

MAYOR OF LONDON

Infrastructure Planning in Opportunity Areas

Utilities and enabling infrastructure

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3 November 2015



“A BETTER CITY”

MAYOR OF LONDON



THE DRIVER: POPULATION GROWTH

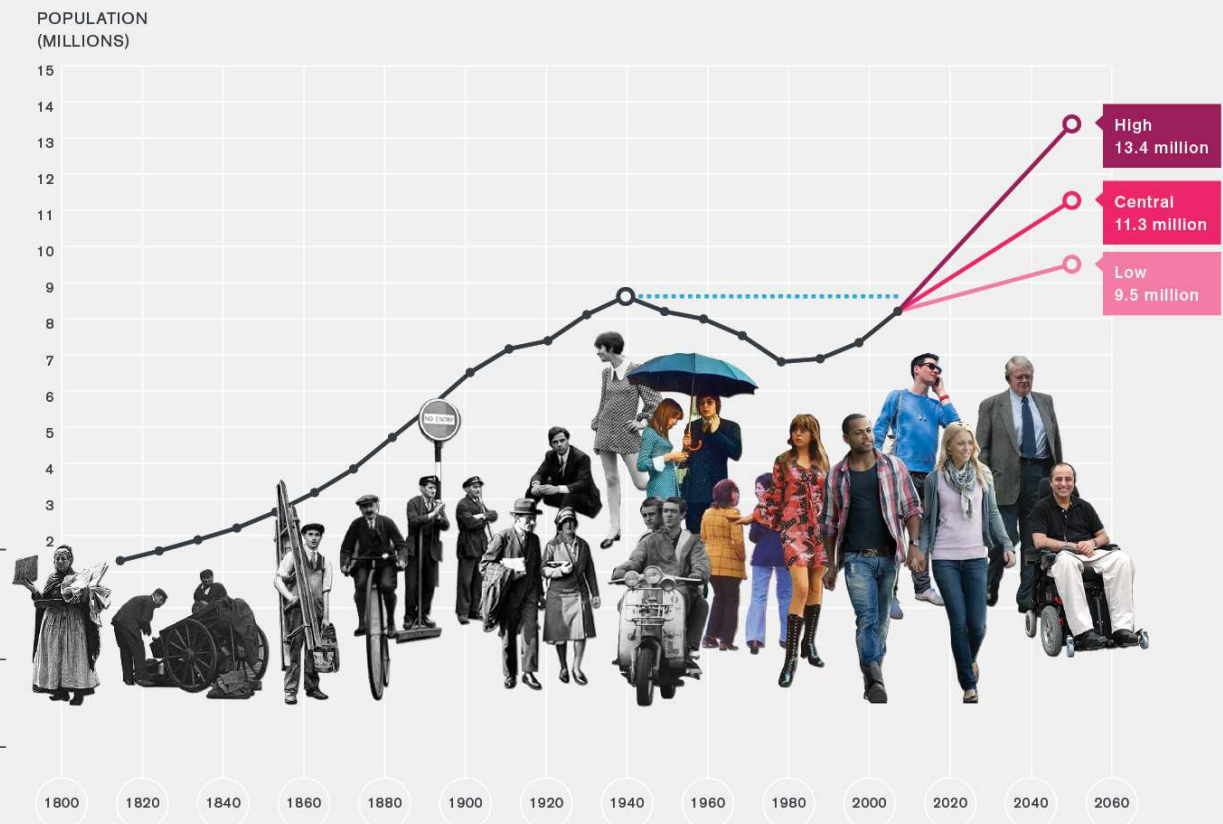
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We estimate that London's population became bigger than ever in February 2015. 8.6 million people, the same as the last peak in 1939.

Projections show growth to 11.3 million inhabitants by 2050

An overall increase of 37% from 2011 to 2050

Source: GLA Intelligence Unit



Approximately one million every 10 years

LONG TERM INFRASTRUCTURE REQUIREMENTS

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An additional
1.5 million
homes



A 20% increase in
energy supply capacity



Approximately
£1 billion of healthcare
investment over the next 5 years



A 50% increase
in public transport
capacity



High speed digital
connectivity



Around 600 more
schools and colleges



Around 40 new
facilities that will be
used for recycling,
remanufacturing,
reusing and waste
management.



An extra 9000ha
of accessible green space
including 10% more green
cover in central London
and town centres



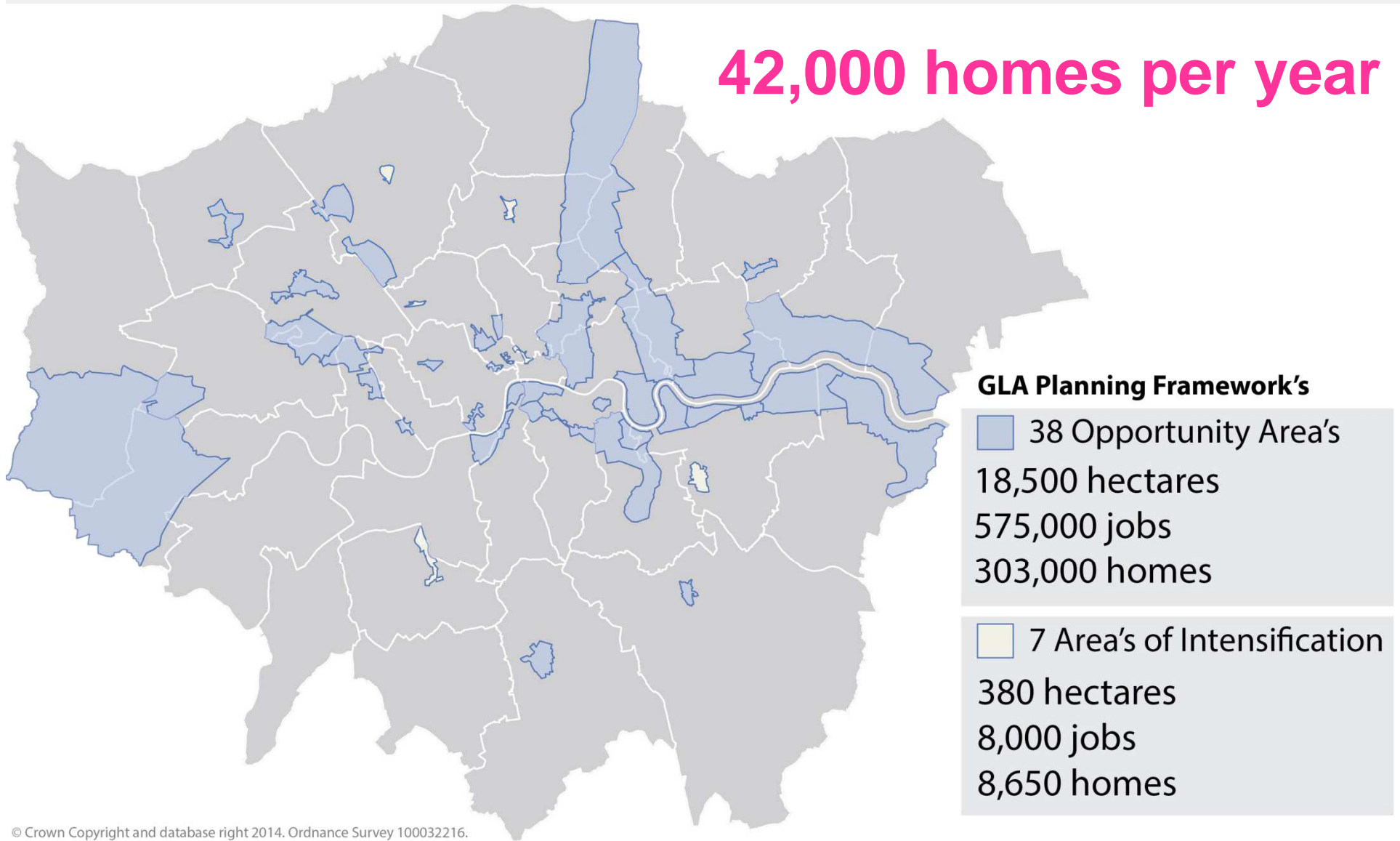
Thames Tideway Tunnel
and other water infrastructure



WHERE WILL THE POPULATION GO?...THE NEXT 1 MILLION PEOPLE

Accommodating Growth: Opportunity Areas & Areas of Intensification

42,000 homes per year



London Infrastructure Delivery Board

The Mayor has established the London Infrastructure Delivery Board to collectively take the lead in improving delivery of London's infrastructure. The aim is to achieve more efficient, integrated and innovative infrastructure solutions. Members including infrastructure providers, regulators, business representatives (developers, contractors), Borough representatives, Infrastructure UK and others.

Key focus areas:

1. More joined up infrastructure planning and delivery in London's high growth areas
2. Development of the London Infrastructure Map. Beta version is now available at http://www.london.gov.uk/webmaps/2050_Public/
3. Regulatory changes
4. Supporting innovation (starting with the Smart London Innovation Network)
5. Skills

Housing, transport and social infrastructure are headline grabbing, but there are a number of environmental considerations to be considered in the early planning stages of a growth area:

- water supply
- flood protection
- green infrastructure
- energy requirements
- circular economy



OVERVIEW: CO2 REDUCTION

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8.6m

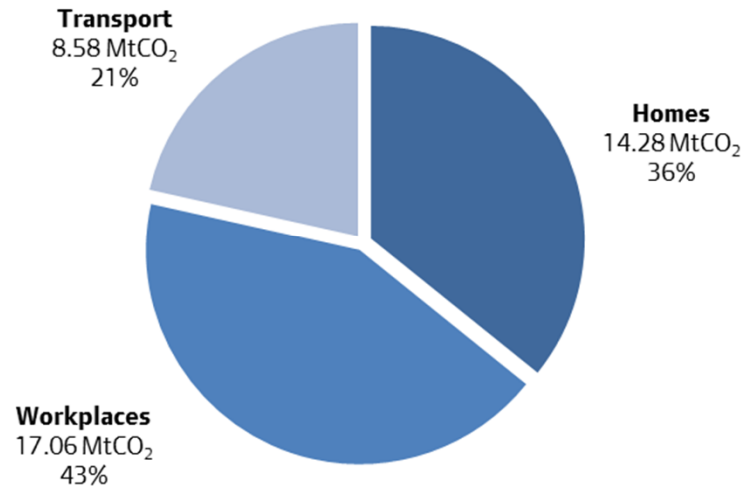
population in London

47%

energy demand
for space & water
heating

4.89

tonnes CO₂ per
capita



25%

of London's energy
supply from
decentralised
energy sources by
2025

60%

reduction in CO₂
emissions by 2025

80%

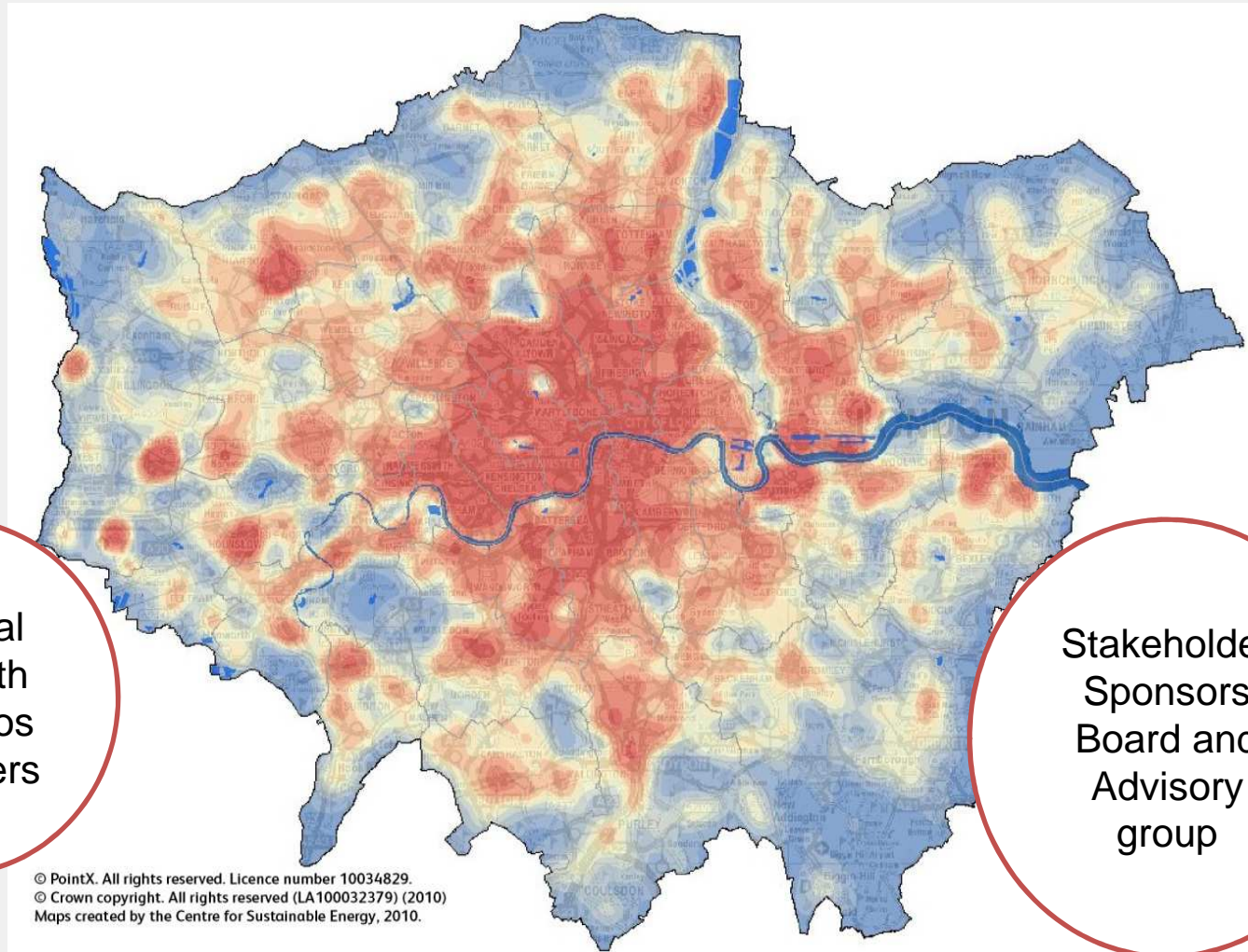
reduction in CO₂
emissions by 2050

THE ENERGY CHALLENGE

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- **Adapt current energy systems into more sustainable ones, less dependent on imported fuels**
- **Diversify mix of energy sources**
- **Enhance energy efficiency, by rationalising use, demand side management and storage of energy**
- **Addressing security of supply and climate change, whilst maintaining competitiveness**





A spatial map with scenarios and layers

Stakeholder Sponsors Board and Advisory group

- World Bank Group – doing business 2015
 - getting electricity: UK ranks 70 of 189 countries
- **London's electricity infrastructure**
 - 1 in 5 of London's substations are almost at firm capacity
 - lead times increasing
- **UK Power Networks investment plans**
 - Ofgem confirms current regulations do not support 'ahead of need' investment
 - UKPN's planned additions of £170m reduced to £100

- **Securing earlier investment strategically, while:**
 - managing risks of predicting demand
 - protecting consumers from financial risk & stranded assets
- **Identifying investment arrangements that respond to risks:**
 - where risks of predicting future demand are low, new regulations permitting the network operator to invest more can be established
 - where risks and land values are higher a separate 'DevCo' (development vehicle) could operate
 - Ofgem consulting on scenarios for change
- **All models for change involve direct local/regional involvement**

Ten Point Action Plan, Includes:

1. Integrated Water Management Strategies
 - VNEB Completed
 - Building support for Upper Lea Valley, Isle of Dogs and Thamesmead / Bexley Riverside
2. Working with water companies to identify and resolve 'pinch-points' based on mains and drains capacity
3. Influence Ofwat and Treasury to allow 'Investment Ahead of Need'
4. Launched the draft London Sustainable Drainage Action Plan for public consultation on 29 October. In parallel Thames Water announced £20m funding (mostly for London) to deliver sustainable drainage projects



An analysis of SUDS opportunity modelling

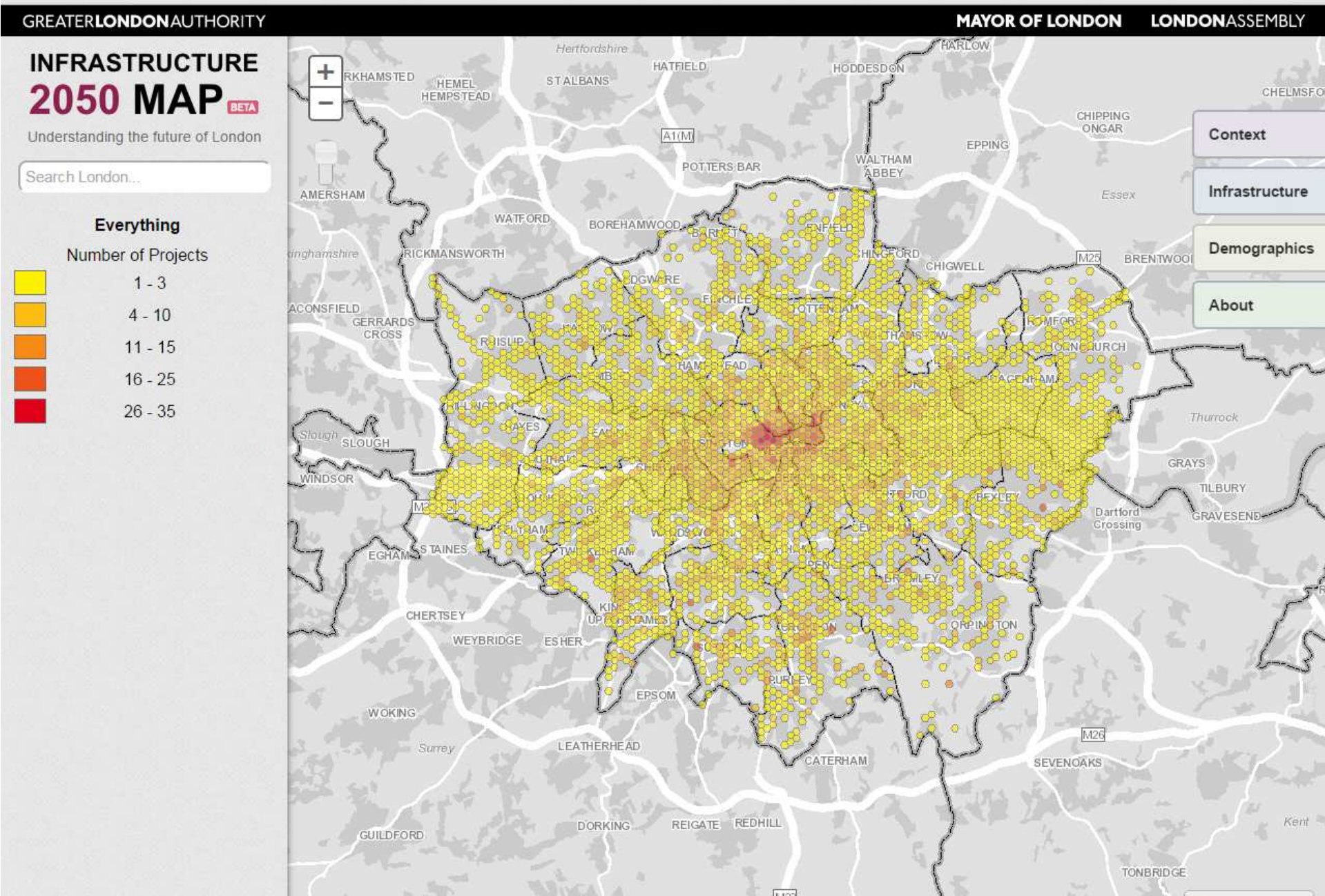
FOCUS AREAS: UNLOCKING CAPACITY AT OPDC

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COORDINATING WORKS AND FUTURE PLANS

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INFRASTRUCTURE 2050 MAP BETA

Understanding the future of London

Search London...

Energy

Energy (points)



Energy (lines)



Transport

Transport (points)



Transport (lines)



Transport (areas)



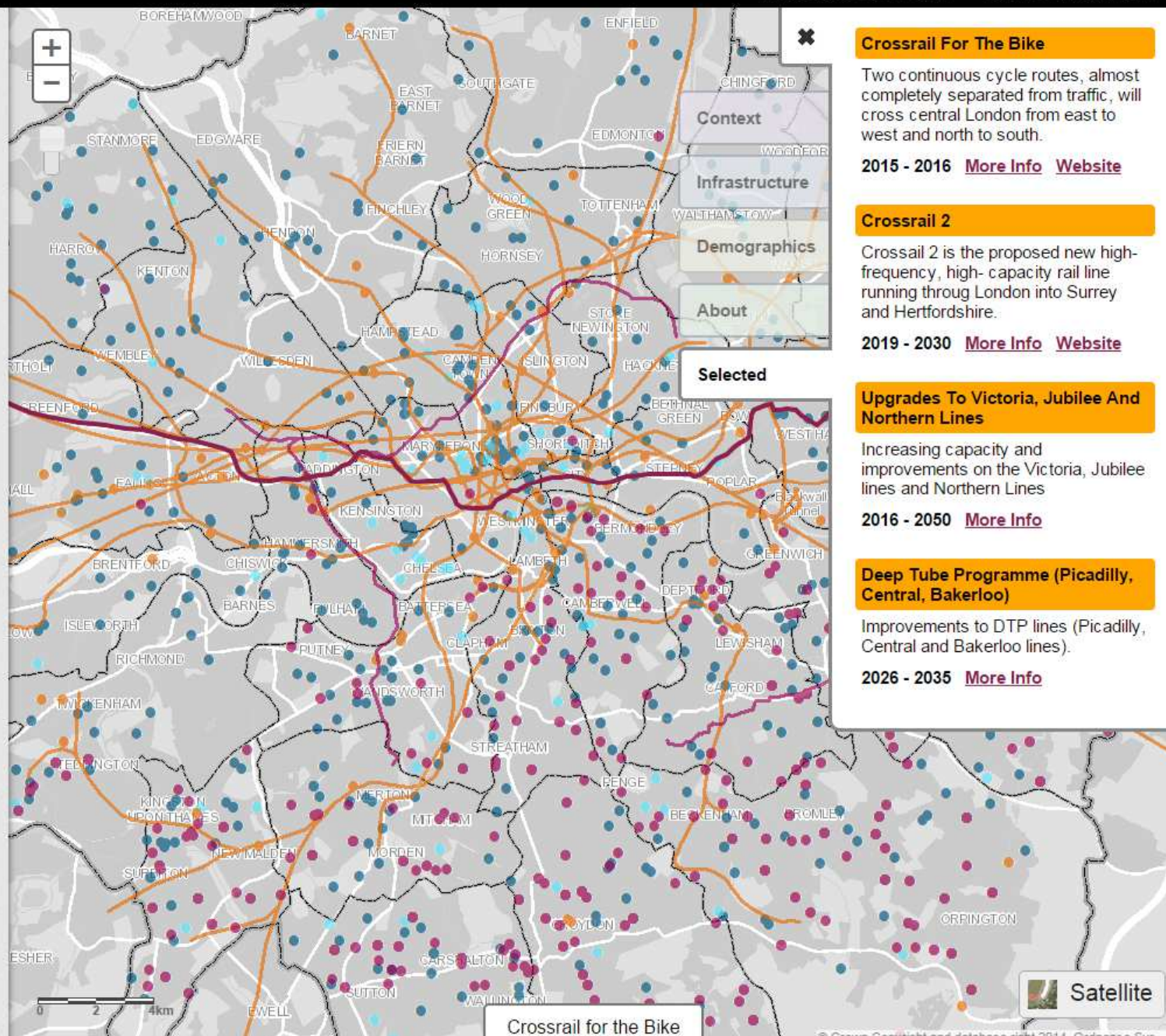
Medical & Health

Medical and Healthcare (points)



Education

Education (points)



INFRASTRUCTURE 2050 MAP BETA

Understanding the future of London

Search London...

Energy

Energy (points)

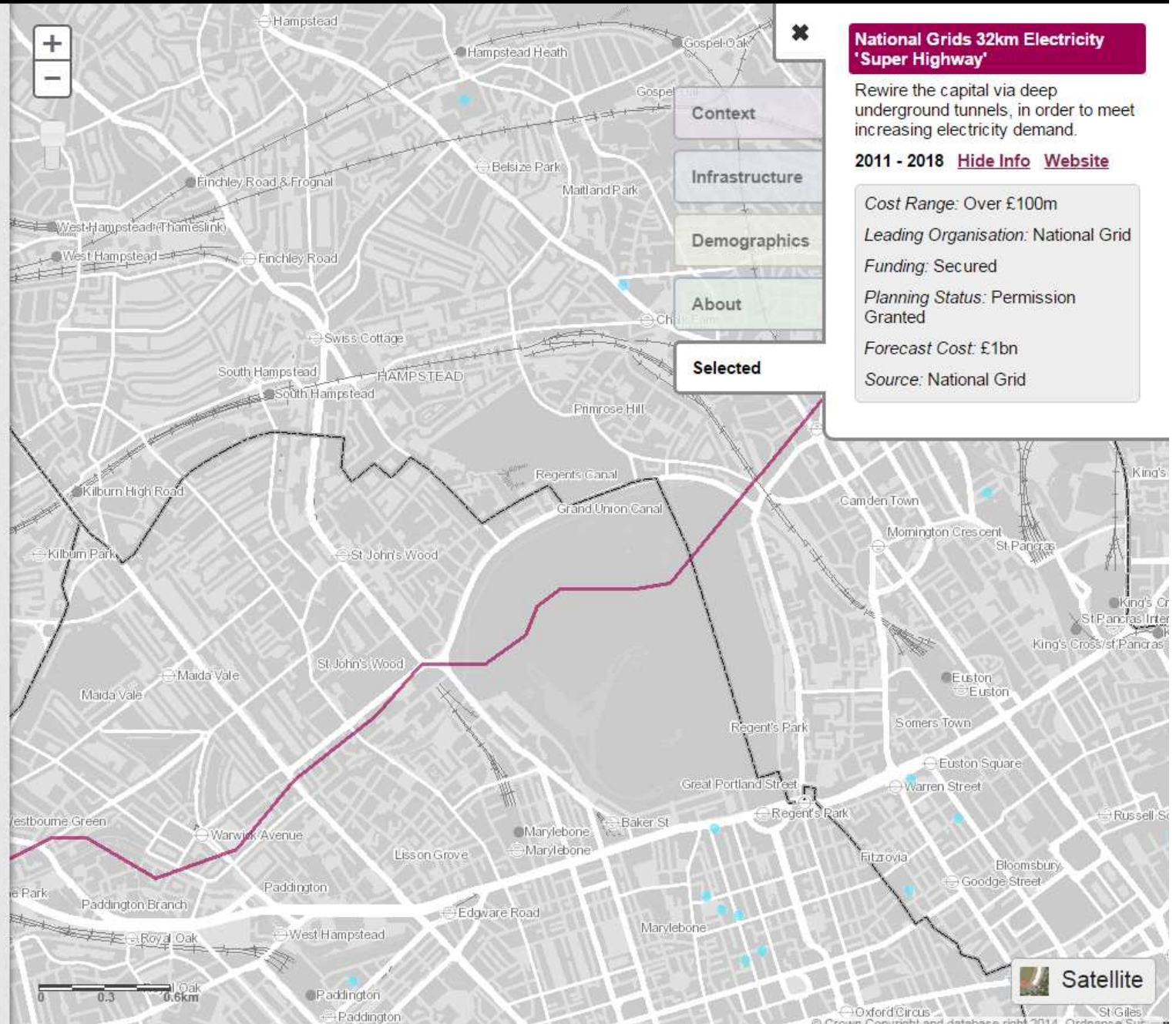


Energy (lines)



Medical & Health

Medical and Healthcare (points)



Context

Infrastructure

Demographics

About

Selected

National Grids 32km Electricity 'Super Highway'

Rewire the capital via deep underground tunnels, in order to meet increasing electricity demand.

2011 - 2018 [Hide Info](#) [Website](#)

Cost Range: Over £100m

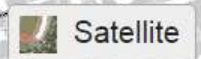
Leading Organisation: National Grid

Funding: Secured

Planning Status: Permission Granted

Forecast Cost: £1bn

Source: National Grid



Infrastructure delivery is at the heart of realising growth at strategic locations.

As London's population grows we need to think innovatively about how we accommodate growth throughout the city, leveraging new infrastructure, existing assets, and new ways of operating within a city.

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