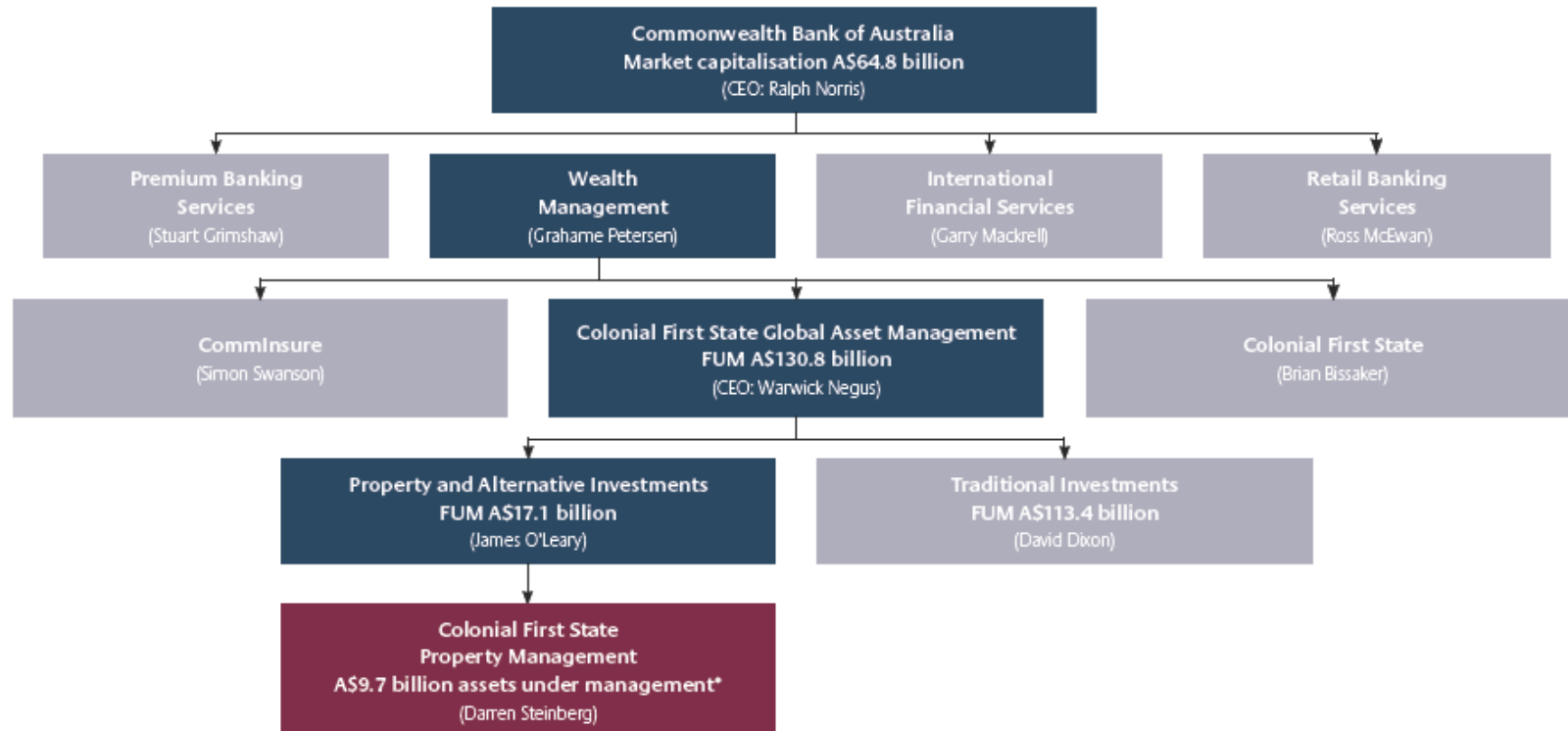


Green Building Council of Australia
Breakfast with the Stars: Chadstone Shopping Centre



Presenter: Paul Donoghue – Regional Development
Manager - CFSPM

Colonial First State Property Management Structure



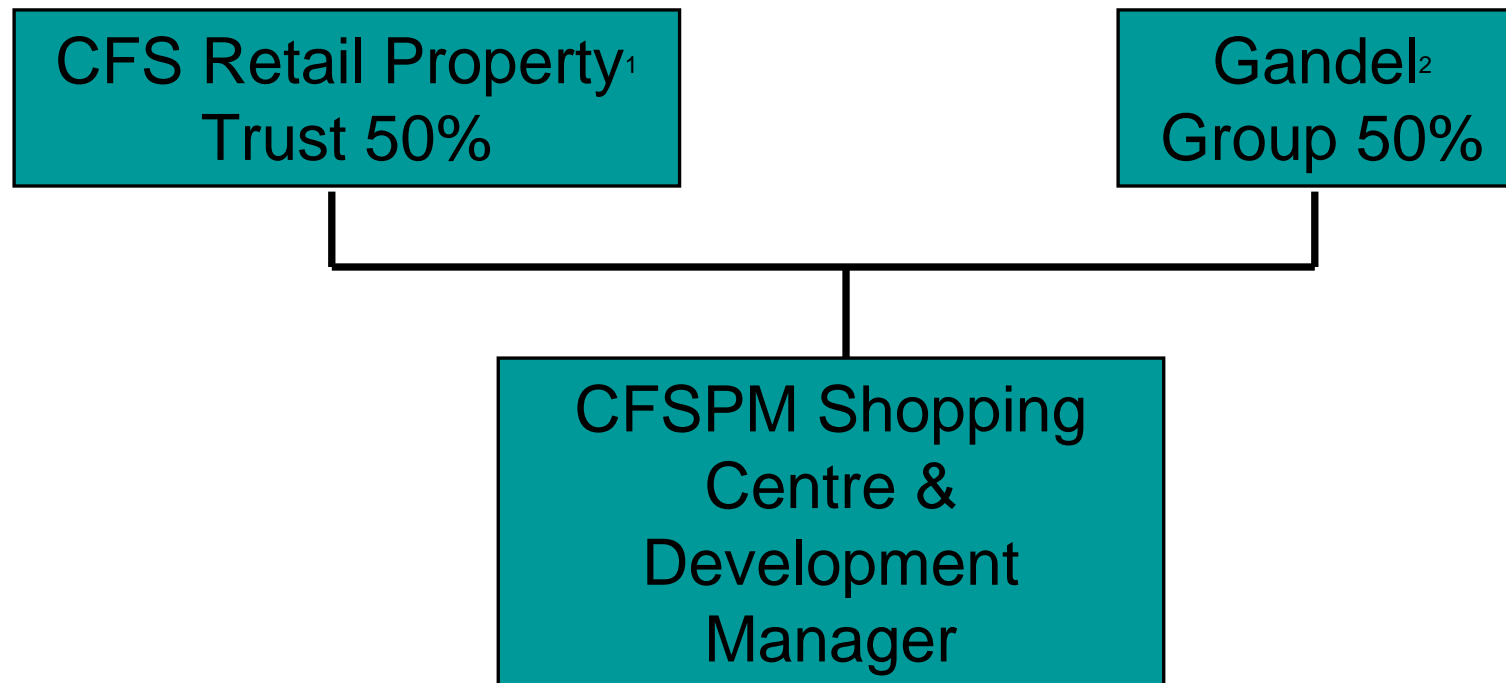
Chadstone Shopping Centre - Aerial



Chadstone – The Fashion Capital Statistics

- GLA 143,000m²
- Visitations 16.5 million p.a.
- Sales \$1 billion Moving Annual Turnover 2007
- Retailers 430 Specialty Stores
Majors: David Jones, Myer, Kmart, Target,
Coles, Hoyts and Borders
- Car Spaces 8,500 approximately

Chadstone Owners



¹ Publicly Listed – ASX

² Private

Development Overview – 47 years

- Chadstone opens 1960
- 10 major developments since 1985
- Latest major development 1999/2000
Myer/David Jones
 - Development Issues
 - Income/Shareholder returns
 - Retail Mix
 - Contemporary best practice design

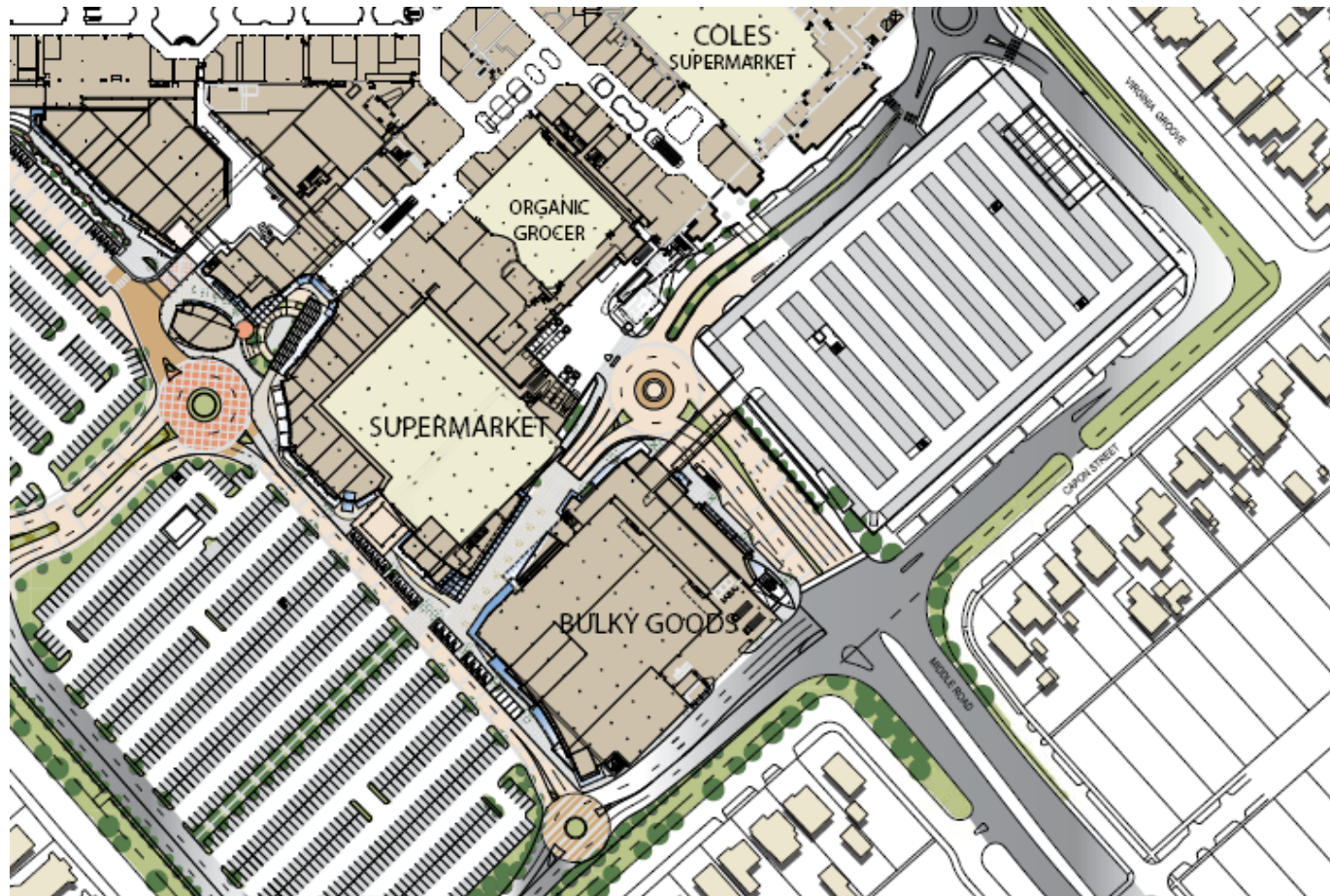
Development Overview – 47 years

- 2005 Planning Scheme Amendment:
 - Existing Retail GLA 106,000m²
 - Approval to add 40,000m² Retail GLA
- Current Developments
 - Development Issues
 - Income>Returns
 - Retail Mix
 - Best Practice Design
 - Sustainable Development

Chadstone – Site Plan



Chadstone Place Development Ground Level



Chadstone Place Perspectives



Chadstone Place Perspectives



Chadstone Place Perspectives



Chadstone Place Perspectives



Chadstone Place Development Development Programme

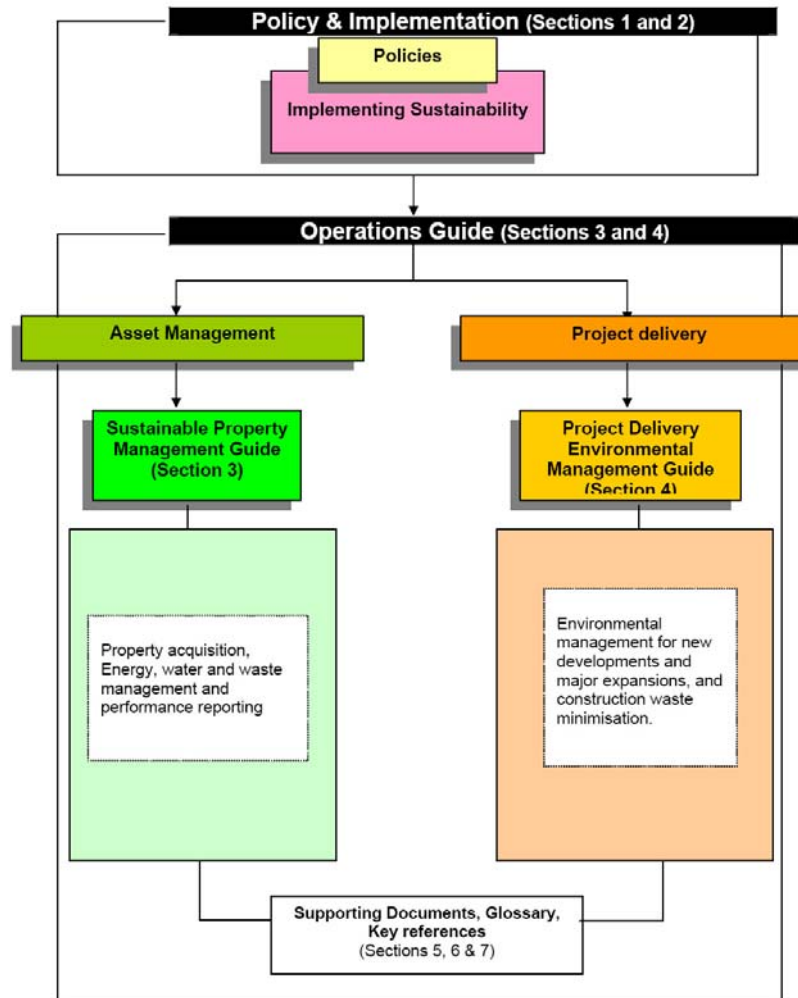
- Concept Design Sept 06
- Green Star – Design Pilot Launched Sept 06
- 1st Round Submission Dec 06
- Design Development Feb 07
- Documentation May 07
- Construction July 07 – Nov 08
- Open Dec 2008

Chadstone Place Development



Retail Sustainability Manual Structure

Figure 1 Retail Sustainability Manual Structure



Asset Management Sustainability

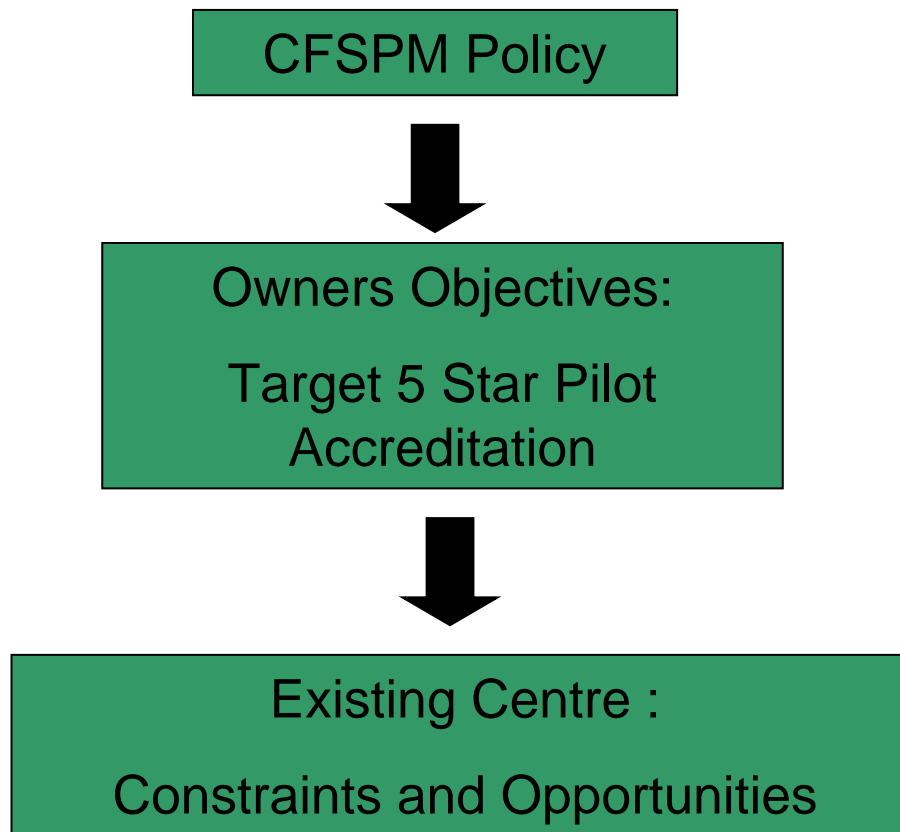
Initiatives:

- Pressure flow control / reduction.
- Waterless urinals.
- Rain sensors.
- Water tanks.
- Replacement of all carpark lights.

Outcomes:

- 14% water savings over last 3 years
- 2006 Yarra Valley Water Sustainability Commendation Award

Chadstone Place – Sustainability Brief



Barriers

- Financial criteria: Year 1 Initial Return
- Stakeholder Education
- 3rd Party commercial arrangements:
tenants

Opportunities

- Stakeholder Education: Industry momentum
- Fund Managers and Investors driving sustainable development
- Authorities: Government and Councils
- 3rd Party commercials: Woolworths and Coles
- Customers

Green Star – Shopping Centre Design Pilot

| Category | Points Available | Points Achieved |
|------------------------------|------------------|-----------------|
| Management | 15 | 12 |
| Indoor Environmental Quality | 14 | 7 |
| Energy | 22 | 14 |
| Transport | 13 | 11 |
| Water | 24 | 24 |
| Materials | 17 | 3 |
| Land Use and Ecology | 9 | 4 |
| Emissions | 14 | 8 |

Chadstone Place Sustainability

Targeted Initiatives

1. Energy

2. Transport

3. Water

Energy

Energy Improvement – Ene-1

- Energy simulation model:
 - Including Mall, BoH, specialty and mini major tenants
 - Excluding major tenants
- Central chilled (air cooled) and heating water (natural gas) plant.
- Individual Fan coil units and air handling units for each tenant.
- Stepped variable speed primary chilled water loop.
- Stepped variable speed primary heating water loop.

Energy

Energy Improvement – Ene-1

- Outside air economy cycle motorised dampers
- VAV (2 speed) AHU for all tenancies.
- Co₂ monitoring and control.
- Advanced DDC system to all plant.

Energy

Energy Improvement – Ene-1

Outcomes:

- Total benchmark emissions (kgCO₂/yr) 2,475,000
- Actual emissions (kgCO₂/yr) 875,000
- Greenhouse gas savings 1,600,000
- Points achieved 12 (of 15)

Transport

Cyclist Facilities – TRA-3

- Shared bicycle paths on entry roads connect to Principle bike network
- End of trip facilities include lockers, staff change and showers

Proximity to Public Transport – TRA-4

- 12 bus lines visit Chadstone and 2 railway stations with 1 km of centre

Transport

Outcomes:

- Points achieved 11 (of 13)

Environmental Design Initiatives (Innovation)

- Public transport transit lounge
- Facilitation for real time bus scheduling
- Green Travel plan and Green Travel co-ordinator

Transport



Water

Occupant Amenity Potable Water Efficiency WAF-1

- 350,000 litre water tank installed
- Captures 250,000L average rainfall/month
- Supplies WC, Urinals, Shower HW and landscape irrigation
- Fire services discharge into tank: 80,000L

Water

Occupant Amenity Potable Water Efficiency WAF-1

Outcomes:

- Total annual water reuse: 3.4m litres
- GLAm²: 16,262m²
- 0.45 litres per day per GLA
- Points achieved 10 (of 10)

Cost Neutral or Variable

- Project Construction Cost \$100m
- Total Development Cost \$136m
- Sustainable Initiatives Costs \$2.6m

Initiatives represent approx 2% of total Development Cost.

Costs exclude savings in operating cost benefits.

Outcomes

- Project Target: 5 star pilot accreditation
- Total weighted points achieved: 67
- Project awarded 5 star Green Star rating: Australian Excellence
- On project completion: a savvy and eco friendly precinct
 - Better place to shop
 - Benefits to owners and community

Future Opportunities

- Green Star Shopping Centre Pilot has educated CFSPM Development Staff
- Development Staff have educated Stakeholders
- Sustainability 'knowledge' is spreading
- The next step:
 - Chadstone West Mall Sustainability Initiatives

The Challenge and the Opportunity: Chadstone West Mall Development

