

ORDNANCE SURVEY

Using geospatial data for the SDGs - the case of Great Britain

Clare Hadley



Outline

Who are we?

- Ordnance Survey (OS) and the Office for National Statistics (ONS)

What have we done?

- Urban natural capital accounting
- Indicator 9.1.1. Access to all season road
- Indicator 11.3.1 Ratio of land consumption rate to population growth rate

What have we learnt?

Ordnance Survey

Great Britain's national mapping agency



Create geospatial data

We produce location data at levels of detail and accuracy not created anywhere else, using ground based survey and remote imaging



Support government

Our data is trusted to support policy and the delivery of public services at every level of government



International expertise

We take our expertise and capability to support sustainable development and deliver efficient public services.



Innovation

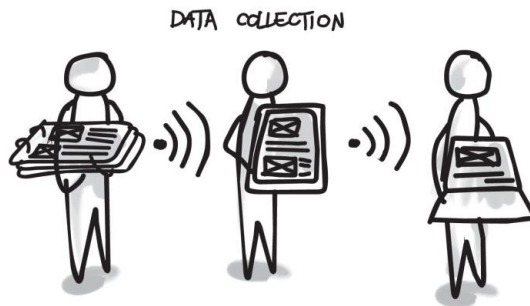
We support research and innovation with our Geovation Hub which supports geospatial entrepreneurs.

Office for National Statistics

UK's largest independent producer of official statistics and its recognised national statistical institute

Responsibilities

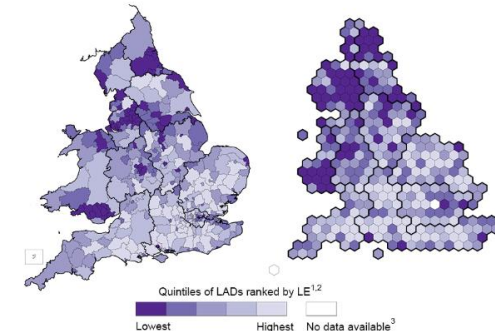
COLLECTING



ANALYSING



DISSEMINATING



Geospatial is key to all of these core functions

Urban Natural Capital Accounting

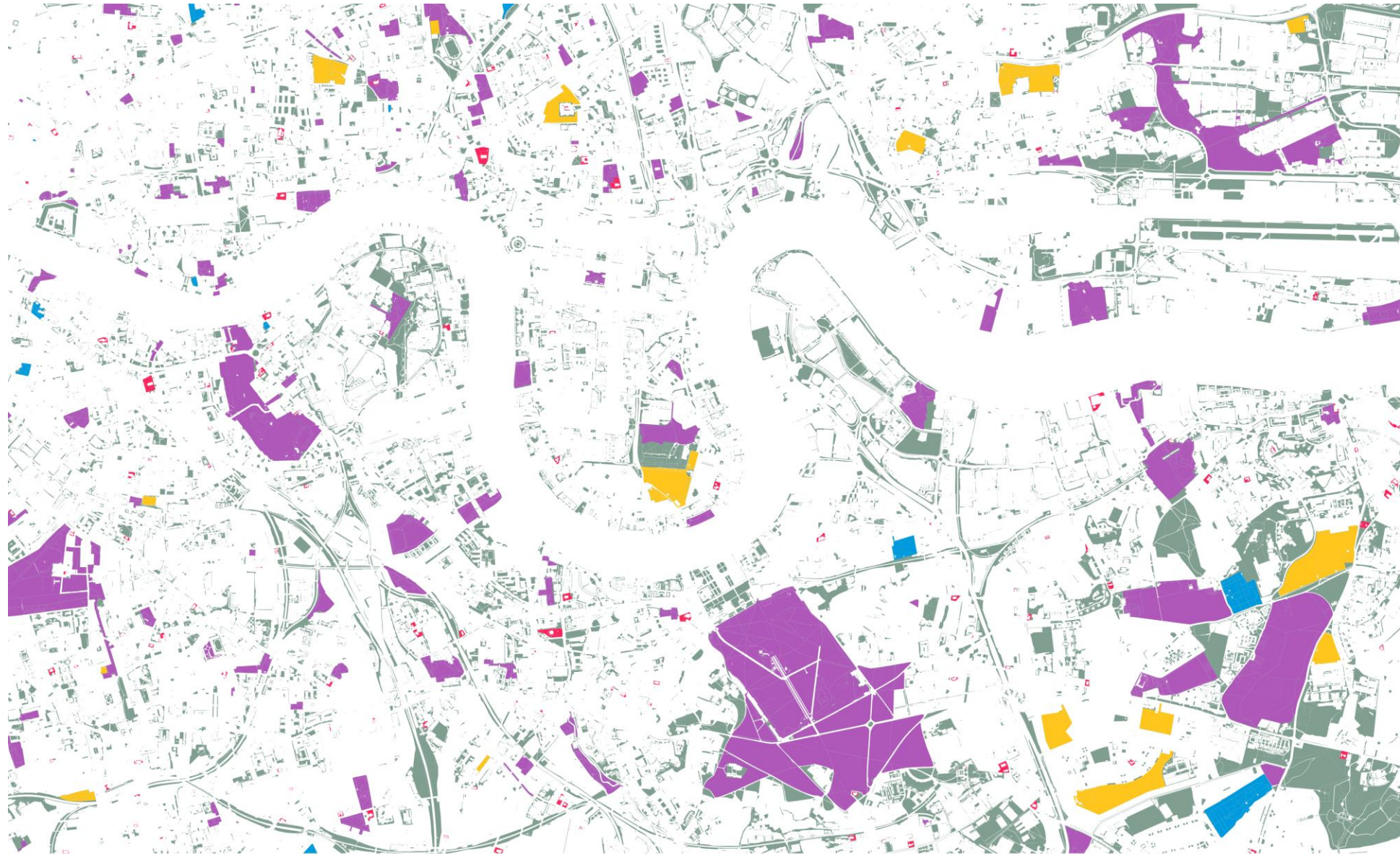
Case Study – Urban Natural Capital Accounting

- At the start of 2018 the UK government published a 25 Year Environment Plan setting out how we will improve the environment.
- Aligned to the SDGs
- Part of this was the production of a full set of 'natural capital accounts' for the UK to help monitor progress.
- OS and ONS worked together on this to produce statistics for urban areas
- Extent Account - describes the area and number of green and blue spaces in all urban areas.
- Services Account - examines the relationship between residential property price and urban green and blue space.

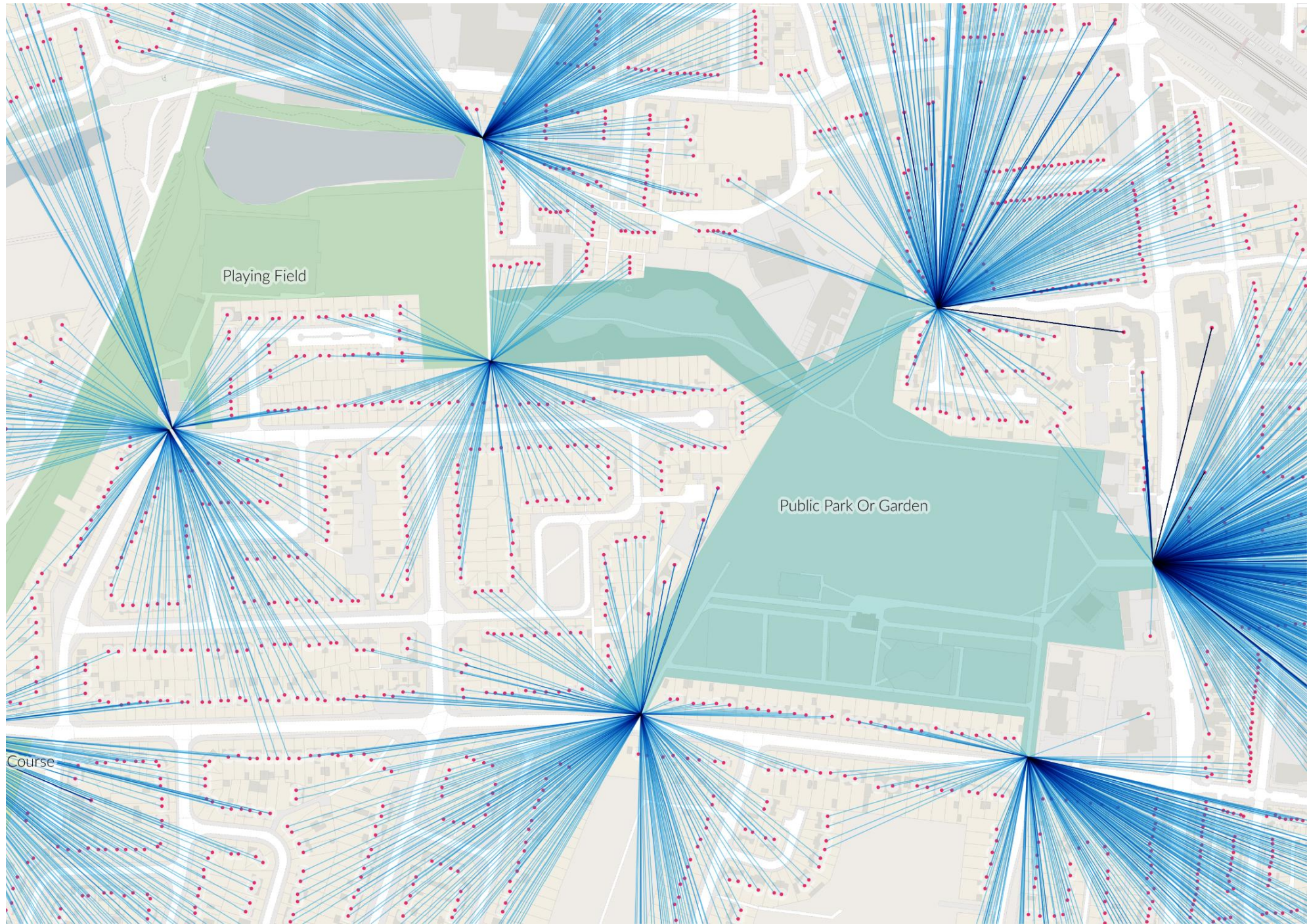


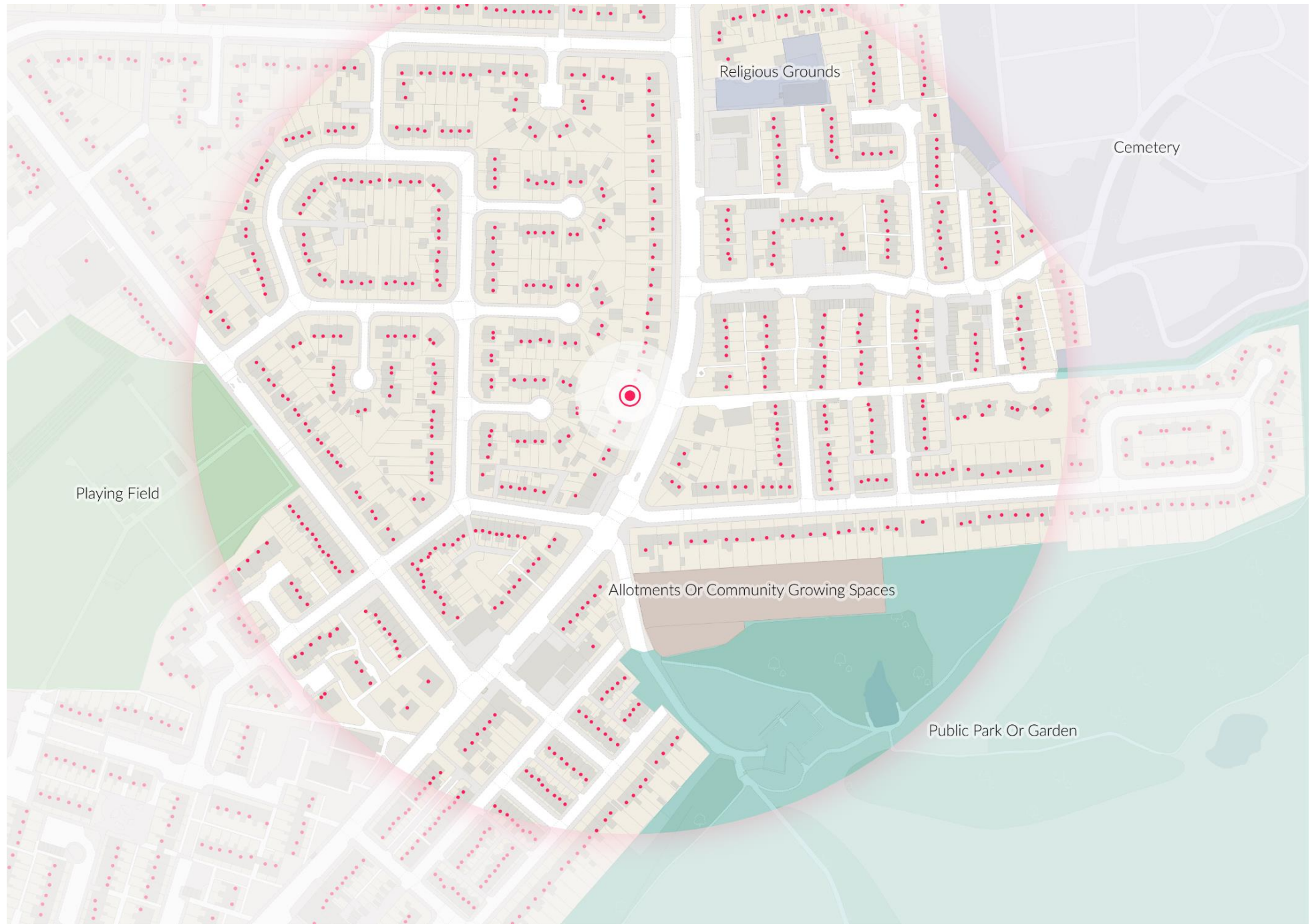
A Green Future: Our 25 Year Plan to
Improve the Environment





 Cemetery  Playing Field  Public Park Or Garden  Religious Grounds





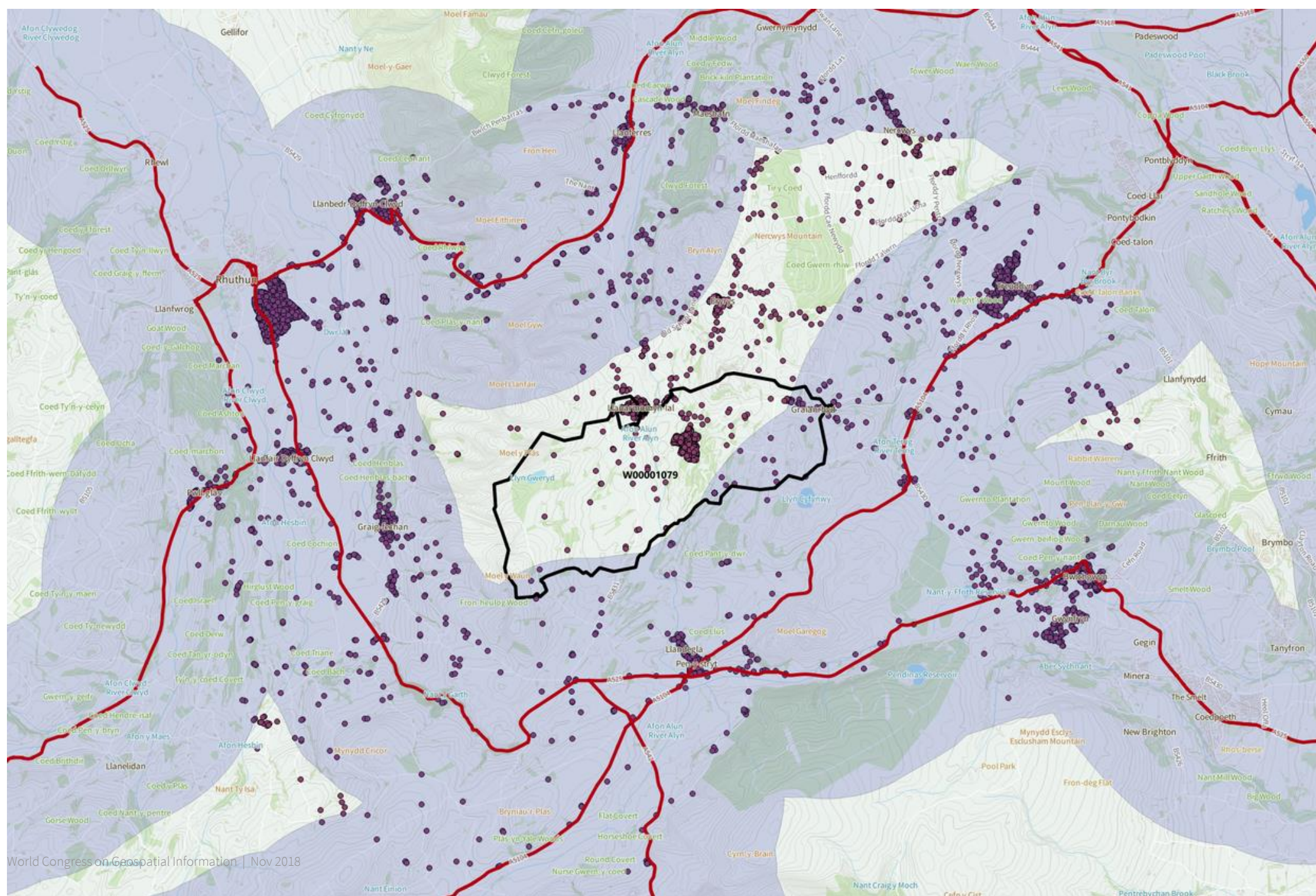
Key Findings

Case Study – Urban Natural Capital Accounting

- Approximately 530 thousand hectares of residential garden and 550 thousand hectares of non-residential natural land cover exists in urban areas in Great Britain, accounting for 30% and 31% of the total urban area respectively.
- The built-up area with the largest proportion of urban natural land cover is West Yorkshire (in the NE of England), 46% of the urban area consists of natural land cover. Brighton and Hove (on the South Coast) have the smallest proportion of natural land cover (20%).
- Very large areas of functional green space and blue space within 200m have the largest positive impact on property prices, resulting in an increase of 1.4% and 3.6% respectively.

Indicator 9.1.1

Proportion of the rural population who live within 2 km of an all-season road



Indicator 11.3.1

Ratio of land consumption rate to population growth rate



Process Overview

Pre-process LSOA geographies, taking care of multiple islands situated within a single LSOA, and oversized rural LSOA's

Cluster Topographic Areas from 2013 and 2016 with each LSOA, working out intersection areas from overlapping polygons

Calculate areas of each land cover type by LSOA, and group the results accordingly

Join the two snapshot areas, accounting for land cover types present in one snapshot that aren't in the other

Output as a spreadsheet, with percentage area cover for each snapshot, enabling land area composition changes to be calculated

Key findings

- In Great Britain, land consumption grew faster than the population growth rate.
- Across GB land consumption grew by 4.3% and the population by 1.5%.
- In England, land consumption grew faster than the population,
- In Wales the population grew faster than the land consumption rate.
- In Scotland land consumption rate versus the population growth rate was the highest .

Lessons learnt

Lessons learnt

- Geospatial data can be successfully used with statistical data to provide information for policy makers, and also to enable the measurement and monitoring of the SDGs
- Pilots and tests of the data are useful ways to explore what information can be derived from it
- Further work is needed to find scalable methods and suitable sources of data

Thank You!

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