



Edge Debate 67: Skyscrapers vs the Planet

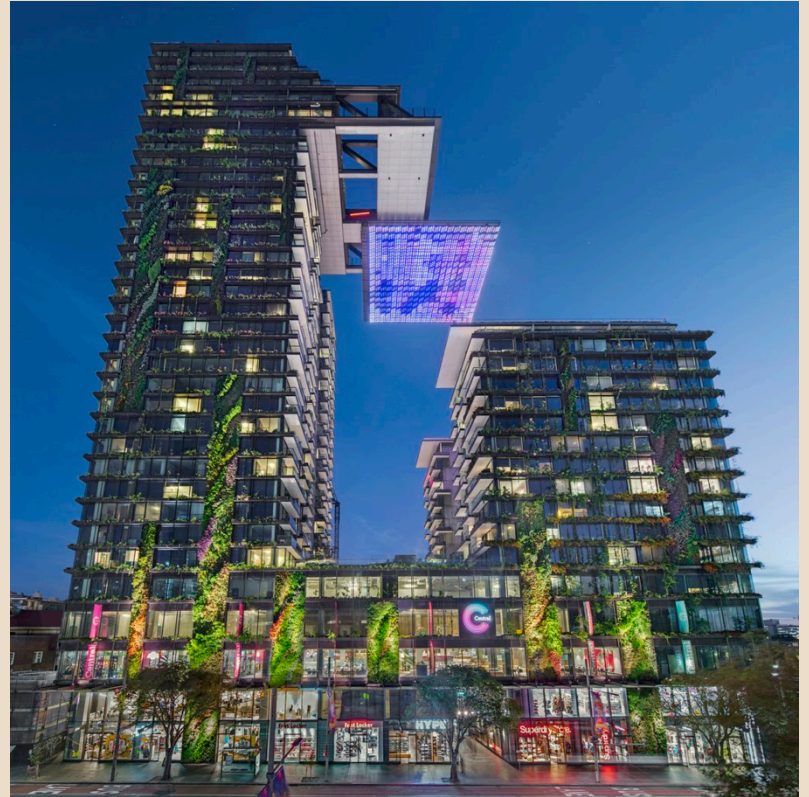
Environmental and social aspects

Energy implications



- high density occupancy
- wind pressures:
 - infiltration
 - conduction heat loss
 - feasibility of nat vent
- daylighting potential
- pumping energy
- lifts ($\approx 5-8\%$ of building energy)

One Central Park, Sydney



Impact on public domain



- dark alley effect
- build up of pollution
- Urban heat island (UHI) effect
- Cold micro-climates
- Wind effects at street level - downwash
- connection with street level



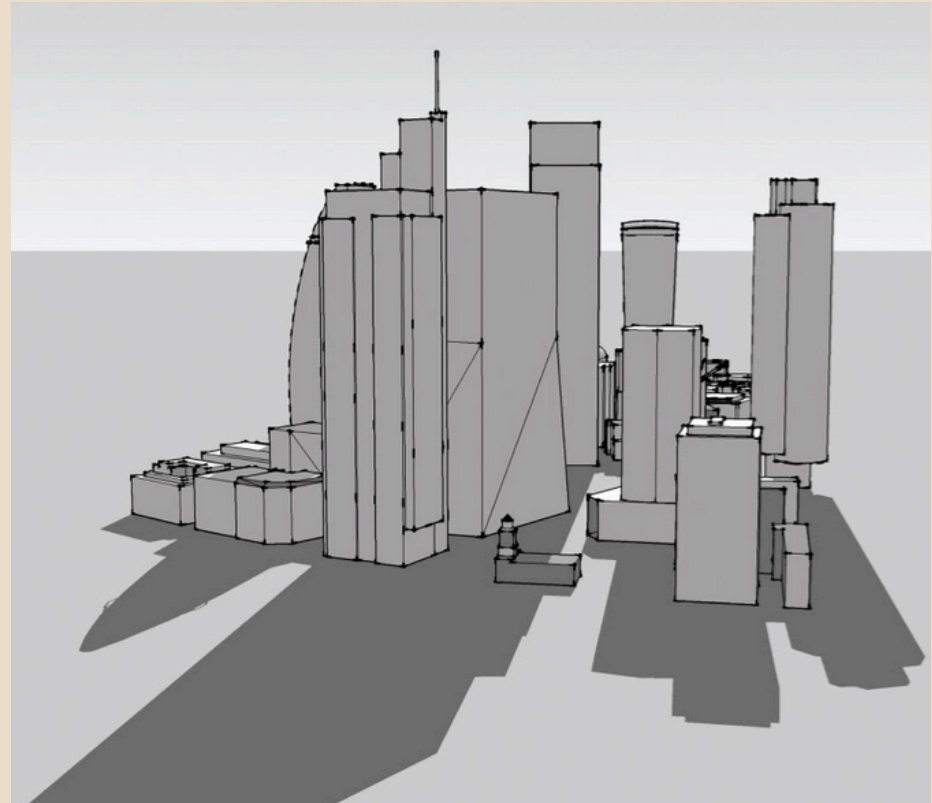
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Impact on neighbouring buildings



- loss of daylight
- loss of useful solar gain
- wind effects
- loss of renewable resource

*'Shadowlands' CIBSE Journal
July'14, (Julie Fatcher)*



Londoners miss out as homes built as 'safe deposit boxes' for foreign buyers

10 investors own sites for 30,000 homes, data shows, with interest from Abu Dhabi and China in Hyde Park site

Robert Booth

The Guardian, Saturday 27 December 2014

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An illustration of the Greenwich Peninsula development, which will include three-bedroom flats costing more than £800,000.

Social sustainability

INKLING

Are we building luxury safety deposit boxes for billionaire investors?

“buy-to-leave”

Around 30,000 home sites are owned by just 10 foreign investors

‘Affordable housing’ requirements watered down by developers

The Guardian, 27 Dec '14

Well-being



... the literature suggests that high-rises are less satisfactory than other housing forms for most people...social relations are more impersonal...crime and fear of crime are greater, and that they may independently account for some suicides.

The Consequences of Living in High-Rise Buildings - Robert Gifford, Architectural Science Review (2007), Canada



World's first Passivhaus office tower



*RHW.2 office tower
in Vienna*