

European Practices in Sustainable Land Use and Transportation

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2008 Travel Study Project

- Transportation, Land Use and Sustainable Development
 - Policies, projects and programs
 - Planning and decision making processes
 - Outcomes
- FHWA/AASHTO – 12 participants
 - Begin two-way dialogue

Places Visited

- Netherlands
 - The Hague (470 K)
 - Amsterdam (750 K)
 - Rotterdam (580 K)
- Denmark/Sweden
 - Copenhagen (510 K)
 - Malmo (280 K)
- United Kingdom (60.9 M)
 - London (7.5 M)
 - Oxford (160K)

US and Europe Similarities

- Coordinating transportation and land use planning is challenging in both
- Growing VMT
- Policies that increase appeal and efficiency of travel choices are essential
- Sprawl

Sprawl Characteristics

USA

- Auto oriented
- Zoning
- Lower density
- Lack of centers
- Limited or no regional public transport

Europe

- New commercial and industrial at new transport links and nodes lead to residential
- Higher density
- Attractive centers
- Regional public transport
- Edge - Single land use, limited mixed use and transit

US and Europe Differences

- Pricing and Regulatory mechanisms accepted in Europe
- Preserving the center city key in Europe
- Regional transit provided in Europe
- Institutional setting

% Trips by Mode, All Purposes

	Automobile	Transit	Bicycle	Walk/Other
United States	89	2	1	7
United Kingdom	65	14	4	17
Netherlands	45	7	28	20
Denmark	42	14	20	24

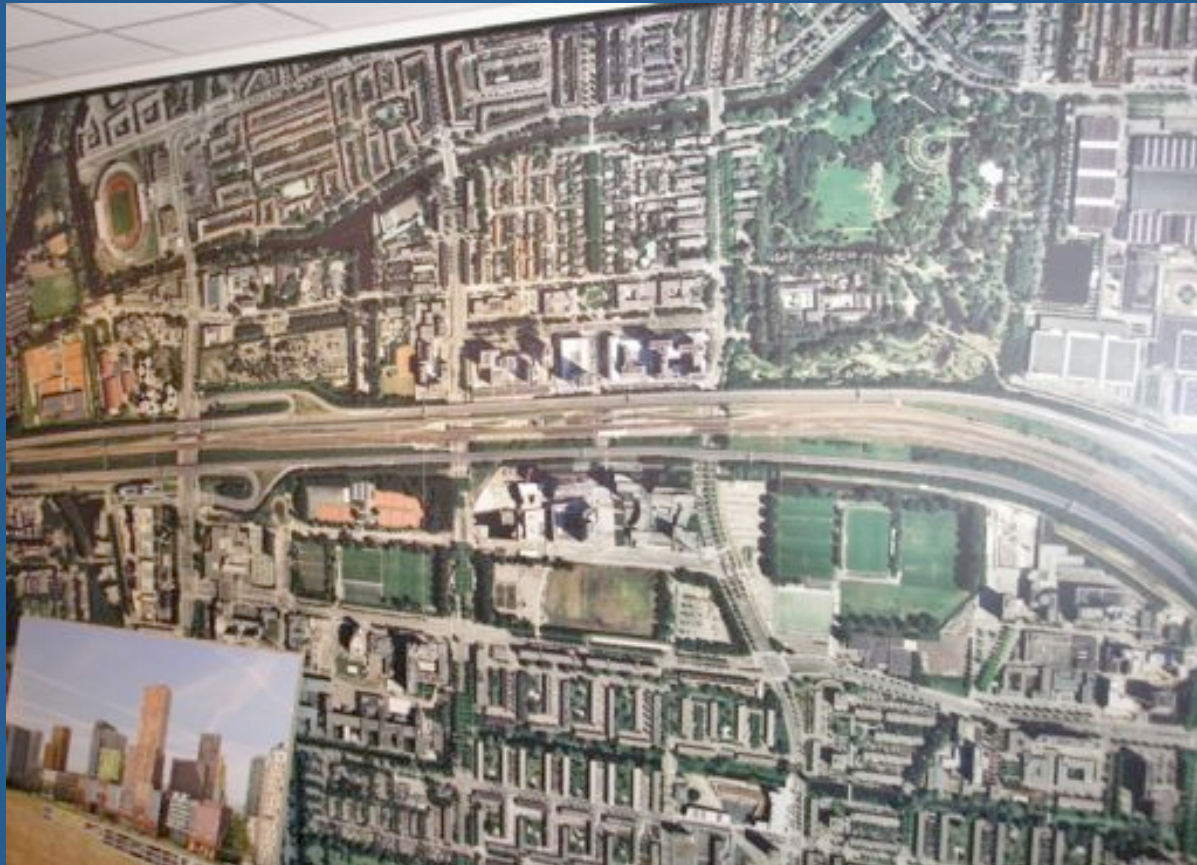
The Netherlands



Netherlands Development Policies

- National government has significant control
 - Regulatory and financial instruments used to implement policy
 - Compact growth
 - Transportation management
- Make commute distances as short as possible
- Focus growth in existing built up areas
- Funding housing development around public transport stations

Zuidas Amsterdam



Zuidas Amsterdam



Zuidas Amsterdam



Cycling in the Netherlands



Ministerie van Infrastructuur en Waterstaat

Bicycle Infrastructure



Bicycle Infrastructure



Bicycle Infrastructure



Bicycle Infrastructure



Bicycle Infrastructure



New Metro



New Metro (ND)



1st Zuidtangent route



Patronage (1st route)

- 40.000 passengers per day (March 2008)
- Every year 10-15% more passengers
- Heaviest loadings in Hoofddorp: almost 13.000 passengers per day (both directions)
- Patronage up to 99% higher than estimated
- Eastern section below estimates
- Use of PT increased since Zuidtangent operating (up to 47% in 3 years)



Zuidtangent Madurodam



Denmark



Denmark's Finger Plan - 1947



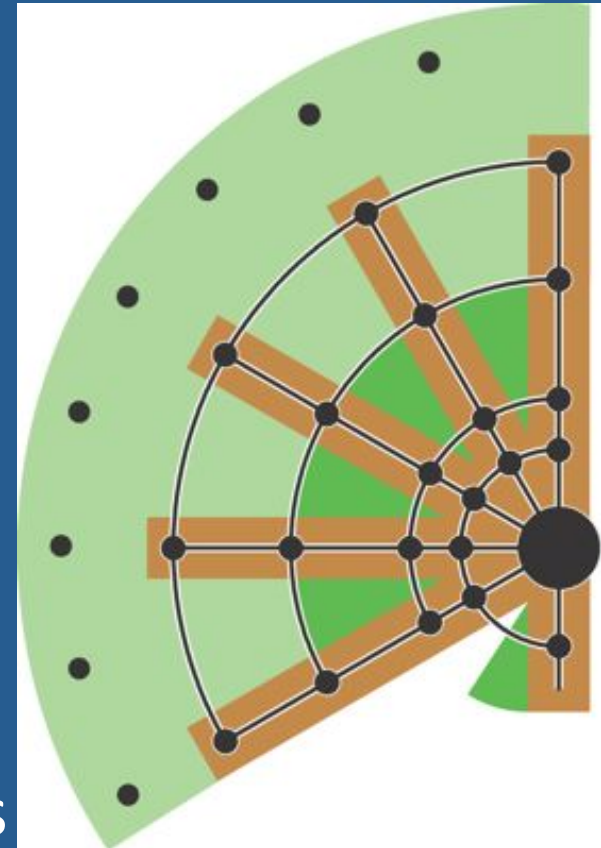
Transport and Land Use Planning

Principles

- Urban growth along 'fingers'
- Green wedges between 'fingers'
- Working areas near public transport

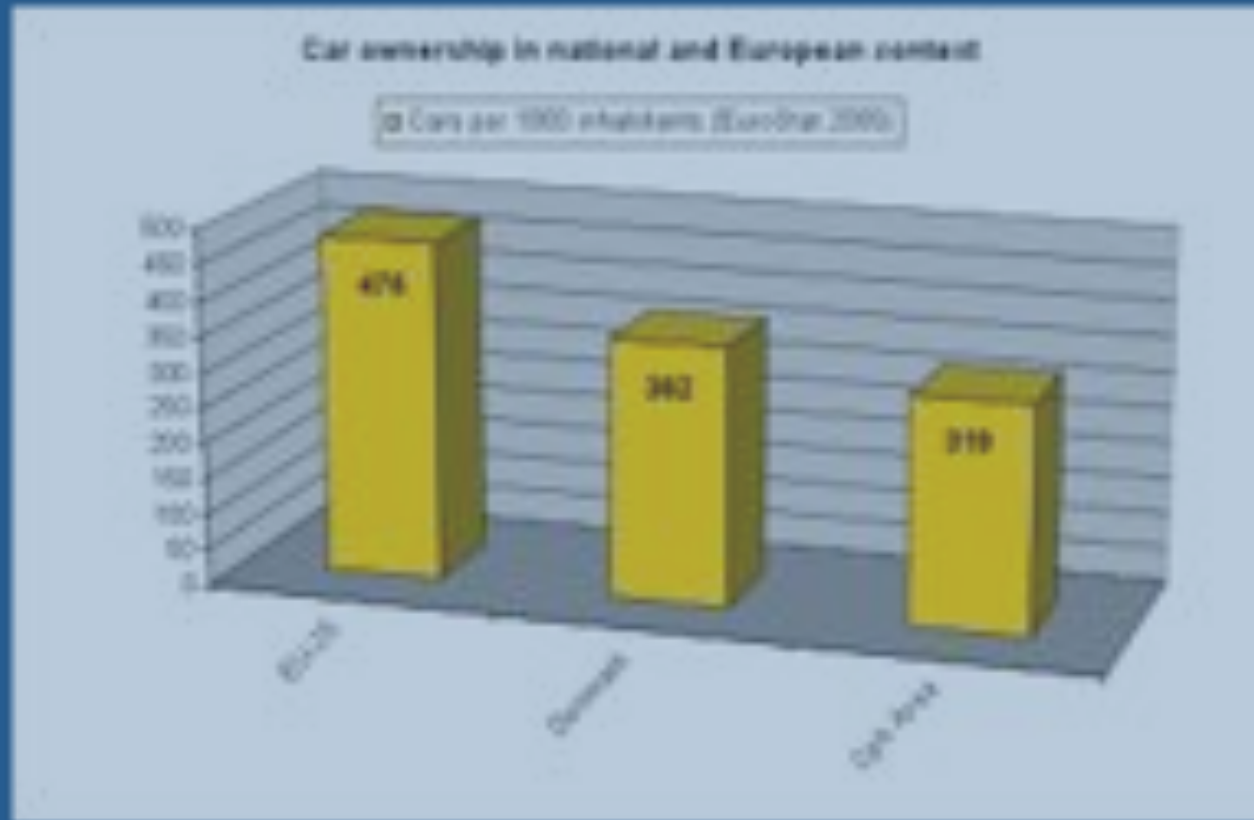
Goals

- Easy transport along and between fingers
- Easy access to recreational areas



Passenger Cars

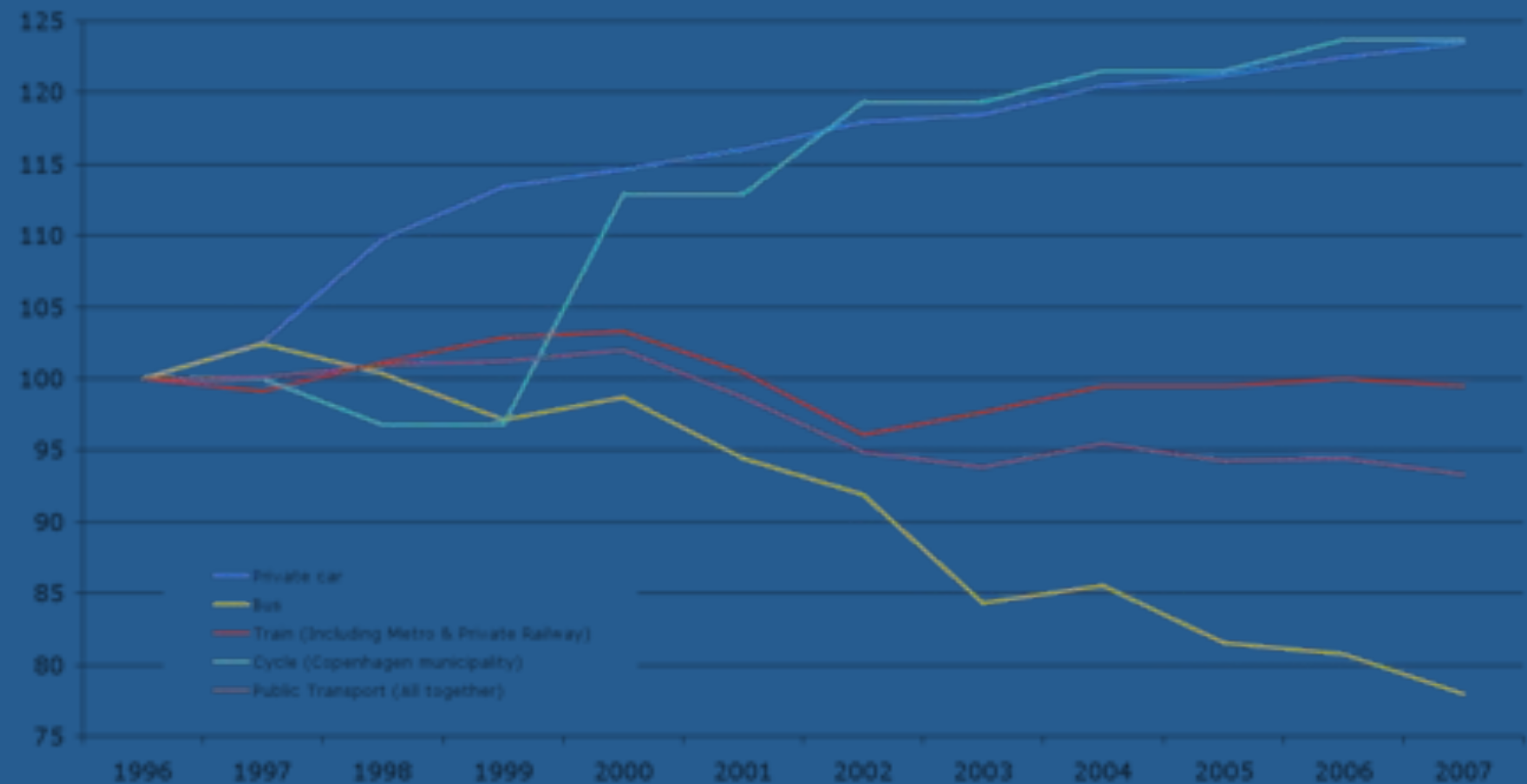
Denmark and especially Copenhagen still low on car ownership



Total growth in Transportation

Development in persontransport volume in Greater Copenhagen Area

Index: 100=1996



Danish car ownership and taxation

Buy one car

**– pay for more than
three**

MAZDA2	\$8.500
+VAT (25 pct.)	\$2.125
+Car tax (180 pct.)	\$19.125
TOTAL PRICE	\$29.750



Denmark's Green Transport Plan

- Green car tax – lowers the taxes on more fuel efficient vehicles
- Introduce smart road pricing (peak pricing)
- Massive investment in public transport (rail)
- More bicycle paths
- 150 Billion Kroner (\$29.5 B USD) through 2020
 - US spending is opposite Denmark

Metro

13 miles long

22 stations

34 driverless trains

45 mil. passengers a year

Yearly costs 89 mil. US\$

Yearly revenue 94 mil. US\$



A Sustainable Mode of Transport

- Constructed as hills
- Regeneration of power
- Low energy lights
- Utilize daylight in underground stations
- Can run on renewable energy sources
- Supports urban densification



Development at Stations



Redevelopment



Redevelopment



Bicycle Infrastructure



New Bicycle Infrastructure




New Bicycle Infrastructure





United Kingdom



The Prince of Wales' Foundation for the Built Environment

September 25th, 2008

Shared Space

Emerging ideas for streets, safety and civility

Ben Hamilton-Baillie

www.hamilton-baillie.co.uk

hamilton-baillie
a s s o c i a t e s

Kensington High Street

- Main Street of Central London
 - 40,000 AADT
- Late 1990's – Improvement study
- 2000 – Consensus on Strategy
 - Away from standard traffic engineering
 - Streetscape design:
 - Pedestrians were put first
- Elected official signed paperwork to be personally liable if problems

Kensington High Street

Before



<http://www.rbkc.gov.uk/>

Design Characteristics

- Completed 2003
- Median increased to 3 meters
 - Bike parking
 - Tree planting
- Removal of 850m ped. guiderails
- Curb ramps
- Combined street furniture, benches

Kensington High Street



<http://www.rbkc.gov.uk/>

Kensington High St (Before)



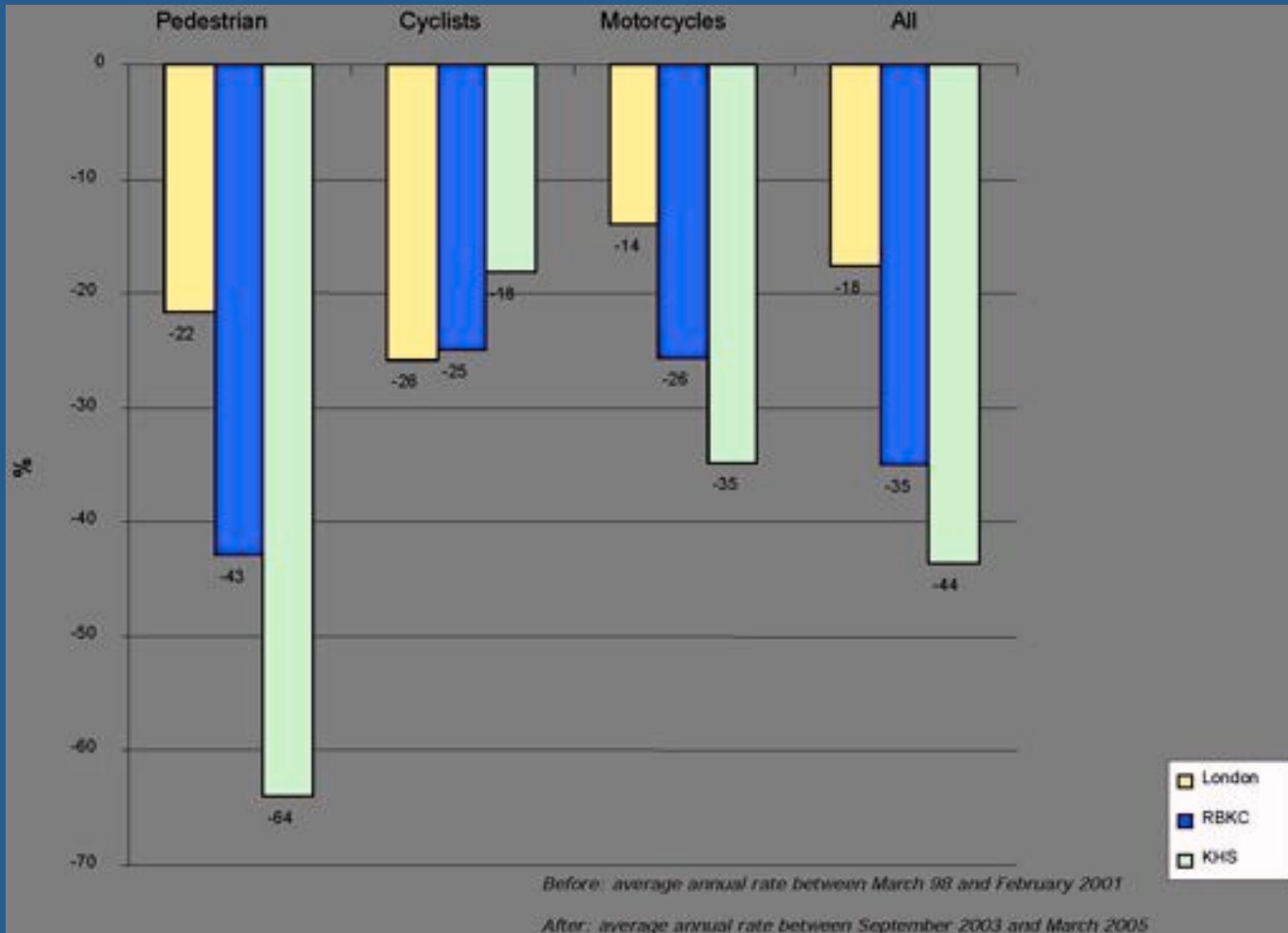
Kensington High St (After)



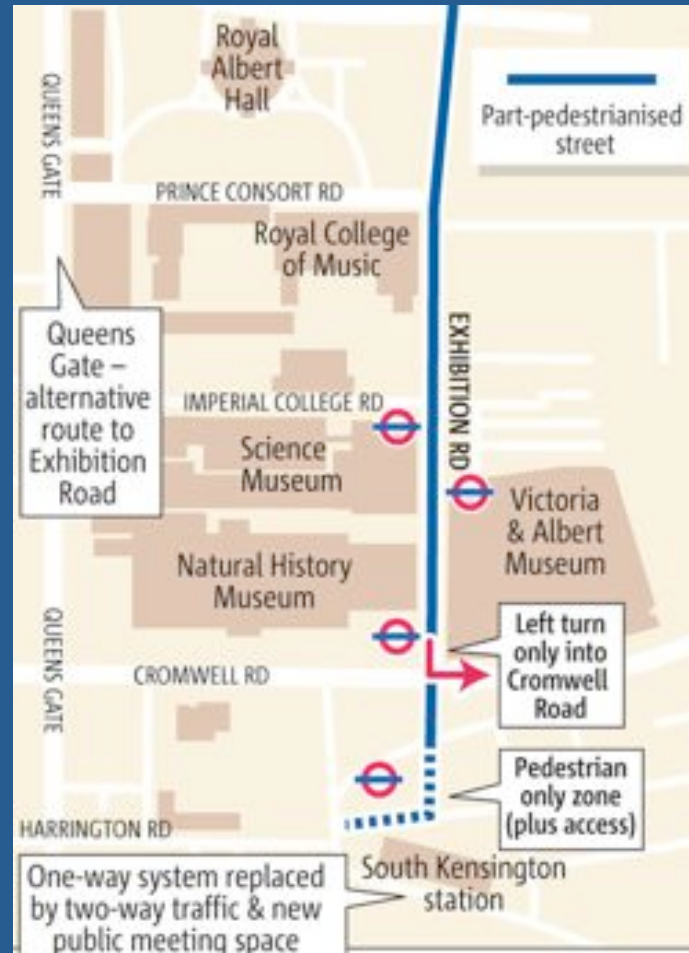
Kensington High St (After)



Safety Impact of Project



Exhibition Road, London



Exhibition Road, London



<http://www.rbkc.gov.uk/>

Neighborhood Street



High Speed Rail



Redevelopment



Redevelopment



Congestion Charge



Clear Delineation of Zone



Outside the Zone



Key themes

- Political will
- Institutional capacity for land use and transportation coordination
- Use of both policies and incentives
 - Attractive public transit and economic tools to regulate car use

Thank You!

