

MASS RAPID TRANSIT CYCLEWAY NETWORK

Cycle ROUTES

LONDON

CycleWAYS

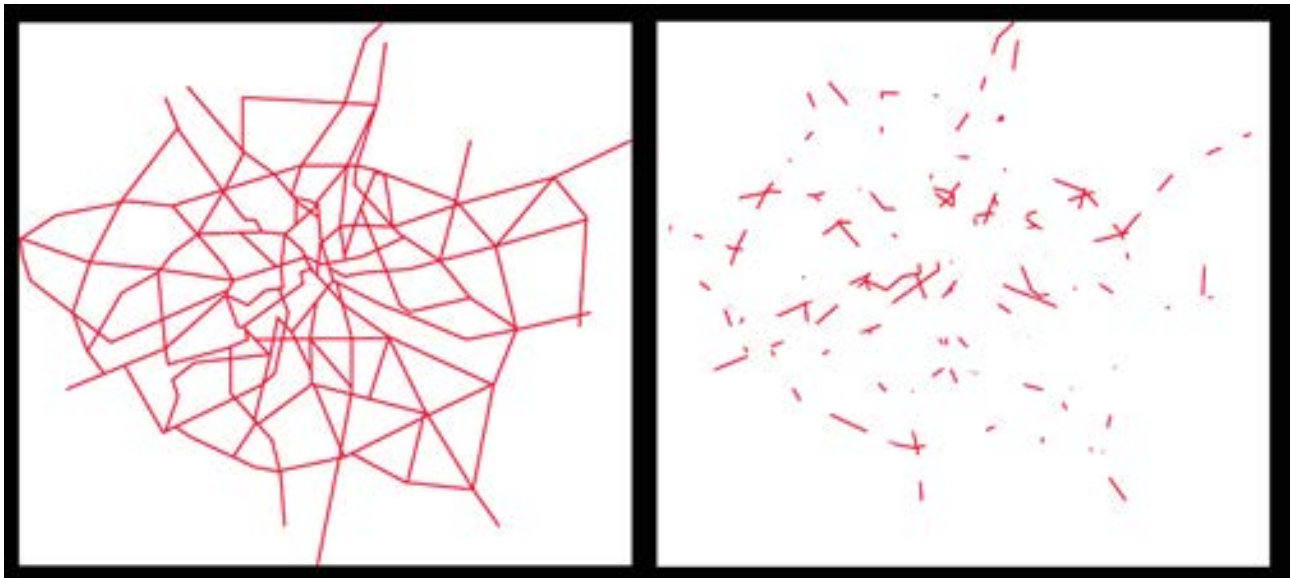


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LAA Landscape Architects Association



Cycle Superhighway CS3 was planned, designed and built by Transport for London (TfL). It changed a Red Route to a Red and Green Route. Useful, beautiful, sustainable and safe, it illustrates the way forward for strategic cycleways in London⁰.

THE PAST



CYCLEWAY NETWORK

CYCLEWAY FRAGMENTS

1. The 'London Cycle Network' (left) was a set of recommended cycling routes, launched by the GLC in 1981. Planning stopped in 2008 but it is still in use. The LCN uses signposts and road markings to advertise routes on dangerous roads and backstreets. It is a set of fragments (right) not a *network* of safe cycling facilities¹.



- History will see TfL's post-2015 'Cycle Superhighways' as the first phase of a Londonwide Cycleway Network of dedicated infrastructure. TfL is planning a new network and expressed a hope of completing the first phase in 2041².

THE PRESENT

2 Traffic Composition Survey Trend Data

Trends in Traffic Composition

As discussed previously, cycling has seen a significant increase in volume over the last two decades. The rate of growth in cycling across the city between 1999 and 2012 was on average over 20 percent per year, with some years reaching over 50 percent year-on-year growth.

However, growth in cycling began to slow in 2012. Figure 2.7 (right) shows the yearly change in vehicle counts indexed to 1999 values. A curve of best fit added to the cycling curve (hashed green line) shows a peak in 2016.

While this is not an extrapolatory exercise, it does appear that the City counts have reached 'peak cycle' over the last five years, suggesting that significant changes in cycling infrastructure provision and/or travel behaviour may be needed to spur further growth in cycling on City streets.

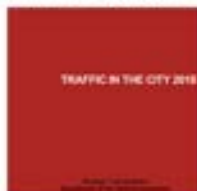
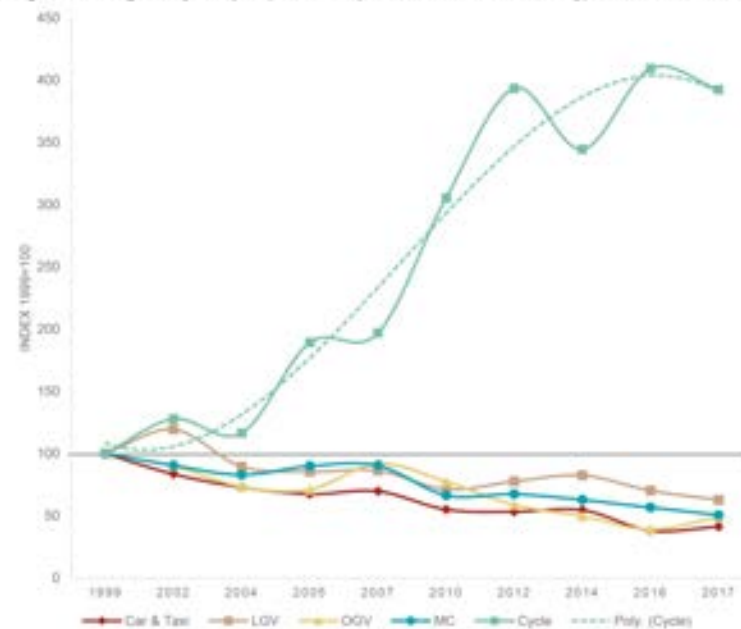
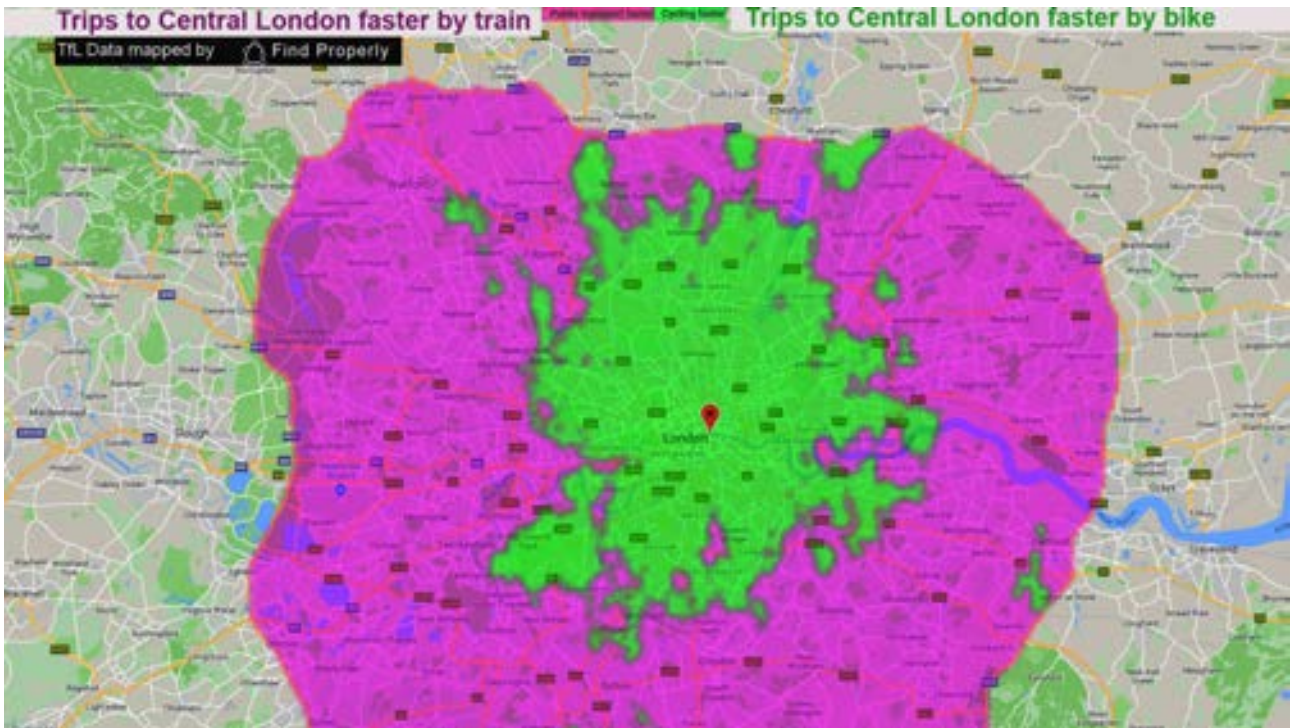


Figure 2.7 Change in day-time (12hr; 07:00-19:00) vehicle counts across the City, indexed to 1999 values



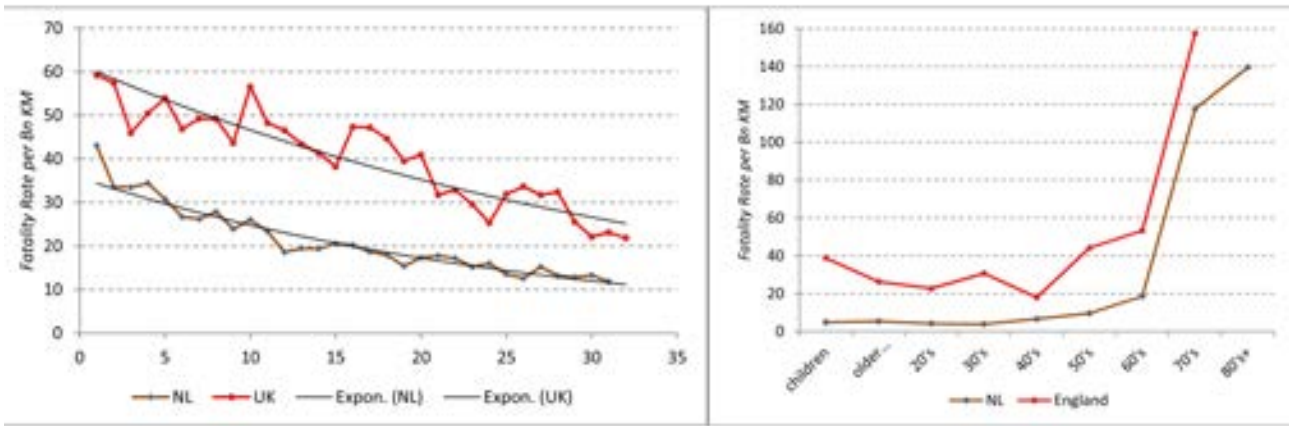
3. Cycling is Central London's fastest-growing transport mode. The use of private cars, taxis and buses is in relative decline. They function increasingly less well because of population growth and consequent congestion³.



4. For half the total trips undertaken in London, which are shorter than 8 miles, cycling is the fastest, healthiest, safest, cheapest and most sustainable transport mode⁴.



5. But cycling is the safest mechanised transport mode *only* because daily exercise helps protect you from obesity, heart disease, cancer, mental illness, diabetes and arthritis⁵.



- The fatality rate for English cyclists is twice the rate in North European countries with decent cycle infrastructure. This is as unacceptable as it would be if the mortality rate from a surgical procedure were twice as high in the UK⁶.

THE FUTURE

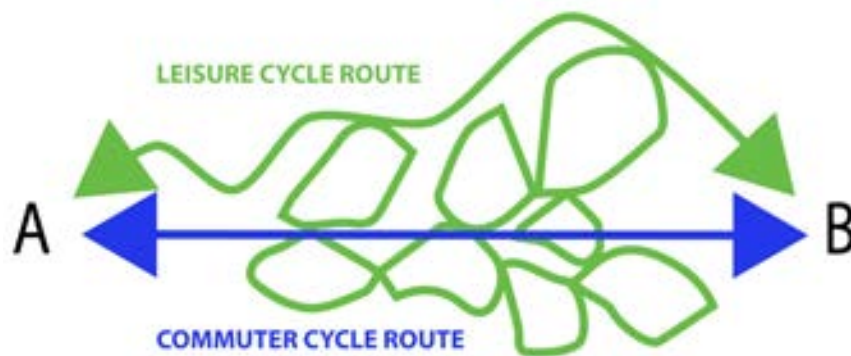
Figure 1: Current plan for cycling routes – according to the TfL Business Plan



Figure 2.4: Prioritised Strategic Cycling Connections



- London requires a strategy to create Cycleway Rapid Transit (CRT) system - a Londonwide Cycleway Network⁷. The Network should include leisure routes as well as commuter routes.



8. *Strategic Cycleways* should be planned, designed and funded by TfL, starting with the construction of cycleways on the 360 miles of the Transport for London Road Network (TLRN). The Red Routes should become Red and Green Routes⁸.

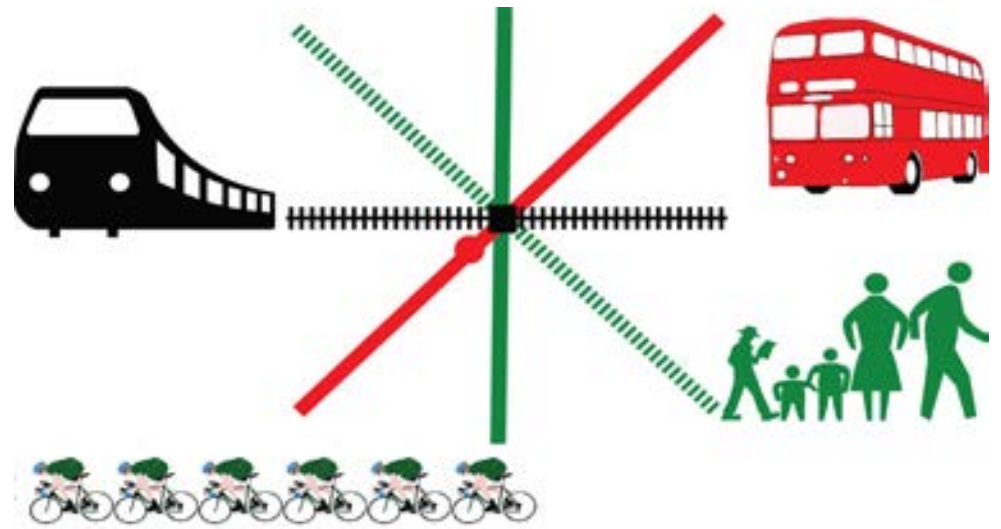
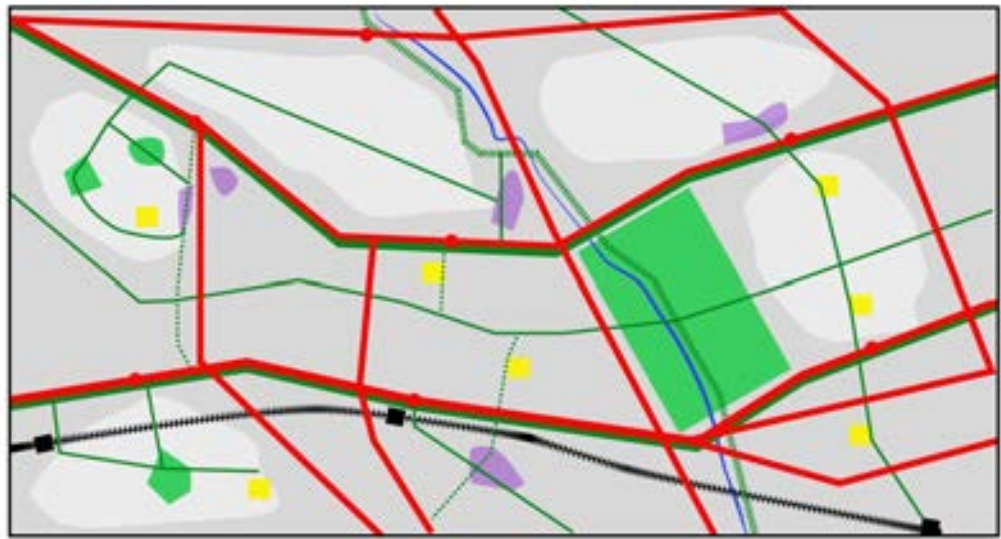


9. *Local Cycleways* (for journeys to schools, shops, stations, parks, hospitals etc) should be planned, designed and funded by the London Boroughs using traffic calming measures (Mini-Holland/Liveable Neighbourhood etc)⁹.

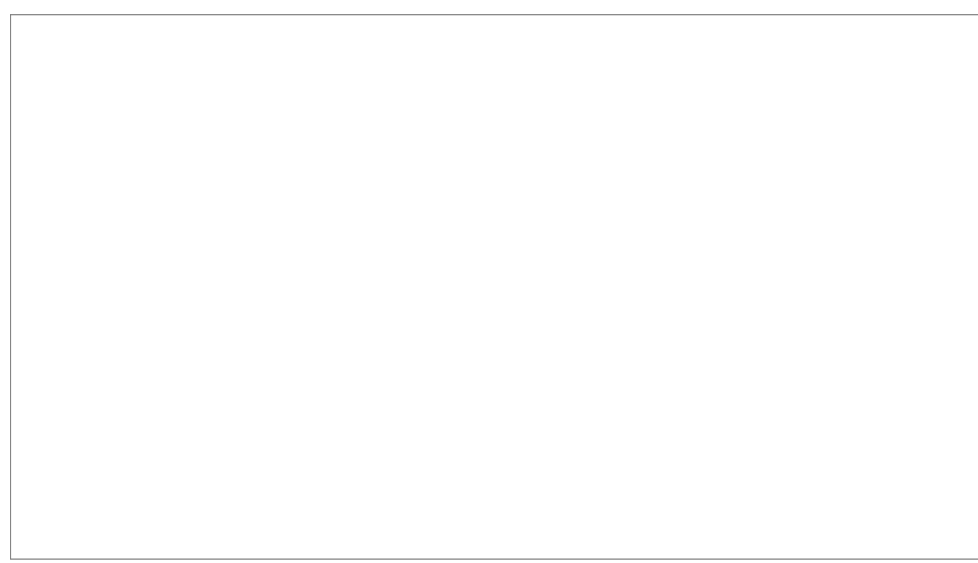
MULTI-MODE TRANSPORT PLANNING DIAGRAM

- DESTINATIONS
- School
 - Station
 - Park
 - Shopping
 - Liveable Neighbourhood

- CYCLEWAY NETWORK
- Main Road / Bus Network
 - Railway
 - TS, Strategic Commuter Cycleway
 - TS, Strategic Leisure Cycleway
 - Borough Local Cycleway
 - Green Road



10. Cycleways should be fully integrated with the other sustainable transport modes (bus, rail, walking) to create a Multi-mode Sustainable Transport System¹⁰.





Cross Rail 1

Cost £15.4 bn
 Length 60 miles
 BCR 1.97:1
 Benefit £29.15bn
 Percent of TfL Budget:
 14.8% for 10 years
 Trips/year: 200m
 Trip cost/mile: £1.16

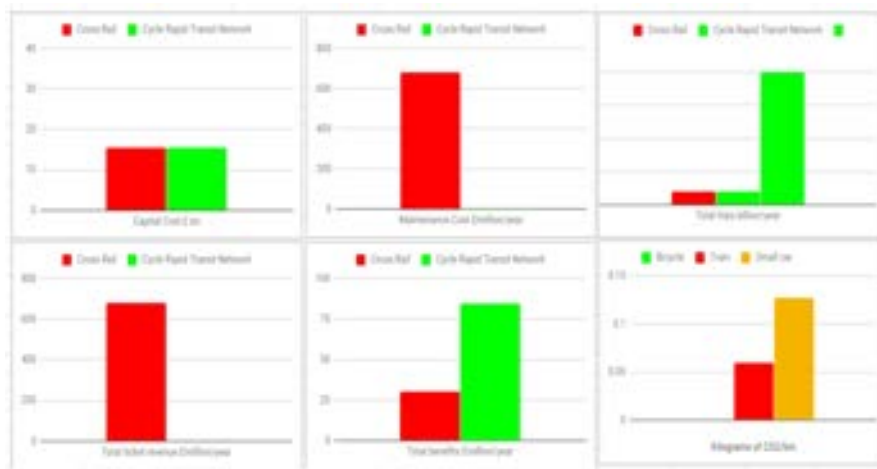
London Cycleway Network 1

Cost £15.4 bn
 Length 1,232 miles
 BCR 5.5:1
 Benefit £84.7bn
 Percent of TfL Budget:
 14.8% for 10 years
 Trips/year: 3,165.6m
 Trip cost/mile: £0.05

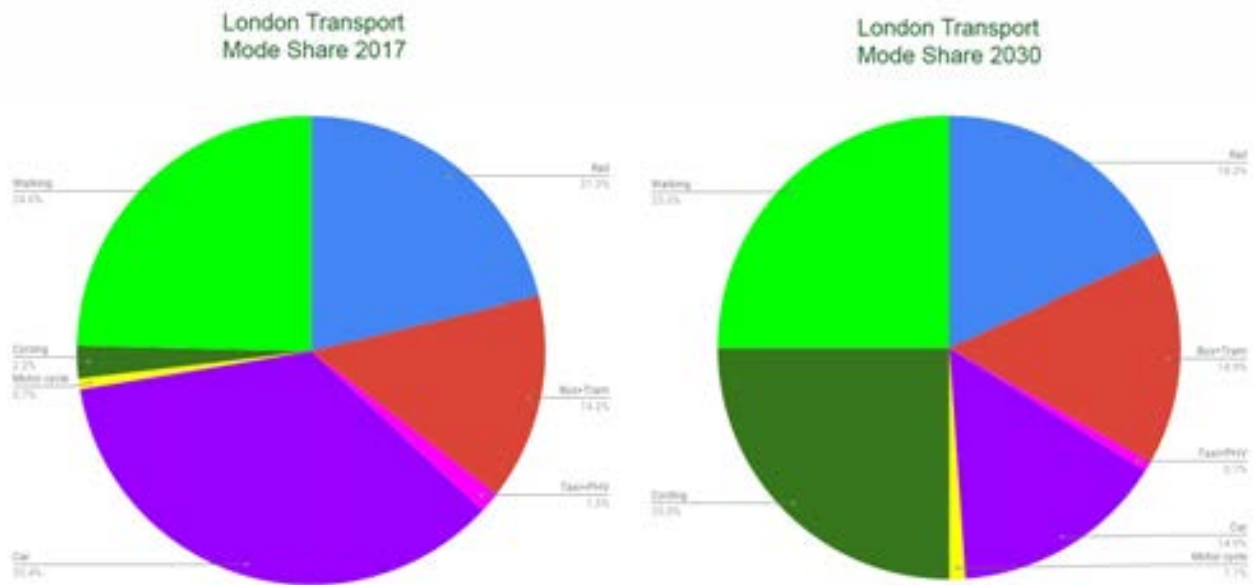
<http://www.landscapearchitecture.org.uk/compare-cross-rail-with-london-cycleway-network-investment>



Comparison of the costs & benefits of railway and cycleway network investment



11. The London Cycleway Network requires funding and phasing. Funding should be related to mode share targets and supported by a Benefit Cost Analysis. Phasing should be ambitious and fast-paced⁴¹.



12. The mode share of cycling in London should be increased by 2% per year: from 2.2% in 2019 to 14.6% in 2025 and 25% in 2030¹².

For further information please see
[London Cycleway Network](#)
[18 videos on London cycleways](#)
 Cycle networks as rapid mass transit





NOTES ON THE ILLUSTRATIONS

0. Cycle Superhighway CS3 went to consultation in 2014. Work began in 2015 and the Embankment section was the first segregated superhighway to open, in 2016. (source: author)
1. The London Cycle Network was launched by the Greater London Council (GLC) in 1981. As shown on the right-hand diagram the aim was to link London town centres. Between 2000 and 2008 additional work was done by the Greater London Authority (GLA) and its transport division, Transport for London (TfL). When Boris Johnson was elected mayor in 2008 the project was discontinued. Routes had been signposted but only fragments of infrastructure (shown symbolically on the left-hand diagram) had been built. (source: author)
2. Construction of the Phase 2 cycle superhighways began in 2015 with the publication of this plan (source: TfL, 2015)
3. Fig 2.7 is from the City of London's [Traffic in the City 2018](#). The City Corporation intends to restrict use of 50% of the streets to pedestrians and cyclists.
4. Using TfL data, [Findproperly](#) published an interactive map showing which journeys are fastest by bike and by public transport.
5. The list of health benefits is from the [Victoria State Government](#) They say cycling helps prevent many serious diseases.
6. The graph is from Malcolm J.Wardlaw *History, risk, infrastructure: perspectives on bicycling in the Netherlands* in the UK Journal of Transport & Health Volume 1, Issue 4, December 2014, Pages 243-250
7. The illustrations are from *Strategic Cycling Analysis: Identifying future cycling demand in London* Transport for London June 2017
8. This an overlay of potential strategic cycle routes on a TfL plan of the *Transport for London Road Network* (source: author). If *equally direct* routings for cycleways can be found it would be better from them to apart from the noise and pollution of main roads. But if no better routes are possible the TLRN 'Red Routes' should become 'Red and Green Routes'.
9. The plans, from Waltham Forest Council and Lewisham Council, show traffic-calmed zones which promote cycling. The Walthamstow proposal was described as a Mini-Holland and the Lewisham proposal as a Liveable Neighbourhood.
10. The diagrams show how multi-mode transport planning could work in London. Conventional transport planning focuses on motorised vehicles, including cars, trucks, buses and trains. Long distance safe cycling routes encourage the use of cars for commuting and for leisure trips. Local safe routes to stations and bus stops increase the use of public transport.
11. Cross Rail was due for completion in 2018 at a cost of £15.4bn with a projected Benefit:Cost Ratio of 1.97:1. At the time of writing (December 2018) there are fears if it costing £19bn to complete. Notes: (1) these charts attempt to compare the costs and benefits of Cross Rail 1 with those of a Cycle Rapid Transit Network (2) The capital cost of Crossrail was put at £15.4 bn in 2018 and this figure was applied to an analysis of a complementary Londonwide Cycle Network (3) the BCR of 1:97:1 for Crossrail is the TfL figure and the BCR of 5.5:1 for cycle infrastructure comes is from the Department for Transport 2014 report on *Value for Money Assessment for Cycling Grants* (4) the running costs for Crossrail are assumed to be equivalent to the ticket revenue from 200m trips/year (5) the ticket revenue from Crossrail is taken to be the £3.40 average cost of a Tube ticket for 200m tickets (6) the number of trips/year on the Cycle Network is seeing as falling between the trip numbers on Crossrail and the number of comprised in a 10% mode share of all trips in London (7) the figures for CO2 emissions are from <https://www.aef.org.uk/> (8) because of their relative speeds, Crossrail is best for medium to long trips and cycling is best for short to medium trips. The networks should be integrated with each other and with bus and walking networks.
12. Notes on the mode share diagrams: (1) the 2018 mode share data is from TfL's *Travel in London Report 11* and the 2030 diagram is based on the following facts, assumptions and estimates (2) the 2019 mode share of cycling will be similar to 2018: 2.2% (3) investing at a similar level to Cross Rail 1 (£1.5bn/year) would increase cycle network capacity by 125 miles of superhighway-standard cycleway per year (@ £12m/mile) (4) The extra capacity will be able to support an average 2%/year mode share increase (=600,000 cycle trips/day) (5) the actual figure is likely to be below this in the

early years and above it in the later years as the new cycleways are connected to form a Londonwide network (6). The 2%/year increase in cycling's mode share can be regarded as 1%/year to accommodate the expected increase in transport demand + 1%/year to make London a healthier and more sustainable city. (7) London's population and its travel demand both rose at about 1%/year from 2000 to 2017 (8) Cross Rail took 11 years to build and is expected to carry 548,000 trips/year. (9) Since Amsterdam has a cycling mode share of 41% the London mode share could be above 25% when, in 2030, it has 1,375 miles of dedicated cycleway (equivalent to 50 radial cycleways from Parliament Square to the M25).



Austin Mitchell MP declared that *'The case for encouraging cycling is so obvious that... it should be central to Government policy... Given the strength of the argument for cycling, it is amazing that so little is being done'* (House of Commons, 10th Dec 1997).