



THE UNIVERSITY OF
WESTERN AUSTRALIA
Achieving International Excellence



'The role of turf in the health of populations'

Dr. Karen Martin

Centre for the Built Environment and Health,
School of Population Health, The University of Western Australia

**Turf Seminar, Perth
13 July 2011**

karen.martin@uwa.edu.au

open space  people space

June 2011, Edinburgh
openspace.eca.ac.uk



UK: Keep off the grass!!!



Emerging from conference

Is green-space quality more important than quantity? (Rudlin 2011)

Green-space needs to be more specific to user needs...



Reiterated that green-space is important for health

For this talk

'Green-space'- any area containing natural elements such as trees, shrubs, small areas of grass (turf).

'Park' –local traditional grassed (turfed) public open space (often containing additional elements such as trees, paths etc).

Role of 'green-space' in health

Proximity to nature associated with sparse building promotes mental health as a setting for stress restoration

(Van den Berg 2003)

Visiting greenspace is associated with overall health (Rappe 2006) and living in areas with walkable greenspaces positively influences the longevity of older people (Takono 2002)

Neighbourhood 'greenness' is negatively associated with mortality from stroke (i.e. more green= less mortality from stroke)

(Hu 2008)



Green-space may be even more important for people in lower socio-economic status (SES) areas

1. Green-space may be more important in lower and middle SES groups for 'all cause mortality' (Mitchell and Popham 2008)
2. In lower SES areas with higher amount of grass and trees, public open spaces are used more frequently than in lower SES areas with lower amounts of grass and trees (Sullivan 2004)



**More green-space in local neighbourhood =
more frequent park use**

(Sullivan 2004)

Role of turf/parks in health behaviours

Local green-space supports **recreational walking**
and thus improved physical health (Sugiyama et al. 2008)

Parks are an important behaviour setting for **physical activity**

(Bedimo-Rung et al. 2005)

Parks have been identified as being the most popular **physical activity**
setting in some US neighbourhoods

(Cohen et al. 2007)



Parks provide environments that support...

Mental health



Physical health

Social capital*

*value of social networks, including the bonding of similar people, bridging between diverse people and reciprocation

How do parks and other green-space support health?



physical activity

(Giles-Corti et al. 2005; Martin 2010; Cohen et al. 2006)



social interaction/ builds social capital

(Bedimo-Rung, et al. 2005)



self esteem and mood

(Barton 2010)

Role of turf/parks in child/adolescent health behaviours

1. Proximity to home (Cohen 2006)
2. Access to parks in urban areas (Babey et al. 2008)
3. Park quality (Perry 2011)



Increased park use

Higher physical activity/energy expenditure (Cohen 2006; Gong 2011)



“All they need is grass”



Turf to support physical activity in schools...



Turf through the years in schools...

Older schools



- + Small plots of land
- + Small play areas
- + Lots of shade
- = few small grassed areas

Turf through the years in schools...

Middle aged schools



Changing demographics=
increasing enrolments...



Reputation of turf...



Turf through the years in schools...

Newer schools



Unintended impact of planning, programs and policies?

**Building Education Revolution
= extra buildings (often unnecessary) & less play space!!**



Does less grass = less physical activity?



The changing urban environment...

Turf removal

Hydro-zoning

POS – small pocket parklands

Selling of school land

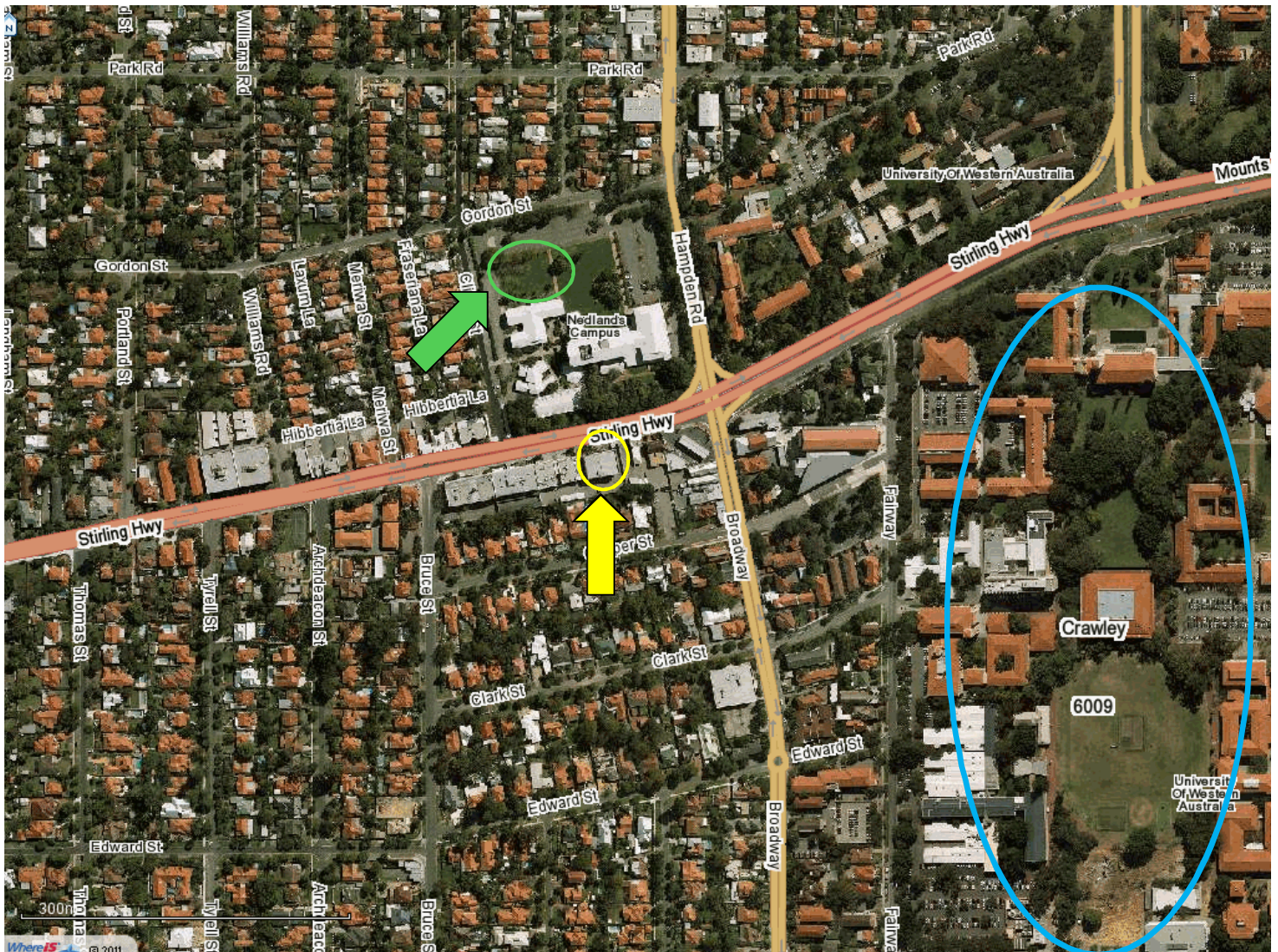
Urban infill and diminishing backyards



Can we continue to use grass the way we have been to support recreation and mental health?

[How] can we promote strategies to bring parks to areas not traditionally landscaped?

What strategies can be developed to ensure parks remain/become a health promotive feature of our neighbourhoods/ working environments?



...imperative to be innovative and strategic



Pirrama Park, Sydney

Environmentally Sustainable Design



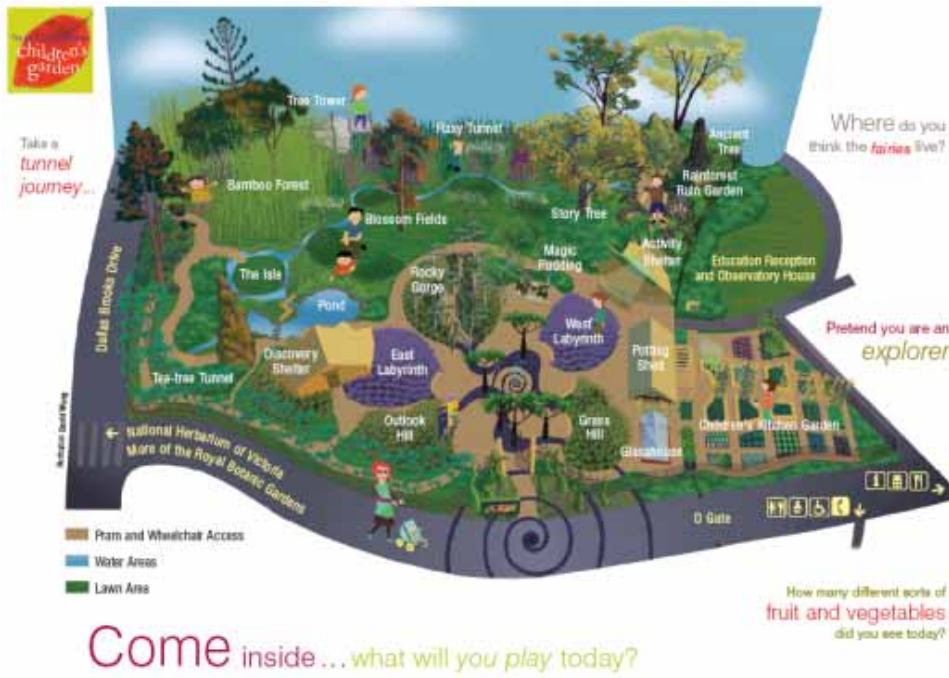
stormwater collection

bio-filtration basins

native plantings

solar panels

Children's Garden, The Ian Potter Foundation Royal Botanic Gardens, South Yarra



Northshore Riverside Park, Brisbane, Queensland

Water sensitive urban design



e.g. picnic shelters
capture rainwater
flows to parkland
gardens

drought tolerant plants

native plantings

Strategies to create parks and green environments to support health

Work with what we know - 'Evidence-based' public open spaces

Large, attractive public open spaces =
higher levels of walking

(Giles-Corti, Broomhall et al. 2005)

Paved, unpaved and wooded areas are predictors of
park use for physical activity (paved trails the strongest)

(Kaczynski, Potwarka et al. 2008)

Park use by youths is associated with quality of the park

(Perry, Saelens et al.)



More research about turf/parks and health is needed ...

1. What other characteristics of parks and green-space can be used to encourage their use?
2. What is the impact of modifying parks to encourage their use?
3. What is optimal park space for population sizes?
4. What are rates of use and physical activity patterns in newer parks without turf and parks with turf (any seasonal differences)?



Research about drought strategies needed...

1. Does hydrozoning impact upon use and aesthetics of parks after periods with no rainfall?
2. What has been the impact of water restrictions on park and sporting field use (and physical activity)?
3. Is there an impact of turf reduction programs (such as those in Nevada) on physical activity, leisure, social capital and mental health?



Strategies for health promoting public open space



Intersperse turf with bushland pockets

Trails for walking/riding/jogging

Spaces for children and teenagers

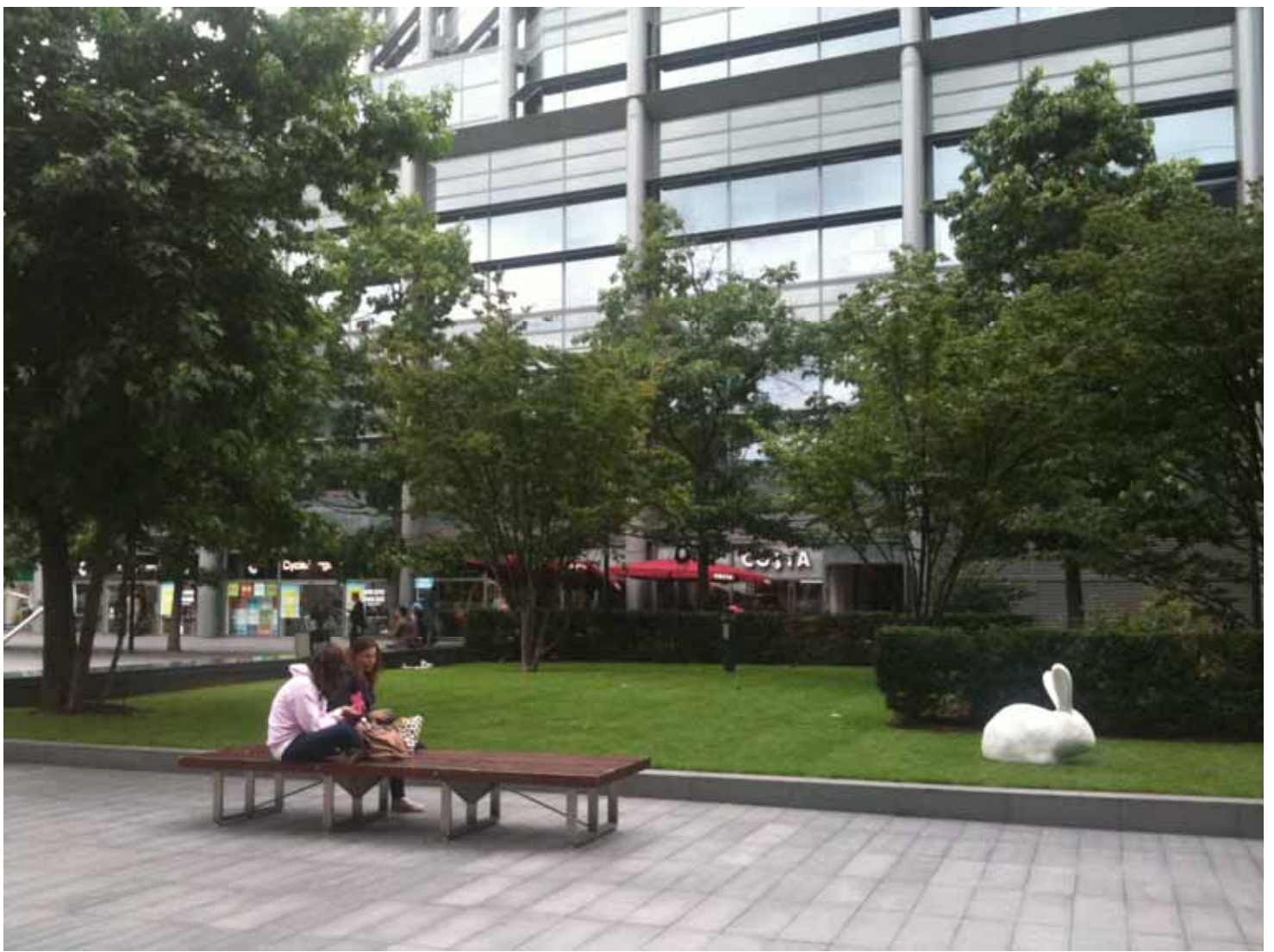
Opportunistic

Consult

Partnerships

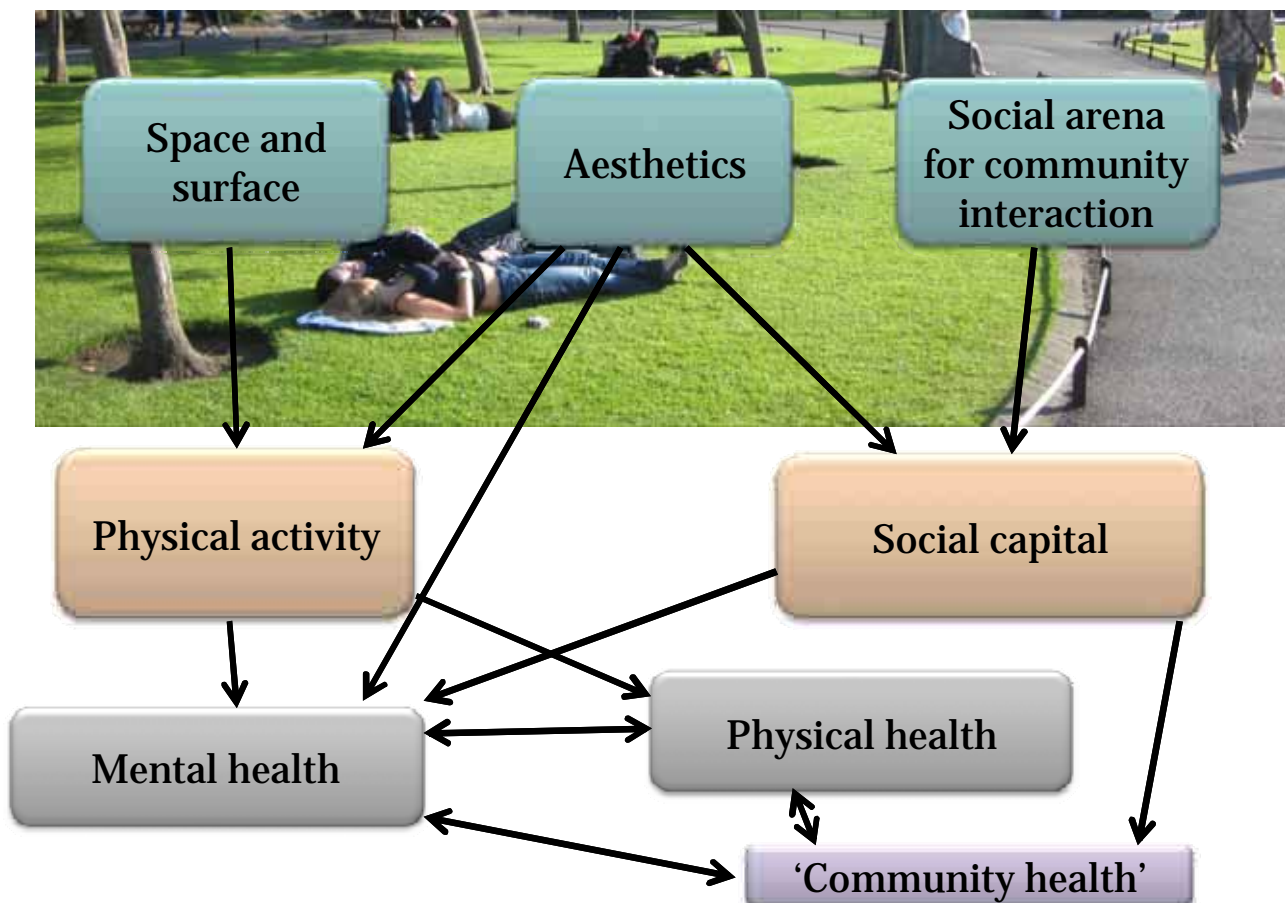








Summary



Use 'health promotion evidence' to promote importance of parks ...



Large blue poster with the text "WHY DON'T YOU BETH AM I CHI". The poster features two white cards with tips in Welsh and English. At the bottom, a woman is wearing a pink and black bicycle helmet. The date "04/07/2011" is printed in the bottom right corner.

Healthy living TIPS!

Up & about
Turn off the TV and get on your bike or visit a park instead.
Stay happy and healthy.

Cyngor byw'n IACH!

O amgylch y lle
Diffoddwch y teledu ac ewch ar eich beic neu fynd am dro i'r parc yn lle.
Byddwch yn hapus ac iach.

04/07/2011