# ONS/ OS discovery work on geographical analysis

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# Introduction

- What happens when data from Ordnance Survey (OS) is combined with data from the Office for National Statistics (ONS)?

- Can this joint approach provide tools, data and analysis to inform local policymaking?

# Contents

- Introductions to OS and ONS teams

- Background to the work

- Examples of early discovery work on
    1. High Streets
    2. Business Parks

# Office for National Statistics (ONS)

- The UK's largest independent producer of official statistics and the recognised national statistical institute of the UK

- We are mid-way through a four year 'Devolution Programme' to provide enhanced regional/local economic statistics.

- Cities and Subnational Analysis Branch, part of Public Policy Directorate at ONS

# Ordnance Survey (OS)

- National Mapping Agency for GB

- Redefining the public task

- Geospatial Data Commission

# Working together

- Both organisations share a very similar remit: namely to use our data, analysis and products to help inform policymaking

- A Memorandum of Understanding between OS and ONS has been signed

- Our impact will be maximised if we are guided by those making the policy decisions and building the local evidence bases

# Discovery work for policy

- We are exploring opportunities for joint OS/ ONS projects that help inform public policy
    - Town Centres
    - Industrial Strategy
    - Business Location
    - Impact of Transport Investment

- Integrate geographic and statistical data to derive new insight
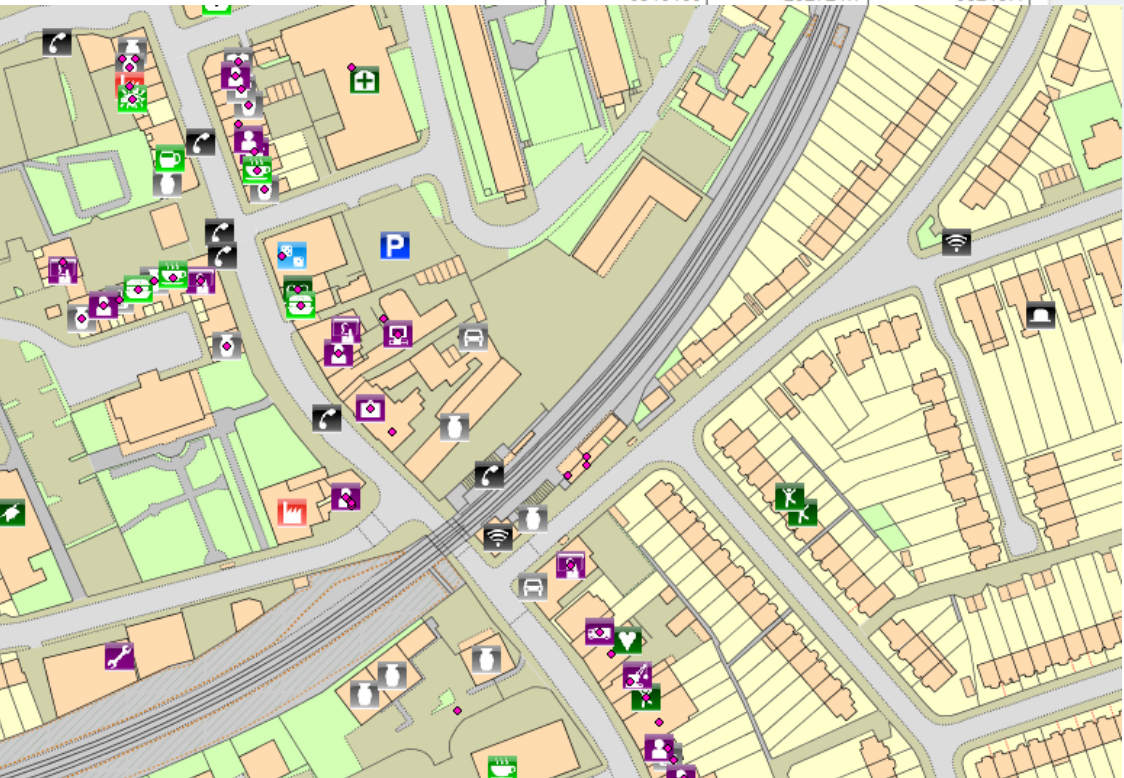
# The potential of new spatial methods and sources

- Data linkage: geography and statistics
- Extraction of intelligence from real world features
- New classifications & typologies
- Better statistics, leading to better policy decisions
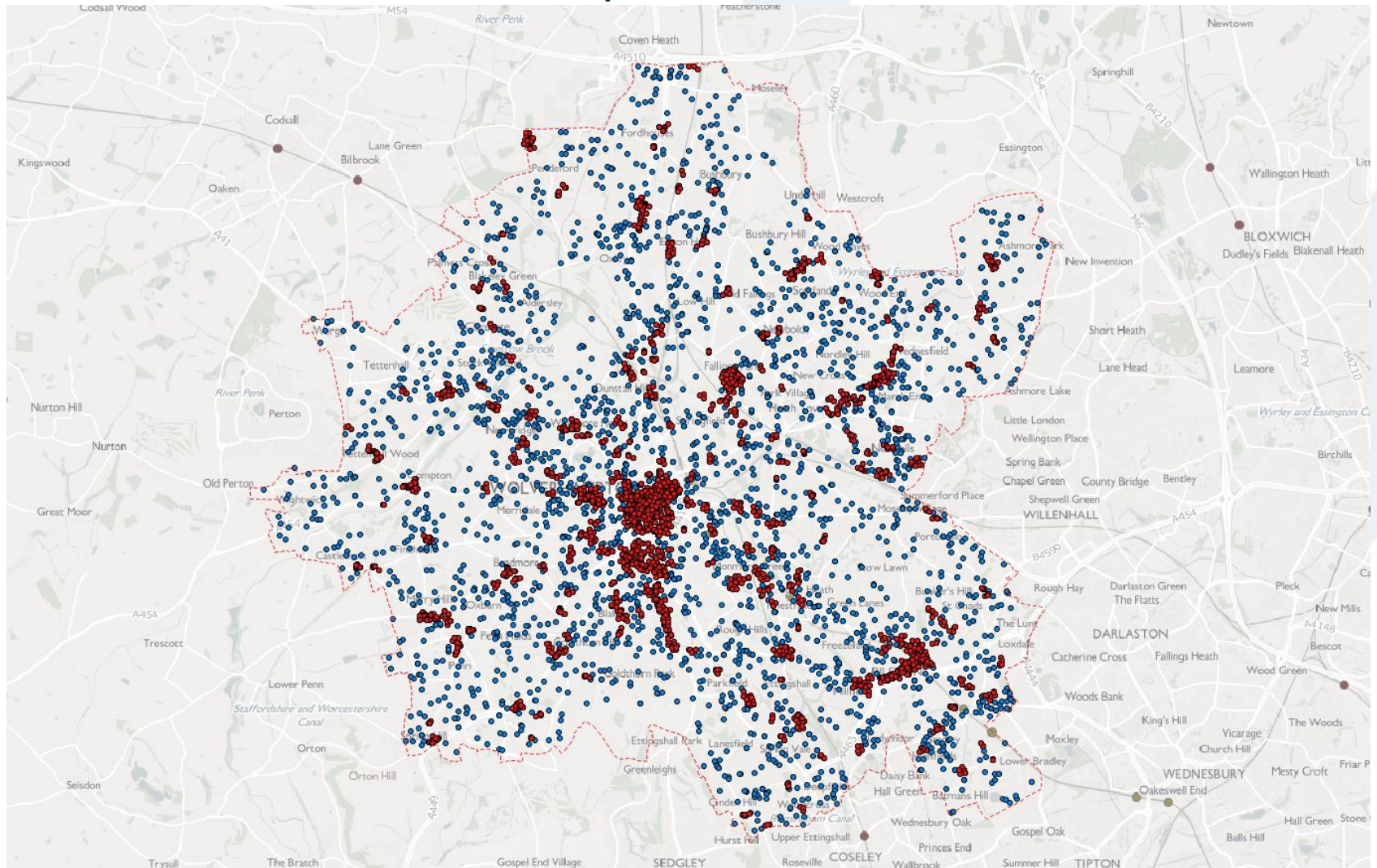- Case study: high streets and business parks

# Discovery work (1) : High Streets

## Address points

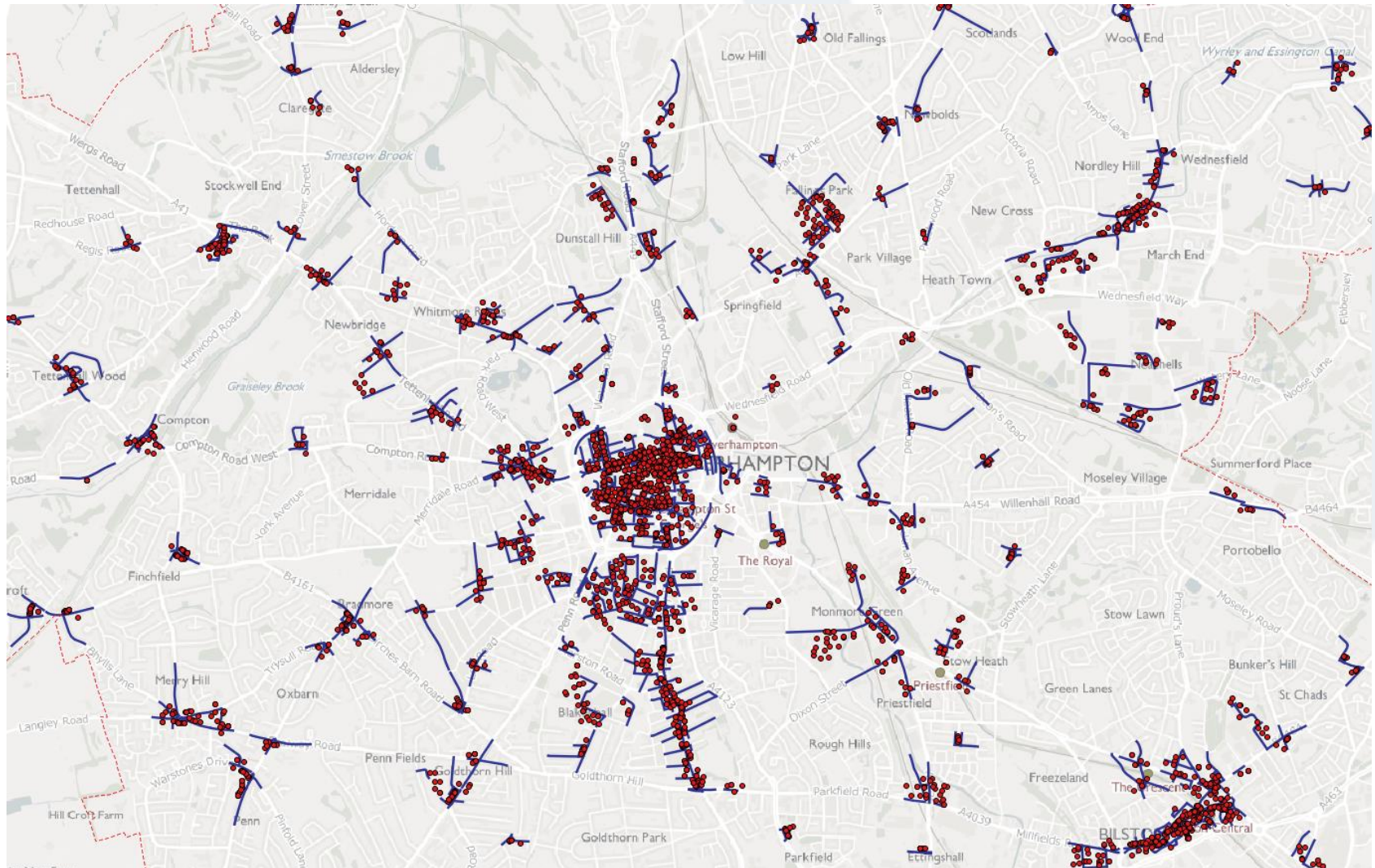| Table | | | | | | |
|---|---|---|---|---|---|---|
| OS_sample_POI | | | | | | |
| FID | Shape * | UNIQUE_REF | NAME | POINTX_CLA | FEATURE_EA | FEATURE_NO |
| 0 | Point | 16250562 | Public Telephone | 6340460 | 292160 | 92202 |
| 1 | Point | 16154144 | Public Telephone | 6340460 | 292721.7 | 93243.4 |
| 2 | Point | 21066838 | Cash Machine (Barclay | | | |
| 3 | Point | 96606523 | Cash Machine (YCASH | | | |
| 4 | Point | 21841078 | Exe Bridges | | | |
| 5 | Point | 21841331 | South Street | | | |
| 6 | Point | 21841205 | Odeon Cinema | | | |
| 7 | Point | 21841366 | Birks Grange | | | |
| 8 | Point | 108383131 | Cricklepit Mill | | | |
| 9 | Point | 41263546 | Okehampton Street | | | |
| 10 | Point | 107701036 | Wi-Fi Hotspot (O2 Limit | | | |
| 11 | Point | 47968294 | Caffe Nero | | | |
| 12 | Point | 47955300 | Park View | | | |
| 13 | Point | 48761488 | tReds | | | |
| 14 | Point | 49762285 | Royal Albert Memorial M | | | |
| 15 | Point | 49868316 | Georges Meeting House | | | |
| 16 | Point | 49763564 | Clifton String Quartet | | | |
| 17 | Point | 54757990 | Perry Prowse Insurance | | | |
| 18 | Point | 54761705 | Swinton Insurance | | | |
| 19 | Point | 54777728 | James Bax | | | |
| 20 | Point | 68714899 | Triumph | | | |
| 21 | Point | 75357823 | Stagecoach | | | |
| 22 | Point | 75488819 | Pennsylvania House | | | |

# Discovery work

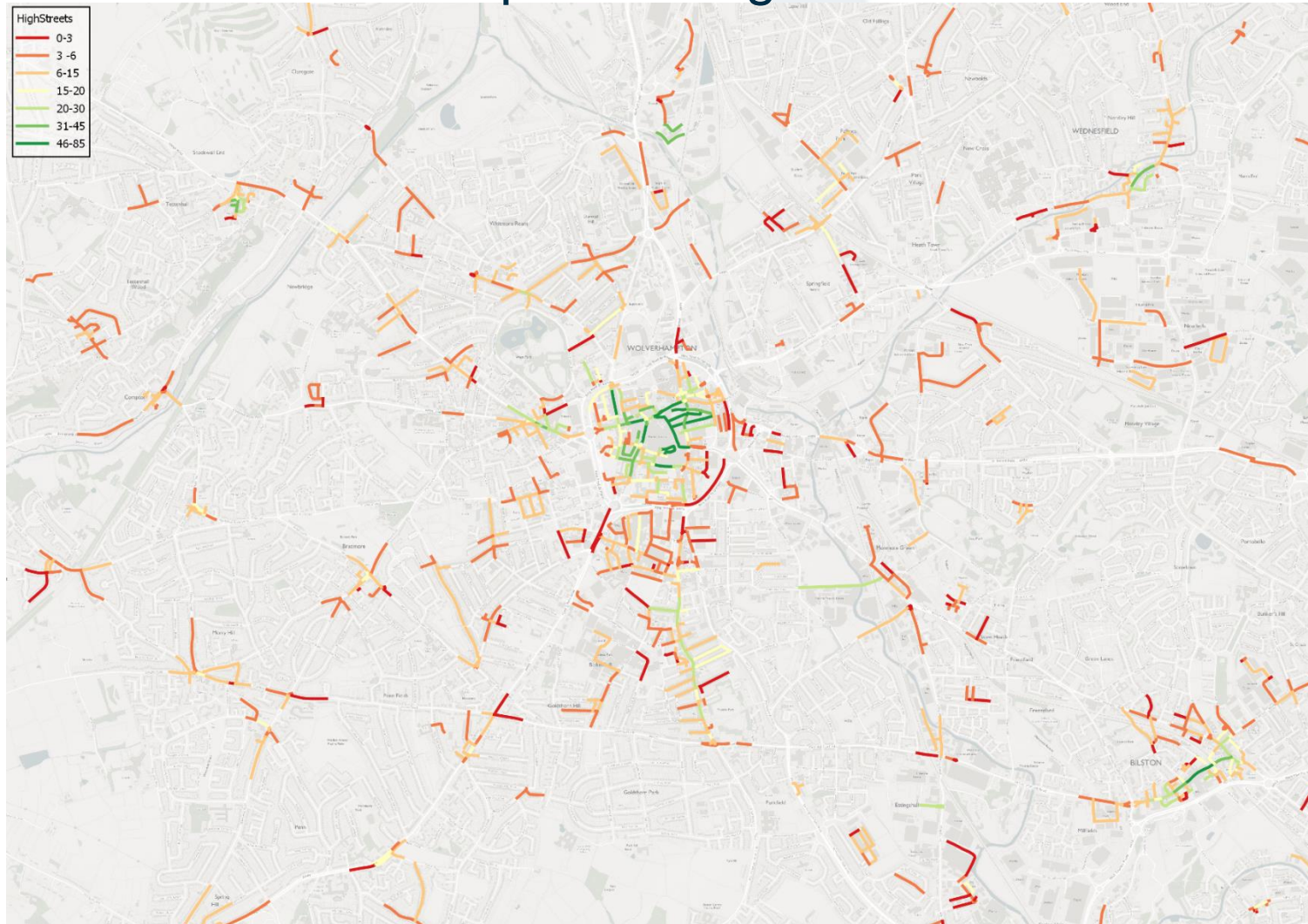Isolate relevant address points

# Discovery work

## Analyse with road networks
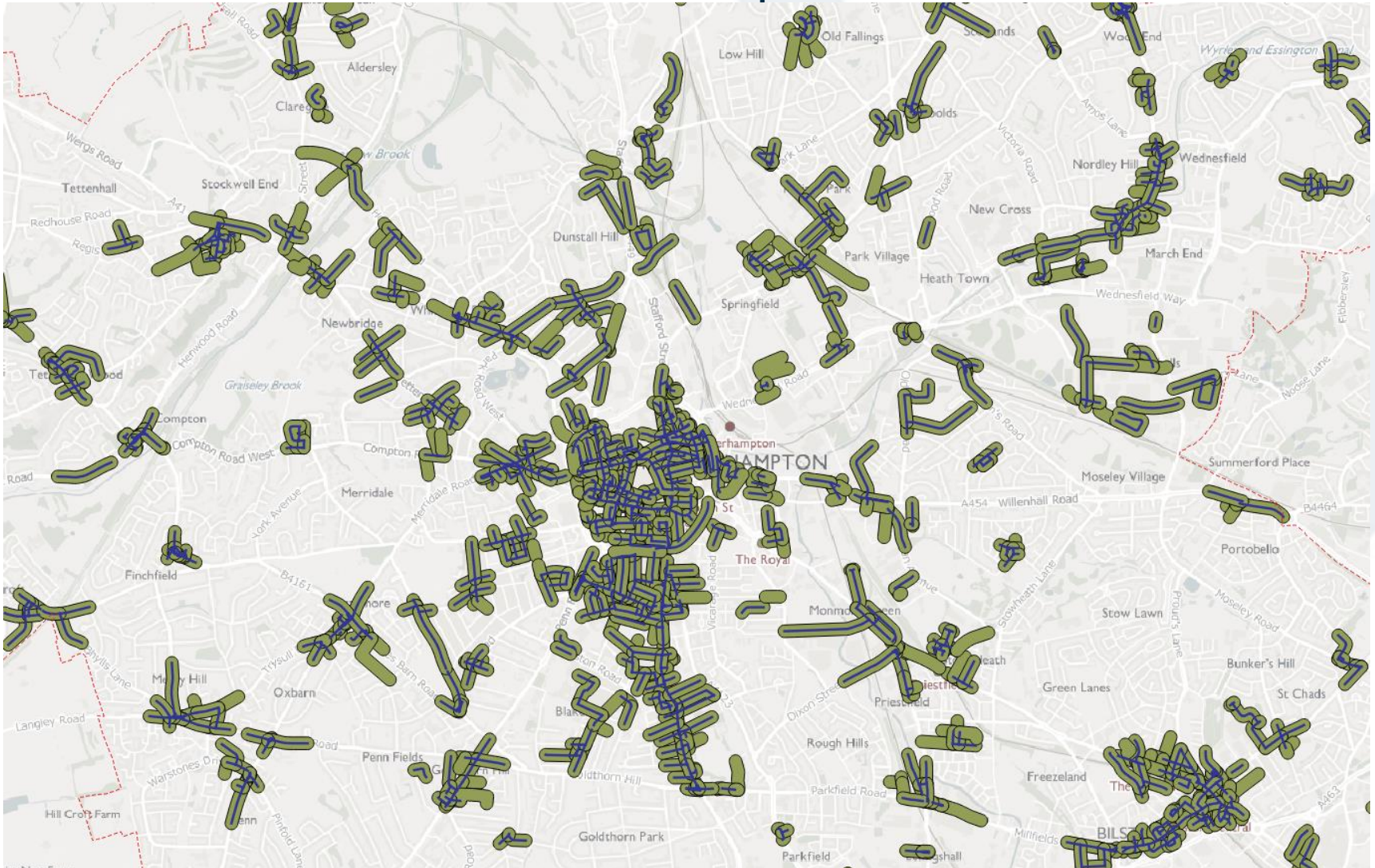
# Discovery work
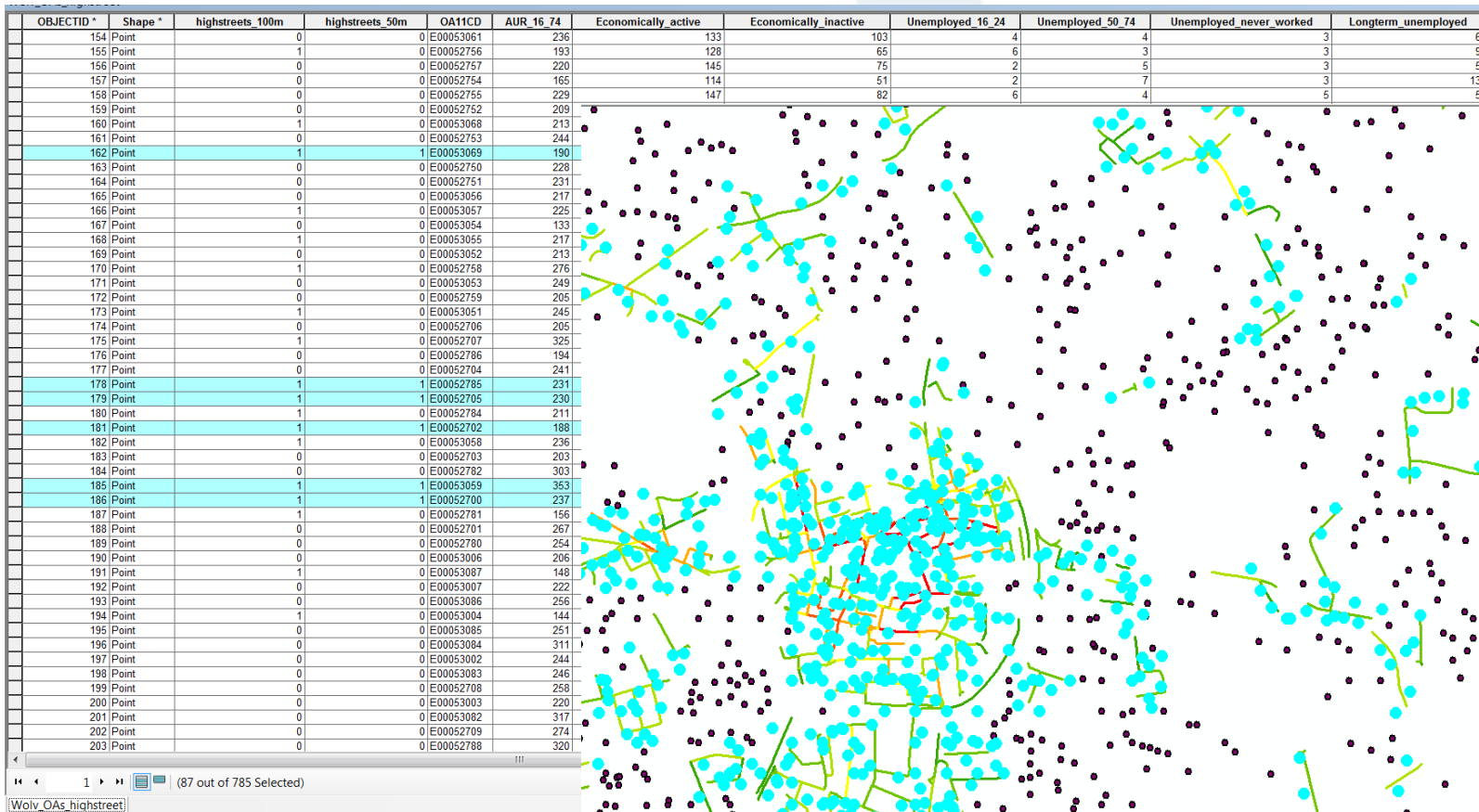
## Result: roads that represent high street extents

# Discovery work

## Create buffers for other data capture

# Discovery work

Identify postcodes/ OAs/ Workplace Zones within 50m distance of high streets
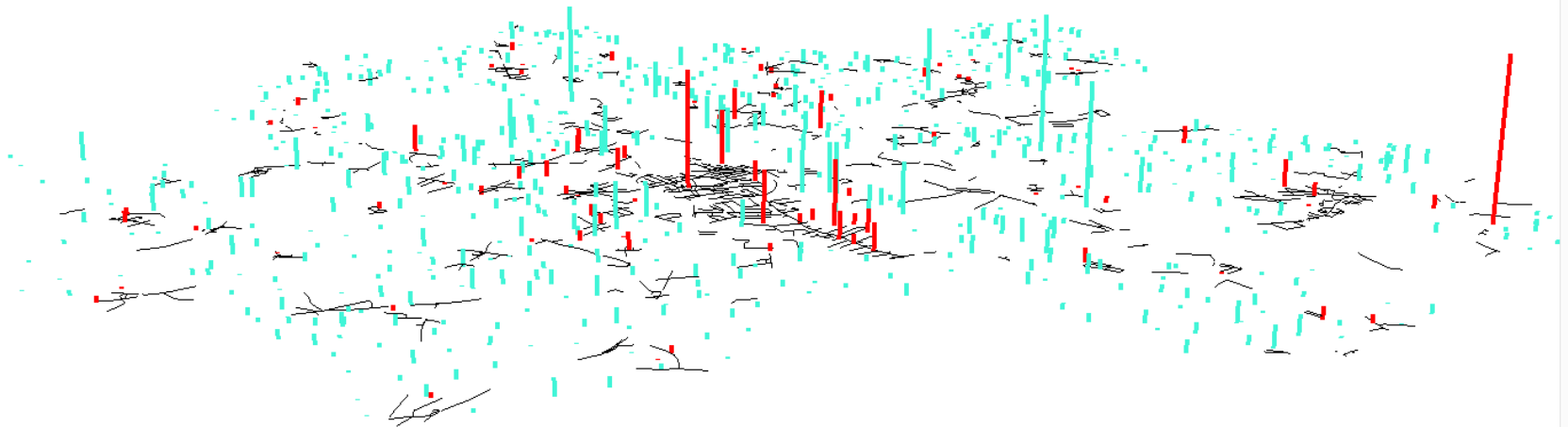
# Discovery work

## Population

- The method we used finds 12% of Wolverhampton's population living within 50m of a high street in 2016

- Since 2011 there has been consistent population growth in high street areas: from 27,836 to 29,862, a rise of around 7%

- This compares with general population growth in Wolverhampton of around 3%

| | Population 2011 | Population 2012 | Population 2013 | Population 2014 | Population 2015 | Population 2016 |
|---|---|---|---|---|---|---|
| **High streets** | 27,836 | 28,095 | 28,532 | 28,666 | 29,288 | 29,862 |
| **Other areas** | 222,016 | 222,875 | 223,025 | 224,321 | 225,118 | 226,759 |
| **Wolverhampton** | 249,852 | 250,970 | 251,557 | 252,987 | 254,406 | 256,621 |

# Discovery work

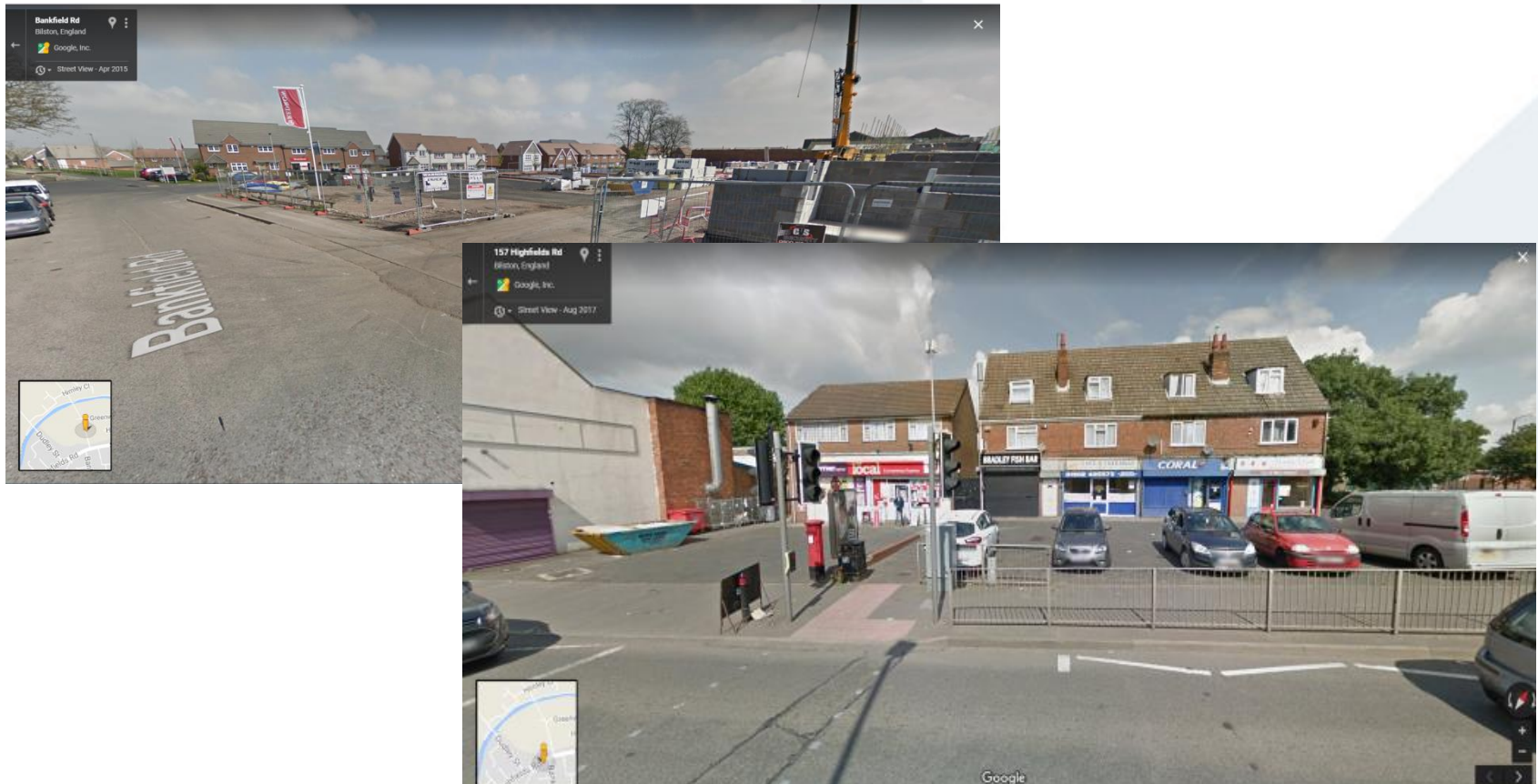## Population change 2011- 2016



- Black lines: high streets
- Red bars: high street OAs, blue bars: non-high street OAs
- Height of bars indicates percentage population change
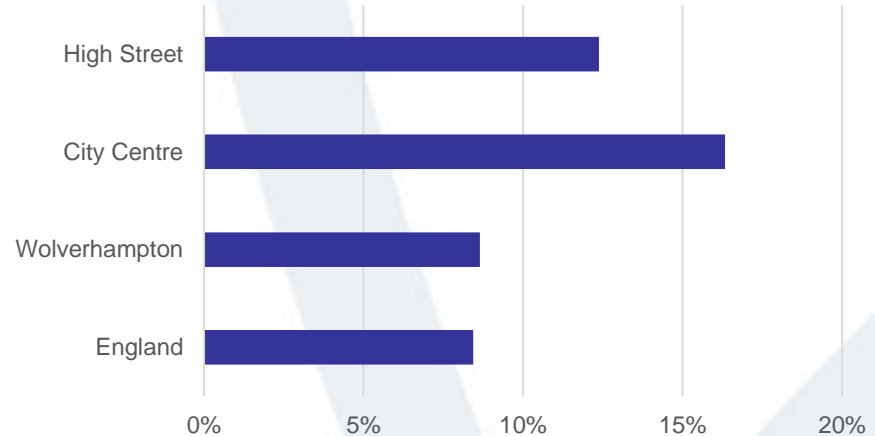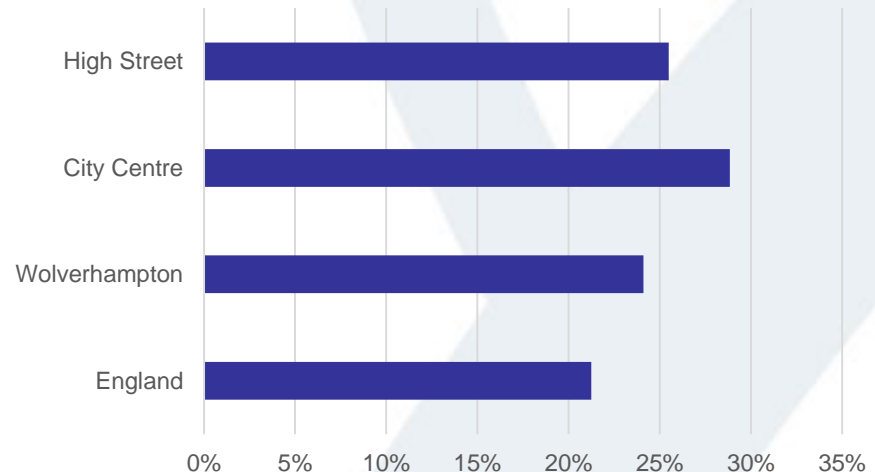
# Discovery work

## Checking with the real world



© Google 2018

# Census data, Workplace Zones

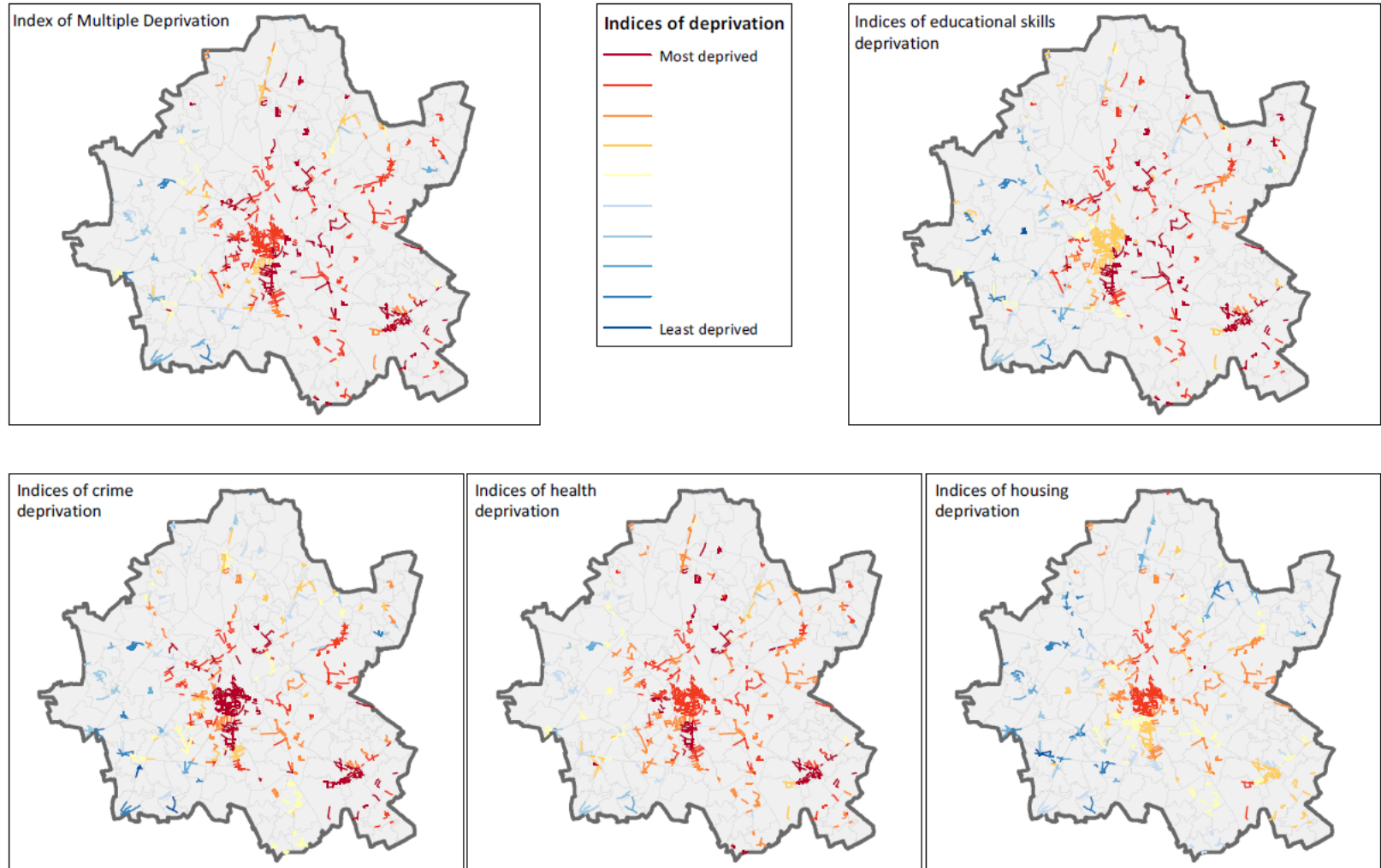- Occupation: Sales and customer service occupations



- Part-time employees

# Indices of Multiple Deprivation, 2015



High Street Index of Multiple Deprivation (IMD), Wolverhampton

# Discovery Work (2) : Business Parks

- Attention often focuses on the health of high streets and town centres and the numbers and types of business within them.

- However, much business growth also occurs in business parks, both existing and newly developed.

- Our view is that there is not much existing information available on the growth and type of business located in business parks.

- Of relevance to local industrial strategies?

# Overview of preliminary results

| Park type | # of parks | # of units | # of employees | Notes |
|---|---|---|---|---|
| Industrial | 22 | ~800 | 50% | Focus on manufacturing and wholesale; ¼ of activity in Key Industrial Park |
| Business | 10 | ~150 | 7% | Variety of industries |
| Retail | 5 | ~250 | 25% | 65% of "retail" being the Wulfrun Centre & surrounds |
| Science | 1 | negligible | negligible | Accurate but too specific |
| Trading Estate | 11 | ~300 | 18% | Slight focus on manufacturing and wholesale |

# Conclusion

- We think there is strong potential in combining OS data on the built-environment with ONS economic and social data

- We can apply this to other places, scale it up and adapt it

- We are developing the pilot study work with local policy makers

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