

Mapping and visualising road safety data in areas of deprivation and what it teaches us about the reasons for risk inequality

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Our vision



**Happier,
healthier people**



**Greener, better
local
environments**



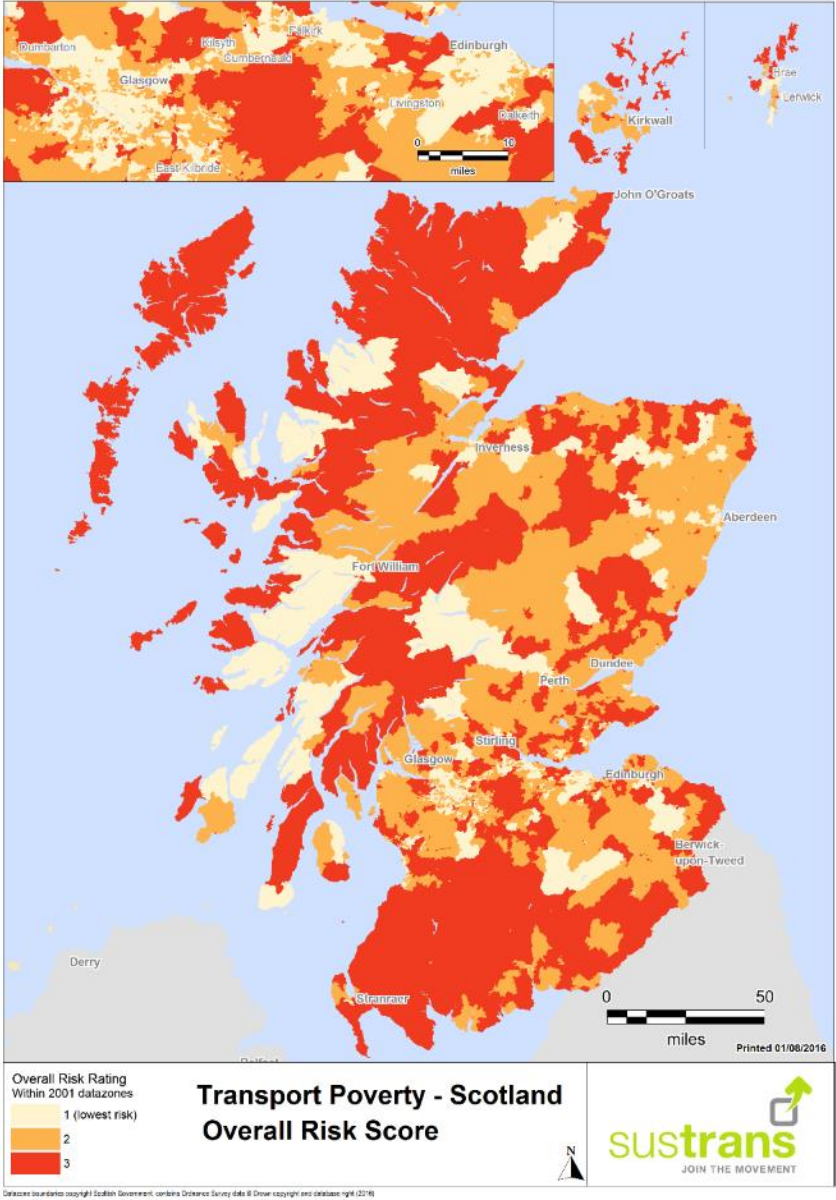
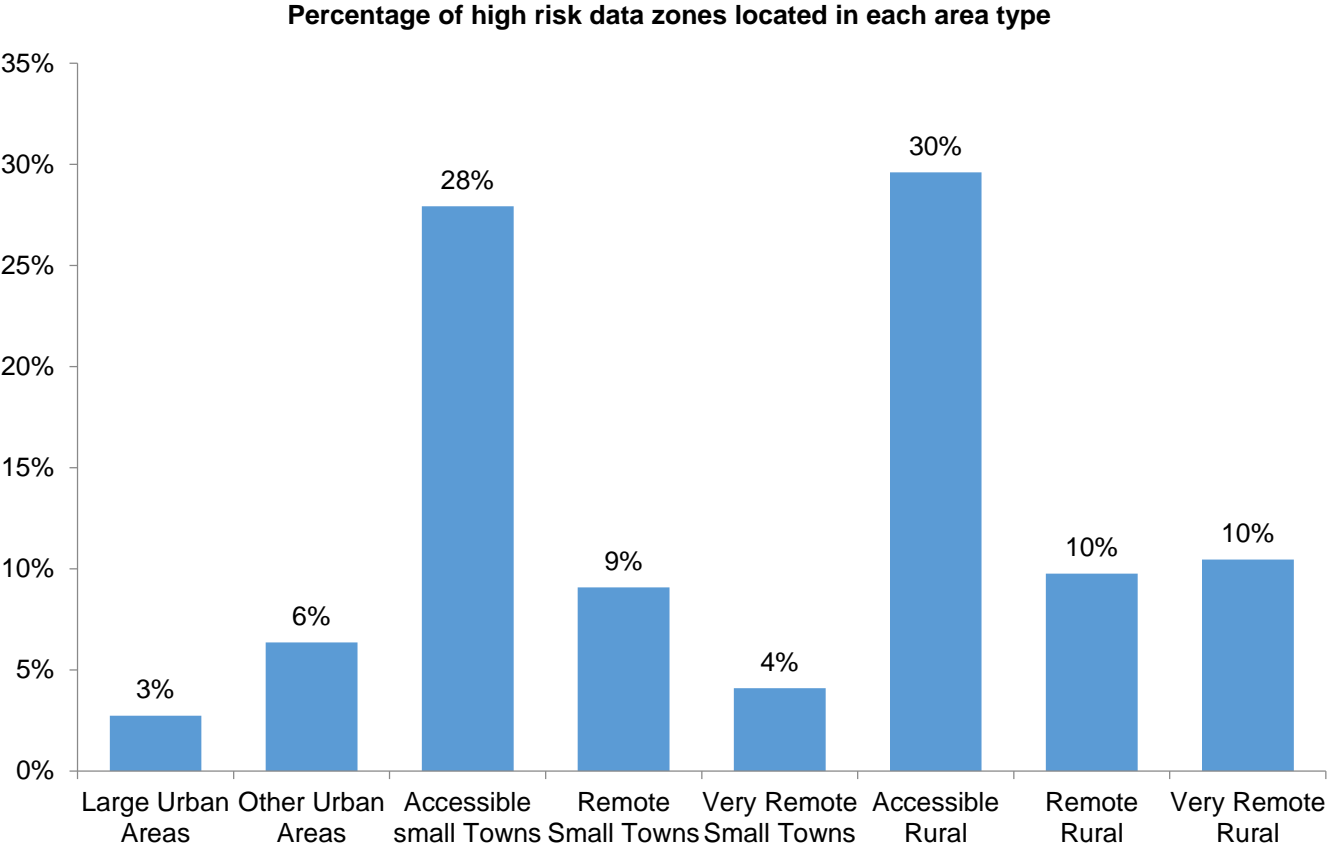
**Stronger
economies
and communities**

Transport poverty is when people don't have access to essential services or work because of a lack of affordable transport options.

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This can result in a burden on households for those on medium to low incomes and can reinforce pre-existing social disadvantages

Results 1: distribution



Results 2: Potential of cycling

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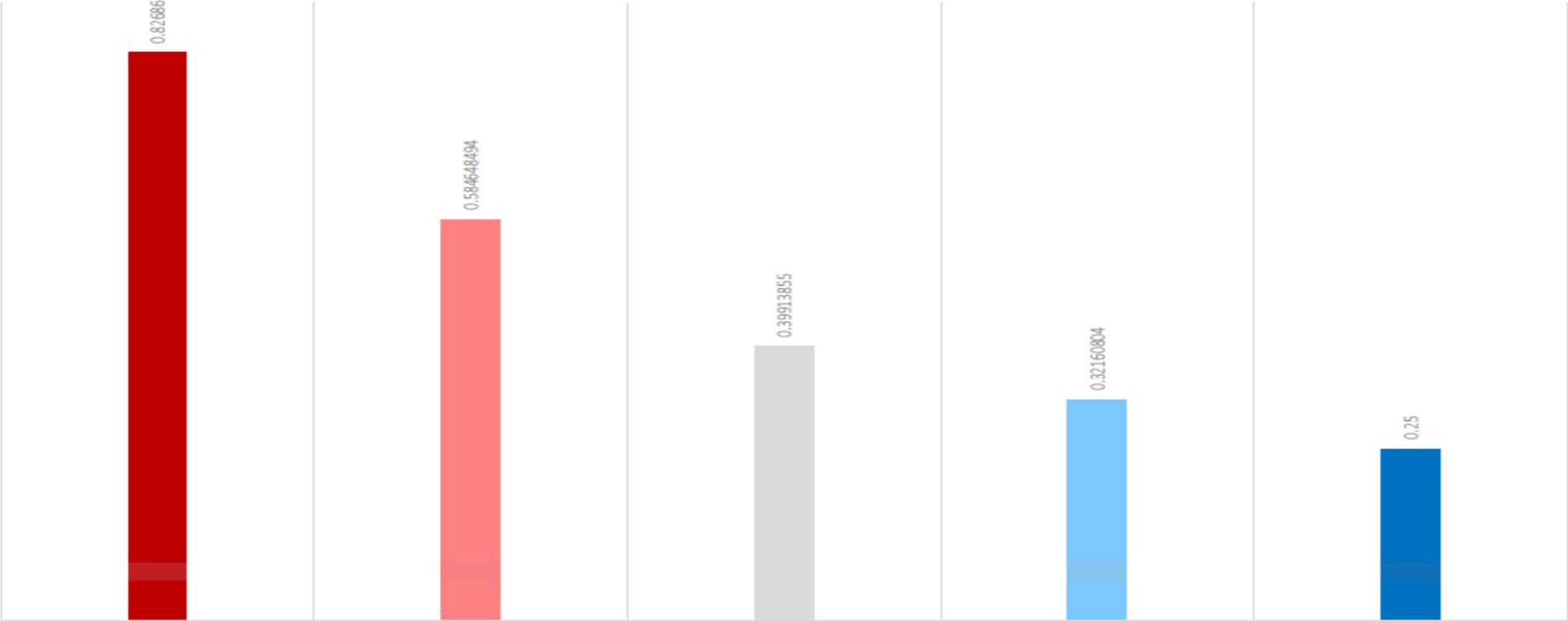
- 61% of high risk data zones are areas where essential services can be accessed by bike within 10 minutes.
- 34% of these areas are in 'small, accessible towns' and 20% in 'remote small towns'.
- Cycling could present a viable alternative to driving to access services in these areas
- What barriers might there be?
 - Access to bikes
 - Safe routes
 - Skills/confidence



Road safety

Mean Number of Accidents

MEAN NUMBERS OF ACCIDENTS BY SIMD QUINTILE

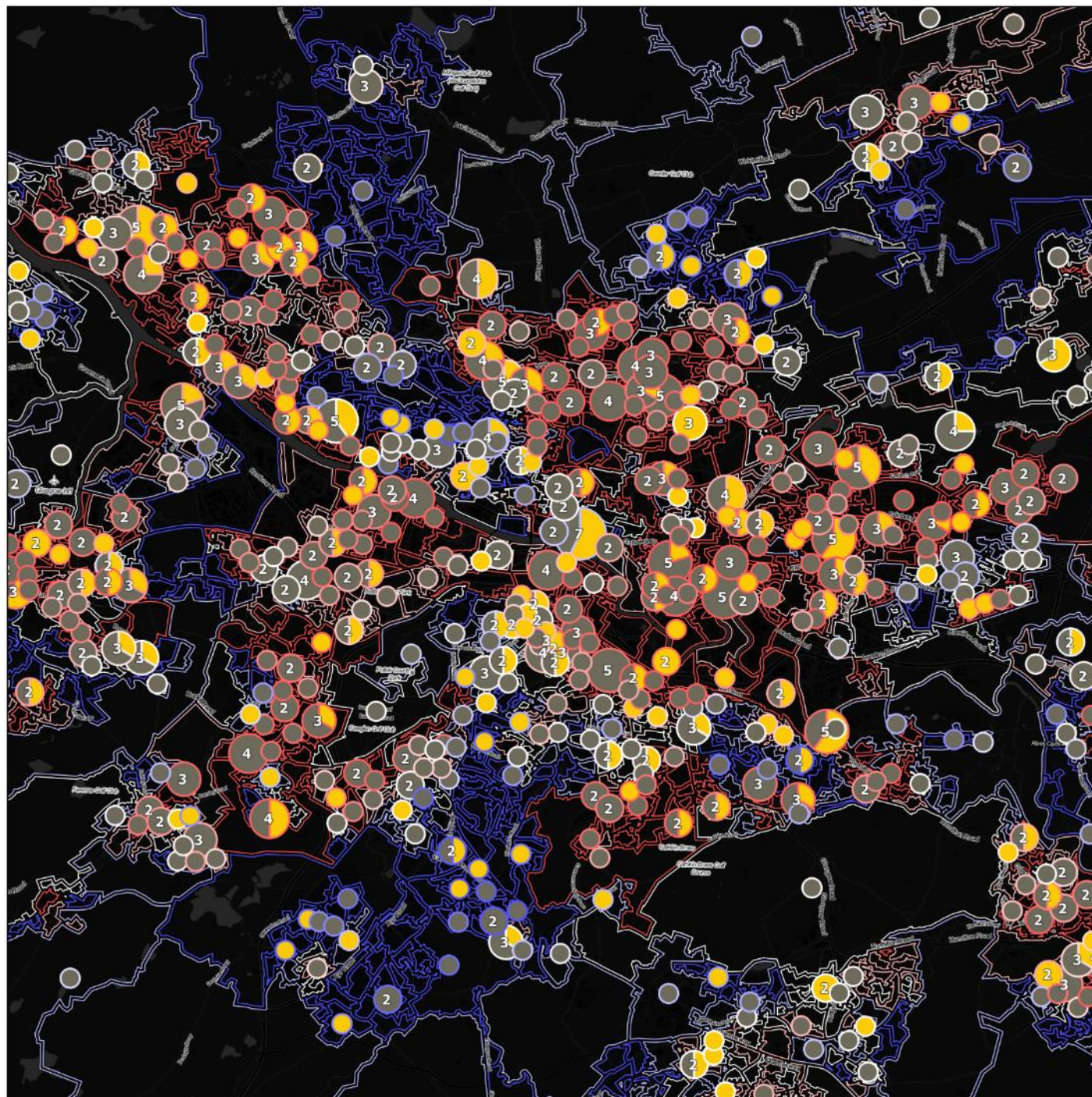


SIMD Quintile (Most Deprived To Least Deprived)

- 1
- 2
- 3
- 4
- 5

SIMD Quintile

Glasgow



DataZones with Pie Chart of
Accidents Taking Place There.

- Outline Colour Indicates SIMD

■ Serious Accidents

■ Minor Accidents

1st - 20th Percentiles

21st - 40th Percentiles

41st - 60th Percentiles

61st - 80th Percentiles

81st - 100th Percentiles

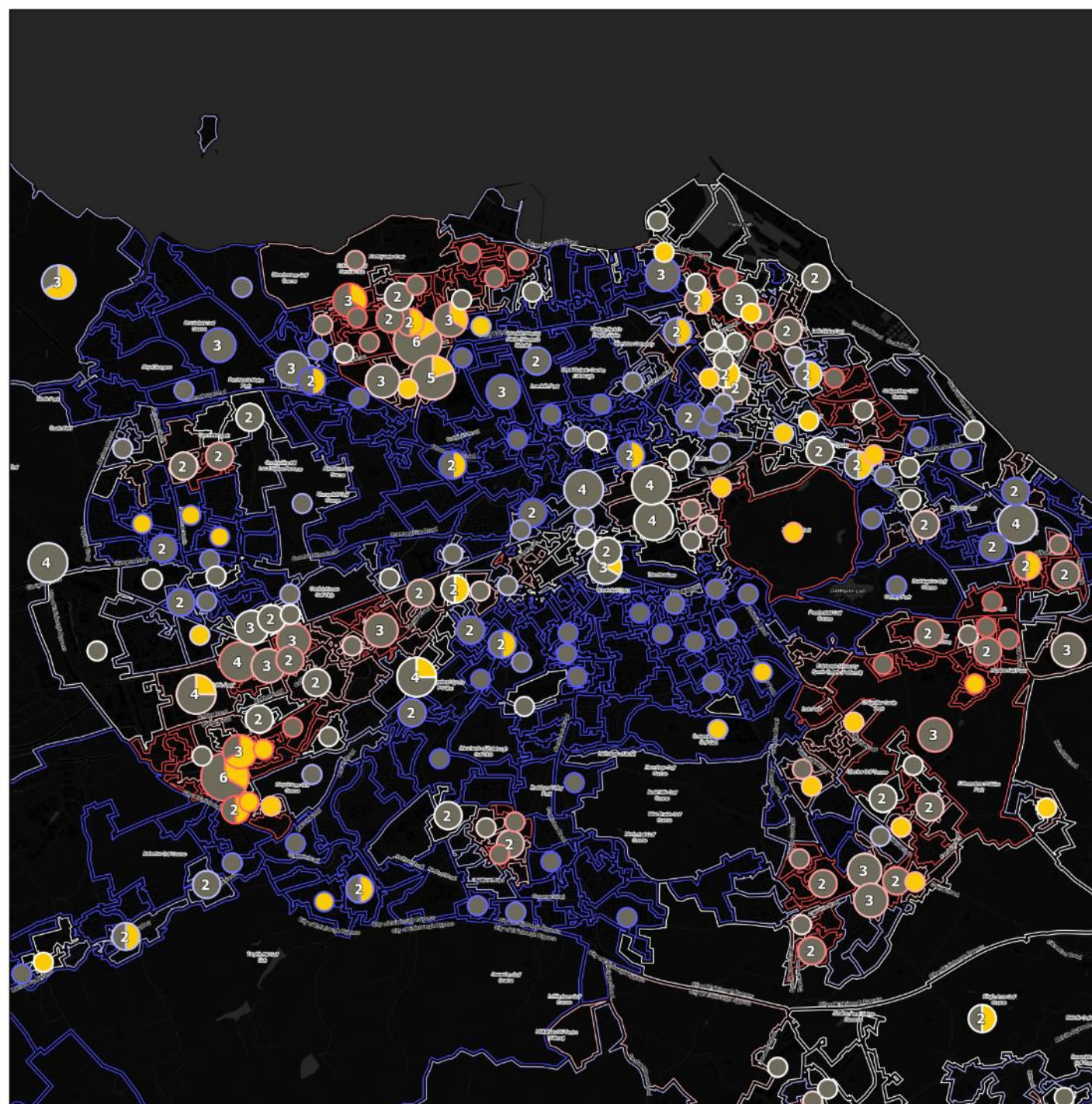
Data:

Scottish Index of Multiple Deprivation (2016) -
Scottish Government

Pedestrians Under 16 Involved in Traffic Accidents
(2012-2017) -
Scottish Government

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Edinburgh



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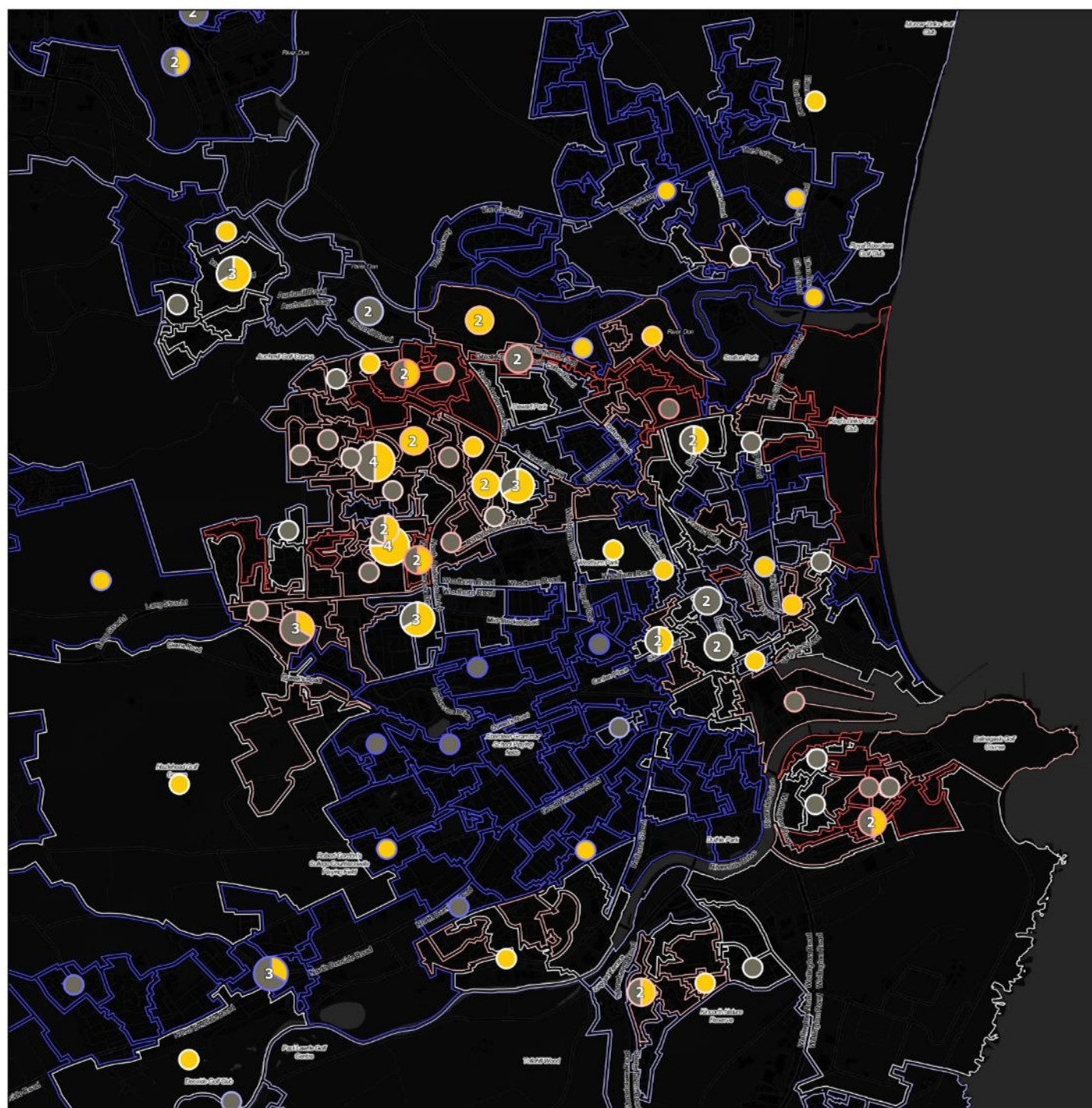
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Aberdeen



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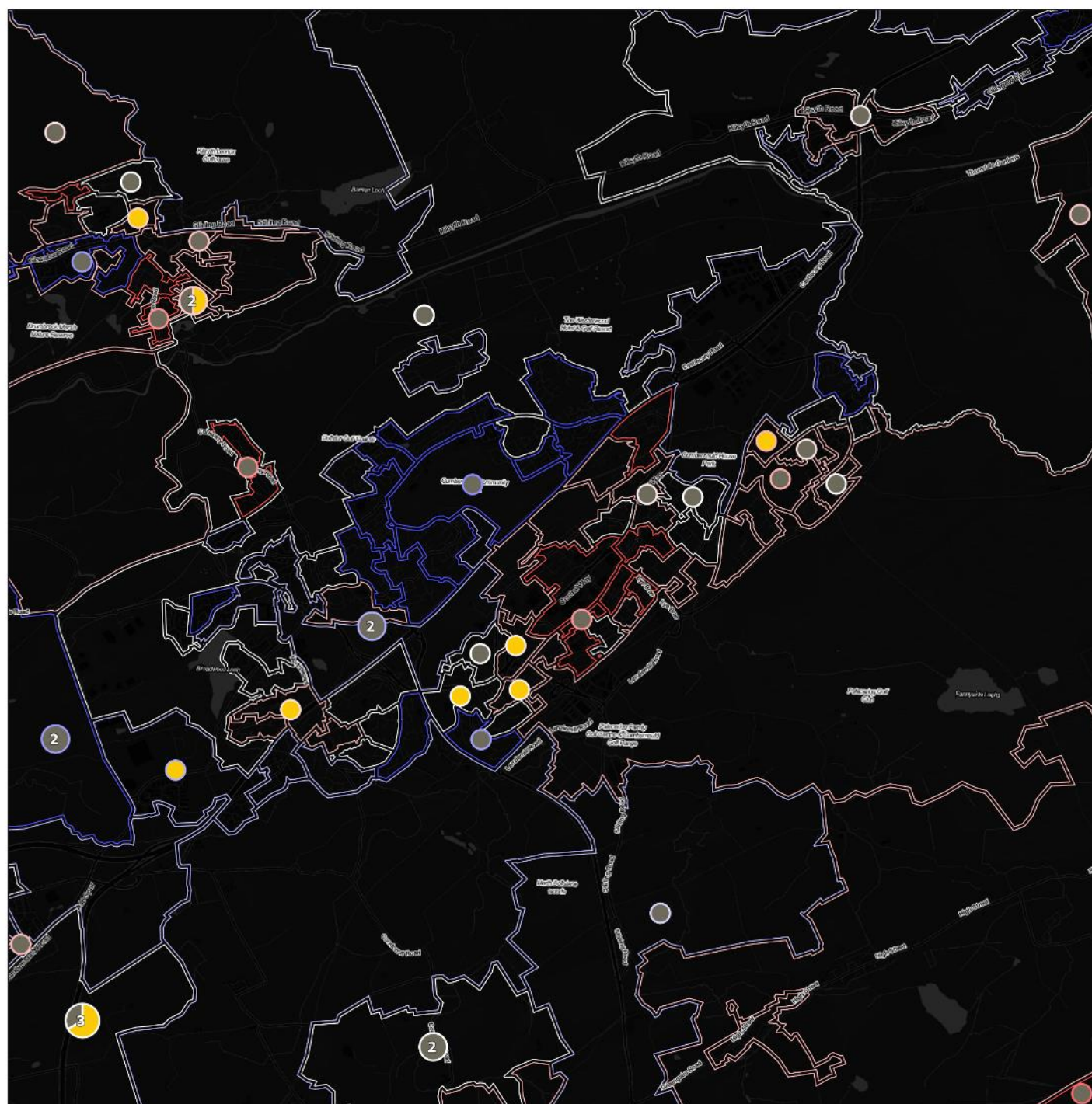
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Why might this be?

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- **Dense and busy?** We might expect more casualties as there are more people on the streets.
- **More dangerous roads?** Deprived areas are more likely to host busy or fast roads.
- **More walking and cycling?** Car ownership is likely to be lower in these areas (though cars driving through might be higher, as above) which means that people are undertaking more trips on foot or bike to school/work.
- **Lack of infrastructure?** In certain cases there may be a lack of investment in infrastructure and locals may not have the time or resources to complain or organise a response.

Cumbernauld



DataZones with Pie Chart of Accidents Taking Place There.

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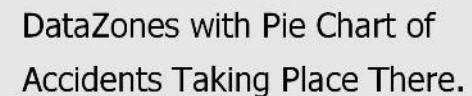
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Post-war towns

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- **Streets design for vehicles?** Rather than evolution over centuries, the vast majority of these places have developed alongside motor vehicles
- **Common features**
 - Guard rails
 - Faster roads
 - Wide-mouthed junctions
 - Limited crossing places
- **Differences in road equity** are more pronounced due to even higher levels of casualties in deprived areas
 - *Caveats: Limited sample size & we don't know that the features above are the cause of accidents*

What can be done

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- Lots! And everywhere will be different.
- Infrastructure: better pavements, safer cycle routes and traffic calming measures.
- Lower speed limits: Protecting children from cars means that we need to slow down cars. Slower streets reduce both the frequency and severity of collisions.
- Further study