TRANSPORT FOR NEW HOMES

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Foundation for Integrated Transport

FIT

Motivation for the project

Fine words about new homes, transport and lifestyles. But what are we building in real life?

Low carbon

Active travel

Walkable

Community

Connected

GREEN

SUSTAINABLE

Accessible

Let's go and have a look.

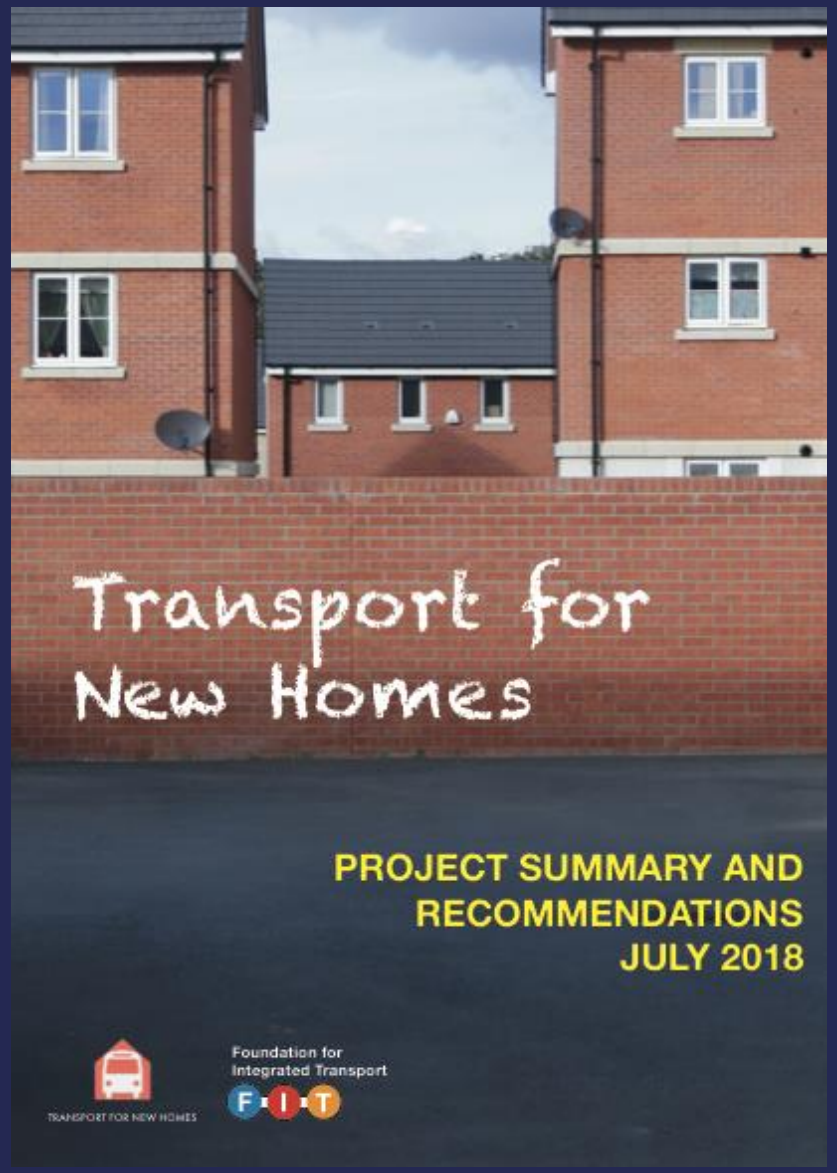
- Does the place feel like a housing estate or a 'village community'?
- Is the place pleasant and vibrant? Are there amenities to walk to?
- Is the public realm pleasant and 'walkable'?
- Is it well connected to the existing urban area?
- How do people travel?
- What would it be like living here without use of a car?
- What is public transport like?

Where we visited:

Visits to the Netherlands

We visited Houten and urban extensions to Utrecht – Vleuten and Leidsche Rijn, as well as Almere and Eindhoven to see how the city was re-inventing itself around walking, cycling and public transport. A visit to Lund in Sweden showed yet another model of development.

What did we find?



Themes:

- *Car-based living*
- *Homes not properly connected for pedestrians, cyclists or buses*
- *Public transport opportunities missed*
- *Importance of mixed land use*
- *Advantages of the new urban quarter*
- *Insights from the Netherlands*

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THEME ONE: CAR-BASED LIVING

- In most of the places we visited, people relied on their cars for the great majority of journeys.
- Parking and road access took up so much room it had a severe impact on the public realm
- Few urban trees and gardens – little space left
- Developer contributions often channelled into road capacity
- Destinations were often car-based too: car park to car park

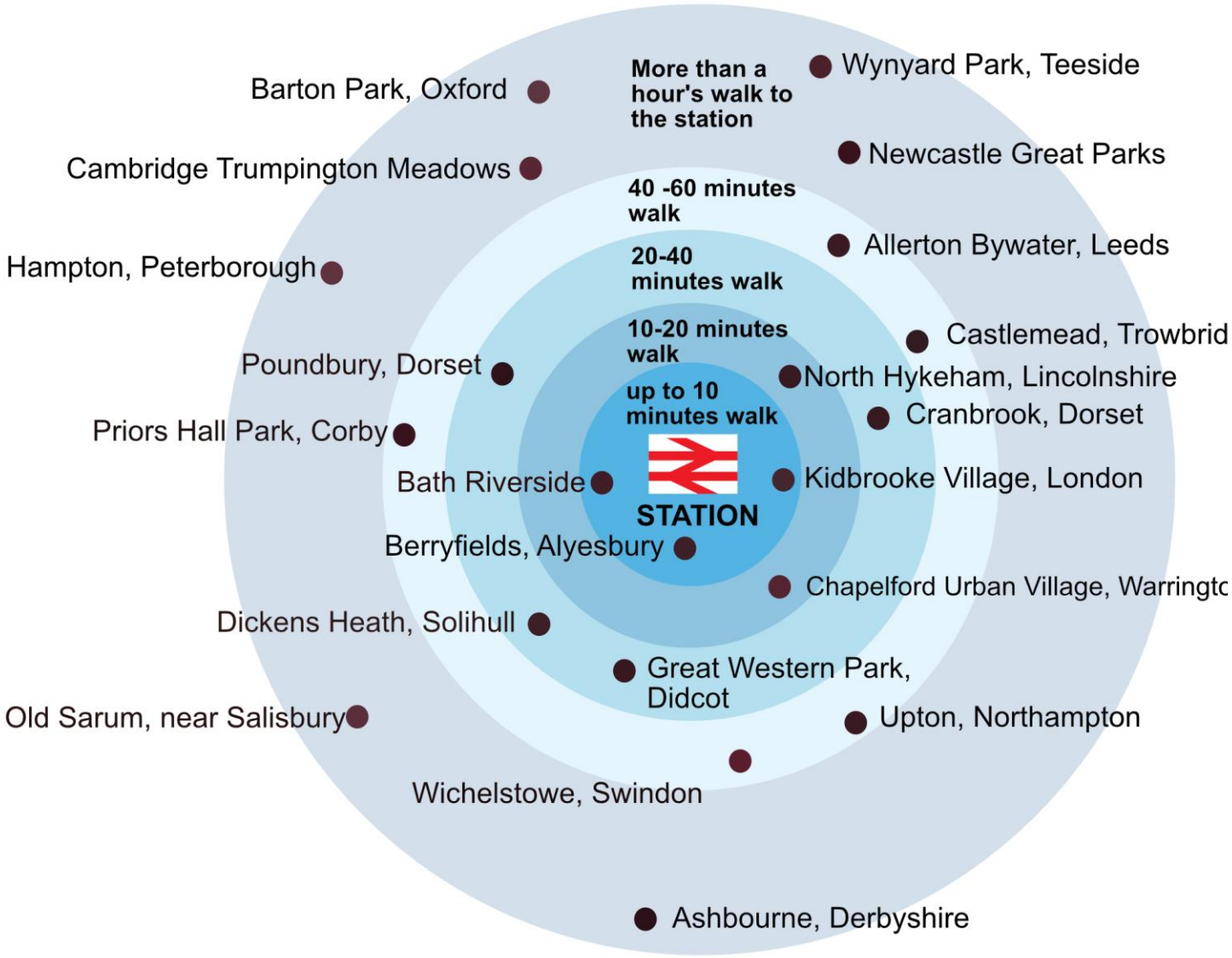
THEME TWO: HOMES NOT PROPERLY CONNECTED FOR PEDESTRIANS, CYCLISTS OR BUSES

- Often not linked by streets to the existing urban area.
- Access off distributor roads, link roads, roundabouts, dual carriageways.
- Pedestrian routes to town unsafe after dark.
- Buses serving neighbouring areas weren't able to reach the site.
- The 'red line of the development' often marked the end of good quality walking and cycling routes.
- This disconnectedness prevents community bonds from forming

THEME THREE: PUBLIC TRANSPORT OPPORTUNITIES MISSED

- Large developments on greenfield sites generally not served by modern integrated transport networks.
- Apart from in Cambridge, rapid transit not exploited.
- Proximity of new homes to a station was rare. Only two new stations – Cranbrook and Warrington West
- Bus services suffered from car-based context of new homes.
- Road capacity was comparatively easy to deliver, but funding uncertainties made local rail and modern rapid transit extremely difficult to put in place.
- Large scale new housing in city areas have got the benefit of an existing public transport network close by.

Distance of new homes from the station



Most developments were nowhere near a station.

THEME FOUR: THE ADVANTAGES OF MIXED LAND USE

- Mixed land-use key to achieving active life styles and viable public transport.
- People coming to work provide a market for local businesses
- Poundbury was unique in this respect, with services and businesses alongside homes as a genuinely walkable community.
- In other places, employment tended to be provided in employment areas segregated from the new homes
- Urban developments such as at Kidbrooke and Bath were better at providing mixed land-use

Poundbury

THEME FIVE: THE ADVANTAGES OF THE URBAN QUARTER

Having found that much new greenfield housing was car-based with little in the way of local facilities, we were encouraged to see that large scale new housing within urban areas was quite different.

- People could make use of public transport networks already in place. Better connected to existing neighbourhoods with services and employment easily accessible.
- Shops and other local businesses moved in to make use of a large new population living close by.
- Many residents saw parking as less important than public transport connections
- Less space occupied by parked cars meant more opportunities for public green space
- But the risk is that these homes are unaffordable to many

THEME SIX: LESSONS FROM THE NETHERLANDS

- New towns designed around excellent public transport – rapid transit systems; segregated bus lanes with bus priority at junctions; stations as integrated transport hubs.
- Walking and cycling were the easiest ways to get around town
- Thriving town centres with market squares, railway stations, shops, urban farms – and virtually car-free
- Clear strategy to prioritise urban and well-connected sites for development
- Multidisciplinary planning teams
- Zoning and spatial planning
- **Uplift in land values used for social good**

OUR VISITS WERE SUPPLEMENTED WITH DESK-TOP RESEARCH….

PROFILES WERE PRODUCED FOR EACH PLACE

- Location
- Form and context of development
- Planning history
- Eventual size
- Date first homes sold
- Homes delivered to date
- Percentage of affordable homes
- Average house price
- Quality of public realm: urban trees, grass verges, walking environment
- Where you can walk to
- Public transport provision, destinations and frequency
- Walking distance to railway station
- Developer contributions to the community
- What is provided locally
- Whether a lack of local facilities is compensated for by frequent public transport

Southern Fringe, Cambridge

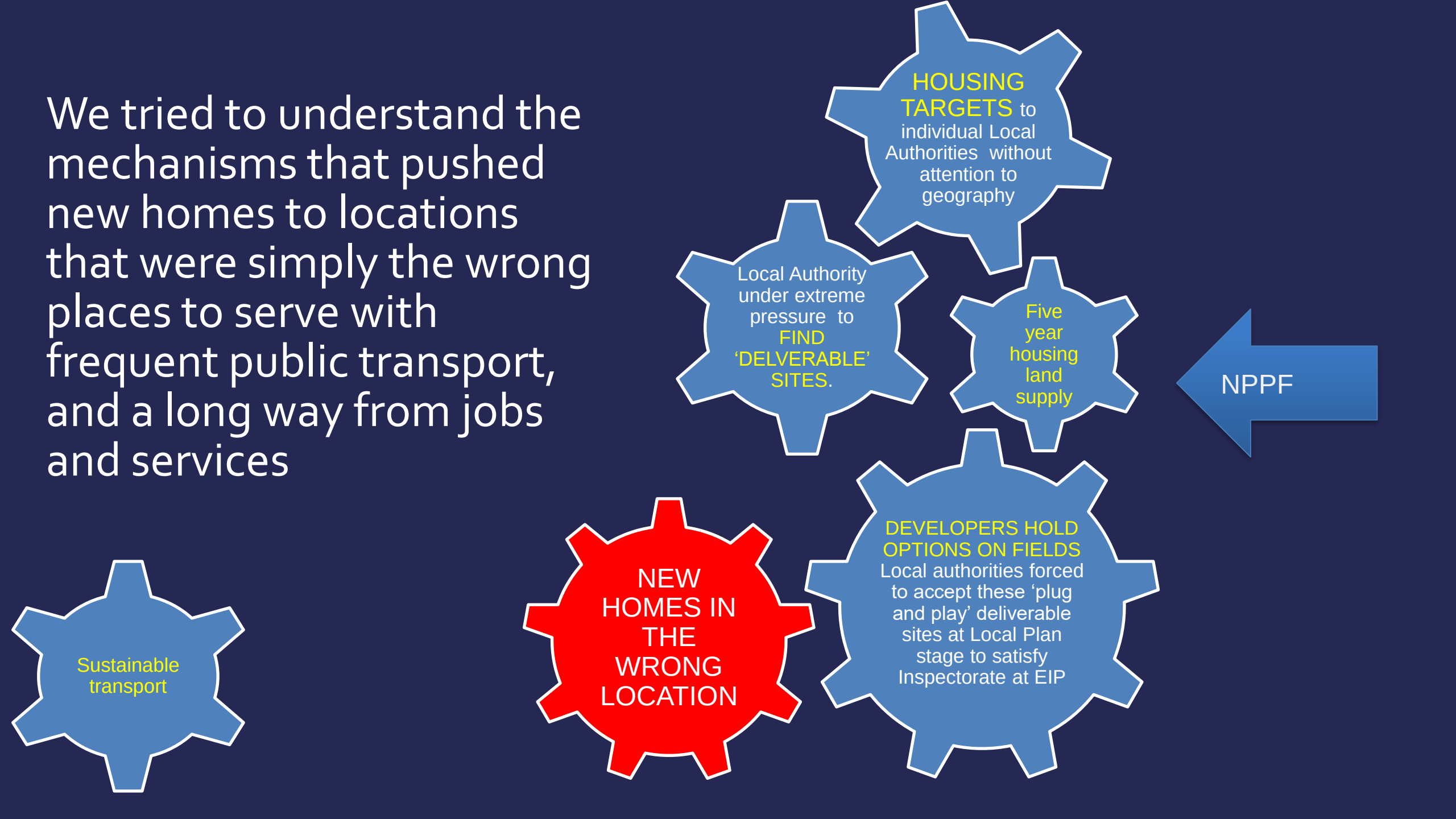
Key details	
Name	Southern Fringe - Great Kneighton and Trumpington Meadows
Location	Cambridge, Cambridgeshire
Number of dwellings	3,450 (2,250 at Great Kneighton and 1,200 at Trumpington Meadows)
Date first homes sold	2012 (Trumpington Meadows); 2013 Great Kneighton)
Homes delivered to date	3,450
Percentage of affordable homes	40%
Average house price	£526,000
Walking distance to railway station	41 minutes

Type of facility	Plans and current state of progress within development	Built yet within site?	Closest example outside the development	Estimated time to reach nearest example outside development			
				Walking	Cycling	Driving	Public transport
Convenience store	Waitrose, Addenbrooke's Convenience Store	Yes					
Café / restaurant	Clay Farm Centre	Yes					
Drinking establishment	No plans known	No	Several on Trumpington High Street	15 mins	5 mins	4 mins	18 mins
High street shops	No plans known	No	Trumpington High Street	15 mins	5 mins	4 mins	18 mins
Supermarket	Waitrose	Yes					
Nursery	Trumpington Meadows Primary School	Yes					
Primary school	Trumpington Meadows Primary School	Yes					
Secondary school	Trumpington Community College, newly opened	Yes					
Park	Trumpington Meadows nature reserve and country park	Yes					
Playground	Several	Yes					
Playing fields	No plans known	No	King George V Playing Fields	15 mins	4 mins	4mins	20 mins
Tennis courts	No plans known	No	King George V Playing Fields	15 mins	4 mins	4mins	20 mins
Leisure centre	Trumpington Sport (new)	Yes					
Swimming pool	No plans known	No	Leys Leisure Sports Complex	42 mins	12 mins	7 mins	27 mins
Wildlife area	Trumpington Meadows	Yes					
Community Centre	Clay Farm Centre	Yes					
Daytime /	Clay Farm Centre	Yes					

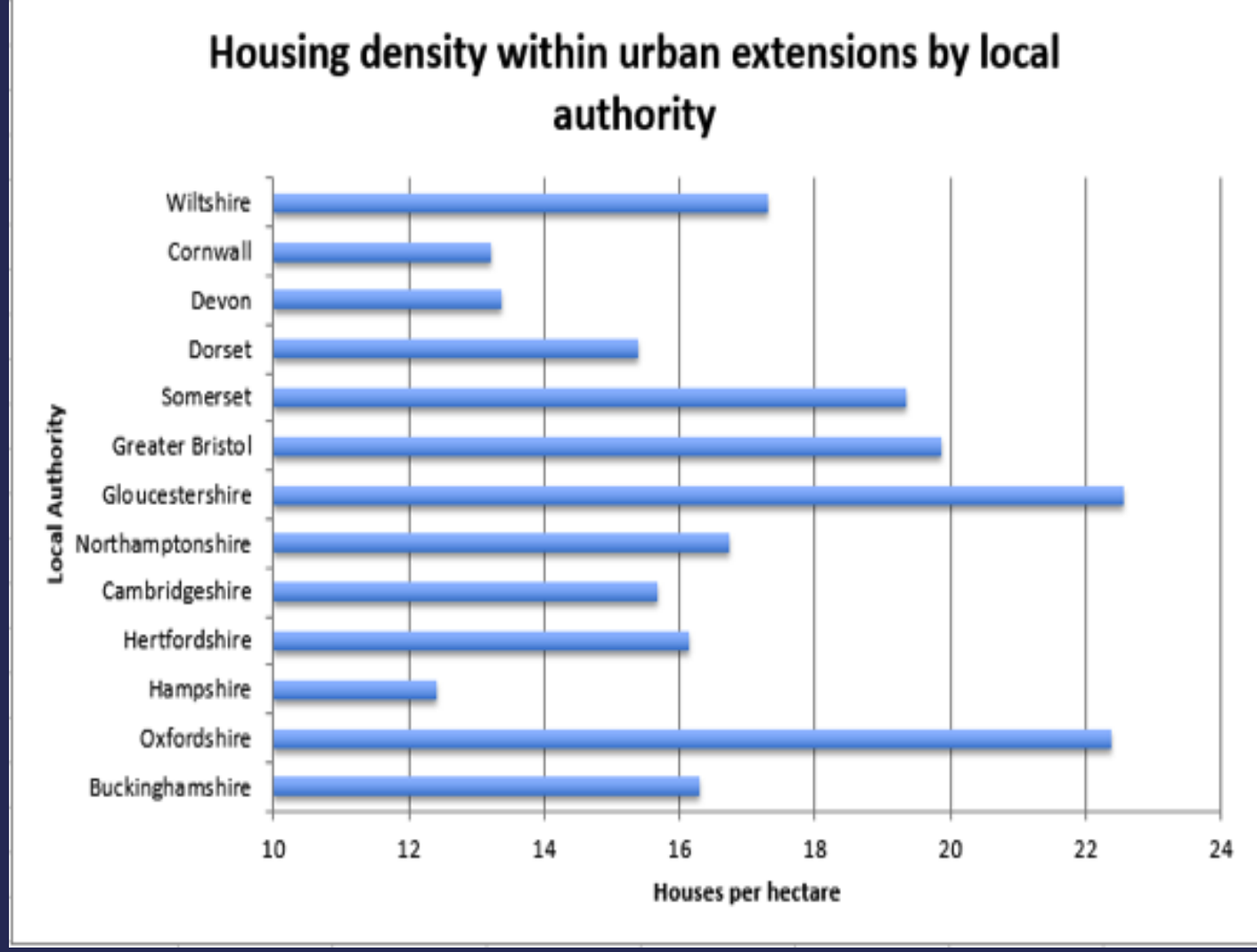
WE LOOKED AT THE PLANNING SYSTEM

- NPPF and Planning Practice Guidance
- Housing targets and their calculation
- Choice of sites in Local Plans – where and why
- Analysis of traffic generation, congestion and commuting, CO_2 emissions
- Overall size and housing density of urban extensions
- Coupling of new homes with new roads
- 'Plug and play ' developer master-planning

We tried to understand the mechanisms that pushed new homes to locations that were simply the wrong places to serve with frequent public transport, and a long way from jobs and services



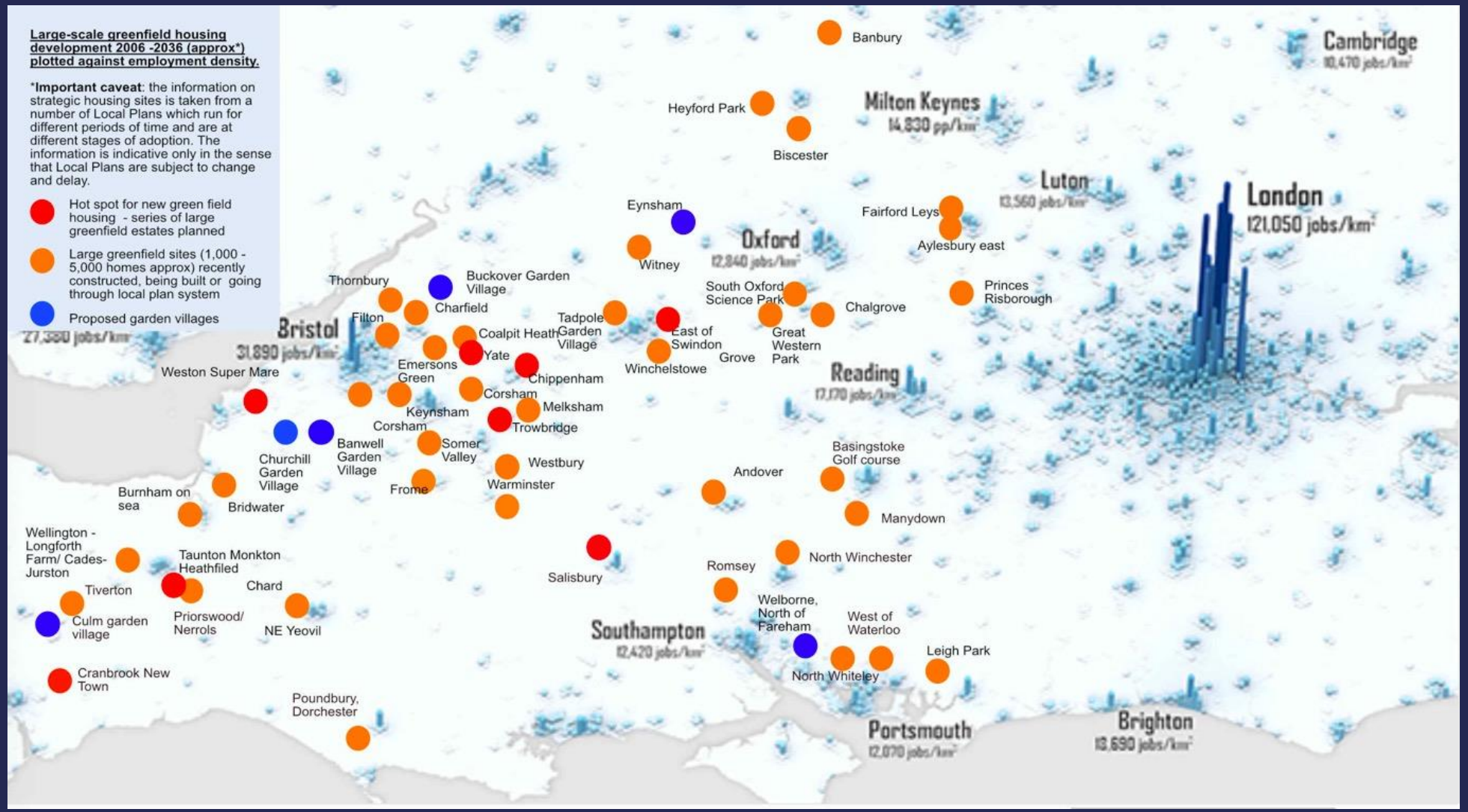
We looked at the overall housing densities of over 100 urban extensions and large new greenfield estates and concluded that they were likely to be insufficiently dense to serve with a public transport network

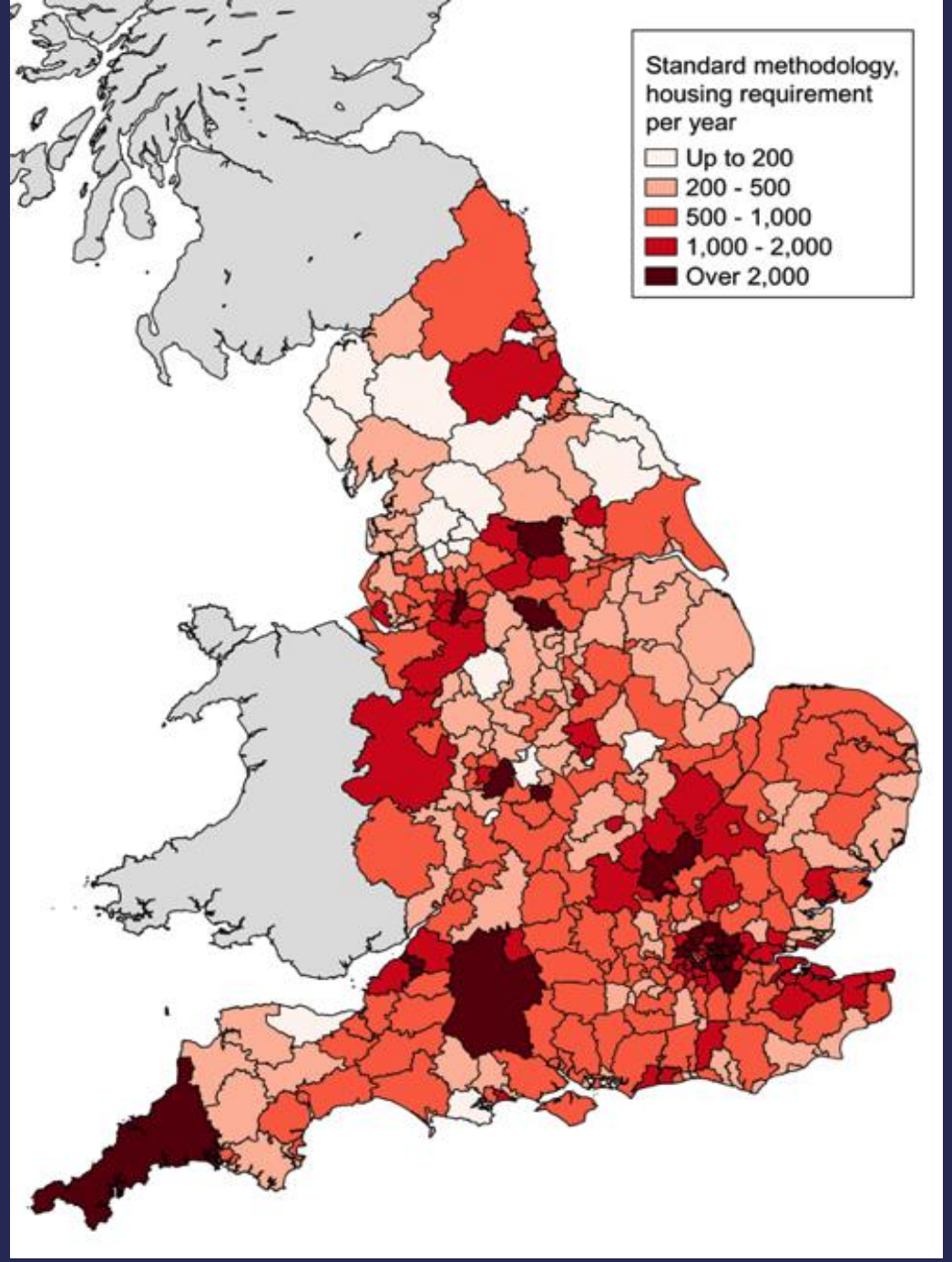


Results of TfNH analysis of gross density over 100 new greenfield estates/ urban extensions.

Using local plans to find strategic sites, we are attempting to map hot-spots for new homes with employment density.

The pattern of dispersed development begins to emerge. People and employment are separated and the pattern of development very dispersed.

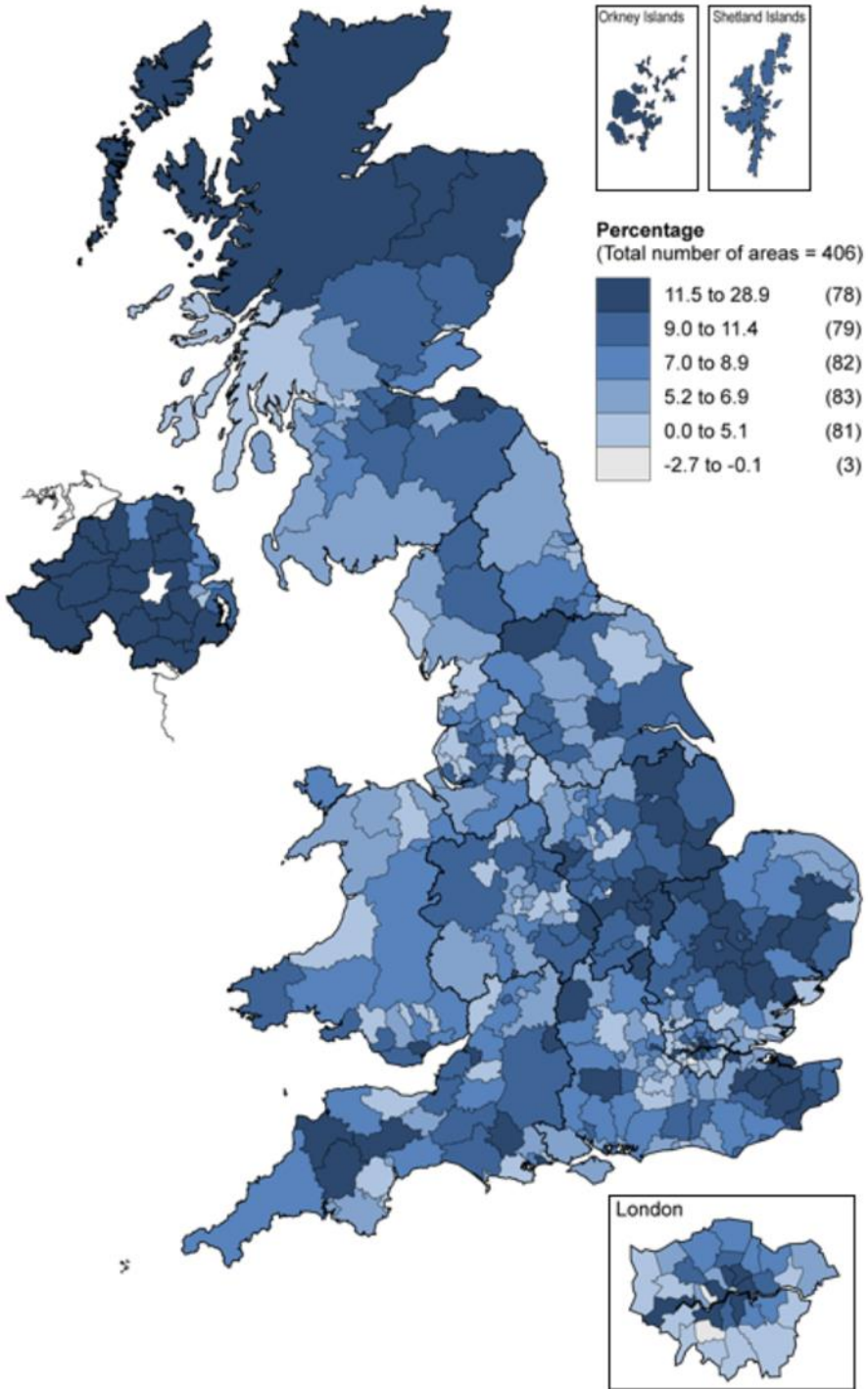




With help from Savills we managed to produce the first ever map of the government's current housing targets to get some kind of perspective on where we were building now and into the future. We asked whether public transport improvements anticipated these changes.

We found no evidence that they did.

Housing targets across England using MHCLG spreadsheet 2018 – mapped by TfNH/Savills



We looked at the change in households across the country and asked whether local public transport improvements anticipated these changes.

Again it seemed they did not.

Geographical differences in growth of number of households from ONS 2011 Census

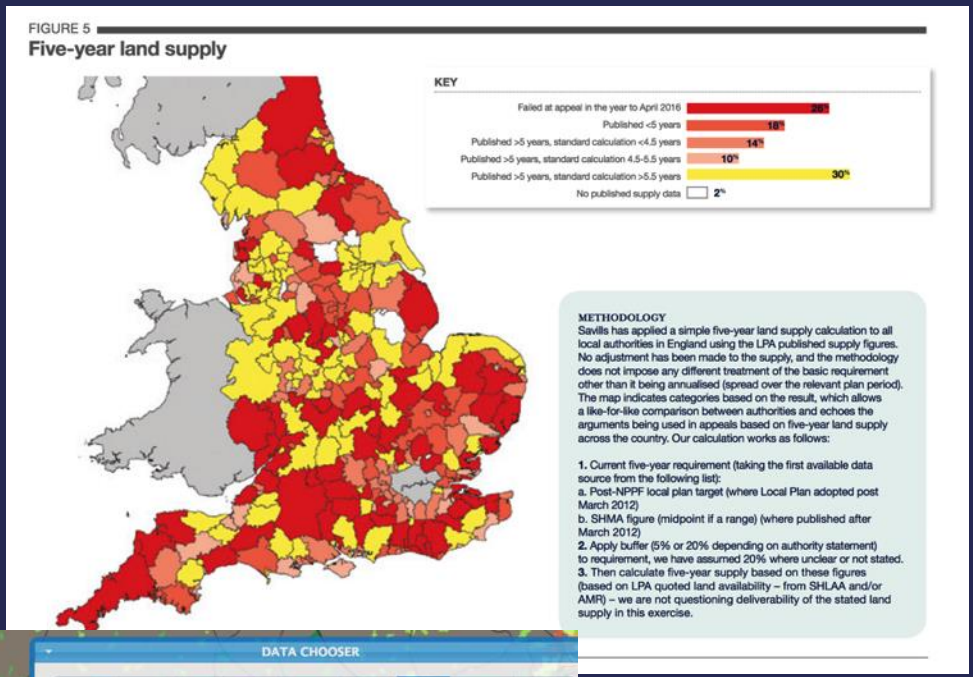
We found that new road capacity received substantial developer contributions in nearly every greenfield development.

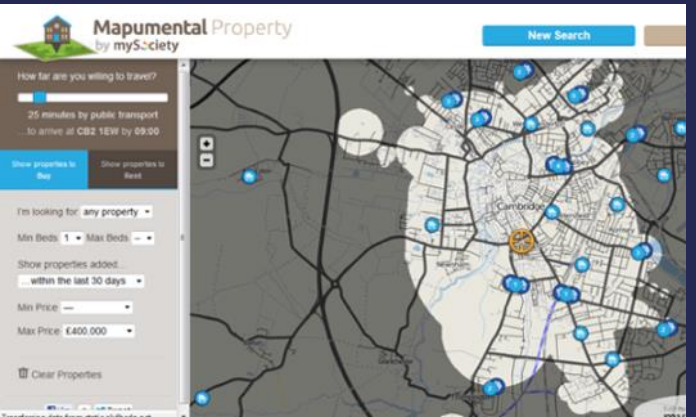
But congestion maps showed that how journeys just added to congested roads down the line – a network effect rather than a local problem.

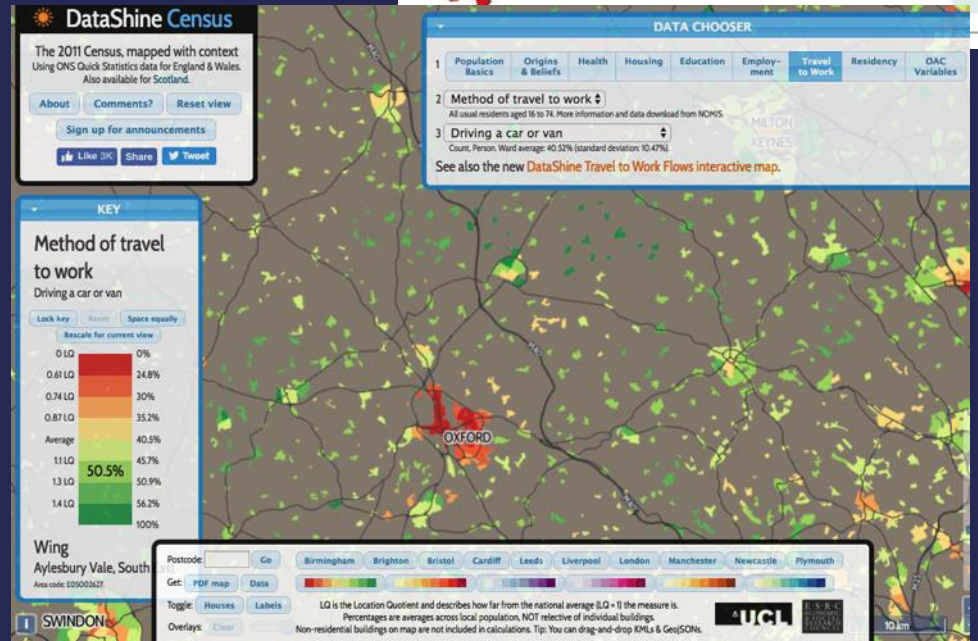
Local Authority	Nearest Town	Hectares	Affordable Housing	New Housing	Road Improvements
Wycombe	Princes Risborough	25	1,040	2,600	Through-development, bypass, and intermediate routes under consideration
Aylesbury Vale	Milton Keynes	107	651	2,170	Extension of grid road network
Aylesbury Vale	Milton Keynes	20	99	330	Extension of grid road network
Aylesbury Vale	Aylesbury	117	980	2,450	Eastern link road and Stocklake link road
Aylesbury Vale	Aylesbury	200	720	1,800	-
South Bucks	Beaconsfield	38	120	300	A355 relief road to its north
South Oxfordshire	Didcot	180	990	3,300	Increase capacity of A34, works at Milton Park interchange
South Oxfordshire	Oxford	100	900	3,000	Access route to central Oxford
South Oxfordshire	Benson	144	1,050	3,500	Improve crossing, junction, slip roads on M40
Vale of White Horse	Abingdon	54	244	610	Improvements to A4183
Vale of White Horse	Grove	45	750	2,500	Eastern and northern relief roads
West Oxfordshire	Witney	130	1,065	3,550	Junction and slip road on A40, west end link and northern distributor between A4095 and B4022
West Oxfordshire	Eynsham	228	660	2,200	New road linking A40 to A44 and improvements to A40
West Oxfordshire	Chipping Norton	166	420	1,400	Eastern link road
West Oxfordshire	Carterton	90	300	1,000	Improvements to B4477 and western slip roads on A40

OTHER DATA

- Datashine (online from UCL) enables you to look at commuter patterns by mode and gives an insight into destinations
- Google provides useful information on congestion
- Mapumental enables you to see what places you can get to from a given point using public transport
- City Scape







Finally… some RECOMMENDATIONS

Recommendations – Theme 3

Public transport opportunities missed

Summary:

- Servicing by public transport had not been a priority in planning most of the places we visited and this failure is deeply engrained in the planning system. We could see that the trend for the future was building hundreds of thousands of new homes in places where nearly everyone tends to jump into a car, with the health and public realm consequences ignored, despite fine words in the NPPF.
- Wrong location for new homes. In a number of cases the place chosen for the new homes was wrong for serving with public transport. It is worrying that there is a new fashion of 'garden villages' and other new estates on fields outside market towns which are precisely in the wrong location to be served by bus.
- For the bus, a new development close to a very large town was easier to serve. This was because these places already had a good bus network and services could be extended to go into the new development area. Unfortunately many estates were built in places with limited bus services to start with, and bus cuts already leaving a very limited network of services.
- Wrong layout. The layout in many areas of new homes was not right for serving by bus with roads too narrow for buses through the estate, problems with parked cars, or bus stops stranded on distributor roads or at the 'gateway' to the development. Buses get stuck in traffic going into town.
- Car-based sprawl reduces the attractiveness of using public transport and makes bus services less viable. The sprawling model of development on the edge of towns, orientated around fast roads and roundabouts, is not an easy layout to serve by bus. Yet this is exactly where new homes are being built.
- New railway stations and services are practically impossible to deliver in real life. We met planners, Local Enterprise Partnerships and MPs wanting local rail. There was great enthusiasm for this mode of transport but we saw only one success story: Cranbrook.
- Mass transit systems in conjunction with new homes. New homes orientated around modern rapid transit were hardly seen – there was only one instance that we saw – new homes around Cambridge. That said we found a number of long term spatial plans for areas expecting a very large population rise emphasising the urgency and importance of building modern mass transit in the future, including the Solent area and Greater Bristol.

Recommendations – Theme 2

Homes not properly connected for pedestrians, cyclists or buses

Summary

- **Bounded by the red line.** Planners work closely with large developers to satisfy housing targets and meet the five year housing land supply. With little public money or control over land, they need the private sector to build not just the homes but the whole development. In many cases the red line of the site boundary is clear to see 'on the ground' because there are no residential streets or path links that cross it. In other cases, pedestrian and cycle infrastructure within the site is good, but once you leave the site boundary the quality of the routes rapidly deteriorates. This can deter residents from walking or cycling to the town centre or other local destinations, again resulting in car-based living.
- **Bubbles of development isolated.** In the case of development on a group of fields in the

The way forward

- **Change the way we select sites to build.** Local planners should be able to select sites adjacent to the existing urban area or sites that are at least linked to it by a main road that is able to function as a central bus or tram route and walking and cycling route into town. This should also have homes and businesses overlooking the pavement so that people feel safe.
- **A number of smaller sites including brownfield sites may be better than a single large one.** Planners need the power to choose places that can be connected into the existing urban area rather than be slaves to the pressures of the five year housing land supply to earmark large 'deliverable' sites.

As a result of our work we have produced a number of recommendations for better combining sustainable transport with the delivery of new homes.

Fundamental changes are needed to deliver new homes and sustainable transport in combination. But how can we initiate something better? That is the question.