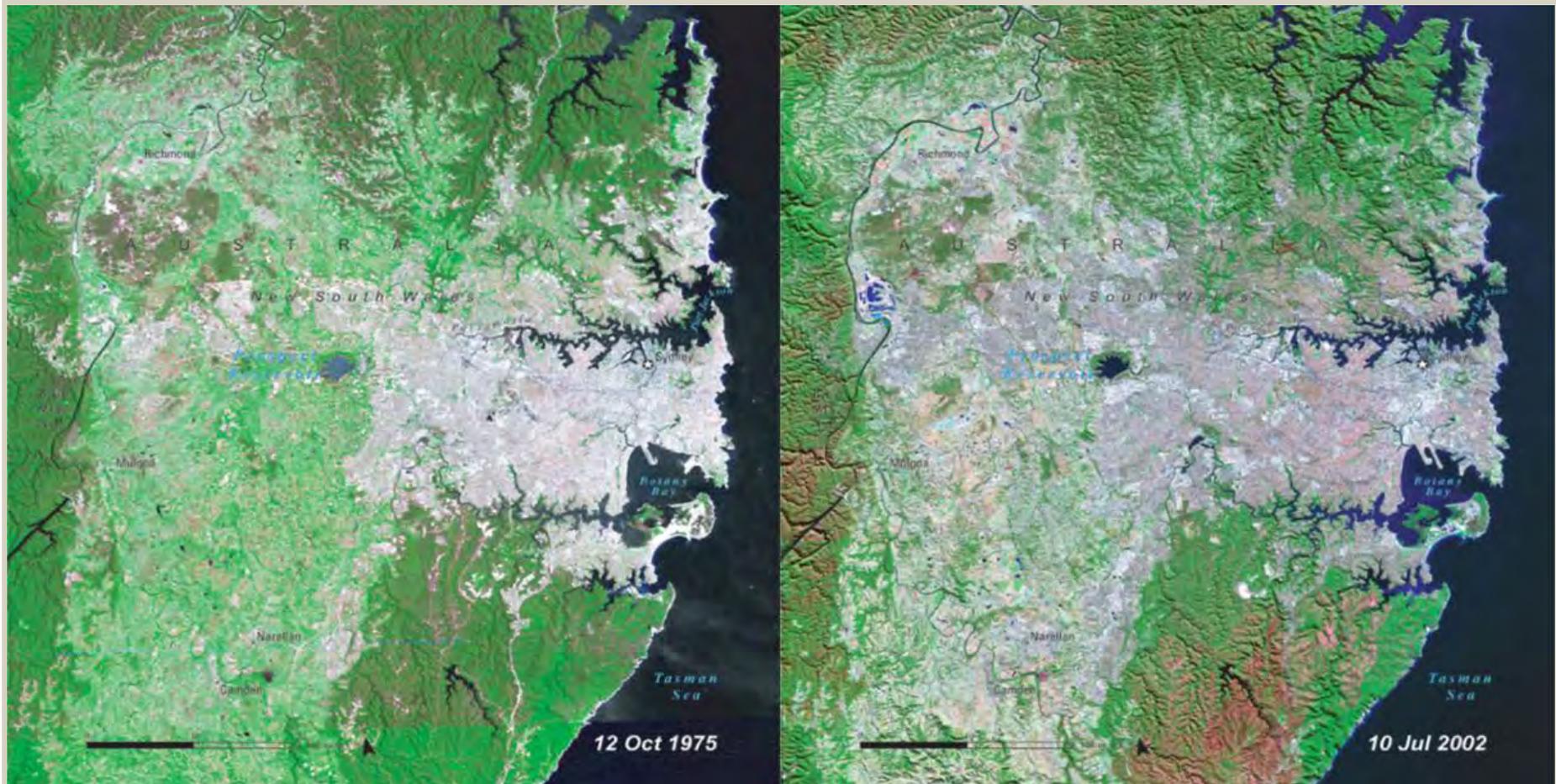


Urban ecology and greening cities

Presentation to Sustainability Talks – Green and public spaces

13 September 2017



What we know

AT A GLANCE

Habitat is being lost
– failure to protect large and small

The natural environment is not
valued in decision making

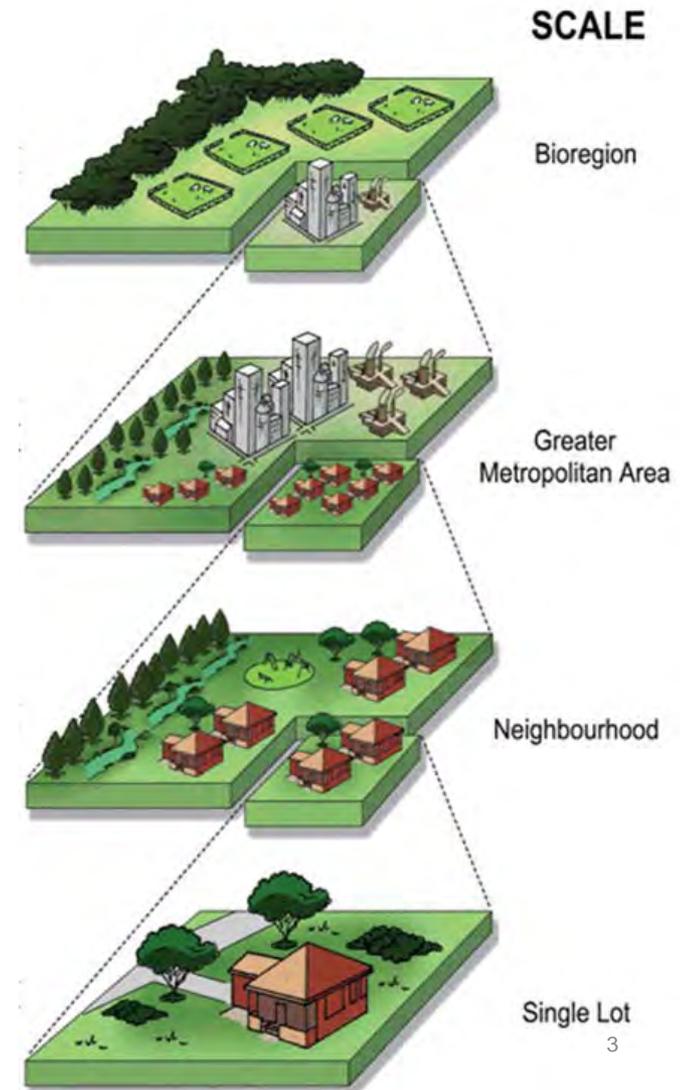
Imagination is lacking



Habitat loss

DEATH BY A THOUSAND CUTS

- Biodiversity impacts tend to be considered locally not regionally
 - incremental loss of habitat
 - reduction of habitat quality and
 - introduction of multiple stressors
- Needs for a multi scale approach
 - Protection
 - Conservation
 - Management



Habitat loss

DEATH BY A THOUSAND PIPES

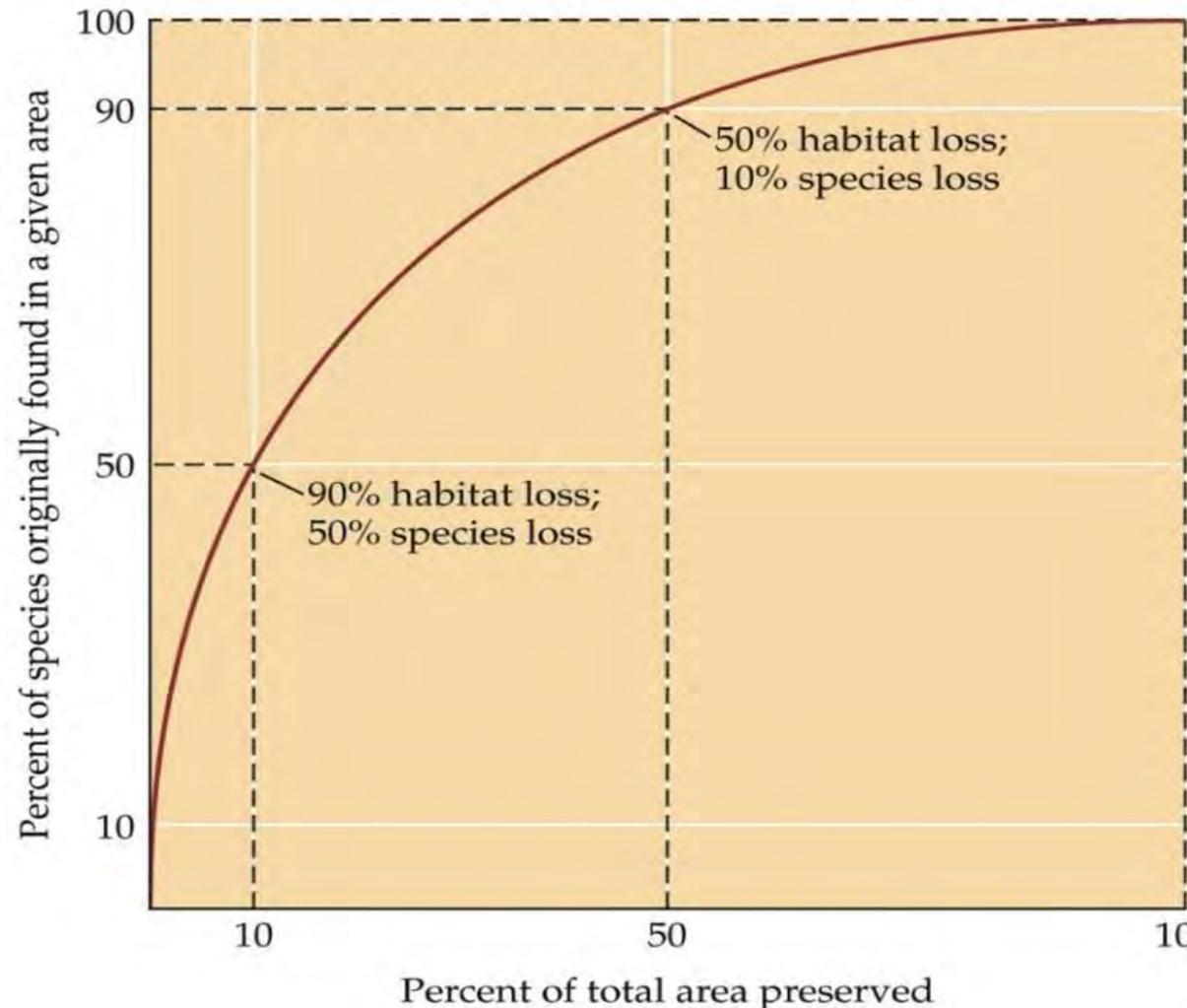


Habitat loss

MATTERS MORE FOR SMALL SITES

Implications:

- When small patch of bushland is cleared the impact on species decline is much greater than if the same amount were cleared from a larger patch



Habitat loss

FRAGMENTATION AND EDGE EFFECTS

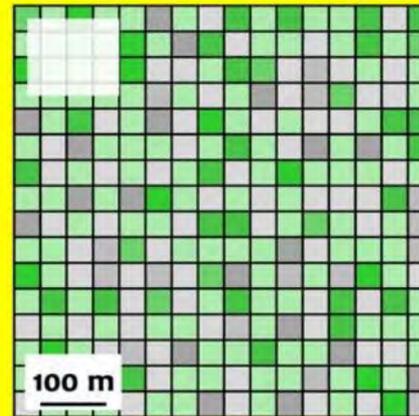


Habitat loss

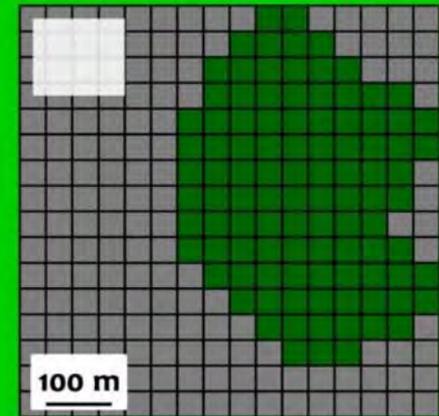
DEVELOPMENT PATTERNS MATTER

- **Protect core areas**
- **Manage for the landscape (not lot)**
- **Compact density** will protect more core habitat and provide more landscape scale biodiversity than low density sprawl

Land sharing



Land sparing



Do we value the environment?



WHY VALUES MATTER

We know

1. Values change over time
2. Values differ between groups of people
3. Multiple values can be assigned to the same place
4. Multiple pathways exist between values, attitudes and behaviours towards ecosystems
5. Values influence peoples judgement of management decisions

Is the environment valued as a resource or valued for its intrinsic worth?

How to we value the environment

BIODIVERSITY OFFSETTING

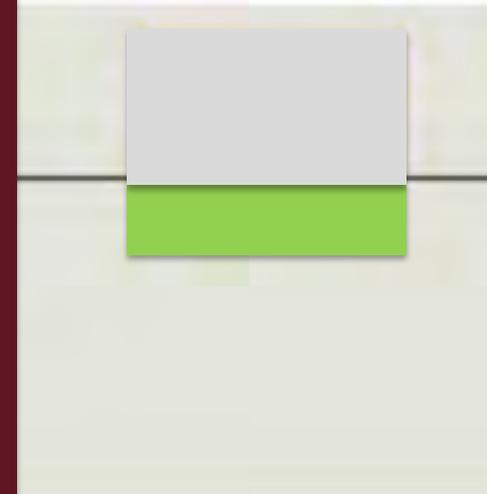
Offsetting schemes avert not stop biodiversity loss

Biobanking can protect 'higher value' sites

BUT this is a tradeoff

- Results in **more vegetation and habitat clearing** and
- Will **not prevent the ongoing decline in biodiversity loss** in cities

... and by using offsets we can maintain biodiversity outcomes



Imagination and new ideas

CONNECT PEOPLE TO NATURE



**Aesthetics does not always
equal more biodiversity
BUT**

- **Backyards and private gardens represent a significant proportion of green space in cities and should be actively managed**
- **Collectively gardens can have a positive contribution to conservation and biodiversity outcomes**



Imagination and new ideas

ITS GOOD TO BE MESSY



- Incorporate buffers or 'un-managed' areas in parks, golf courses and riparian corridors to increase biodiversity
- May be in your backyard too

Imagination and new ideas

HOW WE LANDSCAPE OUR PARKS



Sydney Olympic Park

- a) Low vertical structural complexity
- b) High vertical structural complexity with weeds being replaced
- c) Natural remnant



Imagination and new ideas



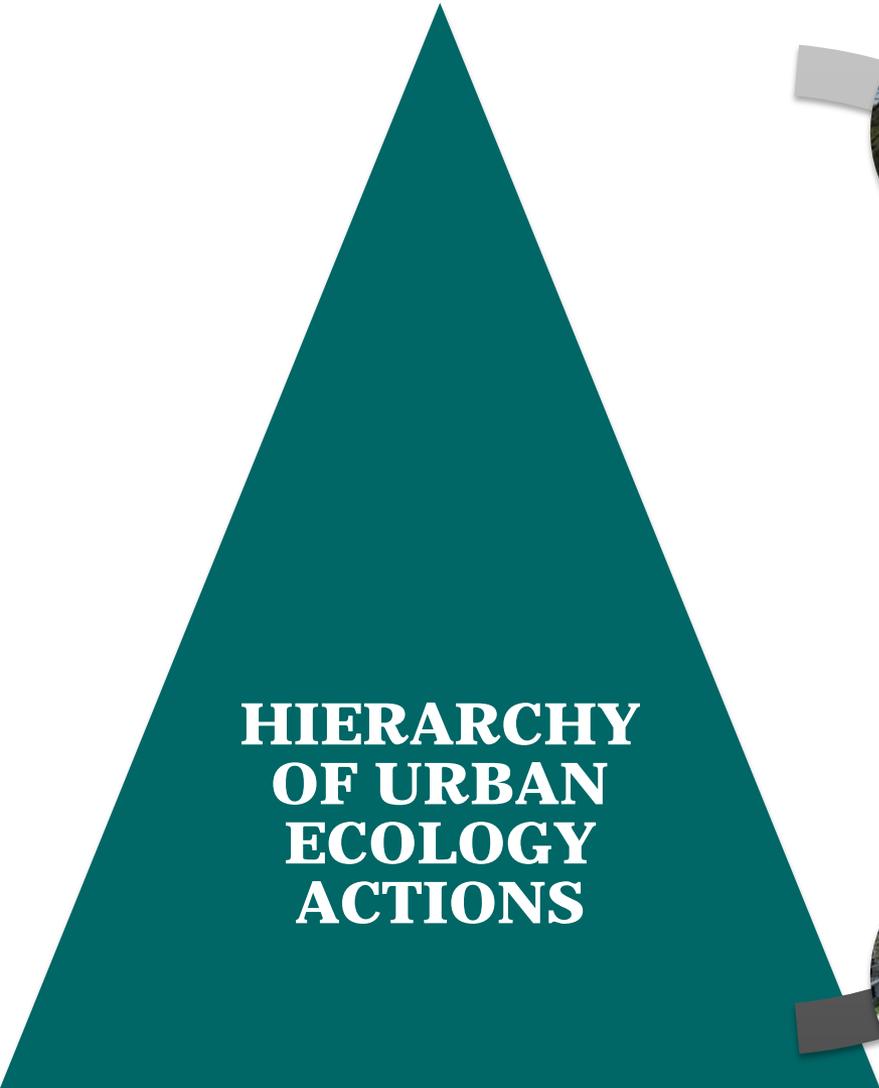
MACQUARIE
University

CONSTRUCTED ENVIRONMENTS AND SUPPORT BIODIVERSITY



Directions

RESPONDING URBANISATION



HIERARCHY OF URBAN ECOLOGY ACTIONS



Protect and
conserve



Restore existing
ecosystems



Enhance
remaining
ecosystems



Create and
connect new
habitats