



# WHAT CAN WE LEARN ABOUT DEPRIVATION FROM STATS19?

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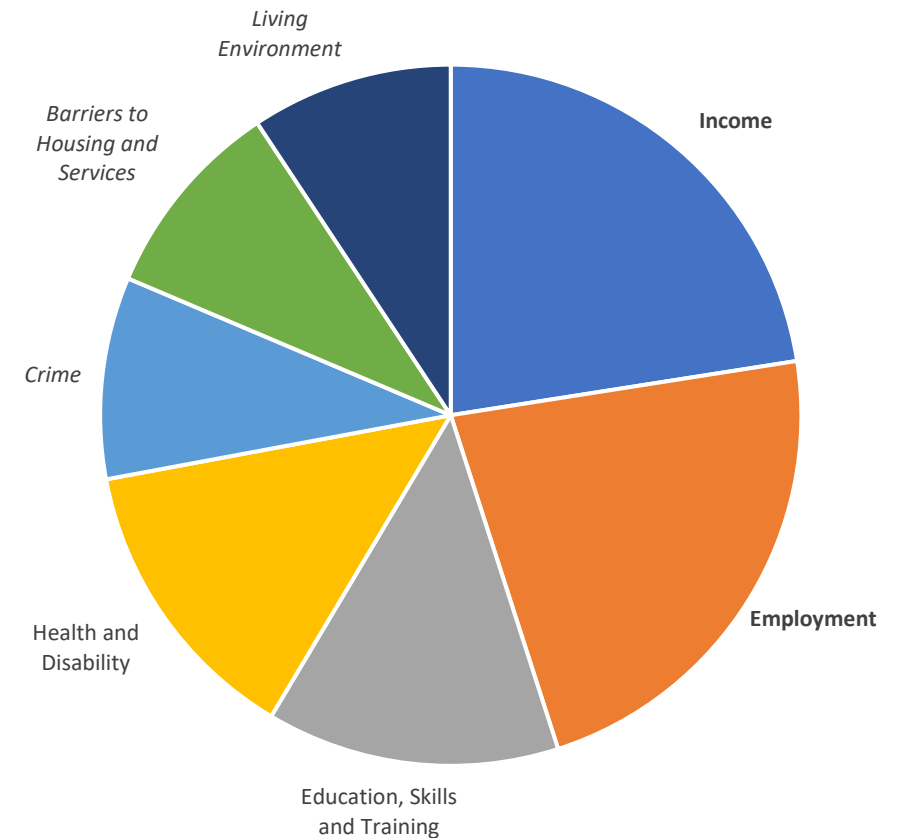


# WHY DOES DEPRIVATION MATTER?

- Well known relationship between road risk and deprivation
- Recent example: Transport for London
  - “Almost twice as many people living in the most deprived 30 per cent of London are killed or seriously injured in road collisions than people living in the least deprived 30 per cent”
  - Results published in a [dashboard](#)
- *“How could I do something like that?”*

# MEASURING DEPRIVATION WITH IMD

- *Index of Multiple Deprivation*
- Official measure of *relative* deprivation for small areas
- Seven different domains
  - Income deprivation affecting children and older people also scored separately
- Combining information produces overall relative measure
- Last updated in 2019
  - *“Timelines for any update are yet to be confirmed”*



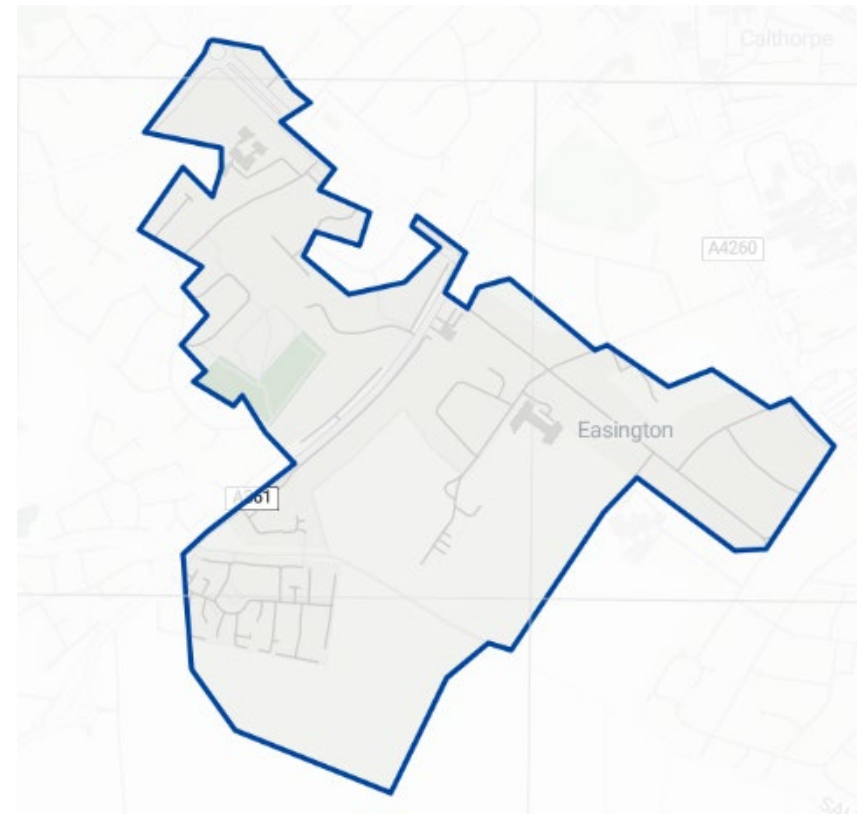


# 'SMALL AREA' GEOGRAPHY

- *Lower layer Super Output Areas (LSOAs)* in England and Wales
  - Population between 1,000 and 3,000
  - 33,755 LSOAs in England
  - 1,917 LSOAs in Wales
- *Data zones* in Scotland
  - Population between 500 and 1,000
  - 6,796 Data Zones in Scotland
- Unique code, starting with country letter E/S/W then '01'

# 'SMALL AREA' GEOGRAPHY

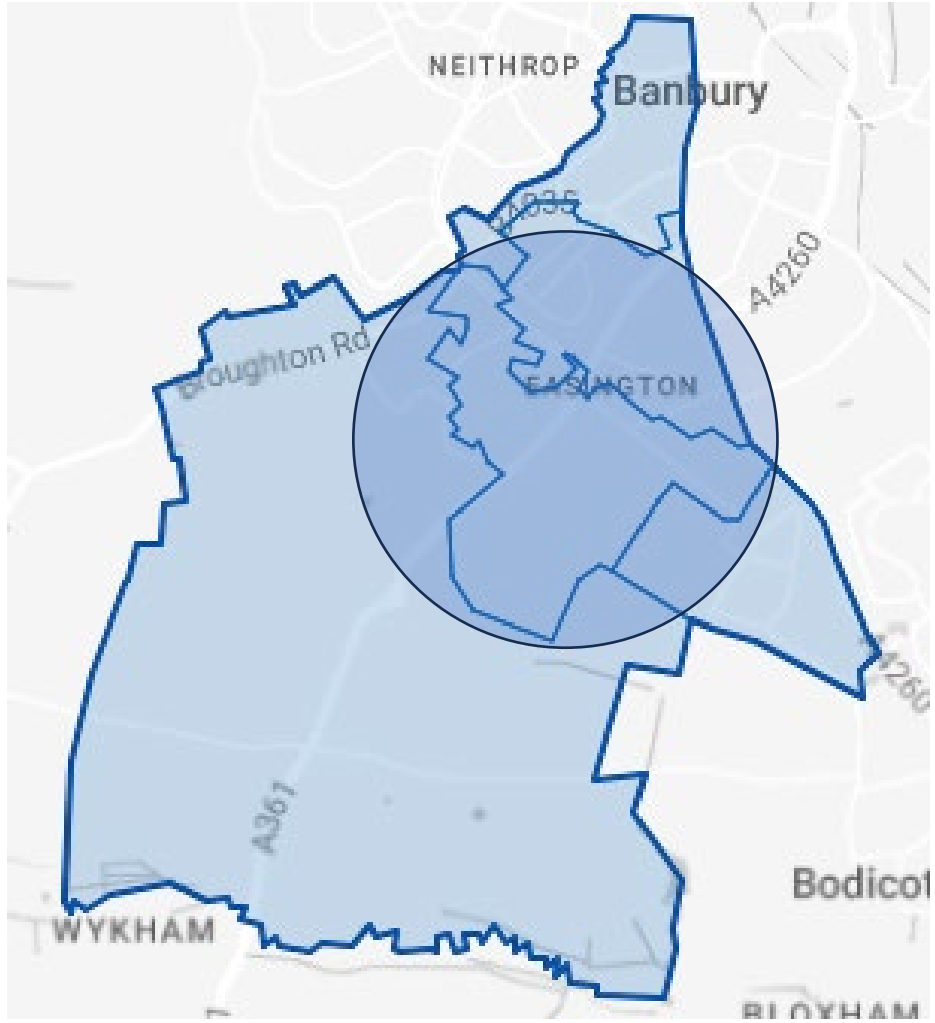
- **'Cherwell 006C' (E01028432)**
  - 837 households, with a population of about 1,982



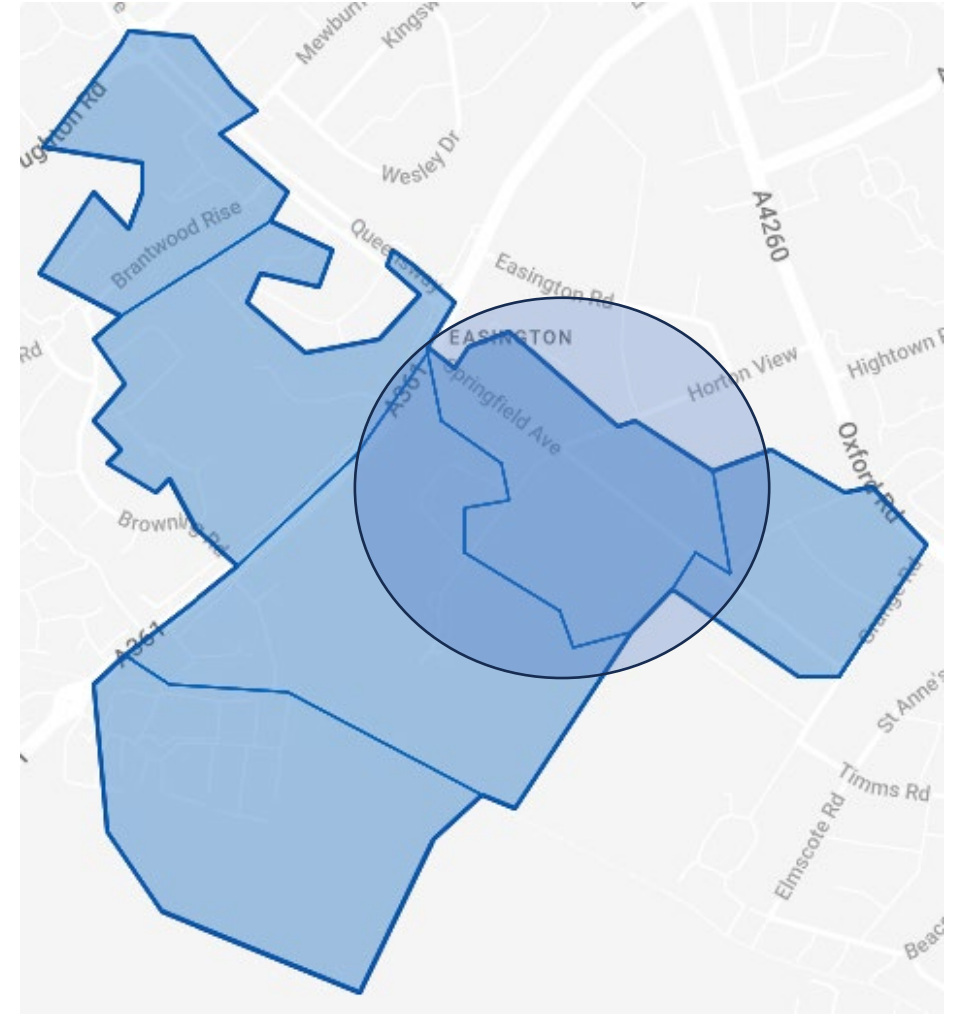


# HIERARCHY OF GEOGRAPHY

MSOA 'Cherwell 006' (E02005926)



OA - E00144889





# GETTING DATA ON DEPRIVATION

- Download full data for a LAD (by postcode and LSOA)
  - <http://imd-by-geo.opendatacommunities.org/imd/2019/area>
- Download IMD for a list of postcodes
  - <http://imd-by-postcode.opendatacommunities.org/imd/2019>
  - Each postcode assigned to LSOA with majority of its residents
  - Postcodes in same LSOA have identical IMD scores
- Download population of LSOAs
  - <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>



# GETTING DATA ON DEPRIVATION

Deprivation in  
E01028432  
'Cherwell 006C'

Each domain  
scored  
separately

Children and  
older people

Index of Multiple Deprivation Rank	20151
Index of Multiple Deprivation Decile	7
Income Rank	16695
Income Decile	6
Income Score	0.097
Employment Rank	19524
Employment Decile	6
Employment Score	0.067
Education and Skills Rank	16727
Education and Skills Decile	6
Health and Disability Rank	18546
Health and Disability Decile	6
Crime Rank	18767
Crime Decile	6
Barriers to Housing and Services Rank	29637
Barriers to Housing and Services Decile	10
Living Environment Rank	9809
Living Environment Decile	3
IDACI Rank	17682
IDACI Decile	6
IDACI Score	0.114
IDAOPi Rank	17797
IDAOPi Decile	6
IDAOPi Score	0.116

Out of 33,755 ...

Scores are only  
meaningful for  
ranking areas,  
not as ratios

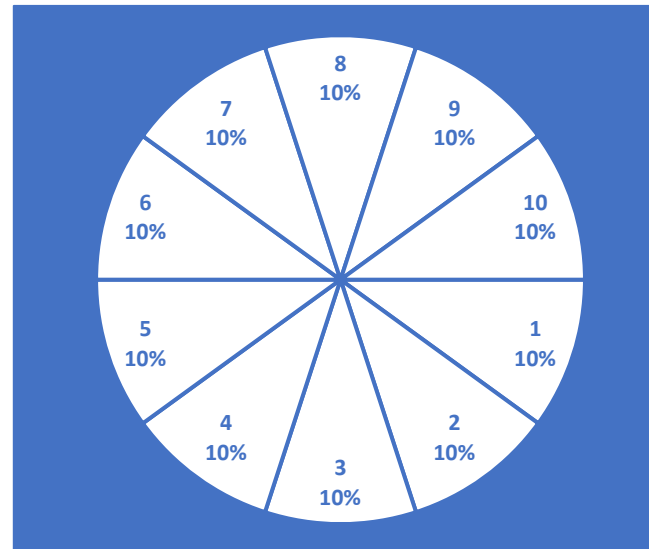
Deciles for each  
domain





# RANKING IN DECILES

- Deciles separate data into equal **tenths**
  - Simply sort the data by score, then split it up
  - Quartiles (quarters), quintiles (fifths), vigintiles (twentieths) also used
- Downloaded decile is relative to England
  - Can easily be re-calculated for other geographies





# DFT PUBLISHED STATS19 DATA

*Relationship to collision and vehicle*

*National IMD decile*

*Residency by LSOA*

accident_index	vehicle_reference	casualty_reference	sex_of_casualty	age_of_casualty	casualty_imd_decile	lsoa_of_casualty	casualty_distance_banding
2023010419171	1	1	2	20	10	E01030370	3
2023010419183	2	1	1	25	3	E01001546	1
2023010419183	3	2	2	38	-1	-1	-1
2023010419189	1	1	1	50	5	E01002443	1
2023010419191	2	1	1	34	2	E01004679	2

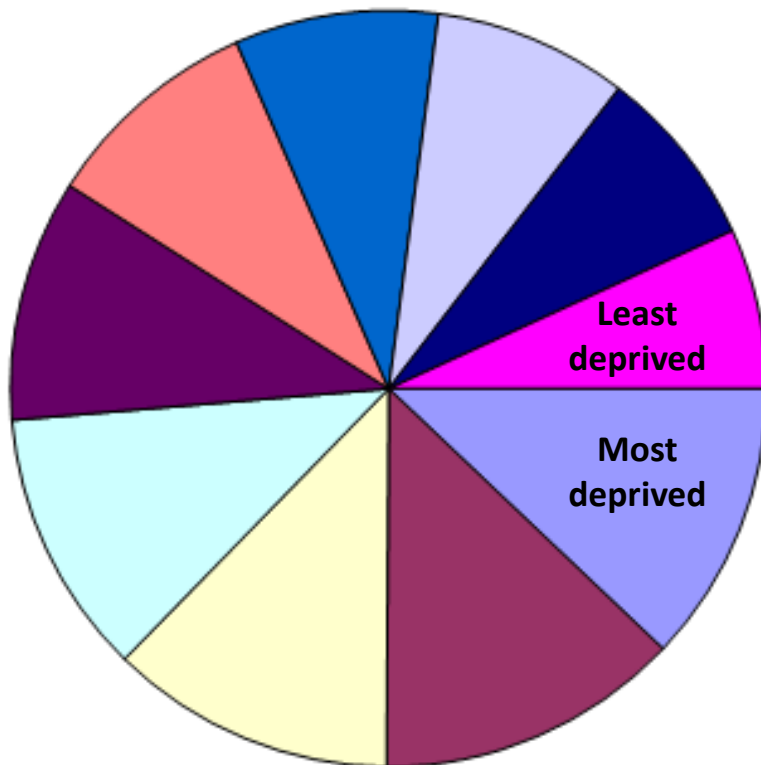
*Basic demographics*

***Caveat: Postcodes are not always collected***

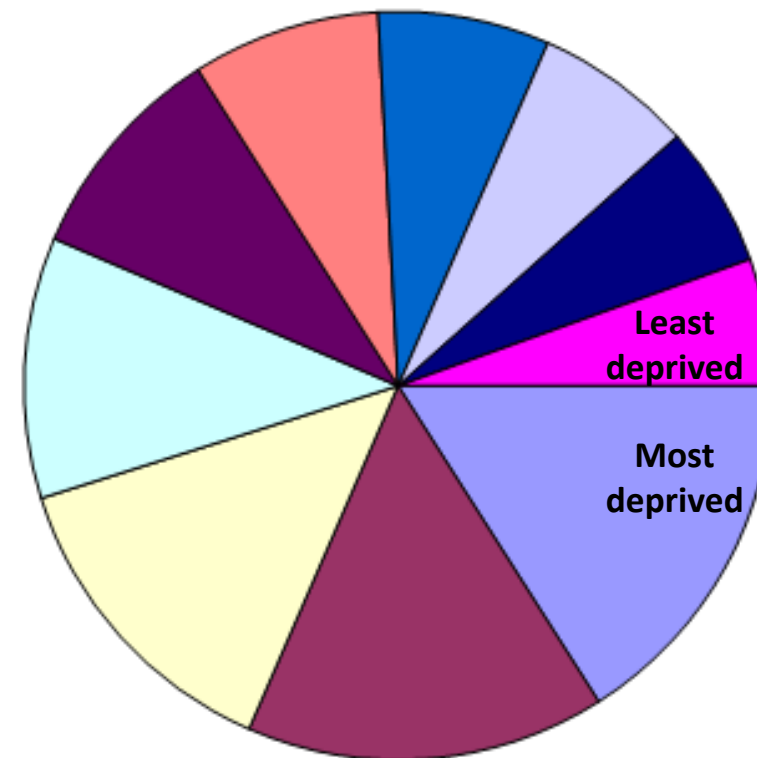
*The same metrics are available for drivers and riders*



# THE NATIONAL PICTURE



*All GB casualties  
who live in England  
2018-22*



*Pedestrian GB casualties  
who live in England  
2018-22*



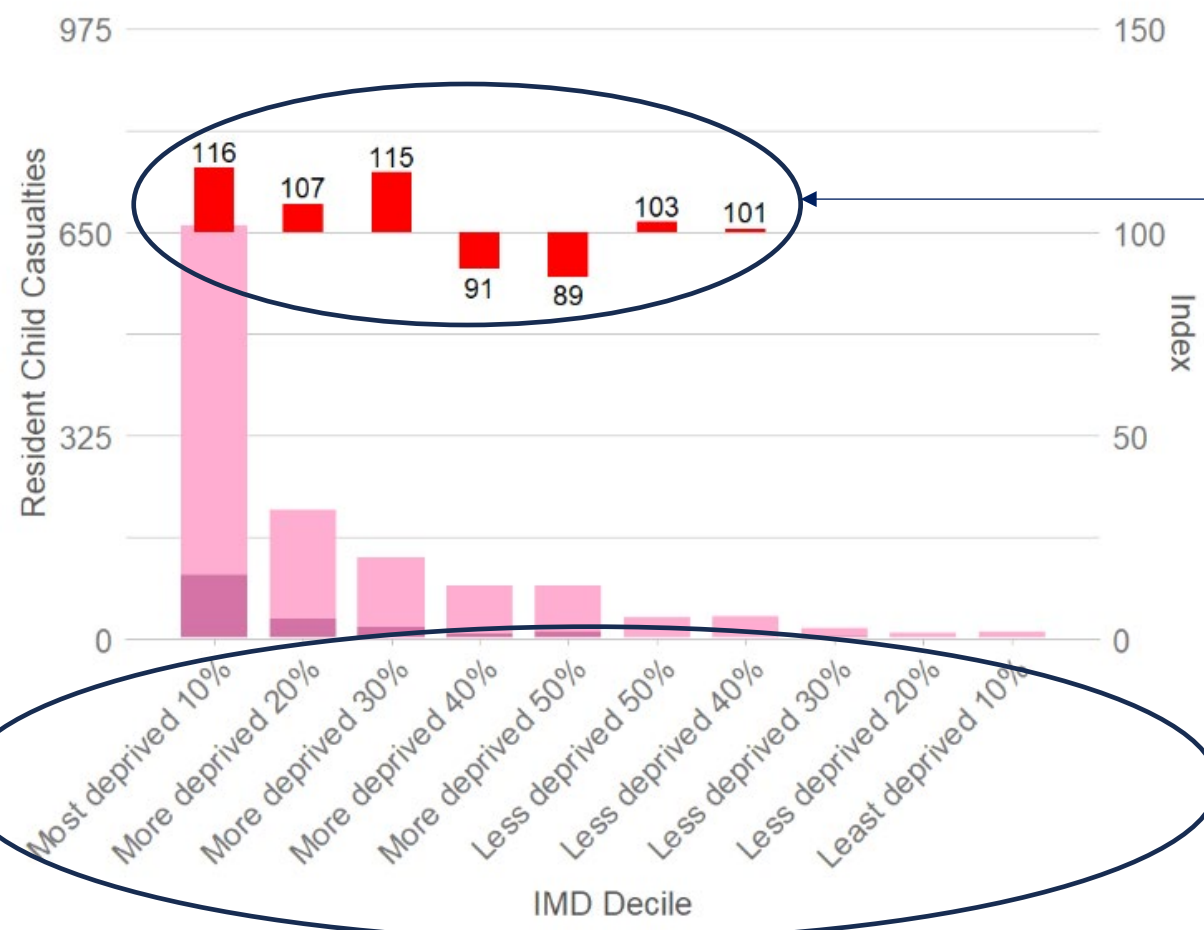
# RESIDENCY MATTERS

- Average annual casualties with a reported postcode on **Birmingham's** roads in the last five years:
  - 2,556, of whom 1,939 lived in Birmingham
  - **76%**
- Average annual Birmingham resident casualties with a reported postcode on **Britain's** roads in the last five years:
  - 2,479, of whom the same 1,939 were injured in Birmingham
  - **78%**
- **Deprivation is more about people than collision location**



# NATIONAL AND LOCAL DEPRIVATION

Child casualties from Birmingham 2018 - 2022

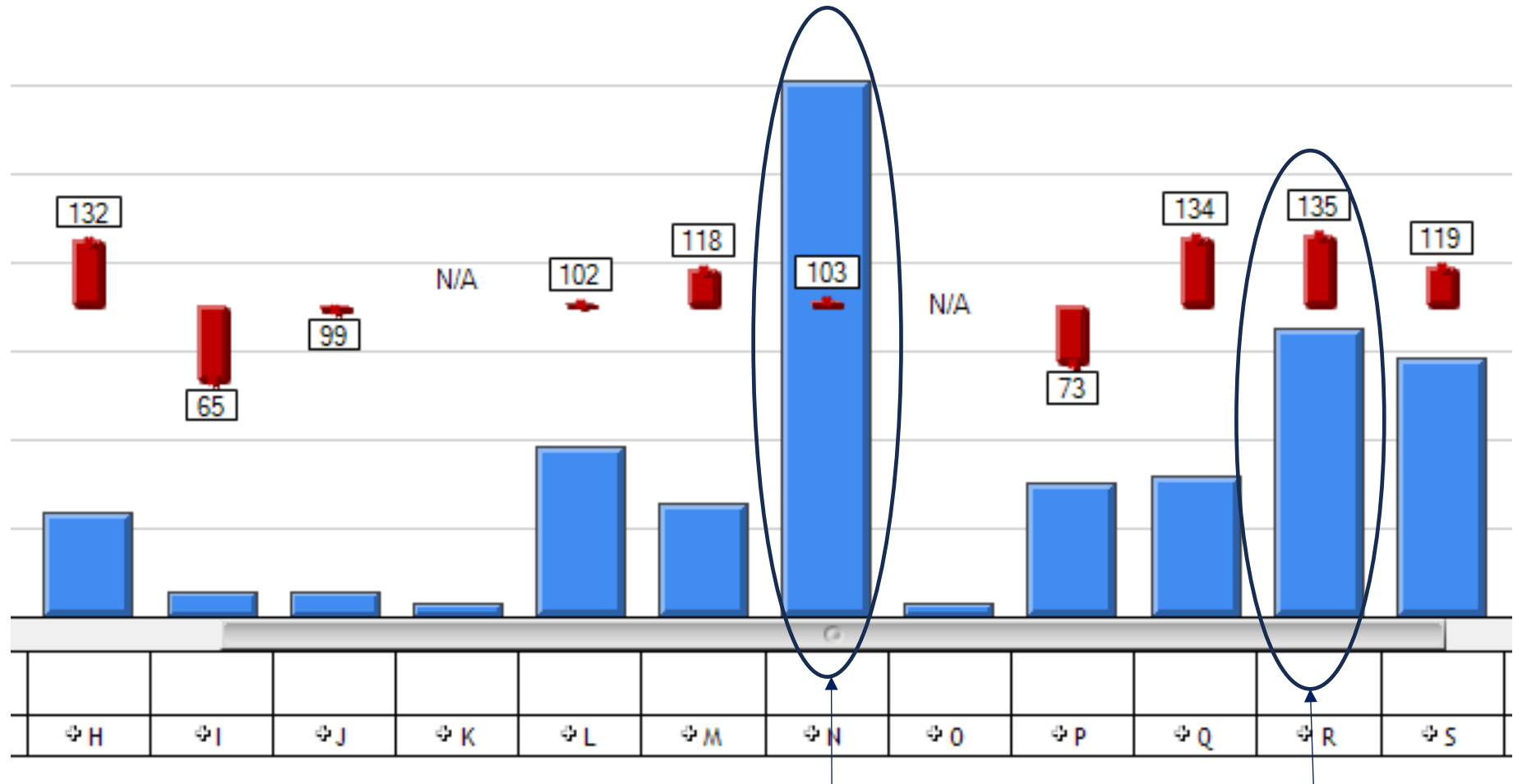


Indexed by local population

National IMD decile

Severity: Slight Serious Fatal

# NEXT STEPS: SOCIO DEMOGRAPHICS



*Birmingham resident casualties  
2018 - 2022*

*“Urban Diversity”*

*“Hard-up Households”*

# URBAN DIVERSITY

Highest count, index 103



## 4N Urban Diversity

Young families and students in ethnically diverse urban centres.

### KEY ATTRIBUTES

Young children, 3+ children, students, house shares, renting, shared ownership, low disposable income, high unemployment, high use of social media.

### CHANNELS

How to reach them



Internet usage  
**High**

### CORE DEMOGRAPHICS

More likely to be:

Age banding  
**18-44**

Level of education  
**A Level (or equivalent)**

Household income  
**£44K** UK average £48K

Composition  
**Families and house-shares**

House tenure  
**Renting, usually privately**

Residence  
**Terraced house**

### MEDIA HABITS



### LIFESTYLE



# HARD-UP HOUSEHOLDS

Second highest count, index 135



## 5R Hard-up Households

Younger families struggling on low incomes in rent terraces.

### KEY ATTRIBUTES

Private and social renting, terraced house, single parent, income support.

### CHANNELS

How to reach them



Internet usage  
**Low**

### CORE DEMOGRAPHICS

More likely to be:

Age banding  
**25-49**

Level of education  
**GCSE (or equivalent)**

Household income  
**£37K** UK average £48K

Composition  
**Family with children**

House tenure  
**Social renting**

Residence  
**Terraced house**

### MEDIA HABITS



### LIFESTYLE







# APPLICATIONS

- Insight into relationship of elevated risk and deprivation
  - Road user groups
  - Age groups
  - Community types
- Relating this insight to geographies and population
- Identifying priorities
- Applications for funding
- Guiding education and outreach
  - Channels for communication
  - Community awareness
  - Understanding audience for creatives



# QUESTIONS

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