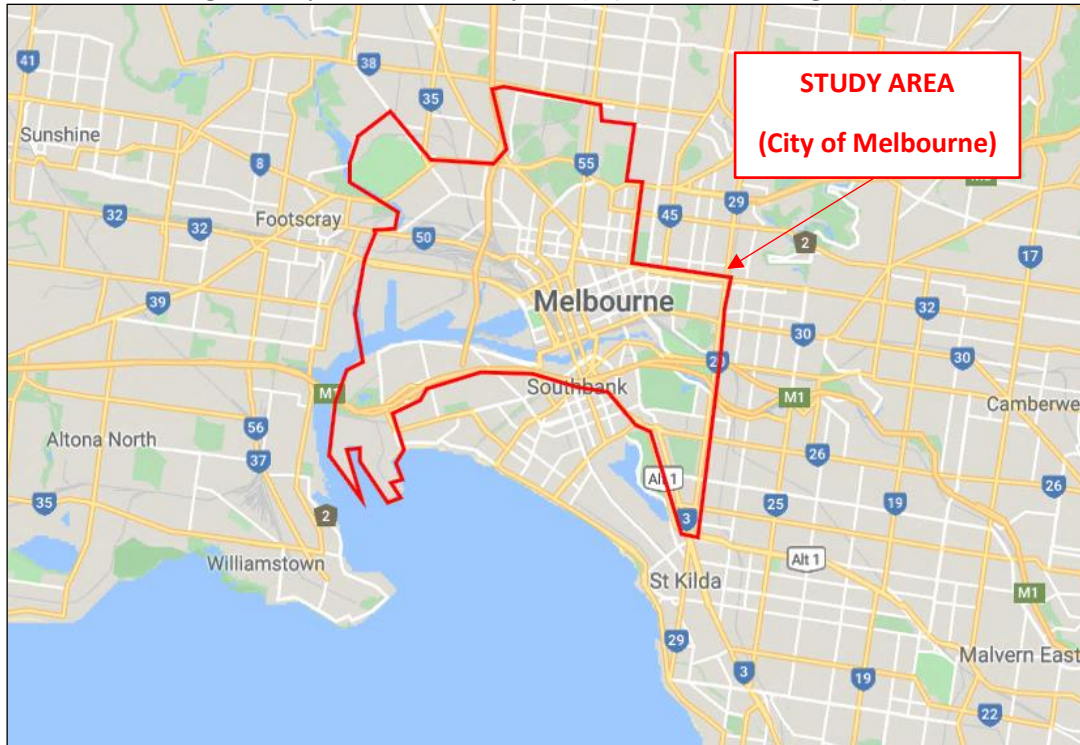
Crash maps

Maps showing the location of serious and fatal crashes in the City of Melbourne from VicRoads Crash Statistics provided in the report. There is one map for each road user type. The time range of data is from 2014 to the first half of 2019 as available by VicRoads Crash Statistics.

3 Study Area

The primary study area is within the municipality under the authority of the City of Melbourne (see Figure 1 below).

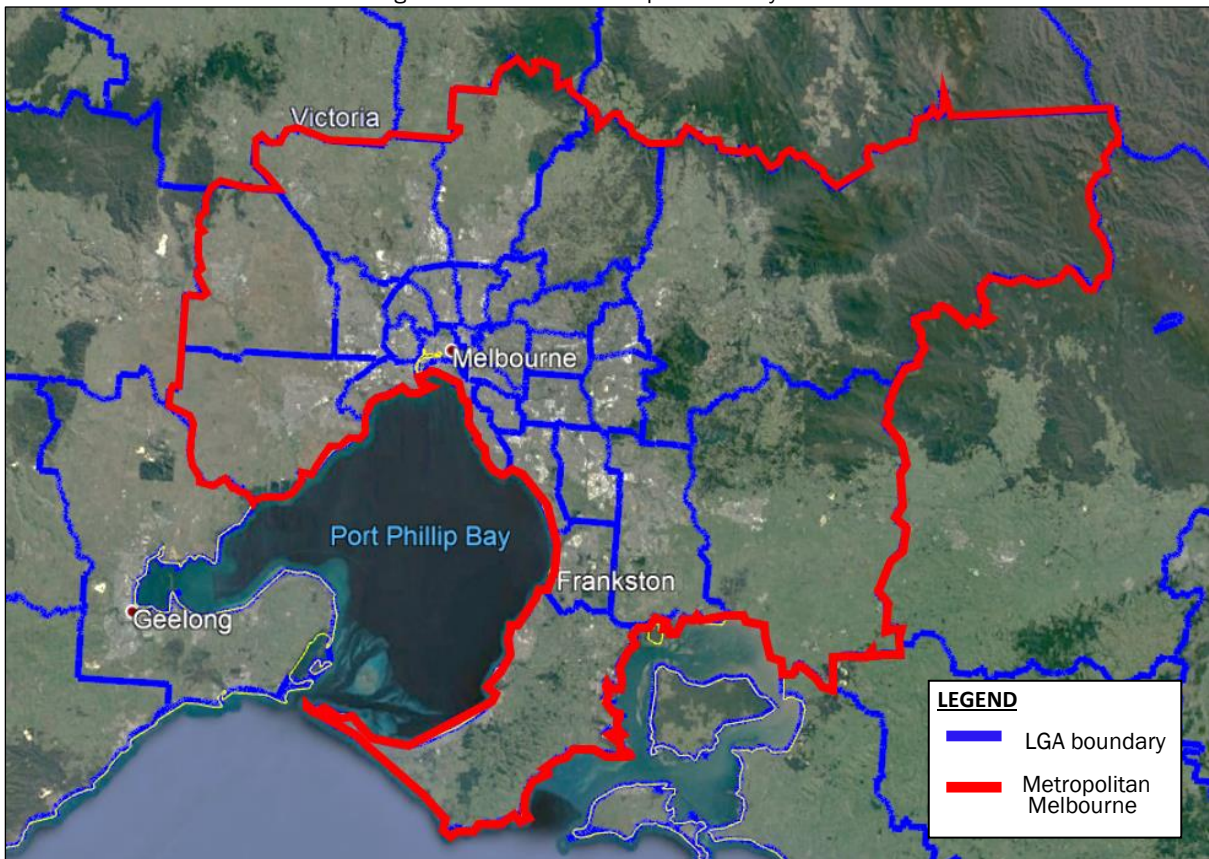
Figure 1: City of Melbourne Study Area (Reproduced from Google Maps)



The crash data for the wider metropolitan Melbourne was also analysed. The wider metropolitan Melbourne area includes the 31 metropolitan municipalities within Melbourne, as listed below. This study area is shown in Figure 2 below.

Metropolitan Melbourne Local Government Authorities		
1. City of Banyule	12. City of Kingston	23. City of Stonnington
2. City of Bayside	13. City of Knox	24. City of Whitehorse
3. City of Boroondara	14. City of Manningham	25. City of Whittlesea
4. City of Brimbank	15. City of Maribyrnong	26. City of Wyndham
5. City of Casey	16. City of Maroondah	27. City of Yarra
6. City of Darebin	17. City of Melbourne	28. Shire of Cardinia
7. City of Frankston	18. City of Melton	29. Shire of Mornington Peninsula
8. City of Glen Eira	19. City of Monash	30. Shire of Nillumbik
9. City of Greater Dandenong	20. City of Moonee Valley	31. Shire of Yarra Ranges
10. City of Hobsons Bay	21. City of Moreland	
11. City of Hume	22. City of Port Phillip	

Figure 2: Melbourne Metropolitan Study Area

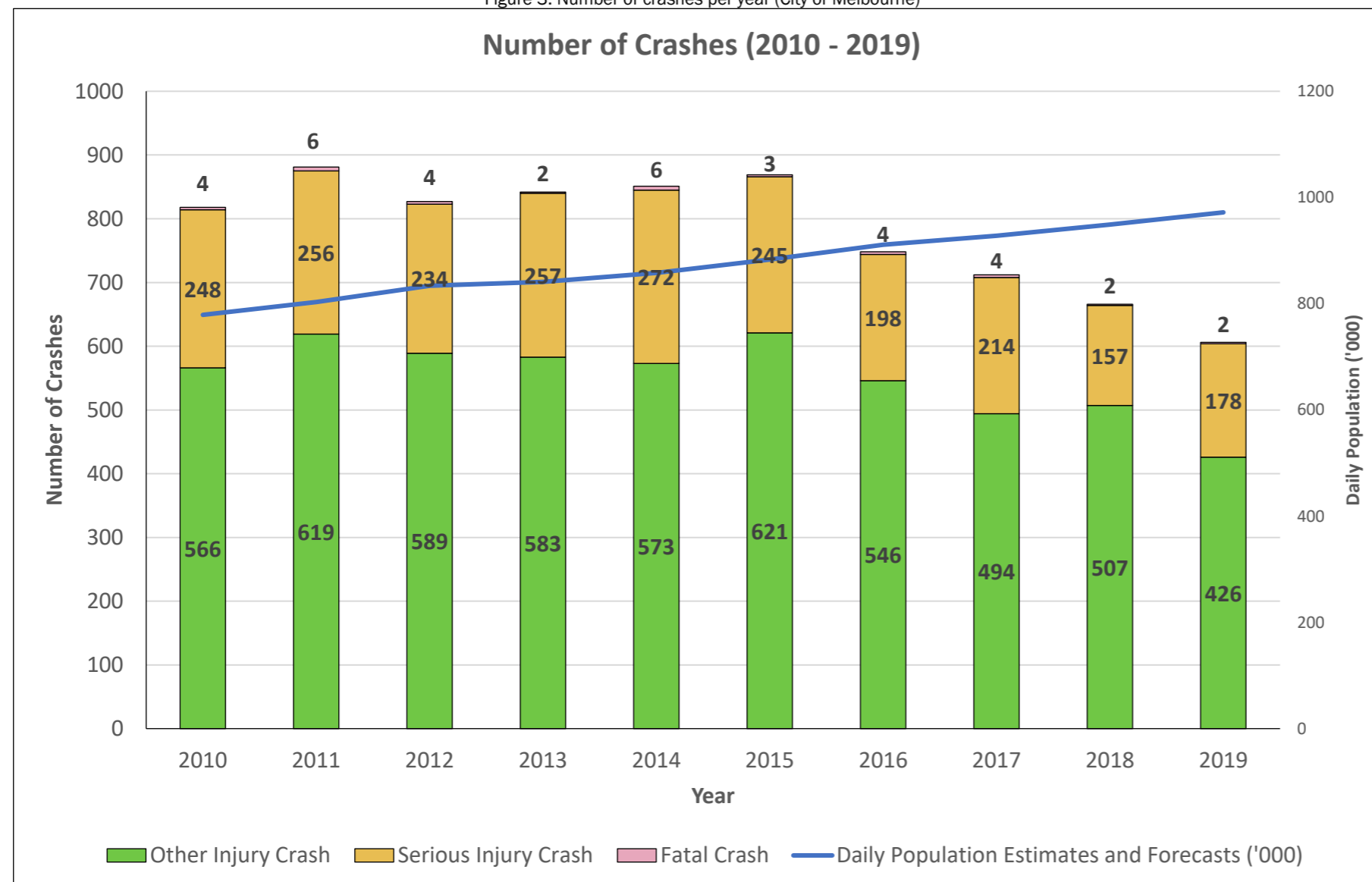


4 Statistical overview – City of Melbourne

4.1 Crashes within the City of Melbourne

An overview of the crash analysis within the Melbourne LGA are provided in Figures 3 to 13 below.

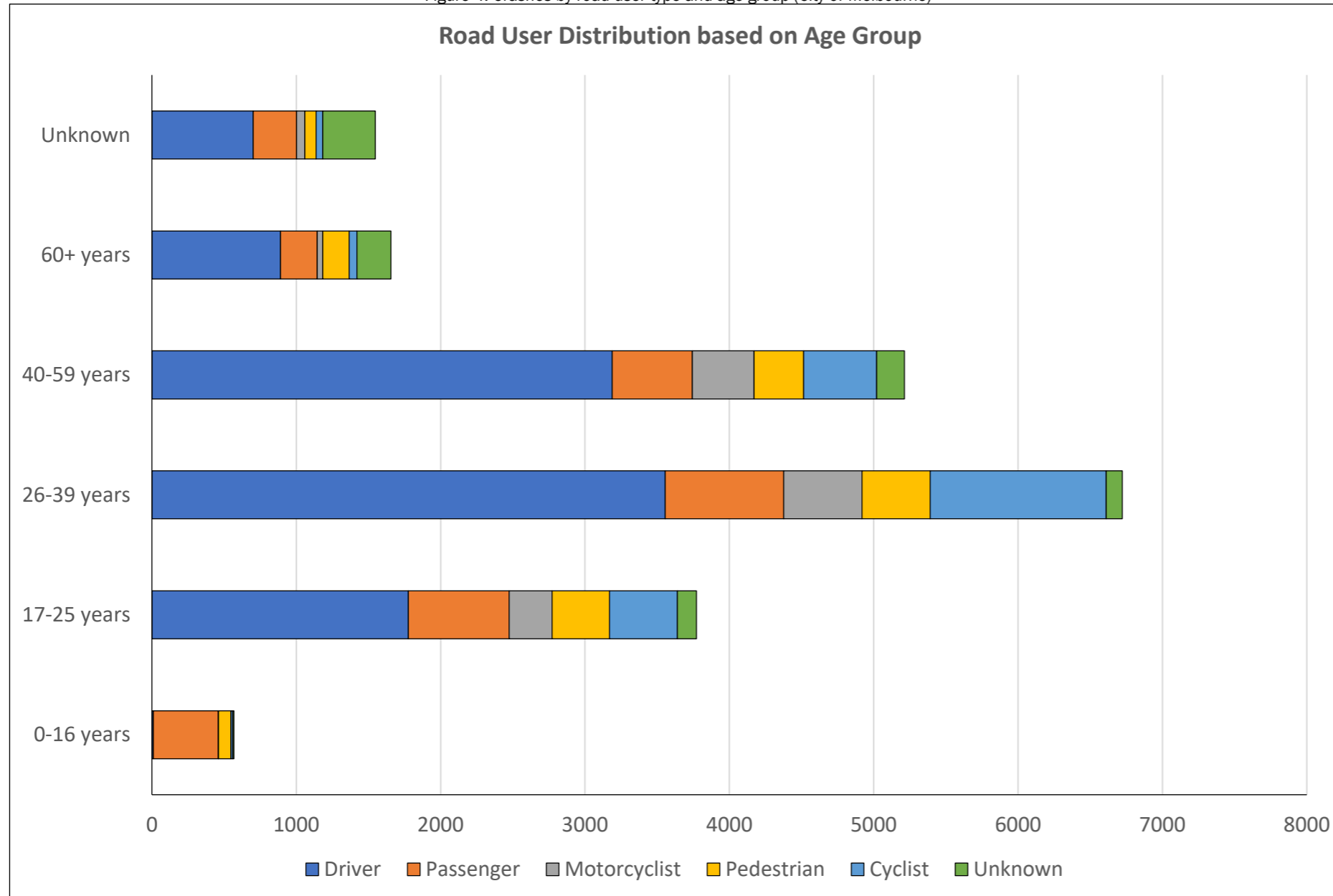
Figure 3: Number of crashes per year (City of Melbourne)



- The number of crashes per year have been trending downwards over the last ten years even though the daily population estimates are trending upwards. This shows that the number of crashes per capita have been decreasing.
- There were a higher number of serious injury crashes in 2019 compared to 2018 despite a lower number of crashes overall. This suggests that crashes in 2019 tended to be more severe.

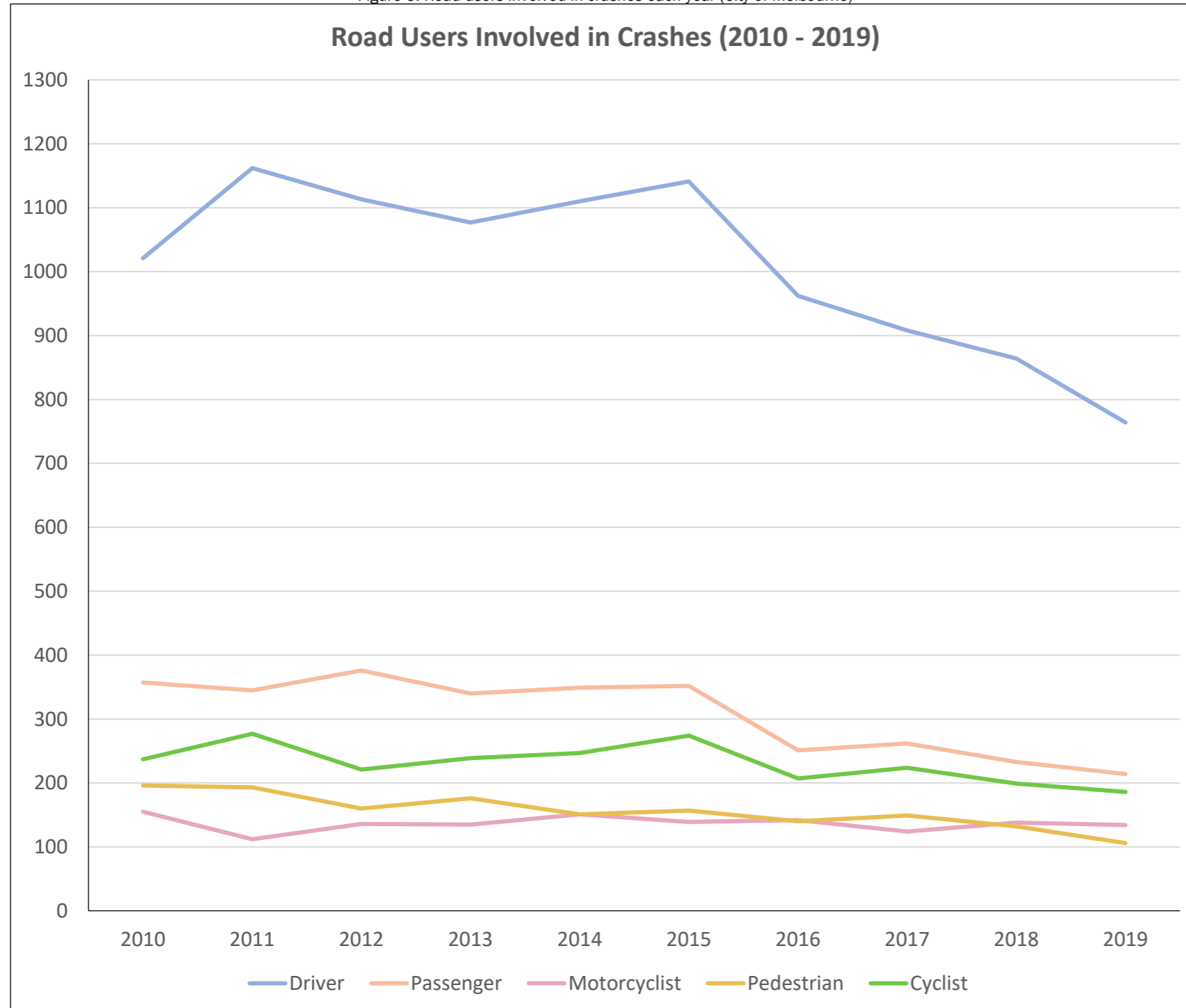
Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

Figure 4: Crashes by road user type and age group (City of Melbourne)



- The greatest proportion of road users involved in crashes are aged between 26 – 39 years old.
- Crashes involving vehicles represent the highest proportion of crashes for all age groups
- Most cyclist related crashes are also represented in the 26 – 39-year-old age group. This may be reflective of the younger age demographic among cyclists.

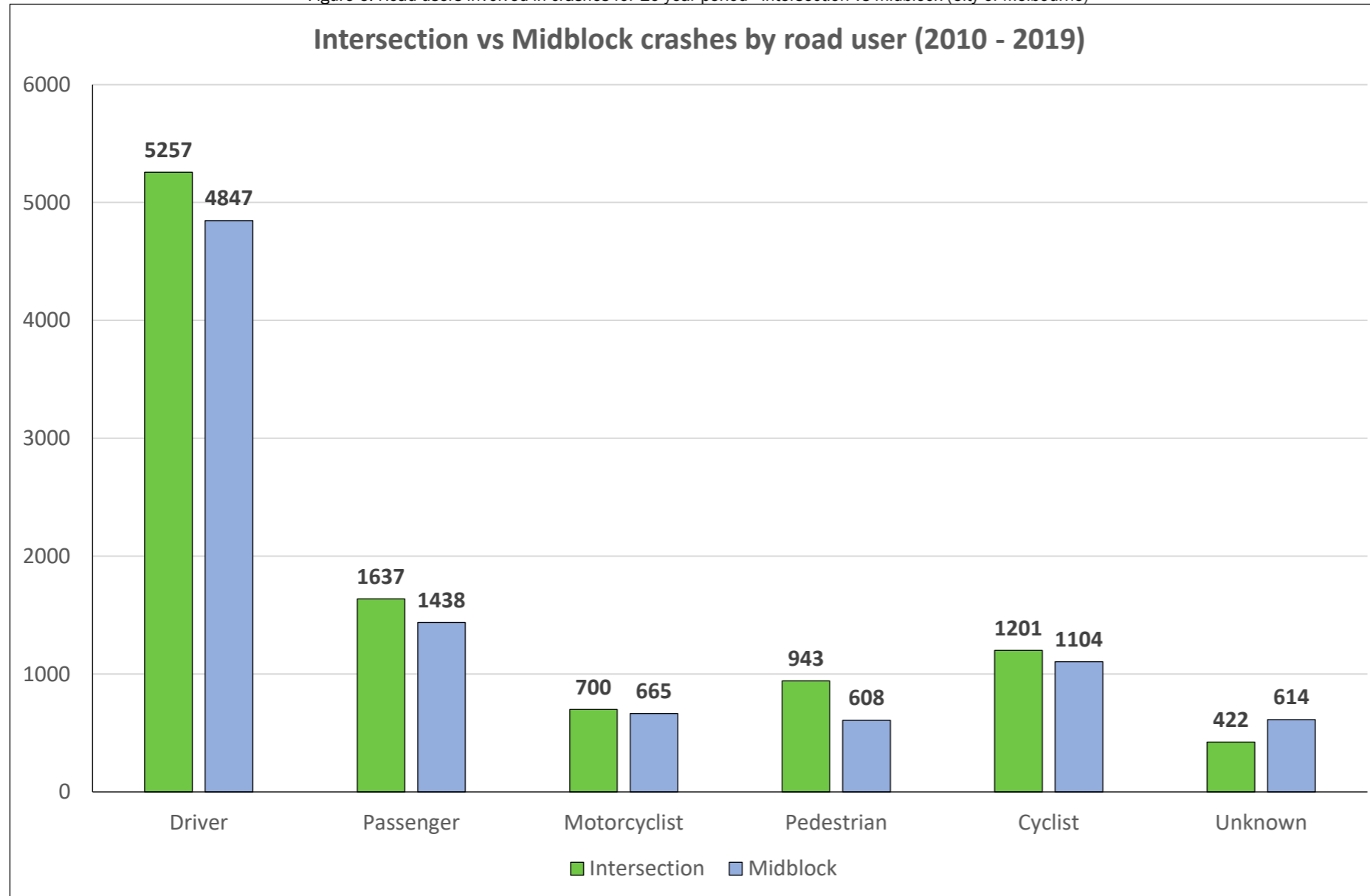
Figure 5: Road users involved in crashes each year (City of Melbourne)



- All road user type crashes are mainly trending downwards over the ten-year period.
- After 2015, the number of road users involved in crashes sharply dropped except for motorcyclists, which increased from 2017 to 2018.
- This may suggest that motorcycle safety treatments may not have been prioritised, or that the number of motorcyclists may have increased

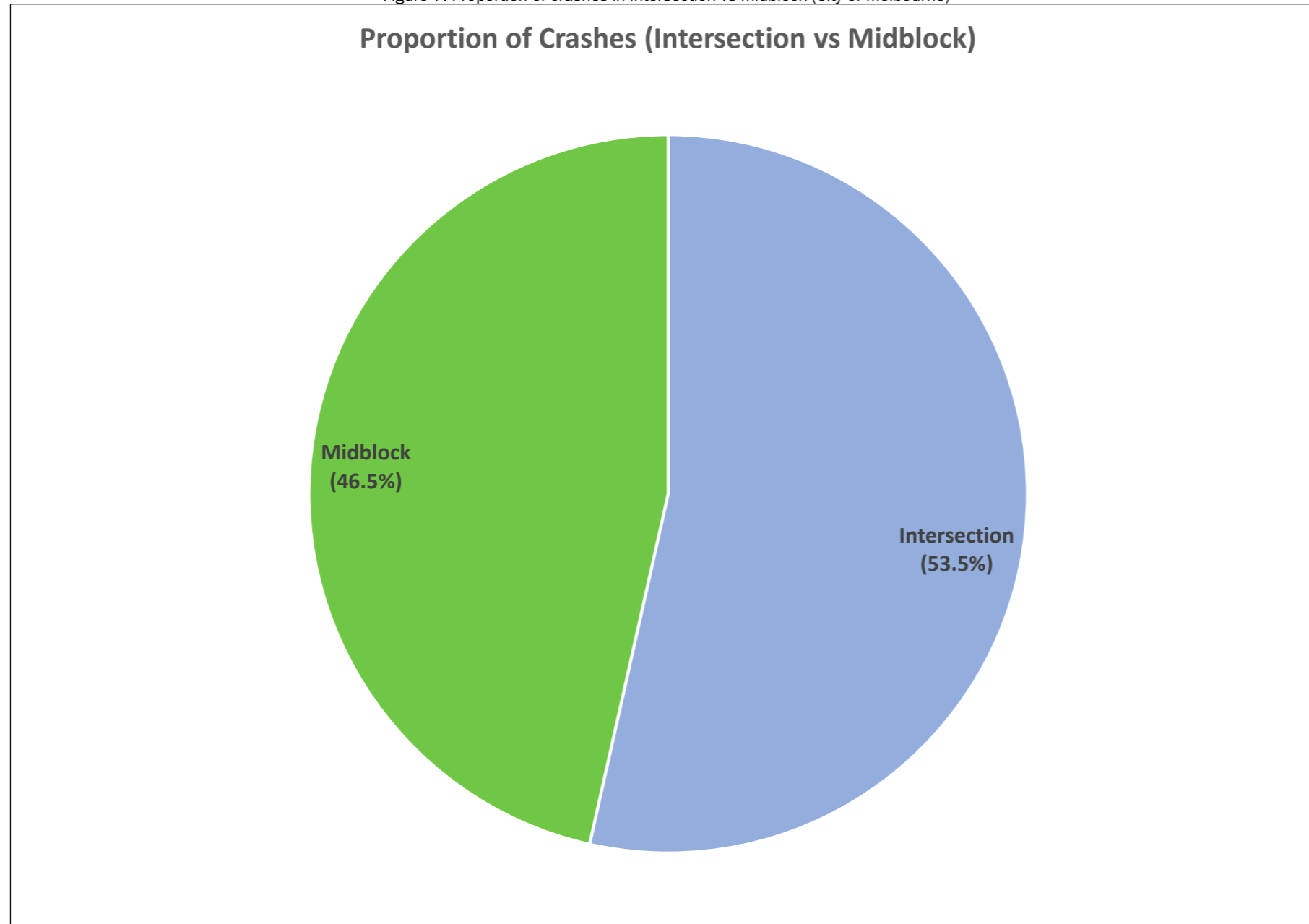
Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

Figure 6: Road users involved in crashes for 10 year period - intersection vs midblock (City of Melbourne)



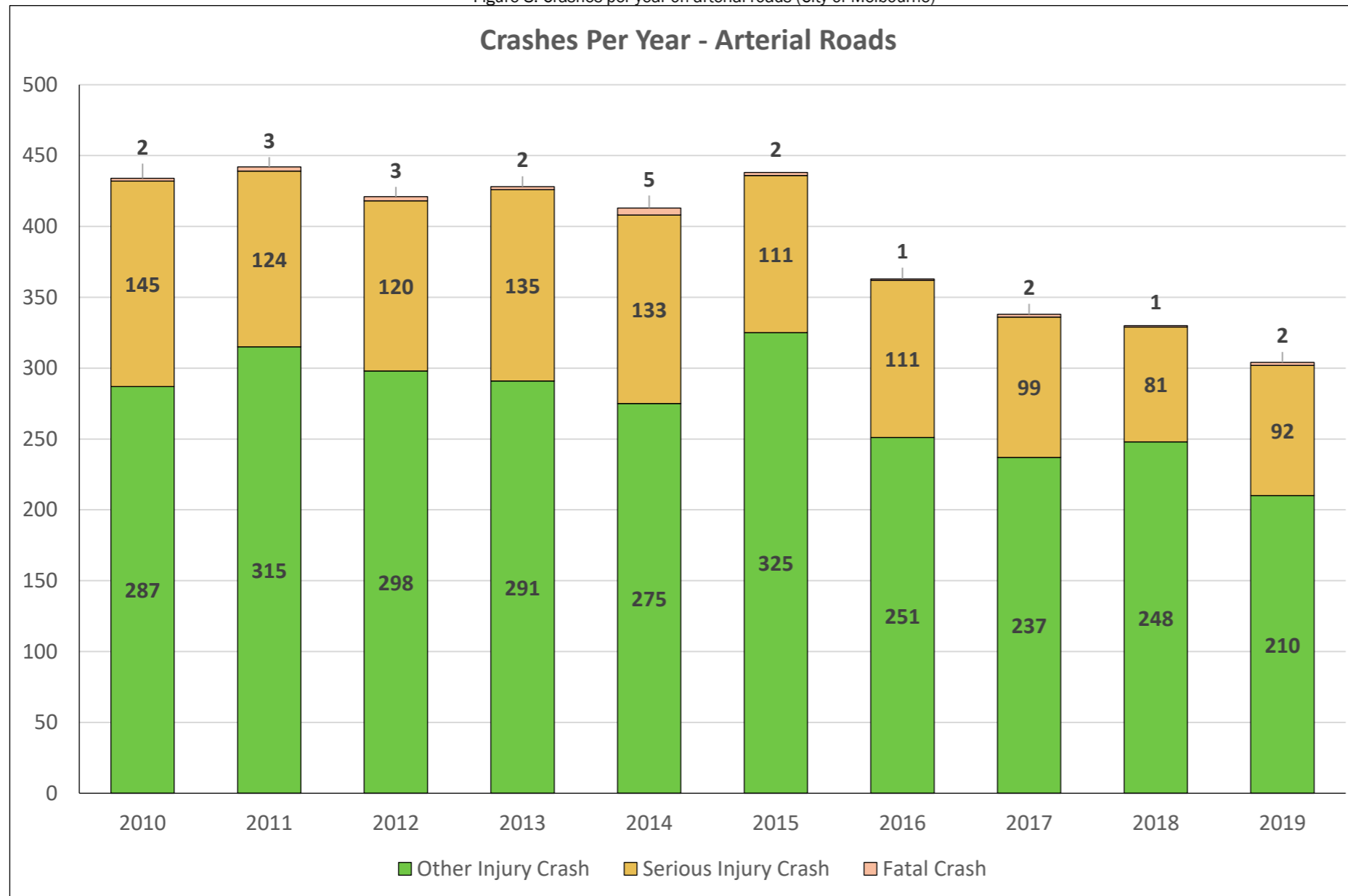
- The number of crashes are generally higher at intersections for all road users
- The number of pedestrian related crashes differ the most, with significantly more pedestrian crashes occurring at intersections than at midblock
- The number of cyclist and motorcyclist related crashes did not differ much when comparing between locations, suggesting that they may be equally vulnerable at both intersections and midblock.

Figure 7: Proportion of crashes in intersection vs midblock (City of Melbourne)



- There were more crashes occurring at intersections as opposed to midblock.
- This may be due to more conflicting movements between road users at intersections.

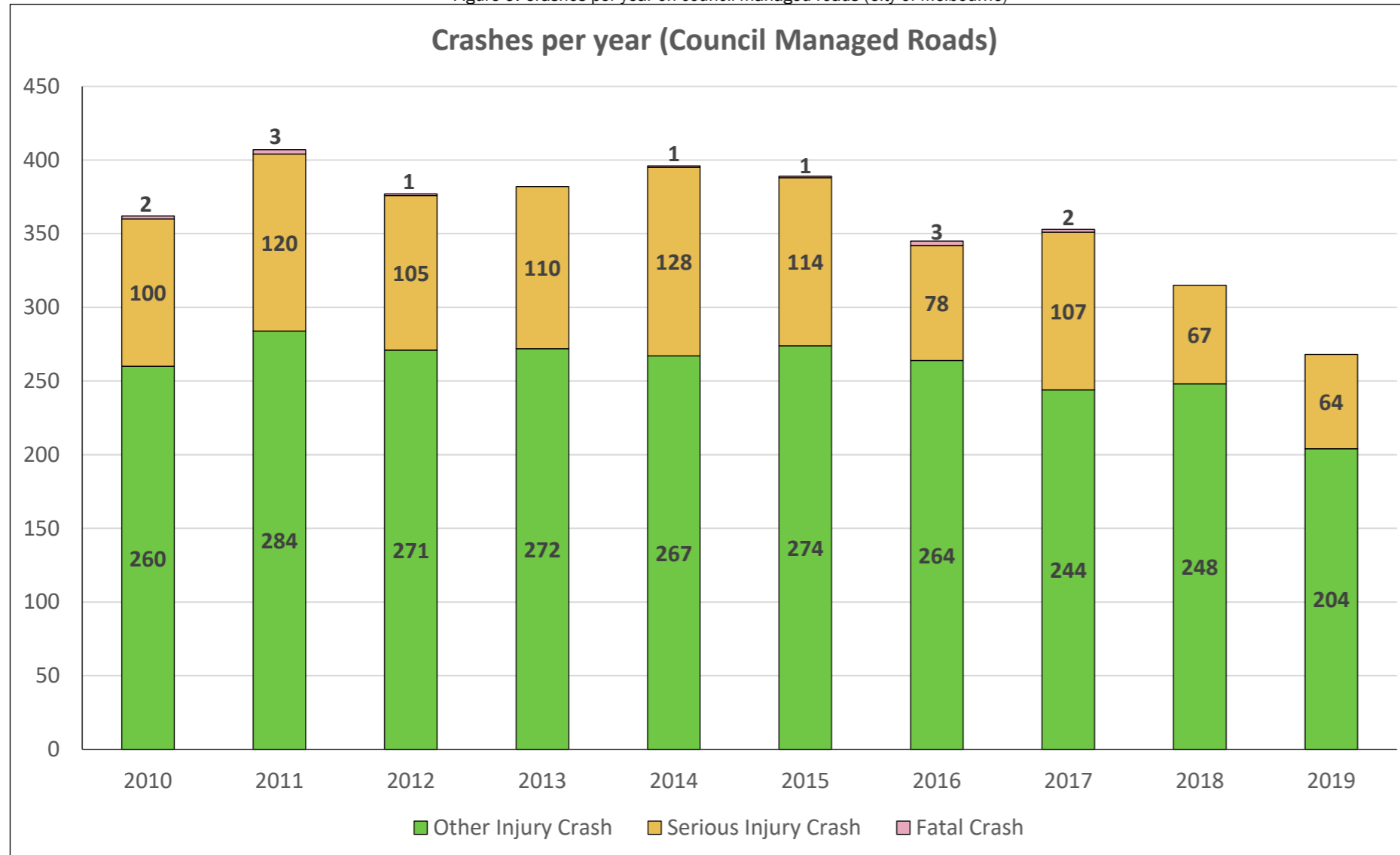
Figure 8: Crashes per year on arterial roads (City of Melbourne)



- The number of crashes on arterial roads within the City of Melbourne LGA have been decreasing each year, which is reflective of the overall downward trend across the municipality.
- There was an increase in the number of serious injury and fatal crashes in 2019 over 2018, suggesting that the severity of crashes on arterial roads within the municipality had increased.

Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

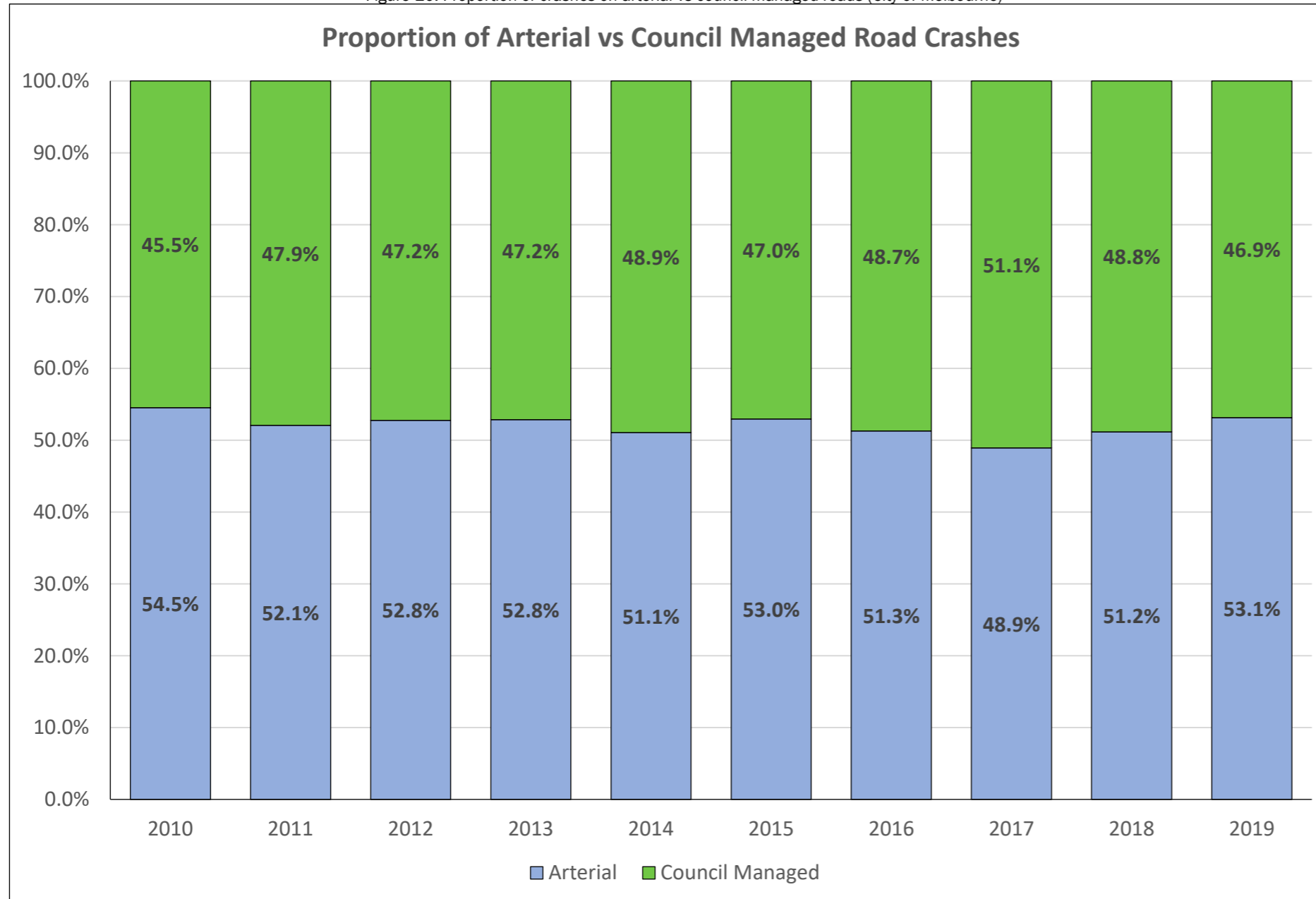
Figure 9: Crashes per year on council managed roads (City of Melbourne)



- Crashes on Council managed roads within the City of Melbourne LGA have been generally decreasing over the years, reflective of the overall downward trend.
- The number of serious injury crashes in 2019 were about the same as 2018. This suggests that the severity of crashes for council managed roads did not increase in 2019 in contrast to the overall upward trend for the municipality.
- This finding indicates that the number of casualties only increased on arterial roads and not on Council managed roads from 2018 to 2019.

Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

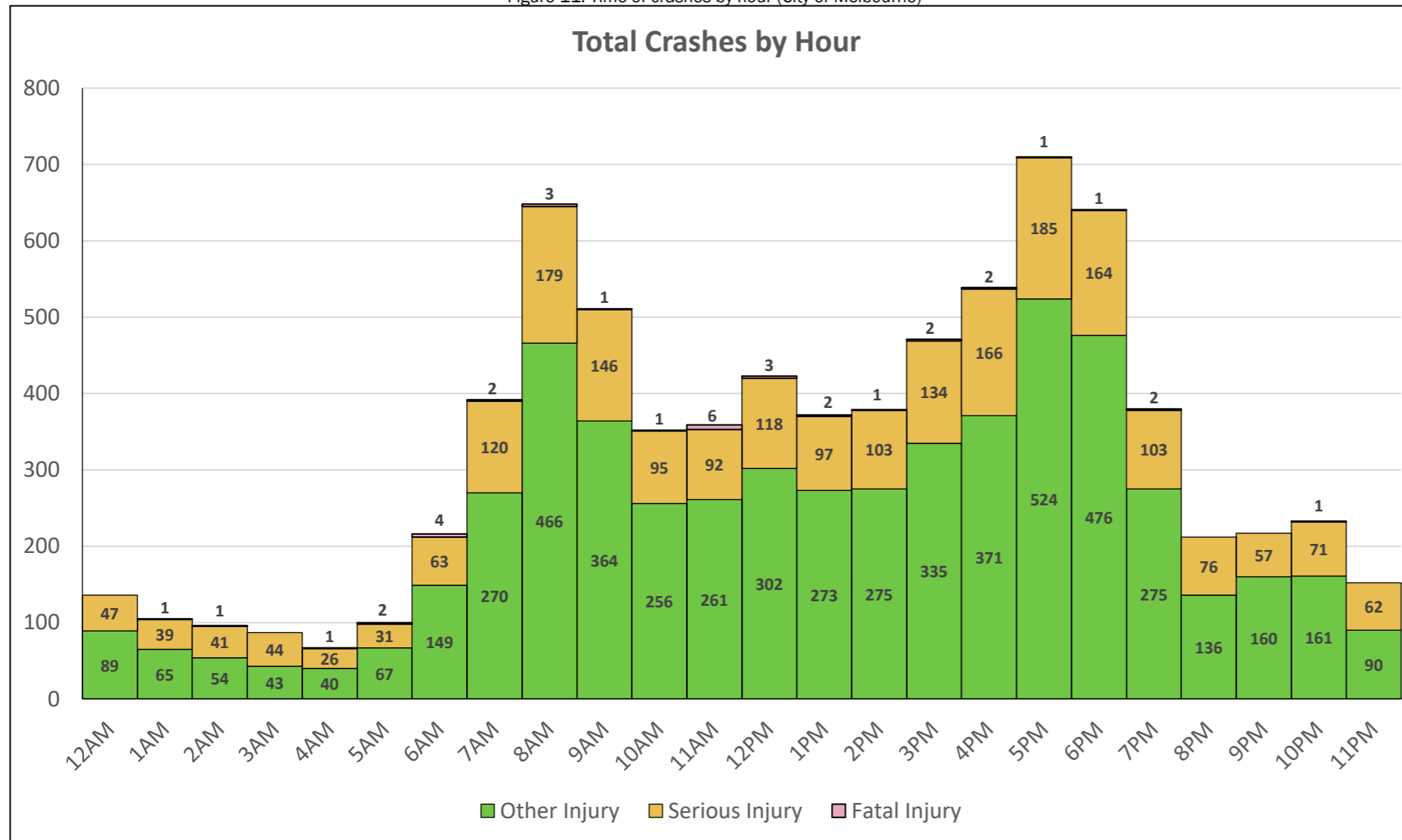
Figure 10: Proportion of crashes on arterial vs council managed roads (City of Melbourne)



- The trend of the proportion of crashes on arterial roads vs Council managed roads are generally consistent every year. There are generally slightly more crashes on arterial roads compared to council managed roads.
- Factors contributing to this could be the higher traffic volumes, travel speeds and levels of congestion on arterial roads.

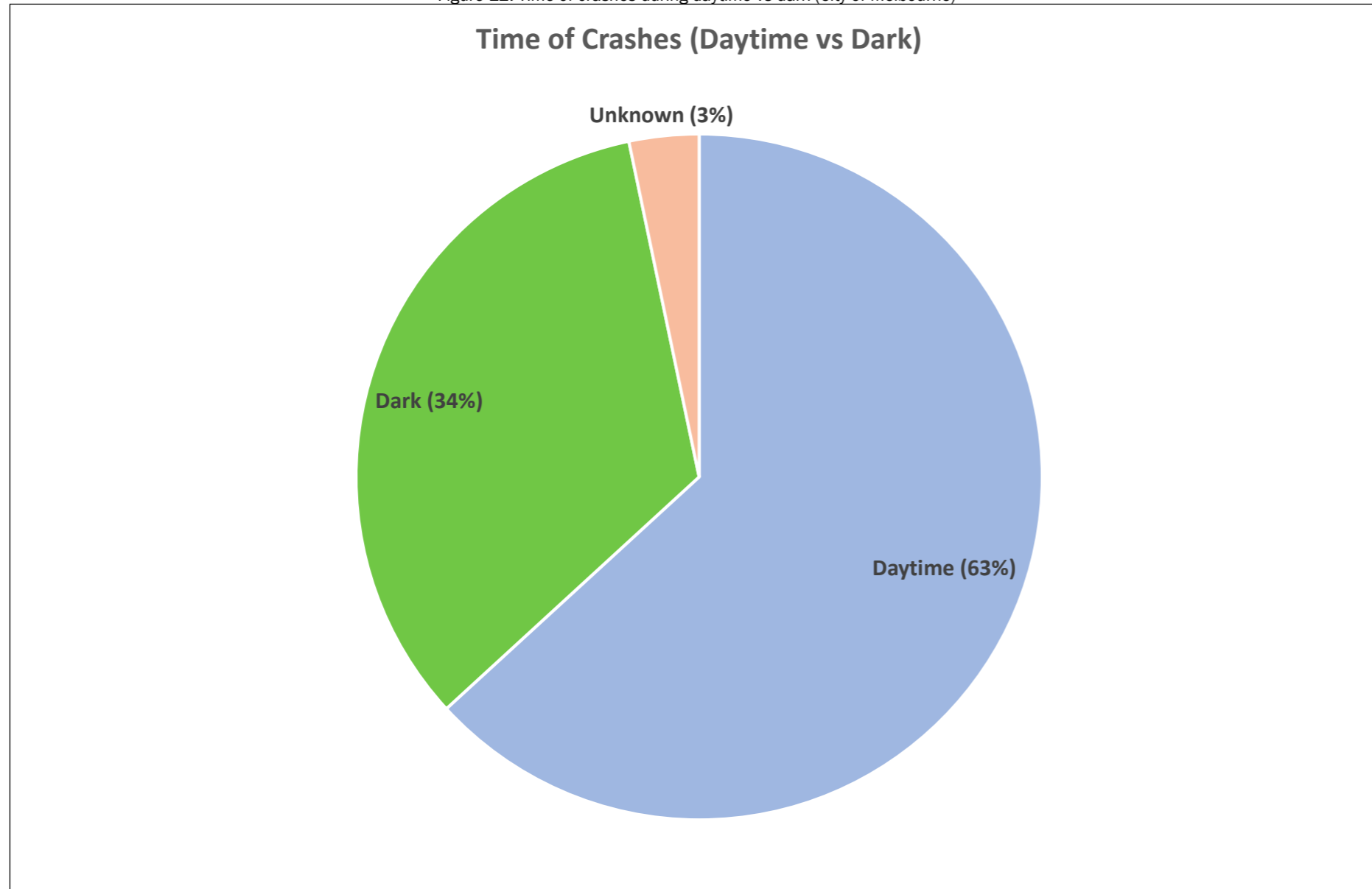
Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

Figure 11: Time of crashes by hour (City of Melbourne)



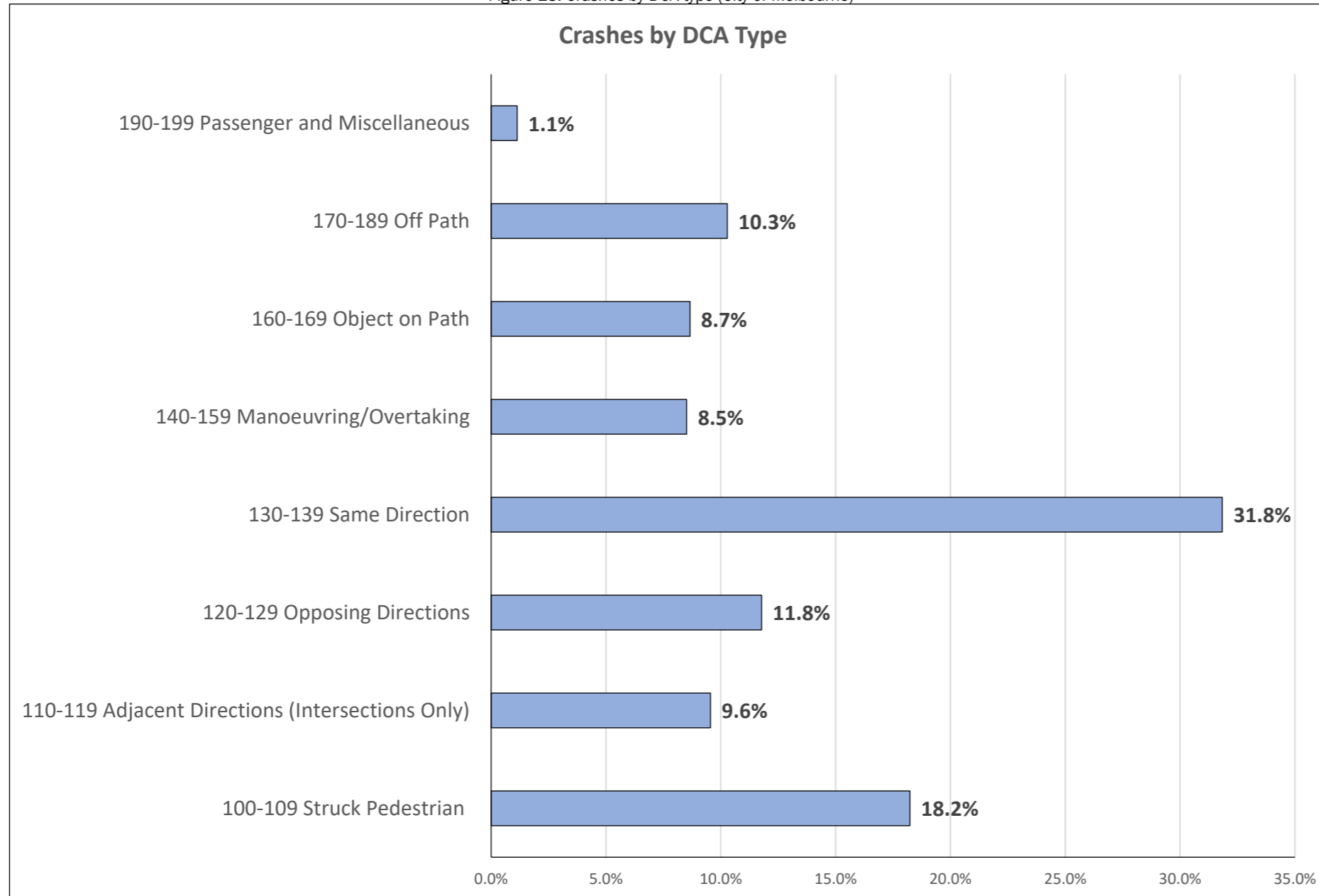
- The most frequent times for crashes occurring included part of the morning peak (8 - 9 am) and the evening peak (5 - 6 pm).
- This is likely due to higher traffic volumes, exposing more road users to risk. However, the proportion of serious injury or fatal crashes during the peak hours were lower (26 - 28%) compared to other times. This suggests a high number of low speed crashes occur during peak traffic times.
- Approximately 30 - 50% of crashes that occurred between 11 pm and 6 am were serious or fatal. This could be due to low light conditions during the night, higher speeds that result with less vehicles on the roads and/or intoxicated road users.

Figure 12: Time of crashes during daytime vs dark (City of Melbourne)



- There were approximately twice as many crashes during daylight hours as compared to dark hours.
- There are less people using the roads at night, thus, the number of crashes per distance travelled at these times may be higher.

Figure 13: Crashes by DCA type (City of Melbourne)

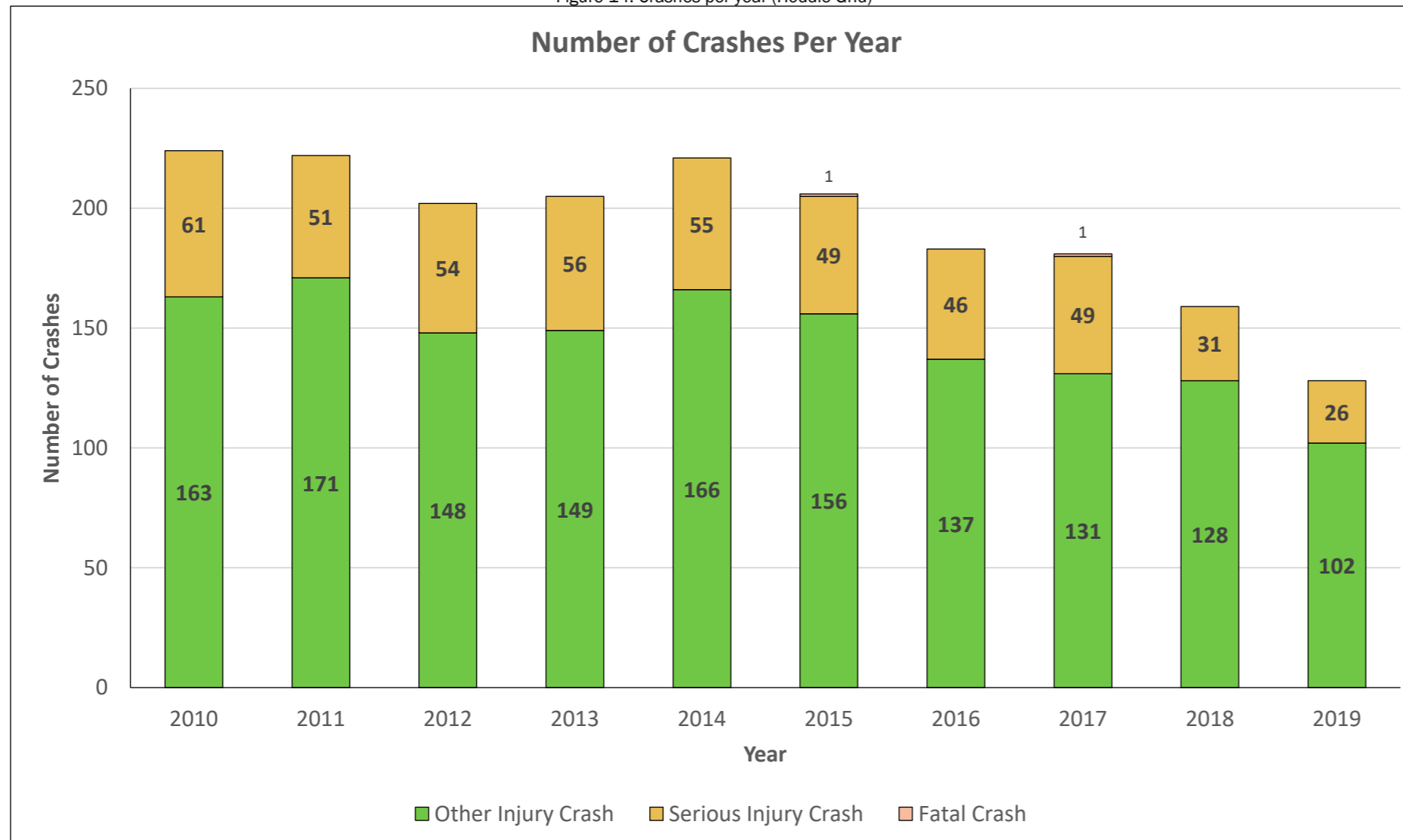


- The greatest proportion of crashes within the City of Melbourne LGA involved vehicles travelling in the same direction (i.e. rear end crashes), representing 32 % of crashes.
- The second greatest proportion of crashes within the City of Melbourne LGA involved pedestrians being struck, representing 18 % of crashes.
- Vehicles running off the road into a rigid object and cross traffic type crashes represent the third highest proportion of crashes (10 %).

4.2 Crashes within the Hoddle Grid

Summaries of the results of the crash analysis within the Hoddle Grid are provided in Figures 14 to 18 below.

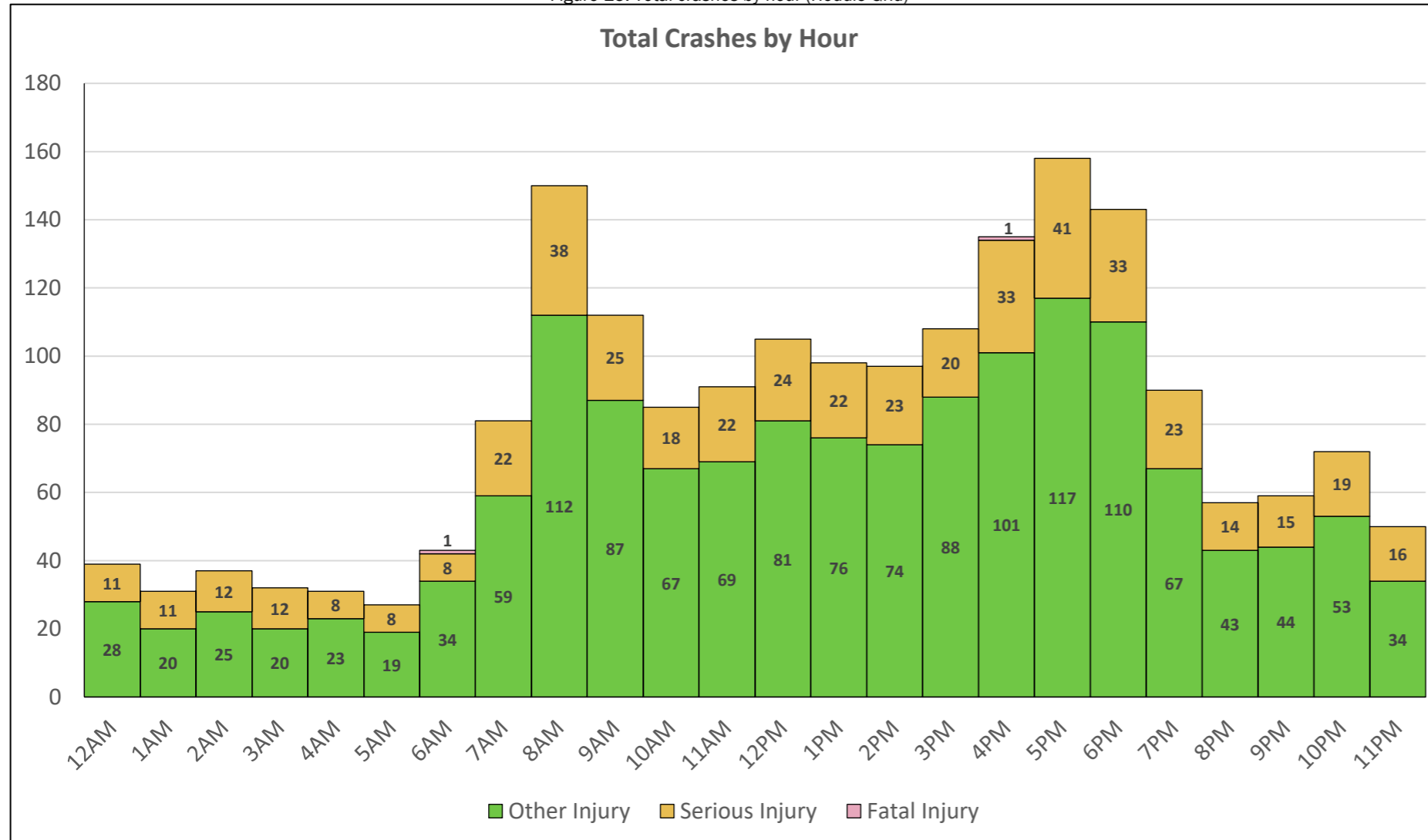
Figure 14: Crashes per year (Hoddle Grid)



Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

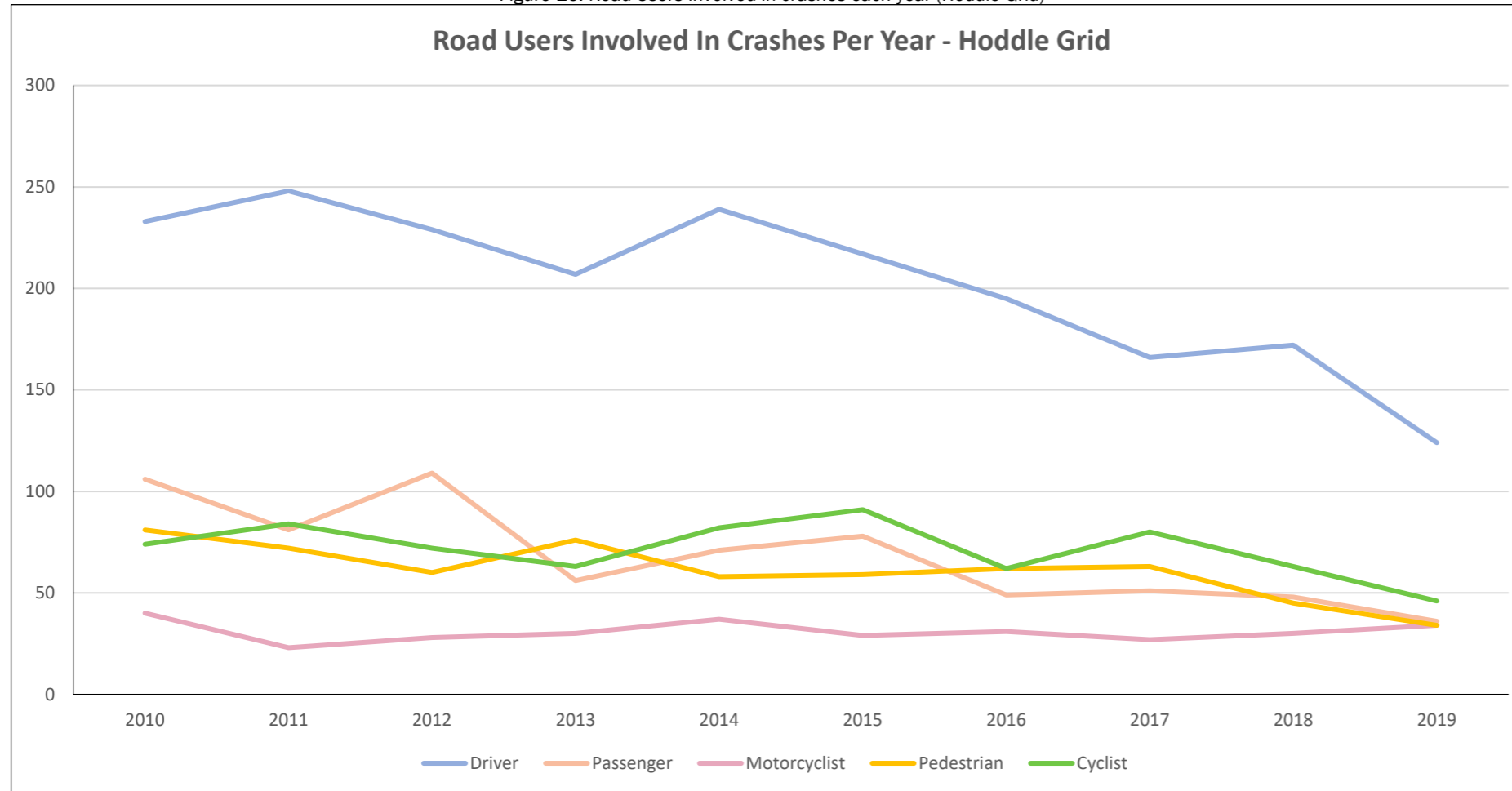
- The overall number of crashes within the Hoddle Grid has followed the general downward trend of the municipality.
- There were fewer serious injury crashes within the Hoddle Grid in 2019 as compared to 2018, which is contrary to the general upward trend of serious crashes between the two years for the LGA.
- This indicates that the increased number of serious injury crashes in 2019 has occurred outside the CBD.
- There was a smaller proportion of fatal crashes compared to the municipality. 1 in 976 crashes in the Hoddle Grid resulted in a fatality, while 1 in 211 crashes in the LGA resulted in a fatality. This is likely due to the lower speed environment in the CBD, resulting in lower severity crashes.

Figure 15: Total crashes by hour (Hoddle Grid)



- Despite having a lower number of crashes, the proportion of serious injury crashes occurring at night were higher, as per the municipality.
- This is likely due to low light conditions during the night, higher speeds that result with less vehicles on the roads and/or intoxicated road users.

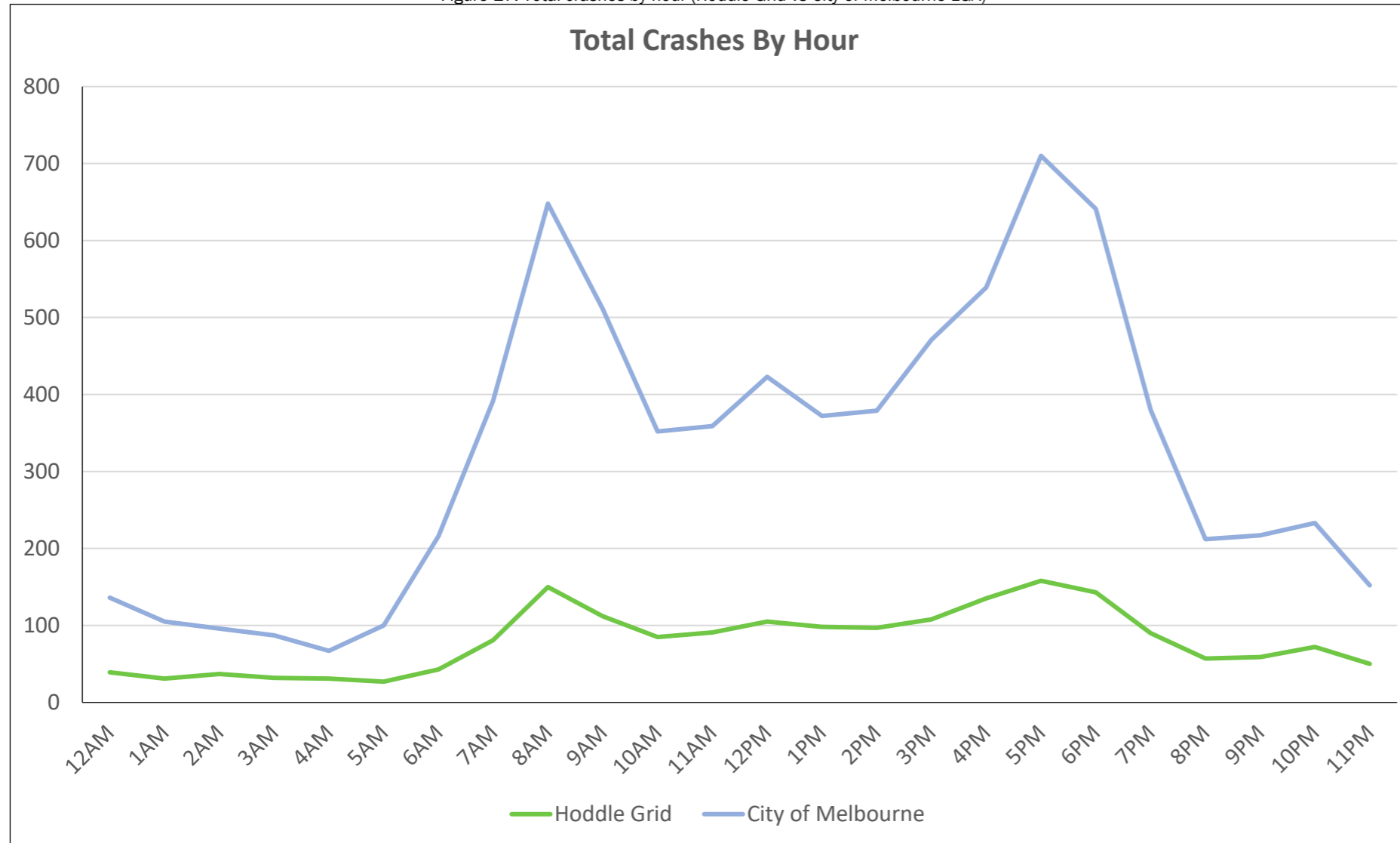
Figure 16: Road Users involved in crashes each year (Hoddle Grid)



- There was a slight increase in the number of motorcyclists involved in crashes in the Hoddle Grid from 2017 to 2019.
- There were fewer crashes involving all other road users from 2018 to 2019, with drivers having the highest decrease in that time period.

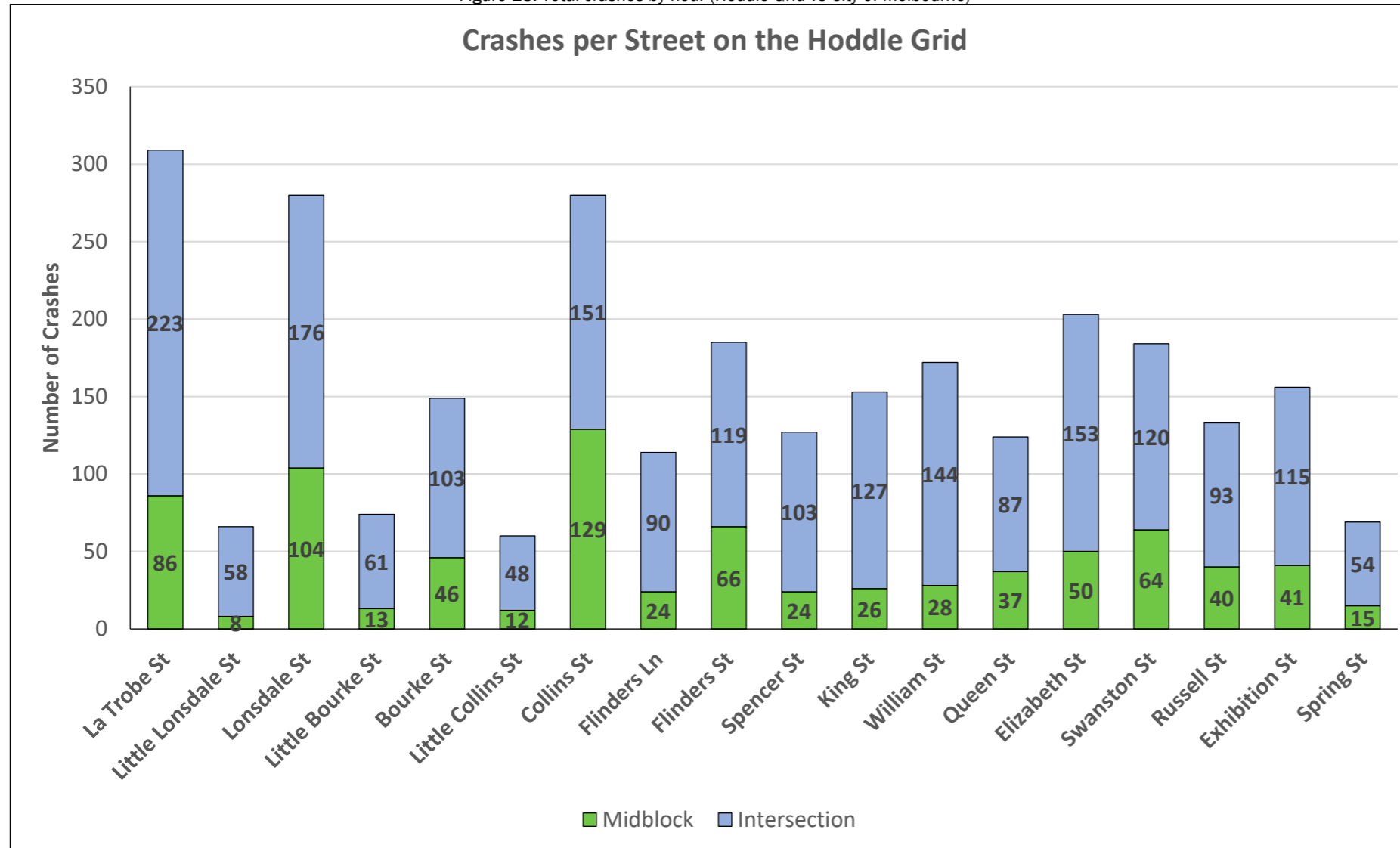
Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

Figure 17: Total crashes by hour (Hoddle Grid vs City of Melbourne LGA)



- The highest frequency of crashes on the Hoddle Grid occurred during 8 - 9 am and 5 - 6 pm peak hours (16 % combined), which is a similar trend to the whole municipality over the same times (17.4 % of all crashes).
- There is a more gradual decline in crashes outside the peak times in the Hoddle Grid, compared to a sharp decline in crashes for the entire LGA. This could reflect a longer peak traffic period in the CBD.

Figure 18: Total crashes by hour (Hoddle Grid vs City of Melbourne)



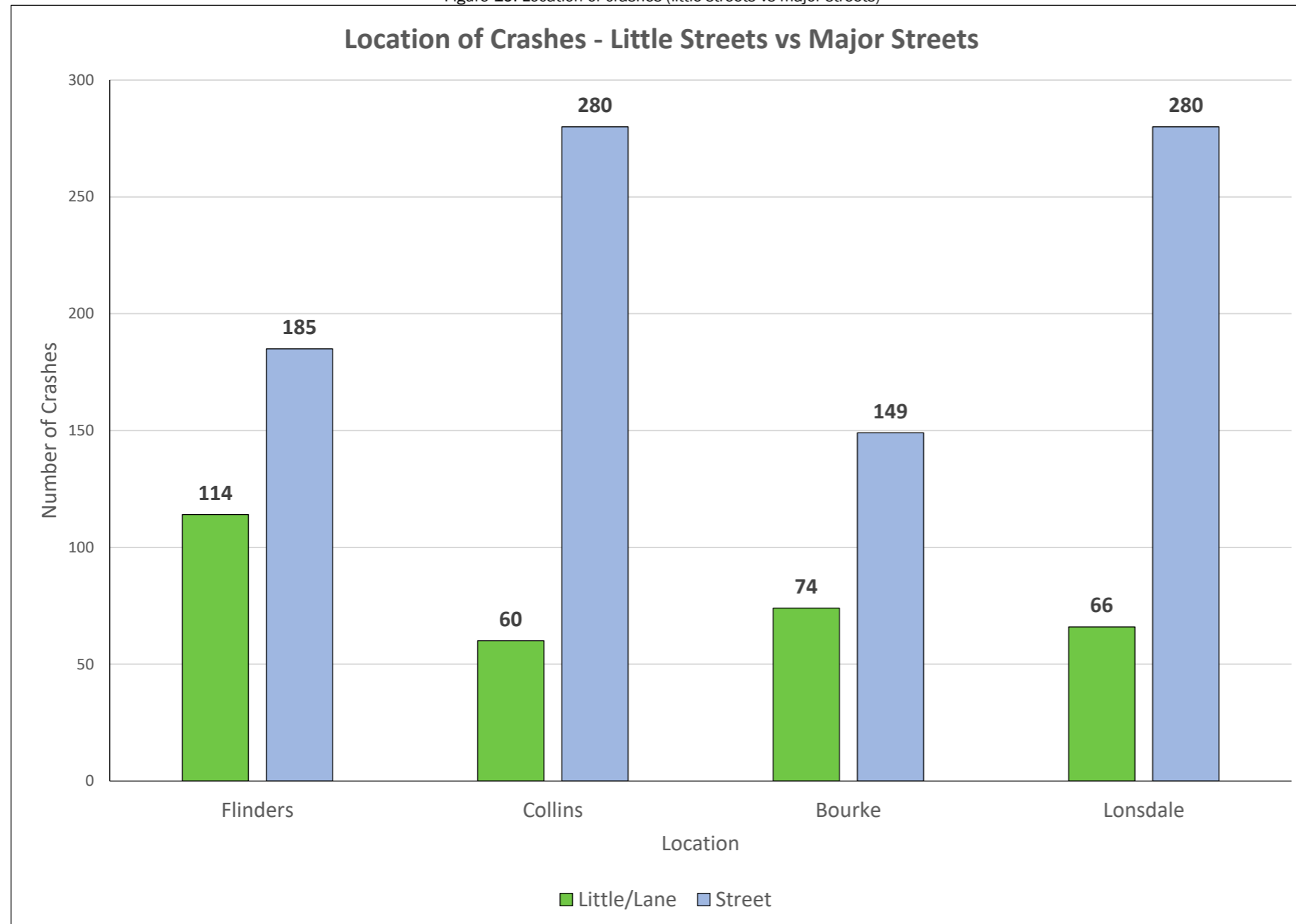
- It is noted that for the major streets which extend beyond the Hoddle Grid, only the crashes which occurred within the section of those roads in the Hoddle Grid have been included in this analysis
- La Trobe Street had the highest number of crashes overall, followed by Lonsdale Street and Collins Street. These streets run across the whole length of the CBD and beyond, and attracted large volumes of through traffic as a result.
- La Trobe Street also had the highest proportion of midblock crashes compared to Lonsdale and Collins Street
- A large number of midblock crashes occurred along Collins Street and Lonsdale Street
- Most crashes on little streets are at intersections with other streets.

Note: Intersection crashes are counted for each road where there was an intersection affected and are also included in all other intersecting streets at the specific location. Thus, the total number of crashes shown are higher than the actual total for the Hoddle Grid.

4.3 Crashes on little streets vs major streets

Summaries of the results of the crash analysis for little streets and major streets are provided in Figures 19 to 24 below.

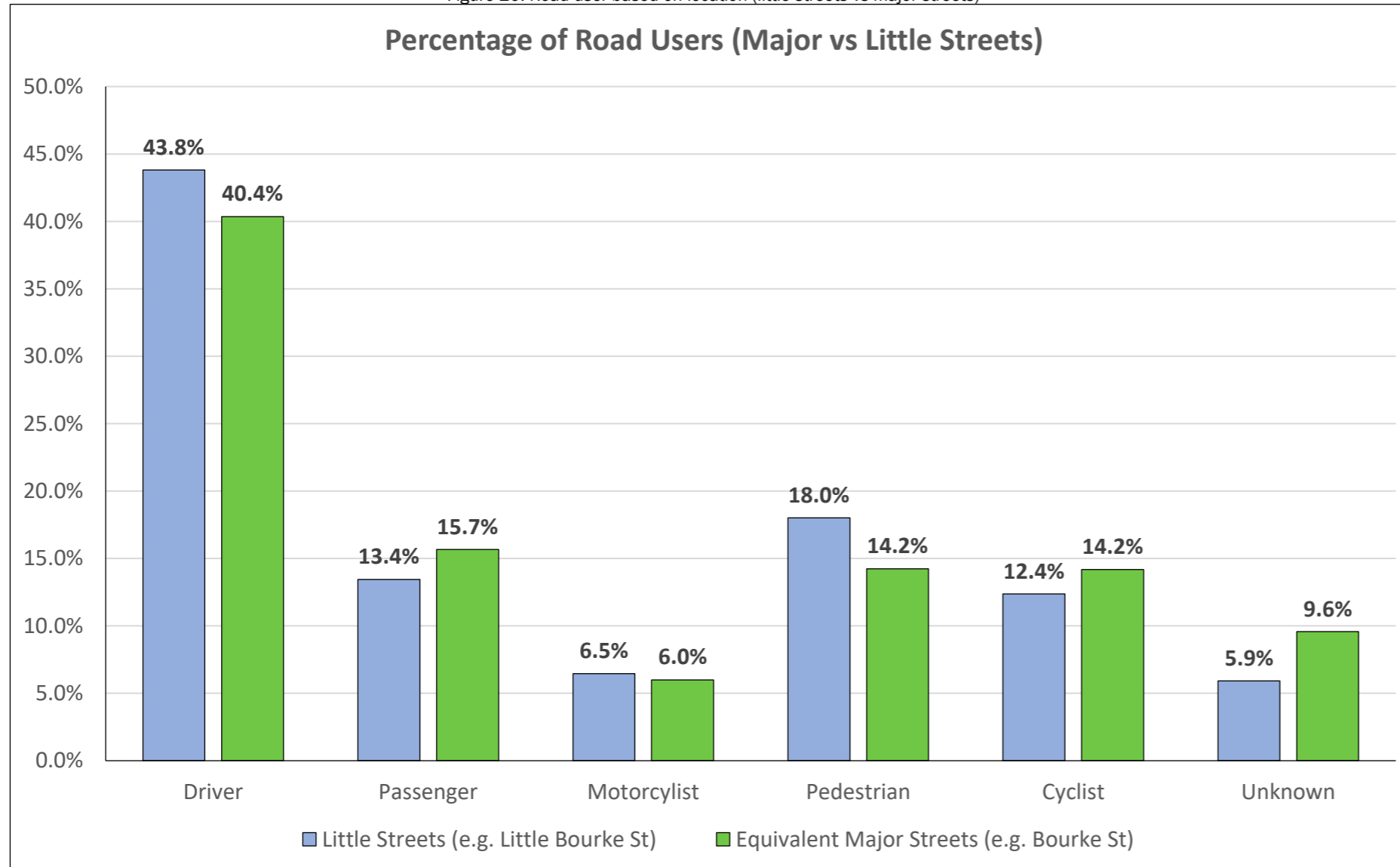
Figure 19: Location of crashes (little streets vs major streets)



- There were approximately three times more crashes on these sets of major streets than their equivalent little street (894 versus 314).
- Flinders Lane had the highest number of crashes out of the little streets.
- The difference between Flinders Lane and Flinders Street was also significantly less than the other three sets of streets. While the other sets had 2 to 4.7 times more crashes on major streets as compared to their equivalent little streets, Flinders Street only had 1.6 more crashes than Flinders Lane.

Note - It is noted that for the major streets which extend beyond the Hoddle Grid, only the crashes which occurred within the section of those roads in the Hoddle Grid have been included in this analysis

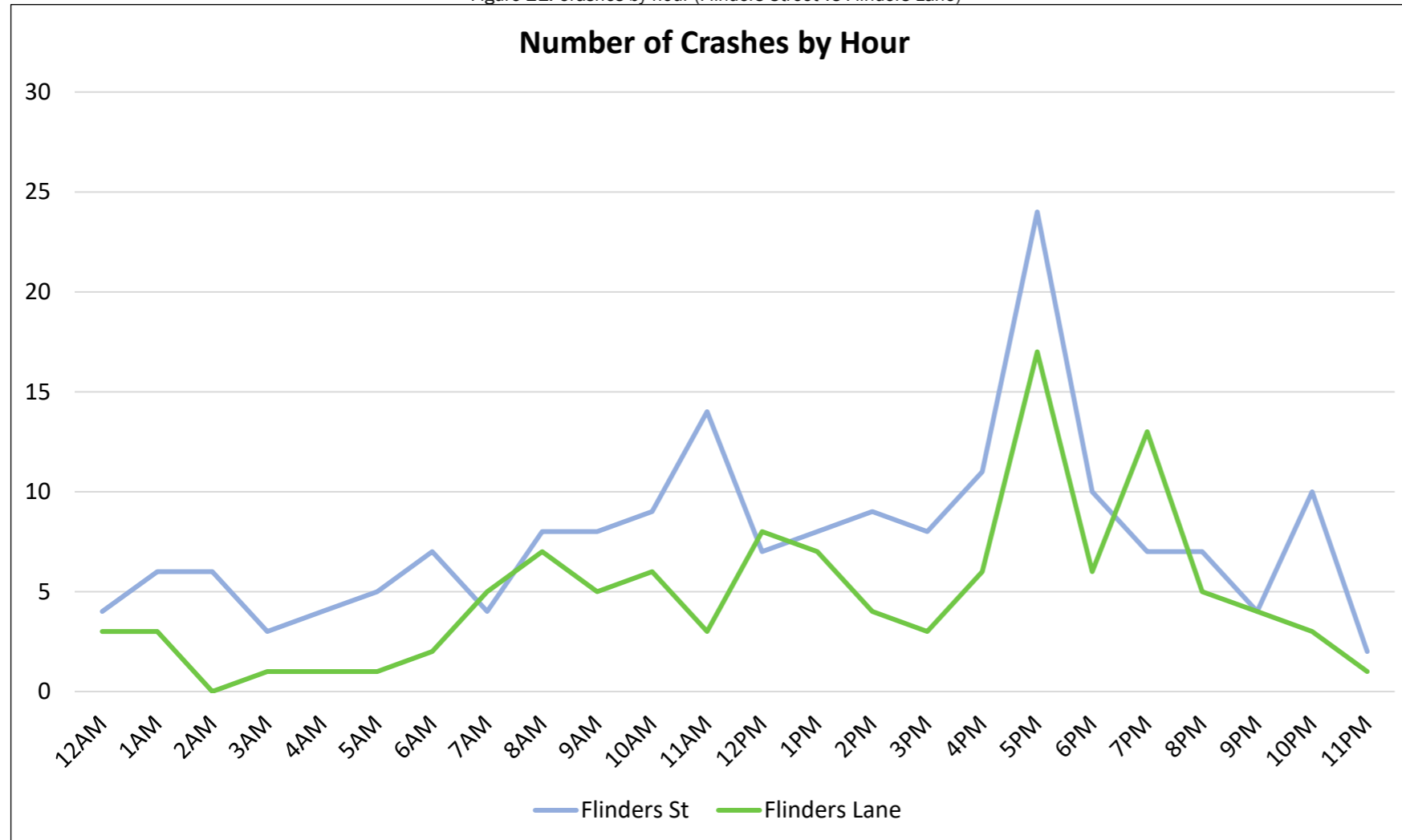
Figure 20: Road user based on location (little streets vs major streets)



- There were proportionally more pedestrians involved in crashes on little streets compared to major streets.
- There were proportionally less cyclist crashes on Little Streets compared to major streets

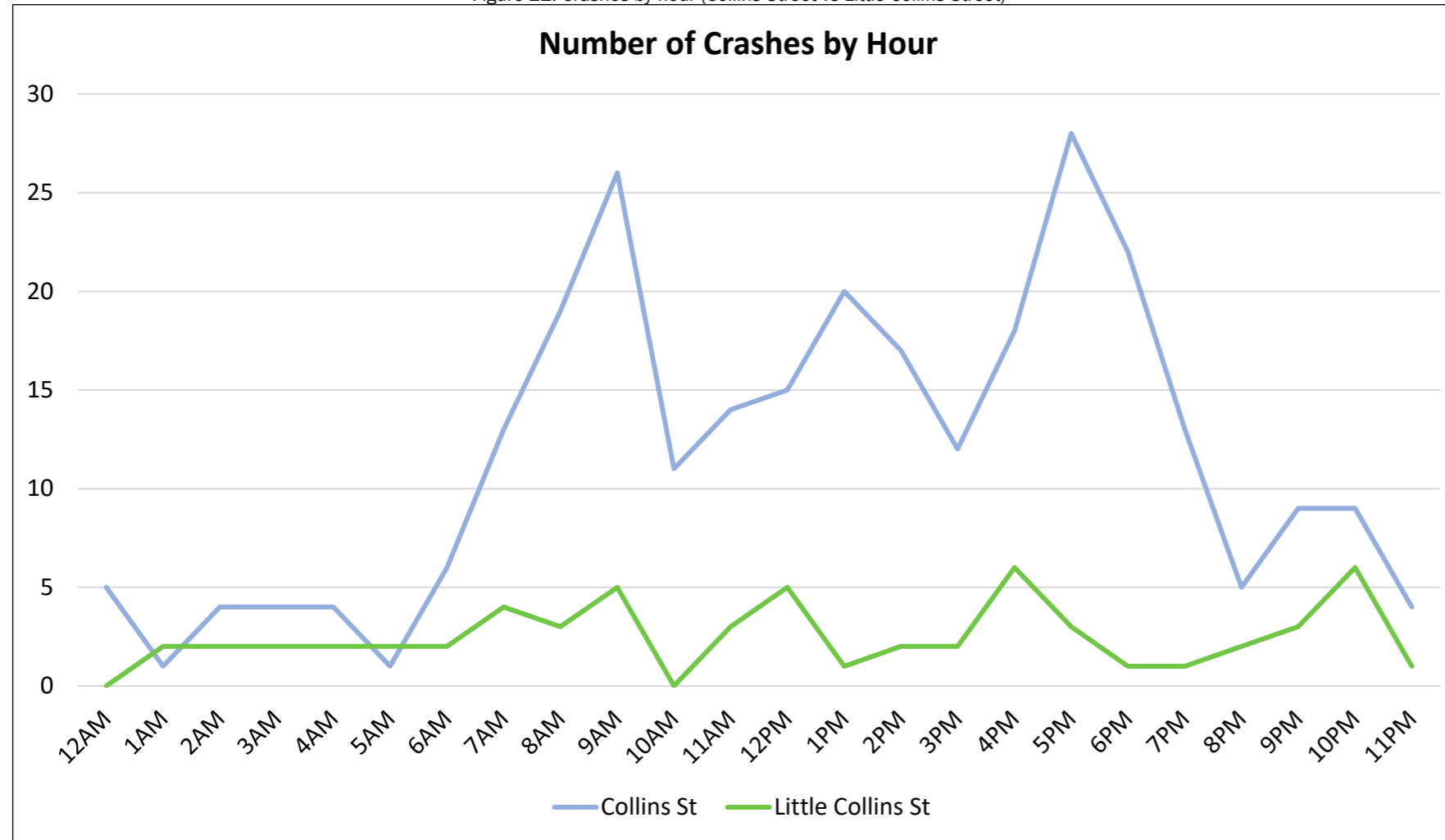
Note - It is noted that for the major streets which extend beyond the Hoddle Grid, only the crashes which occurred within the section of those roads in the Hoddle Grid have been included in this analysis

Figure 21: Crashes by hour (Flinders Street vs Flinders Lane)



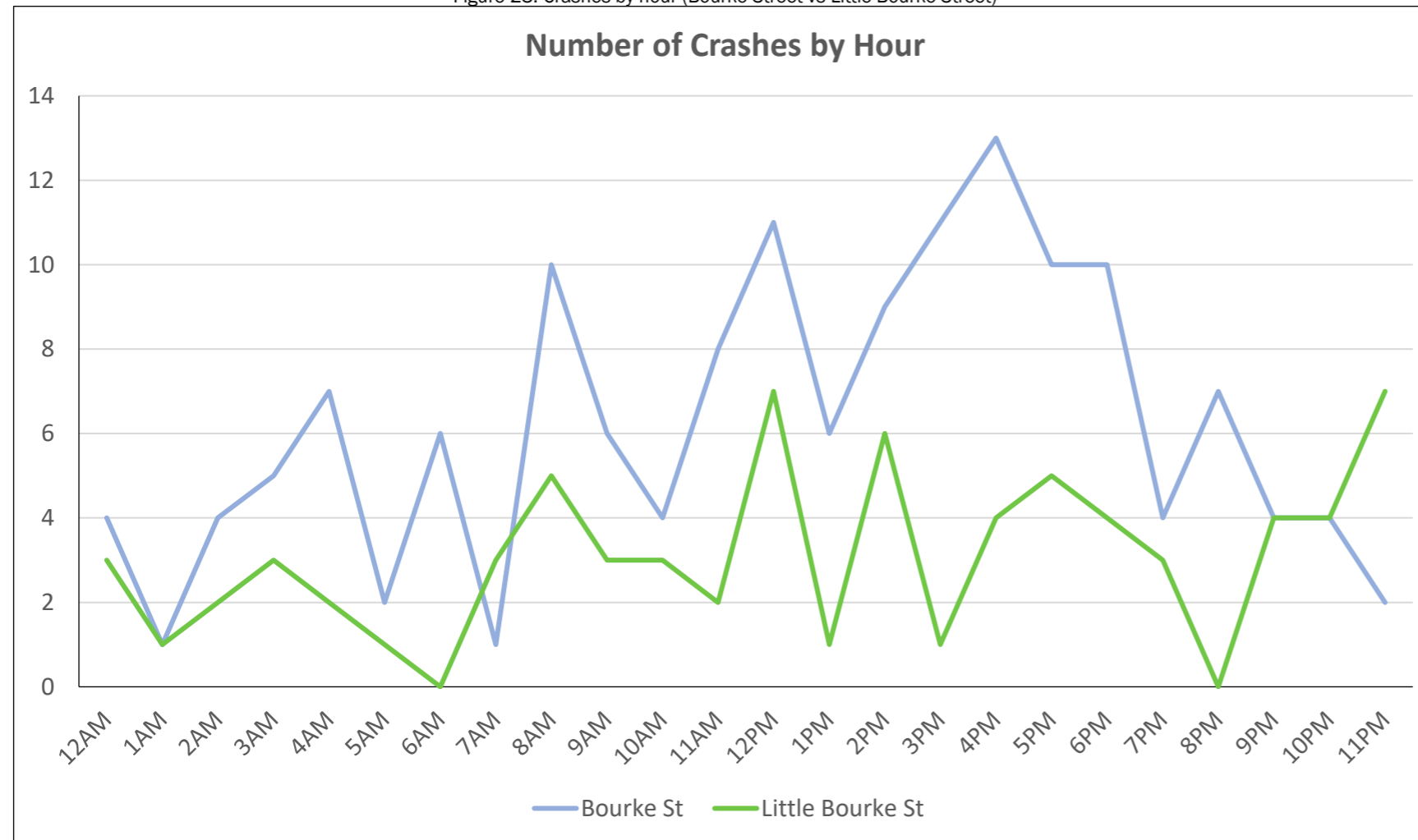
- Flinders Street and Flinders Lane did not seem to have a prominent morning peak crash time during 8 - 9 am as seen in the Hoddle Grid and the municipality.

Figure 22: Crashes by hour (Collins Street vs Little Collins Street)



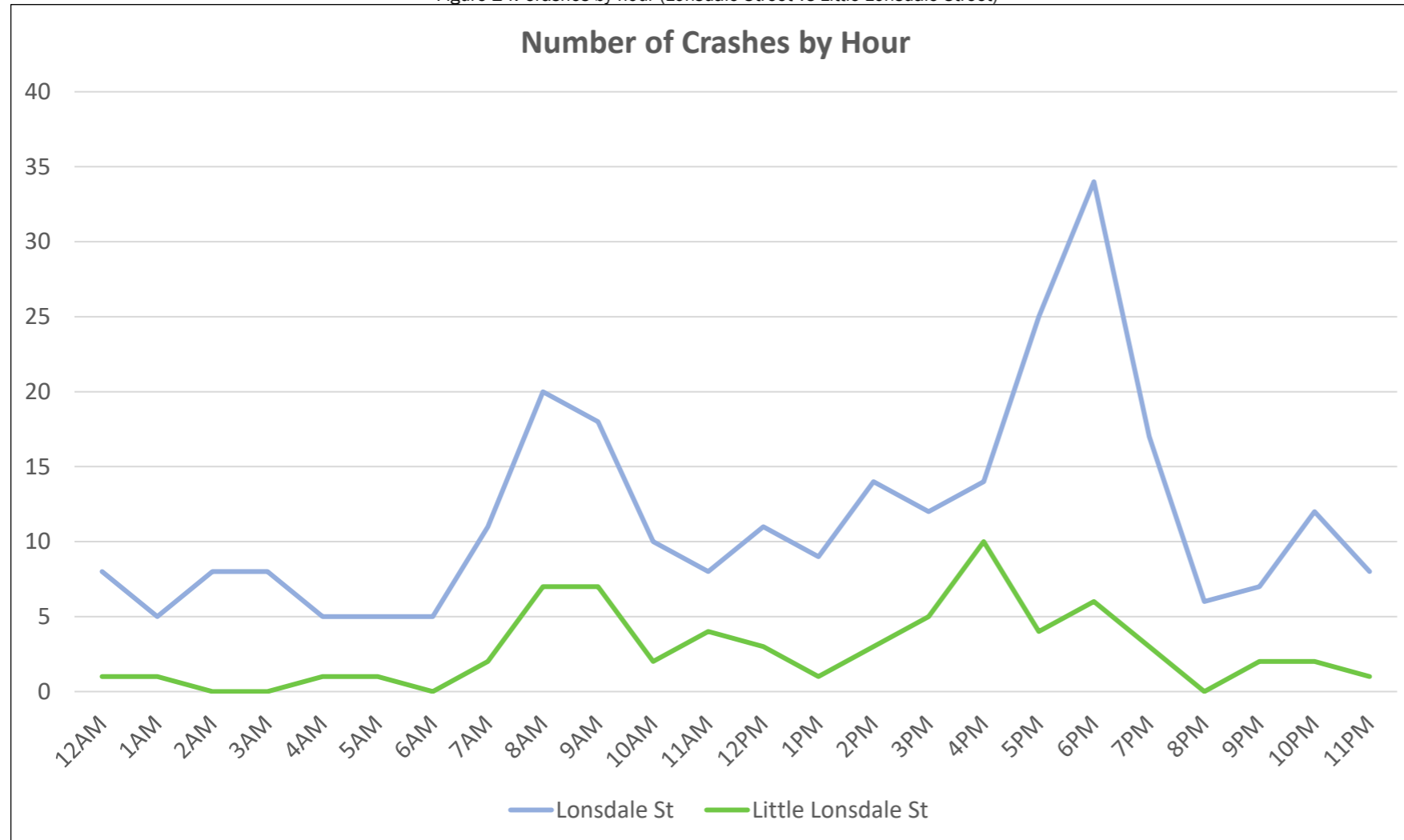
- There is a prominent spike in crashes on Collins Street during the peak periods (8 – 9 am and 5 – 6 pm). However, this trend is not seen on Little Collins Street.
- This could indicate that traffic volumes are generally consistent throughout the day on Little Collins Street, and is not used as a route for through traffic

Figure 23: Crashes by hour (Bourke Street vs Little Bourke Street)



- There seemed to be a peak in the number of crashes on Little Bourke Street that occurred at 12 – 1 pm and 11 pm to 12 am, which is not typical of the municipality. This could reflect higher midday and night activity on Little Bourke Street than average.
- There is no clear peak in the number of crashes in either Bourke Street or Little Bourke Street, which may indicate that traffic volumes could be generally consistent throughout the day
- Apart from Flinders Lane, little streets in the Hoddle Grid had less than 10 crashes per year on average. Thus, it is possible that isolated incidents may have caused fluctuations in results over each hour of the day.
- Crash numbers were generally lower on Bourke Street when compared to other major streets in the CBD. This could be due to the fact that Bourke Street does not run straight through the city, resulting in less traffic.

Figure 24: Crashes by hour (Lonsdale Street vs Little Lonsdale Street)

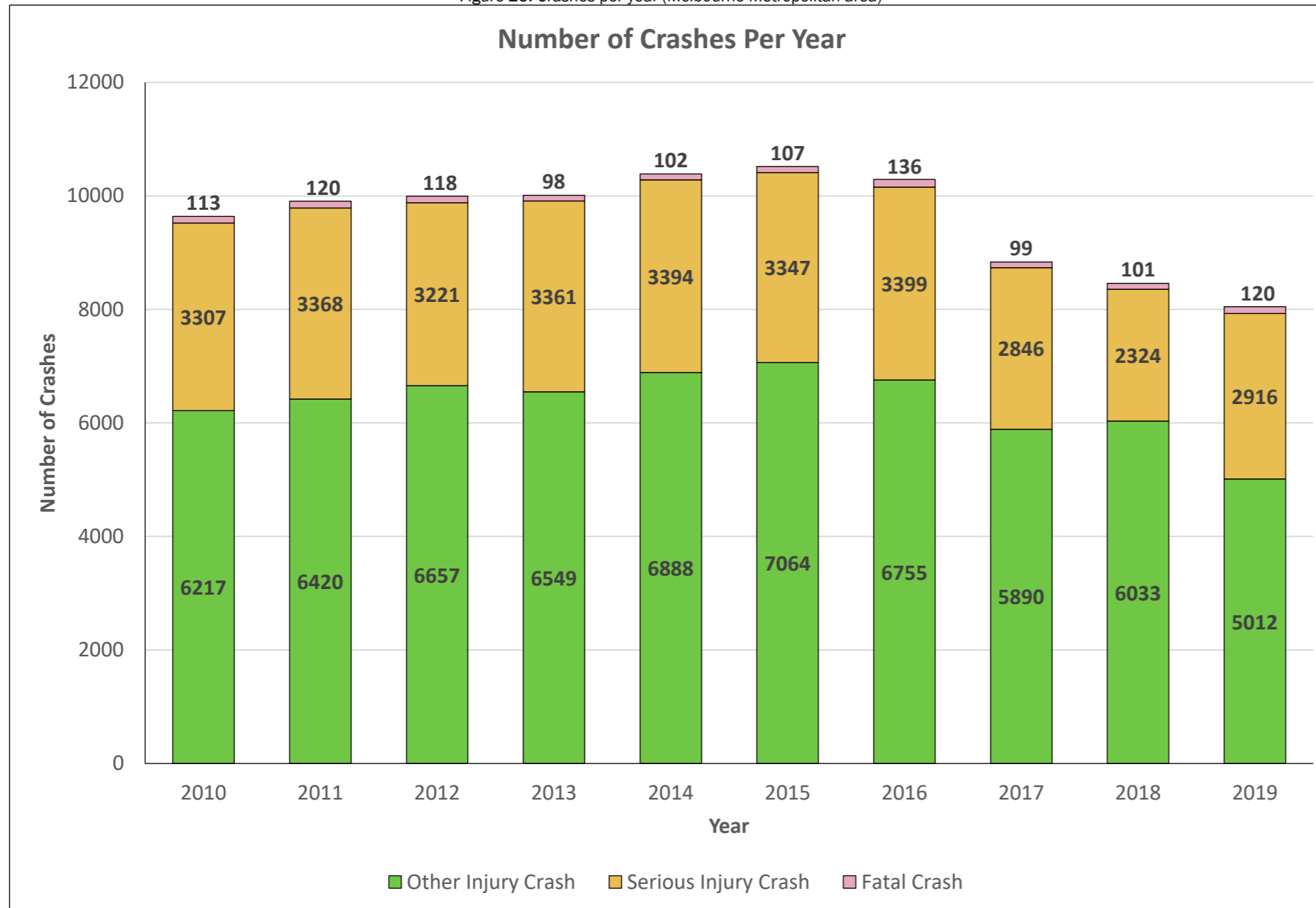


- There is a significant spike in crashes during the evening peak traffic period (6 - 7 pm) on Lonsdale Street, and a less significant spike in the morning peak period (8 - 9 am). This is likely due to congestion which occur during this time.
- A similar trend was observed on Little Lonsdale Street, with crashes spiking in the morning peak (8 - 9 am) and in the afternoon peak (4 - 5 pm).
- There was a relatively small number of crashes (about one per year) that occurred during 8 pm to 7 am on Little Lonsdale Street.

4.4 Comparison with the Wider Metropolitan Melbourne Area

A comparison of crashes within the City of Melbourne with the wider metropolitan area is made, given in the Figures 25 to 28 below.

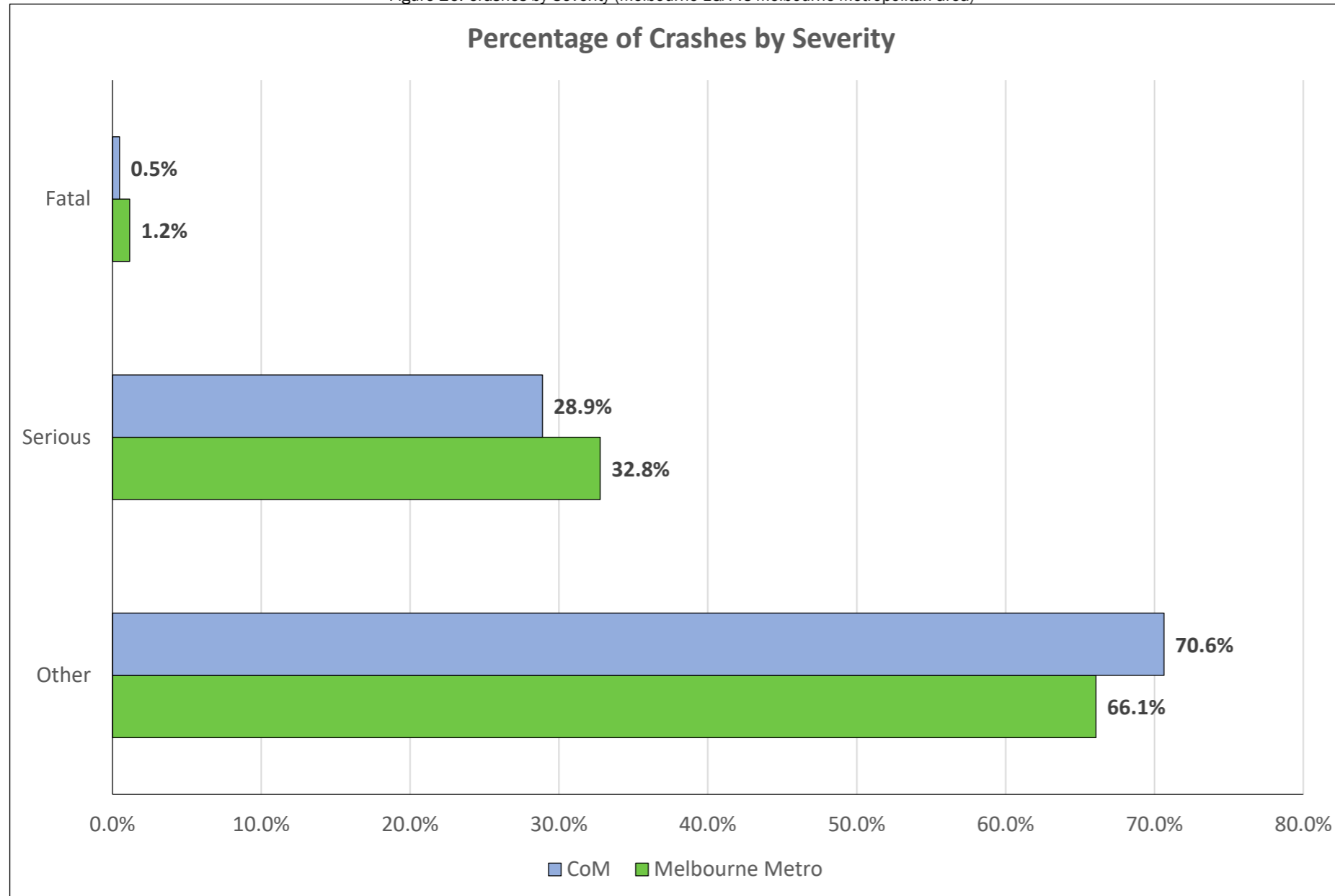
Figure 25: Crashes per year (Melbourne Metropolitan area)



- There was a higher number of serious injury and fatal crashes in 2019 when compared to 2018 for the metropolitan Melbourne area, despite lower crash numbers overall.
- This observation is consistent with the higher number of serious injury crashes in the Melbourne LGA in 2019 when compared to 2018.

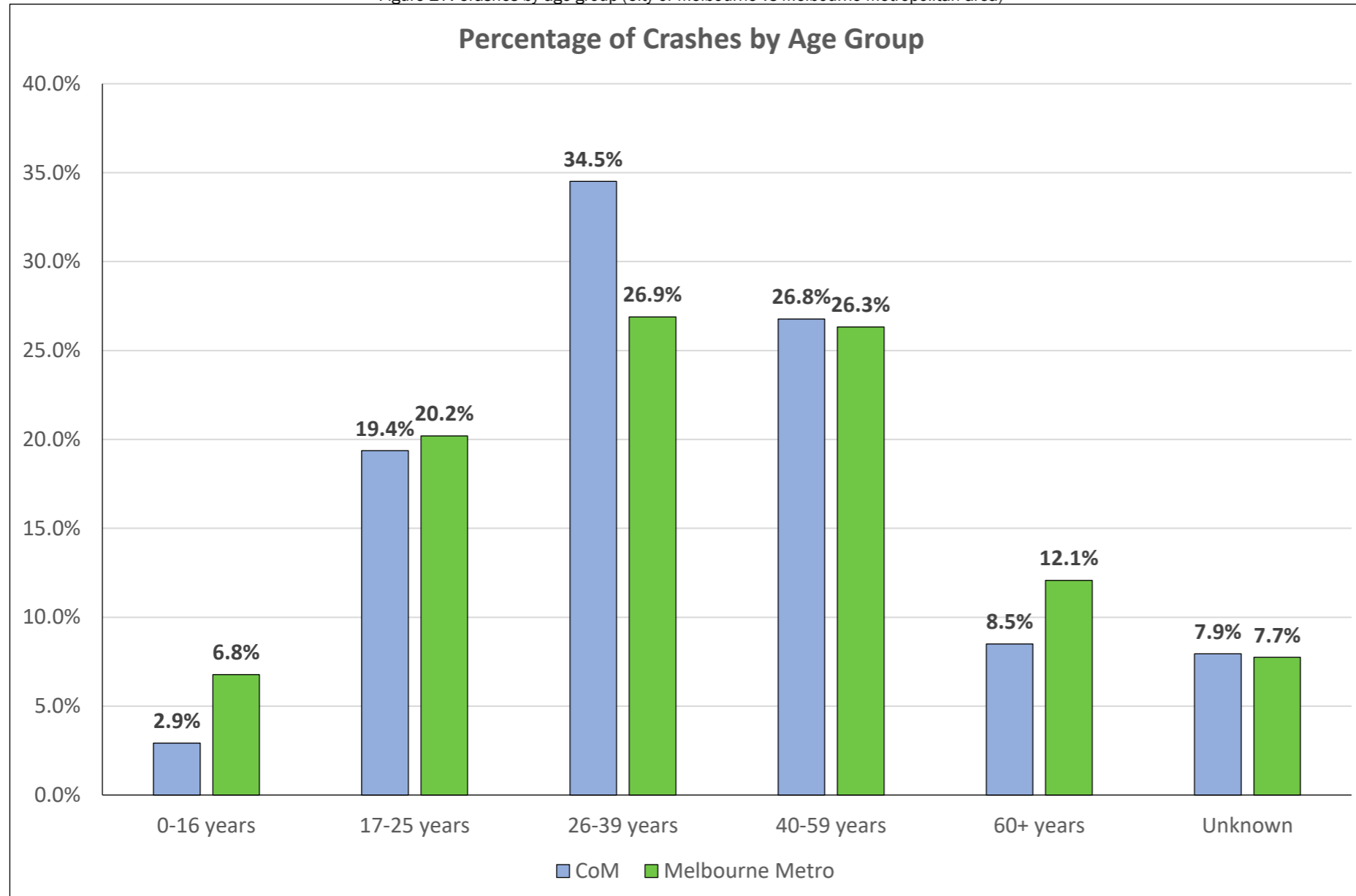
Note: As only 6 months of data is available for 2019, the crashes have been doubled as a means of extrapolation to represent the crashes for 2019.

Figure 26: Crashes by Severity (Melbourne LGA vs Melbourne Metropolitan area)



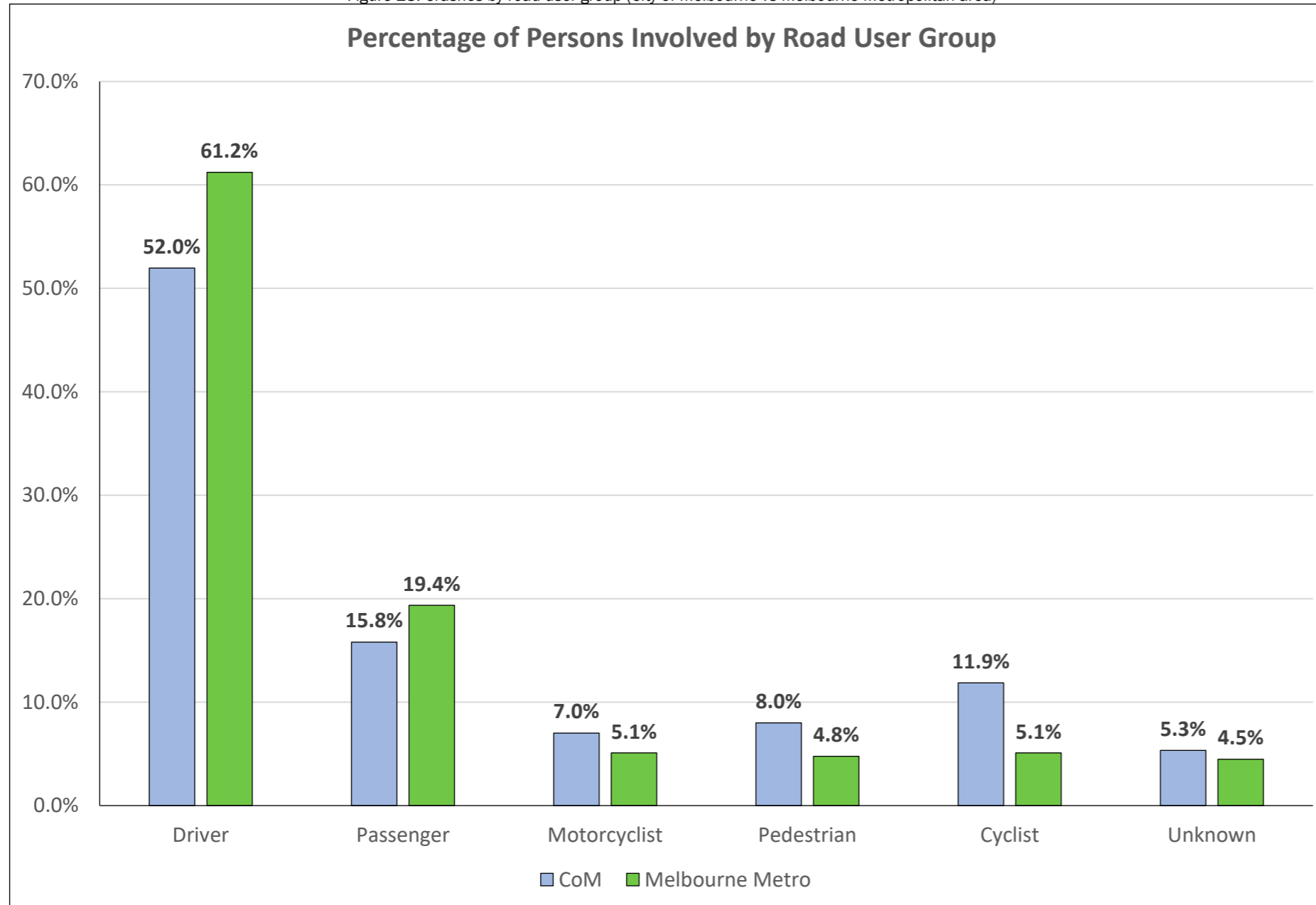
- The City of Melbourne had a lower proportion of crashes resulting in fatal or serious injury when compared to the wider metropolitan area.
- One of the main reasons for this could be the speed limits within the municipality being on average lower than the rest of Melbourne

Figure 27: Crashes by age group (City of Melbourne vs Melbourne Metropolitan area)



- The percentage of 26 to 39 year-old persons involved were significantly higher in the City of Melbourne compared to the wider Melbourne Metropolitan area. This is reflective of the resident and road user demographic in the area.
- The higher number of cyclist related incidents in this age group within the City of Melbourne could also have contributed to the higher representation of 26 to 39 year-old persons involved in crashes.

Figure 28: Crashes by road user group (City of Melbourne vs Melbourne Metropolitan area)

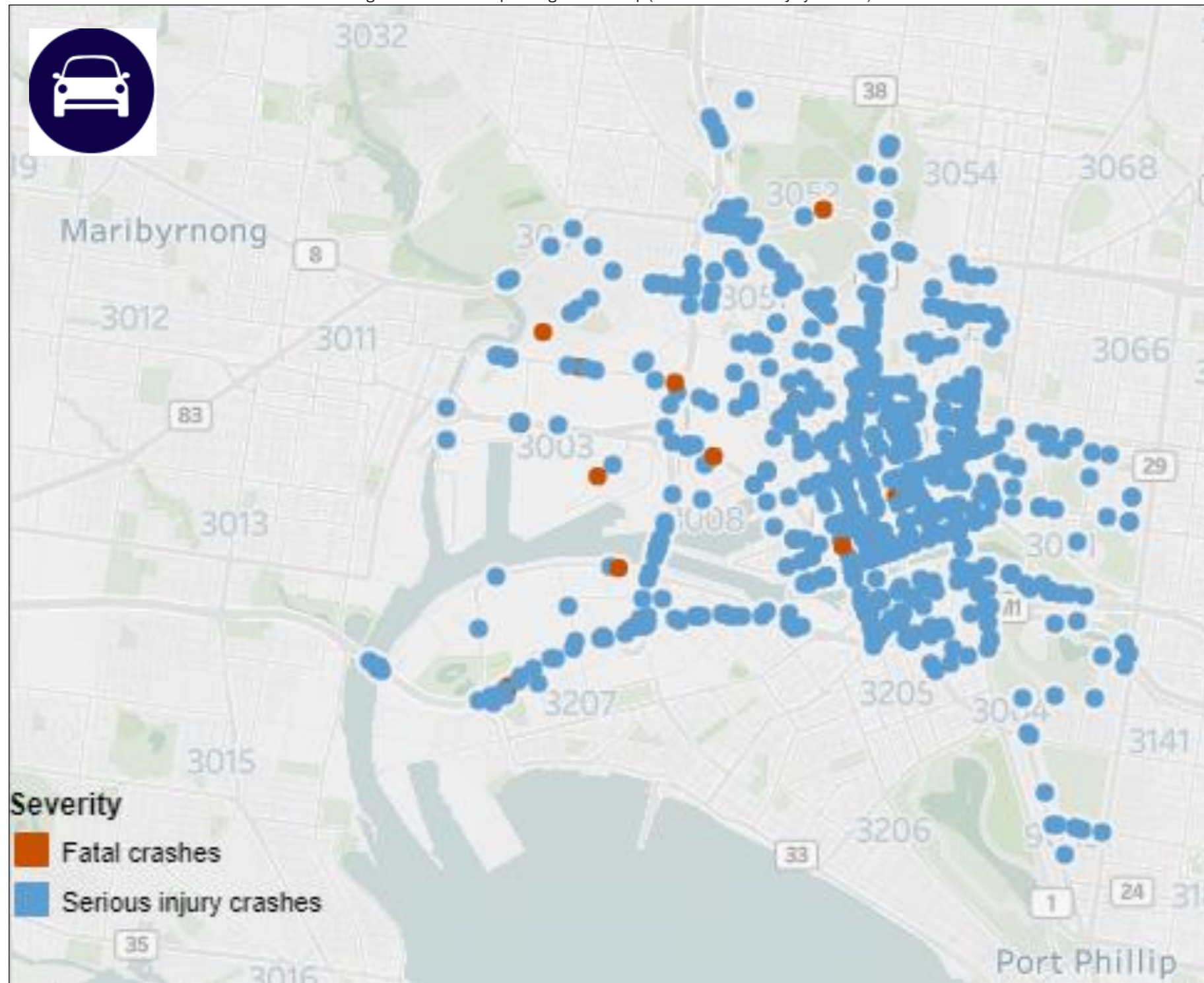


- Proportionally, there were almost twice the percentage of cyclist crashes in the City of Melbourne compared to the rest of the city.
- There was also a significantly higher percentage of road users involving pedestrians and motorcyclists involved in crashes in the City of Melbourne.
- This is likely due to a higher proportion of road users walking and cycling within the Melbourne LGA when compared to the average of the Metropolitan Melbourne area

4.5 City of Melbourne crash area maps

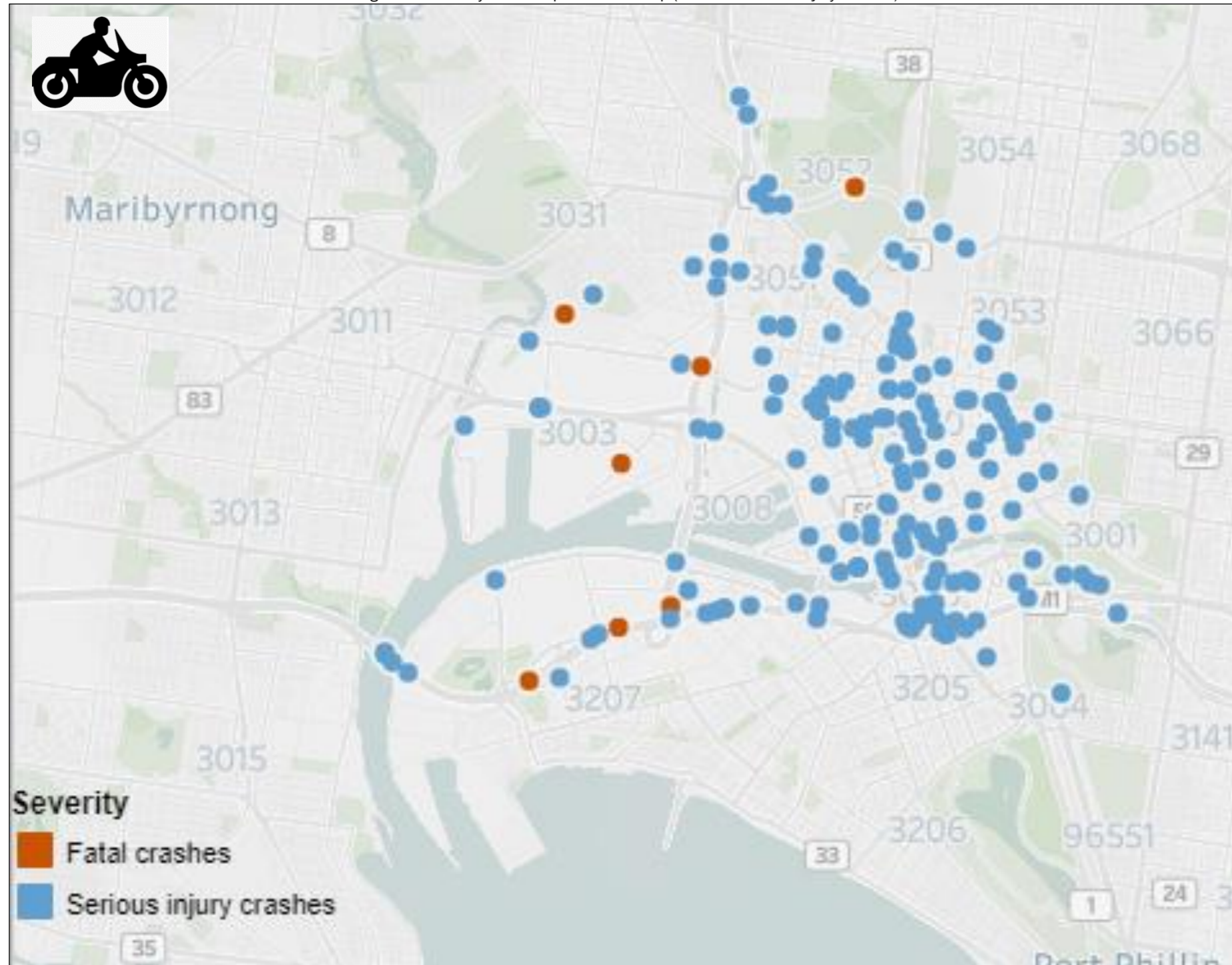
Maps showing the location of serious and fatal injury crashes for each road user group are given in Figures 29 to 32 below. The time range of data is from 2014 to the first half of 2019 as available through VicRoads Crash Statistics.

Figure 29: Driver and passenger crash map (Fatal and Serious Injury crashes)



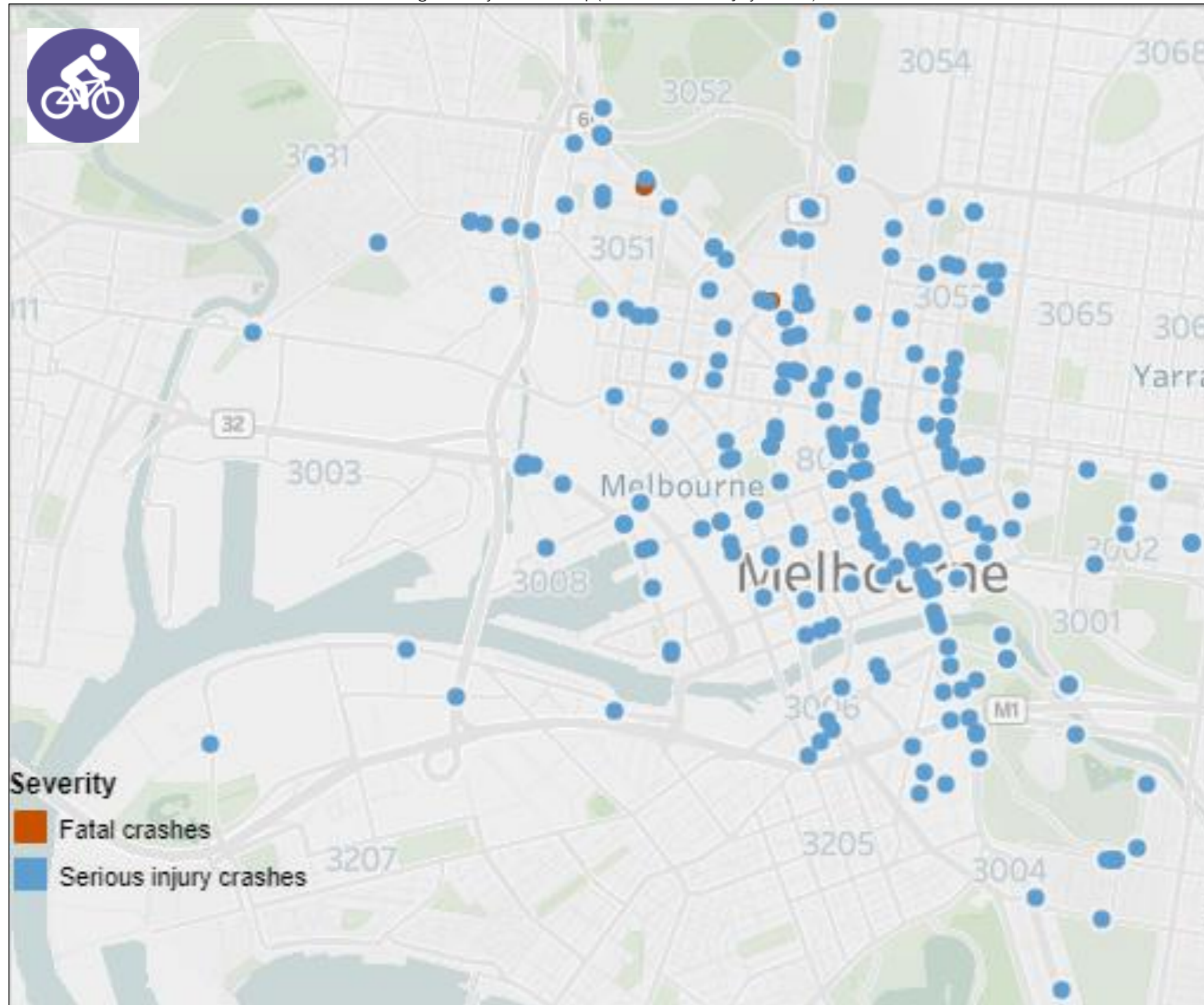
- Crashes involving cars or heavy vehicles are generally widespread across the municipality.
- The exception to this is the residential area south of Macaulay Road and north of Arden Street in Kensington where there are few crashes.
- Fatal crashes are more concentrated in the West Melbourne area, but on different roads.

Figure 30: Motorcyclists and pillion crash map (Fatal and Serious Injury crashes)



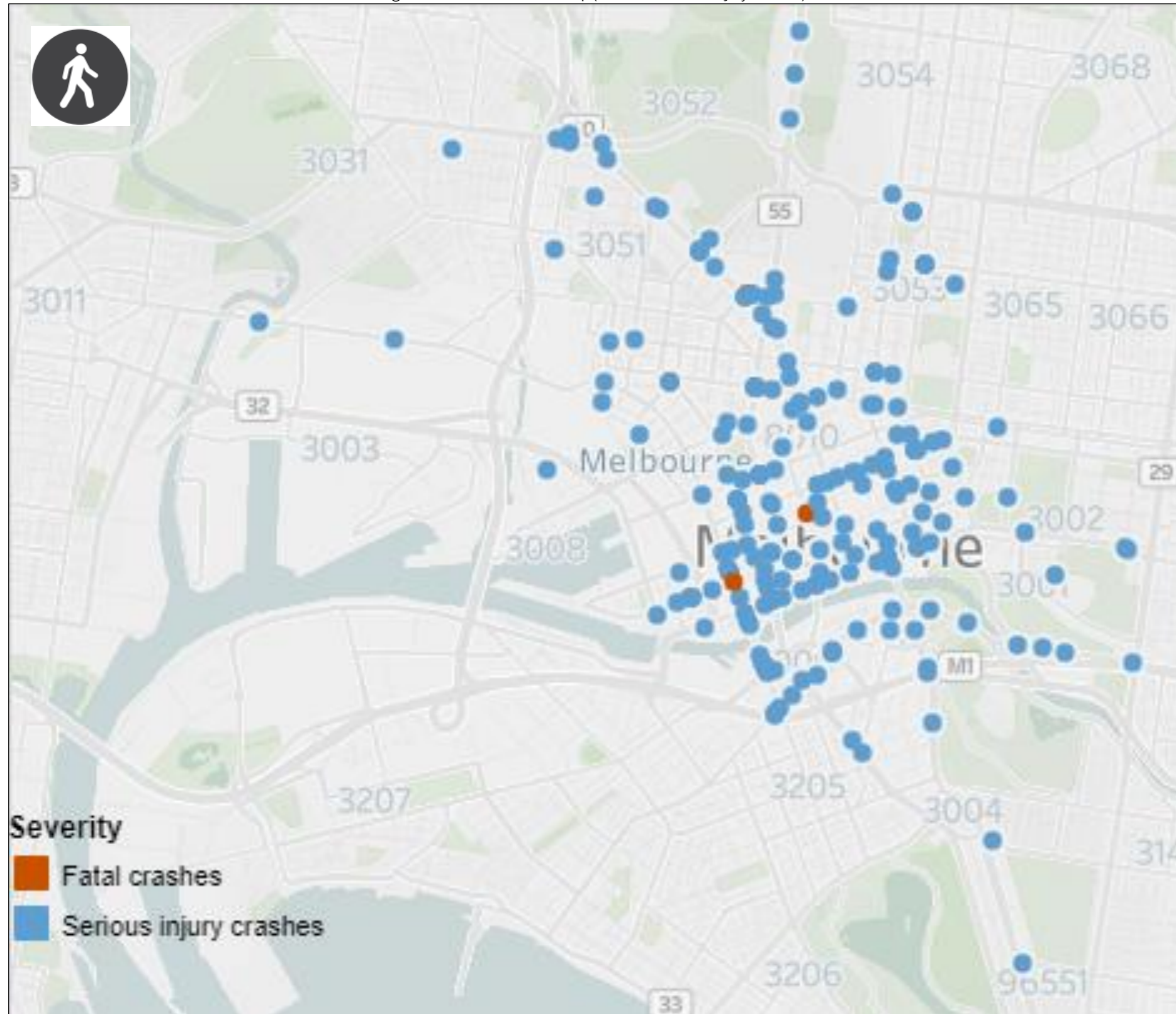
- There is a cluster of serious injury crashes involving motorcyclists at the intersection of the West Gate Freeway and Kings Way as well as City Road near the freeway.
- There are several fatal crashes at the West Gate Freeway / Citylink west of the CBD.

Figure 31: Cyclist crash map (Fatal and Serious Injury crashes)



- Fatal crashes involving cyclists in the last five years have occurred at the Curran Street / Dryburgh Street roundabout and Grattan Street near the intersection with Flemington Road (a cyclist struck a pedestrian).
- There was a high number of serious crashes along St Kilda Road, Swanston Street and Elizabeth Street as well as Rathdowne Street in front of Carlton Gardens and the Melbourne Museum.

Figure 32: Pedestrian crash map (Fatal and Serious Injury crashes)



- Pedestrian casualties are more centred in the CBD as well as Flemington Road and where it connects to Elizabeth Street. There were also several serious crashes involving pedestrians on City Road west of Kings Way.
- Fatalities have occurred mainly at intersections, including Collins Street / Spencer Street, Victoria Street / Peel Street, King Street / Hawke Street and Grattan Street near the intersection with Flemington Road.

ATTACHMENT A – DETAILED CRASH SUMMARY

Crashes by year				
Year	Other injury crash	Serious accident crash	Fatal accident	Daily population (000')
2010	566	248	4	779
2011	619	256	6	803
2012	589	234	4	834
2013	583	257	2	841
2014	573	272	6	858
2015	621	245	3	883
2016	546	198	4	911
2017	494	214	4	928
2018	507	157	2	949
2019	426	178	2	972

Age group based on road user group						
Age group	Driver	Passenger	Motorcyclist	Pedestrian	Cyclist	Unknown
0-16 years	10	450	2	85	13	8
17-25 years	1776	698	298	398	471	131
26-39 years	3556	821	542	472	1220	111
40-59 years	3188	555	428	344	506	192
60+ years	891	254	39	182	55	234
Unknown	701	301	57	79	46	364

Road users involved in crashes by year						
Year	Driver	Passenger	Motorcyclist	Pedestrian	Cyclist	Unknown
2010	1021	357	155	196	237	86
2011	1162	345	112	193	277	59
2012	1113	376	136	160	221	99
2013	1077	340	135	176	239	108
2014	1110	349	151	151	247	102
2015	1141	352	139	157	274	138
2016	962	251	142	140	207	114
2017	908	262	124	149	224	152
2018	864	233	138	132	199	108
2019	764	214	134	106	186	74

Road user based on location - intersection versus midblock						
Location	Driver	Passenger	Motorcyclist	Pedestrian	Cyclist	Unknown
Intersection	5257	1637	700	943	1201	422
Midblock	4847	1438	665	608	1104	614
Off-road	17	4	1	7	6	3
Unknown	1	0	0	2	0	1

Crashes by location – intersection vs midblock (City of Melbourne)	
Intersection	4174
Midblock	3626
Off-road	18
Unknown	2

Crashes by year - arterial roads			
Year	Other injury crash	Serious accident crash	Fatal accident
2010	287	145	2
2011	315	124	3
2012	298	120	3
2013	291	135	2
2014	275	133	5
2015	325	111	2
2016	251	111	1
2017	237	99	2
2018	248	81	1
2019	210	92	2

Crashes by year			
Year	Other injury crash	Serious accident crash	Fatal accident
2010	260	100	2
2011	284	120	3
2012	271	105	1
2013	272	110	0
2014	267	128	1
2015	274	114	1
2016	264	78	3
2017	244	107	2
2018	248	67	0
2019	204	64	0

Time of crashes – hourly intervals			
Hour starting	Other Injury	Serious Injury	Fatal Injury
12AM	89	47	0
1AM	65	39	1
2AM	54	41	1
3AM	43	44	0
4AM	40	26	1
5AM	67	31	2
6AM	149	63	4
7AM	270	120	2
8AM	466	179	3
9AM	364	146	1
10AM	256	95	1
11AM	261	92	6
12PM	302	118	3
1PM	273	97	2
2PM	275	103	1
3PM	335	134	2
4PM	371	166	2
5PM	524	185	1
6PM	476	164	1
7PM	275	103	2
8PM	136	76	0
9PM	160	57	0
10PM	161	71	1
11PM	90	62	0

Time of crashes - daytime vs dark	
Daytime	4941
Dark	2622
Unknown	257

Crashes by Type	
100-109 Struck Pedestrian	1426
110-119 Adjacent Directions (Intersections Only)	747
120-129 Opposing Directions	921
130-139 Same Direction	2490
140-159 Manoeuvring/Overtaking	666
160-169 Object on Path	677
170-189 Off Path	804
190-199 Passenger and Miscellaneous	89

Crashes by year (Hoddle Grid)			
Year	Other injury crash	Serious accident crash	Fatal accident
2010	163	61	0
2011	171	51	0
2012	148	54	0
2013	149	56	0
2014	166	55	0
2015	156	49	1
2016	137	46	0
2017	131	49	1
2018	128	31	0
2019	102	26	0

Time of crashes – hourly intervals (Hoddle Grid)			
Hour starting	Other Injury	Serious Injury	Fatal Injury
12AM	28	11	0
1AM	20	11	0
2AM	25	12	0
3AM	20	12	0
4AM	23	8	0
5AM	19	8	0
6AM	34	8	1
7AM	59	22	0
8AM	112	38	0
9AM	87	25	0
10AM	67	18	0
11AM	69	22	0
12PM	81	24	0
1PM	76	22	0
2PM	74	23	0
3PM	88	20	0
4PM	101	33	1
5PM	117	41	0
6PM	110	33	0
7PM	67	23	0
8PM	43	14	0
9PM	44	15	0
10PM	53	19	0
11PM	34	16	0

Road users involved in crashes by year (Hoddle Grid)						
Year	Driver	Passenger	Motorcyclist	Pedestrian	Cyclist	Unknown
2010	233	106	40	81	74	233
2011	248	81	23	72	84	248
2012	229	109	28	60	72	229
2013	207	56	30	76	63	207
2014	239	71	37	58	82	239
2015	217	78	29	59	91	217
2016	195	49	31	62	62	195
2017	166	51	27	63	80	166
2018	172	48	30	45	63	172
2019	124	36	34	34	46	124

Crashes on the Hoddle Grid by street			
Road	Midblock	Intersection	Total
La Trobe St	86	223	309
Little Lonsdale St	8	58	66
Lonsdale St	104	176	280
Little Bourke St	13	61	74
Bourke St	46	103	149
Little Collins St	12	48	60
Collins St	129	151	280
Flinders Ln	24	90	114
Flinders St	66	119	185
Spencer St	24	103	127
King St	26	127	153

Crashes on the Hoddle Grid by street			
William St	28	144	172
Queen St	37	87	124
Elizabeth St	50	153	203
Swanston St	64	120	184
Russell St	40	93	133
Exhibition St	41	115	156
Spring St	15	54	69

Crashes by location – (little and major streets)		
Road Name	Little/Lane	Street
Flinders	114	185
Collins	60	280
Bourke	74	149
Lonsdale	66	280

Crashes by road user type (little and major streets)						
Road	Driver	Passenger	Motorcyclist	Pedestrian	Cyclist	Unknown
Flinders Lane	108	39	24	50	30	14
Flinders Street	139	71	28	62	49	84
Little Collins Street	62	10	5	32	17	11
Collins Street	271	102	34	78	126	63
Little Bourke Street	81	31	9	30	23	11
Bourke Street	145	45	15	76	48	26
Little Lonsdale Street	75	20	10	22	22	8
Lonsdale Street	313	119	52	90	82	33

Time of crashes – hourly intervals (little and major streets)								
Hour starting	Flinders Street	Flinders Lane	Collins Street	Little Collins street	Bourke Street	Little Bourke Street	Lonsdale Street	Little Lonsdale Street
12AM	4	3	5	0	4	3	8	1
1AM	6	3	1	2	1	1	5	1
2AM	6	0	4	2	4	2	8	0
3AM	3	1	4	2	5	3	8	0
4AM	4	1	4	2	7	2	5	1
5AM	5	1	1	2	2	1	5	1
6AM	7	2	6	2	6	0	5	0
7AM	4	5	13	4	1	3	11	2
8AM	8	7	19	3	10	5	20	7
9AM	8	5	26	5	6	3	18	7
10AM	9	6	11	0	4	3	10	2
11AM	14	3	14	3	8	2	8	4
12PM	7	8	15	5	11	7	11	3
1PM	8	7	20	1	6	1	9	1
2PM	9	4	17	2	9	6	14	3
3PM	8	3	12	2	11	1	12	5
4PM	11	6	18	6	13	4	14	10
5PM	24	17	28	3	10	5	25	4
6PM	10	6	22	1	10	4	34	6
7PM	7	13	13	1	4	3	17	3
8PM	7	5	5	2	7	0	6	0
9PM	4	4	9	3	4	4	7	2
10PM	10	3	9	6	4	4	12	2
11PM	2	1	4	1	2	7	8	1

Crashes by year (Melbourne Metropolitan Area)			
Year	Other injury crash	Serious accident crash	Fatal accident
2010	6217	3307	113
2011	6420	3368	120
2012	6657	3221	118
2013	6549	3361	98
2014	6888	3394	102
2015	7064	3347	107
2016	6755	3399	136
2017	5890	2846	99
2018	6033	2324	101
2019	5012	2916	120

Crashes by severity		
Severity	City of Melbourne	Melbourne Metropolitan Area
Other	5524	63,485
Serious	2259	31,483
Fatal	37	1114
Total	7820	96,082

Crashes by age group		
Age group	City of Melbourne	Melbourne Metropolitan Area

Crashes by age group		
0-16	568	16,450
17-25	3772	49,090
26-39	6722	65,359
40-59	5213	63,972
60+	1655	29,353
Unknown	1548	18,823

Crashes by road user group		
Road user	City of Melbourne	Melbourne Metropolitan Area
Driver	10179	148,786
Passenger	3295	47,043
Motorcyclist	1371	12,981
Pedestrian	1638	11,613
Cyclist	2325	12,366
Unknown	1049	10,258



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