

# Connecting wellness, urban form, care models and health outcomes in Cranbrook: A healthy new town case study



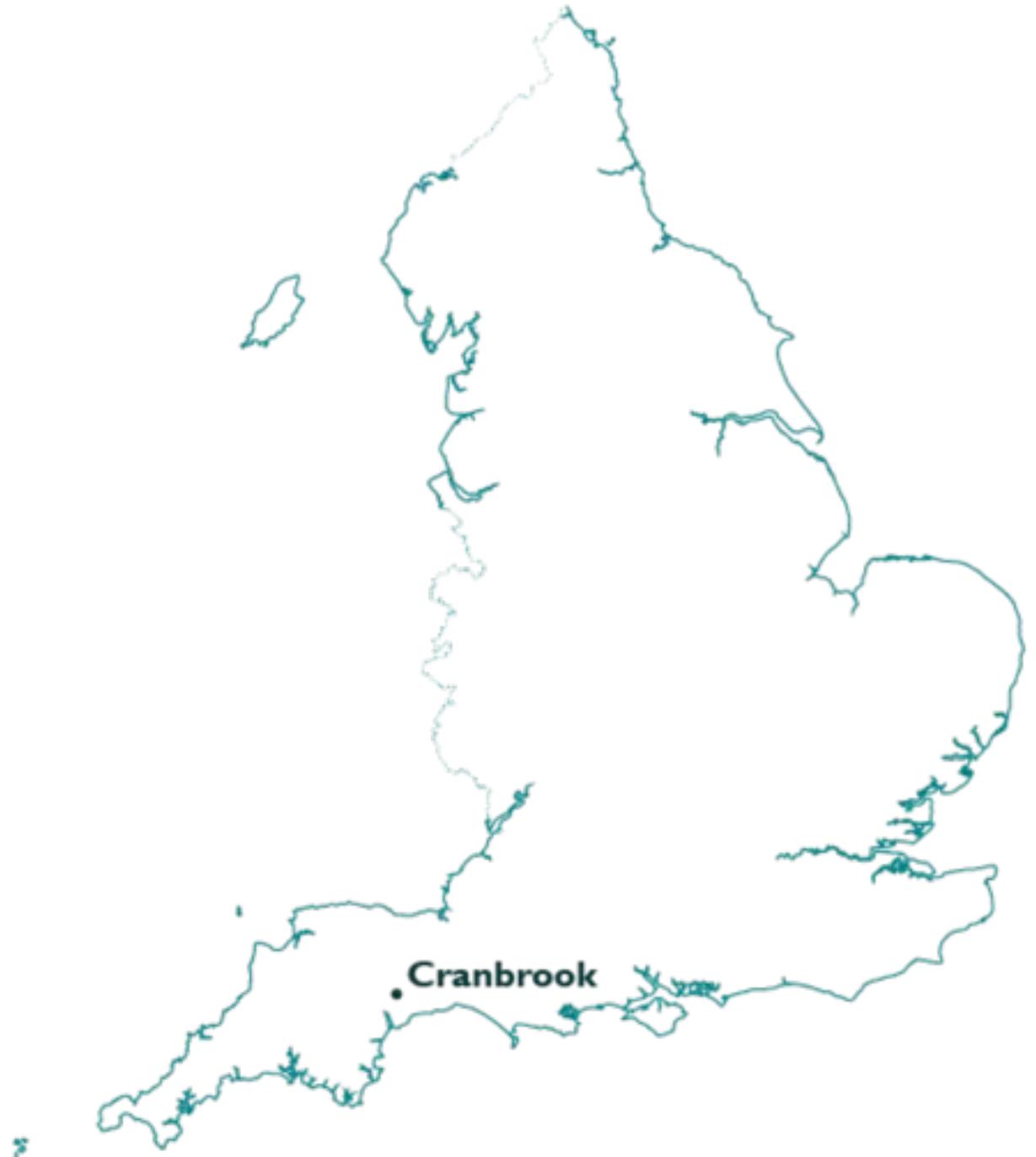
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East Devon District Council  
Devon County Council  
North, East and West Devon Clinical  
Commissioning Group  
Devon County Council

# The Context

- Commercially led development
- £20 million in public loans
- £20 million in grants
- Permission for 3500 homes, applications for nearly 8,000
- UK 'normative' model of housing development



# The Town

4.3km	Length of town
4,200 x	Residents
1 x	Primary schools
1 x	'Through' school
1 x	Neighbourhood centres
12.6ha	Town centre
1 x	Railway stations
1 x	Community buildings
7 x	Shops
? x	Businesses



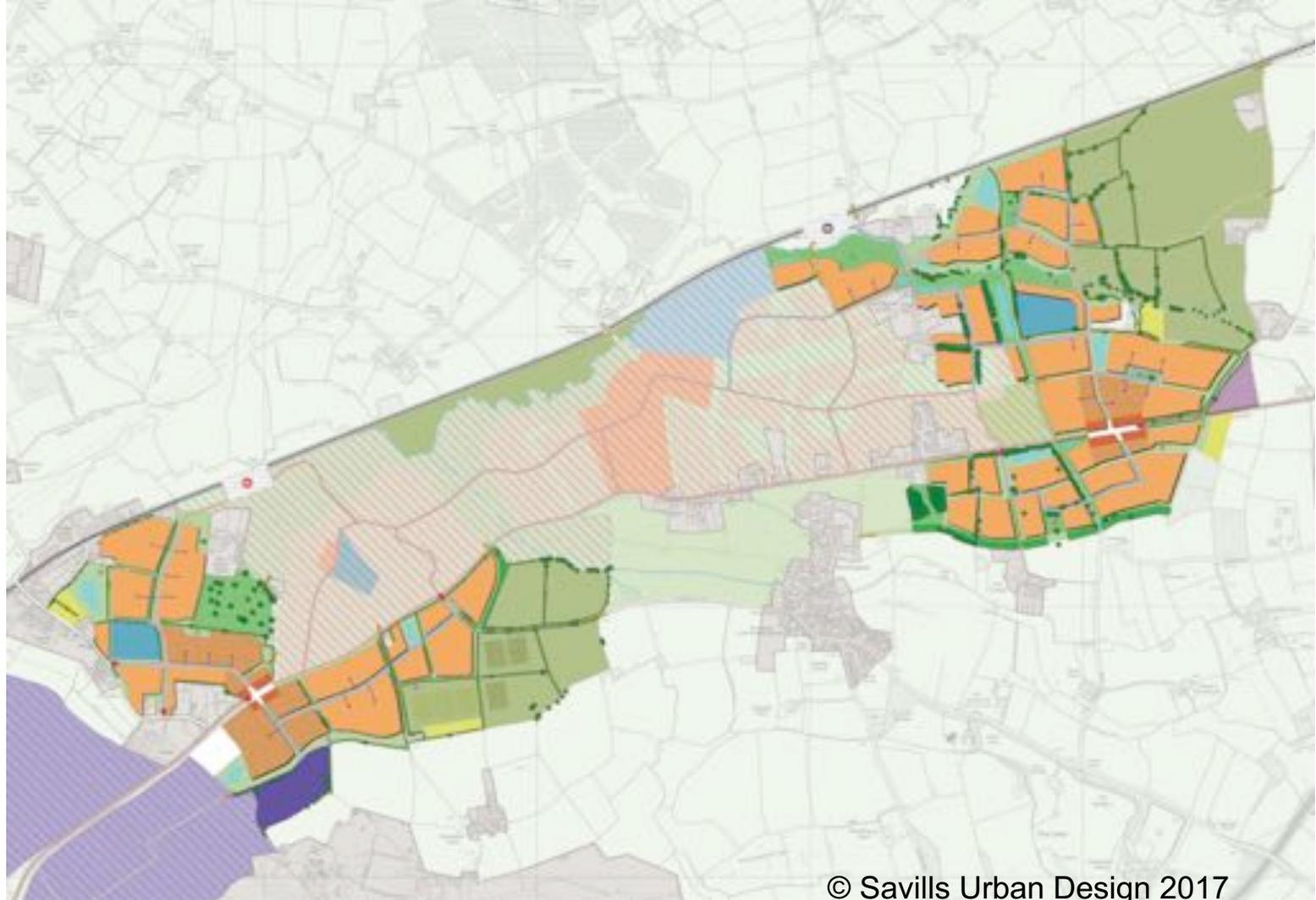
# The Community

- Mostly young families
- How will Cranbrook maintain the good health and well-being of its community?



# The opportunity

- Masterplan
- Planning Policy
- HNT
  - Health priority and funding



# Stage I. Macro-scale

- **Space Syntax**  
Integrated Urban Model  
  
A holistic understanding of Place

Roads

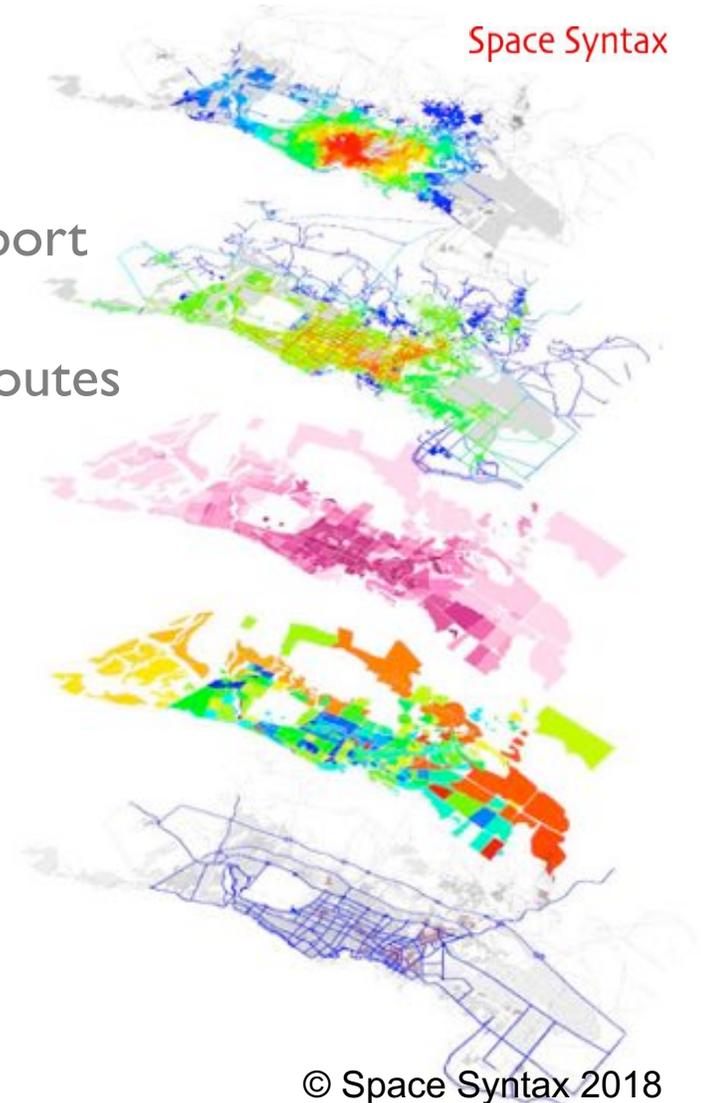
Public Transport

Pedestrian routes

Land use

Population

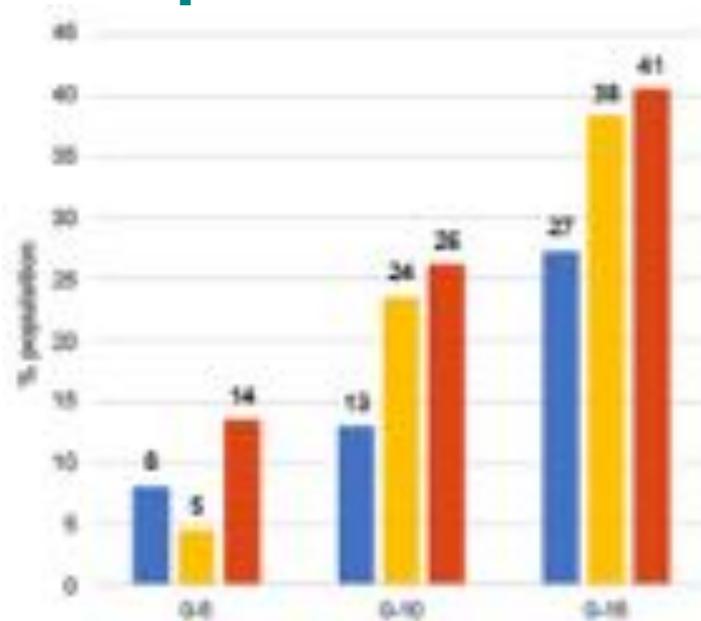
Census data



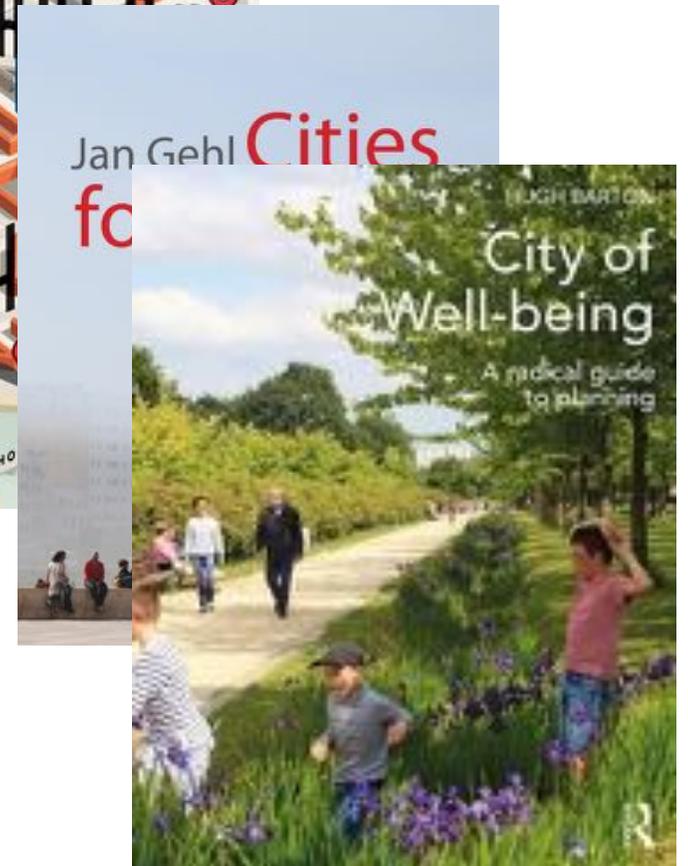
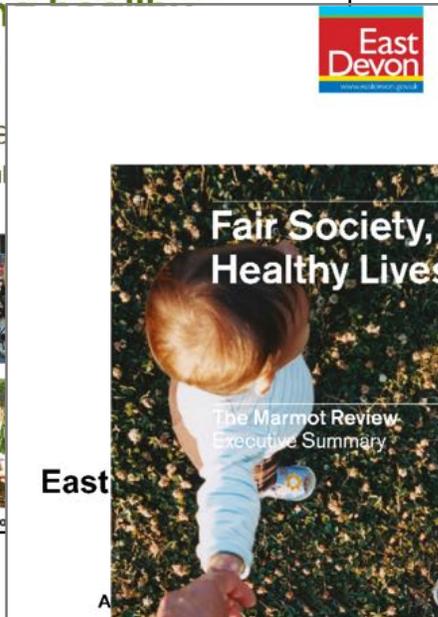
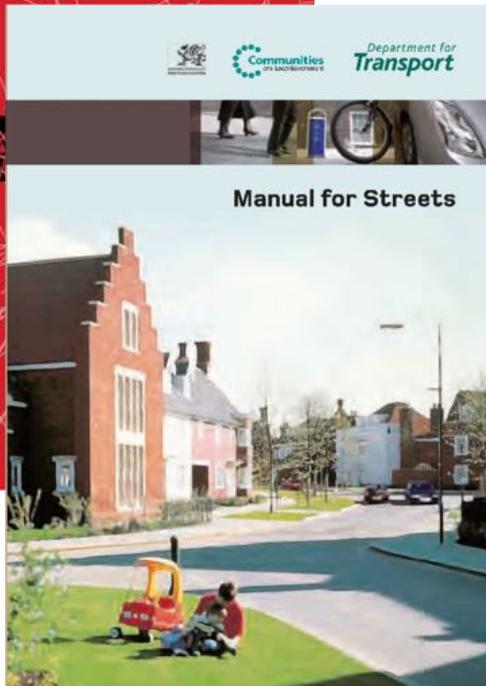
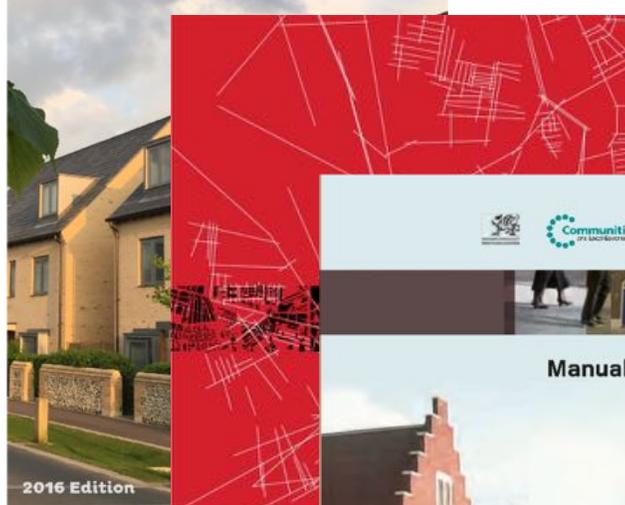
# Optimising the plan

Accessible services

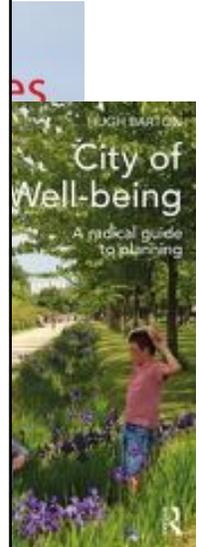
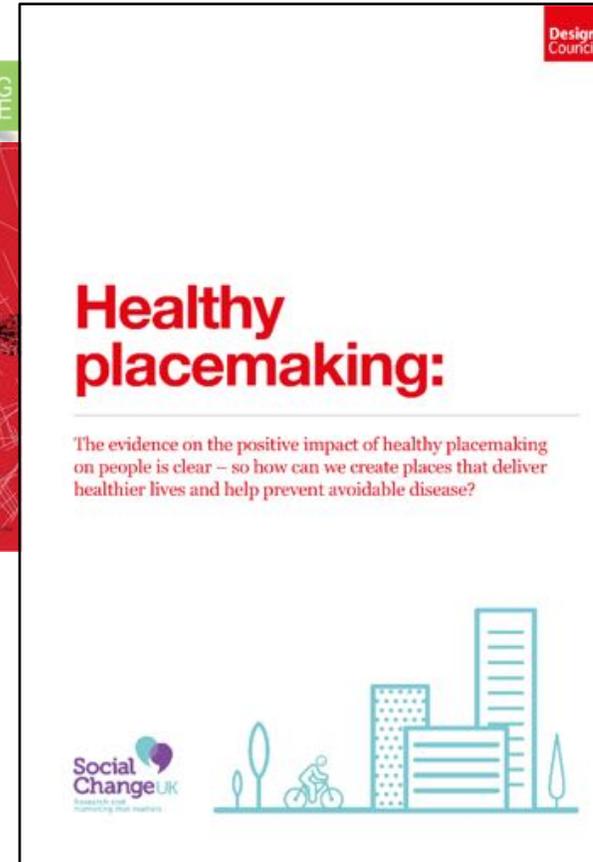
Economic development



# Detailed design coding



# Welcome to perfection?



# What if...?



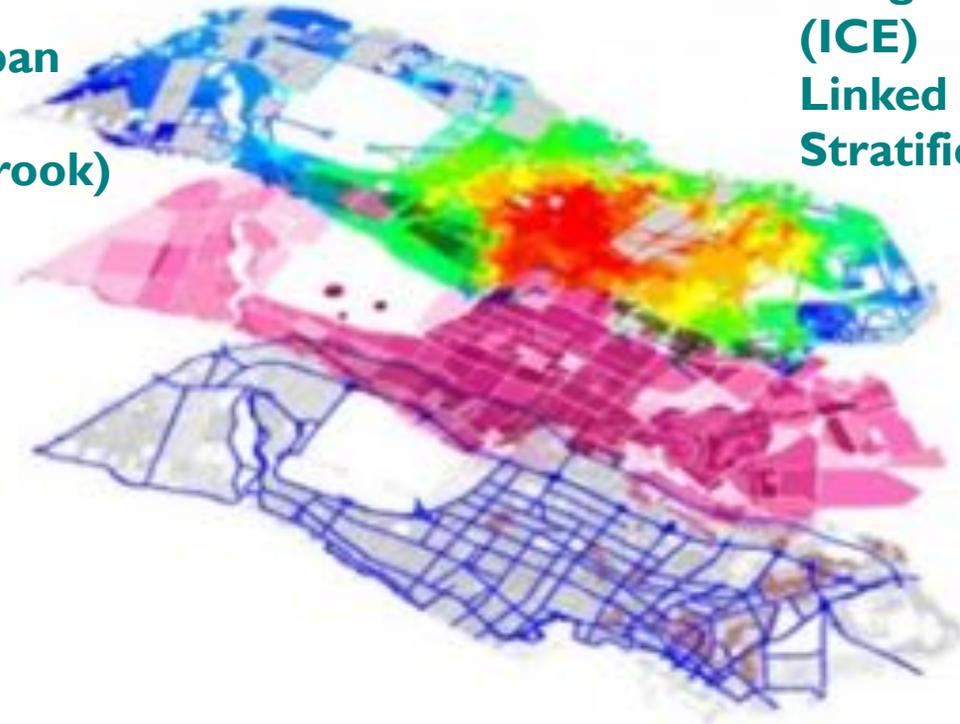
# Spatial analysis for health



# Our approach

- Linking spatial and person-based data
- Preliminary findings from neighbourhood-level data

**Space Syntax  
Integrated Urban  
Model (IUM)  
(Exeter/Cranbrook)**



**Integrated Care Exeter  
(ICE)  
Linked Data Risk  
Stratification Model**

1. Frailty  
based risk  
stratification

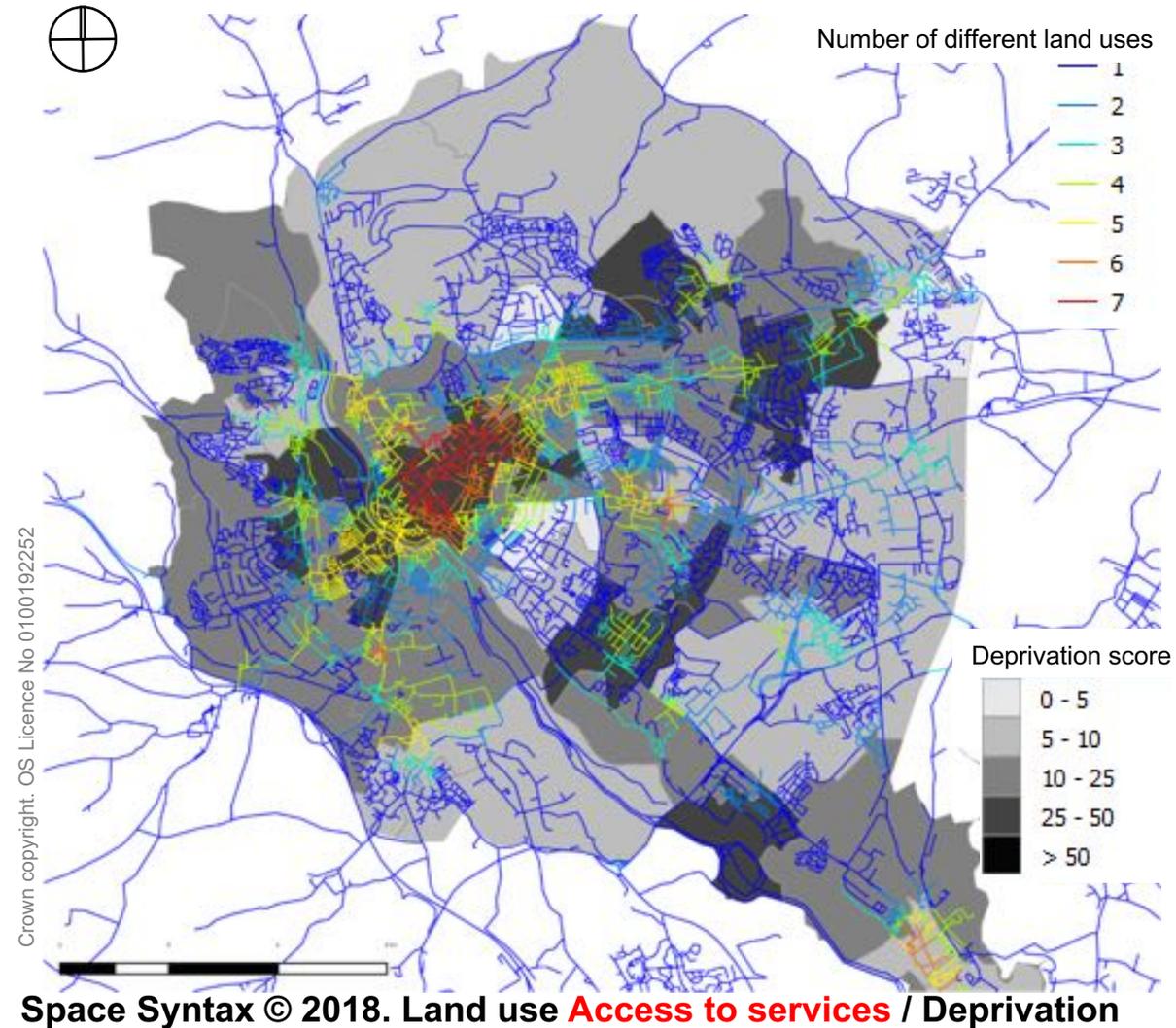
2. Population  
Segmentation

3. Health and  
social care  
linked dataset

4. Health and  
Wellbeing  
Outcomes

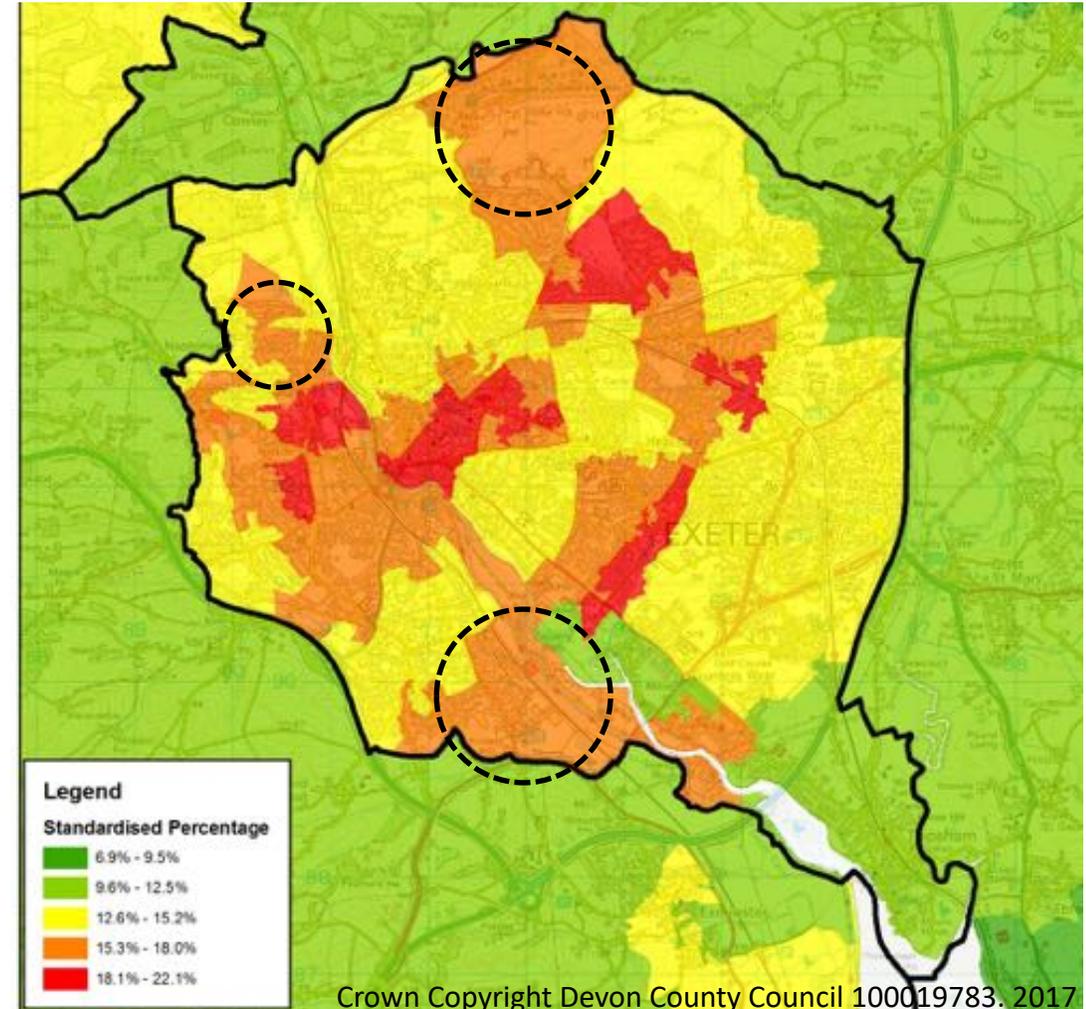
# Services and deprivation

- IUM included measures for access to services, car dependency and service availability
- Map overlays access to services measure (network lines) and Index of Multiple Deprivation (English index for socio-economic deprivation)



# Frailty (ICE)

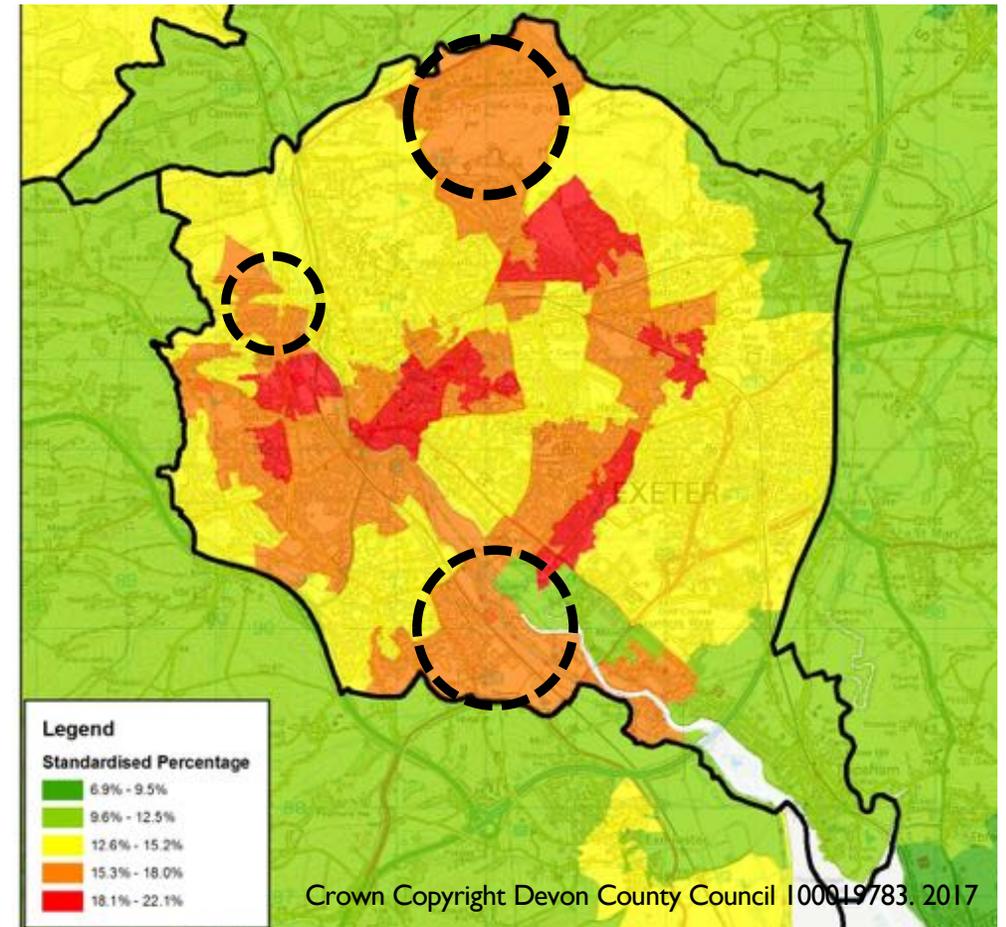
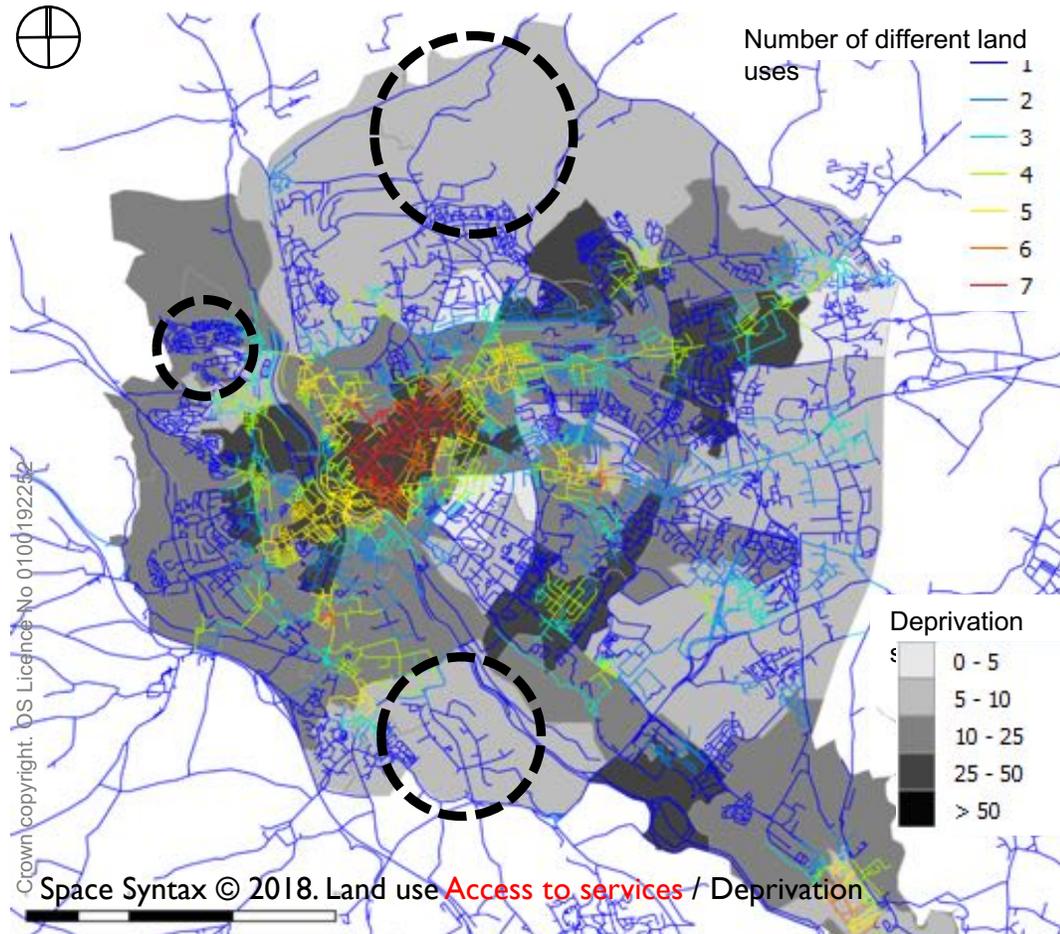
- Frailty – A clinically recognisable state of increased vulnerability and decreased function and activity
- Socio-economic deprivation is a strong predictor for the early onset of frailty (10-15 years earlier in the most deprived areas)
- An age standardised analysis reveals some areas with ‘higher than predicted’ frailty



Early Onset of Frailty with higher than expected hotspots circled

# Outliers

○ Areas with earlier than expected onset of frailty. All have limited access to services.



# Outlier communities

- 1950s to 1990s built suburbs with high car dependence
- Couples and older families
- Social isolation / Loneliness risk
- Exwick and Pennsylvania hilly

Higher Pennsylvania



Exwick



Alphington



# Further findings

- Obesity and car dependency
- ‘Outlier’ areas more prone to mild / moderate frailty
- Increasing frailty can trigger house moves to accessible areas or care settings



# Forthcoming analysis

- A longitudinal study looking at exposure and risk
- Next steps machine learning and postcode/household level analysis



# What this all means

New insights create conditions for success

- More opportunities for a healthier place

Thinking differently about urban design

- Planning for the wider determinants of health

Thinking differently about health models

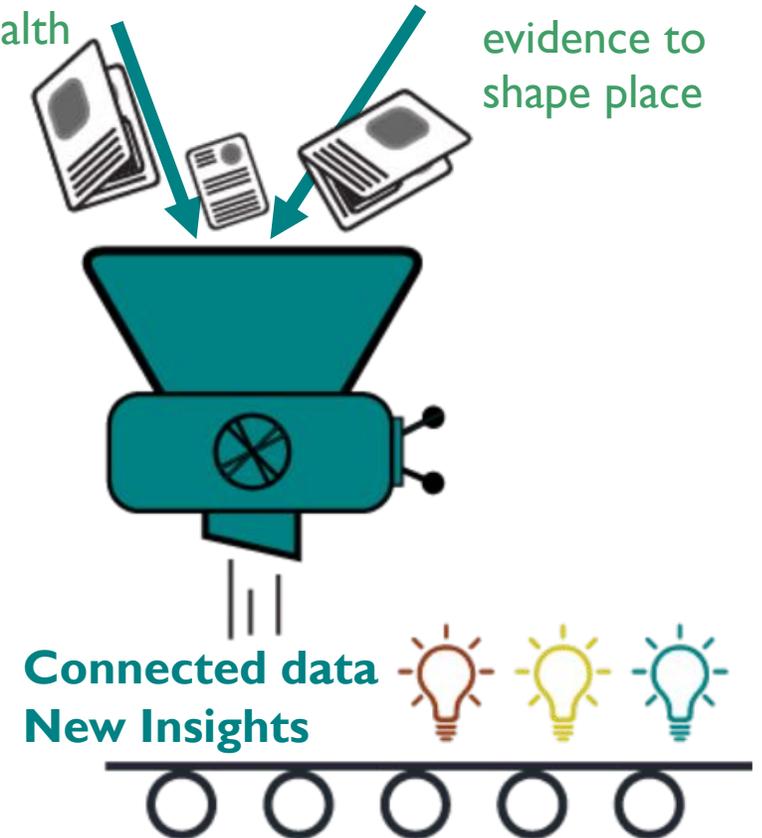
- Putting health advice where the people are

Planning differently and acting together

- Building on our shared learning

Frailty evidence  
**early enough** to  
shape health

Social, economic,  
environmental  
evidence to  
shape place



# It's about more than data



# HNT Principles

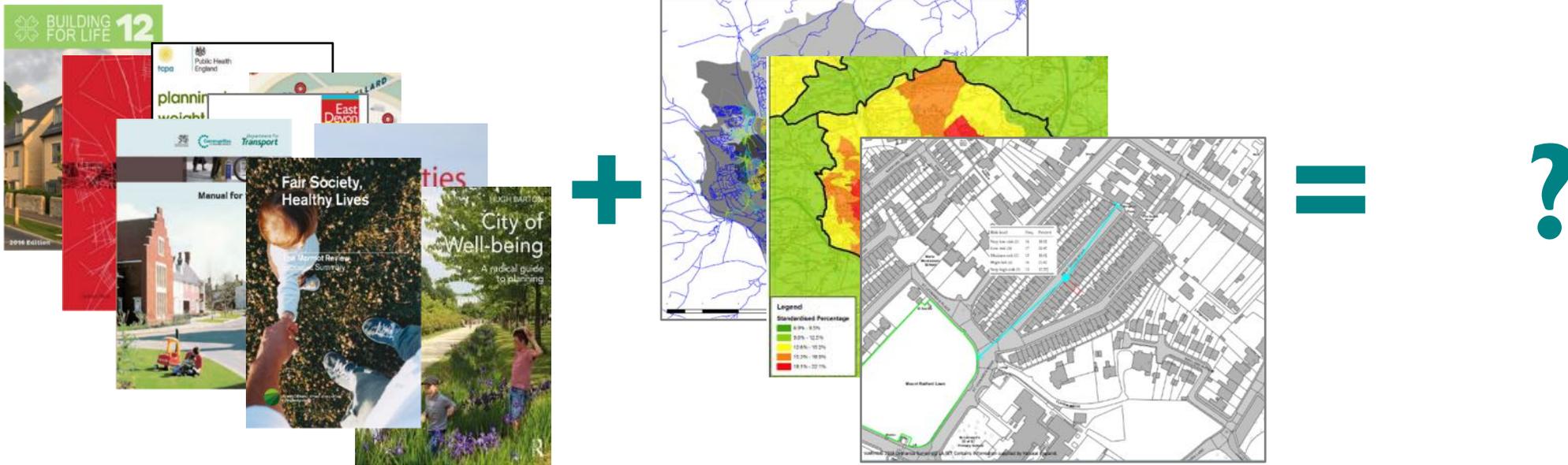
## Principles

1. **Plan ahead collectively**
2. **Plan integrated health services that meet local needs**
3. Connect, involve, empower people and communities
4. **Create compact neighbourhoods**
5. **Maximise active travel**
6. Inspire and enable healthy eating
7. Foster health in homes and buildings
8. **Enable healthy play and leisure**
9. **Provide health services that help people stay well**
10. **Create integrated health centres**



# Systemic transformation

- Evidence on which to base reform of policy and design



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# Donald Rumsfeld

“There are known knowns, there are things we know that we know. There are known unknowns. That is to say, there are things that we know we don’t know. But there are also unknown unknowns. There are things that we don’t know we don’t know.”

# Cranbrook Healthy New Town Partnership

Space Syntax

Royal Devon and Exeter   
NHS Foundation Trust



Department  
for Transport



  
Northern, Eastern and Western Devon  
Clinical Commissioning Group

Exeter and East Devon  
Growth Point

TRAVELDEVON



ONE YOU

