Introduction to the Street Mobility project and Toolkit

Prof Peter Jones

On behalf of the Street Mobility and Network Accessibility project team:

www.ucl.ac.uk/street-mobility

@streetmobility
Street Mobility project team

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- Barbara Bonney
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Main objectives

• Increase understanding of residents’ perceptions and priorities for addressing Community Severance (CS) on busy main roads

• Develop questionnaire tools to measure CS at the individual level

• Measure local access and walkability

• Develop a CS index for busy roads, based on readily available data

• Obtain estimates of the values to residents and the local economy of reducing CS

• Test these measures on four road corridors

• Analyse the impact of CS on wellbeing and other social outcomes
Main components

The UCL Street Mobility project

- Participatory mapping
- Video surveys
- Household survey
- Street audits
- Stated preference survey
- Spatial analysis
Case studies

- Seven Sisters Road (London)
- Finchley Road (London)
- Queensway (Southend-on-Sea)
- Stratford Road (Birmingham)
Participatory mapping

- Informal mapping sessions
- Informal street mapping
- In-depth interviews & participatory mapping workshops
Household survey:

Health and neighbourhood mobility
Stated preference survey

- 423 respondents across 4 areas
- Each respondent answered 8 questions, each one with different road conditions

**Scenario:** there is a bus stop on the other side of the road that is in a cheaper travel zone than the bus stop on this side

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

<table>
<thead>
<tr>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross at this point</td>
<td>Do not cross the road and pay the higher ticket cost</td>
</tr>
<tr>
<td>Saving 80p off your one-way ticket cost</td>
<td></td>
</tr>
</tbody>
</table>

Options:
- Option A
- Option B
Spatial analysis and walkability model

- **Walkability** – reflects potential for walking
- **Community severance** can occur where high walkability co-exists with high motorised traffic levels
# Street Audit

## Link Assessment Form

**PERS**

**Link Name:**

**Location:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Checklist Factors</th>
<th>Checklist</th>
<th>Overall Score</th>
<th>Design Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effective width</strong></td>
<td>Width for pedestrian flow</td>
<td>+ve</td>
<td>+/−</td>
<td>-ve</td>
</tr>
<tr>
<td></td>
<td>Wheelchair accessibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All sections acceptable with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Separation from traffic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Allowance for obstructions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pedestrian congestion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dropped kerbs</strong></td>
<td>Located on desire lines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adequate capacity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level dropped/flush</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gradient of drop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consistency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency of dropped kerbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gradient</strong></td>
<td>Severity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Steps/strips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rest points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Undulations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriate handrails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presence of obstructions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Location/alignment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overhead obstructions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reviewer:**

**Time:**

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*Images of streets and buildings are shown on the right side of the page.*
Video surveys

% OF MOBILITY-IMPAIRED

- Walk along pavement
- Walk along pavement, crossing side streets
- Signalized crossing
- Zebra
- Informal crossing
Street Mobility Toolkit

- Designed to assist local authorities, consultants and local communities to better understand CS and what to do about it
- Provides advice on how to measure CS, and to assess impacts on local communities
- Some tools aimed at local communities, others at transport professionals
Contents of the Toolkit

- **Introduction**: overview of the toolkit
- **What we know**: summary of the evidence on the effects of busy roads on local people and key project findings
- **Participatory mapping**: approach and case study
- **Health and Neighbourhood Mobility Survey**: survey instrument and case study
- **Video surveys**: what to do and case study
- **Walkability models**: overview and case studies
- **Valuation tool**: summary of the interactive tool
- **Other useful tools**: street audits and space syntax
# Summary of tools and applicability

<table>
<thead>
<tr>
<th>Tool</th>
<th>Why use it?</th>
<th>What resources are needed?</th>
<th>People</th>
<th>Expertise</th>
<th>Money</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participatory mapping</td>
<td>To get local community members' views on the neighbourhood, including where they do and do not go, why, and how</td>
<td>Local community, NGO², social enterprise, university, local government, businesses</td>
<td>Helps but not necessary</td>
<td></td>
<td>£</td>
<td></td>
</tr>
<tr>
<td>Health &amp; neighbourhood mobility survey</td>
<td>To find out the proportion of people locally who are affected by various problems, and which groups are particularly affected</td>
<td>Local community, NGO², social enterprise, university, local government, commercial organisation</td>
<td>Helps but not necessary</td>
<td></td>
<td>£</td>
<td></td>
</tr>
<tr>
<td>Video surveys</td>
<td>To measure the amount of motor and pedestrian traffic using roads, and recording where people cross roads</td>
<td>Local government, university, commercial organisation</td>
<td>Siting the cameras; reviewing the films; interpreting the findings</td>
<td></td>
<td>££</td>
<td></td>
</tr>
<tr>
<td>Walkability models</td>
<td>To assess the potential of an area for pedestrian travel</td>
<td>Local government, university, commercial organisation</td>
<td>Using data sources; software; very powerful computer</td>
<td></td>
<td>££</td>
<td></td>
</tr>
<tr>
<td>Measurement and valuation tool</td>
<td>To estimate the cost to local residents and society of the barrier effect of busy roads</td>
<td>Local government, NGO², university</td>
<td>Using data sources</td>
<td></td>
<td>£</td>
<td></td>
</tr>
<tr>
<td>Space syntax³</td>
<td>To show which street segments are most useful for connecting different areas, and how easy it is to walk from one place to another</td>
<td>Local government, university, commercial organisation</td>
<td>Using data sources; space syntax software; interpreting the findings</td>
<td></td>
<td>£</td>
<td></td>
</tr>
<tr>
<td>Street audits</td>
<td>To assess how pleasant and easy it is to walk around the area</td>
<td>Local community, NGO², social enterprise, university, local government, commercial organisation</td>
<td>Consistent assessment of each feature</td>
<td></td>
<td>£ to ££</td>
<td></td>
</tr>
</tbody>
</table>
The toolkit is available to download from:

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

For more information about the project, see:

https://www.ucl.ac.uk/street-mobility/project