Cadcorp Workshop - 3rd March

Buildings and Risk

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RBFRS

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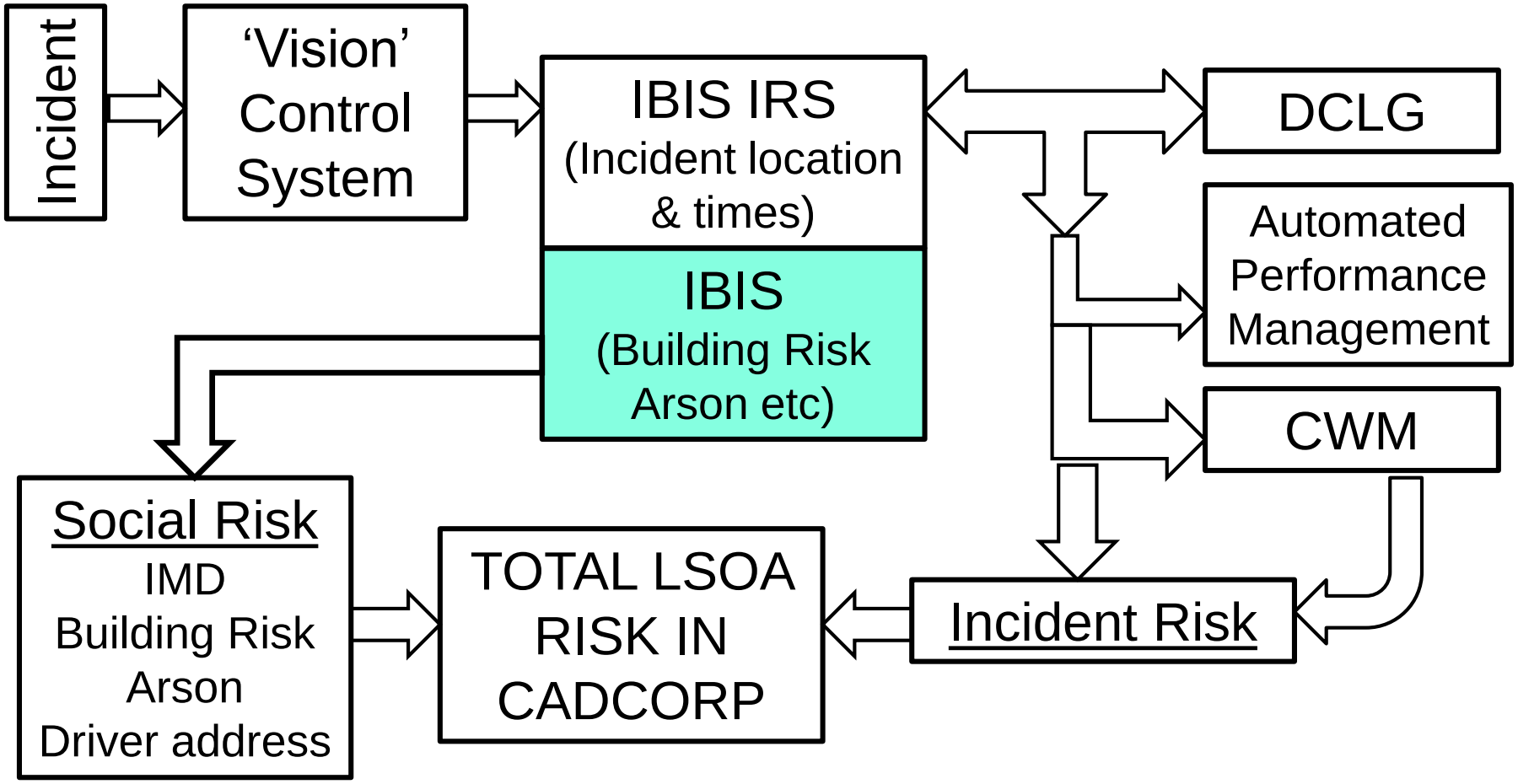
Outline

- Risk Mapping – then Modelling
- Data Flows
- Concepts
  - Risk = Likelihood x Severity
  - Incident Types
  - Geographic area
  - Incident Risk / Societal Risk
- How will risk be impacted by future developments?

Data Flows



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Risk Methodology - Response

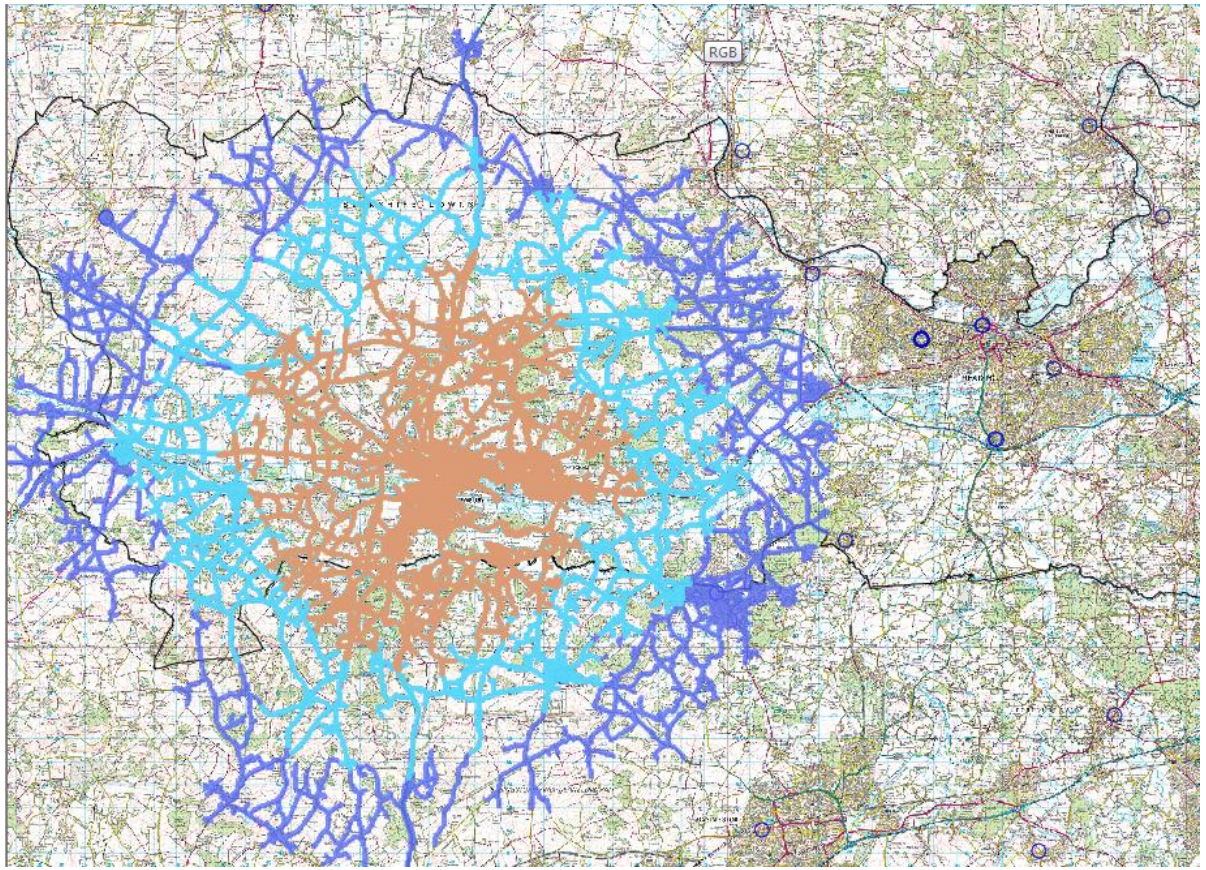
Call Handling

+

Turnout

+

Travel Times



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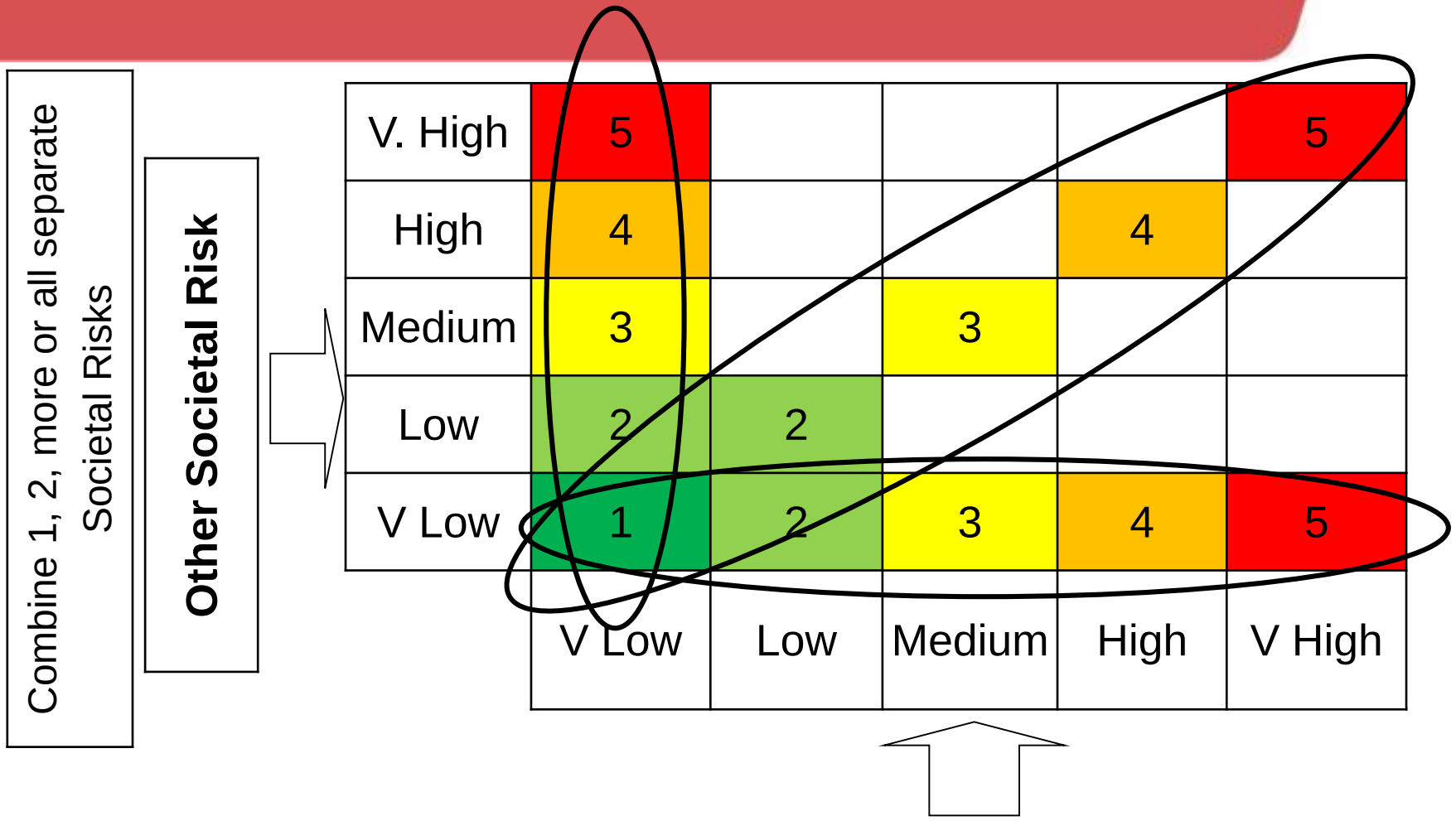
Conceptual Model - Flexibility



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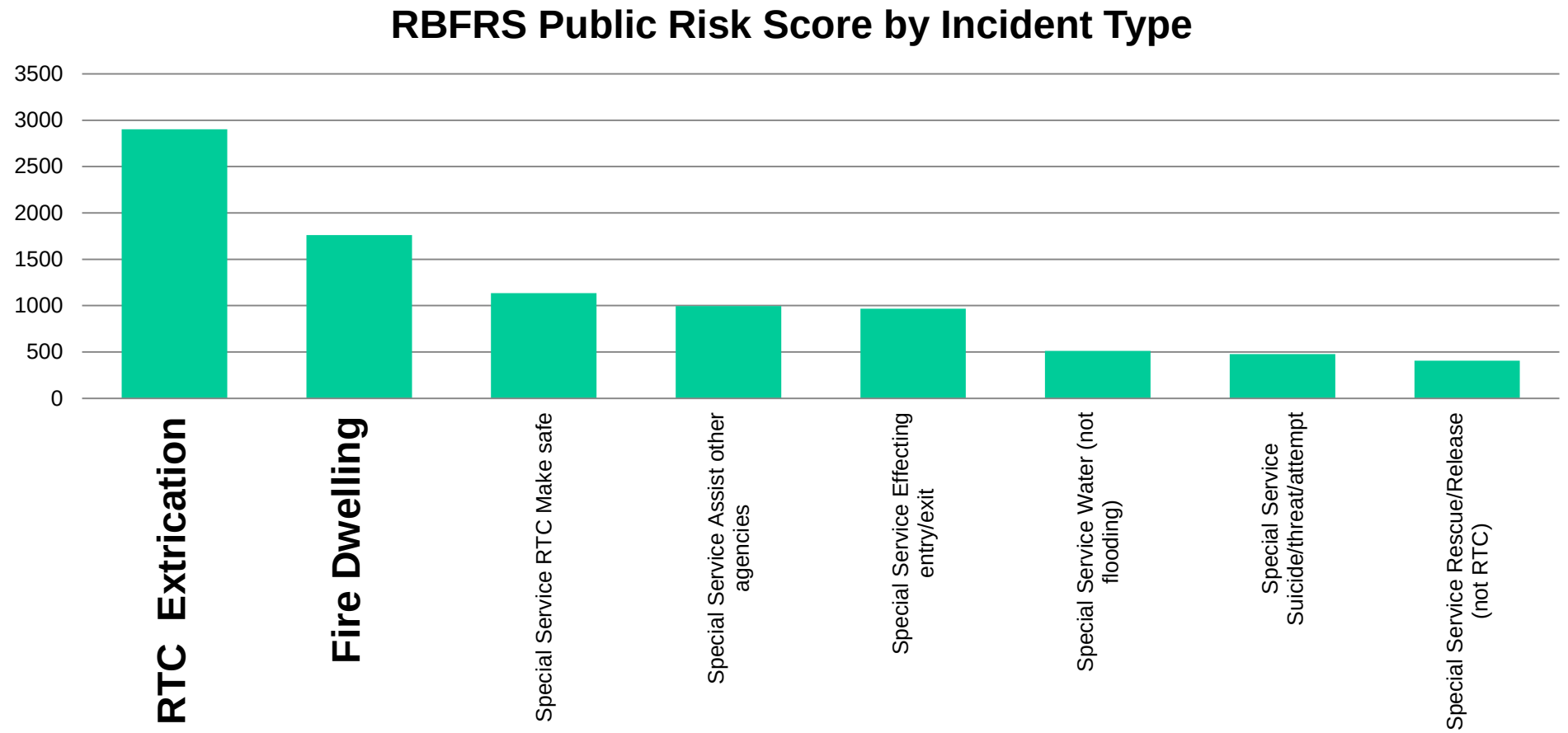
Incident Risk



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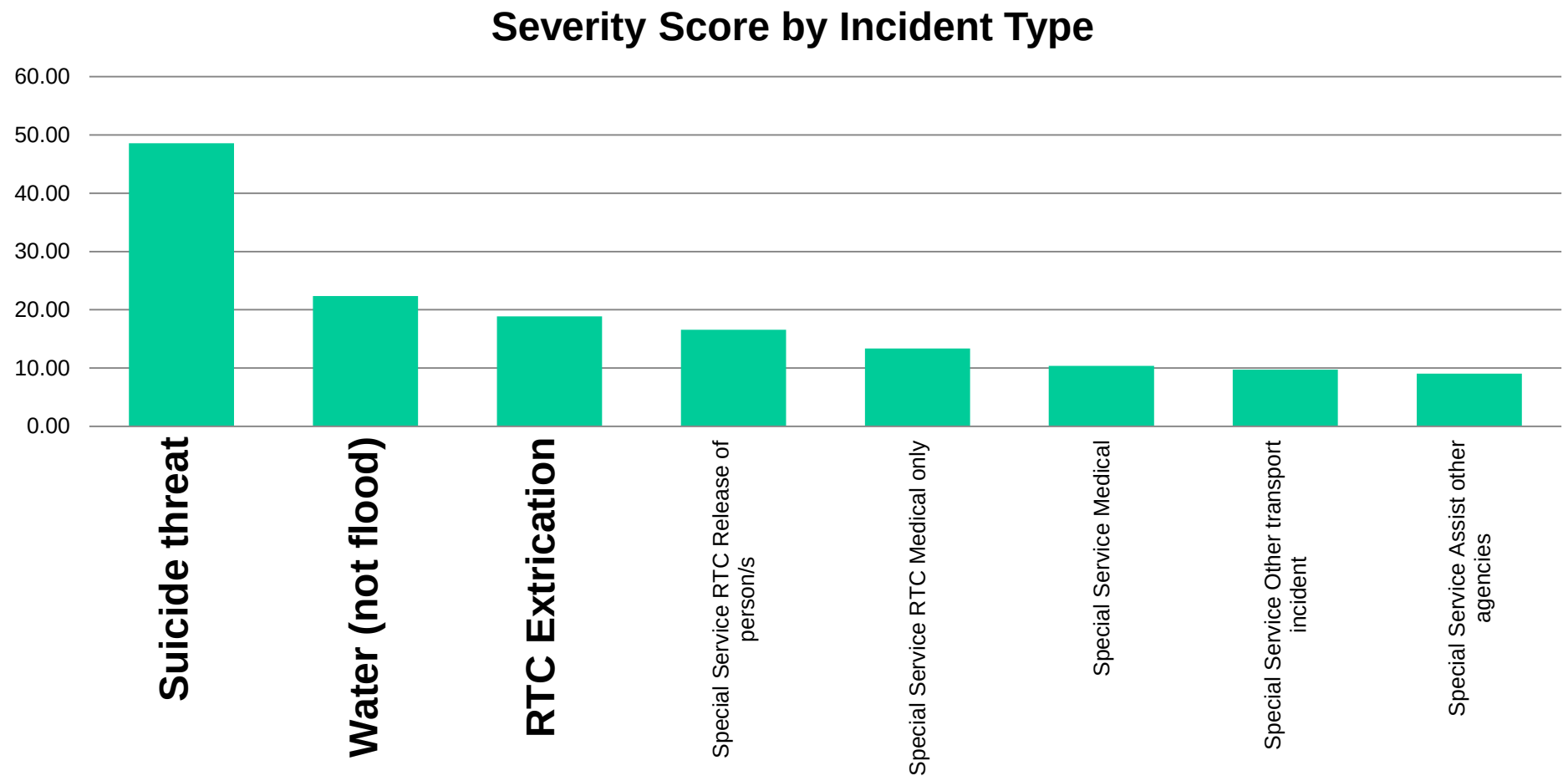
Incident Severity



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Risk Methodology - Geography

- Lower Super Output Areas (LSOAs)
- Incidence of Multiple Deprivation
- Population by LSOA (gives risk RATE)
- Broad Risk Assessment (to)Treatment Delivery
- Motorway LSOAs

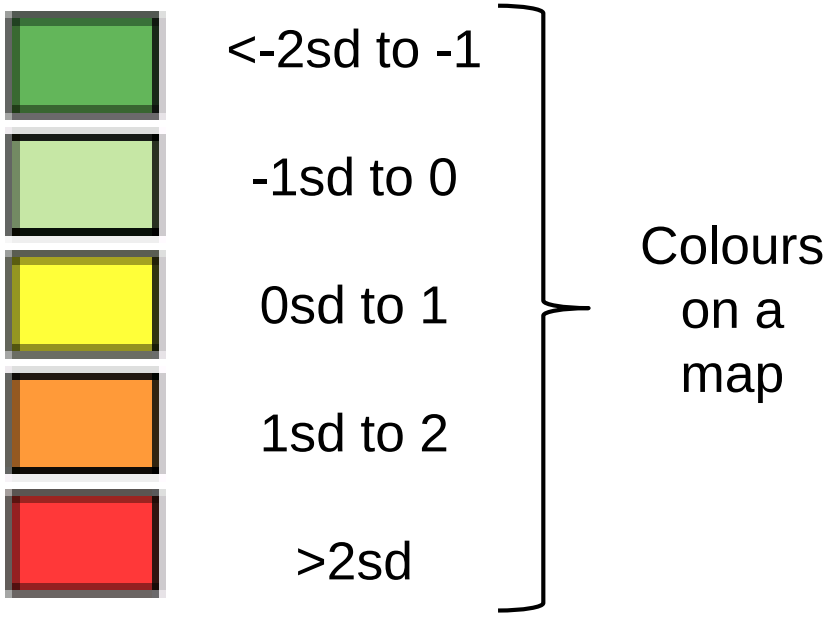
Incident Risk

Incident Risk Score in each LSOA =

SD((#type 1 x severity/LSOA pop) +

(#type 2 x severity/LSOA pop) + etc)

Where SD = Standard Deviation



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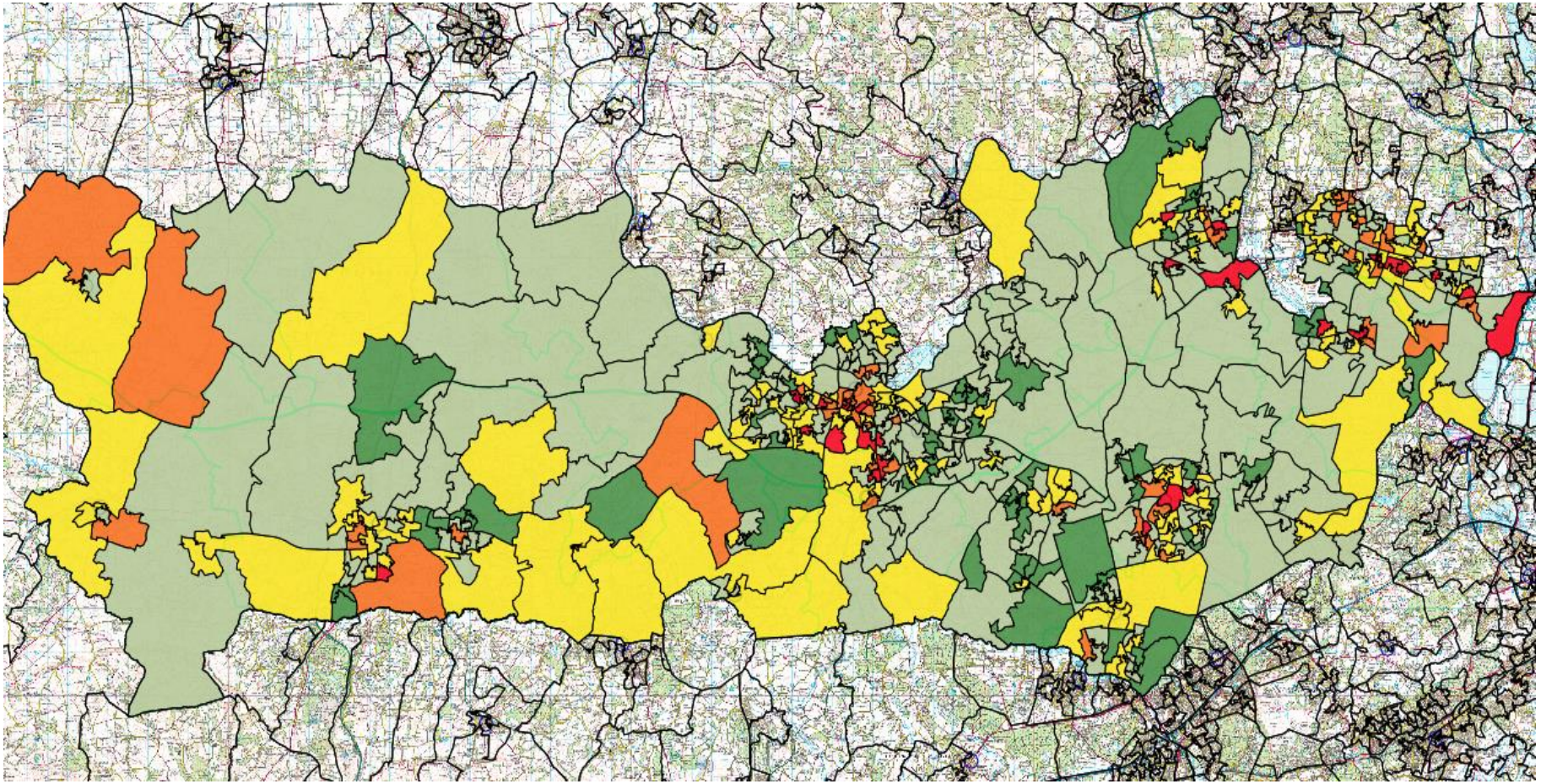
Dwelling fires



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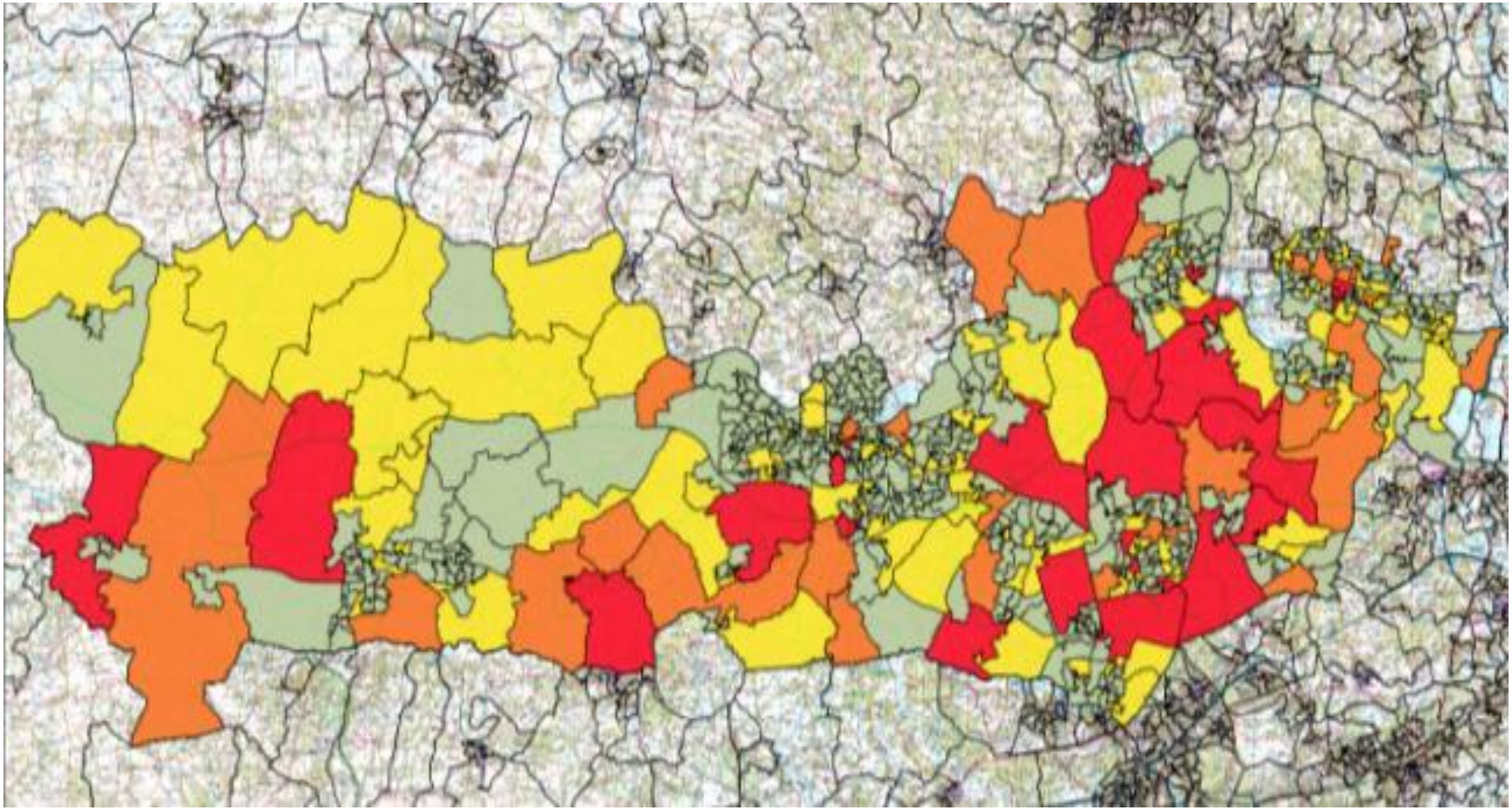
RTC Extrication



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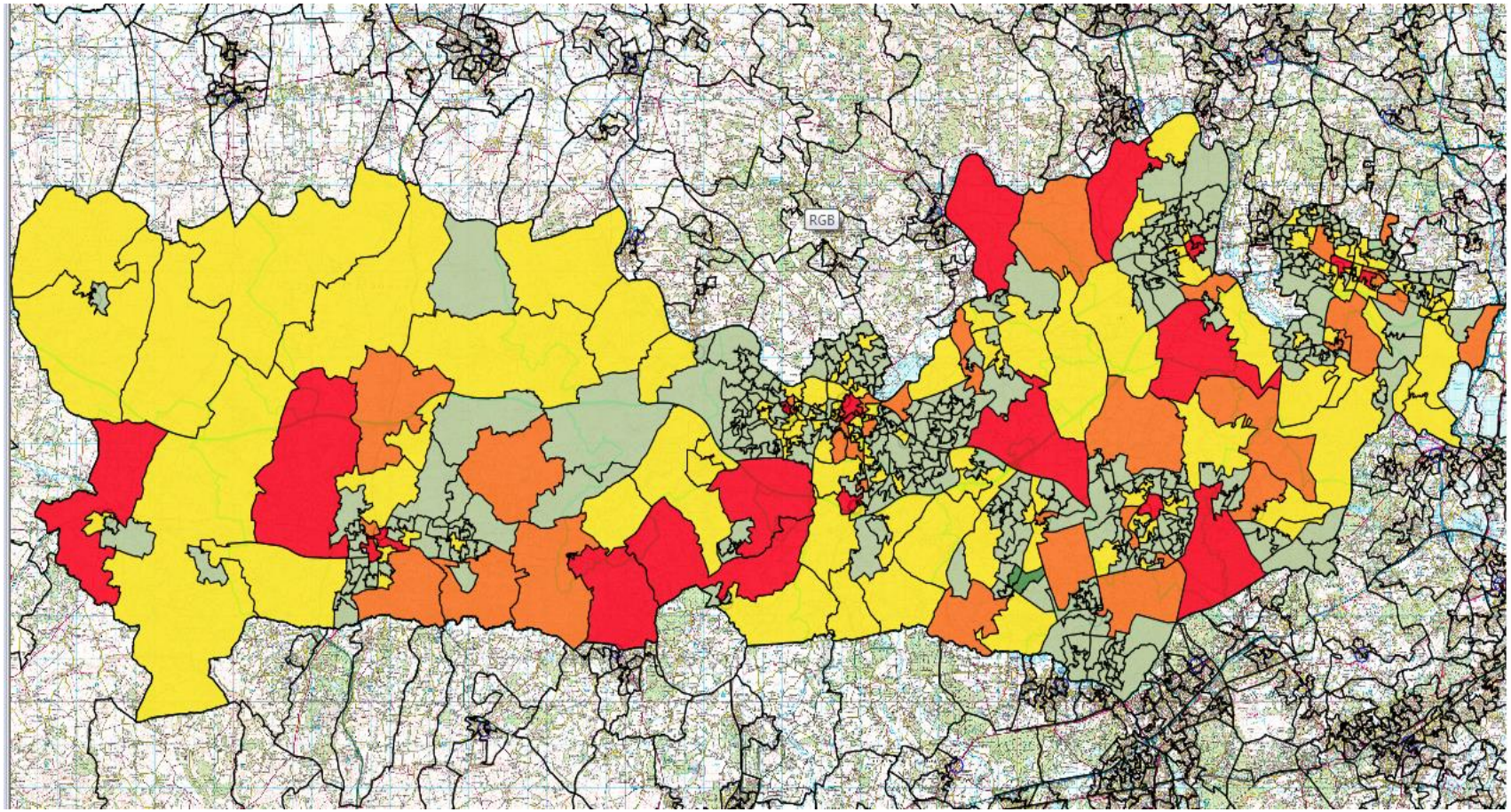
All Incidents



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Social Risk

- Incidence of Multiple Deprivation
  - Income Score
  - Employment Score
  - Education, Skills and Training Score
  - Health Deprivation and Disability Score
  - Crime Score
  - Barriers to Housing and Services Score
  - Living Environment Score
  - Income Deprivation Affecting Children Index (IDACI) Score
  - Income Deprivation Affecting Older People (IDAOPI) Score
  - Children and Young People Sub-domain Score
  - Adult Skills Sub-domain Score
  - Geographical Barriers Sub-domain Score
  - Wider Barriers Sub-domain Score
  - Indoors Sub-domain Score
  - Outdoors Sub-domain Score

- Other Societal Risks **by LSOA**
  - Police road safety incident casualty address data
  - Deliberate fire data
  - **Non-residential building score**
  - **Residential building scores**
  - Smoking
  - Alcohol related incidents
  - Falls
  - Mental Health
  - Water Incidents

Social Risk

Social Risk in each LSOA =

(SD(IMD score) x 0.6) +

(SD(Arson score/LSOA pop) x 0.3) +

(**SD(Building risk score/LSOA pop) x 0.1)**

Where SD = Standard Deviation

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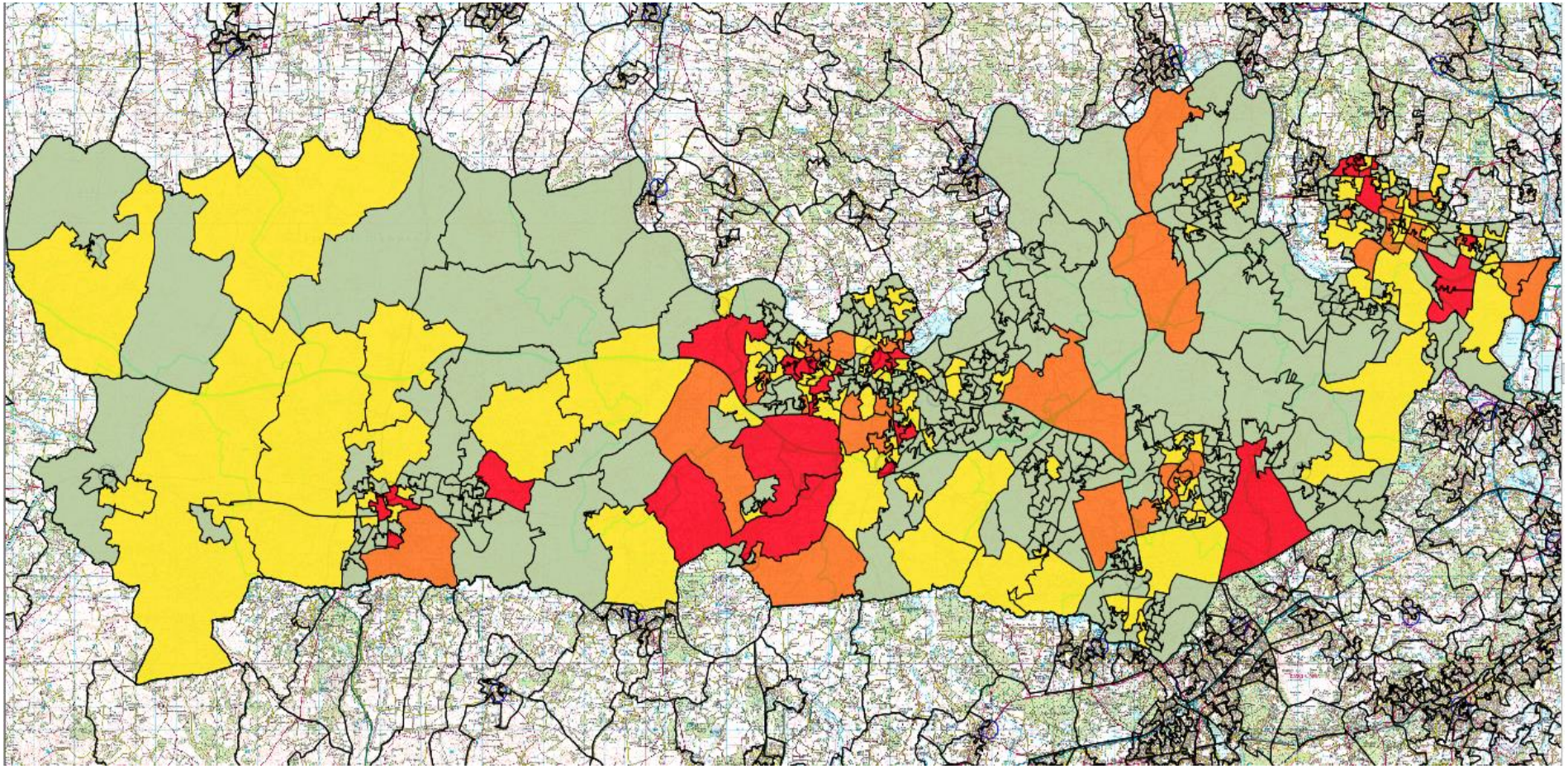
Arson



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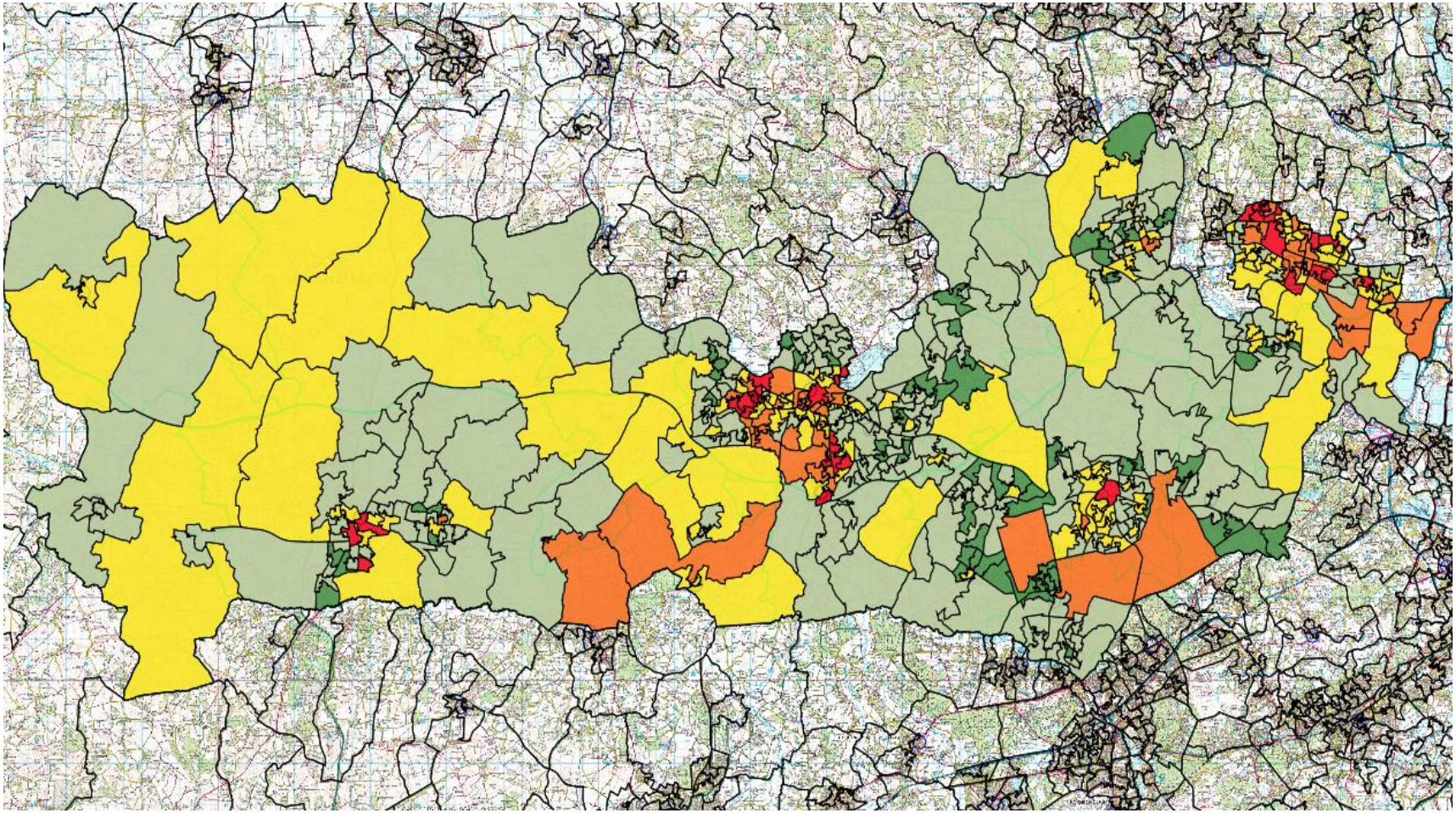
Total Social Risk (Berks Normalisation)



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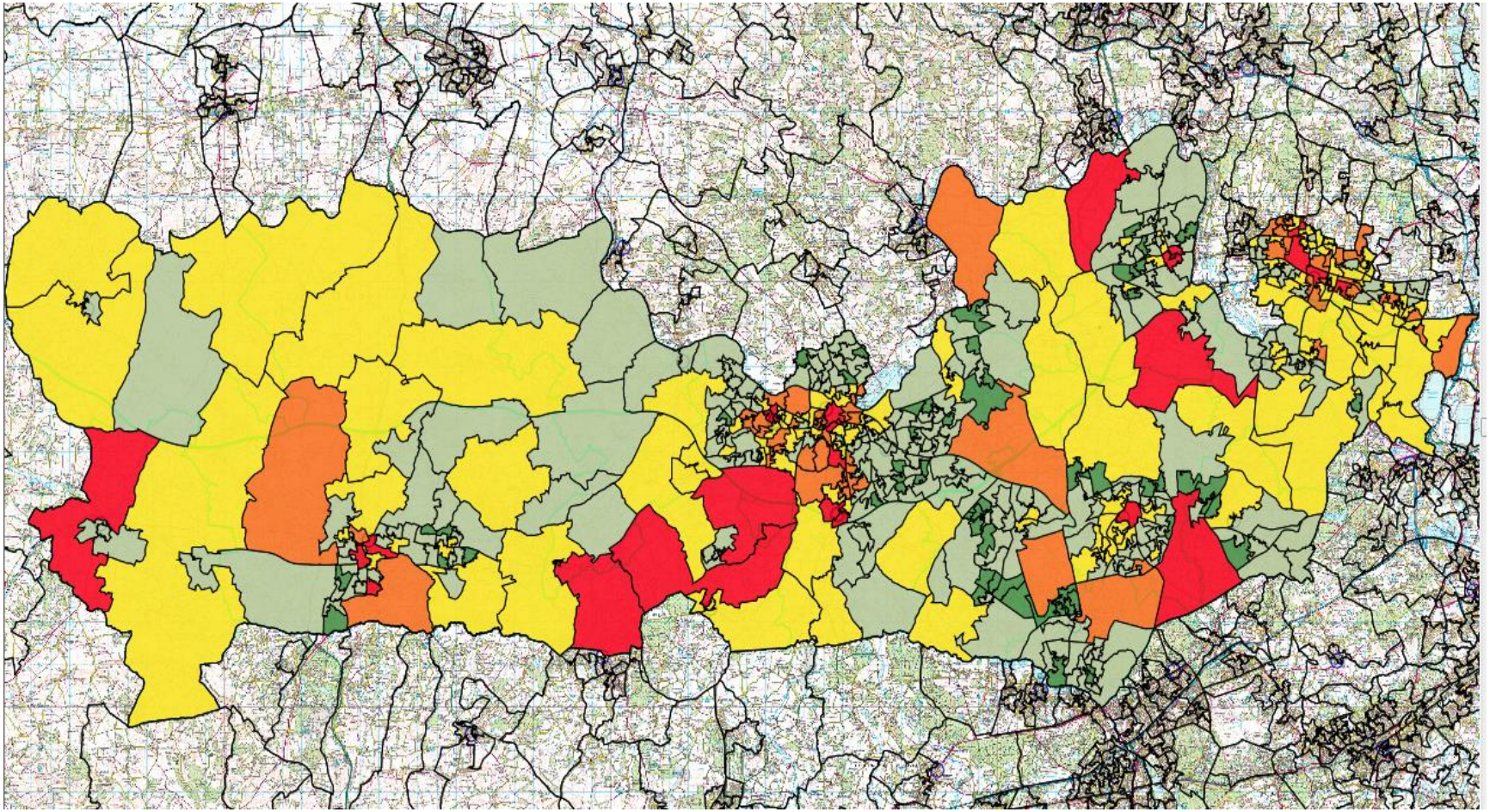
Total Risk Calculation

Total Risk in Each LSOA =

SD ((SD Incident Risk x 0.5)+(SD Social Risk x 0.5))

- Weighting Factors

Total risk (50/50 weighting)



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Summary

Monster Spreadsheet

Next changes in Response

New Housing and Building Developments

Comments and Questions?

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