Auditing the Built Environment for Health Supportive Infrastructure

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Outline

1. What is an audit?
2. Who audits the built environment for health?
3. Sample Healthy Built Environment audit Tools
4. Case Study
5. Introducing the UNSW Mini Audit
Why Audit the Built Environment for Health?

- Research (cross-sectional/longitudinal)
- Funding allocation
- Advocacy
- Strategic planning
- Development assessment
- Personal decision making
Who Audits the Built Environment for Health?

- Urban planners
- Transport planners
- Developers
- Public health workers
- Researchers
- The community
- Students
- Everyone!
What places are subject to audits?

- New development proposals
- Existing urban environments
- Workplaces
- Schools
- Hospitals
- Parks and open spaces
- Shopping centres
- Universities

Different audits are undertaken at different stages of decision-making.
Hallmarks of a good audit tool

- Able to be replicated

**BUT...**

- Contextual
  - Scale
  - Population characteristics
  - End use of data
Hallmarks of a good audit tool

• An urban planning approach
• Detailed observations of environments and people
• In-depth understandings of place
Sample Healthy Built Environment Audit Tools:

Walkability audits

What is walkability?
http://www.youtube.com/watch?v=a9UMTCzTWVo

Design Considerations for Walkability
http://www.youtube.com/watch?v=_ADR_BEePSg
- Infrastructure
- Destinations
- “The Journey”
Design Considerations for Walkability

• Make connections
• Create safe places for people to walk and cycle
• Create stimulating and attractive routes
• Design safe, accessible footpaths
• Shared path design
• Slow traffic for safe streets
• Provide safe places to cross streets
• Support on-road cyclists
• Keep routes clear, direct and legible
• Create attractive and welcoming streets
Walkability Audits and Checklists

- Heart Foundation: Neighbourhood Walkability Checklist
- WA Department of Transport: Walkability Audit Tool
- Victoria Walks: Walking Audit Form
- Walkinginfo.org: Walkability Checklist
- Healthy by Design Tasmania: Planning and Design Considerations
- WalkScore: “Drive Less Live More”
- Walk San Diego: Walkability Checklist

...and many (many many) more....
Case Study Audit Tool:

Planning and Building Healthy Communities: A Multidisciplinary Study of the Relationship Between the Built Environment and Health

Australian Research Council Linkage Grant

- Research partners from health and the built environment
- Four sites being examined
Case Study Audit Tool: “Planning and Building Healthy Communities: A Multidisciplinary Study of the Relationship Between the Built Environment and Health”

Four sites:

Victoria Park (inner urban South East Sydney)
Medium and high density housing types

Rouse Hill (Sydney suburban north west)
A mix of detached single and two storey dwellings and townhouses, and some apartments

Airds Bradbury (a public housing estate in Sydney’s suburban south west)
Developed in the 1970s – Radburn design principles
Redevelopment Project (initiated by Housing NSW and Landcom)

Renwick (Southern Highlands of NSW, about 100 km from Sydney)
Low density housing developed in accordance with Healthy by Design principles
How do these neighbourhoods support people being healthy as part of every day living?
Background to the audit

The three domains:

• Getting People Active
• Connecting and Strengthening Communities
• Providing Healthy Food Options

Long term evolution and on-the-ground testing
Methodology

Completed by a team of interdisciplinary auditors

On foot – immersion in the locality

Cadastral maps sourced from councils

Note taking, iPad, GIS software

Qualitative observations as well as quantitative measurements

Detailed visual record
## Audit components

### Land use

#### Residential types

- Detached dwelling
- Terrace/townhouse
- Duplex/semi-detached
- Dual occupancy
- Unit (up to 3 storey)
- Unit (3 storeys and above – note the amount of storeys on the map)
- Other

#### Mixed use:

- Commercial/Residential - Note the specific uses on the map

#### Recreational:

- Open/green space
- Park
- Playground
- Equal access playground
- Sports field
- Recreational walking path/cycleway
- Outdoor gym
- Basketball/tennis court
- Swimming pool
- Lawn bowling green
- Amenities for people with physical impairments (describe on map)
- Water Sensitive Urban Design/open space
- Private open space
- Other

<table>
<thead>
<tr>
<th>Nature of land use</th>
<th>Ref. on map</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detached dwelling</td>
<td>R1</td>
</tr>
<tr>
<td>Terrace/townhouse</td>
<td>R2</td>
</tr>
<tr>
<td>Duplex/semi-detached</td>
<td>R3</td>
</tr>
<tr>
<td>Dual occupancy</td>
<td>R4</td>
</tr>
<tr>
<td>Unit (up to 3 storey)</td>
<td>R5</td>
</tr>
<tr>
<td>Unit (3 storeys and above – note the amount of storeys on the map)</td>
<td>R6</td>
</tr>
<tr>
<td>Other</td>
<td>Describe on map</td>
</tr>
<tr>
<td>Commercial/Residential - Note the specific uses on the map</td>
<td>MU</td>
</tr>
<tr>
<td>Open/green space</td>
<td>Rec1</td>
</tr>
<tr>
<td>Park</td>
<td>Rec2</td>
</tr>
<tr>
<td>Playground</td>
<td>Rec3</td>
</tr>
<tr>
<td>Equal access playground</td>
<td>Rec4</td>
</tr>
<tr>
<td>Sports field</td>
<td>Rec5</td>
</tr>
<tr>
<td>Recreational walking path/cycleway</td>
<td>Rec6</td>
</tr>
<tr>
<td>Outdoor gym</td>
<td>Rec7</td>
</tr>
<tr>
<td>Basketball/tennis court</td>
<td>Rec8</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>Rec9</td>
</tr>
<tr>
<td>Lawn bowling green</td>
<td>Rec10</td>
</tr>
<tr>
<td>Amenities for people with physical impairments (describe on map)</td>
<td>Rec11</td>
</tr>
<tr>
<td>Water Sensitive Urban Design/open space</td>
<td>Rec12</td>
</tr>
<tr>
<td>Private open space</td>
<td>Rec13</td>
</tr>
<tr>
<td>Other</td>
<td>Describe on map</td>
</tr>
</tbody>
</table>
Residential land uses
Recreational land uses – type, quality, character
Institutional/community uses
Commercial uses
Availability, quality and affordability of food
Community gardens
Airds Bradbury

Photo credit: HBEP 2013
Community gardens
Rouse Hill
### Walking/Footpaths:

<table>
<thead>
<tr>
<th>Footpaths</th>
<th>W1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signalised pedestrian crossings</td>
<td>W2</td>
</tr>
<tr>
<td>Painted pedestrian crossings</td>
<td>W3</td>
</tr>
<tr>
<td>Note whether crossing the street is accessible for all (e.g. people with limited mobility or parents with prams)*</td>
<td>Accessible (Acc.) Not accessible (N/Acc.)</td>
</tr>
<tr>
<td>Material of footpaths</td>
<td>Dirt (D) Concrete (Con) Bitumen (Bit) Paving (Pav) Cobblestone (Cobb) Other (describe on map)</td>
</tr>
<tr>
<td>Quality of footpaths (i.e. consistency and evenness of surfaces, presence of trip/slip hazards)</td>
<td>Poor (M-P) Average (M-A) Good (M-G)</td>
</tr>
<tr>
<td>Width of footpaths</td>
<td>Measure and note the width of footpaths on the map</td>
</tr>
<tr>
<td>Gradient of footpaths</td>
<td>Flat (G-F) Moderate (G-M) Steep (G-S) Other (describe on map)</td>
</tr>
<tr>
<td>Type of buffer between footpath and street (i.e. trees, fence/railing)</td>
<td>Note and describe on the map</td>
</tr>
<tr>
<td>Types of obstructions along the footpaths (e.g. overgrown vegetation, café dining)</td>
<td>Note and describe on the map</td>
</tr>
<tr>
<td>Visibility along footpaths</td>
<td>Poor (V-P) Average (V-A) Good (V-G)</td>
</tr>
<tr>
<td>Connectivity of footpaths</td>
<td>Continuous (Cont.) Abrupt end (Abr.)</td>
</tr>
<tr>
<td>Type of shading of footpaths</td>
<td>Awning (Awn.) Shade structures (Sh.S) Vegetation (Veg) Other (describe on map)</td>
</tr>
<tr>
<td>Quality of shading of footpaths</td>
<td>Poor (Sh-P) Average (Sh-A) Good (Sh-G)</td>
</tr>
<tr>
<td>Other</td>
<td>Describe on map</td>
</tr>
</tbody>
</table>

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**Street network**

**Street pattern**

**Quality and maintenance**

**Walking infrastructure**

**Street furniture**

**Public transport**
Airds Bradbury
Street network
Cycling infrastructure
Parking provision

Victoria Park
Street network
Rouse Hill
Evaluative commentary

General observations of the site – qualitative assessment
Healthy Planning Mini Audit: How Healthy is Your Campus?