Planning for ESD

19 August 2008

Stephen Ingrouille
*Going Solar*

Craig Czarny
*Hansen Partnership*

David Jarrett
*Advanced Environmental*

David Vorchheimer
*Russell Kennedy*
What is ESD?

Defined in hundreds of different ways

- “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”
  Brundtland Report *Our Common Future*

- “using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life, now and in the future, can be enhanced”
  National Strategy for Ecologically Sustainable Development 1992 (NSESD)
Stephen Ingrouille
Going Solar
Passive Building Design, PVs & Solar Hot Water

Caulfield Grammar
- Yarra Junction Campus
Passive Building Design, Solar Heating & PVs

Lumen Christi Primary School - Churchill
Renewable Energy - PVs

Grid-Connect PV on East-Facing Roof
Ascot Vale
Renewable Energy - PVs

Grid-Connect PV - St Kilda
Renewable Energy - PVs and Solar Hot Water

St Jo’s, West Brunswick
Commercial PVs – ‘The Solar Pergola’

Award Winning Project - 
40 Albert Road, South Melbourne
Building Integrated PVs

Award Winning Project:
Ballarat University
Building Integrated PVs

Award Winning Project:
Ballarat University
Renewable Energy - PVs

Award Winning Project: Grid-Connect PV - Williamstown
Renewable Energy - PVs

Award Winning Project: Grid-Connect PV – Tulla-Calder Interchange
Renewable Energy - PVs

Award Winning Project: Grid-Connect PV – Tulla-Calder Interchange
For just a short period (but for much too long) our cities have been designed around the motor car. This has led to:

- Greenhouse gases and other pollutants
- Noise pollution
- Loss of amenity
- Road congestion, rage & trauma
- Obesity and other health issues
The Negative Spiral

Increased Traffic

Hindered:
- Public Transport

Reduced:
- Amenity

More:
- Roads
- Parking Spaces
- Impervious Surfaces

More:
- Congestion
- Road Rage
- Accidents

Less:
- Walking
- Cycling
- Social Streets

More:
- Pollution & Noise
- Greenhouse Gasses
- Global Warming

More:
- Obesity
- Diabetes
- Heart Disease

Increased:
- Costs and Taxes

Increased:
- Hospital Admissions

Increased:
- Hospital Admissions
The Positive Spiral

Reduced Traffic

Improved:
- Public Transport
- PT Corridors
- Amenity

Less:
- Congestion
- Road Rage
- Accidents

More:
- Walking
- Cycling
- Social Streets

Less:
- Pollution & Noise
- Greenhouse Gasses
- Global Warming

Less:
- Roads
- Parking Spaces
- Impervious Surfaces

Reduced:
- Costs and Taxes

Reduced:
- Hospital Admissions

Reduced:
- Hospital Admissions

Less:
- Obesity
- Diabetes
- Heart Disease
Sustainable Cities

We need to:

• Design and build better cities
• Design and build better buildings
• Design and build better transport systems
• Be more sustainable tourists
Sustainable Affordable Housing

Award Winning Design

Commendation from Adelaide City Council
Sustainable Transport

With Climate Change and Peak Oil we need to rethink how we design our cities and transport systems.
Sustainable Transport

Melbourne and Geelong have spread almost right around Port Phillip Bay. The West Gate Bridge and our existing public transport system are reaching capacity.
We could and should use ferries.

The cities of Melbourne and Geelong have spread almost right around the Bay. Many cross-city trips are generated but much of our existing public transit system radiates from the cities. High-speed ferries would provide a complimentary transit system servicing both the commuter and tourist markets.
We could and should use ferries.

The cities of Melbourne and Geelong have spread almost right around the Bay. Many cross-city trips are generated but much of our existing public transit system radiates from the cities. High-speed ferries would provide a complimentary transit system servicing both the commuter and tourist markets.
Sustainable Transport - Hovercraft

Sketch: Jenny Donovan
Sustainable Transport - Hovercraft

Sketch: Jenny Donovan
Ultra-Light Rail provides a cost-effective solution particularly for areas of lower density on the fringes of the city.
Sustainable Transport

Sustainable transport is more than just ‘big picture’ infrastructure. It includes:

- Walking
- Cycling
- Car Share
- Car Pooling
- And also…..
Sustainable Cities

The fundamental design of our cities:

• New Developments
• Urban Renewal
Pearls-on-a-String

Sketches: Jenny Donovan
Pearls-on-a-String

Sketch: Jenny Donovan
Sustainable Cities – Village Life

We know this formula works because there are excellent examples in Melbourne.
Sustainable Cities - Village Life
Sustainable Villages

Each new village must encompass:

• Sustainable urban design
• Sustainable buildings
• Renewable energy & energy efficiency
• Water harvesting & water efficiency
• Sustainable transport
• Sustainable tourism
Visions for Victoria - Sustainable Cities

• The good news is that, substantially, we know how to design and build sustainable cities.

• The reality is that with Climate Change and Peak Oil, we have to do it.
Craig Czarny
Hansen Partnership
sustainability; an urban design & landscape architectural perspective

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

sustainability scope

1. broad perspective on sustainability
2. holistic view the city as a living being
   - reduced energy input
   - minimised waste output
   - healthy lifestyles
   - community intactness
   - respect for natural systems
   - links with people & nature

richard rogers; cities for a small planet

richard rogers; cities for a small planet

craig czarny; august 2008
active versus passive practice

1. notable technical innovations… but
2. get it right from the start
   - settlement size and location
   - neighbourhood configuration
   - design of public spaces
   - building design (by others)
3. does it have to ‘look’ sustainable… or can it just be?

Craigm Czarny; August 2008
sustainability; an urban design & landscape architectural perspective

models of sustainable design

1. traditional modes of city design
   • organic european villages
   • embedded asian settlements
   • latin american towns*

CRAIG CZARYNY; AUGUST 2008
112. The plaza is the starting point of the town; inland it should be at the center of the site; at a port location, it should be at the landing point. The plaza should be either square or rectangular in shape; if the latter, then the length should be at least $1\frac{1}{2}$ times the width.

114. The four principal streets begin from the middle of each side of the plaza, and eight other streets begin from each corner.

115. The buildings around the edge of the edge plaza are to have portales, as are those on the four principal streets. At the comers, however, the portales should stop so that the sidewalks of the eight other streets can be aligned with the plaza.

116. In cold climates, the towns should have wide streets; in hot climates, narrow streets.
sustainability; an urban design & landscape architectural perspective

settlement size & location

1. sitting to topography
2. response to microclimate
3. extent of township..walkable
4. definition of boundaries
5. networks of gardens or plazas
6. vertically layered uses

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

Compact mixed-use nodes reduce journey requirements and create lively sustainable neighbourhoods

Zoning of activities leads to reliance on the private car.

Compact nodes reduce travel and allow walking and cycling.

Compact nodes linked by mass-transit systems can be arranged in response to local constraints

Compact nodes can be arranged in response to local constraints.

Towns of 1,000,000 – 250 miles apart
Towns of 100,000 – 80 miles apart
Towns of 10,000 – 25 miles apart
Towns of 1,000 – 8 miles apart

Christopher Alexander; A Pattern Language

Richard Rogers; Cities for a Small Planet

Craig Czarny; August 2008
sustainability; an urban design & landscape architectural perspective

neighbourhood configuration

1. street orientation/ lot sizes
2. street width and aspect
3. central place/ focus
4. space for vegetation (in or out)
5. drainage/ water retention

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

xochimilco park, mexico city; the blue and green lungs of the city

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

design of public spaces

1. use of local materials
2. the edible landscape
3. streets as waterways (wsud)
4. flexible spaces for play

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

craig czarny; august 2008
reorganising cities for sustainable form

1. a network of villages
2. moderate walk up scale (4-6)
3. universal vertically mixed uses
4. an interwoven productive landscape
5. inherently flexible public spaces

where is this being demonstrated?
sustainable sydney 2030

craig czarny; august 2008
sustainability; an urban design & landscape architectural perspective

craig czarny; august 2008
The Role of Buildings in the Current Environment
The need to stabilise carbon

**Source:** IPCC report

### Food
- **0°C:** Severe impacts in marginal Sahel region
- **1°C:** Falling crop yields in many developing regions
- **2°C:** Rising number of people at risk from hunger (25 – 60% increase in the 2080s in one study with weak carbon fertilisation), with half of the increase in Africa and West Asia.
- **3°C:** Entire regions experience major declines in crop yields (e.g. up to one third in Africa)
- **4°C:** Yields in many developed regions decline even if strong carbon fertilisation
- **5°C:**

### Water
- **0°C:** Small mountain glaciers disappear worldwide – potential threat to water supplies in several areas
- **1°C:** Significant changes in water availability (one study projects more than a billion people suffer water shortages in the 2080s, many in Africa, while a similar number gain water)
- **2°C:** Greater than 30% decrease in runoff in Mediterranean and Southern Africa
- **3°C:** Sea level rise threatens major world cities, including London, Shanghai, New York, Tokyo and Hong Kong
- **4°C:**
- **5°C:**

### Ecosystems
- **0°C:** Coral reef ecosystems extensively and eventually irreversibly damaged
- **1°C:** Possible onset of collapse of part or all of Amazonian rainforest
- **2°C:** Large fraction of ecosystems unable to maintain current form
- **3°C:** Many species face extinction (20 – 50% in one study)
- **4°C:**
- **5°C:**
Why we cannot ignore buildings

Australian 2020 carbon abatement cost curve

- Reduction below 1990 levels, percent
- Break-even point

Cost of abatement
A$/t CO₂e

Note: Abatement opportunities are not additive to those of previous years
Source: McKinsey Australia Climate Change Initiative
The Role of Buildings

- Upstream (indirect) CO$_2$ emissions from the power sector via demand for electricity and district heat. Buildings consume about half of the electricity and heat produced by the power sector. [Stern Report]

- US$18-44 billion in lost productivity through illness and;
- US$20-160 billion in lost productivity through poor comfort in US alone
  - Source: Fisk, 2000
The Role of Buildings

- Energy efficiency options for new and existing buildings could considerably reduce CO$_2$ emissions with net economic benefit. Many barriers exist against tapping this potential, but there are also large co-benefits (*high agreement, much evidence*).

  - By 2030, about 30% of the projected GHG emissions in the building sector can be avoided with net economic benefit [6.4, 6.5]

  - Energy efficient buildings, while limiting the growth of CO$_2$ emissions, can also improve indoor and outdoor air quality, improve social welfare and enhance energy security [6.6, 6.7].

Source: IPPC Fourth Assessment Report, Working Group III
Refresh

• Refresh is Lincolne Scott and Advanced Environmental’s industry publication.

• It shares our IP on market trends and emerging issues in the property space

• Demystifying Health and Productivity

www.lincolnescott.com/refresh
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Lend Lease Home Aspirations</th>
<th>Lend Lease Home Priority</th>
<th>B.R.E.E.A.M. Considerations</th>
<th>% of total credits BREEAM</th>
<th>L.E.E.D. Considerations</th>
<th>% of total credits LEED</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Gasses</td>
<td>5-star SEDA rating for base and operation (minimise emissions)</td>
<td>HIGH</td>
<td>max 134 Credits - sliding scale for gas emission per m², others for monitoring and maintenance</td>
<td>20%</td>
<td>Max 16 credits - 2 prerequisites, sliding scale for performance, commissioning and renewable energy</td>
<td>24%</td>
<td>All consider important, should represent 25% of criteria</td>
</tr>
<tr>
<td>Indoor Air Quality</td>
<td>Maximisation of outside air to occupants a priority</td>
<td>HIGH</td>
<td>Max 28 Credits - ventilation, no smoking, maintenance</td>
<td>4%</td>
<td>max 9 credits - 2 prereqs (min IAQ and smokers), low emitting materials</td>
<td>13%</td>
<td>Good IAQ also linked to productivity, potentially underrated by BREEAM, no smoking compulsory in AU.</td>
</tr>
<tr>
<td>Lighting</td>
<td>Natural light and views considered important</td>
<td>HIGH</td>
<td>Max 28 Credits - natural light, ballast, glare, views all considered</td>
<td>4%</td>
<td>max 2 credits - min natural light and views</td>
<td>3%</td>
<td>Natural light and views can also improve productivity and morale… possibly underrated by BREEAM &amp; LEED</td>
</tr>
<tr>
<td>Thermal comfort</td>
<td>Not directly referred to in aspirations, but mentions “have flexibility in comfort”</td>
<td>MEDIUM</td>
<td>Max 20 credits - local temp control, targets, collection of feedback</td>
<td>3%</td>
<td>max 4 credits - indiv. Control, monitoring, compliance with ASHRAE standards</td>
<td>6%</td>
<td>Good Thermal Comfort linked to productivity, possibly underrated</td>
</tr>
<tr>
<td>Building Materials and choice</td>
<td>Some Aspirations, no goal specified</td>
<td>MEDIUM</td>
<td>Max 66 Credits - considered reuse of materials and choice of sustainable materials</td>
<td>8%</td>
<td>Max 11 credits - 1 prerequisite, recycling, local, renewable materials</td>
<td>16%</td>
<td>PVC not mentioned by BREEAM, LEED, LLH, Carpets/paints covered in IAQ</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>Big focus on minimising water use, reuse considered</td>
<td>HIGH</td>
<td>Max 52 Credits - limits to water consumption, monitoring, control of waste</td>
<td>8%</td>
<td>Max 5 credits - reduction in water use, onsite treatment, efficient garden</td>
<td>7%</td>
<td>Water conservation is increasingly important, LLH presents a strong focus, env. rewards may be relatively small compared to cost</td>
</tr>
<tr>
<td>Management Issues</td>
<td>Training, strategies and effective management of initiatives discussed in aspirations</td>
<td>HIGH</td>
<td>Max 79 Credits - focus on management plans, systems, appointment of “proper” environmental contractors for monitoring</td>
<td>11%</td>
<td>Max 5 &quot;bonus&quot; credits for innovation, other management issues tied in with individual criteria (eg monitoring)</td>
<td>7%</td>
<td>Difficult to incorporate management issues into ratings… can perhaps include innovation as well, includes monitoring of ongoing criteria, education, etc</td>
</tr>
</tbody>
</table>
30 The Bond

- A Grade Building
- 5 Star Rating Green Star Pilot
- 5 Star Rating ABGR commitment
- First Passive Chilled Beam Office Building in Australia
- $millions increase in value

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Water
- Water efficient fixtures and fittings
- Water efficient landscape irrigation to the green roof

Materials
- The building will be delivered with a fully integrated buildout.
- Facilities will be provided for the ongoing collection, recycling and management of waste.
- Sustainable sourced timbers are being used throughout.

Land Use and Ecology
- The development is on a previous industrial use site and encapsulates prior contamination
- The project includes a green roof for staff access.

Pollution
- Over 95% of refrigerants are zero ozone depletion.

Innovation
- First extensive chilled beams use in Australia

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Energy
- The space cooling is provided by energy efficient chilled beams system.
- First 5 star ABGRS rating for office buildings in Australia.
- Low energy TS lighting is installed.

Management
- An independent commissioning expert is being used to commission the chilled beams system.
- Seasonal commissioning will be undertaken to ensure the AECGS targets will be met.

Indoor Environmental Quality
- 100% fresh air ventilation with allowance twice that required by the Australian Standard.
- Western facade includes fully operable automatic louvres to control glaze and provide thermal comfort.
- Fresh air rates will exceed Australian standards increasing indoor air quality.

Transport
- The building is located within the CBD in close proximity to Wynyard rail and bus interchanges.
- Cycling facilities and change rooms are provided on site.
Green Pipeline

- Certified Projects
- Registered Projects

- Total Green Stars Awarded
- Future Potential
Market Trends / Emerging issues

- 5 star Green Star is almost the default
- 6 star (under V2) will be as common as 5 star is now in 2 years time
- Tenants are demanding healthy productive workplaces
- Major tenants are installing raised floors for data and power (but not air)
- Trend toward providing separate fresh air and comfort conditioning systems
- Carbon disclosure will occur. Potentially mandatory.
- Carbon trading in the property sector
- Living Buildings….
<table>
<thead>
<tr>
<th></th>
<th>4 STAR</th>
<th>5 STAR</th>
<th>6 STAR</th>
<th>'LIVING'</th>
<th>RESTORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGY</strong></td>
<td>• Passive Solar</td>
<td>• VAV</td>
<td>• Principles</td>
<td>• Displacement</td>
<td>• Climate Neutral</td>
</tr>
<tr>
<td></td>
<td>• VAV</td>
<td>• VAV</td>
<td>• VAV Beam</td>
<td>• Chilled Ceiling</td>
<td>• Thermal Mass</td>
</tr>
<tr>
<td><strong>WATER</strong></td>
<td>• 3A Rated Fittings</td>
<td>• 4A Fittings</td>
<td>• Water Cycle</td>
<td>• Water Neutral</td>
<td>• Waterless Bathrooms</td>
</tr>
<tr>
<td></td>
<td>• Waterless Urinal</td>
<td>• R/Water</td>
<td>• S/Water</td>
<td>• Blackwater</td>
<td>• Waterless Bathrooms</td>
</tr>
<tr>
<td><strong>ECOLOGY</strong></td>
<td>• Permeable Paving</td>
<td></td>
<td></td>
<td></td>
<td>• Do No Harm</td>
</tr>
<tr>
<td><strong>EMISSIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Zero Emissions</td>
</tr>
<tr>
<td><strong>MATERIALS</strong></td>
<td>• Waste Reduction</td>
<td>• Building</td>
<td>• Packaging</td>
<td>• No Timber</td>
<td>• Recyl. Red</td>
</tr>
<tr>
<td></td>
<td>• Contraction</td>
<td>• Minimisation</td>
<td>• Plastics</td>
<td>• Enhanced Energy</td>
<td>• Recyl. Conc.</td>
</tr>
<tr>
<td><strong>TRANSPORT</strong></td>
<td>• Cycle Facilities</td>
<td>• Good Connectivity</td>
<td>• Cycle Paths etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Advanced Environmental
ESD &
the Victorian Planning System
(“the fine print”)
ESD

- Not all about solar Hot Water, Water Tanks or five star energy rating
- May include Water Sensitive Urban Design
- Thermal massing
- Solar power / wind power
- Use of recyclable materials / recycled materials
- Other
Regulatory approach

- Planning Permits
  - Heritage areas
  - Larger scale developments / smaller developments
- Planning Scheme Amendments
- Building Controls
Taras v Yarra [2003]

- Related to a further information request under s.54 of *Planning and Environment Act 1987.*
- ESD should be required by building not town planning as should go across all buildings not just those subject to planning approval. (6)
- ESD Report **not** required.
Moore St Developments v Moreland [2004]

- Pre *Hasan*
- Proposal for 23 dwelling development
- Notes (like *Hasan*) that it is inappropriate to impose ESD condition as it is not necessary, as the requirements sought are imposed by other legislation (17).
- Notes that ESD conditions may however be appropriate in some circumstances.
Golden Ridge v Whitehorse [2004]

- Mitcham tower decision
- Supported ESD
- ESD condition imposed (Conditions 7 and 8)
- Satisfied that concerns re: ESD can be dealt with by way of conditions (102)
- Issued a warning re: ESD features and “sexing up” of buildings (101)
Golden Ridge v Whitehorse [2004]

But it does not follow that the planning process should be used as the primary tool to ensure that appropriate design principles are involved in buildings. There are two reasons for this:

- All buildings should incorporate ESD and therefore should be done as part of building process.
- ESD often turns on matters of detail such as the thickness of insulation, the use of drapes and the style of glass used in windows. This detail is often unavailable when a building is submitted for planning approval; and it would be unreasonable to require it to be available. (paragraphs 99-103)
Michelakos v Darebin [2004]

- Pre *Hasan*
- Conditions requiring energy report.
- Condition not required as dealt with by building surveyor (7)
- Refers to decision in *Golden Ridge v Whitehorse CC (Mitcham Towers) [2004]*
Tharbad P/L v Moreland CC [2005]

- Pre *Hasan*
- Five storey building – 18 dwellings 4 shops
- Decision included ESD conditions (same as *Hasan*)
- No discussions of ESD matters.
Hasan v Moreland [2005]

- Dual occupancy development
- Concluded that inappropriate to require “solar hot water, water tanks and five start energy rating” by conditions on a permit as adequately dealt with by building controls.

“that the building regulations are intended to be the principal method of imposing certain types of sustainability measures in dwellings in Victoria, however, he is not satisfied that these regulations are intended to completely exhaustively or exclusively express the law in relation to the subject.”(14)
Hasan v Moreland [2005]

- Noted that there may have been a different outcome if the provisions of building controls different (19).
- Building comprehensive and appropriate method as not all dwellings require Planning Permits.
- Inappropriate to distinguish between dwellings which require Planning Permits and those that don’t in relation to ESD - contrary to UC principles (21).
- ESD comes down to detailed design (22).
- Should be an objective and open process of evaluation of benefits and costs before imposing a requirement (25).
Devtec v Moreland [2005]

- After Hasan
- Shop and 18 dwellings
- Larger scale than in Hasan v Moreland.
- Condition 4 of Permit required ESD MP.
- Tribunal noted that condition similar to Hasan (14).
- Council sought to distinguish Hasan based on scale of development (16).
- Tribunal held that nothing in the circumstances of this matter depart from the decision in Hasan (19).
- Struck out condition.
Jolin Nominees v Moreland [2006]

- After *Hasan*
- Proposal for 16 dwellings
- DDO imposed for site specific amendment which required “energy efficient design and ESD” (ie, not standard).
- Found that environmental sustainability has explicit support at all levels of the Victorian planning system and that requirement for ESD plan is appropriate in certain circumstances – not contrary to *Hasan*. (31)
- Provides an assessment of *Hasan* and distinguishes *Hasan* condition as it required measures, whereas *Jolin* condition required reports (14).
Jolin Nominees v Moreland [2006]

7 principles in applying ESD conditions (54)

1. There is justification at all levels of the planning system for the imposition of objectives, strategies and (perhaps) permit conditions which incorporate best practice ESD principles”.

2. There is a need to be selective in applying such conditions and they should not be applied ‘globally’. They should be proportional and relevant to the scale and nature of the development.

3. The requirements imposed by, or as a result of, a condition should not exceed what is reasonable to expect of the developer.

4. There is no need to apply conditions which are comprehensively dealt with by other legislation or regulation.
7 principles in applying ESD conditions (54) (Cont’d)

5. The usual vehicle to deliver planning permit outcomes is a plan and/or report, commonly referred to as an ESD management plan.

6. Such a vehicle should be linked to identified targets that are framed in a way to actively encourage developers to design buildings, subdivisions and other developments to achieve the targets. Without these targets, the condition and the plan can become meaningless and fail one of the fundamental objectives of a permit condition, which is to deliver certainty.

7. Unless a council can show that an ESD type condition has a nexus with a transparent council ESD strategy or guideline, the Tribunal would be reluctant to allow such a condition just for the sake of it.
Jolin Nominees v Moreland [2006]

- The Tribunal noted in relation to ESD MP’s that (56)
  - “The plan itself will not achieve anything. It will not make the development more sustainable. Rather, an ESD Management Plan only has value as a means of documenting and delivering sustainability outcomes that are part of the inherent design of the development.”
  - “An ESD management plan should not be required as a matter of course but only where one is really needed by reference to the scale or nature of the development in order to achieve sustainable outcomes in the longer term. The need should be sufficiently worthwhile to justify any additional cost. (56)
**Jolin Nominees v Moreland [2006]**

- Useful decision which sets out principles in applying ESD MP’s – paras 61-66
- Concludes in relation to ESD conditions that:
  
  “We do not consider that Hasan’s case justifies or envisages rejection of all conditions which require preparation of an ESD management plan so long as such a plan is a means of essentially documenting and delivering identifiable sustainability outcomes and the plan is proportional and relevant to the scale and the nature of the development.” (60)
Asian Pacific Building Corp v Stonington [2007]

- Large development
- 115 room Res Hotel, Licensed Premises, Cafe & Restaurant, Pool, Gym
- Followed _Jolin_ (2006)
- ESD condition included (ESD MP) condition 3.
- ESD condition reflects that imposed in _Jolin_ (13)
- Notes clause 11.03-2 principles (SPPF) re: ESD
Kleidon v Moreland CC [2007]

- 2 dwellings in double storey building
- Tribunal found that should not delay all energy efficiency issues to building permit stage (as per Hasan) but must look at items at clause 55.03-5 (ResCode). (22)
Proposal for 65 dwellings
Determined that a condition requiring use of grey water for toilet flushing should be deleted on the basis of a public health risk in recycling grey water in development of this size for toilet flushing (4).

“Satisfied on the evidence before me that it would be unreasonable to burden the developer and future owners of dwellings with the costs and uncertainties associated with a system which has not yet been proven.” (6)
“Effective ESD requires development to be designed with sustainability in mind from the outset rather than regarding sustainability as an “add on” that can be addressed by retrofitting a conventional design or through the imposition of conditions (7)

• ESD requirements need to be in Planning Scheme to be effective also need to have CONSISTENT application (8)

• (referring to Taras v Yarra) – ESD requirements should be applied to all buildings regardless of whether the building needs a Planning Permit.
100 Mason Street P/L v Hobsons Bay [2007]

- It is REASONABLE to expect ESD outcomes in substantial developments and subdivisions of this type as part of Planning Permit process (9)
- Provides an example of an integrated water strategy condition (10)
Solar Panels

**Forsyth and Brindley v Moreland [2001]**
- Heritage - Proposed demolition of chimney
- Location of solar panels should **NOT** override heritage considerations (paras 26, 27 and 29)
- Allowed panels subject to relocation.

**Maddaner v Booroondara [2006]**
- Need for balance between heritage and ESD.
- Need to locate in an appropriate position (behind chimney).
Food for thought

**Gippsland Coastal Board v South Gippsland [2008]**

- Use and development of six lots for single dwellings
- Took into account potential sea level rises as a result of climate change.
- Application refused
- Applied ‘precautionary principle’ – where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environment degradation (referred to at clause 11.03-2 (SPPF))
Overview

- ESD conditions not to be included where requirements duplicate building provisions
- Conditions may be appropriate for larger developments / subdivisions
- Conditions should not be included as an afterthought – ESD should be integral to design
- ESD MP conditions will not work unless ESD measures form part of initial design
- Measures need to bear in mind the associated costs
- ESD relevant consideration in Planning Scheme amendments – Strategic Assessment Guidelines
- Likely change?
Questions?
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