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# **Pedal Cyclists**

**Fatal, Serious and Slight Casualties**

**January 2020 – November 2024**

**Executive Summary and Recommendations**

January 2026

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## Introduction

In the last decade there has been an overall downward trend in the number of people killed in road traffic collisions on Scotland's roads. Despite some increases in 2016, 2019 and 2022, overall, there have been positive changes towards a reduction in fatal casualties. Unfortunately, 2024 saw a notable rise in fatalities and it is imperative that Police Scotland and partners work together to address this and reverse this trend.

Scotland's [Road Safety Framework 2030](#) (RSF2030) has a vision to have the best road safety performance in the world by 2030 and a compelling long-term goal for road safety where there are no deaths or serious injuries on Scotland's roads by 2050. These outcomes align with the five pillars of the Safe System: Safe Road Use; Safe Vehicles; Safe Speeds; Safe Roads and Roadsides; Post-crash Response.

All road users are exposed to a variety of risks. The alignment of one or more risks can result in a collision. It is important, therefore, to understand the nature of collision causation, as it may be any combination of factors that result in a collision and any combination of factors that result in a fatality. A positive change in road users' behaviour can reduce the severity of the collision or prevent it from happening entirely.

Working in partnership to achieve the RSF2030 vision, Police Scotland and Transport Scotland instigated road fatality research and in-depth analysis of all factors relating to road traffic fatalities on Scotland's road network. The findings of the '[In depth road traffic fatalities report for the years 2015-2020](#)' were published on 25<sup>th</sup> October 2023.

Recommendation 73 within the report states that:

***“Further in-depth analysis should be undertaken on the currently available data set to identify trends and subsequent recommendations for pedestrians, motorcyclists, pedal cyclists and child fatalities.”***

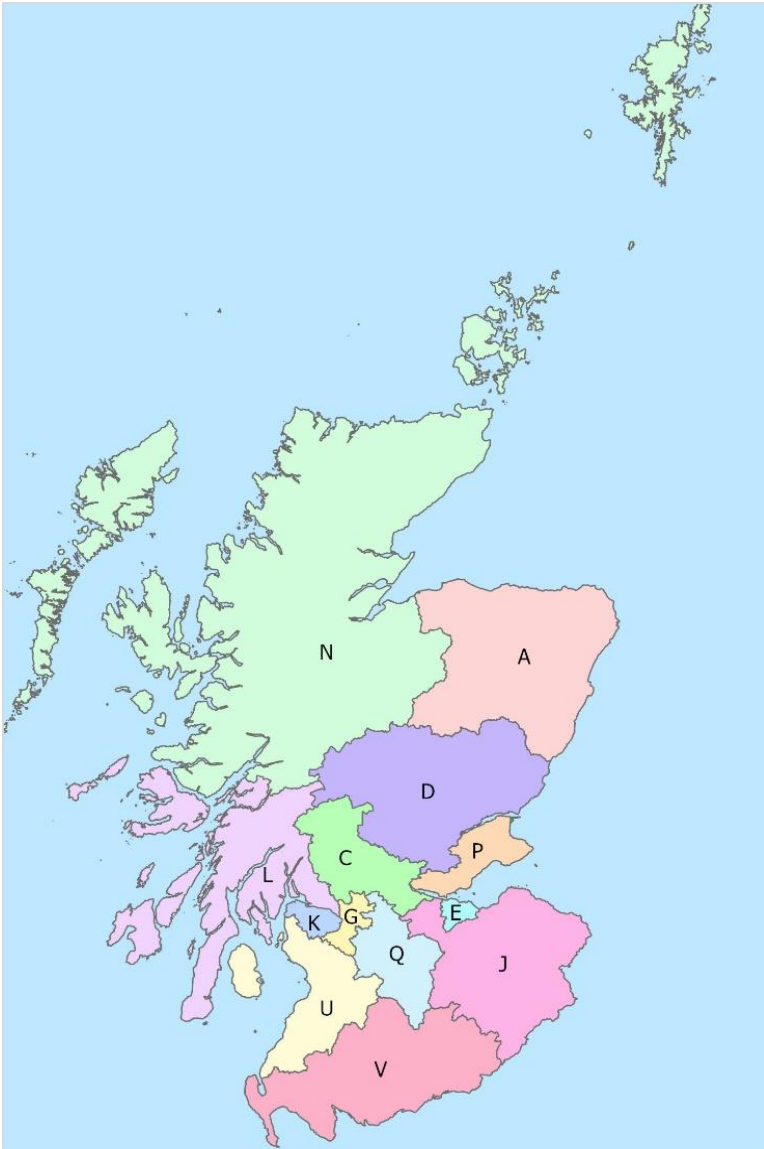
A notable shift in the number of people cycling on Scotland's roads has been highlighted in the media in recent years. It is assessed this is likely due to an increased consciousness of the benefits to "[help improve fitness, and it being a sustainable and cost-effective mode of transport](#)". Many now opt to cycle for [their commute to work and school, as well as leisure](#). This is corroborated by Cycling Scotland, whose '[recent analysis of national cycle counter data shows 24 locations across Scotland recording increases of above 30% in cycle journeys in June 2024, compared with June 2023](#)'.

This report will focus on all collisions resulting in pedal cyclist injury during the reporting period 1<sup>st</sup> January 2020 to 29<sup>th</sup> November 2024.

This report focusses on the locations of fatal, serious and slight collisions that have involved pedal cyclists, and has been produced to better understand the scale, nature and causations, and to identify any countermeasures or recommendations to mitigate risk on the road for pedal cyclists.

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To align with the available data for fatal, serious and slight collisions, spatial analysis has been conducted using the geographical boundaries of Police Scotland’s divisions, as shown below:



Division Code	Local Authority	Division Code	Local Authority
<b>North</b>		<b>East</b>	
A	Aberdeen City	C	Stirling
	Aberdeenshire		Clackmannanshire
	Moray		Falkirk
D	Dundee City	E	City of Edinburgh
	Perth & Kinross	J	East Lothian
	Angus		Midlothian
Highland	Scottish Borders		
N	Eilean Siar	P	West Lothian
	Orkney Islands		Fife
	Shetland Islands		
	<b>West</b>		
G	Glasgow City		
	East Dunbartonshire		
	East Renfrewshire		
U	East Ayrshire		
	North Ayrshire		
	South Ayrshire		
Q	North Lanarkshire		
	South Lanarkshire		
L	Argyll & Bute		
	West Dunbartonshire		
K	Inverclyde		
	Renfrewshire		
V	Dumfries & Galloway		

Map 1: Map showing 13 Police Scotland Divisions. As illustrated in the adjoining table, the 'North' area is made up of 'A', 'D' and 'N' Divisions. The 'East' area is made up of 'C', 'E', 'J' and 'P' Divisions. The 'West' area is made up of 'G', 'K', 'L', 'Q', 'U' and 'V' Divisions.

## Key Findings

- A total of 26,561 casualties (fatal, serious and slight) were recorded for all road user types between January 2020 and November 2024. Pedal cyclists accounted for 9% of the overall casualties (n=2,341), despite only representing 1% of the traffic volume.
- 2,314 collisions involving pedal cyclists took place. This resulted in 32 fatal, 916 serious 1,366 slight severity collisions.
- 2,341 pedal cyclist casualties were recorded during the reporting period. This resulted in 32 fatalities, 138 very serious, 153 moderately serious, 625 less serious and 1,393 slight severity casualties.
- 2020 accounted for the highest number of fatal (n=11), serious (n=247) and slight (n=344) severity collisions.
- Whilst serious and slight collisions reduced during the reporting period, fatal collisions spiked in 2023.
- Whilst most collisions occurred during spring and summer time (n=1,363), notably 951 collisions took place throughout the autumn and winter period, between September and February.
- The majority of fatal collisions occurred on weekdays (n=26), most of which took place outwith traditional commuting hours.
- 'C' Division (Forth Valley) recorded the highest number of pedal cyclist-related fatalities (n=5), with 80% of these having taken place in 2021 (n=4).
- 'G' Division (Greater Glasgow) recorded the highest number of serious collisions (n=211), and 'E' Division (Edinburgh City) recorded the most slight collisions (n=380).
- Junctions were prominent locations for collisions, with 14 of the 32 fatal collisions occurring at or close to a type of Junction: T-Junction (n=6), Crossroad Junction (n=4), a Junction (n=4). Roundabouts were also identified to pose significant risk, with 110 serious and 199 slight collisions taking place.
- Whilst fatal collisions most commonly occurred on 'A' class roads, serious severity collisions most commonly took place on unclassified roads/residential streets. Sixteen of the 32 fatalities took place on a road with a 60mph speed limit, with fifteen having taken place on 30mph speed limit roads. Most serious and slight collisions occurred on 30mph speed limit roads.
- The only roads which recorded more than one fatal collision were the A814 and the A710 (each n=2). Regardless of severity, throughout the reporting period, the A8 is the highest risk road for collisions involving pedal cycles (n=30 serious, n=41 slight), followed by the A77 (n=15 serious, n=27 slight). Notably, these roads remain the highest risk roads in 2024, with

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ten collisions on the A77 and nine on the A8. Additionally, the A82 and A7 also recorded eight collisions each in 2024.

- Nine fatal collisions, 47 serious and 63 slight collisions occurred as a result of another vehicle travelling 'too close to cyclist'. The nine fatal collisions primarily occurred during daylight hours, though notably five of the fatal collisions occurred during winter months between November and February.
- No fatal collisions occurred as a result of the cyclist being 'Impaired by Alcohol or Drugs'. Ten serious collisions occurred where the cyclist was believed to be 'Impaired by Alcohol'. Nine of whom were male, with almost half of whom were in the 40-49 age group (n=4). More than half (60%) of the ten collisions took place on the weekends (n=6). Six out of the ten collisions occurred between 16:00 hours and 23:00 hours, with three of these occurring on a Friday. One serious collision occurred where the cyclist was believed to be 'Impaired by Drugs'.
- No fatal collisions occurred as a result of the cyclist being distracted by use of a mobile phone. Though one person was wearing ear bud style headphones at the time of a fatal collision.
- Twenty seven of the 32 fatal pedal cyclist collisions involved more than one vehicle, with cars having the greatest representation. Five fatal collisions involved the pedal cyclist only.
- Twenty two of the 32 fatal collisions involved a pedal cyclist, and one vehicle (two in total), four fatal collisions involved a pedal cyclist and two vehicles (three in total), and one fatal collision involved a pedal cyclist and three vehicles (four in total).
- More than half (n=19) of the 32 fatal pedal cyclist collisions involved a motor vehicle being 'at fault'. The remaining 13 collisions involved the pedal cyclist being 'at fault'. *Note: 'At fault' indicates that the behaviour / actions of the driver/rider are likely to have contributed to the occurrence of the collision. It should be noted that more than one road user can be found 'at fault' in any given collision.*

## Executive Summary

A total of 26,561 casualties (fatal, serious and slight) were recorded for all road user types between January 2020 and November 2024. Pedal cyclists accounted for 9% of the overall casualties (n=2,341), despite only representing 1% of traffic volume.

Throughout the review period, collisions of all severity have displayed a decreasing trend from a period high in 2020.

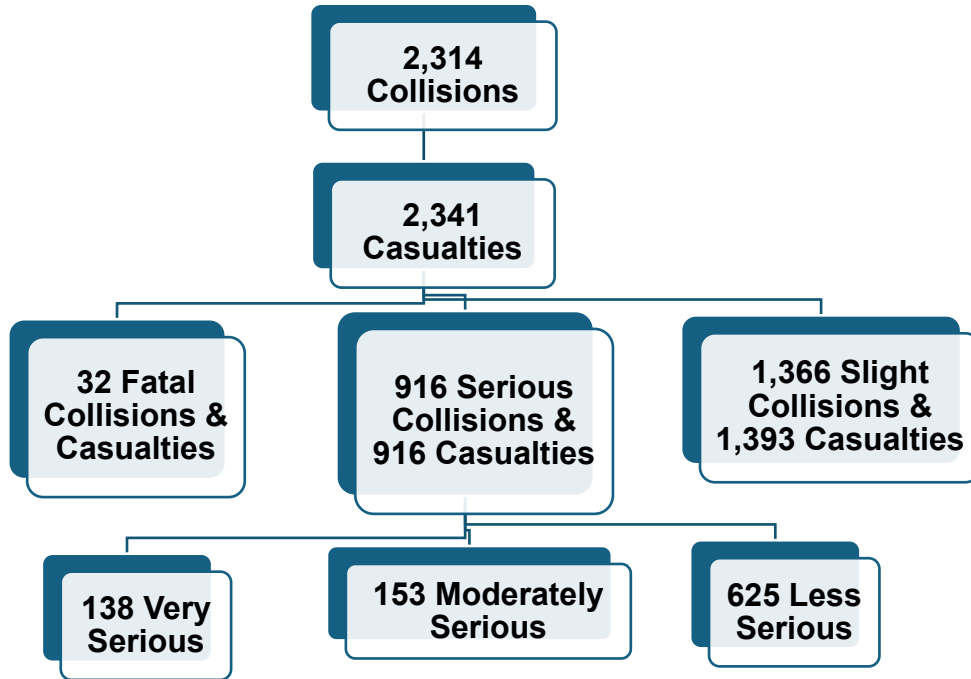


Figure 1: Chart showing Fatal, Serious and Slight severity collisions and casualties involving pedal cyclists between January 2020 and November 2024.

Whilst there have been year on year reductions in both serious and slight collisions, the number of fatalities has shown a degree of fluctuation. Between January 2020 and November 2024, a total of 2,314 collisions involving pedal cyclists took place. This resulted in 32 fatal collisions (32 fatalities), 916 serious severity collisions (916 serious severity casualties) and 1,366 slight severity collisions (1,393 slight severity casualties). The 916 serious severity pedal cyclist casualties were made up of 138 very serious injuries, 153 moderately serious injuries and 625 less serious injuries. Six collisions took place resulting in seven pedal cyclist passengers being injured (four serious and three slight casualties).

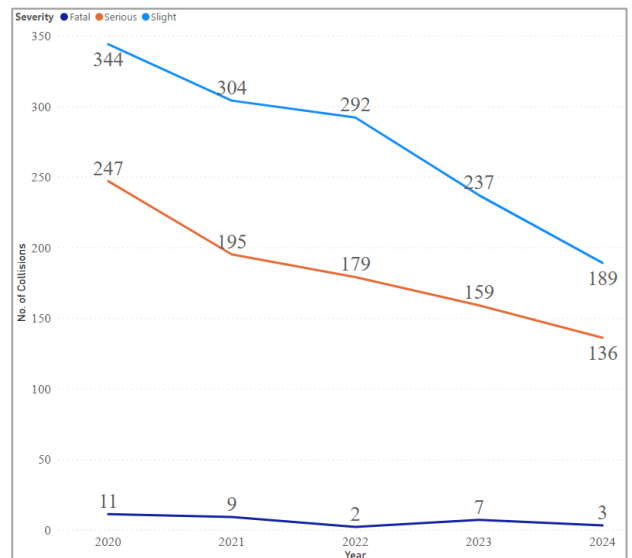


Figure 2: Chart showing Fatal, Serious and Slight severity collisions involving pedal cyclists between January 2020 and November 2024.

[A new hierarchy of road users in the highway code was introduced in 2022](#), and although no direct correlation can be made between the introduction of hierarchy and reduction of figures, it is important to highlight and promote these changes, which, are detailed below.

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The new hierarchy of road users details that road users who are most at risk during a collision (including pedal cyclists), are now at the top of the hierarchy.

This update to the Highway Code details how pedal cyclists should position themselves on the road and especially when approaching a junction, how cyclists should proceed when at junctions where existing facilities and new special cycle facilities exist. Furthermore, the update also informs that pedal cyclists must maintain a 0.5 metre distance from the kerb and a one metre distance between themselves and parked vehicles. This updated order of road user also encourages pedal cyclists to make themselves visible and known to pedestrians as well as slower moving traffic, especially on the approach to junctions and when passing large vehicles. The updated Highway Code also explains the new hierarchy around pedal cyclists when travelling through roundabouts.

While all age groups were represented among the casualties, adults aged between 20 and 59 were recorded in higher numbers. Casualties were predominantly male.

Regardless of severity, pedal cyclist casualties were most commonly male. Male fatalities were most commonly adults between the ages of 30 to 39 (n=5), and 60 to 79 (n=10). Regardless of casualty sex, serious severity pedal cyclist casualties were most commonly aged in the 50 to 59 year old age group (n=176), followed by the 40 to 49 year old age group (n=173). And the 20 to 29 year old age group recorded the highest number of slight severity pedal cyclist casualties (n=276).

Higher numbers of collisions/casualties occur during summer months and during traditional commuting times. Geospatial analysis highlights concentrations of collisions on unclassified roads, particularly in areas of high population density, such as Edinburgh City and Greater Glasgow. Junctions and roundabouts feature prominently in all severities of collision and represent a significant risk to pedal cyclists.

The highest number of fatal collisions took place in Forth Valley (n=5). Greater Glasgow recorded the highest number of serious severity pedal cyclist collisions (n=211) and Edinburgh City recorded the most slight severity collisions involving pedal cyclists (n=380).

Half of the fatal pedal cyclist collisions occurred on 'A' class roads (n=16) and serious (n=429) and slight (n=727) severity pedal cyclist collisions most commonly took place on 'unclassified' roads.

Of the 32 fatal pedal cyclists more than half of these were wearing helmets (n=21), with 11 not having worn a helmet at the time of collision.

There was a high degree of commonality in the contributory factors recorded for all road users focussing on due care and attention and the visibility of vulnerable road users such as cyclists. The most commonly recorded included:

- Failed to look properly
- Failed to judge other's path/speed
- Careless/reckless/In a hurry.
- Loss of control.

In relation to pedal cyclists, and regardless of the severity of the collision, 'failure to look properly', 'cyclist entering road from pavement' and 'loss of control' feature prominently. This may suggest

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lapses in judgement or awareness of road safety among some cyclists and presents an opportunity for educational/awareness-raising campaigns. Other contributory factors relating specifically to pedal cycles were recorded in lower number, but included:

- Defective brakes/lights
- Cyclist with dark clothing.

Contributory factors relating to other vehicles identified the following four contributory factors to be the most common:

- Failed to look properly
- Failed to judge other's path/speed
- Careless, reckless or in a hurry
- Loss of control.

Factors relating to the 'Fatal Five' such as the cyclist being impaired by drugs or alcohol were very rarely recorded.

In terms of reducing the likelihood of a collision occurring, analysis of countermeasures highlighted that 'training to improve hazard perception skill', and 'training to reduce risky driving manoeuvre' alongside vehicle technology such as advanced electronic braking systems could have a positive influence for all road users. More specifically to pedal cyclists, 'awareness training of vulnerable road user' (VRU) and 'increased VRU conspicuity', for example by appropriate use of lights or high visibility clothing, were most commonly recorded.

In terms of 'collision avoidance' - where the driver/rider was assessed to be responsible, 'training to improve hazard perception skill' was deemed a 'likely' countermeasure among five instances involving pedal cyclists and a further five instances involving goods vehicles.

Also, in relation to 'collision avoidance', 'training to reduce risky driving manoeuvre' was deemed a 'possible' countermeasure among two instances involving cars and one instance involving a goods vehicle. This countermeasure was also deemed a 'likely' countermeasure among two instances involving cars and also 'almost certain' among one instance involving a goods vehicle.

In terms of 'electronic braking systems' under the 'collision avoidance' countermeasure confidence, this was a 'possible' countermeasure in one instance involving a car, 'likely' on two occasions (both relating to cars) and 'almost certain' in one collision (goods vehicle).

Countermeasures relating to severity reduction focussed on practical solutions such as the use of protective clothing/helmets and vehicle modification such as pop-up bonnets, pedestrian airbags etc.

While countermeasures are only identified for fatal collisions as part of the In-Depth Road Fatalities Study project, it is assessed that due to the similarities in contributory factor profile between fatal, serious and slight collisions, introduction of these countermeasures would have a positive effect on the numbers and severities of all collisions involving pedal cyclists.

While the general decreasing trend in the numbers of pedal cyclist collisions/casualties is encouraging, it is clear that there is more that must be done to meet the demanding targets of

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Scotland's Road Safety Framework 2030. Positive action from Police Scotland, Transport Scotland, partner agencies and all road users is required to reduce pedal cyclist fatalities on Scottish roads.

This report outlines the recommendations aligned to the pillars of the Safe System, which aim to improve road safety and reduce pedal cyclist fatalities through:

- Education and awareness
- Practical actions.

In addition to recommendations to review or create awareness/safety campaigns focussed on the findings of this report, a number of site visits are recommended for partnership to review any practical actions which could improve the safety of identified high risk roads/junctions etc. and collision locations where a specific countermeasure of 'add appropriate barrier' was recorded.

## Recommendations

The following recommendations have been identified through analysis and are presented for consideration:

### Safe Road Use

#### Education and Awareness

##### *Recommendation 1 (Pedal Cyclists)*

Develop or continue to run campaigns on cycling safety

- Targeted campaigns should continue to be aware of seasonal differences for pedal cyclist fatalities.
- Police Scotland support the NPCC 2 Wheels Safety Campaign, running in June 2025, the findings of this report support this time period for future similar campaigns.
- Consideration could be given to tailored winter campaigns or shortened “reinforcement” social media campaigns, to maintain rider awareness during poorer winter conditions.

#### Supporting Analysis

##### *Fatalities*

Throughout the reporting period there were a total of 32 pedal cycle fatalities in Scotland. With lighter nights and better weather, it is common for more cyclists to be on the road during spring, summer and autumn months. June and August recorded the highest number of fatal collisions during the reporting period (n=5 respectively).

##### *Serious*

The number of serious collisions involving pedal cyclists has reduced each year, with a 45% reduction over five years. With a high in 2020 (n=247) the most significant drop was into the following year, 2021 and this encouraging trend has continued. April to end of September (n=588) recorded the highest numbers of collisions, with a peak in August (n=113). Despite the poorer weather conditions and more limited hours of daylight, there were still 328 serious collisions over the winter to spring months of October to March, indicating a significant number of cyclists still on the road, which, equates to over a third (36%) of the overall serious severity collisions.

##### *Recommendation 2 (Pedal Cyclists and Other Road Users)*

Adapt existing campaigns for all road users

- Given that there has been an increase in cycling in recent years, especially in more urban areas and cities, it is recommended that awareness of increased cyclists using the roads is raised.
- Messaging should include the need for increased vigilance regarding vulnerable road users and emphasising the need for allowing space on the roads. This is regardless of vehicle type, but can specifically, relate to vans and goods vehicles and the increased blind spots that these larger vehicles have. Messaging should also emphasise the need for pedal cyclists to be aware of larger vehicles having increased blind spot areas. Operation Close Pass is an

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initiative that has been designed to educate motorists on the distance that should be maintained between the motorist and a pedal cyclist.

- Police and partners to review current pedal cyclist campaigns and assess how fit for purpose and current these campaigns are.
- Consideration should be given to encourage safe cycling amongst all age groups, particularly, the older road user groups, by advertising and hosting safety campaigns for cycling in cafes, and on the radio as well as social clubs that older road users may frequent.

### Supporting Analysis

#### *Fatalities*

Of the 32 fatalities across Scotland, more than three quarters (78%) were male (n=25). Fatalities most commonly involved the 30 to 39, 60 to 69 and the 70 to 79 year old age groups (n=5 respectively). Fatalities have occurred across many age categories and it is important that any preventative campaigns target a wide audience.

On nine occasions vehicles had passed too close to the cyclist. Operation Closepass is vital in reminding drivers of the safe space which should be given when passing cyclists.

#### *Serious*

Where the driver/rider was assessed to have been likely 'at fault', 'failure to look properly' was the most common contributory factor (n=240), with 83% of these being assigned to cars (n=198). Thirty eight instances involved car drivers 'passing too close to cyclist'.

Whilst cars were the most common vehicle type to be involved in serious severity pedal cyclist collisions, goods vehicles up to 3.5 tonnes were the second most common vehicle type (n=47 contributory factors assigned). Like cars, 'failure to look properly' was the most common contributory factor to have been recorded amongst collisions where goods vehicles up to 3.5 tonnes was deemed to have had responsibility for the collision occurring (n=19). Three instances were recorded where the goods vehicle up to 3.5 tonnes 'passed too close to cyclist'. Goods vehicles tend to be larger in size, and can potentially have a larger blind spot, hence the [lack of visibility if a pedal cyclist travels in the blind spot of a goods vehicle](#). In addition to this, 'careless, reckless or in a hurry' (n=6), 'failed to judge other's path/speed' and 'dazzling sun' were all recorded (n=4 respectively).

#### *Slight*

152 slight casualties were under the age of 16, 89% of which were male (n=136). The majority of collisions occurred on unclassified roads (n=112). The most common contributory factors behind these collisions were 'failure to look properly' (n=38), followed by 'cyclist entering road from pavement' (n=28). 'Failure to look properly' (n=38) was most commonly applied to pedal cyclists (n=26), followed by cars (n=11) and one taxi/private hire car.

### *Recommendation 3 (Pedal Cyclists)*

#### *Cycling in the urban environment*

- Given the high proportion of collisions occurring on unclassified roads/residential streets, consideration should be given to the creation of an 'Urban Cycling' safety campaign to alert cyclists to the specific risks of cycling in urban areas. Trials of the campaign could be focussed, in the first instance in Glasgow or Edinburgh, given the high prevalence of collisions in these areas.

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- Consider an input to schools/cycling clubs etc to highlight the specific risks of urban cycling and provide appropriate safety advice.
- Consideration should be given to raising awareness of the increased use of e-bikes as a mode of transport to perform food, drink and grocery deliveries and their increasing presence on the roads.

### Supporting Analysis

#### *Slight*

The highest number of collisions with a slight severity occurred in high population, urban divisions: 'E' (Edinburgh City) Division (n=380) and 'G' (Greater Glasgow) Division (n=368). Slight collisions most commonly took place on unclassified roads (n=727). However, notable numbers were recorded in 'E' (Edinburgh City) Division on the A8 road (n=15) and the A7 road (n=11). The highest number in 'G' (Glasgow) Division took place on the A77 road (n=23) and the A8 road (n=21). Additionally, cluster analysis identified a high-risk roundabout on Barrhead Road and Pollokshaws Road in Glasgow (B762).

#### *Recommendation 4 (Pedal Cyclists)*

#### Cycling Under the Influence of Alcohol/Drugs

- The impact of cycling whilst under the influence of alcohol or drugs, should be emphasised during the 'Festive Drink/Drug Drive' Campaign, the Drug Driving Week in August, as well as the 'Two Wheels' Campaign. Whilst these campaigns may be more focussed on drivers, the focus could, also be extended to cyclists.
- A further recommendation would be to highlight the dangers of driving and cycling under the influence of alcohol, by advertising this in bars, and in the alcohol aisles in supermarkets.

### Supporting Analysis

#### *Fatalities*

No fatal collisions involving pedal cyclists occurred as a result of the cyclist being 'Impaired by Alcohol or Drugs'.

#### *Serious*

Ten serious collisions occurred where the cyclist was believed to be 'Impaired by Alcohol'. Four collisions occurred during winter months of November to January. One serious collision occurred in 2021 involving a pedal cyclist being 'Impaired by Drugs'.

#### *Slight*

There were three slight pedal cyclist casualties assigned the contributory factor 'Impaired by Alcohol'; and two pedal cyclists assigned 'Impaired by Drugs'.

#### *Recommendation 5 (Partners)*

#### Community Engagement – Safety initiatives

- There are a number of cycling training initiatives that Cycling Scotland provide and a number of cycling events (Etape Caledonia 2025, Ginduro! Scotland etc.). It is recommended that roads policing/partners engage with these groups to offer support and collaborate to ensure that safety advice/hazard awareness advice is in line with the current findings.
- It is recommended that schools continue to promote the Cycling Scotland Bikeability training programme to enhance safety and knowledge of cycling safely for children. This programme teaches safety checks and how children can ride safely in traffic.

## Supporting Analysis

### *Fatalities*

More than half (n=18) of the 32 pedal cyclist fatalities occurred less than five kilometres from the casualty's home postcode, with the most common age group of these casualties being the under 17 year old age group. Of the five fatalities under the age of 17, one was commuting to school.

### *Serious*

1,115 contributory factors were recorded for serious severity collisions involving a pedal cyclist. 'Failure to look properly' was the most common contributory factor recorded amongst serious severity collisions involving pedal cyclists (n=325), with this mostly applying to cars (n=202) followed by pedal cyclists (n=81). The top six most commonly recorded contributory factors for serious severity collisions also feature in fatal collisions. This highlights the importance of vigilance and awareness of potential hazards whilst using the road network, reinforcing the importance of ensuring that our safety campaigns are addressing these risks.

## Safe Vehicles

### Education and Awareness

#### *Recommendation 6 (Pedal Cyclists – General)*

#### *Pedal Cyclist Visibility*

- It is recommended that the current cycle safety campaigns be adapted to reinforce the importance of visibility (clothing/lights/reflectors etc.) to address poor conspicuity as a common contributing factor, and to liaise with partners/cycle shops to discuss the inclusion of posters and flyers regarding cycle safety/traffic awareness etc. at point of sale. Virtual reality (VR) headsets could also be introduced which could highlight dangers and blind spots for cyclists, positioning on roads, and hazard perception.
- The 'Be Bright, Be Seen' campaign was launched in 2009 by the City of Edinburgh Council, and aims to encourage drivers, cyclists and pedestrians to take extra care during the darker months when using the road network and be as visible as possible.
- Half of the six pedal cyclist passenger casualties occurred in 'E' Division/Edinburgh. It is therefore recommended that more awareness of safety for pedal cyclist passengers is raised during the 'Be Bright, Be Scene' campaign.
- Consider promotion of existing programs such as:
  - The Royal Society for Prevention of Accidents (RoSPA) provides training courses which promote safety whilst cycling.
  - The Scottish Occupational Road Safety Alliance (ScORSA) offers support and promotes safe driving to work.

## Supporting Analysis

### *Fatalities*

Nine fatal collisions, resulting in nine fatalities, took place on unclassified roads/residential streets in eight of the 13 policing divisions – 'D' (Tayside) (n=2), 'A' (North East), 'E' (Edinburgh City), 'G' (Greater Glasgow), 'L' (Argyll and West Dunbartonshire), 'N' (Highlands and Islands), 'Q' (Lanarkshire) and 'U' (Ayrshire) Divisions (n=1 respectively). The most common contributory factors for collisions on unclassified roads relate to perception/awareness and driver behaviour.

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Further research of these collisions identified that on one occasion, the pedal cyclist did not have any lights fitted, and was wearing a black coloured jacket, using wireless earbud style headphones. The cyclist crossed into the opposing carriageway, and into the path of an oncoming motorcar. This exemplifies the necessity for cyclists to wear visible clothing and ensure they are alert and focussed on road safety, particularly when crossing traffic.

Of the 217 contributory factors assigned to vehicles, 91 contributory factors were linked to cyclists. 'Failure to look properly' (n=12) was the most commonly recorded, followed by 'failed to judge others path/speed' (n=9). Additionally there were instances where the 'cyclist entered road from pavement' (n=4), the 'rider was wearing dark clothing', (n=4) and where the cyclist was 'not displaying lights at night or in poor visibility' (n=2).

### *Serious*

Between 06:00 hours and 08:59 hours, a total of 125 serious collisions took place, which represents 14% of the overall serious severity collisions (n=913), with the highest number taking place between 08:00 hours and 08:59 hours (n=59).

From 14:00 hours onwards, figures remain high until 18:59 hours (n=359), with the highest number occurring during the commuting hours of 17:00 hours and 17:59 hours (n=82).

There were a higher number of collisions on Friday afternoons between 14:00 hours and 14:59 hours (n=20). Of these 20 collisions, six casualties were between the ages of 20 and 28 years of age, and two were children who were 15 years of age. Of these, there were three instances where the journey was being conducted as part of work (n=1) and commuting to/from work (n=2).

### *Recommendation 7 (Pedal Cyclists – General)*

#### *Cycle Helmets*

- Safety campaigns to highlight the importance of cycle helmets for all cyclists given that more than half of fatalities on unclassified roads/residential streets were not wearing a helmet.
- Consider engagement with schools, colleges, and cycle events to reinforce the importance of wearing helmets and appropriate safety clothing. It should be noted that children and older road users were more commonly recorded in collision data for not wearing helmets and this should be considered in the design of the campaign.

#### *Supporting Analysis*

##### *Fatalities*

Of the 32 pedal cyclist fatalities, 11 were not wearing a helmet, the majority of which were male:

- Under Age 11 (n=1)
- Aged 11 – 20 (n=3)
- Aged 21 – 30 (n=1)
- Aged 51 – 60 (n=2)
- Aged 61 – 70 (n=1)
- Aged 71 – 80 (n=3)

All 11 collisions occurred on single carriageways. Eight collisions took place on roads with a 30mph speed limit and three took place on roads with a 60mph speed limit.

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Ten of the 11 pedal cyclist fatalities incurred head injuries.

### *Serious*

Of those involved in serious severity collisions (n=916), more were recorded to have been wearing a helmet (n=508) than those who were not (n=293). It was unknown for 115 casualties. The majority of those not doing so were male (n=247) and were spread across the age groups.

### *Slight*

Similar to serious collisions, there were a higher number of pedal cyclists who had worn a helmet (n=780) during slight collisions, compared to 386 who had not - it was unknown for 227 casualties. Again, the majority of those not wearing a helmet were male (n=334). Ages ranged across most age categories, however almost a quarter (24%) were between the ages of 10 and 19 years of age (n=94).

## Action

### *Recommendation 8 (Partners)*

#### Pedal Cycle Maintenance

- Consider opportunities for partnership working with cyclist groups/cycle shops to offer cycle maintenance drop-in sessions to highlight the importance of regular check of brakes, lights etc. and provide practical advice.

### Supporting Analysis

One fatal collision, two serious collisions and eight slight collisions involved a pedal cycle having 'defective brakes'. These involved males and females across a range of ages.

#### *Fatalities*

The fatal collision took place in the evening during July 2021, on an unclassified road within 'L' (Argyll and West Dunbartonshire) Division, and involved a 51 year old male.

#### *Serious*

Both serious severity collisions took place in the afternoon hours on unclassified roads and involved one 12 year old male and one 24 year old male.

#### *Slight*

The eight slight severity collisions all occurred on single carriageways, with most of these taking place within 30mph stretches of road (n=7). Collisions most commonly occurred in 'D' (Tayside) and 'E' (Edinburgh) Divisions (n=2 respectively). Most casualties were male (n=7), and of note, more than half were aged between 10 and 14 years of age (n=4). Of the eight collisions, seven of these took place during weekdays, particularly on Tuesdays (n=3) and Wednesdays (n=2).

### *Recommendation 9 (Partners)*

#### Larger Vehicles

- In relation to lack of visibility of pedal cyclists for goods vehicles and HGVs, it is recommended that more awareness is raised. Making pedal cyclists more visible to HGVs could be achieved by installation of cameras and sensors detecting vulnerable road users. And liaising with partners to identify opportunities to raise awareness of HGV blind spots and cyclist awareness to drivers.
- Liaise with partners to identify routes to promote the use of Camera/sensor VRU systems for large vehicles. Consider the possibility of subsidies/funding to encourage retrospective fitting of this technology to older vehicles.

## Supporting Analysis

### *Fatalities*

Of the 217 contributory factors assigned to vehicles, 'failed to look properly' was the most commonly recorded contributory factor (n=30) – of note, this was assigned to goods vehicles up to 3.5 tonnes on five occasions and goods vehicles over 7.5 tonnes on four occasions.

'C' Division recorded the highest number of pedal cyclist fatalities, one in 2020 and four in 2021. The locations of these collisions were sporadic. Contributory factors included 'dazzling sun', 'failure to judge other's path/speed' and 'failure to look properly' (n=2 respectively). Of note, 'cyclist entering road from pavement' (involving a car) and 'passing too closely to cyclist' (involving an articulated HGV) were also contributory factors.

### *Recommendation 10 (Partners)*

#### Secondary vehicle safety

- Collaborate with partners to highlight the importance of these measures (e.g. pop up bonnets/pedestrian air bags etc.) in vehicle design to manufacturers to encourage their inclusion and further development of the ways in which vehicles may be designed to be safer for vulnerable road users in the event of a collision.

## Supporting Analysis

### *Fatalities (Countermeasures)*

It was assessed as 'possible' that 'improved pedestrian secondary safety' (where the driver was assessed to be responsible) could have reduced the severity of injury to the cyclist in collisions which involved cars (n=9), a bin/refuse lorry (n=1) and a goods vehicle (n=1). *Note: 'Pedestrian secondary safety' measures include safety features on vehicles such as pop-up bonnets and pedestrian airbags which aim to absorb some of the impact and reduce the severity of injuries.*

## Safe Roads and Roadsides

### Education and Awareness

#### *Recommendation 11 (Partners)*

#### Campaign / Material – Junctions

- Junctions are particularly high risk for cyclists. Consideration should be given to collaboration with partners in the creation of a campaign highlighting the risks of junctions for vulnerable road users. This should be inclusive of all road users to encourage vigilance for all traffic using the road.

## Supporting Analysis

### *Fatalities*

14 fatal collisions took place at, or in close proximity to, crossroads or a T-junction. These road layouts are high risk for cyclists and require all drivers and riders to be alert, focussed and maintaining the correct road positioning at all times to ensure safety, particularly because traffic is often crossing lanes and direction of travel.

### *Recommendation 12 (Other Road Users)*

#### Campaign / Material – Travelling too close to cyclist

- Nine fatal collisions occurred as a result of another vehicle travelling ‘too close to cyclist’. It is recommended that the new guidance in relation to the hierarchy of road user in the Highway Code (regarding the distance to be maintained between a pedal cyclist and vehicle) is adhered to. This could be achieved by advertising on conventional/social media or adverts on roadside billboards.

#### Supporting Analysis

##### *Fatalities*

Nine fatal collisions occurred as a result of another vehicle travelling ‘too close to cyclist’. The nine fatal collisions involved vans/goods vehicles up to 3.5 tonnes (n=4), cars (n=3) and goods vehicles 7.5 tonnes and over (n=2). These collisions took place during weekdays, with almost half taking place on a Friday (n=4).

#### Action

### *Recommendation 13 (Recording Practices)*

#### Recording of the presence of cycle lanes

- To improve understanding of the success of cycle lanes in road safety, consideration should be given to the recording of the presence of cycle lanes/paths at locations of collisions involving pedal cyclists within STATS19/CRaSH reporting. This will allow future assessment of their effectiveness and allow for the identification of suitable locations for their implementation.

#### Supporting Analysis

From Stats 19 data it was not possible to indicate the presence of a cycle path or cycle lane near to the location of the collision.

### *Recommendation 14 (Partners)*

#### Site Visits

Partners to attend recommended sites of collisions to identify any improvements that could be made to improve road user safety, such as speed calming measures, cycle lane etc.

- Junctions identified through analysis.
- Locations identified where installation of an appropriate barrier is recommended.
- Roads identified as recording a high volume of collisions highlighted in this report: A7; A77; A8; B762.

#### Supporting Analysis

##### *Fatalities*

14 fatal collisions took place at, or in close proximity to, crossroads or a T-junction. These road layouts are high risk for cyclists and require all drivers and riders to be alert, focussed and maintaining the correct road positioning at all times to ensure safety, particularly because often traffic is crossing lanes and direction of travel.

## Slight

- A8 (Edinburgh): All 15 collisions took place at or near to junctions between Ingliston and Greenside/Canongate.
- A8 (Glasgow): The 21 slight collisions on the A8 road took place between West Drumoyne and Swinton. Notably, one collision took place at a roundabout and eight at junctions.
- A7: Ten collisions took place on the A7 road, between Prestonfield and Canongate/Old Town. Four occurred in close proximity to a crossroad junction, and a further four took place close to a T-Junction.
- A77: Twenty-three slight collisions on the A77 road took place between Glasgow City Centre South and Newton Mearns, south of Glasgow. Ten of these collisions took place at a T-Junction.
- B762: Nine collisions occurred at the roundabout connecting B762/Barrhead Road and Pollokshaws Road.

## Further Analysis

### Additional Analysis

#### *Recommendation 15 (Cycle lanes)*

- Identify priority locations where the addition of a cycle lane may be most beneficial and assist with the informing of scoring criteria required for infrastructure funding. As part of this work, research should be undertaken regarding [ongoing projects](#) (including Sustrans) for cycle paths to identify any which could be fast-tracked based on analytical assessment of the highest risk roads.

## Supporting Analysis

### *Fatalities*

Power Bi mapping shows that the majority of pedal cyclist fatalities took place on roads that did **not** have a cycle lane present.

#### *Recommendation 16 (Local problem profiles)*

- Problem profile focussing on Pedal Cyclists in 'E' Division (Edinburgh City) and 'G' Division (Greater Glasgow) should be prepared. These could include a focus on junctions/unclassified roads, highlighted as key concerns during analysis. Roads mentioned include: A77; A8.
- Further analysis in relation to pedal cyclists who are delivering food, drink and groceries as part of their employment (such as Just Eat or Deliveroo).
- Recommendation to alter CRaSH System to allow for 'travelling whilst working'/ 'in course of employment' information to be included.

### *Serious*

'G' Division recorded the highest number of serious severity pedal cycle casualties (n=211). Comparative analysis identified that 'E' Division had the next highest recorded, with broadly similar contributory factors. It is recommended that local problem profiles are prepared for 'E' and 'G' Divisions to identify high risk locations/common contributory factors etc.

**OFFICIAL**

On Friday afternoons from 14:00 hours until 14:59 hours, there were 20 serious collisions recorded. Of these 20 collisions, six casualties were between the ages of 20 and 28 years of age, and two were children who were 15 years of age. Of these, there were three instances where the journey was being conducted as part of work (n=1) and commuting to/from work (n=2).