



*5th Healthy Cities: Working
Together to Achieve Liveable Cities*
Conference

Ben Ellickson

Landscape Architect/ Urban Planner
SITEPLAN (Adelaide SA)

*Landscape miles....towards a
25km city*

Presentation outline

Landscape miles....towards a 25km city

- 1 Where are cities and their landscape taking us?
- 2 How do we plan for cities in a carbon constrained future?
- 3 Can we bring the 'food miles' concept into urban planning and into our cities landscape industry?
- 4 Adelaide as a 25km city. Will carbon constraints guide our urban form in the future?
- 5 Practical measures...landscape industry innovation.

Background: Where are we heading?

Regardless of what others are doing around the world, Australia's vision is to be a 'carbon reducer'.

Per capita, Sydney is the worlds third highest carbon emitter (20.3 tonnes for each resident p/a).

- We import more and more and export an un-refined resource base.
- We cost shift. Someone or something always pays for the environmental cost of production.
- We can overcome the environmental challenges we are facing. We can use carbon as a catalyst for more vibrant and brighter cities though clever planning.



How is the world responding?

The world is changing rapidly. Many products, businesses and industries are responding to the carbon issue.

This venue provides an option for carbon accounting for a simple one night room fee.

In my view, the philosophy of our urban form will need to change in the long run.

Other growing nations value and mimic our lifestyles and watch our choices closely.



Source: Eco and Sustainability 9 Feb 2010, US Natural Stone Council 2009, The Guardian online 11 May 2012

How are we growing?

According to a recent report of the WWF, the highest rates of urban population growth will be in cities under one million people.

- Urban population growth (cities under 1 million) 4.19% p/a over other city types.
- There will still be 'mega cities', they will learn from the smaller cities.

Catherine Tumber, 2012, Small, Gritty, and Green: The Promise of Americas Smaller Industrial Cities in a low carbon world.

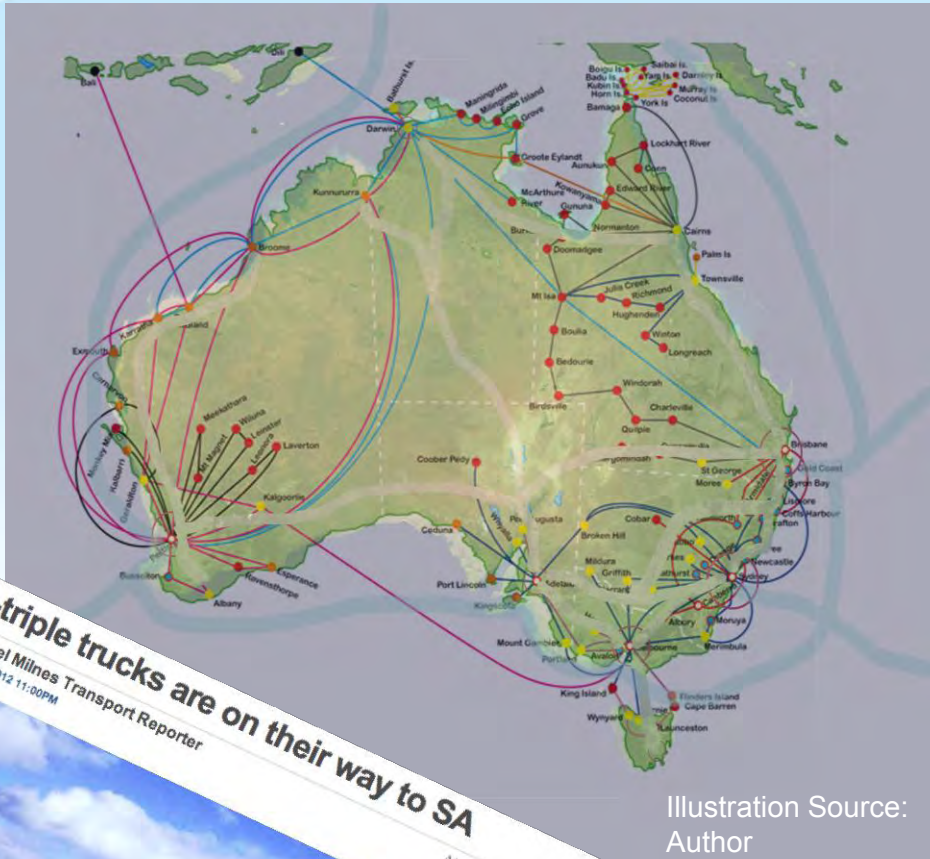


Illustration Source: Author (Article by Business Insider 23 May 2012) Data source: WWF Living Planet Report 2012



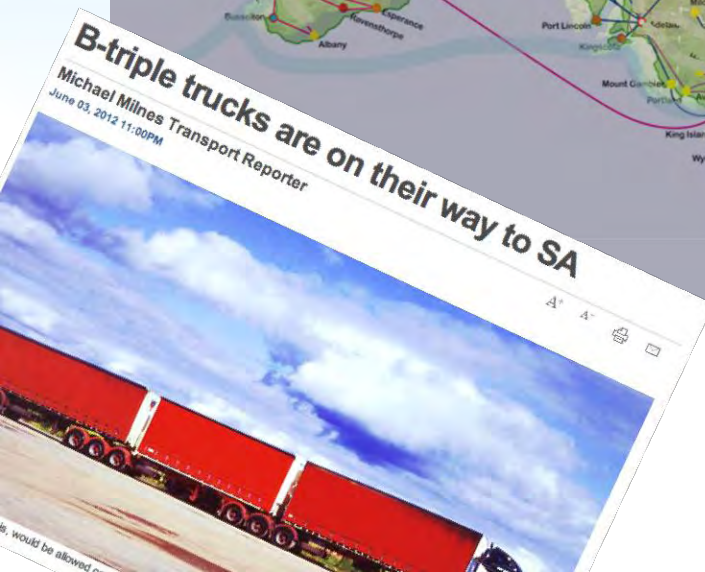
“smaller cities could be placed as the centre of a relocalized low-carbon world in a truly new urbanism. The technology is under development, the private capital is poised for investment, the foundation world is paying attention, urban advocates are showing greater sensitivity”

Why are landscape miles relevant?



“Australian transport sector accounts for around 76 million tonnes of total net greenhouse emissions, representing 13.5% of Australia’s total emissions” (Dept of Sustainability , Environment, Water, Population and Communities).

There has been a massive growth importing landscape materials (cut stone, graniteslabs, wet poured concrete pavers, steel ornaments, precast items, flat-pack ornaments)



Landscape Miles

The Concept of landscape miles is considering the carbon cost of transporting and producing the landscape of our cities including the cost of the missed opportunities for 'new landscapes' and the demise of efficient 'borrowed landscapes'.

- Adopting the landscape miles philosophy is like killing two birds with one stone: longer lasting and more locally meaningful urban environments as well as less emissions through simple shifts in our choices.
- Visions of 'eco' cities might be fanciful, however they are always based on a bold and functional landscape vision.....



Context: The Landscape Industry

- Traditionally there has been very little support and incentives for the 'efficiency' or 'innovation' of providing urban landscape.
- Mechanization and transport technologies have lead to greater capacity for moving materials, however, environmental costs needs to be considered.
- Its not just about where we source things from , its about how we use these things and the total embodied energy of the urban landscape. For example, turf can be either transported from great distances, or sown simply by seeding but the real cost to the environment is within enormity of maintenance.

"The exchange of 1,000 gasoline-powered lawn mowers for electric mowers has the potential of reducing volatile organic compound (VOC) emissions by 9.8 tons per year, which is equivalent to removing 230 cars from the highways".

US EPA Outdoor Air -Transportation Equipment : Lawn Equipment, August 2009

- We cantassume that providing trees, new parks and updated gardens is enough in a carbon conscious world. We need to make sure things are provided in a sustainable manner.

The cities efficiency of being

- We can not allow cities to rule us. We need to bring our cities in closer alignment to our health and spiritual needs.
- Our cities were originally planned around access to resources and the ability to maintain a 'standard of living'.
- Instead of adapting to our resource base, our cities and our planning has become reliant on importing and 'manufacturing' a landscape.
- Environment and Economy can be balanced if cities evolve to work for us. If we set no limits we are powerless to control a city.
- Planning for access to natural resources and quality landscapes is the key (let the landscape work for us)

Case Study- Rocklin USA

Rocklin, (California one of fastest growing satellite regions in USA). The area has around 100,000 Ha of Granite resources.

Now developed over as housing expansion...fake rocks recently used for major 'tourism' entry sculpture.



Case Study- Willunga Basin

Willunga Basin Vineyards ('A' class viticulture soil) was to be developed as residential expansion with no buffer along the main entry road to the basin.

A waste of an amazing 'productive landscape' as a backdrop to a city.
Exportable urban amenity?

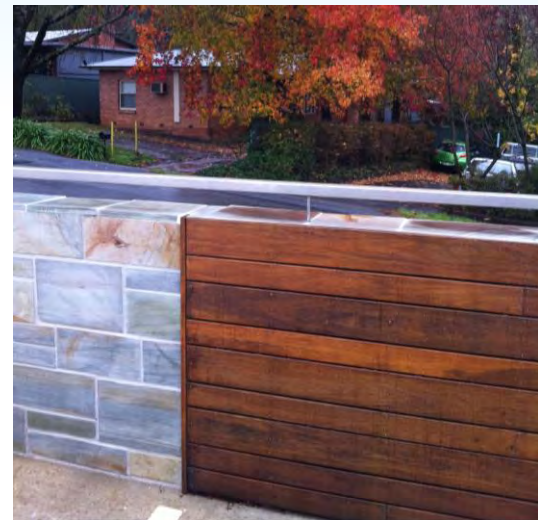
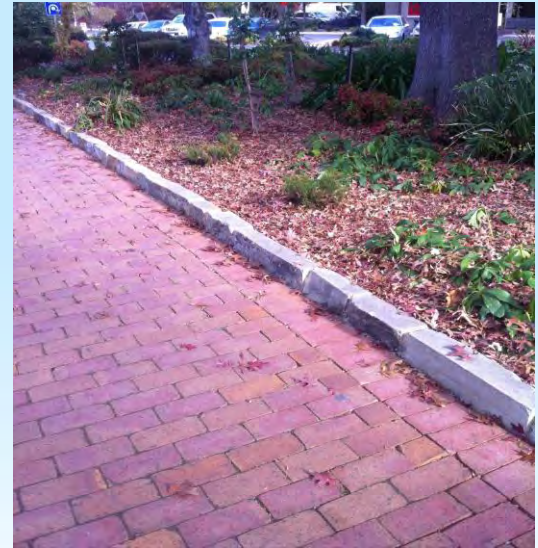


Case Study-Adelaide Hills

Two recent streetscape upgrades within the same township. The sites are within 15km of the CBD.

Site 1: local sourced pavers (18km),
exposed aggregate (15km), local natural
sandstone (14km), recycled timber
bollards (20km)

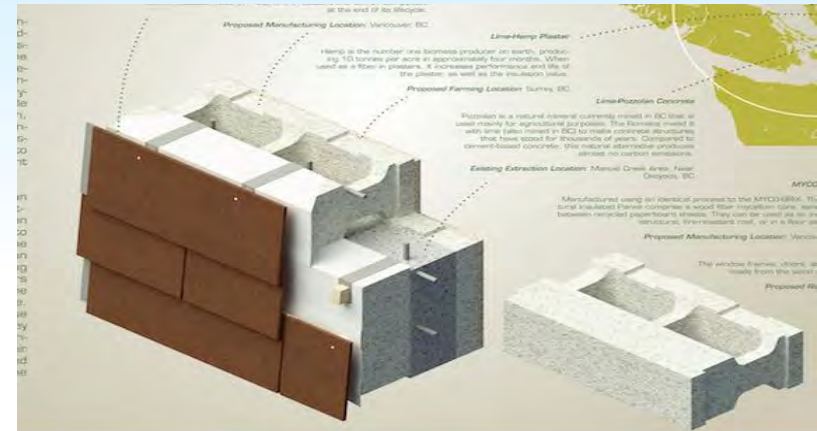
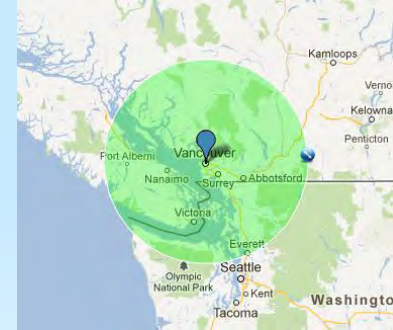
Site 2: The other site uses all imported
materials timber (SE Asia), concrete
pavers (Perth), sandstone facings (India),
s/s bollards (China).





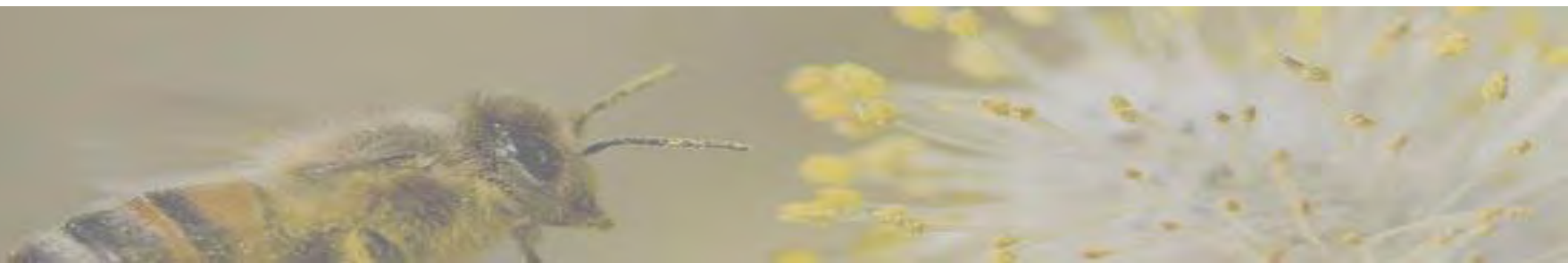
Champions of local materials

- Mahatma Gandhi – 50km spiritual belief for sourcing materials for homebuilding
- Architecture Foundation of British Columbia (Canada) – 100 mile house competition just finalised.
- “Prior to the widespread use of polluting fossil fuels, most buildings were made of local materials that made sense for the local climate and lifestyle” Trey Farmer, Inhabitat, 2012
- LEEDS (US Green Buildings Rating Tool) – Credits for materials sourced within 600 miles.



Why a 25km city?

- Bikerideable(1 hour to core by most commuters).
- Within a trip return range of most electric assisted vehicles (Gophers and Scooters).
- 20 minutes on public transport (the 20 minute city).
- Insect and Bee activity (roaming range of around 10km means it can cross pollinate most of the zone).
- It is a radius that when applied to Adelaide incorporates many renewable, recyclable and low energy embodied products available to build the city (stone, clay brick, water, salt, nitrogen, sand, timber, aggregates, compost, technology supply, sequestration areas,manynew living options).



Adelaide: an example

Adelaide could once pride itself with the '20-minute city' ideal. Adelaide is a well planned city, legible and retro-fittable. The 25km landscape miles concept can update our thinking to a higher goal.



the "20-minute city" no more

metro malcontent —

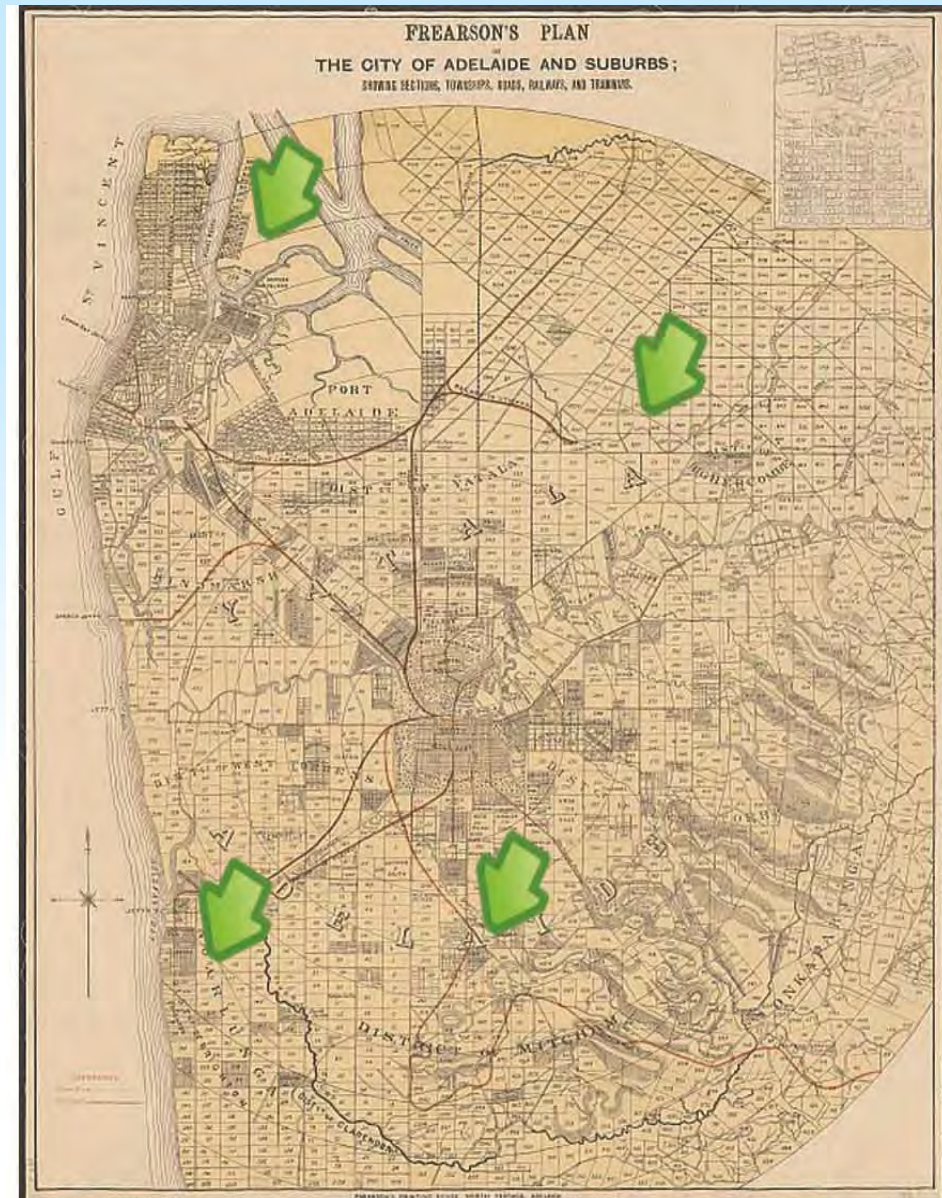
once had the enviable reputation
"20-minute city", which meant
the central business district
metropolitan area and
within a convenient

based on nationally accepted standards, that title is
no longer deserved.
But traffic jams and red lights are not the only pro
lems facing Adelaide motorists today. Another m
area of concern for the RAA is the lack of a syste
maintenance regime for many of our metro
roads. Many arterial and busier secondar
have well and truly reached their use-by d



18th Century Settlement: The city was designed around access to its resources...

- River Torrens as a 'cooling artery' and food production resource.
- Linked satellite settlements close to quarries and timber using the most efficient transport routes.
- Allotment sizes based on the productivity of the land and topography limitations.
- Parkland belt for recreation on the flat open grasslands near the core close to water supply.

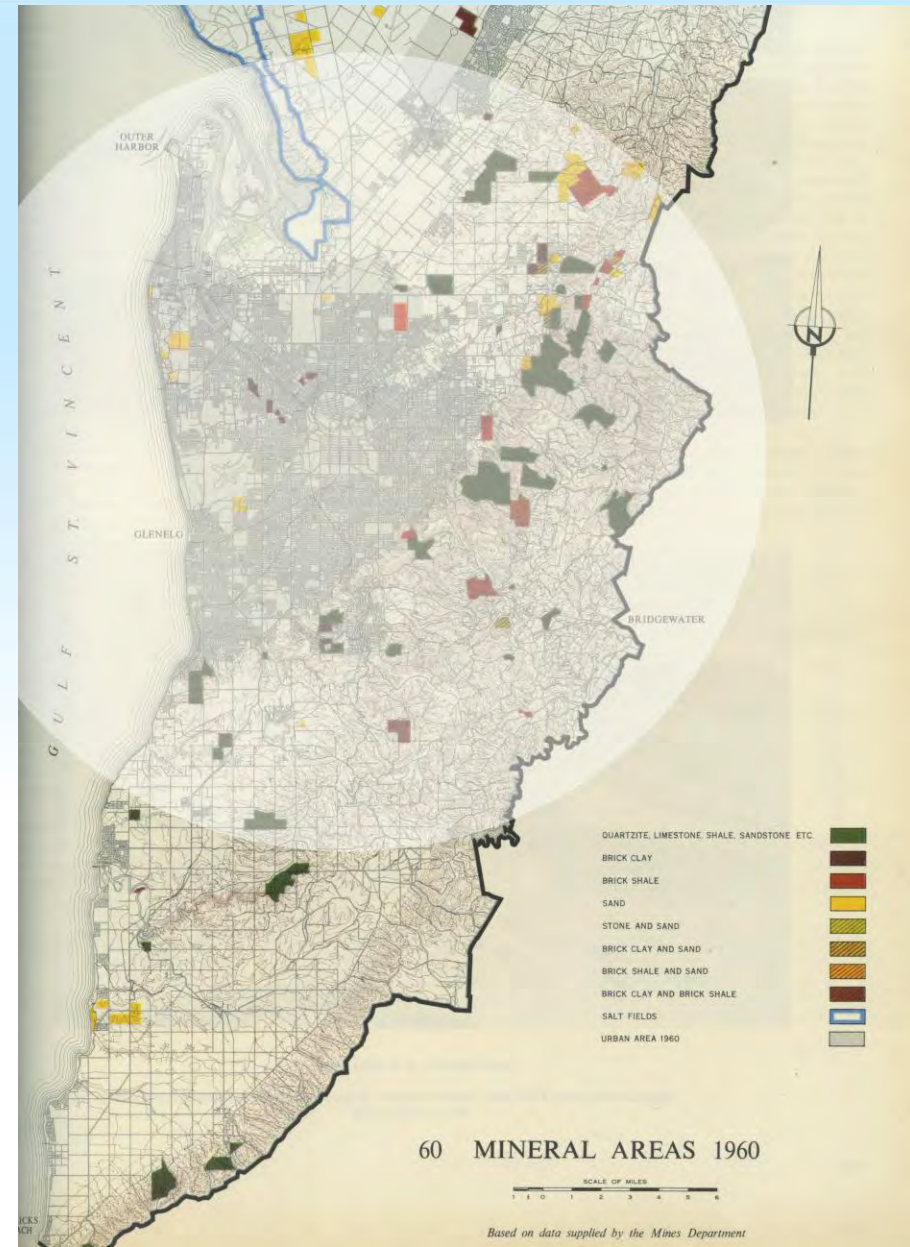




Example of historic planning for resources within 25km.....

- We planned cities with close attention to practical details, we needed and wanted to be closer to things.
- We simply do not do this properly anymore, we rely on importing and transport technology as a fallback measure.

Source: Report on the Metropolitan Area of Adelaide, 1962, Map 60





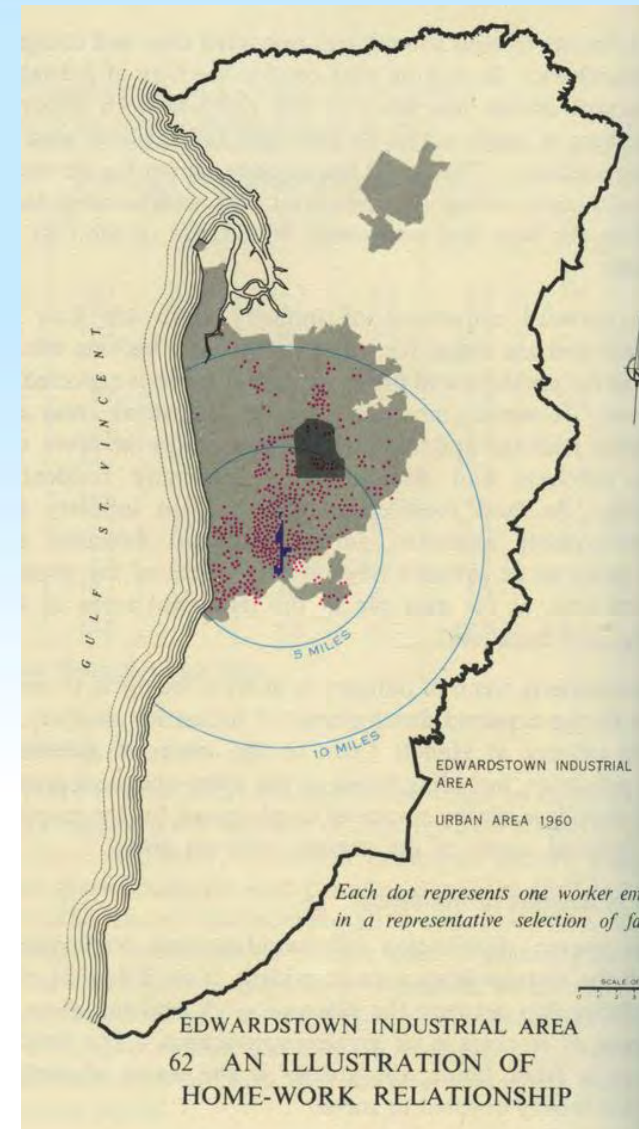
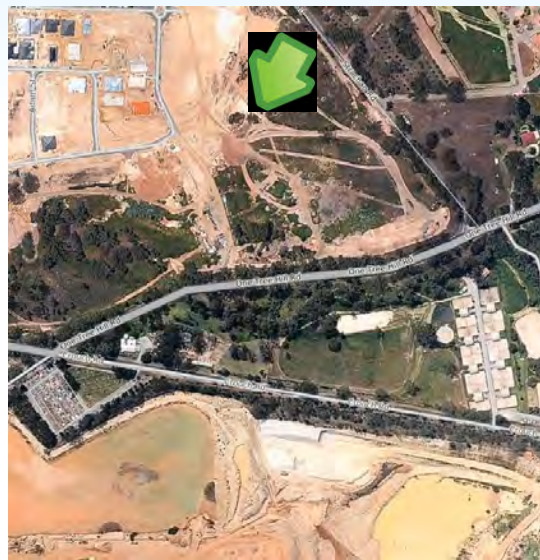
The 1962 plan for Adelaide contained very useful resource planning statements:

- Warnings not to develop over our local resources.
- Planning and supporting industries and manufacturing based on distances work.
- Consideration of valuable local building materials.



Sand deposits at Golden Grove.

"... important minerals from local sources may be jeopardized by the continued expansion of the metropolitan area."



Source: Report on the Metropolitan Area of Adelaide, 1962, p142 and p148

Practical examples: Local and 25km cities can work for us

Examples of how the landscape can be 'dual purpose' and how the landscape can work for us. Examples of innovation and industry within the urban fabric of the city.

Edible and productive landscapes -*local renewed landscape*

Design with nature -*local and natural responsiveness*

Innovative production -*new local processes*

Edible and productive landscapes

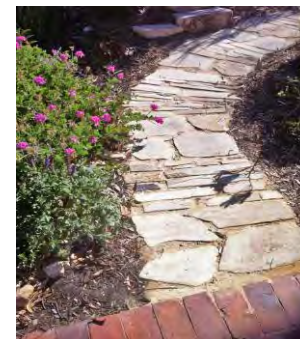
- Edible landscapes can provide valuable new landscape in cities and are most useful when locally accessible.
- Streets, parkland, rooftops and even inside buildings can become insect attracting bio-diverse areas.
- We need to view the landscape of urban areas as being more productive, this is the way our cities originated. With today's knowledge we can be productive and beautiful.





Design with nature

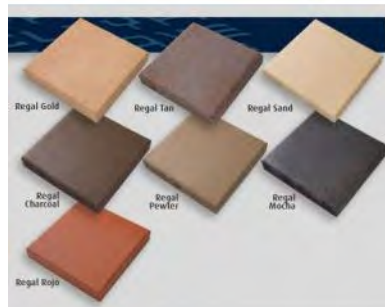
- Burnside Adventure Playground – local timber within the 25 km city.
- Aldinga Arts Eco Village – recycling and re-use.
- Sturt Street Bio-city (Christie Walk) – dense inner city living within a local landscape.
- Adelaide Parklands - Community Garden initial step forward.
- Kangaroo Island - foreshore amenities.





Innovative production

- Shell grit rendering and plastering.
- Stone cutting improvements. Sandstone faced sea wall, fieldstone walling.
- Local company in Adelaide are able to compost and return 95% of 'kerbside green waste' into valuable soil resources. This all takes place inside the urban boundary.
- Large format clay pavers - sourced and fired within the metropolitan area.
- Tyrepeeling making living retaining walls – using tyres at the source.



Summary

- More compact cities and cities that build 'local resource capacity' will be able to export learning's to the emerging cities as the rest of the world aims to become more carbon efficient.
- A growth model for a more compact city that engages with its immediate landscape and experiments with local materials will be more efficient and more creative.
- Cities that aim to retain a 'closeness' to their resources will flourish economically and spiritually into the new future and this will assist in the health and well being of our cities.
- More research and on-ground action needed:
 - creative competitions and debate
 - procurement policies updated to reflect carbon issues
 - applications for 'mega cities'



5th Healthy Cities: Working Together to Achieve Liveable Cities Conference

Landscape miles....towards a 25km city

Thank you.....😊

SITEPLAN



Landscape Design

Garden Construction

Irrigation

Water Sensitive Design

Ben Ellickson

m> 0403963463

p> 83885584

e> siteplan@internode.on.net

ABN: 14887976461