



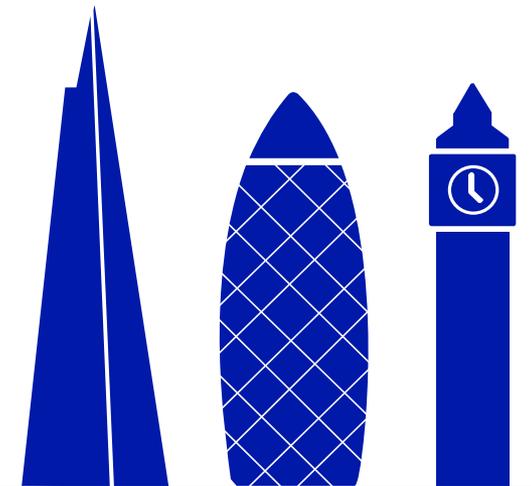
OCT 2017

Evolution of Cycling in London

Korak van Tuyl
Design Manager – TfL Outcomes Delivery



- History
- Key Dates
- Off-Street Trials
- Cycle Superhighways
- On Street Monitoring



Cycling in London - Dates

- May 2000 – Mayor of London
- Feb 2004 - London Cycle Action Plan launched
 - Target for LCN+ 900km of cycle by 2009/10
- June 2005 – London Cycle Design Standard launched
- June 2007 – Tour de France starts in London
- July 2010 – Cycle Hire launched



London Cycle Network

DESIGN MANUAL



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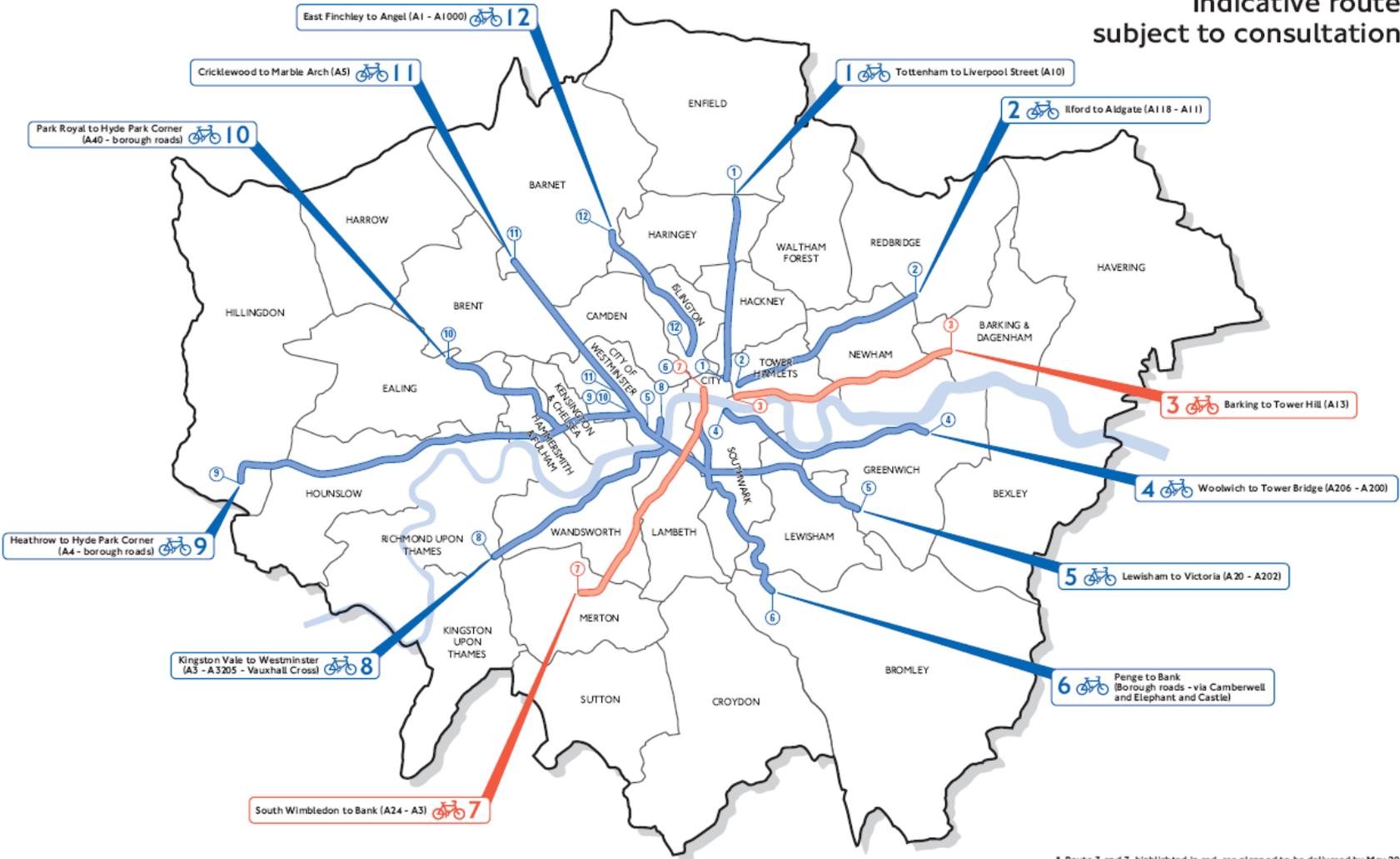
Cycle Super Highways – Key dates

- July 2010 – CS3 and CS7 opened
- July 2011 – CS2 and CS8 opened
- Dec 2012 – Better Junctions programme launched
 - 33 junctions with high pedestrian & cycle collisions
- Jan 2013 - OFF STREET TRIALS started
- Aug 2013 – Extension to CS2 (segregated tracks)



Cycle Superhighways

Indicative routes
subject to consultation*



* Route 3 and 7, highlighted in red, are planned to be delivered by May 2010.



Change in Cycle Design

Off-Street Trials

Adapt European designs to UK
Lobby to change UK regulations
On street roll-out

Learning from Others

City Visits (Europe and North America)
International Benchmarking Study



Segregation methods



- Set back of segregation



- Road Markings



- Types of segregation



Traffic Signals

- Early release



All Road Users

- Behaviour
- Understanding



Bus Stop Bypass



- Capacity of Island

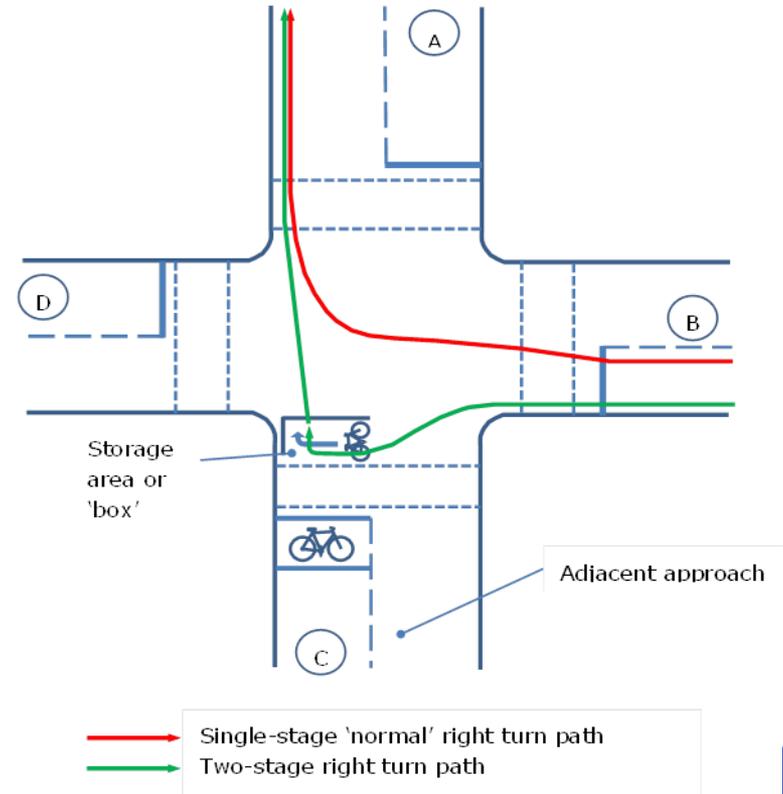


- **Pedestrian / Cycle interactions**





Two Stage Right Turn



Changes – 2015 was a big Year

One of the largest consultations TfL has carried out:

- Over 100 stakeholder meetings
- Over 230,000 leaflets sent
- Over 2 million emails
- Over 30,000 responses



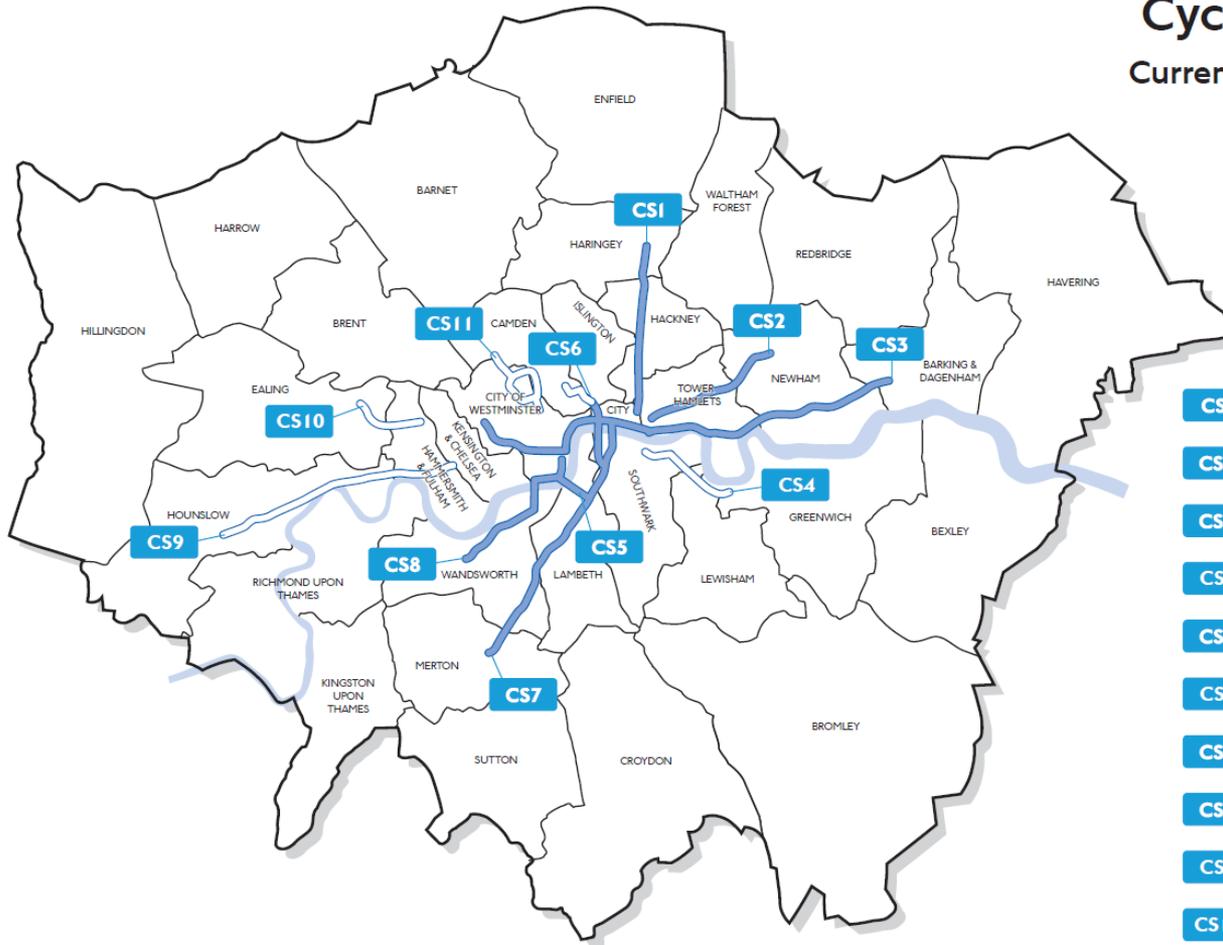
Cycle Super Highways – Key dates

- Nov 2015 – CS5 opened
- Apr 2016 – CS2 upgrade completed
- May 2016 – East west (CS3) / North South (CS6) opened
- May 2016 - Quietway 1 opened
- May 2016 – CS1- inner sections opened
- Aug 2017 – Quietway 2 - part opened
- Oct 2017 – CS9 Consultation underway



Cycle Superhighways

Current and proposed route map



- CS1** Tottenham to City
- CS2** Stratford to Aldgate
- CS3** Barking to Lancaster Gate
- CS4** Tower Bridge to Greenwich
- CS5** Oval to Pimlico
- CS6** Elephant & Castle to King's Cross
- CS7** Merton to City
- CS8** Wandsworth to Westminster
- CS9** Olympia to Hounslow
- CS10** Acton to Wood Lane
- CS11** Swiss Cottage to West End

 Current route open
 Proposed route



The Cycle Superhighways programme will continue to evolve and is subject to further change

Version 2 – 25.8.17



Cycle Super Highway - philosophy

Safer

- Provide a consistently segregated route for cyclists

Direct and fast:

- a high quality route has been introduced on a key strategic corridor through the heart of central London.

High-capacity:

- Cycle track been designed to cater for future increases in cycle flow.

Continuous and visible:

- clearly identify the route and help wayfinding.

Innovative:

- new facilities, techniques and cycle specific features

Comfortable:

- new high quality road surfacing, and a cycle maintenance strategy is in place



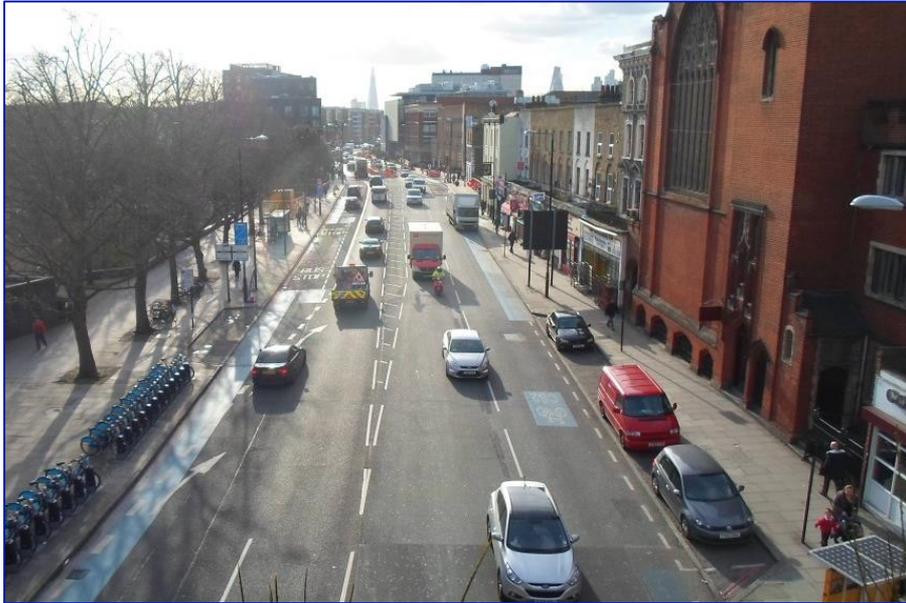
Reallocating Road Space



CS3 East -West



Reallocating Road Space



CS2 Upgrade



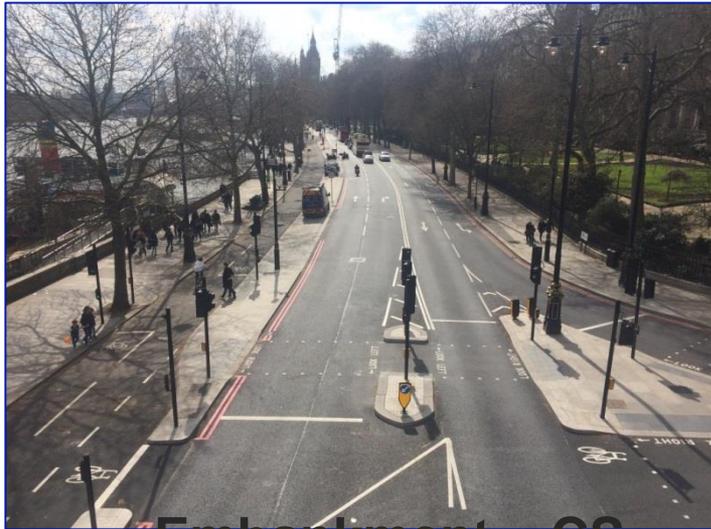
Reallocating Road Space



CS2 Upgrade



Junction Improvements



**Embankment – CS
F-W**



Vauxhall – CS5



**A11/Burdett Road
Junction
CS2 Upgrade**



Links – Segregated Tracks



Bi-Directional Tracks on CS E-W



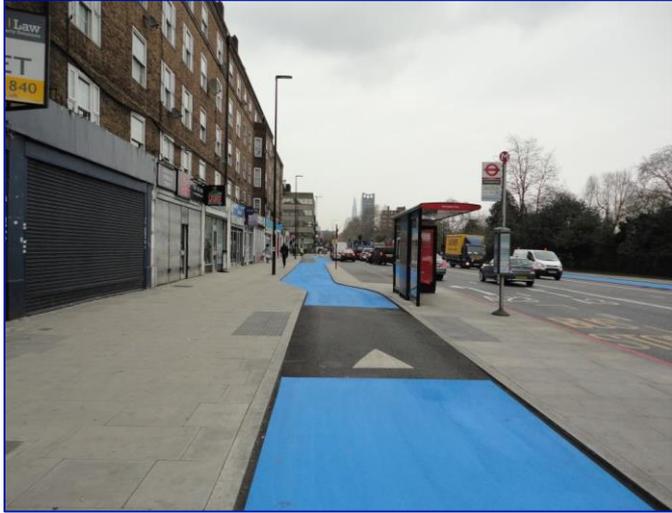
Wanded Tracks on CS2U



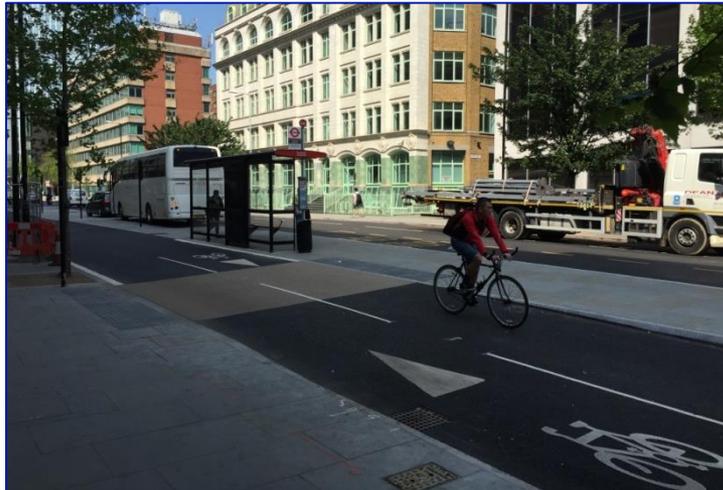
Hybrid (stepped) Track on CS7



Links – Bus Stop Bypass



Oval (CS7)



CS
N-
S



CS2
Upgrade



Links – Loading & Parking



Pad Loading on CS N-S



Floating Loading on CS2U



Motorcycle Parking On CS E-W



Completed Routes

CS3 Victoria Embankment



CS6 Blackfriars Bridge

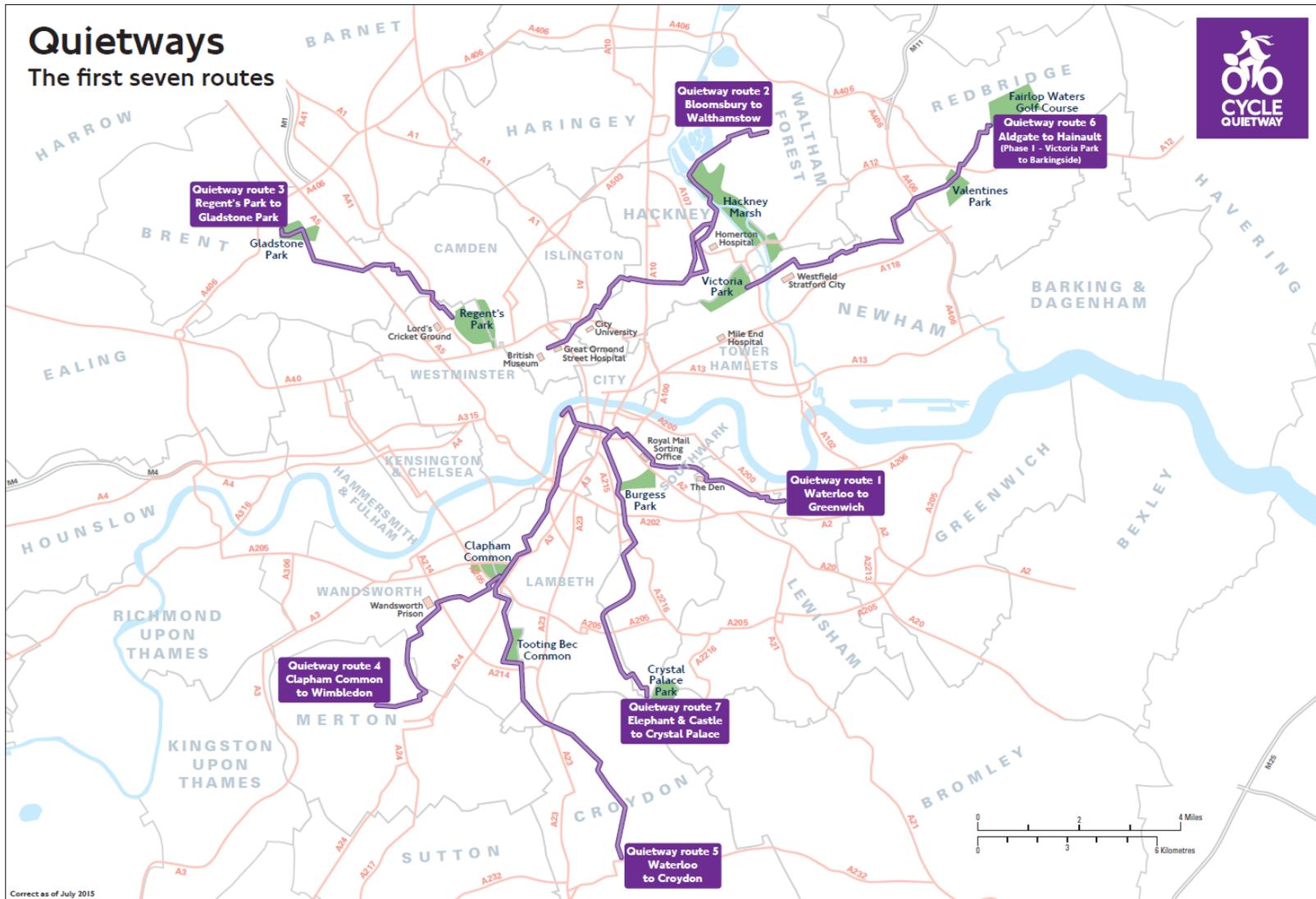


Quietways

In his Vision the Mayor declared that Quietways would be:

- Direct
- Clearly signed
- Better surfaced
- Designed as whole routes not piecemeal
- Segregated from motor traffic where they briefly join busy roads
- Make use of 'filtered permeability' that restricts through motor traffic
- Make use of greenways : parks and waterways
- Include new bridges where required

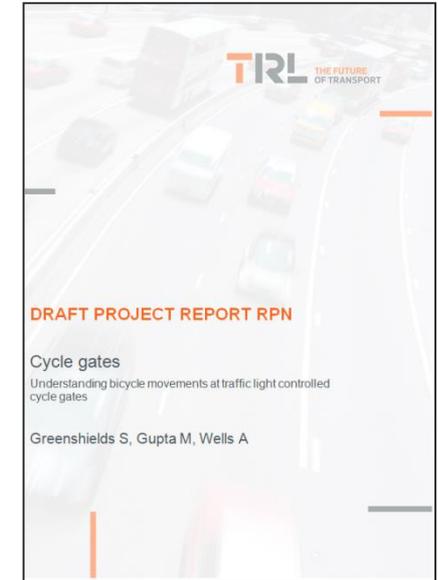
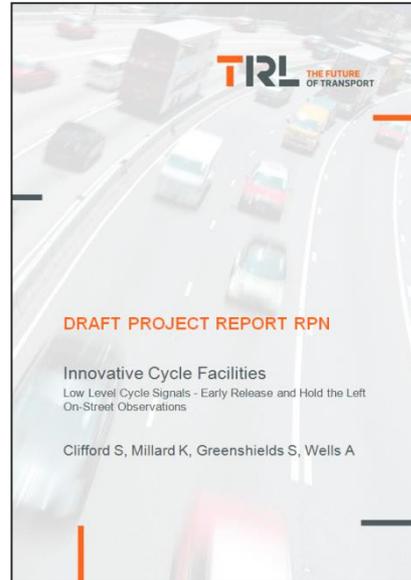
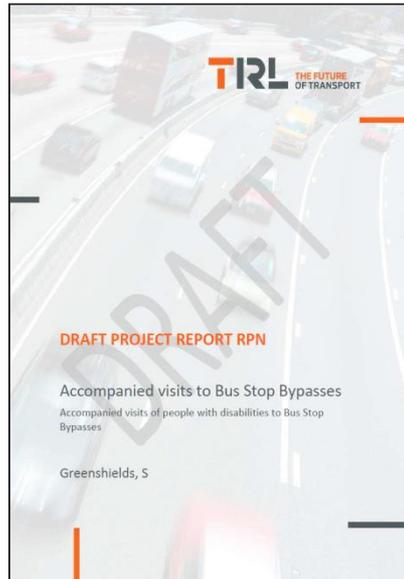




7 Quietways



On street monitoring



Undertaken by external agencies

Number of locations monitored:

Videos surveys

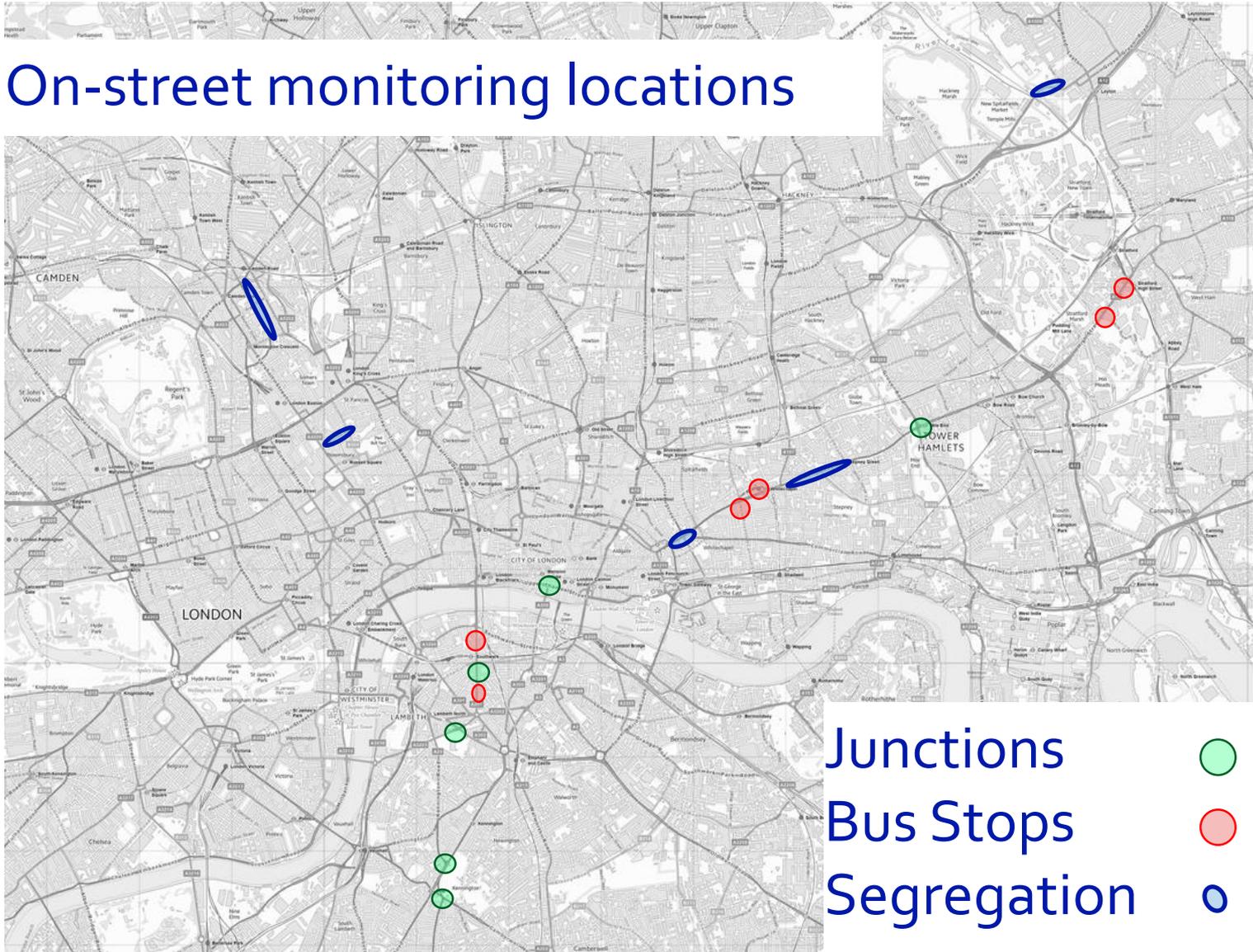
Cycle counts

Questionnaires – cyclists and pedestrians

Guided walks for lesser abled (sight and mobility impaired)



On-street monitoring locations

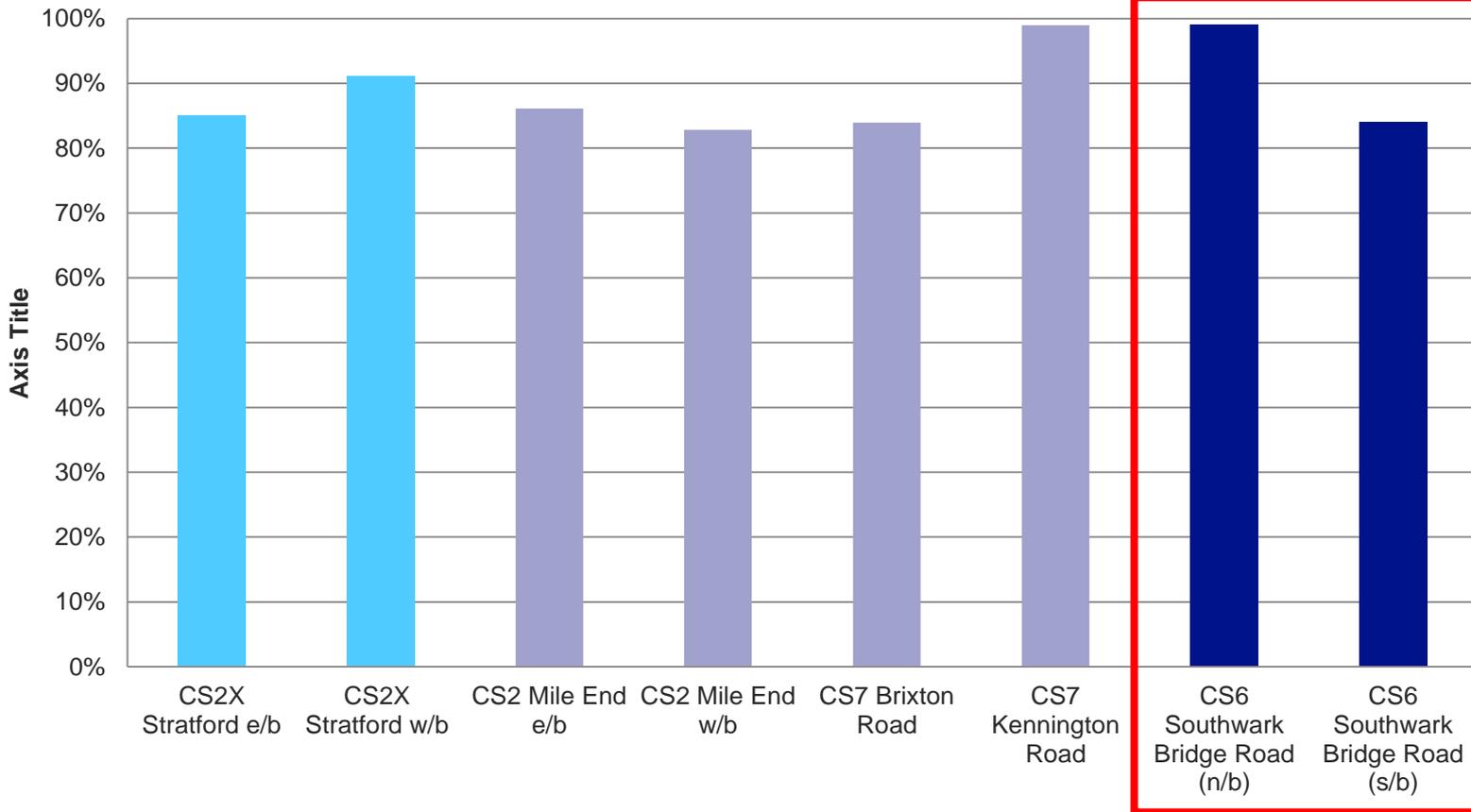


Segregated tracks



Use of Segregated tracks

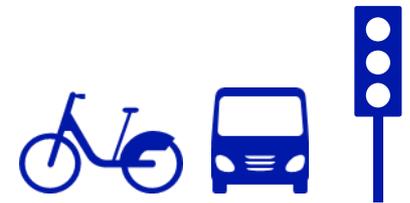
Cycle use of segregated track



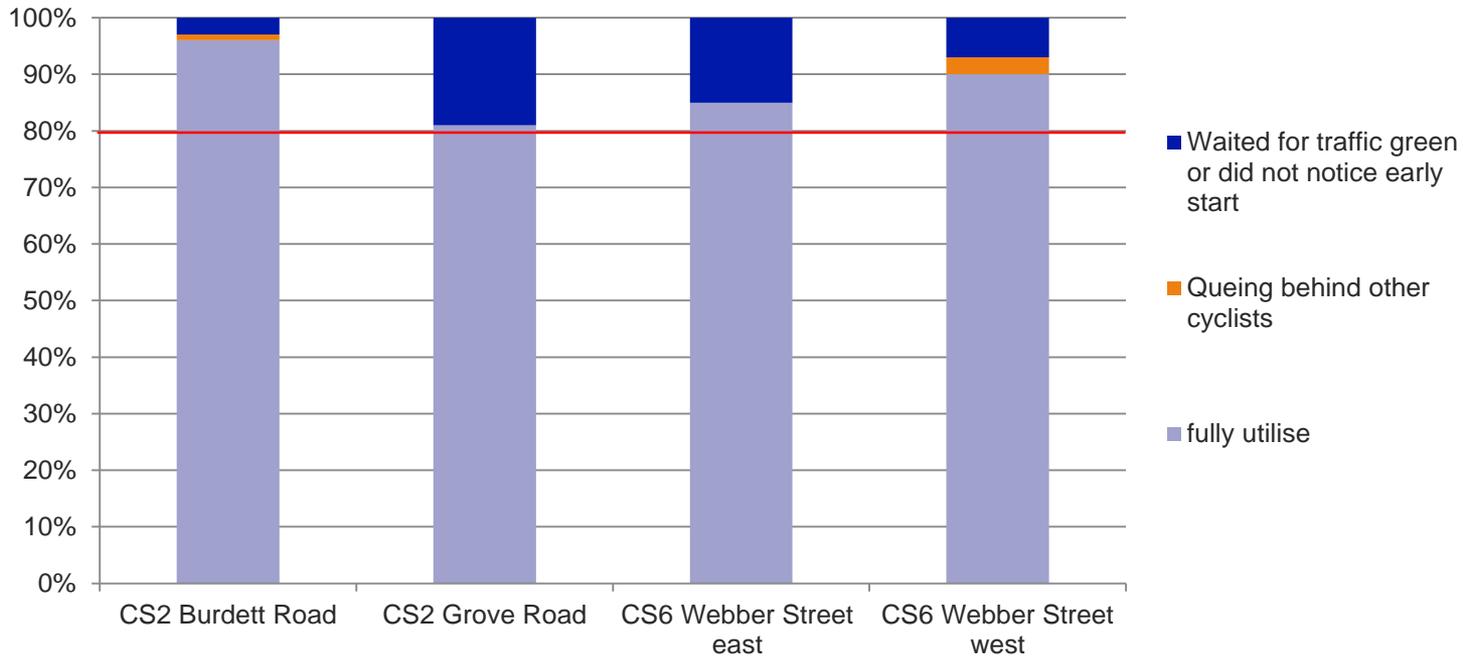
Early Release



Cambridge Heath Road – 4 seconds early release for cyclists



Early Release – On Street Cyclists Behaviour



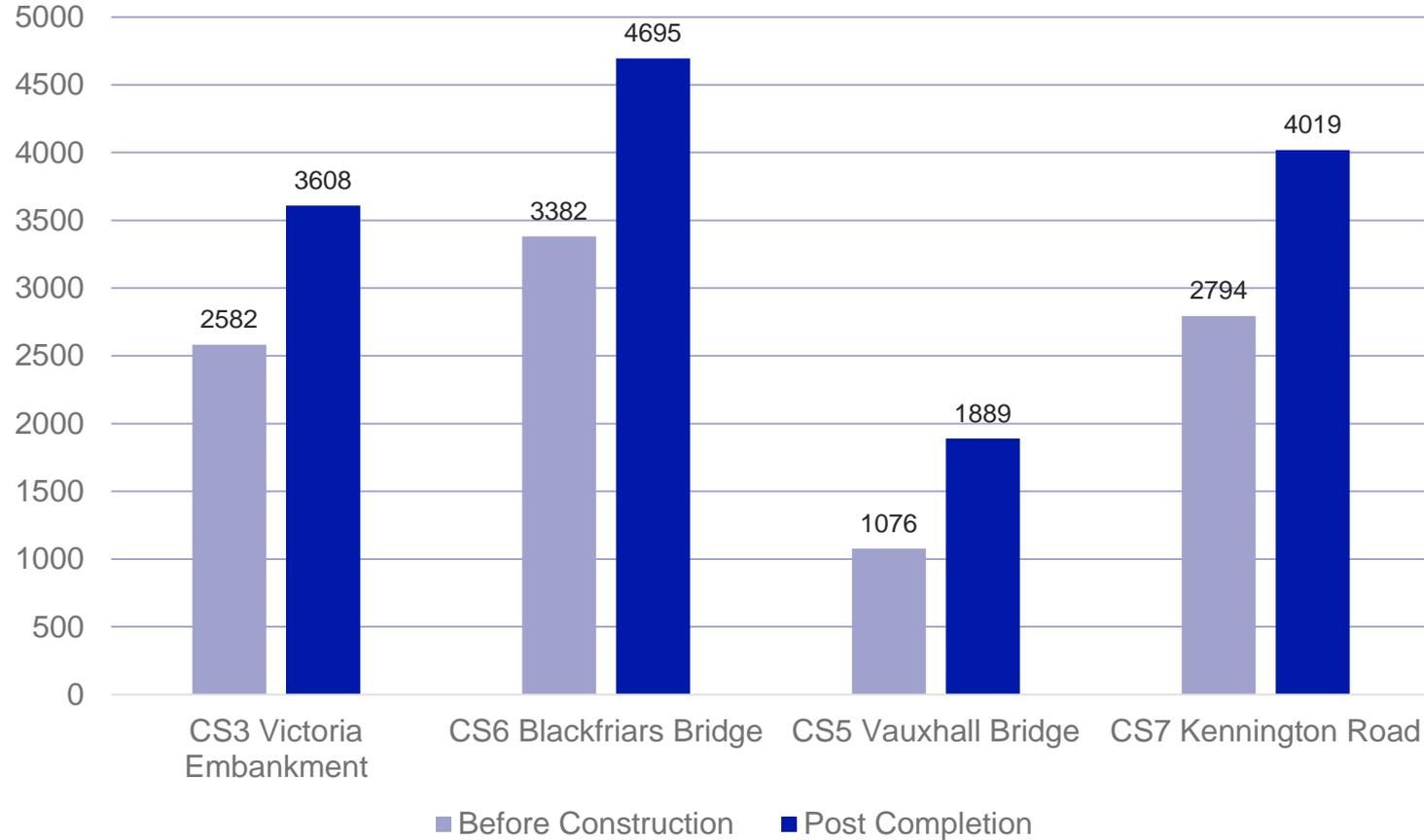
High volume routes – 2016 monitoring

Growth in use of Cycle Superhighways

- 13% increase in cycling compared to the 2014 baseline survey
- Two thirds of the daily km cycled on the CS routes occur in the AM and PM peaks.
- The busiest hours are 8am to 9am and 6pm to 7pm
- The top 4 sites recorded daily cycle flows of over 8,000 per day in both directions.



Increase in cyclists in London (AM peak)



Design philosophy aims

- Remove / minimize conflicting movements by separating users in time and space
 - at junctions (4 sec early release, 2SRT, LLCS, hold the left)
 - on links (stepped track, light seg'n, kerbed seg'n)
- Reduce delays to attract more cyclists
 - same green time as general traffic
 - progression through networks



Provision for all abilities



Conclusion



Increase in number of people cycling





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