

Welcome

Leading Green Thinkers

The Green Vision for Perth

Hosted by

Nadja Kampfhenkel

State Manger for WA

Green Building Council Australia



green building council australia



**TAKE
YOUR GREEN
BUILDING
QUALIFICATIONS
TO A NEW
LEVEL**



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VISIT WWW.GBCA.ORG.AU/EDUCATION-COURSES/CPD FOR MORE DETAILS**

GREEN STAR COMMUNITIES A DRAFT NATIONAL FRAMEWORK

FEBRUARY 2010



Today's Speakers

Ryan Keys

Director of Planning

East Perth Redevelopment Authority

Robert Mulcahy

State Director

WSP Lincolne Scott





Vital Perth

-Green Vision for Perth



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REVITALISING URBAN PLACES

Perth Landscape

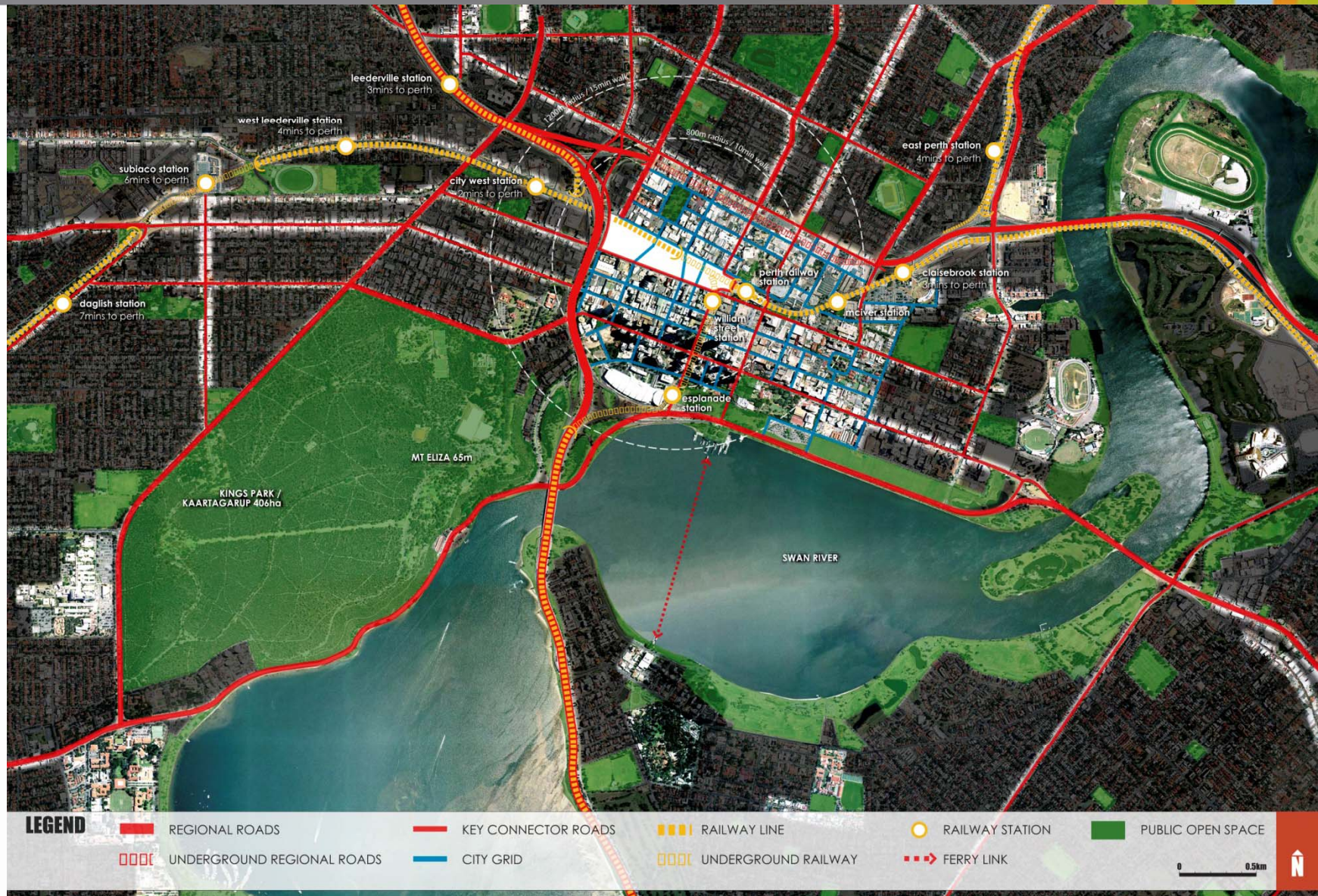


Perth Context

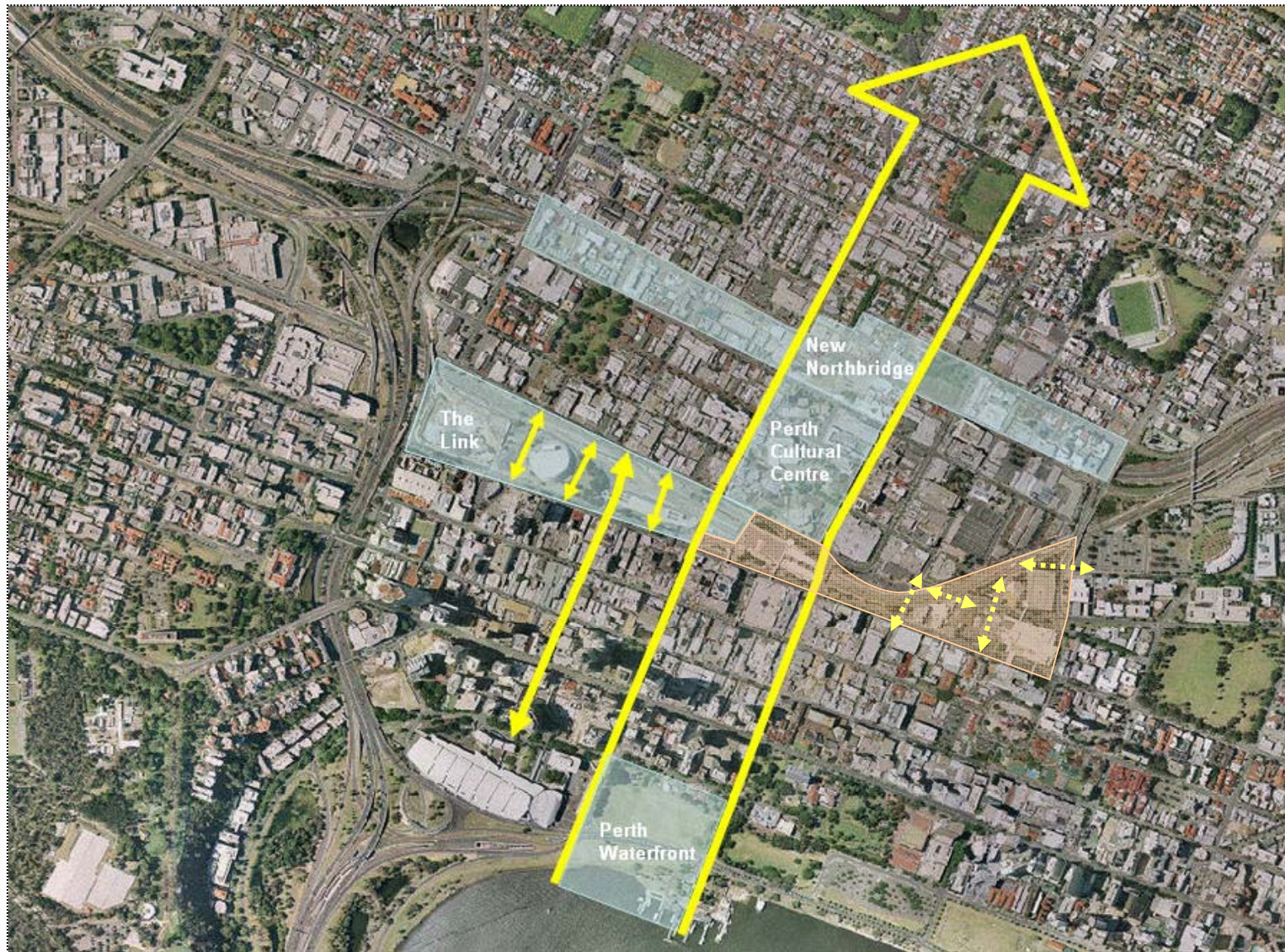
Entry Points →



Perth Context



Northern Axis – Waterfront → Link



Regeneration program



Regenerating Perth – Redevelopment Goals

- Sense of Place
- Urban Efficiency
- Connectivity
- Economic Well-being
- Social Inclusion
- Environmental Integrity



EPRA Planning Framework

REDEVELOPMENT SCHEME 2



6 JANUARY 2010



Redevelopment Scheme 2

➤ January 2010

Development Policies

➤ Policy One:
Green Building Design

Riverside



Riverside – Key Facts

Area:	40 hectares
New Dwellings:	3,400
New Population:	5,800
Retail/Commercial:	81,000 sqm
New Workers:	1,700
Govt. Investment:	\$130 million
Investment Attraction:	\$750 million

Riverside – Waterbank Precinct



Riverside – Waterbank Precinct

**Tier 1 Buildings -
Minimum 6 Star
Green Star rating.**

**Tier 2 Buildings -
Minimum 5 Star
Green Star rating.**



The Link



The Link – Key Facts

Project area:	13.5 hectares
Dwellings:	1,650
Affordable housing est:	250 dwellings
Residential population up to:	3,060
Retail/ Commercial (m²) est:	244,000 m²
Employees up to:	13,350
Public domain:	4.4 hectares
Investment in construction projects est:	\$2 billion

These figures are indicative, may be exceeded and are subject to market conditions.

The Link Master Plan



The Link – Green Star Buildings

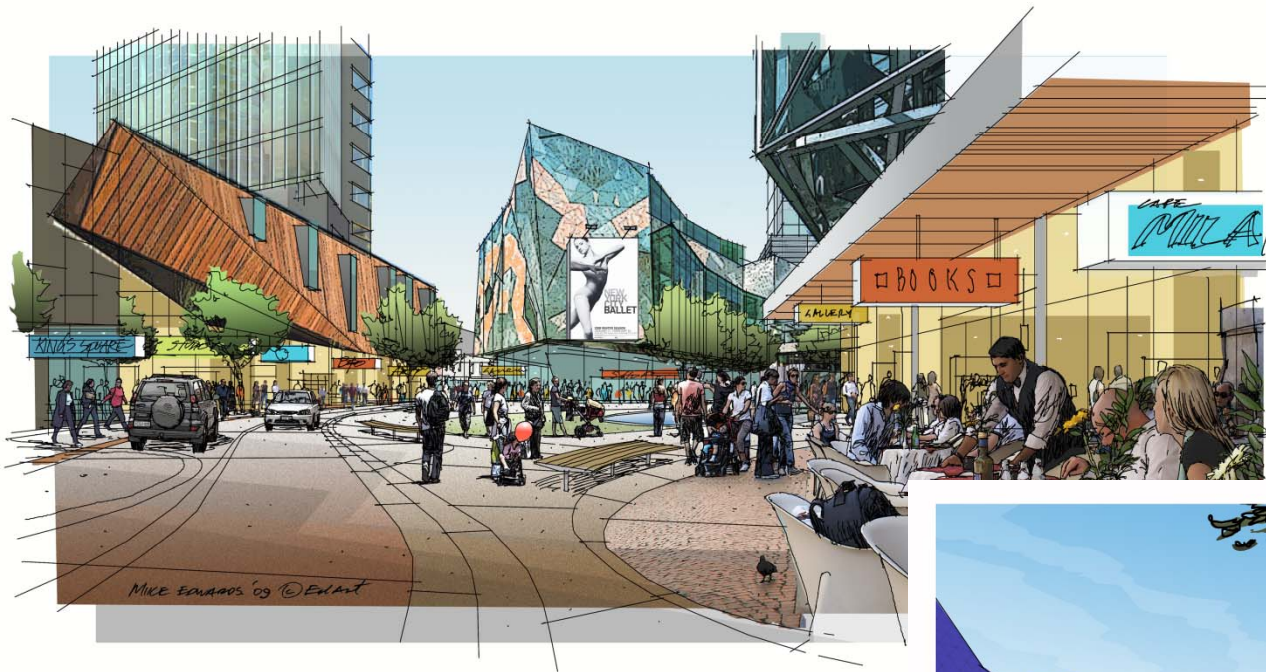


The Link – Artist Impressions



The Link – City Square view south to CBD

The Link – Artist Impressions



The Link – Kings Square

The Link - Wellington Street view
north east from Perth Arena



one40William



Perth in 2031

- **Population growth**
- **Key challenges**
- **Opportunities**





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REVITALISING URBAN PLACES

www.epra.wa.gov.au



Environmental Sustainability for Perth

Background



- Energy Focus (Commercial and Residential)
 - Existing Office: ABGR → NABERS Energy
 - New residential: NatHERS → First Rate → AccuRate
- Environmental Focus on new buildings
 - Green Star Office Design → As Built
 - Green Star Office Interiors
- Green Star Education, Healthcare, Residential, Industrial.....
- Environmental Focus on existing buildings
 - NABERS Water, IEQ, Waste...



WA vs Rest

Source: GBCA Evolution 2010:BCI Australia Data



6 WA projects out of 126 received Green Building Fund grants. Floor space of these projects was 6% of total NLA funded.

Policy

Commonwealth

- Greenhouse focused
- New buildings focused
- Limited incentives
- Still fragmented (although improving)
- Product focused (MEPS, Solar Cities/Solar Rebate, [Insulation...](#))

State

- Limited for property
- Limited leadership

Local Government

- Inconsistent across jurisdictions
- Regulation focused (limited or no incentives)


Existing Buildings



- Approx 55% of Perth's CBD office stock, being 750,000 m², is currently over 20 years of age.
- Approx. 76% of stock being 1,048,000 m², is over 20 years of age.
- On these measures Perth has the second oldest office stock in Australia. Most 20 year figures are around 25-40% of total stock

These buildings are significantly less efficient in their power and water consumption than new developments.

Source: Property Council of Australia - WA Division



Policy Issues for WA (property)



Water Recycling

Feed in Tariffs

Energy pricing

Existing Building incentives

General Sustainability Incentives

Government Leadership as a tenant and owner

Regulation and Incentives



EPRA Development Policy

Tier One: 6 Star Green Star

Development on any Tier One site is required to achieve 6 Star Green Star Design certification from the GBCA. Tier One sites will be identified in the Design Guidelines for each project area or precinct.

Tier Two: 5 Star Green Star

Development on any Tier Two site is required to achieve 5 Star Green Star Design certification from the GBCA. Tier Two sites will be identified in the Design Guidelines for each project area or precinct.

Tier Three: 4 Star Green Star

Unless nominated as a Tier One or Tier Two site, all sites within the Redevelopment Area are identified as Tier Three sites. Development on Tier Three sites are required to achieve 4 Star Green Star Design certification from the GBCA.

P3 Development is to achieve and provide certification of a nominated Green Star design rating. Certification and documentation is to be submitted to the Authority at **working drawings stage** (building design completion stage) in accordance with the following:

- Where a Green Star Rating tool has been adopted by the Green Building Council of Australia (GBCA), certification of compliance with that tool and required star level is to be obtained by the applicant from the GBCA.
- Where the applicable Green Star rating tool is in pilot phase with the GBCA, the applicant is to engage a Green Star Accredited Professional to undertake self-assessment of the development against the pilot tool and a compliance statement is to be submitted to the satisfaction of the Authority.

P4 To ensure that the Green Star design rating is achieved in accordance with P2 and P3 (above), a statement from a Green Star Accredited Professional will be required to be submitted to the Authority at **practical completion stage** of all developments and prior to occupation of the building. The statement is to confirm that all initiatives identified in the design certification and integral to the achievement of the Green Star rating have been implemented.

The Link

3.2.2 Sustainability

Design Intent:

The Authority is committed to ensuring that developments within the project area achieve a high level of environmentally sustainable design (ESD). ESD encompasses environmental, social and economic aspects of a development. The Link project will provide mixed-use developments with varied activity including office, residential, commercial, retail and entertainment uses to provide a thriving day/night urban experience. In order to reduce car use these opportunities to live, work and play are complimented by social facilities adjacent to the Perth rail and central bus stations.

Objective:

All developments in The Link Project Area will be designed to achieve Australian excellence for environmental sustainable outcomes incorporating innovative design, construction and management principles.

The Authority Policy: Refer to the Authority's Policy on environmental sustainability.

- The Authority's sustainability ratings required for each lot are identified in the Lot Specific Guidelines.

All Tier 1 (6 Star Green Star) or Tier 2 (5 Star Green Star)



Commercial office tower with sustainable design initiatives



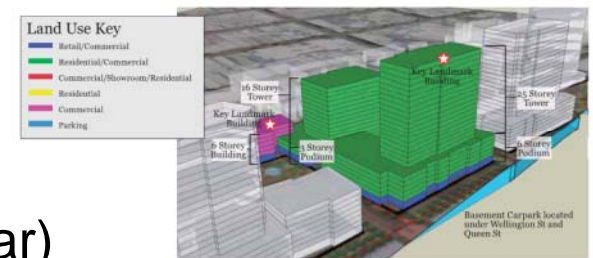
The (potentially lost) Opportunity

Policy is limited to individual buildings (silos)

May become a “tick the box” and \$s per credit exercise

Perhaps should consider:

- Flexibility in approach (not just Green Star)
- Performance/outcomes
- Precinct based services
 - Water capture, treatment and recycling
 - Central Energy
 - Waste management/waste recycling
 -



Perth Waterfront

“Environmentally responsive – the design of Perth Waterfront pays close attention to prevailing climatic conditions, providing protection from the south westerly winds, while still enabling access to the northern sun. Climate change considerations have been factored into the Waterfront, as have opportunities for integrated water management and bioremediation, offering a softer landscaping treatment and aesthetic benefits to the Mounts Bay area.”



Perth Waterfront - ESD

“through a robust process that ensures design excellence and the establishment of a new benchmark for architecture in Perth. This benchmark will extend to the performance of buildings, which will be expected to meet high standards of environmentally sustainable design.”

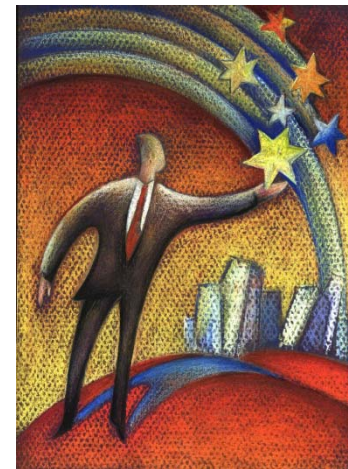


The Opportunity

Policy /guideline is still **mainly** limited to individual buildings
Very broad, not yet defined – opportunity to capture wider range of ideas and initiatives

Perhaps should consider:

- Flexibility in approach (e.g. Green Star with other areas or options)
- Performance/outcomes
- Precinct based services
 - Water capture, treatment and recycling
 - Central Energy
 - Waste management/waste recycling
 -



New York City

GREEN MANHATTAN

Why New York is the greenest city in the U.S.

By David Owen

Published in *The New Yorker*

10/18/04

"The key to New York's relative environmental benignity is its extreme compactness. Manhattan's population density is more than eight hundred times that of the nation as a whole"

- Eighty-two per cent of Manhattan residents travel to work by public transit, by bicycle, or on foot.
- The density forces the majority to live in some of the most inherently energy efficient residential structures in the world: apartment buildings.
- People who live in cities use only about half as much electricity as people who don't, and people who live in New York City generally use less than the urban average.

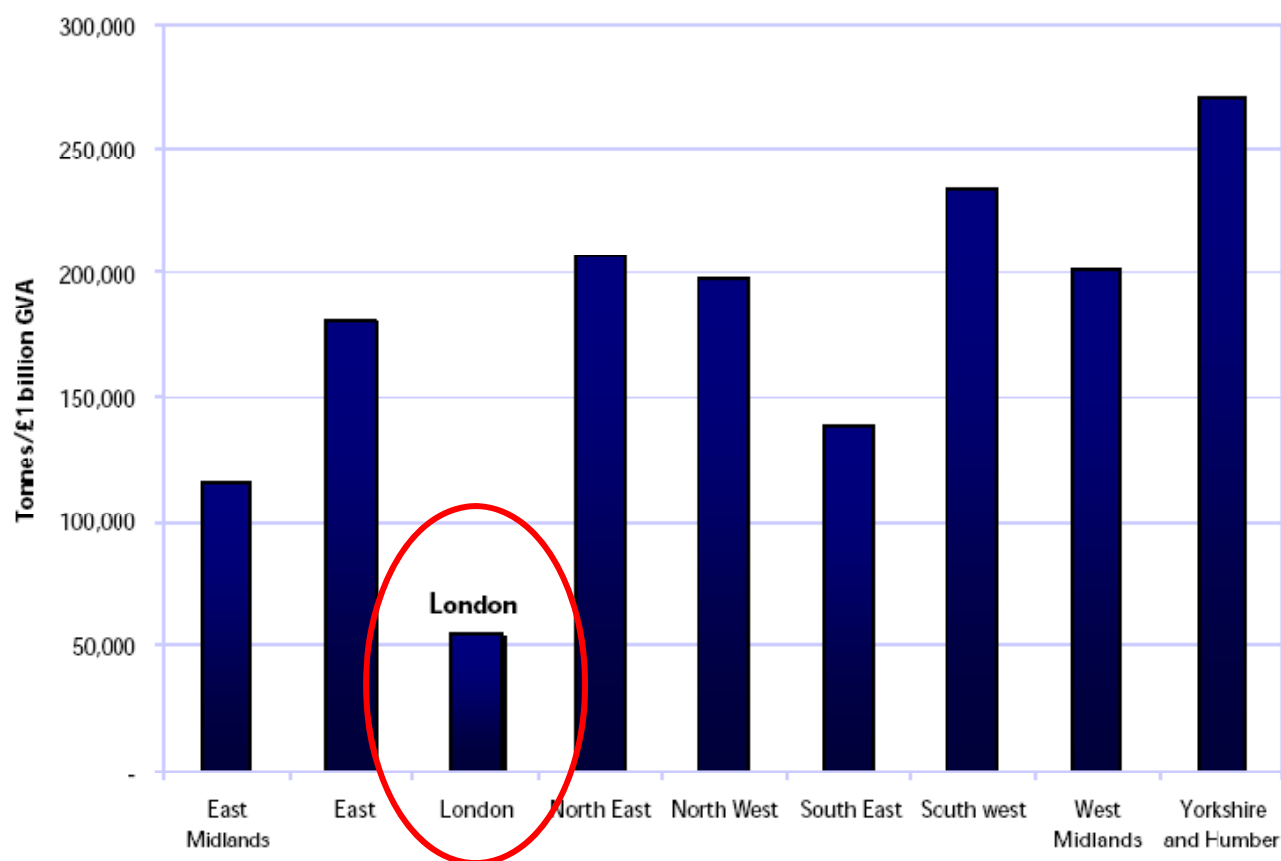
Measuring Environmental Performance - London

GLAECONOMICS **The environmental effectiveness of London**
Comparing London with other English regions



Emissions vs. Gross Value Added

Figure 4.9: CO₂ emissions from electricity usage per £1 billion of GVA from the commercial and industrial sector (2002, tonnes)



WA and Perth?

Australia on the Move 2009

- 2009 Perth population – 1.6 M
- 2027 Perth Population – 2.3M (40%+ growth)



**FUNDAMENTAL
PRESSURES**

State of the Environment Report 2007

- Energy use per capita is growing
- Water consumption per capita stabilising
- Western Australians have amongst the largest ecological footprints (a measure of consumption) in the world
- Vehicle ownership in WA is the highest in Australia

Summary

Beyond Green Star

Precincts

Existing Buildings

Policy coherence and consistency

Incentives

Government Leadership

Perth

- Energy
- Transport
- Density
- Water ??



THANK YOU

Questions?

Questions



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AT A GLANCE



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Today's Panel

Steve Woodland

Government Architect and Director
Cox Howlett & Bailey Woodland Architects

Chris Melsom

Principal and International Head Planning
Discipline
HASSELL

Richard Kilbane

General Manager, Development and Commercial
Hawaiian



Questions



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Thank You

**This gift made perfect
business sense.**



**Sow the seeds,
reap the rewards.**



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GREEN STAR COURSES

Class: Green Star Accredited Professional

Date: 7 April 2010

Level: Clifton's Training

State: Perth





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WIN**



**A RETURN TRIP
TO THE**

USA



Join us at a GBCA event between 1 March and 31 August 2010 and you could be on your way to US Greenbuild 2010!

GBCA events include Leading Green Thinkers, Meet the Stars and Member evenings in your state or territory. The more of these events you attend, the greater your chance of winning!
Details at www.gbca.org.au




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A YEAR IN GREEN BUILDING
GREEN BUILDING EVOLUTION 2010

EVOLUTION 2010

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Thank You

Further information
available on website

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