Developing a suite of tools to assess the effects of busy roads on local residents

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On behalf of the Street Mobility and Network Accessibility project team

www.ucl.ac.uk/street-mobility

@streetmobility

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Arts & Humanities Research Council

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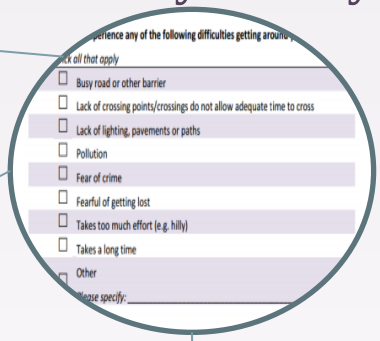
The UCL *Street Mobility* project

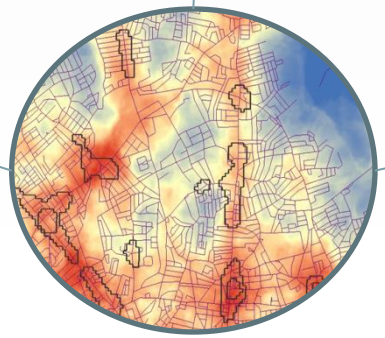
Video survey

Participatory mapping

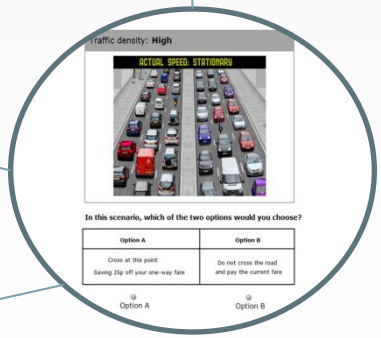
Health and Neighbourhood Mobility Survey



Street audits



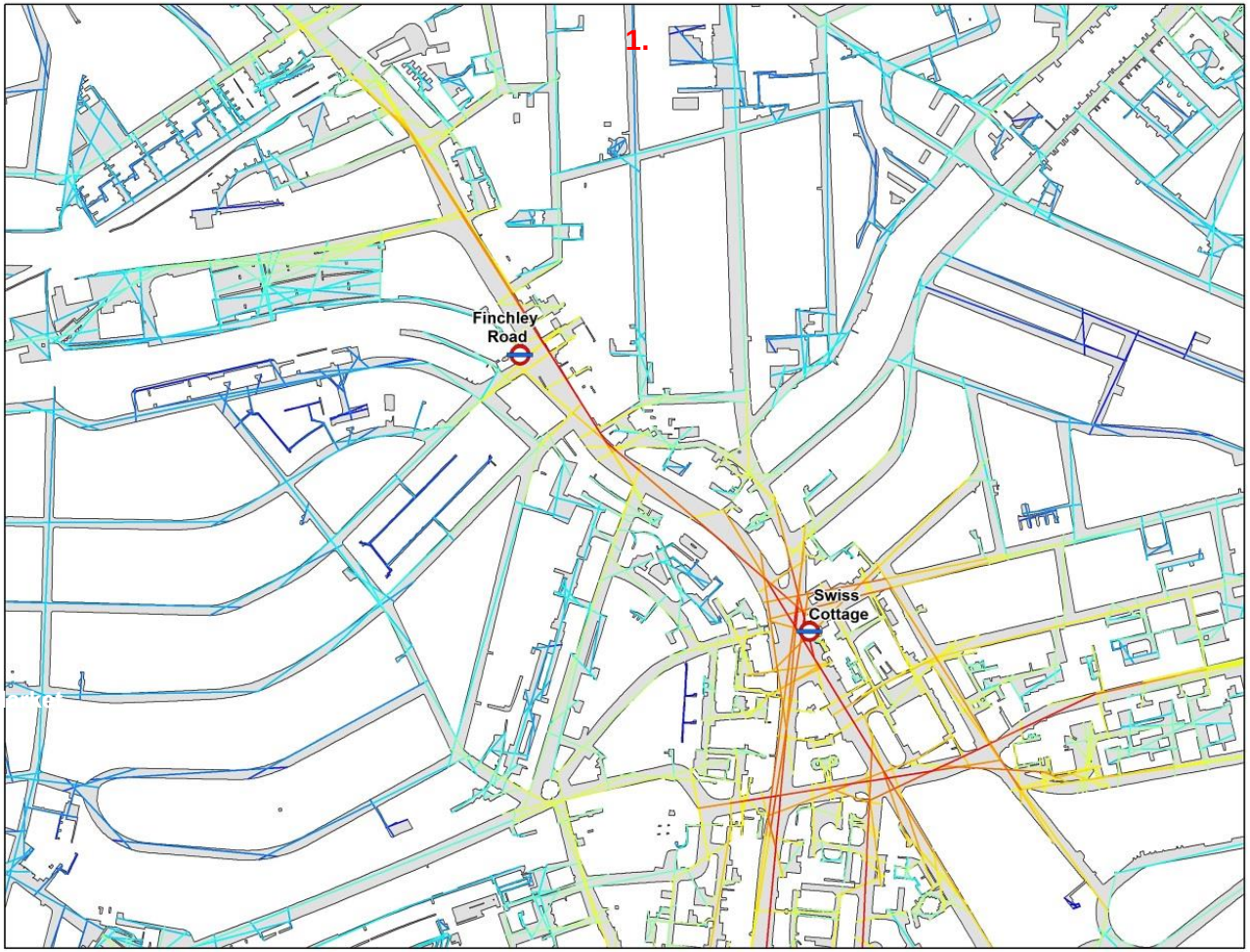
Spatial analysis



Stated Preference survey

Study results
Finchley Road

Syntax analysis (local scale)



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)

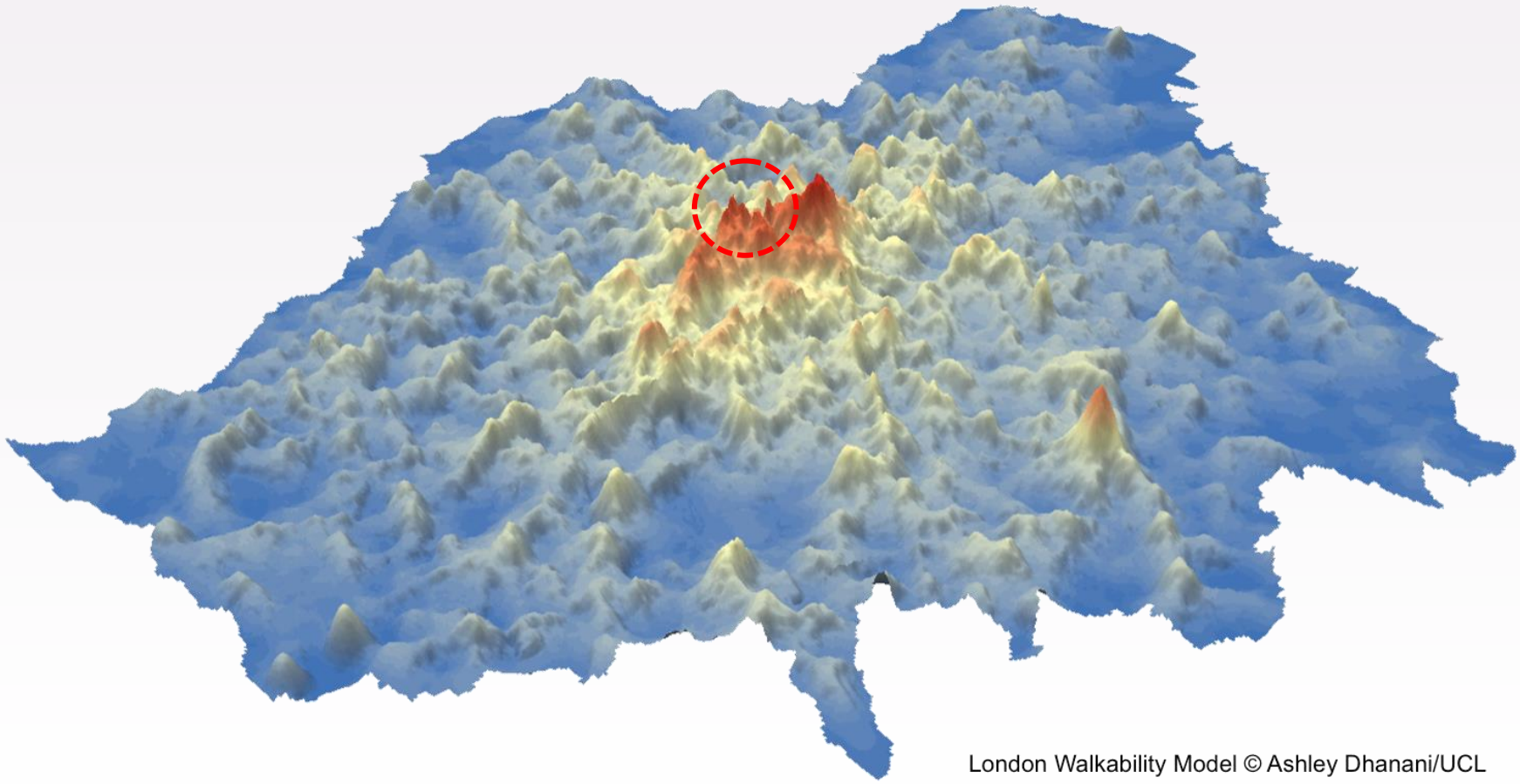
Context


A41
A41
Finchley Road
Waitrose John Barnes
College Green
Palmers Lodge Swiss Cottage
Hampstead Theatre
Swiss Cottage
Odeon Cinema Swiss Cottage
Swiss Cottage Leisure Centre
Swiss Cottage Central Library
A502

HIDE

- 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)

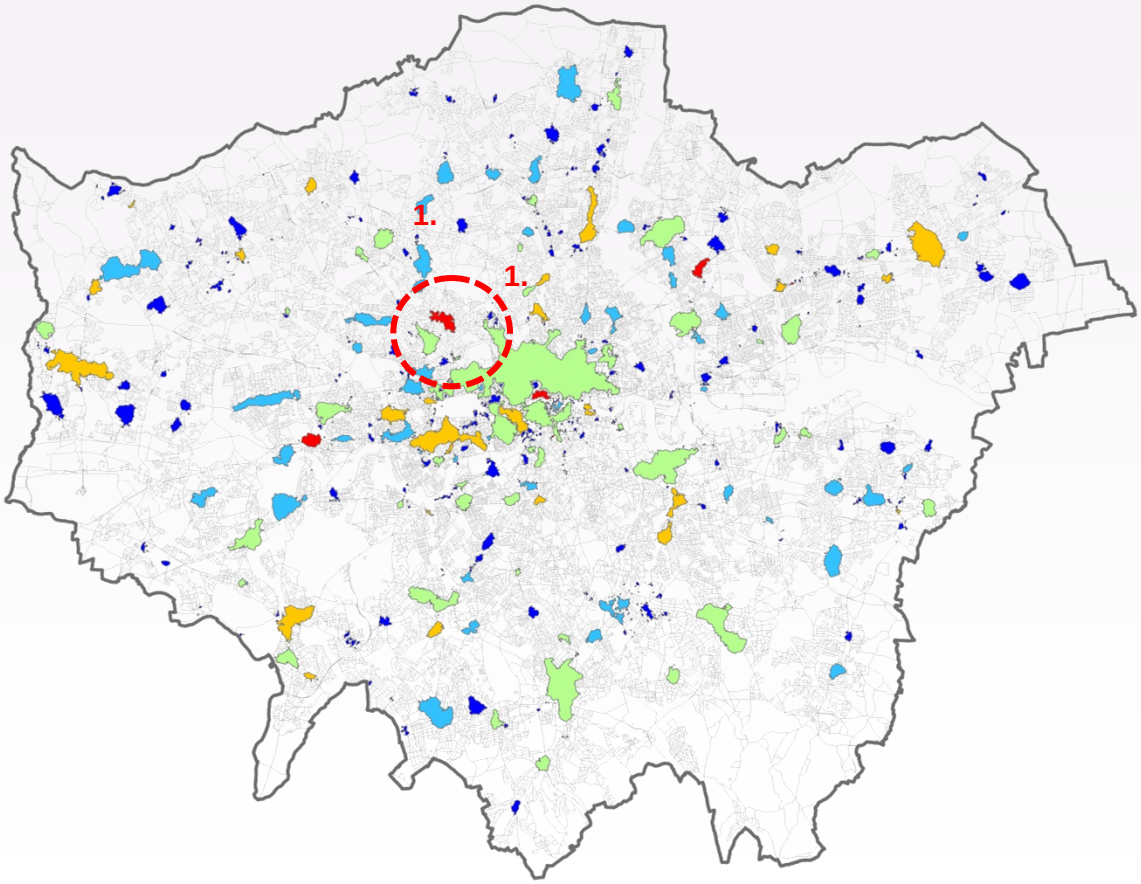
London’s walkability



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



HIDE

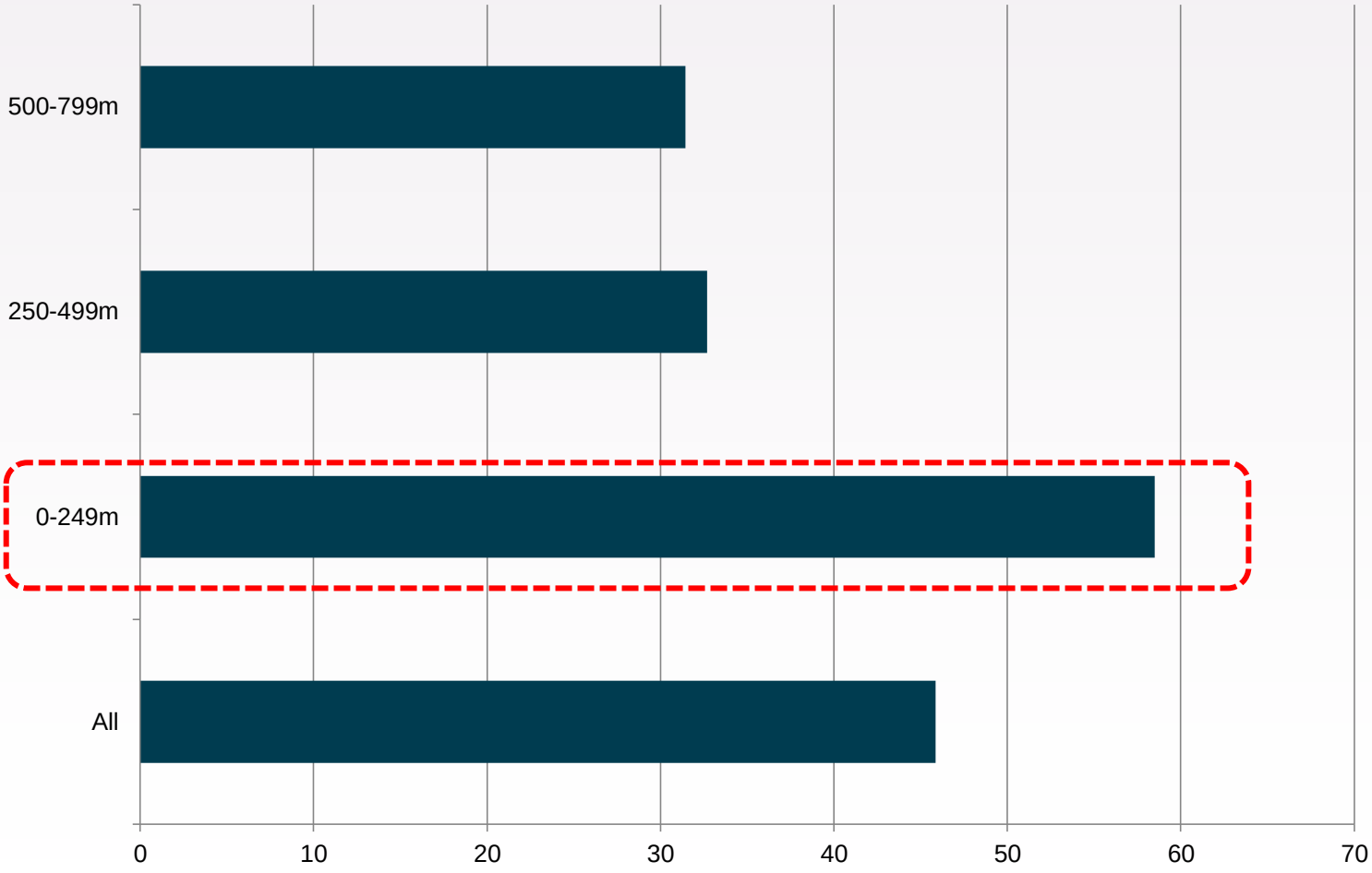
Survey participants reported that the ability to walk to local places often or always being affected by the speed of traffic or its volume

47% at least occasionally affected by the volume of traffic,
15% often or always affected

Participants' self-reported ability 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%)**

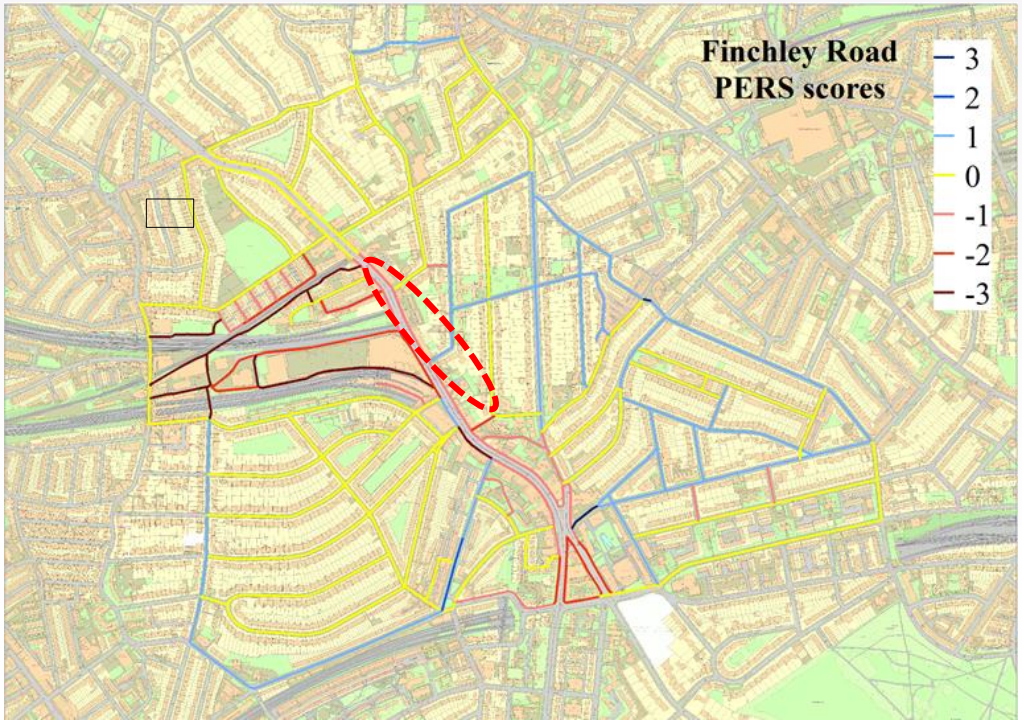
% at least occasionally affected by volume of traffic (own road): P=0.002



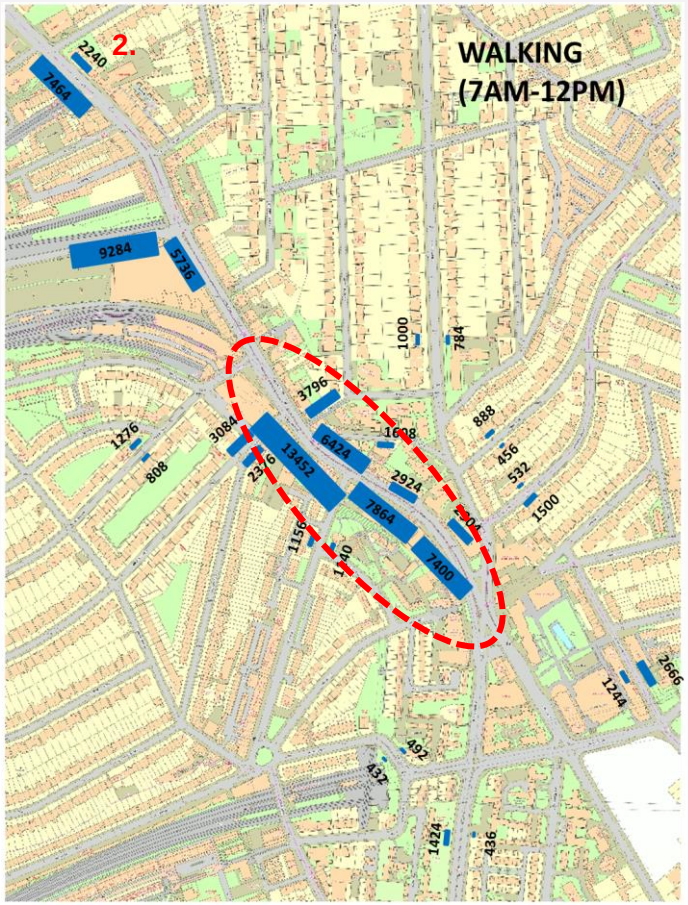
Perception (participatory mapping) of road as socio-economic border between two different groups, reinforced by findings from the IMD

(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)



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



Respondents of 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

Noise and air pollution

61.04 µg/m³ mean Nitrogen Dioxide levels for October 2014 - October 2015 (EU annual limit is 40 µg/m³)

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

"*Exhaust fumes from huge airport buses are dreadful. Killing us.*"
(S1 survey participant)

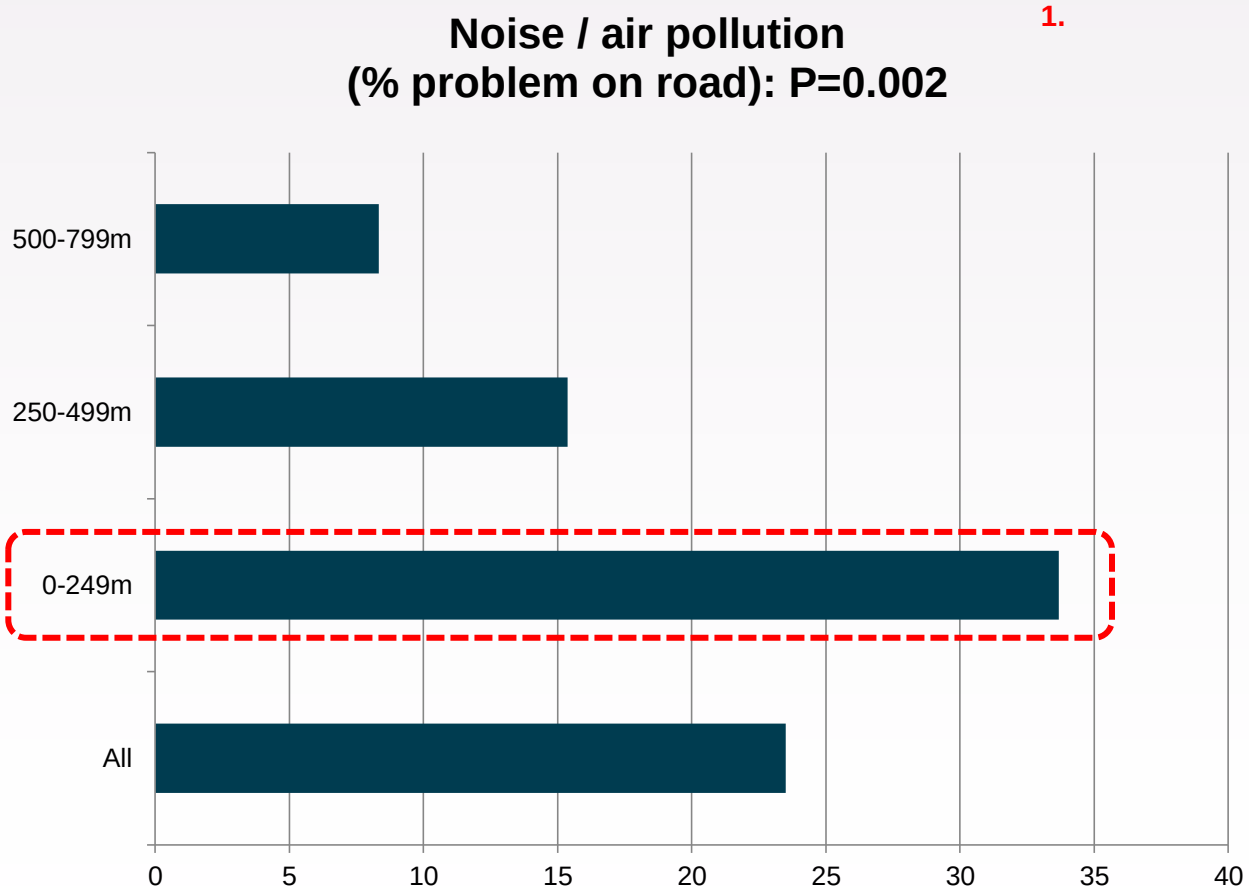
Air pollution- HIDE

61.04 µg/m³ mean Nitrogen Dioxide levels for October 2014 - October 2015
(EU annual limit is 40 µg/m³)

20% PM participants cited pollution as a negative perception of the road

36% HNM survey participants reported air or noise pollution presented a difficulty for them in walking around the local area

1.

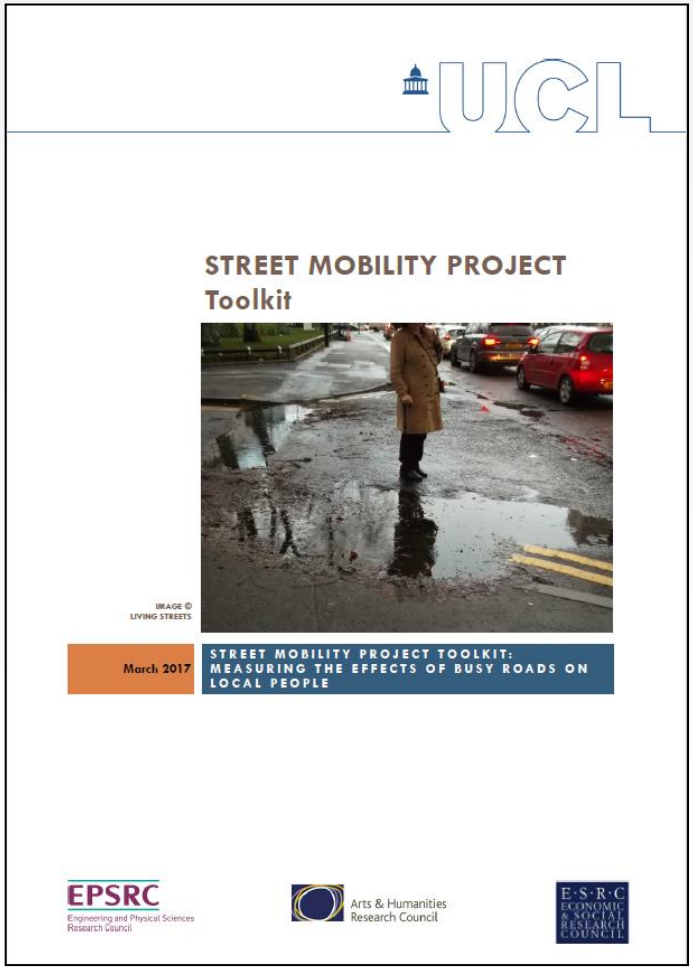

Noise / air pollution
(% problem on road): P=0.002
500-799m
250-499m
0-249m
All
0
5
10
15
20
25
30
35
40

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."
(S1 survey participant)

Community severance measurement toolkit

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



The toolkit will be available in March 2017.

www.ucl.ac.uk/street-mobility

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.

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