

Validating the Street Mobility Toolkit: Triangulation of findings in Finchley Road

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On behalf of the Street Mobility and Network
Accessibility project team

www.ucl.ac.uk/street-mobility

[@streetmobility](https://twitter.com/streetmobility)

We thank our
funders:

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Pioneering research
and skills

E · S · R · C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL


Arts & Humanities
Research Council

Health and Neighbourhood Mobility Survey

Participatory mapping



Video survey



The UCL Street Mobility project

...experience any of the following difficulties getting around...

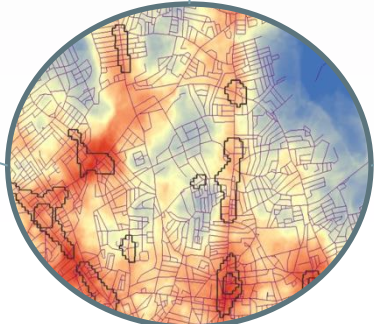
Tick all that apply

- Busy road or other barrier
- Lack of crossing points/crossings do not allow adequate time to cross
- Lack of lighting, pavements or paths
- Pollution
- Fear of crime
- Fearful of getting lost
- Takes too much effort (e.g. hilly)
- Takes a long time
- Other

Please specify: _____



Street audits



Spatial analysis

Traffic density: High

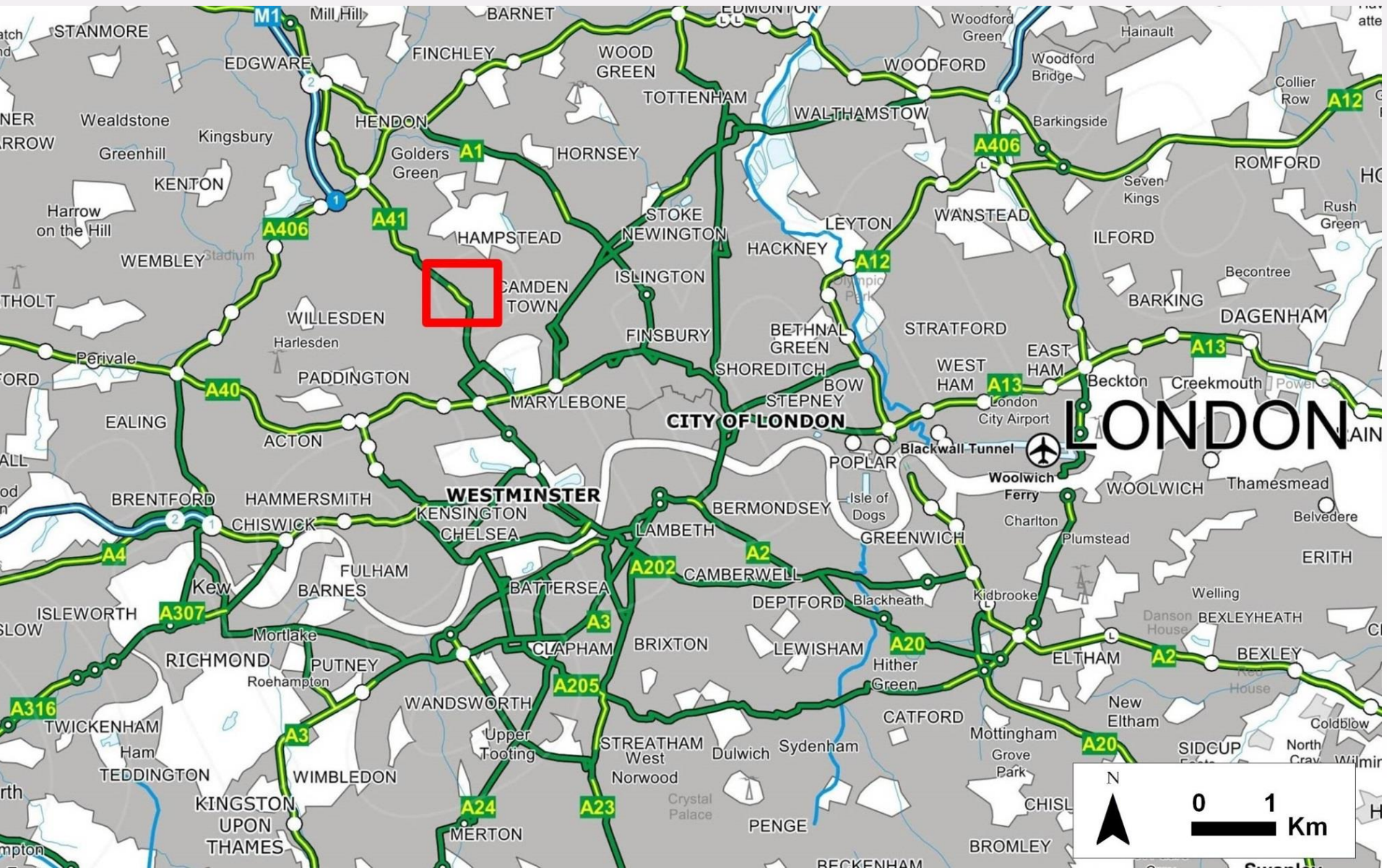
ACTUAL SPEED STATIONARY

In this scenario, which of the two options would you choose?

Option A	Option B
Cross at this point Saving 20p off your one-way fare	Do not cross the road and give the current fare
<input type="radio"/> Option A	<input type="radio"/> Option B

Stated Preference survey

Case study 2: Finchley Road



Study results

Finchley Road



Using triangulation to assess a suite of tools to measure community severance

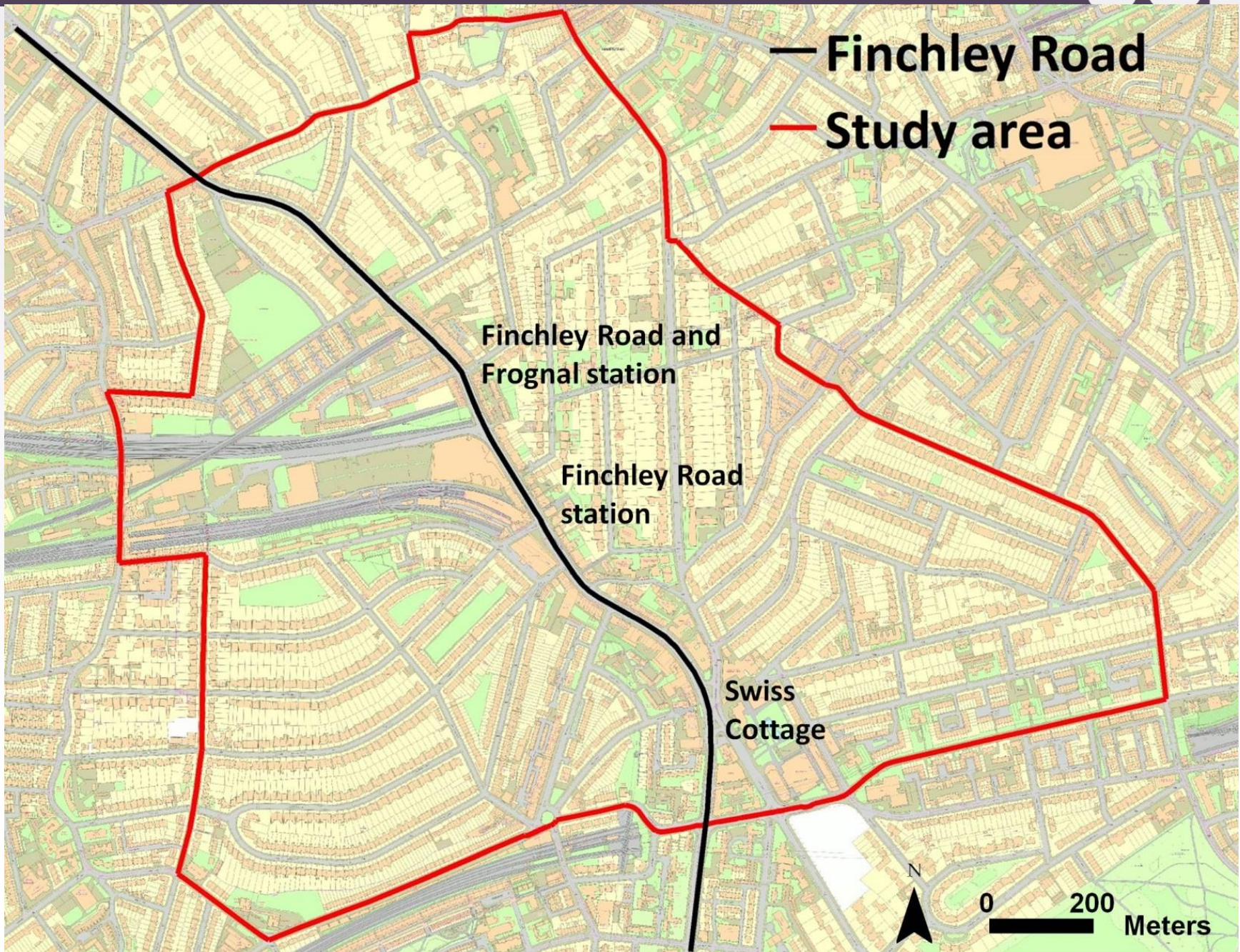
Mindell JS, Anciaes PR, Dhanani A, Stockton J, Jones P, Haklay M, Groce N, Scholes S, Vaughan L, on behalf of the Street Mobility and Network Accessibility team.

Journal of Transport Geography. 2017;**60**:119–129

Doi. [10.1016/j.jtrangeo.2017.02.013](https://doi.org/10.1016/j.jtrangeo.2017.02.013)

Available open access:

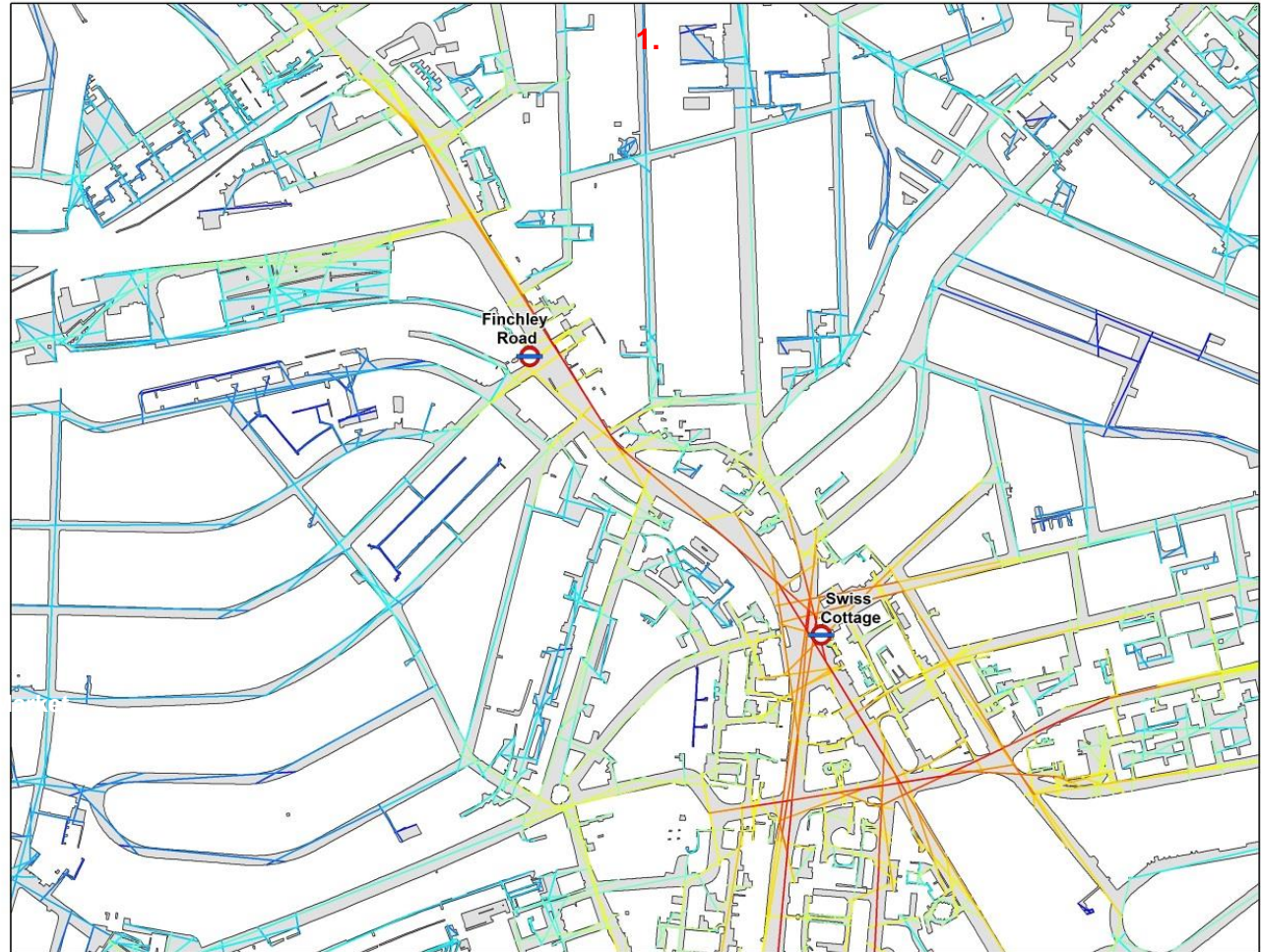
www.sciencedirect.com/science/article/pii/S0966692316305026



Walkability and connectivity - HIDE

- Space syntax showed that Finchley Road is structurally important for pedestrian activity. Red, Blue
- The walkability model shows that Finchley Road is one of the peak walkability areas in London.
- However, traffic flow data showed that it is also the arterial with the highest motorised traffic levels of any non-motorway road in London. This co-existence of heavy traffic and high walkability suggests community severance will be high.
- Free text comments from participants confirmed this.

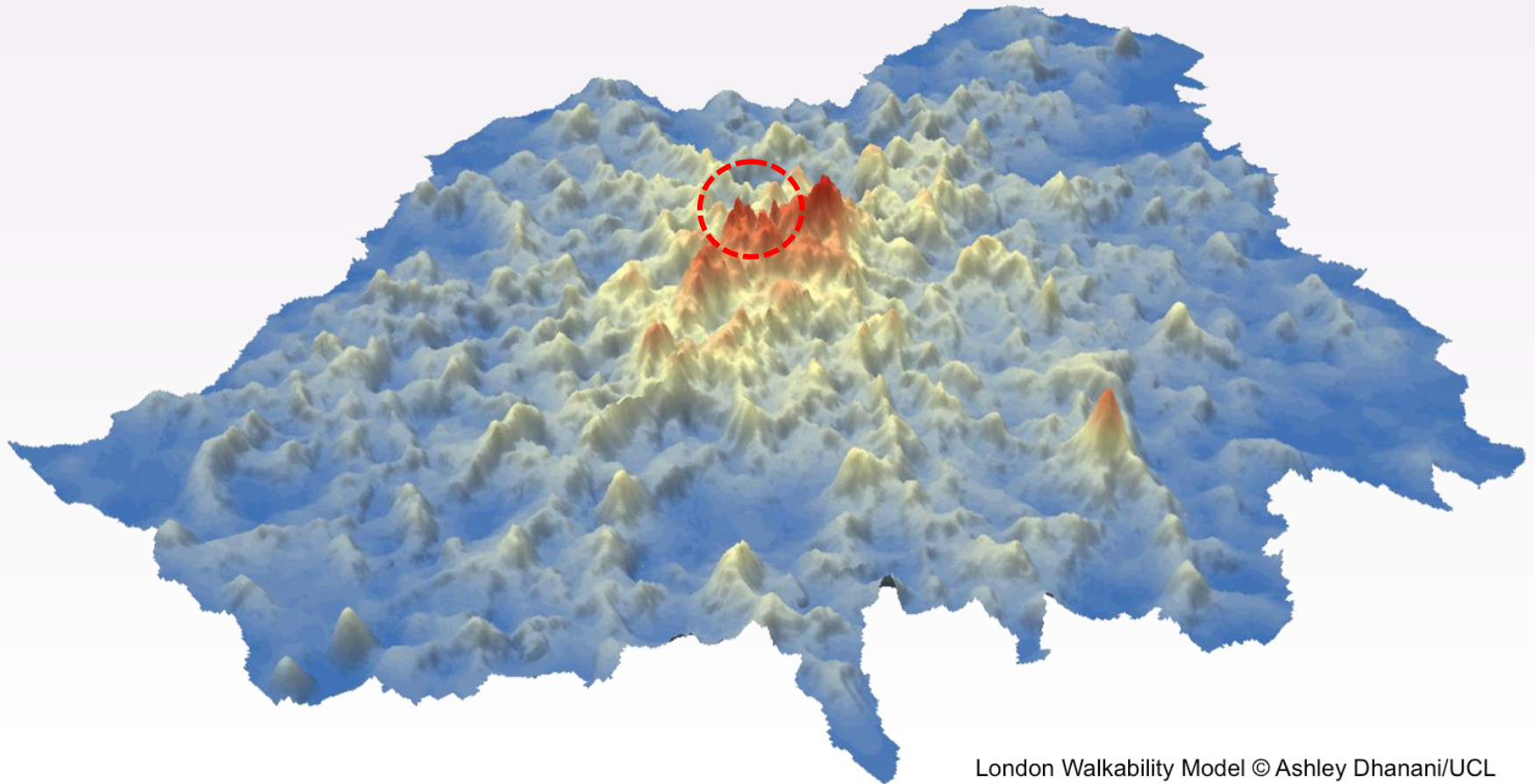
Syntax analysis (local scale)



O2 Shopping Centre

London's walkability

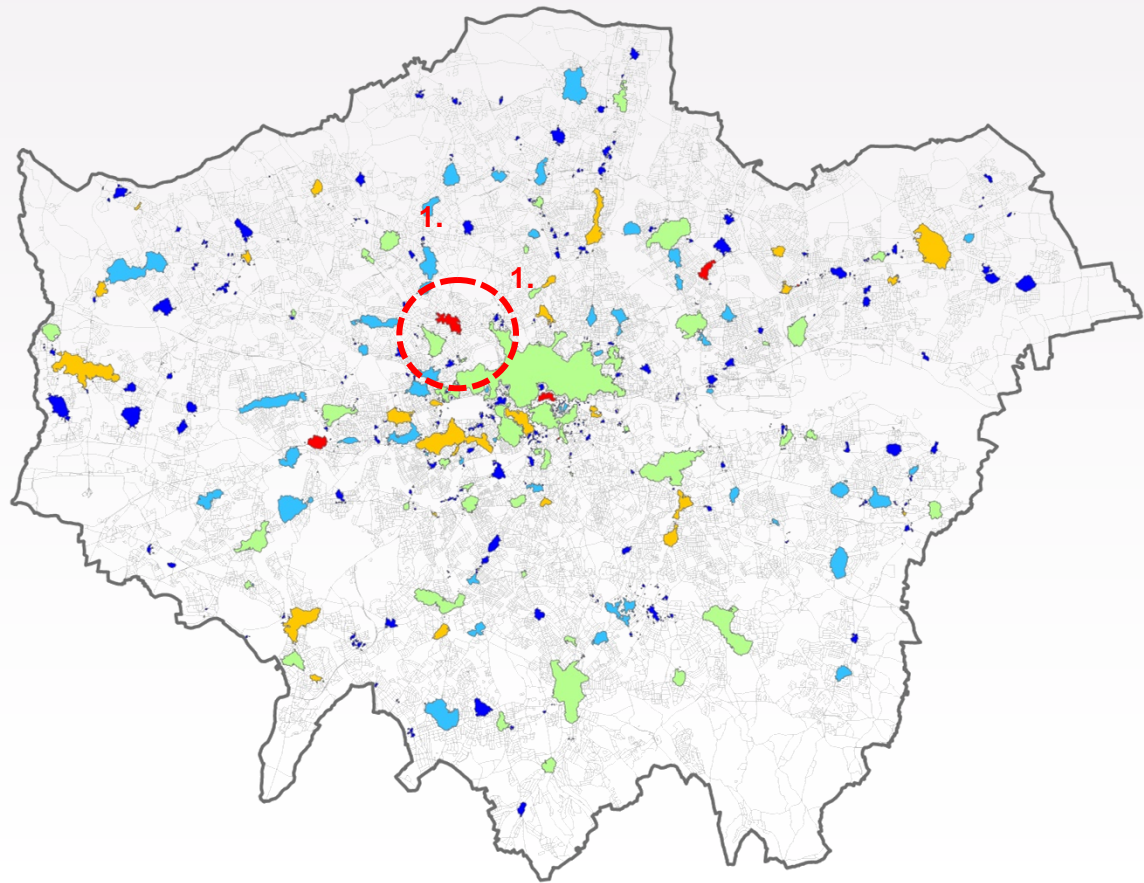
Context



London Walkability Model © Ashley Dhanani/UCL

Levels of traffic within peak walkability boundaries

- 39,500-46,500 vehicles (07.00-24.00)
- High % heavy good vehicles & buses/coaches

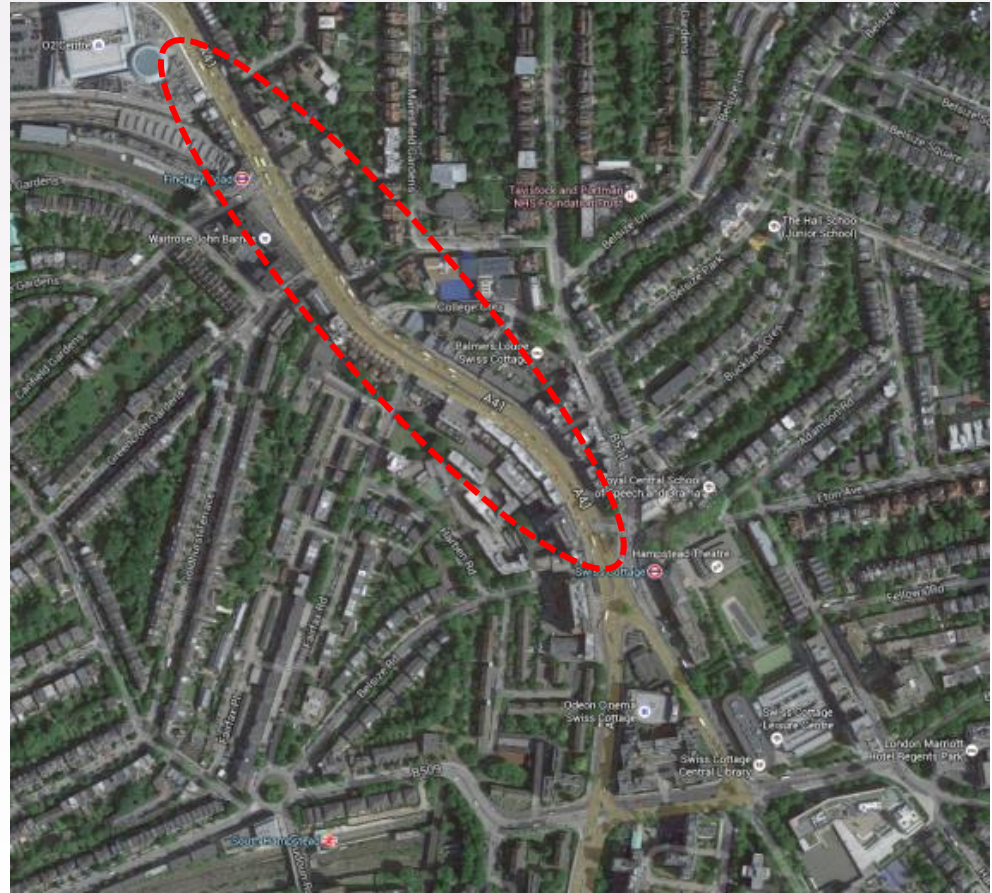


Walkability and connectivity

“Finchley Road is probably the most congested, dangerous, noisy, dirty road in the world.”

(Male, 65-74; Health and Neighbourhood Mobility Survey)

- Local residents asked on the street report that the road is a strategic destination with popular local amenities (Swiss Cottage Farmers' Market, Leisure Centre, O2 Shopping Centre)

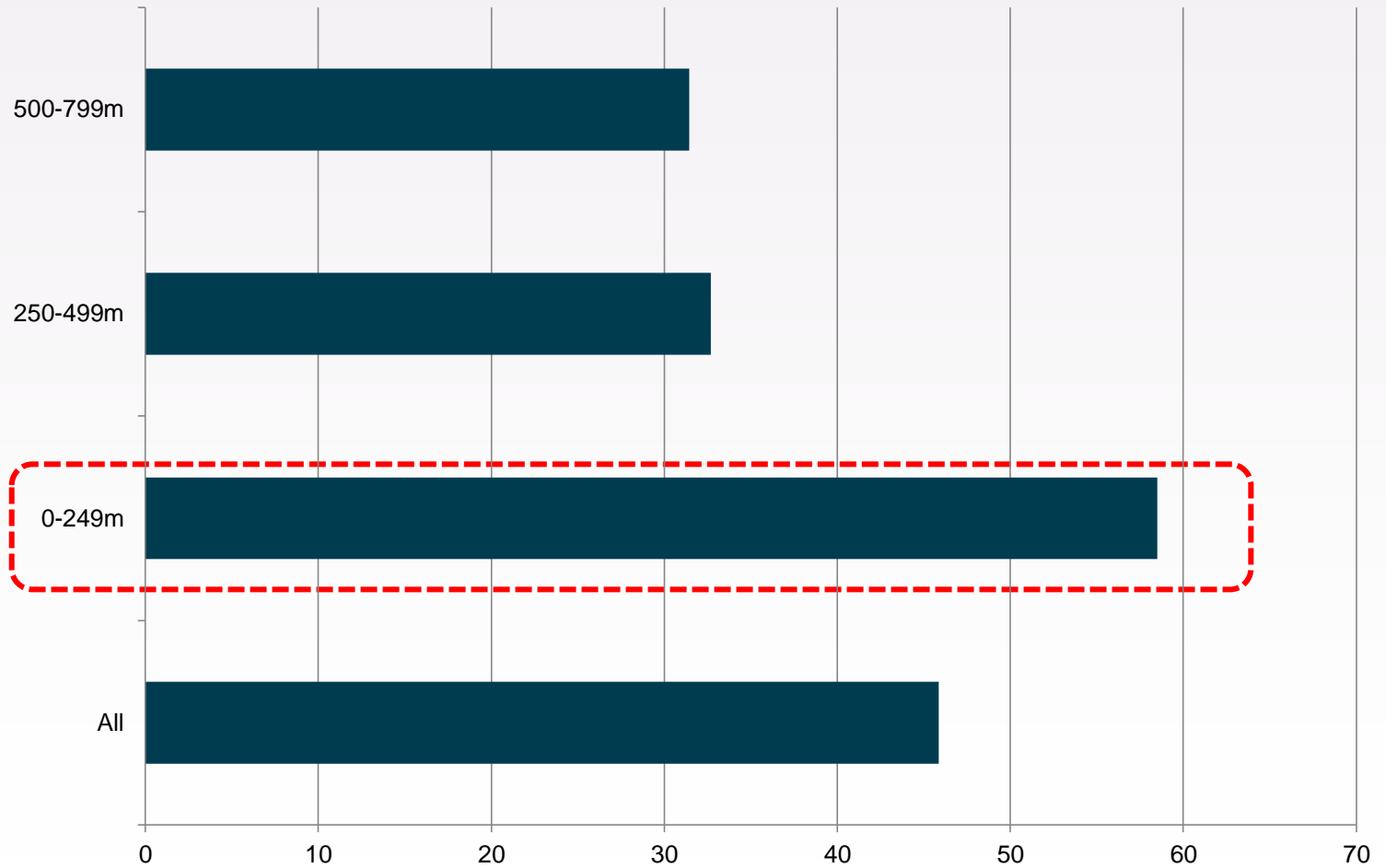


Factors affecting participants' self-reported ability to walk around their neighbourhood

Factors	Never affected (%)	Occasionally affected (%)	Often or always affected (%)
Volume of traffic, N (%)	109 (53%)	66 (32%)	30 (15%)
Speed of traffic, N (%)	111 (54%)	65 (32%)	29 (14%)
Other N (%)	160 (79%)	29 (14%)	14 (7%)

Mobility and destinations

% at least occasionally affected by volume of traffic (own road):
P=0.002



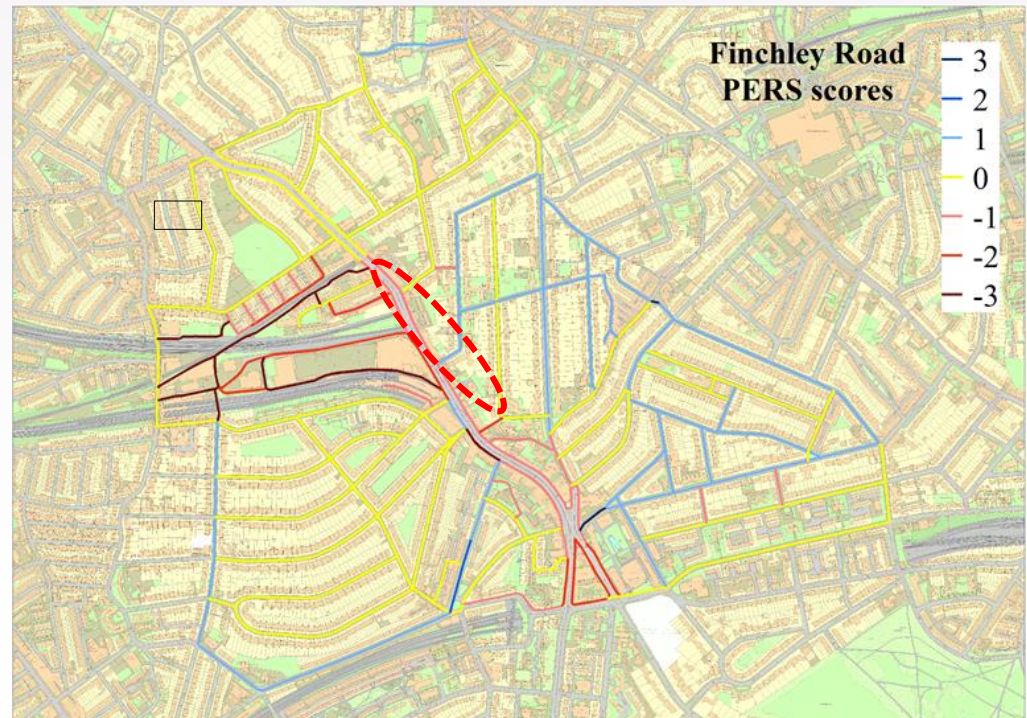
Perception
 (participatory
 mapping) of road
 as socio-
 economic border
 between two
 different groups,
 reinforced by
 findings from the
 Index of Multiple
 Deprivation

(from Oliver
 O'Brien's blog of
 IMD deciles)



The PERS survey results show there are barriers to walking other than road traffic, such as railways and dark alleyways (in the NW part) and slopes (in some streets leading to the Finchley road in the E part)

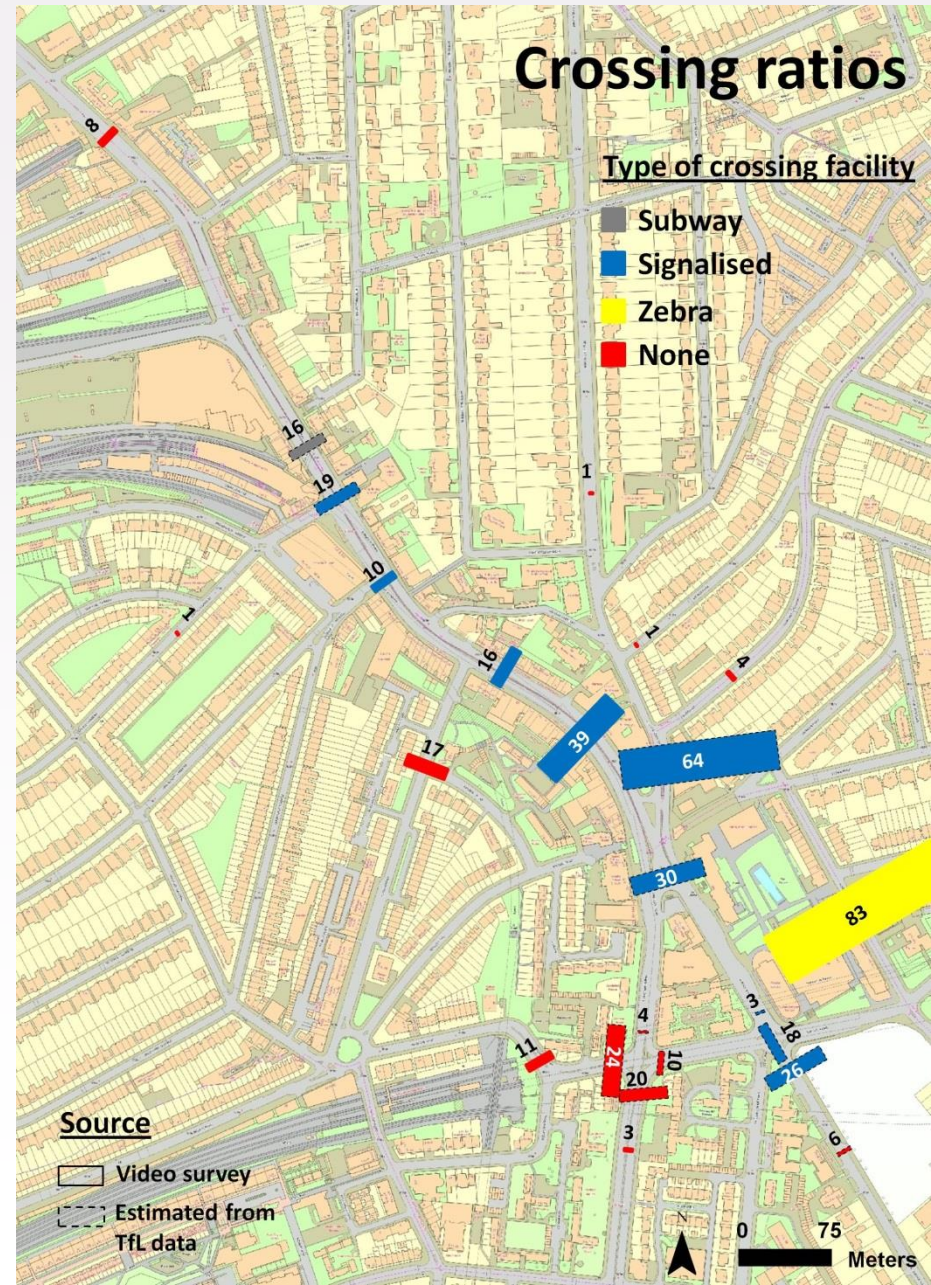
Mobility and destinations



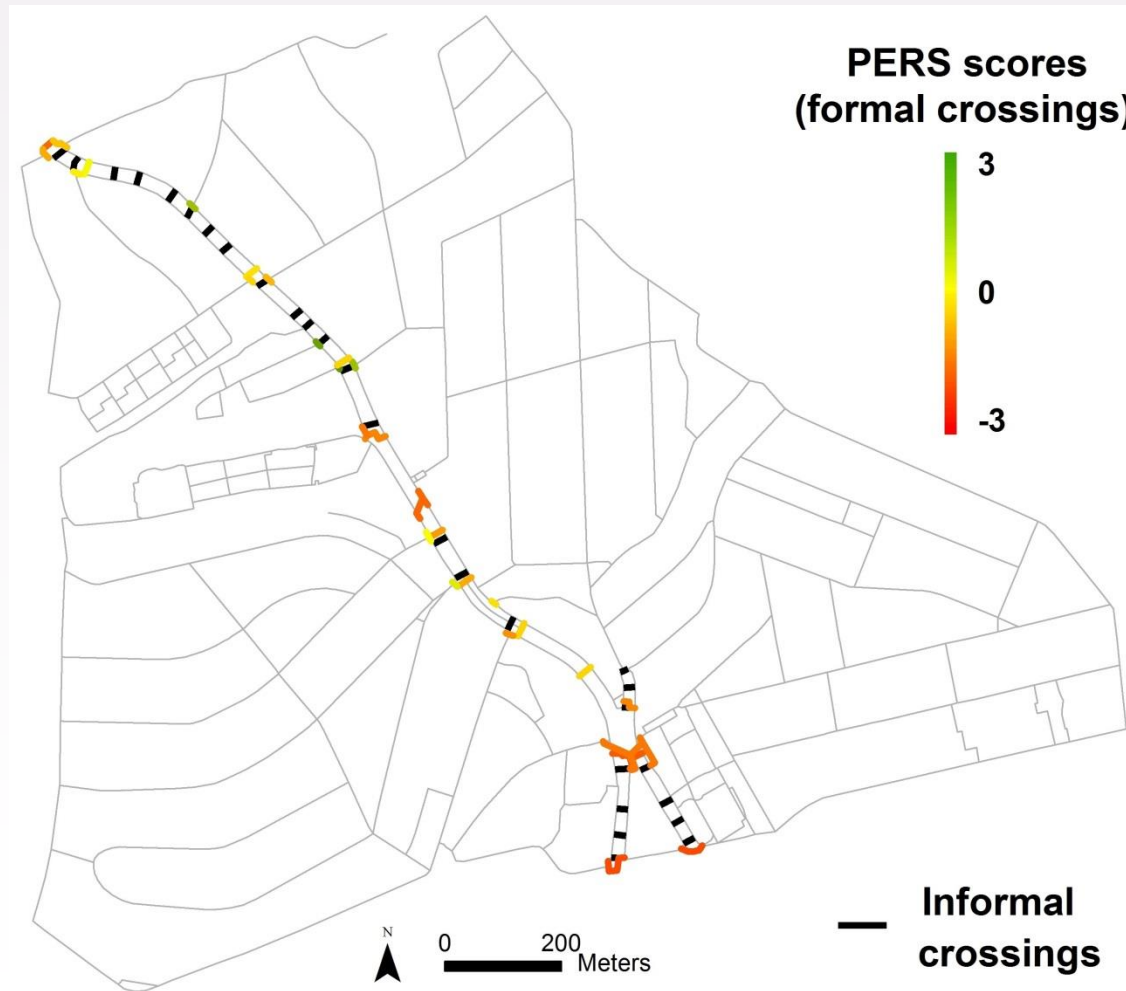
25% of survey participants who did not live on the busiest road reported that they avoided walking along the busiest road



Crossing Finchley Road



Crossing Finchley Road



Participants in the SP survey prefer to use straight pelicans

Mobility and destinations



Participants in the SP survey prefer to use straight pelicans unless there is another type of crossing that is closer

Staggered pelican	0.3
Footbridge	1.6
Underpass	3.6

Walking times (minutes) above which people would choose those other types of crossing

Air pollution- HIDE

1 in 5 PM participants cited pollution as a negative perception of the road

36% Health & Neighbourhood Mobility Survey participants reported air or noise pollution presented a difficulty for them in walking around the local area

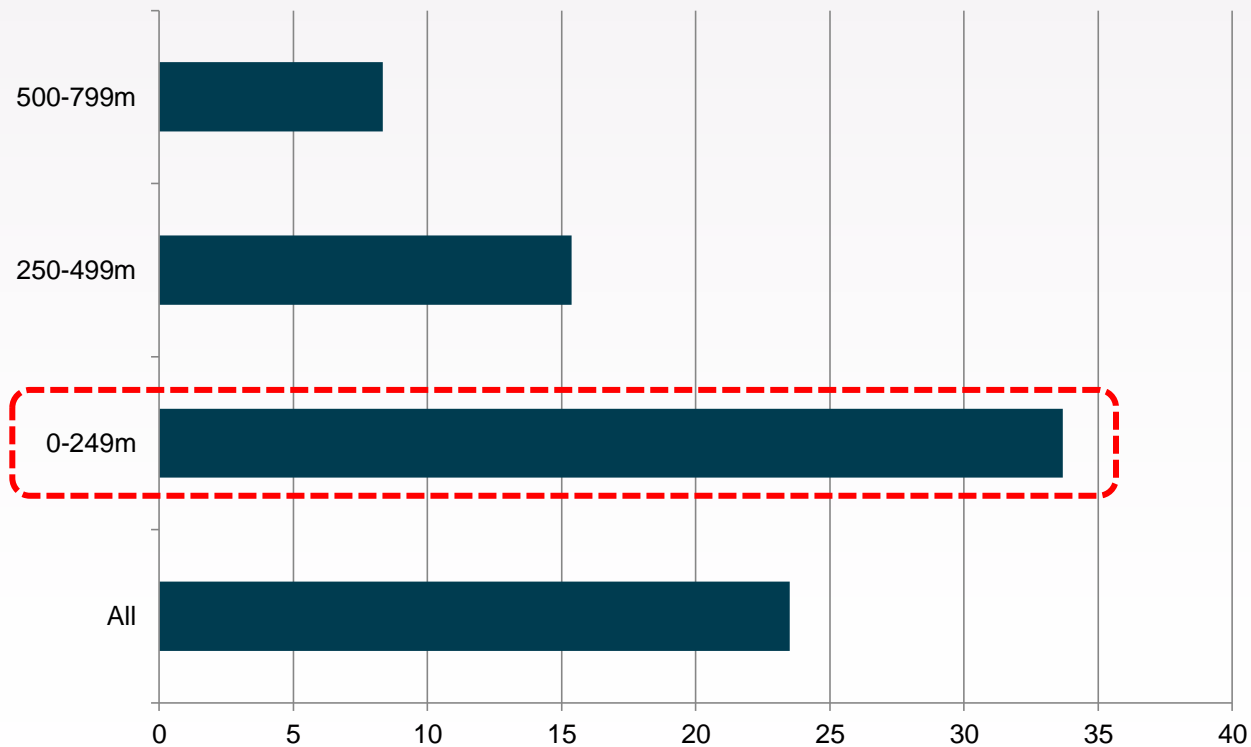
Noise and air pollution

61.04 $\mu\text{g}/\text{m}^3$ mean Nitrogen Dioxide levels for October 2014 - October 2015
(EU annual limit is $40 \mu\text{g}/\text{m}^3$)

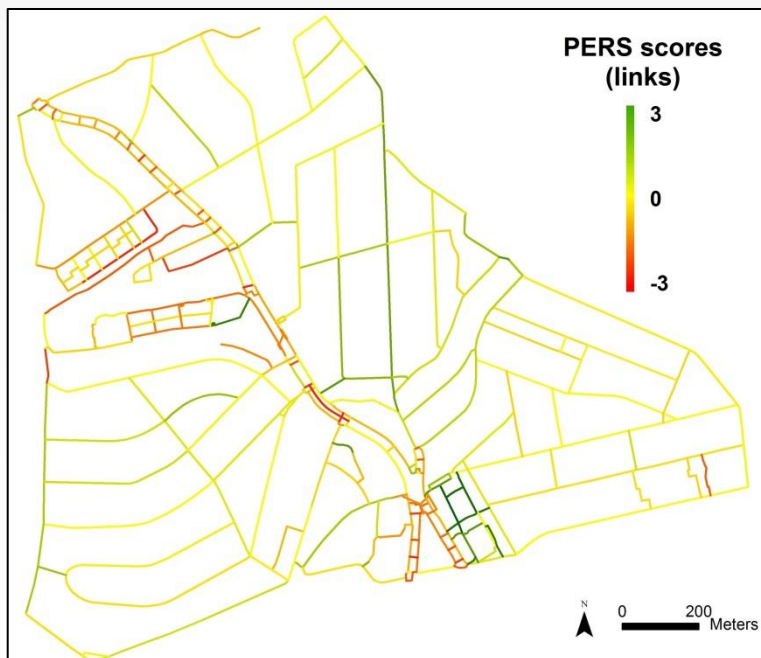
"Exhaust fumes from huge airport buses are dreadful. Killing us."
(H&NM Survey participant)

"I avoid the pollution on Finchley Road by using the bus - it's foul crossing by the cinema (Swiss Cottage), really disgusting."
(Street survey)

**Noise / air pollution
(% problem on road): P=0.002**



People also report that the pavement conditions are not adequate for the people with disability.

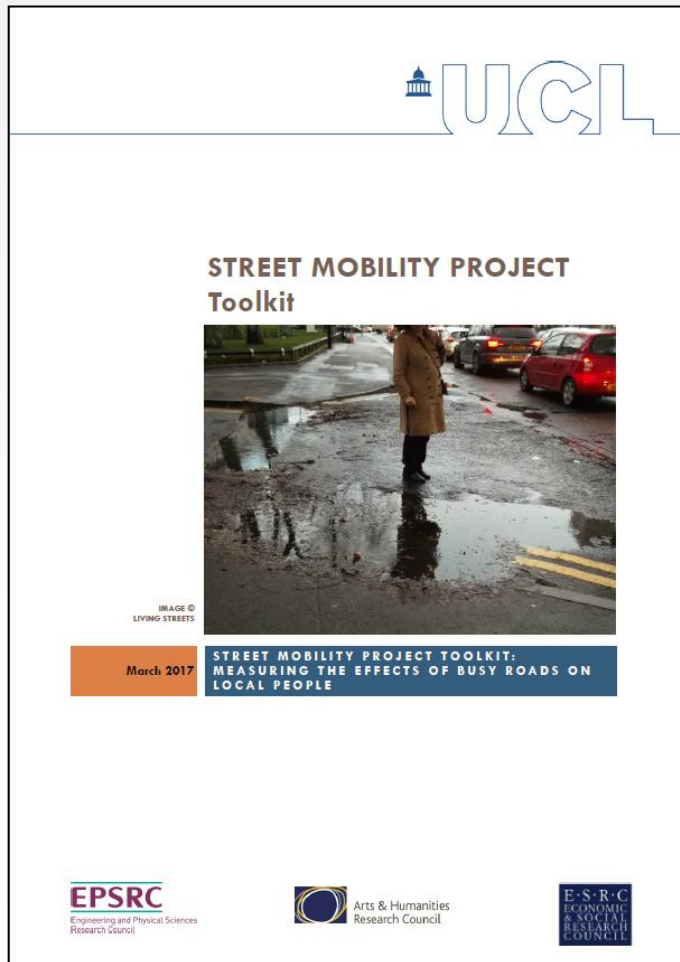


"I have arthritis and use a walking stick. Many of the pavements are cracked and I have fallen on several occasions."

H&NM Survey participant

Community severance measurement toolkit

www.ucl.ac.uk/street-mobility/toolkit



Most of the toolkit is now available

www.ucl.ac.uk/street-mobility

(The valuation tool will follow in the next few weeks)