

# “Rail Transport is to Canary Wharf as Water is to California”

Peter Anderson

CFO Canary Wharf Group



Vision, 1987







Reality, 2008





# London's Crossrail: A Case Study in Transit Investment

Jim Berry



# What is Crossrail?

- A new railway for London and the south east
- 118 km from east to west
- 24 trains per hour in each direction
- More than 200 million passenger journey per annum
- Spacious and bright stations
- And **much** more...







# The Importance of Rail Access to Canary Wharf West India Docks, 1987







# Canary Wharf, 2013







## Transit Orientated Development, 1980







DLR Opens, 1987







Phase One, 1991







Jubilee Line Opens, 1999







2004



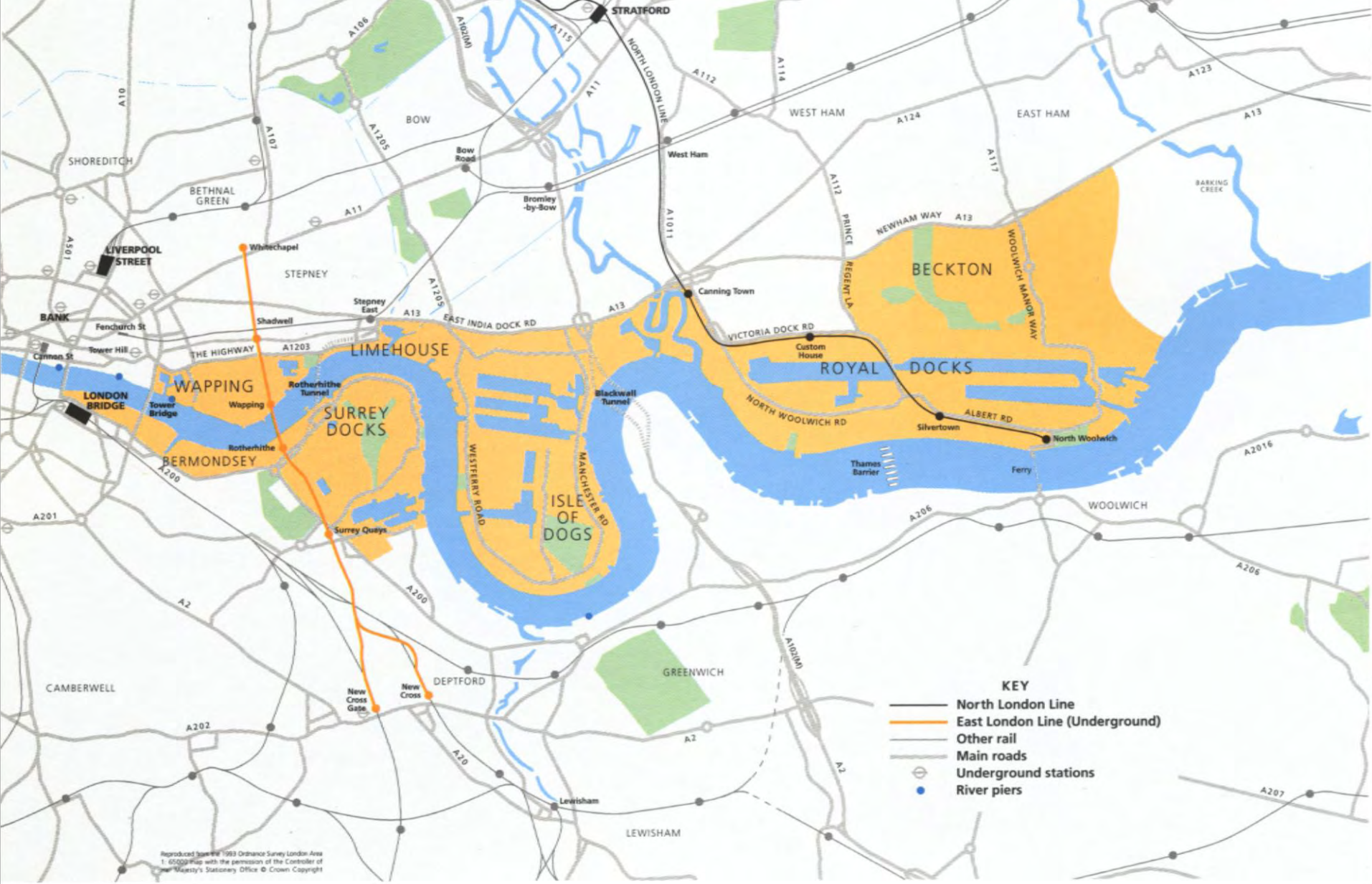




Post Crossrail, 2018



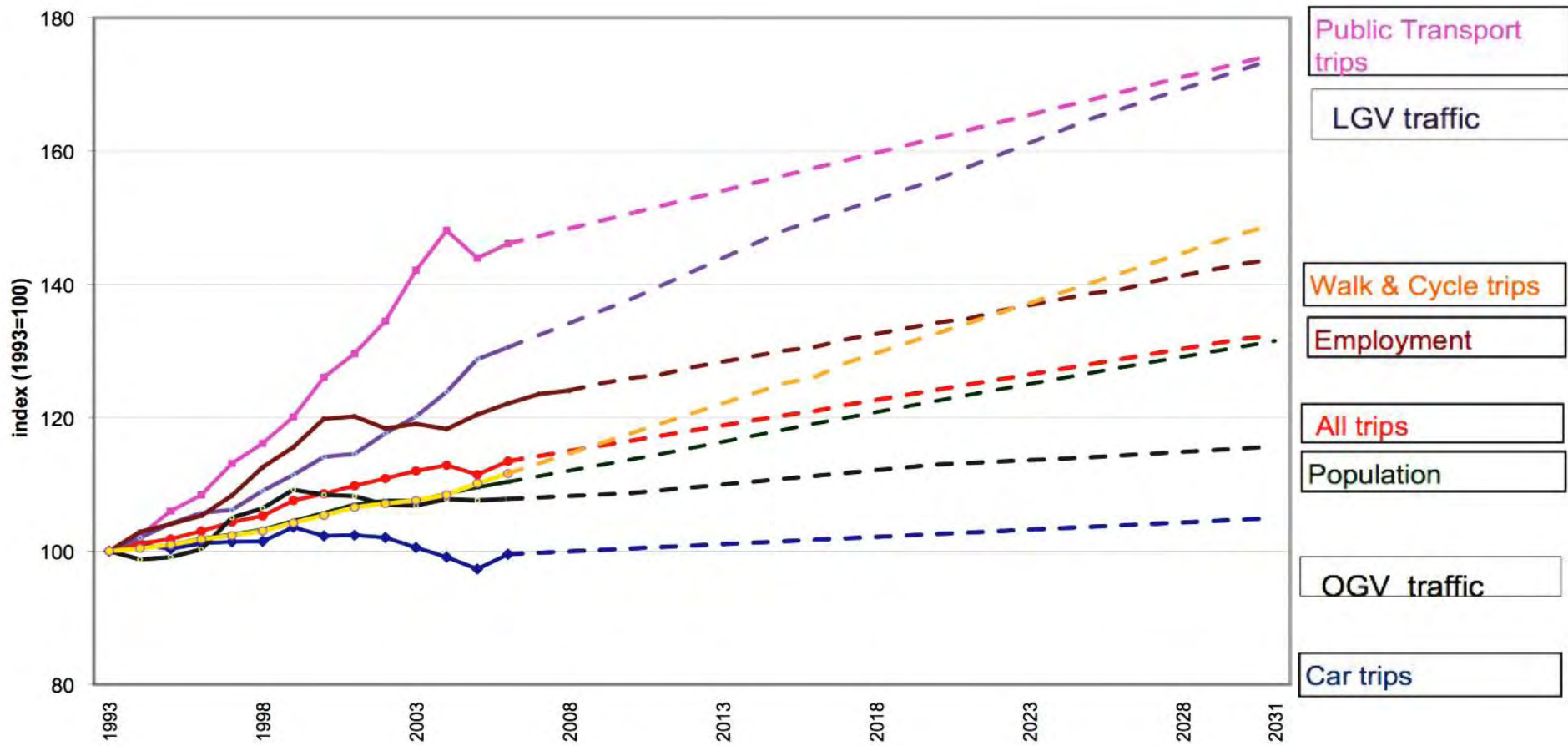




# The Need For Crossrail



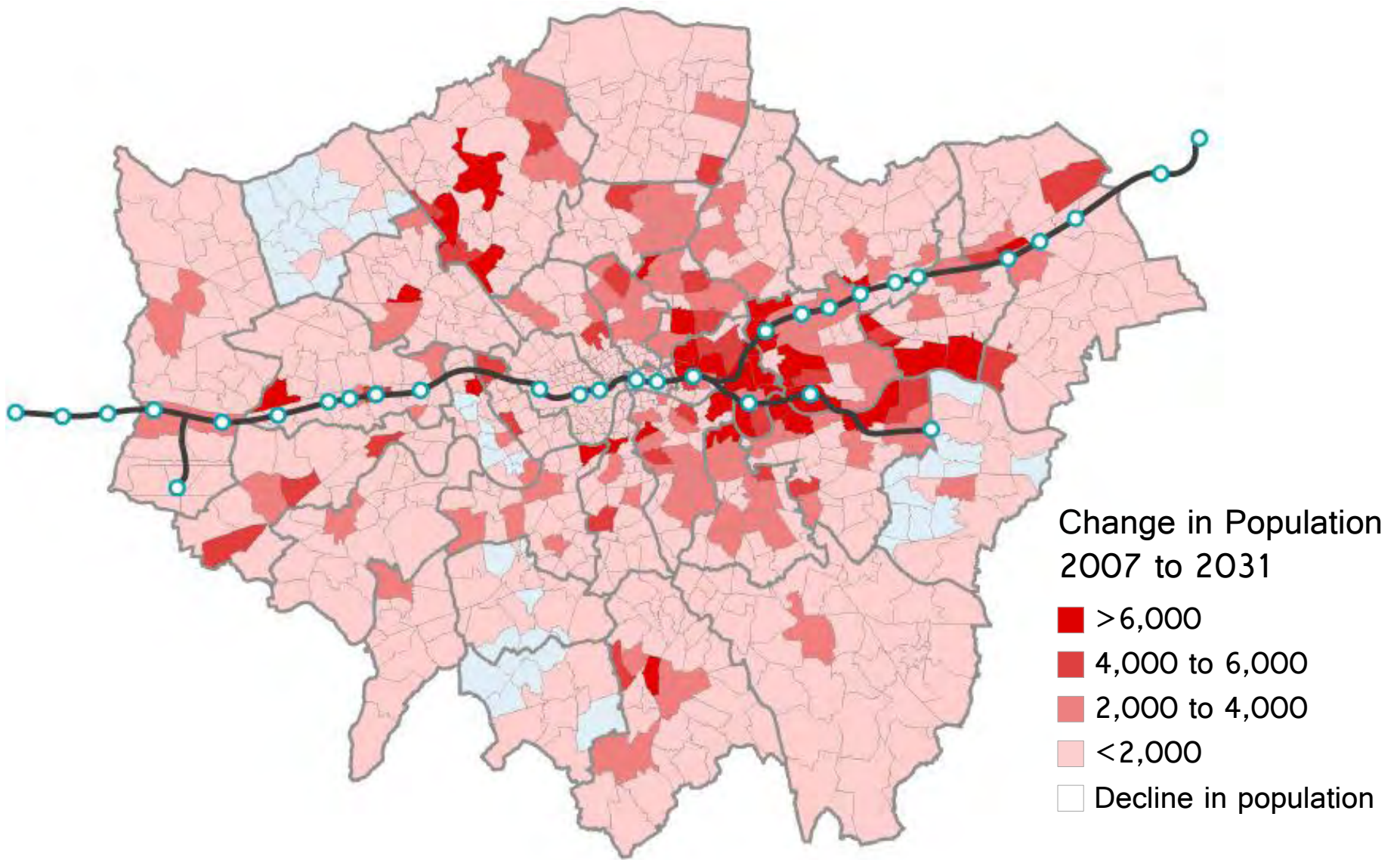




# Population and Employment Growth



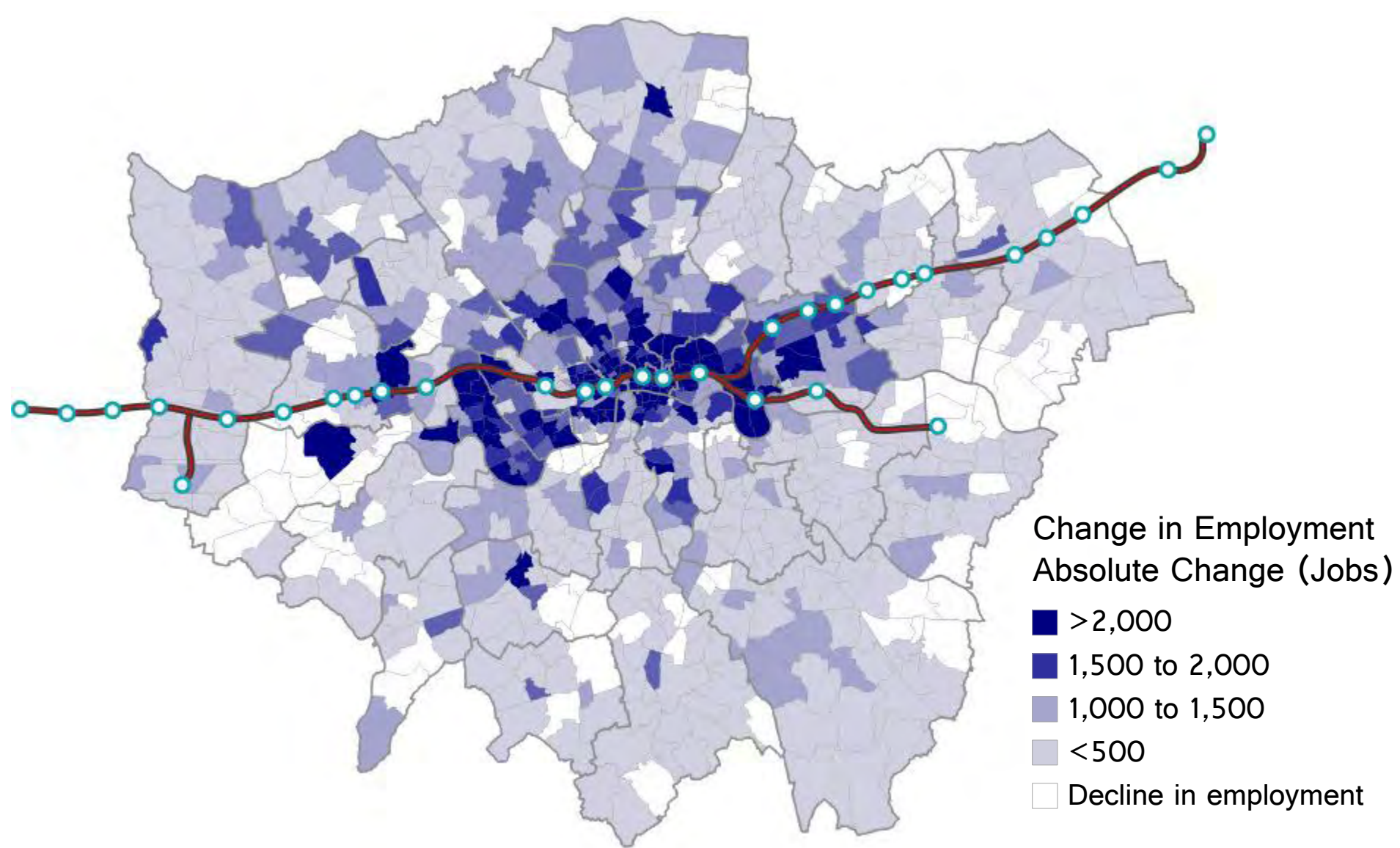




# Change in Population Growth 2007 - 2031







## Change in Employment Growth



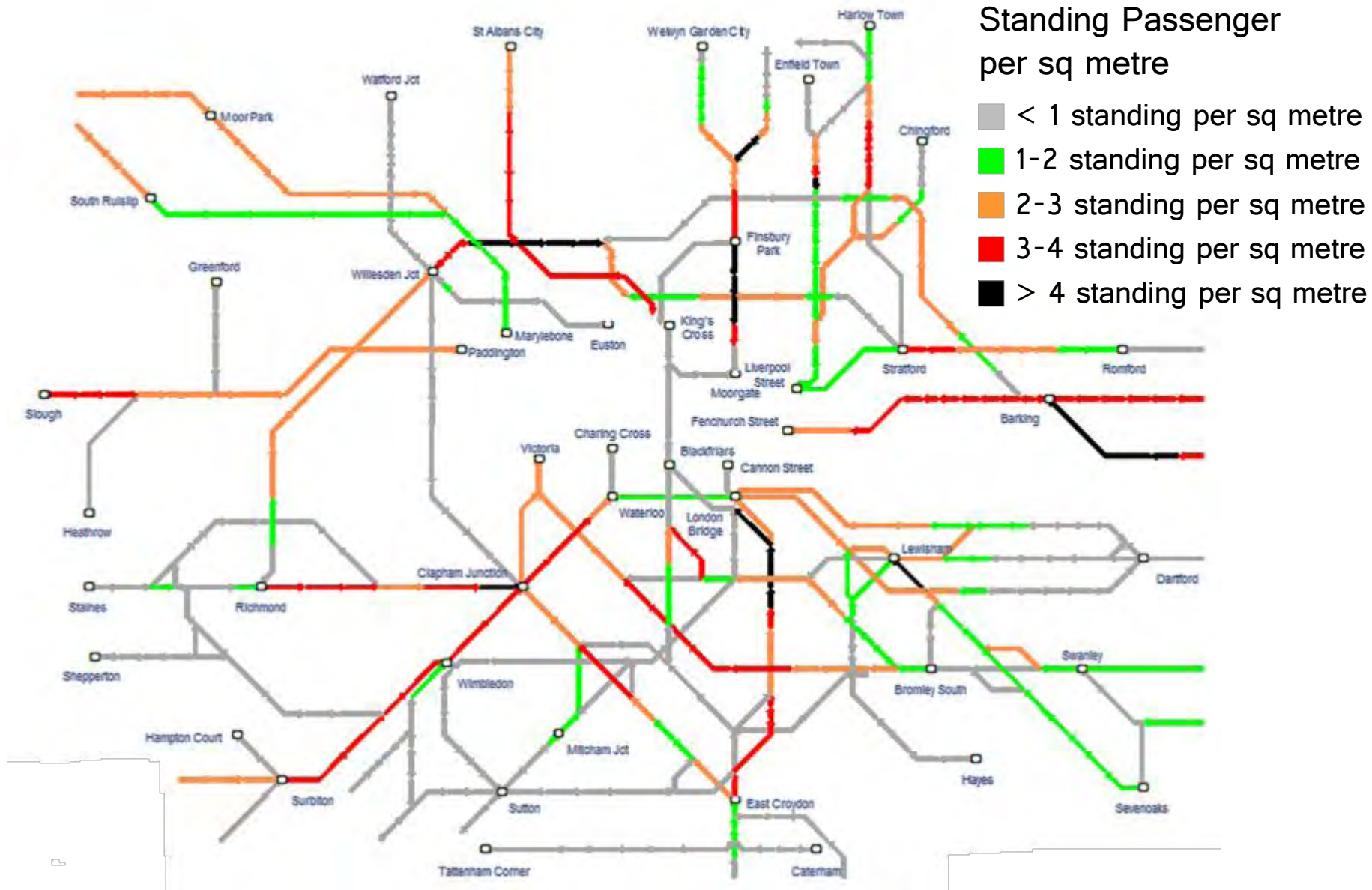




# Tube and DLR Crowding, 2006







# Rail Crowding, 2006





# Crossrail History



- 1880 Regents Canal Railway Company
- 1943 Abercrombie Plan
- 1974 London Rail Study
- 1989 Central London Rail Study
- Competition with Jubilee Line Extension
- 1991 Private Bill Submission
- 1994 Bill Rejected
- Transport and Works Act (TWA)





# Crossrail History



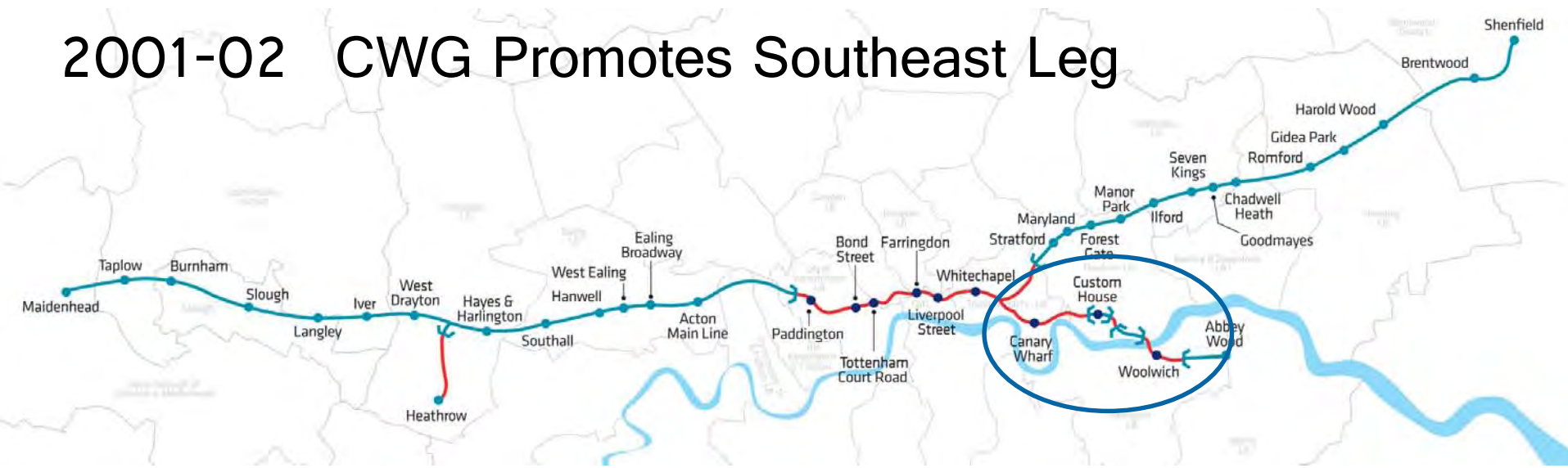
1996 TWA Submission Rejected

Route Protection

2000 Creation of CLRL to integrate line with SRA initiatives

2001 CWG looks to Crossrail to boost transport supply

2001-02 CWG Promotes Southeast Leg





# Crossrail History



2003-04 Department Of Transport Support,  
Monentegu Review

2004 Treasury; No Financial Support for the Project

2005-08 Hybrid Bill to Parliament, House of Commons,  
House of Lords





# RAIL VICTORY FOR LONDON

## ■ Brown announces Crossrail go-ahead

**LONDON'S long-awaited Crossrail scheme will go ahead, the Prime Minister announced today.**

It follows a 20-year campaign by the Evening Standard on behalf of business and commuters. The east-west route will

**JASON BEATTIE**  
Chief Political Correspondent

ease journey times for thousands of travellers and cement the capital's position as the world's leading business city.

Work should start on the £16 billion project next year and once completed in

2017, trains will run from Maidenhead, via Heathrow, the West End and the City to Canary Wharf and beyond.

Gordon Brown said Crossrail was of "enormous importance", not just to London, but to the whole country.

"By generating an additional 30,000 jobs and helping London retain its position as

the world's pre-eminent financial centre, it will support Britain's economic growth and maintain Britain's position as a leading world economy," he said.

The decision prompted jubilation among business leaders and politicians

**CONTINUED ON: PAGE 6▶**

Funding Agreed, October 2007







LONDON'S QUALITY NEWSPAPER

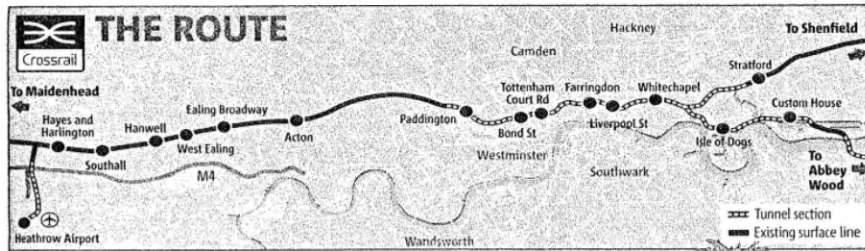
# Evening Standard

Wednesday 23 July 2008

www.standard.co.uk

Incorporating The Evening News 50P

# ALL SYSTEMS GO FOR WORLD CLASS RAILWAY



## Queen gives approval to London's £16bn Crossrail route — work starts next year

**THE £16 billion rail link which will transform transport in London passed a historic milestone today.** The Queen gave her formal royal assent to the Crossrail Bill — putting the whole project on track to be operational by 2017. Work will begin next year on two tunnels which will run from Paddington to Canary Wharf, giving millions of passengers faster

**NICHOLAS CECIL**  
Chief Political Correspondent  
comes after a long-running Evening Standard campaign. The line will run from Maidenhead and Heathrow in the west through tunnels under central London — with new stations at Paddington, Bond Street, Tottenham Court Road, Farringdon, Liverpool Street, Whitechapel and Isle of Dogs — then out to Shenfield and Abbey Wood in the east.

and it will run 24 trains an hour in each direction through central London during peak times. The service will provide an alternative to packed Tube lines and will boost the development of Canary Wharf and the Thames Gateway. Douglas Osakervee, chairman of the company behind the scheme, promised a new "world class affordable railway" for London. Transport Secretary Ruth Kelly, who



### INSIDE

How minister supported Sats marking system  
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Tussauds show Amy Winehouse the waxwork  
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Too big to be knifed: words of stab victim  
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Doctors face annual tests for competence  
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Street protests over capture of Karadzic  
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### BUSINESS

Vodafone hits out at City over shares fall  
PAGE 28

### SPORT

Chelsea on the attack over Fergie taunts  
BACK PAGE

### LONDON WEATHER

# Royal Assent, July 2008





# BLACK MONDAY

■ 5,000 City staff axed as US banks crash

■ Lehman goes bust, Merrill is taken over

■ Wall Street crisis sends shares plunging



End of the line: Lehman Brothers staff arrive at Canary Wharf today to discover they will lose their jobs at the end of the week. "We've been told it's all over – we are bankrupt," said one

**FOUR thousand City workers and 1,000 more in High Wycombe lost their jobs today after the collapse of US investment bank Lehman Brothers.**

At a private meeting at the bank's City...

**JONATHAN PRYNN**  
Consumer Affairs Editor

told they would all be made redundant. Lehman, the fourth biggest investment bank on Wall Street, filed for bankruptcy just before 6am London time.

As they gathered outside the Canary Wharf offices, staff were seen consol-

been told it's all over. We're finishing our existing business and that is it. It will be about a week. We are bankrupt."

The banker said it would not just be investment banking employees but other departments would also face the axe.

Within minutes of the Lehman bankruptcy, an even more illustrious Wall Street institution, Merrill Lynch, agreed

for \$50 billion to save it from becoming the next to fail. Both banks have lost billions on investments in the US mortgage market. Shares in London plunged.

American commentators are calling it the worst financial crisis on Wall Street since the 1929 crash which helped usher in the Great Depression. Another huge

Ex-minister raises pressure on Brown

PAGES 28-9

Video backs Saunders family over shooting

PAGE 7

Free swimming threatened by £9m shortfall

PAGE 11

Our critic is banned from Damien Hirst

PAGES 18&19

Obama banks £36m in month to fight McCain

PAGE 27

## BUSINESS

Nightmare on Wall Street

PAGES 28-30

## SPORT

Let coach Clarke join Hammers says Lampard

BACK PAGE

LONDON WEATHER  
TONIGHT: 9C (48F)

Clear, calm, 5-10m dr...

Black Monday, September 2008







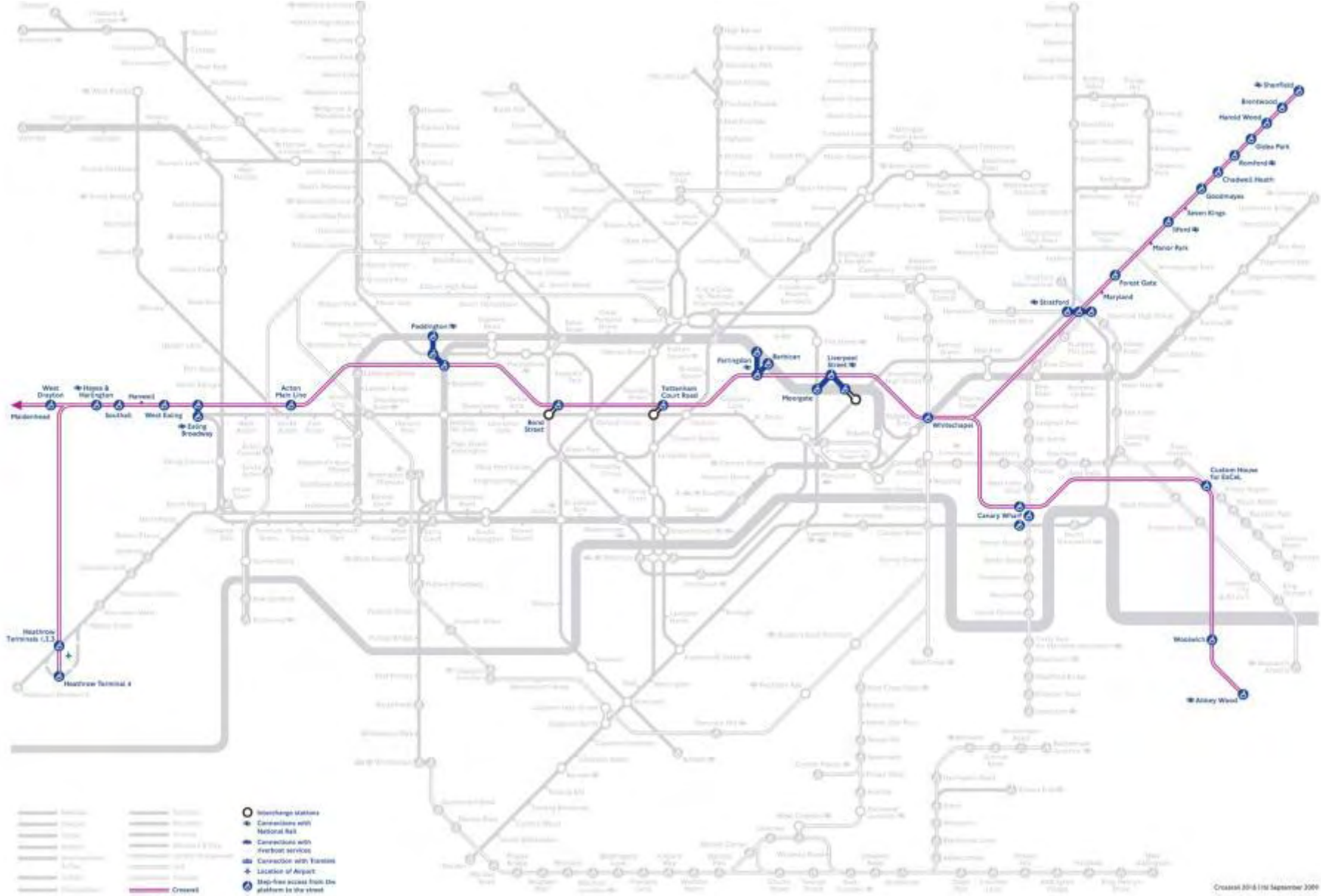
## Prime Minister and London Mayor Launch Crossrail Construction, 2009









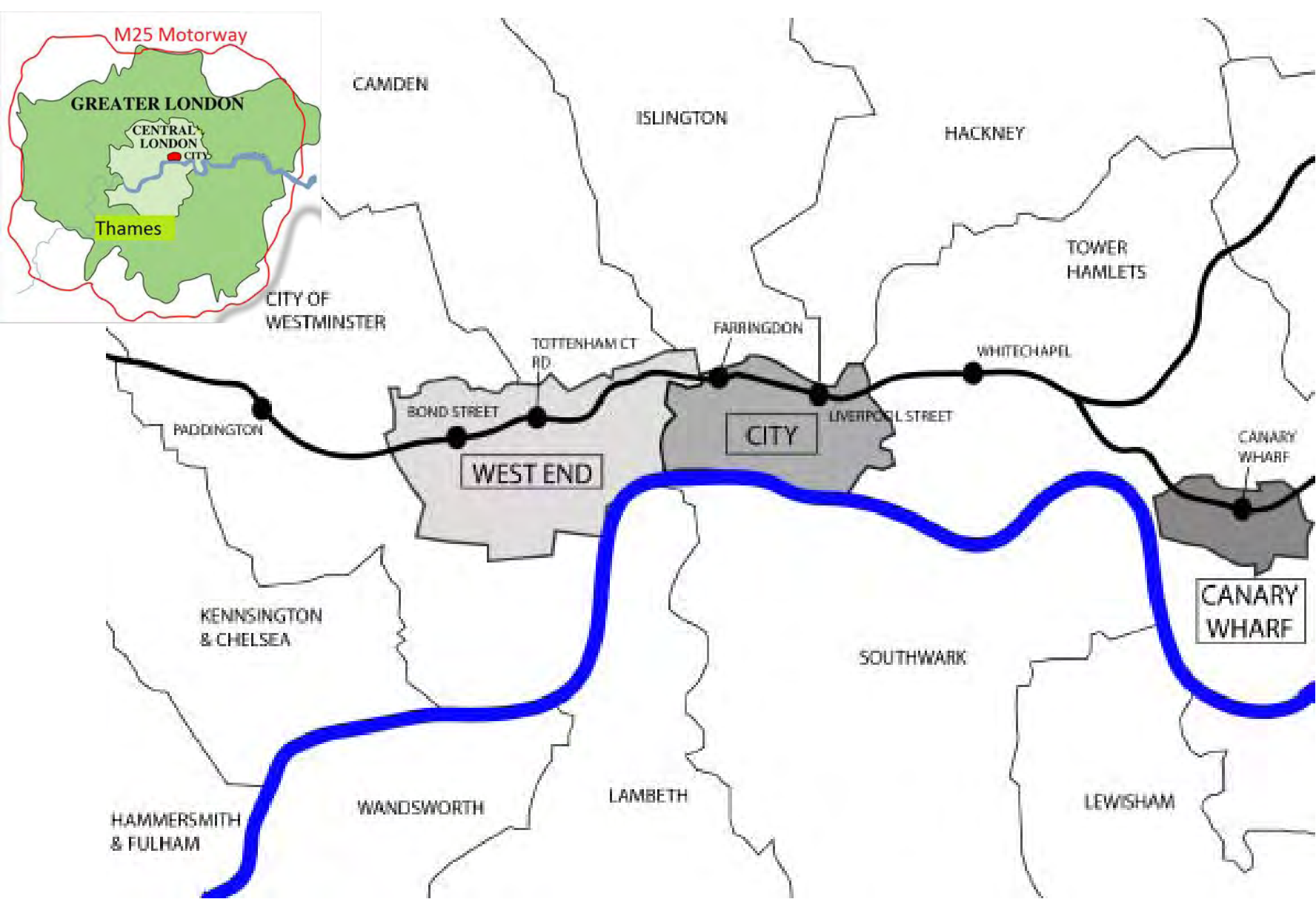


Crossrail 2018 (1st September 2009)

# Crossrail Connections, 2018/2019







# Crossrail Benefits





# Transportation Benefits

- Accessibility, service quality, safety, security, health and the environment
- New trains – passengers' comfort
- Mobility improvements
- Enhanced accessibility features
- Step-free access for the National Rail Network
- Reduce pressures on road traffic, with an overall 2% reduction
- Reduce need for car trips to central London
- Modal shift – reduce carbon emissions by 1,300+ tonnes per annum
- 2% reduction in road accidents

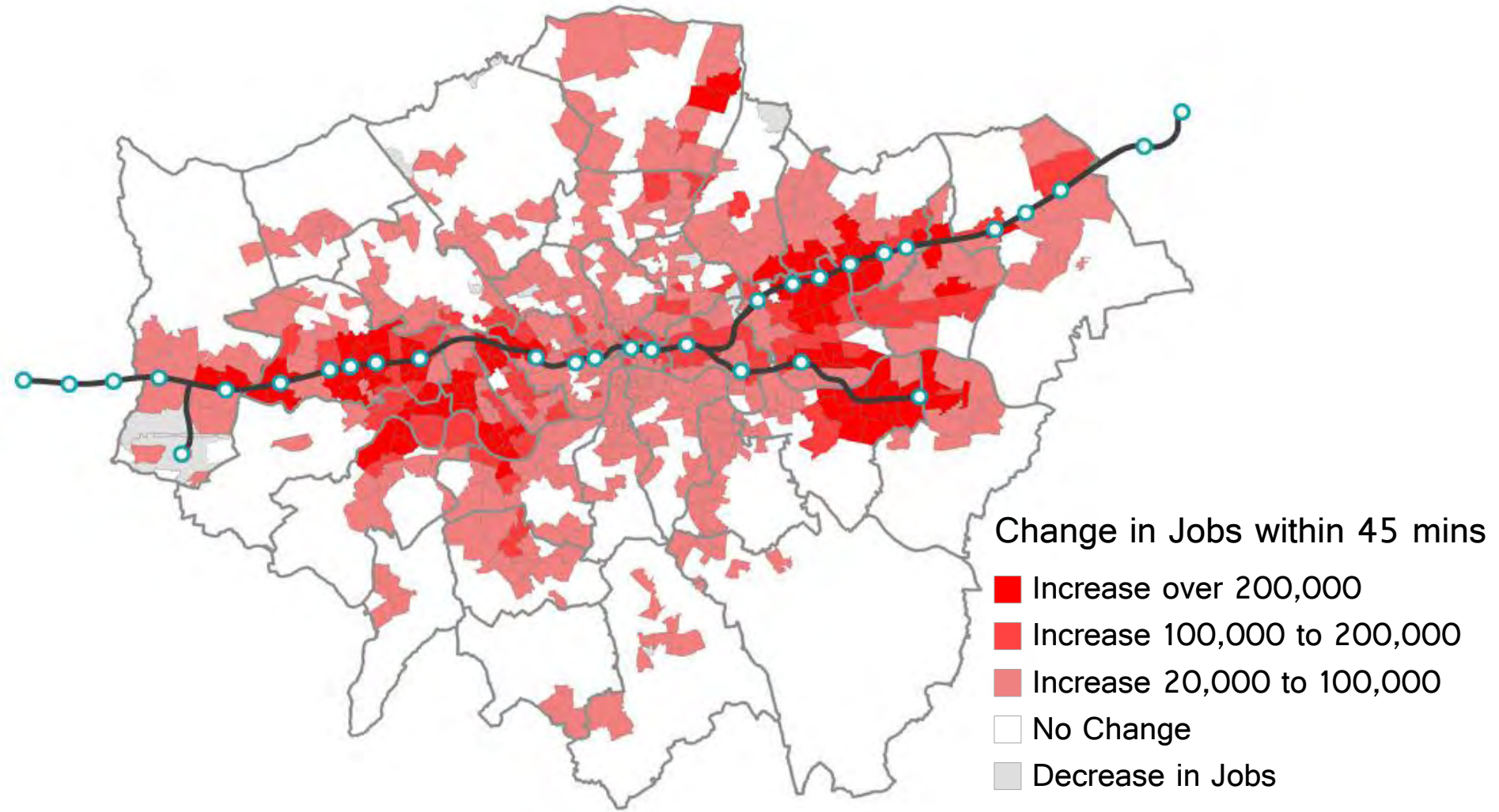


# Economic Benefits

- Reduced journey times
- Over **35%** of the future employment growth will be located in areas served by Crossrail services
- Regeneration; East London
- **100,000+** jobs created across the Thames Gateway
- Crossrail will bring **1.5M** more people within a **45min** commute
- Increased productivity caused by clustering economic activity
- **14,000** people will be working on constructing the Crossrail at peak







Change in Jobs within 45 mins



Example Journey	2010 existing journey time	Crossrail journey time
Slough to Tottenham Court Road	55mins	32mins
Ilford to Bond Street	35mins	25mins
Heathrow to Liverpool Street	55mins	32mins
City/Liverpool Street to Abbey Wood	40mins	18mins
Paddington to Canary Wharf	30mins	16mins

## Change in Journey Times





# Wider Economic Benefits

- The impact of Crossrail on the wider economy is substantial
- DFT guidance identifies four specific components of these 'wider impacts' or 'wider economic benefits' (WEBs):
  - Move to More Productive Jobs
  - Pure Agglomeration
  - Increase in Labour Force Participation
  - Impacts on Imperfect Competition



Component (£bn; PV 1Q 2002 prices)	TfL (London Weighting VoT)	DfT (UK wide VoT)
<b>User Benefits:</b>		
– Time Savings	9.1	6.6
– Congestion Relief	7.3	5.3
– Other	0.5	0.5
– Indirect Tax Revenue	-1.4	-1.4
<b>Total User Benefits</b>	<b>15.5</b>	<b>11.0</b>
<b>Costs:</b>		
– CAPEX	-9.4	-9.4
– Operations/Maintenance	-3.9	-3.9
– Revenues	7.4	7.4
– Other	0.2	0.2
<b>Total User Costs</b>	<b>-5.6</b>	<b>-5.6</b>
<b>Net Present Value</b>	<b>9.9</b>	<b>5.4</b>
<b>“Conventional” BCR</b>	<b>2.76</b>	<b>1.97</b>

## Crossrail Benefits and Costs Summary (2002 Prices)





Component (£bn; PV 1Q 2002 prices)	TfL (London Weighting VoT)	DfT (UK wide VoT)
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– Other	0.5	0.5
– Indirect Tax Revenue	-1.4	-1.4
<b>Total User Benefits</b>	<b>15.5</b>	<b>11.0</b>
<b>Costs:</b>		
– CAPEX	-8.0	-8.0
– Operations/Maintenance	-3.6	-3.6
– Revenues	7.4	7.4
– Other	0.2	0.2
<b>Total User Costs</b>	<b>-4.2</b>	<b>-4.2</b>
<b>Net Present Value</b>	<b>11.2</b>	<b>6.7</b>
<b>“Conventional” BCR</b>	<b>3.64</b>	<b>2.59</b>

## Crossrail Benefits and Costs Summary Excluding ‘Sunk’ Costs (2002 Prices)



Component (£bn; PV 1Q 2002 prices)	TfL (London values)	DfT (UK wide values)
<b>Wider Economic Benefits</b>		
– GDP (includes Welfare below)	42	6 to 15
– Welfare (including Increased Tax)	7 to 18	6 to 9
<b>BCR (including Welfare WEBs)</b>		
Central Estimate	3.97	3.09
Sensitivity Estimate (including M2MPJ)	5.87	3.53
<b>BCR (including Welfare WEBs), without "sunk" costs</b>		
Central Estimate	5.23	4.07
Sensitivity Estimate (including M2MPJ)	7.74	4.66

## Crossrail's Wider Economic Benefits (2002 Prices)





# Problem: Funding

UK Treasury Response 2001-2007

- **“Agree there is a problem”**
- **“Crossrail: Good Idea”**
- **“Not Affordable”**



# CWG – Alternative Funding Based on Beneficiaries

- Debate on funding issues: public or private funding
  - Who will benefit from Crossrail?
  - Could they contribute to the costs?
- Beneficiaries of the transport infrastructure
  - Users
    - Direct Crossrail Users
    - Users of other lines to Crossrail
    - Users of other, less congested lines
  - Road Users





# CWG – Alternative Funding Based on Beneficiaries (continued)

- Employers, developers, landowners
  - Operators of other lines
  - Shorter commute for employees
  - Larger area for recruitment
  - Support for urban development opportunities
  - Employers who have an enlarged catchment area
  - Increase in land value
- Government
  - Economic activity/growth
  - Social Inclusion
  - Tax Revenues



# Can Property Help? July 2002

## Options

- Mechanisms to capture revenue from property:
  1. Business rates supplement
  2. Development levies paid by real estate developers (Section 106)
  3. Joint developments (e.g. with CWG)
- Transparent
- Easy to implement
- Rigorous studies, linking funding to revenue
- Linking Funding to Project

JULY 2002  
**Funding Crossrail: Could Property Help?**  
BRIEFING PAPER

**EXECUTIVE SUMMARY**

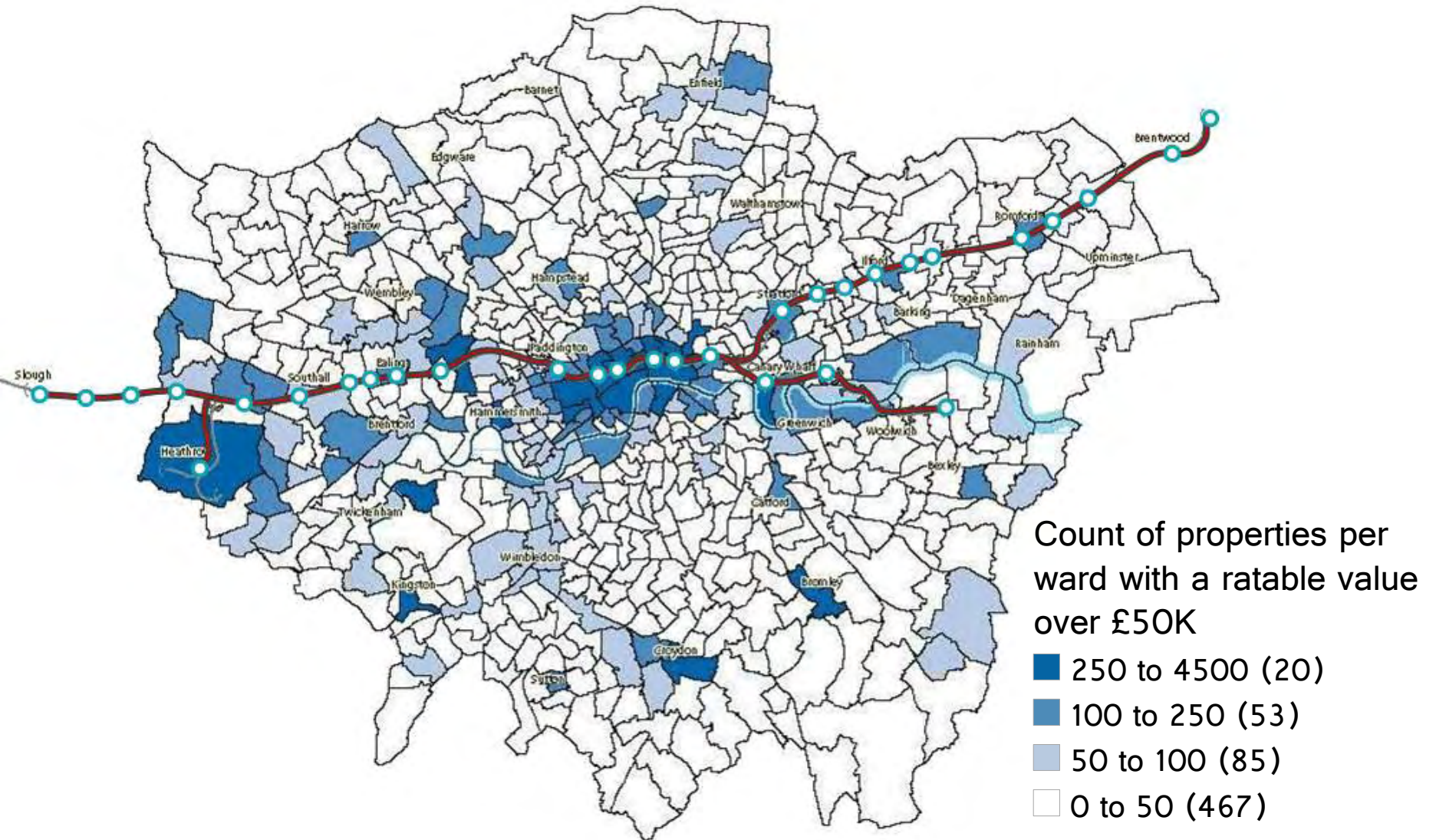
- Crossrail is a major new rail route that is being proposed to run east-west through central London and beyond. It is likely to cost around £6 billion to construct.
- Crossrail could affect the property market in two main ways: impacting the value of existing properties along the route, and creating property development or redevelopment opportunities by raising land values. The scale of value uplift is difficult to assess but could be in the region of 5% to 10%.
- This paper examines the suggestion that capturing part of these increases in property values could help to fund the infrastructure costs. It moves the debate forward by quantifying some of the factors which to date have only been discussed in abstract terms.
- Three mechanisms for value capture are identified. Their revenue-generating potential is assessed in relation to the principal "impact areas" of 1km around each proposed station along the Core Route through London.
- It is estimated that up to 2025, a total of 10.8 million sq m (117 million sq ft) of commercial development or redevelopment will occur within the impact areas. Around 55,000 residential dwellings will also be built. Depending on the scale of charges imposed, the use of Section 106 (planning gain) legislation could generate £2 billion to £3.1 billion of revenue.
- The Rating and Council Tax systems offer a second capture mechanism. Within the impact areas of the Core Route lies commercial property with an aggregate Rateable Value of £4.1 billion. A charge of 2p in the £ on all commercial occupiers would produce between £10.7 million and £141 million per annum in future years. Over a 20-year period this could generate between £2 billion and £3 billion in total.
- A charge on residential properties would be likely to produce modest revenues of around £8 million per annum along the Core Route. This would rise in areas beyond the Core Route where residential property represents a higher proportion of the impact area stock.
- The third possibility is a threshold levy on the owners of the £69 billion of commercial buildings and £38 billion of residential property within the impact areas. A levy of 2% on the total post-Crossrail value would generate over £2.2 billion in capital receipts. Depending on the uplift assumptions made, this equates to around one third of the total value uplift, meaning that almost two thirds of the value enhancement due to Crossrail would still accrue to the owners.
- There remain legal, practical and political obstacles to the implementation of each of these approaches. Combinations of methods will also require evaluation to avoid the risk of "capturing" the same value increase via more than one method.

For additional background information on Crossrail readers are advised to visit [www.crossrail.co.uk](http://www.crossrail.co.uk), which also contains links to related information sources.

Funding Crossrail: Could Property Help?      **CB Hillier Parker**  
cbhillierparker.com      CB Richard Ellis operates as CB Hillier Parker in the UK





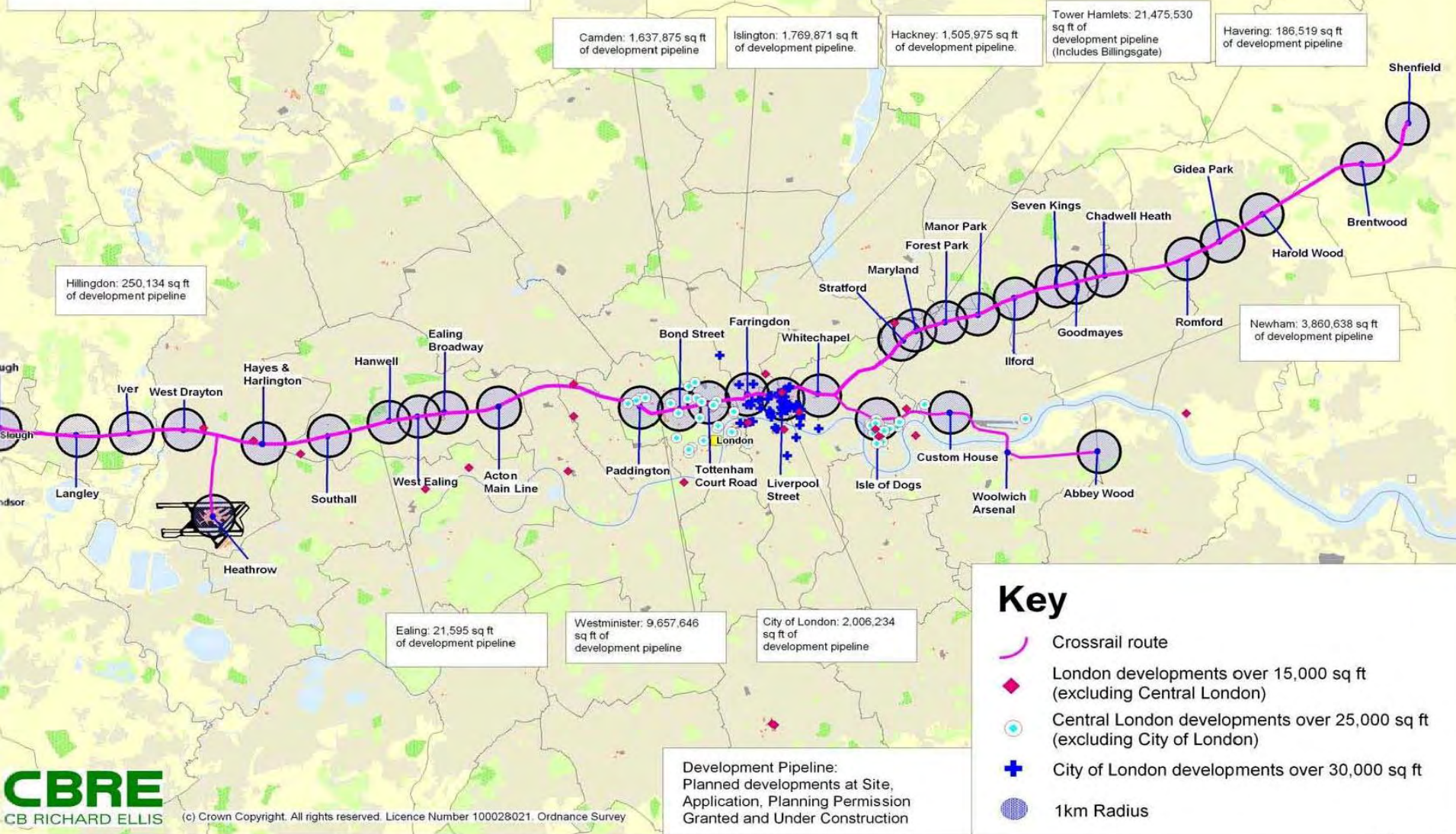


## Business Premises with a Ratable Value Excess of 50K Sterling





# Development Pipeline within 1km of Crossrail Stations 2006 - 2026



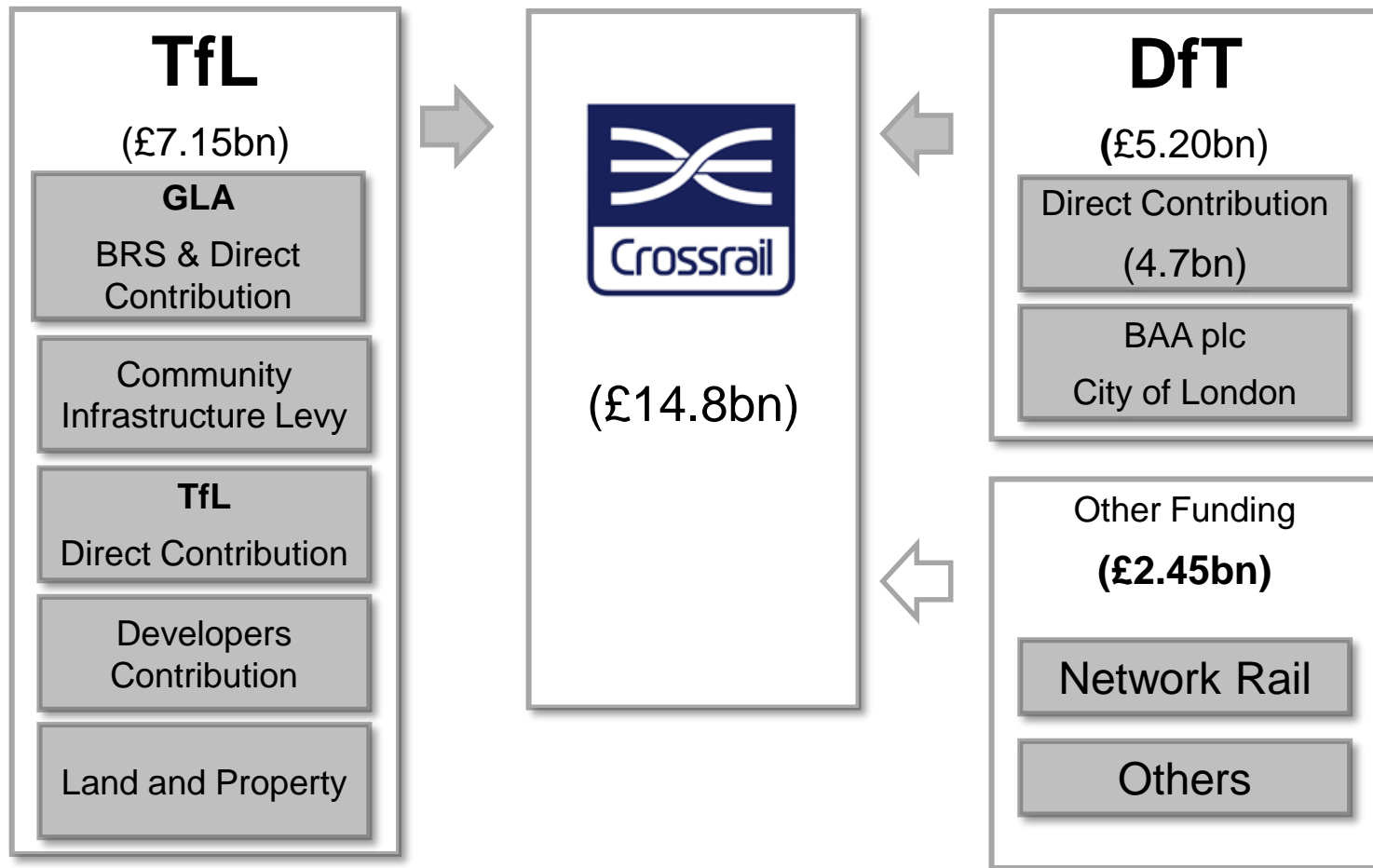
# Development Levy





Zone	London Boroughs	Rates (£ per sq. m.)
1	Camden, City of London, City of Westminster, Hammersmith and Fulham, Islington, Kensington and Chelsea, Richmond-upon-Thames, Wandsworth	£50
2	Barnet, Brent, Bromley, Ealing, Greenwich, Hackney, Haringey, Harrow, Hillingdon, Hounslow, Kingston upon Thames, Lambeth, Lewisham, Merton, Redbridge, Southwark, Tower Hamlets	£35
3	Barking and Dagenham, Bexley, Croydon, Enfield, Havering, Newham, Sutton, Waltham Forest	£20







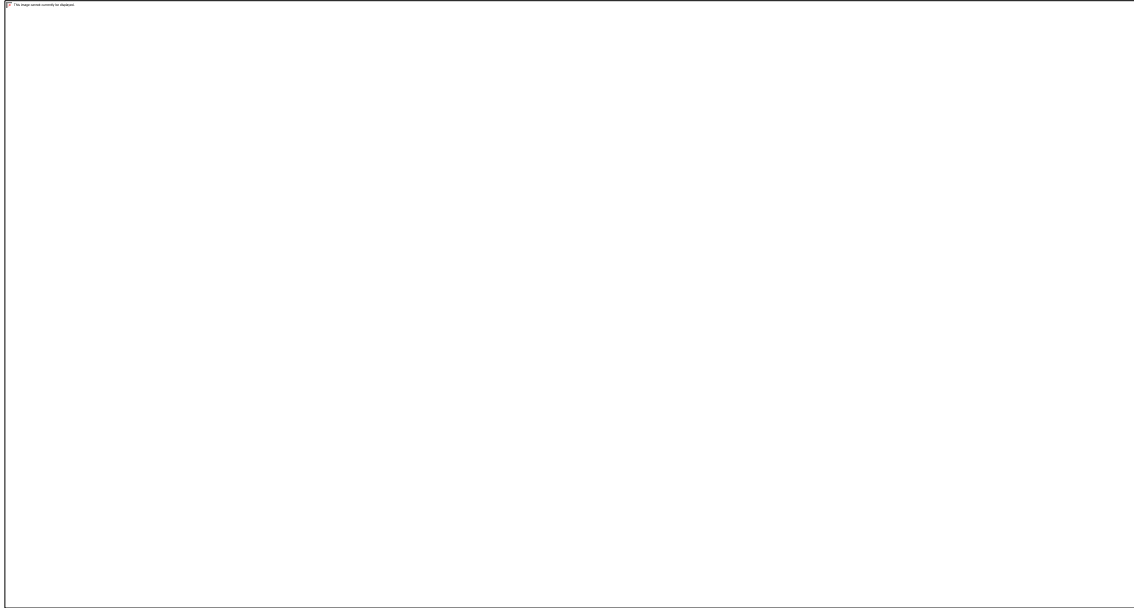
Mayoral CIL	Business Rate Supplement	S106	OSD
<p>Applies to all <u>new</u> development across the GLA area</p> <p>Zoned based on borough boundaries</p> <p>3 charge rates (£20/£35/£50 sq m). Rates that applies based on viability (average) within each borough.</p>	<p>Applies to all <u>new and existing</u> commercial properties</p> <p>2p per £ of rateable value above 55k p.a.</p> <p><b>Over £200 million collected form businesses in first year, close to target</b></p>	<p>Applies to all <u>new</u> office/retail/hotel development</p> <p>Applies to Central Activity Zone, Docklands and 1km of each Crossrail station within the GLA boundary</p> <p>Matrix of rates dependent on area and type of development</p>	<p>Contribution from development of 14 main sites above and around Crossrail stations</p> <p>~2m sq ft</p> <p>e.g. Astoria &amp; Goslett Yard site Tottenham Court Rd. 500,000 sq ft of premium retail office and residential accommodation</p>
£300m	£4.1bn	£300m	£445m



# Crossrail 1 Property Contribution



# Over Site Developments



- 14 main sites identified
- e.g. Astoria & Goslett Yard site at Tottenham Court Road station
  - Development plans approved by Westminster City Council
  - 500,000 sq ft of premium retail, office and residential accommodation created at eastern end of Oxford Street and Tottenham Court Road







Bond Street East OSD

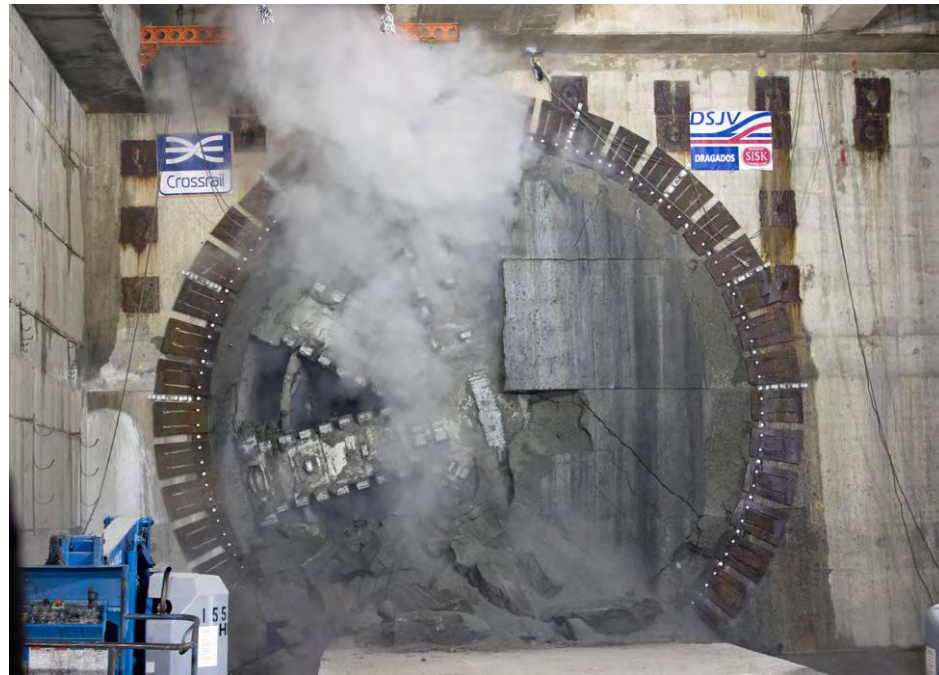


TCR East OSD

# Over Site Developments



# Crossrail's Big Breakthrough as Tunnel Reaches Canary Wharf



Ingredients for Success, September 2013





# Ingredients for Success



- A Clear Case for Project Need
- Business and Community Support
- A Positive Business Case
- Champions: Public and Private
- Funding
- Political Support
- Transparency



# Crossrail Champions



- Large investors interested in transport infrastructure and real estate development
- Very dynamic business lobby:
  - London First: “We want London to be the best place in the world to do Business!”
  - British Airports Authority
  - Corporation for London
  - Canary Wharf Group
- Decision-Makers
  - Flexible in view of the need for change
  - Open to creative ideas from the private sector





# Business Case



## Crossrail Benefits and Costs Summary

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## Crossrail’s Wider Economic Benefits

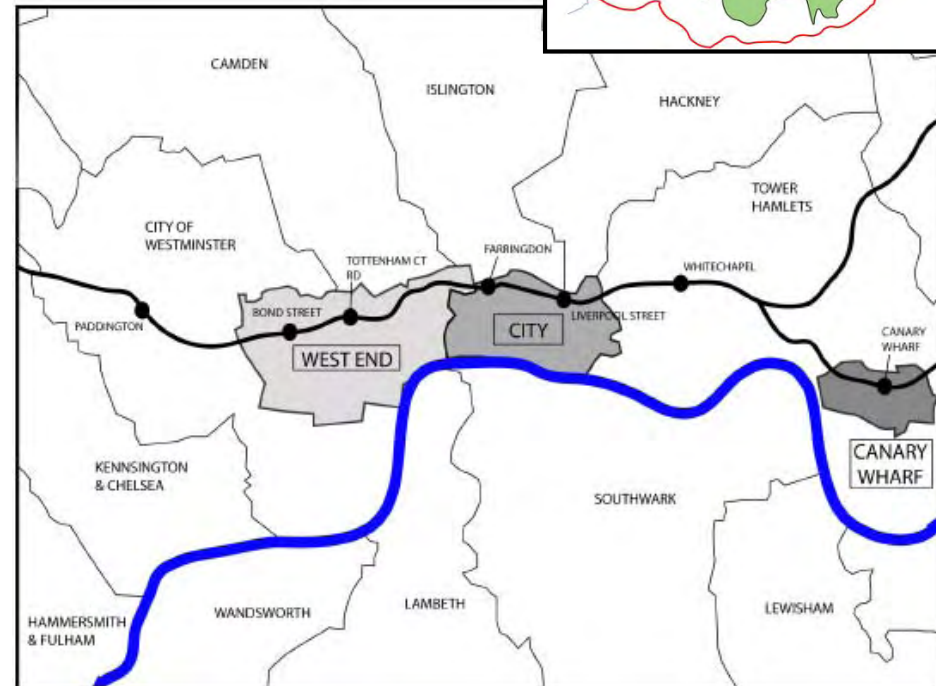
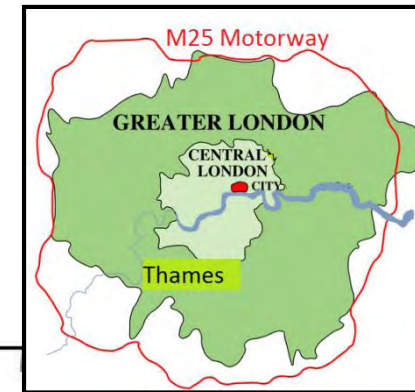
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# Wider Benefits

## Generating Economic and Social Benefits

- Decreases congestion on the rail network
- Efficient link between East and West
  - The City
  - West End
  - Canary Wharf
  - Heathrow Airport
- Encourages urban regeneration around stations
- Creates employment
- Social Inclusion







- Canary Wharf Group
- British Airports Authority
- London First
- City of London Corporation

## Private Sector Support



# Funding



## Cost-sharing Between Principle Beneficiaries:

- Government
  - Economy
- Private Sector
  - Employers
  - Land Owners
  - Developers
  - Economy
- Users
  - Public Transport Users
  - Road Users
- Each Contributing Approximately £5 Billion





# Canary Wharf Crossrail Station

By Canary Wharf Group

- Design and construction cost: CAN\$ 765 M
- Under construction since May 2009



Station Visualization



Station Construction  
September 2013



# Prices set to go up as Crossrail project pulls in

Properties within a 10-minute walk of new line's stops will perform best if you're looking for an investment

Kay Lockett  
@wharf.co.uk

**T**he arrival of Crossrail across the capital is significantly increasing property value around its planned stations, including Canary Wharf.

The estate's new station, currently under construction in West India Dock, is set to become a major focus for residential development, according to a report by estate agent Knight Frank.

Andrew Grocock, head of sales at the firm's Canary Wharf office, said: "The housing market has been so volatile, but we are now beginning to see peak prices of 2007 returning and Crossrail will mean there is a steady increase in values from now until 2018.

"Property within a 10 minute walk of Crossrail stations will out perform other areas and from our perspective we anticipate the market to be very good.

"There is a huge appetite from overseas investors as well as local people who are



Knight Frank's head of sales for the Canary Wharf estate Andrew Grocock

Canary Wharf and Crossrail will have a long term positive impact on the market."

The report suggests out of all the stations, Canary Wharf has the biggest scope for residential development as a result of Crossrail.

It says the improved connectivity provided by the new

## NUMBERS

£1 billion – value of Canary Wharf housing stock within 10 minutes of Crossrail in 2012.

Three million sq ft of residential, office and retail space planned above central London Crossrail stations.

10 per cent increase in London's rail transport capacity when Crossrail opens – the largest since the Second World War.

Passenger numbers are expected to be in the region of 200 million a year.

to international connections including a 30-minute reduction in the time it takes to get to Heathrow Airport.

Knight Frank's study also found better access to the West End as well as the infrastructure including shops and restaurants planned for the station would also make Canary Wharf more attractive to families looking to buy a home, whether or not they work in east London.

Canary Wharf Group





# Relevance to GTA

- Planning
  - Comprehensive
  - Transparent
  - Thoroughly vetted by TfL, DFT, UK Treasury, Parliamentary Process
- Private Sector Support
  - Recognize need and benefits
  - Prepared to support and promote
  - Solid Business Case
- Value Capture
  - Those who benefit should contribute to the cost in a proportionate and transparent way
- Funding
  - Tools that reflect private sector beneficiaries
  - The BRS
  - Section 106
  - CIL





**Thank You!**

