

Integrating Sustainability

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Environment and Heritage Committee
House of Representatives
Parliament House
Canberra ACT 2600

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Dear Sir/Madam

INQUIRY INTO SUSTAINABLE CITIES 2025

The attached submission responds to the House of Representatives Standing Committee on Environment and Heritage invitation to provide input on its Inquiry: *Sustainable Cities 2025*.

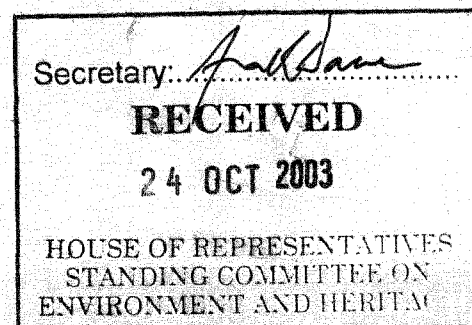
In 2002 I was involved in a collaborative project with the International Environment Technology Centre of the United Nations Environment Programme to develop a framework for sustainable cities. This resulted in the *Melbourne Principles on Sustainable Cities*, which were adopted at the Local Government Session of the World Summit on Sustainable Development held in Johannesburg in 2002.

This submission will explore how the *Melbourne Principles* can be used to promote sustainable cities in Australia, as well as raising other relevant issues, based on knowledge gained in over 30 years working in the area of environment protection in Australia and overseas. Wherever possible, my comments have used the same subheadings that appear in the Discussion Paper, but where necessary new headings have been added to address issues relevant to the Inquiry's Terms of Reference.

I would be happy to expand or further clarify any issues contained in this submission, and I can be contacted on ☎ (03) 9578 6180.

Yours faithfully

Dr Harry Blutstein



SUBMISSION

Context

The House of Representatives Standing Committee on Environment and Heritage inquiry into *Sustainable Cities 2025* is in part prompted by the announcement that 2004 is the Year of the Built Environment. Part of the international focus of the year will be the response to Habitat II, which arose out of the Sustainable Cities Programme launched by the United Nations Centre for Human Settlements in 1990.

This wider international context prompts me to argue in this submission that the Inquiry should not limit itself to encouraging Australian cities to adopt more sustainable practices. Australia's interests can also be served by helping cities in our neighbourhood become sustainable.

There has been considerable attention paid to economic, social and environmental issues, and their interactions, faced by cities by international agencies for a number of reasons.

- (a) Metropolitan regions have become the key unit of the global economy, and when successful can drive prosperity.
- (b) Sudden urbanisation, particularly in developing countries as the rural poor migrate looking for employment, can cause severe social problems.
- (c) Cities create very large ecological footprints, which will have to be substantially reduced to achieve a degree of sustainability.

This global interest in cities resulted in the 1996 *Istanbul Declaration*¹, which identified strategies to complement Habitat II. They are:

- Encourage the creation of a favourable and democratic environment in cities.
- Support the transfer of responsibilities and resources to local authorities.
- Encourage partnering among local authorities, the private sector and civil society.
- Promote the implementation of participatory and consultative mechanisms at the local level.
- Ensure the development of capacities and the strengthening of institutions through urban projects.
- Integrate policies on human settlements with economic, social, environmental, demographic and landuse policies.
- Concentrate efforts on poor populations in urban and semi -urban areas.

¹ United Nations Conference on Human Settlements (Habitat II), *The Habitat Agenda*, Istanbul, Turkey, June 1996.

- Support international cooperation among local authorities, non-governmental and community organizations and other urban stakeholders.
- Adopt human settlement policies that take gender equity into account.
- Share habitat and urban development practices and projects.
- Recognize and support efforts by local communities that contribute to the development of sustainable cities.

Recommendation: That the Inquiry include in its deliberations how Australia should contribute to the international agenda on sustainable cities.

Conceptual Approach to and Sustainability

At various points in the *Discussion Paper* it is implied that the author has in mind a triple bottom line approach. The conceptual approach to sustainable development and its application to cities needs to be explicit. There are a number of versions of the triple bottom line and these are discussed critically below.

In Australia there have been a number of definitions used. Perhaps the most comprehensive process was initiated in June 1990 when the Commonwealth Government issued a discussion paper on ecological sustainable development² and followed it with a national strategy³. It defined ecologically sustainable development as “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 increased”. All levels of government were able to sign the Intergovernmental Agreement on the Environment⁴ (IGAE) in the same year, committing themselves to integrating environmental considerations into government decision-making and to pursuing the principles of ecologically sustainable development. It should be noted that the discussions in Australia focussed on the economic and ecological facets of sustainability, devoting very little attention to social sustainability. The IGAE is not a legal document but a statement of intent or aspirations. While it is not within the scope of the Inquiry to review such documents, it probably needs to be re-visited to ascertain its relevance to your Terms of Reference.

² Commonwealth Government (1990) *Ecologically Sustainable Development (Discussion Paper)* AGPS.

³ Commonwealth Government (1992) *National Strategy for Ecologically Sustainable Development*, AGPS.

⁴ The Agreement is set out in the Schedule to the *National Environment Council Act 1994*

It should be noted that definitions for sustainable development have found their way into environmental legislation in a number of jurisdictions. While this is a positive development, it fails to address the issue holistically by ensuring that sustainability principles guide pieces of legislation in the economic, social and cultural spheres.

Internationally, most texts refer to the Brundtland Commission definition⁵ of sustainable development: "as development that meets the needs of present generations while not compromising the ability of future generations to also meet their needs". Its emphasis on economic development and maintaining ecological integrity does not adequately address social capital, which will be important in transforming cities, because if people see the direct benefits to themselves, their families or their communities they are more likely to contribute.

There is a general consensus that sustainability needs to be built around the "triple bottom line", popularised by John Elkington⁶, although others suggest that the cultural element should be considered separately while others argue that governance should be added, which allows issues like equity to be addressed.

There have been various diagrammatical representations of the triple bottom line. One uses three concentric circles in which economic and social sustainability are enclosed in a large circle of the environment, indicating that they are totally dependent on maintenance of ecological services. This is the "deep green" model, and while factually correct, has garnered little enthusiasm. The most common representation is of three intersecting circles representing social, economic and ecological (or environmental) sustainability, in which sustainable development is seen as achieving a "balance" or "compromise" between the three.

A different model was suggested at a UN summit⁷, which is based on the interdependence of the triple bottom line. This is the model I prefer. It is shown below as three interdependent cogs, in which social and economic sustainability provide the resources to drive ecological sustainability. The oil that lubricates this model, and ensures that democratic principles and equity are incorporated, is good governance. This pragmatic model is based on how the world actually works.

⁵ Brundtland Commission (1987) *Our Common Future* UN World Commission on Environment and Development.

⁶ John Elkington *Cannibals Without Forks*.

⁷ At the United Nations City Summit Habitat Agenda held in June 1996 (Chapter 1, page 1) it was stated that: "There is a sense of great opportunity and hope that a new world can be built, in which economic development, social development and environmental protection as interdependent and mutually reinforcing components of sustainable development can be realized through solidarity and cooperation within and between countries and through effective partnerships at all levels."



In this model ecological sustainability is driven by harnessing social and economic capital built up within the city. Thus while cities require significant effort to make them more sustainable, the capacity to effect those changes also exists within cities, and needs to be harnessed.

Recommendations: That the Inquiry use the triple bottom line that incorporates the need for sound and active governance processes to drive change, as the conceptual framework for its deliberations.

That the Inquiry consider using the diagrammatical representation of the triple bottom line based on interdependent cogs.

Common Framework

Cities are complex, interconnected and dynamic systems. Their management is often fragmented, resulting in unsustainable urbanisation. Driving the necessary changes to make them more sustainable presents a major challenge.

Sustainable development affects every aspect of the functioning and metabolism of a city, many parts of which are interdependent. It therefore requires an integrated approach to closing cycles of natural resources (eg water, materials, energy). Cost effective change can be achieved through addressing the system as a whole.

Yet the functioning and metabolism of a city is usually not managed by any one group. Even when there is overarching management of a city, bureaucratic departmentalisation ensures that interrelated areas like transport, landuse planning,

economic development and management of water, wastewater and wastes are addressed by different function areas, with little integration. The level of connectedness between government departments and other groups with an interest and impact on sustainable development is often poor.

Sustainability should be a shared responsibility, requiring cooperation and partnerships between different organisations and interests. Therefore, the transformation of cities towards a more sustainable future requires cooperation between all levels of government (and between departments within government), communities of interest, the business sector, resource managers and all its citizens.

To bring these various groups together towards a common purpose, the International Environment Technology Centre of the United Nations Environment Programme, in partnership with the International Council for Local Environmental Initiatives and EPA Victoria sponsored a Charrette in Melbourne in April 2002. The Charrette developed a framework, *Melbourne Principles on Sustainable Cities*, for coalescing different interests around a common vision for sustainable cities.

The Charrette consisted of international experts from developing and developed countries, which ensured that the *Melbourne Principles* were relevant to cities, whatever their state of development. The Principles were adopted at the Local Government Session of the World Summit on Sustainable Development on 30 August 2002, and incorporated into Local Action 21, the document that succeeded Local Agenda 21.

Subsequently, the *Melbourne Principles* were adopted by the Australian Local Government Association at its 2002 Congress in Darwin

The *Melbourne Principles* are ten simple principles by which a city could develop strategic and action plans. They address the urban environment holistically, and are based on a triple-bottom-line framework⁸. The language of each principle is straightforward and can be easily communicated to decision-makers, stakeholders and the general public. They apply to both developed and developing countries, and are designed to guide thinking and provide a strategic framework for action.

Currently the *Melbourne Principles* are being operationalised through the development of a toolbox and pilots.

It is expected that the *Melbourne Principles* will be used throughout the world to promote sustainable cities, and it would be reasonable for them to be adopted in Australia, where they were developed.

⁸ The Melbourne Principles also address sound governance and cultural issues.

Recommendations: That the application of sustainable development to Australian cities be based on integration across the physical environment, infrastructure, finance, institutions and social activities, based on an understanding of the functioning of, and interrelationships between ecological, social and economic processes and behaviour.

That the Melbourne⁹ Principles on Sustainable Cities be adopted as an agreed framework for promoting sustainable cities in Australia.

Inquiry Objectives

The Discussion Paper establishes a number of objectives for the sustainable city of the future. While this list provides useful signposts for the changes that need to be made, it need to be understood that many of these issues are interrelated and at that sustainable development requires a holistic approach.

One element that the objectives address implicitly is the role of the community in shaping sustainable development. This would be worthwhile dealing with explicitly, and in some detail.

Recommendations: That the Inquiry's Objectives should recognise that various issues identified in the Discussion Paper are interrelated and need to be addressed holistically.

That the Inquiry explicitly recognise the importance of communities and increasing social capital as key drivers for change towards sustainable cities, and that the opportunities of unleashing this potential be further explored.

Sustainable Communities

The transformation of cities towards sustainability will require the cooperation and active participation of its local communities, an issue not directly addressed in the Discussion Paper. The importance of people to the process was concisely put by Caio Koch-Weser, managing Director of the World Bank who said: "We used to see

⁹ The inclusion of the name of "Melbourne" may not sit easily with the parochialism of other Australian cities. It should be noted that the Principles were only named after Melbourne because that is where they were developed, in the same way as the Montreal Protocol or Basel Convention.

physical and financial capital as critical inputs and constraints into development; now we see human and social capital as the limiting factor.”

Furthermore, as the journey towards sustainability will profoundly effect how people live, work and play, they must be involved in shaping these changes.

It will therefore be necessary to create and foster sustainable communities¹⁰, where people can participate in creating vibrant and healthy places to live, work and play. Such communities need to be built on participation, reciprocity, trust, proactivity and sharing resources.

Sustainable communities (based on geography or interests) can benefit by cooperating to articulate their aspirations and working together to establish priorities to meet their needs. This can be done by:

- Accepting that communities can benefit from getting directly involved in sustainable development, and that this approach is an effective driver for change in the way people work, live and play.
- Appreciating the interdependence of social, environmental and economic objectives, and the need for sustainable communities to address all three.
- Developing governance processes that engage people in the community.
- Encouraging active individual and corporate citizenship, committed to achieving triple bottom line sustainability
- Engaging existing community groups so that they understand the broader challenge of sustainable development and enlist their commitment to work within this wider context.
- Enhancing the capacity of the community to address the challenges it faces through knowledge, expertise and resources.

A number of sustainable communities are operating in Australia, such as the Southwest Sustainability Partnership in Victoria, Sustainable Gladstone in Queensland and Newcastle in NSW, that provide useful examples to others. Exemplar examples of overseas cities that have taken up the challenge are Seattle¹¹ and Chattanooga¹².

To be successful sustainable communities need to ensure the involvement of civil society, the business sector and all levels of government. This can provide the vehicle to promote the transformation of cities towards sustainability.

¹⁰ Harry Blutstein (2003) *Thinking about Sustainable Communities*.

¹¹ See <http://www.sustainableseattle.org/>

¹² See <http://www.chattanooga.net/sustain/>

Recommendation: That fostering sustainable communities, with active involvement of civil society, the business sector and all levels of government, be used in Australia to promote the transformation of its cities towards sustainability.

Governance

Sound governance processes are important to the functioning of sustainable communities.

The hallmark of good governance is that it encourages interaction, participation, and partnerships between community members and community interest groups so that processes and outcomes are owned by all. Governance facilitates relationships, working together, flexibility, trust and managing diversity.

As mentioned earlier, no single body has the responsibility for addressing sustainability in cities holistically, which has resulted in the failure to develop and integrate sustainable solutions. Therefore governance processes are needed to bring together relevant groups to work together.

Good governance of cities needs to be based on accountability, integrity, transparency, capacity (resources, processes and skills). There is a need to coopt communities and stakeholders to provide support for sustainability programs.

While governance has been traditionally dominated by various levels of government, there are new approaches to empowering local communities to play a greater role in shaping their own destiny. As sustainability entails profound changes to the way people work, live and play, their active involvement in the process is a desirable driver for change.

Governance structure and processes should seek to:

- Integrate social, environmental and economic sustainability
- Foster awareness and learning in sustainable development and motivate all parts of the community to work on this project.
- Build community and business capacity to address sustainability challenges.
- Provide a forum¹³ for all levels of government to work with civil society and the business community to work together to create sustainable cities.

¹³ It is important that no sector dominate such a governance structure.

- Leverage resources from public and private sources, and help foster partnerships to optimise the effective use of such resources.
- Ensure resources are used effectively to achieve agreed outcomes.
- Broker partnerships.
- Provide transparent, accountable and inclusive processes to engage the community and stakeholders.

Within the above governance objectives, there may need to be changes in the way governments interact with the community, with greater scope for constructive engagement, as opposed to traditional consultation processes and limited participation in government programs. In some cases, the agenda may be set by local communities, and the role of government will be to support those activities with resources and to support capacity building.

Recommendation: That good governance practices, that bring together all relevant parties in a city to work together on sustainable development, are nurtured.

Capacity

The transformation to sustainable cities requires new skills and approaches in both the government and business sectors, as well as changed behavioural patterns in the community to address such issues as sustainable production and consumption.

In the business sector there is not a good understanding of the role eco-efficiency can have in improving both economic and environmental outcomes for a company. While there have been government programs to promote various aspects of eco-efficiency (energy reduction, cleaner production and water conservation), such programs are fragmented and have generally proved to be of short term benefit.

Government programs to encourage eco-efficiency need to be integrated around sustainability principles, and concentrate on building capacity in the private sector so it can help itself.

Capacity is also needed within civil society if sustainable communities are to be created. Local government has a lead role to play in this project.

There is also a need to build capacity in the public sector to orientate it to work with communities on an more equitable basis and provide them the skills to foster the growth of sustainable communities.

The public sector also needs to build its own capacity to incorporate sustainability solutions into its own operations and ensure they are used in decision-making.

Knowledge of sustainable cities is also vested in a number of international networks¹⁴ that have sprung up to address the issue. While regionally based, Australia would benefit from linking into these networks as well as showing leadership in our neighbourhood by sponsoring the establishment of a similar network.

It is generally agreed that sustainable development needs to be addressed at the level closest to people. Consequently local government has taken a lead in this area. Many have active Agenda 21 programs and are participating in ICLEI's Cities for Climate Change programs. Unfortunately, municipalities often don't have the financial resources to meet the challenges they face in implementing sustainable development, which has diminished their effectiveness.

Recommendations: That building capacity, in the public and private sectors and community structures, is an essential prerequisite to facilitate the transformation to a sustainability city.

That the ability of local government to adequate resource sustainable development programs be reviewed, and if necessary provision made for them to have access to adequate sources of funding.

That Australia sponsor the establishment of a sustainable cities network in the Asia Pacific region to generate local information exchange and mutual support.

Investing in sustainability

Significant investment has been made in the infrastructure (transport, communications and reticulation of services) that support our cities. These were not designed for sustainable outcomes, and can act a barrier to change.

For example, the lack of a third pipe prevents widespread reticulation of treated wastewater and therefore acts as a barrier to reuse. While it is unlikely that current infrastructure investment will be discarded overnight, there is a need to ensure that new investment in our infrastructure is directed at ensuring that it delivers sustainable solutions.

¹⁴ For example there is the Mediterranean Coastal Cities Network, European Sustainable Cities and Towns campaign, WHO's Healthy Cities Campaign, Cities for Life Forum (South America), Cities^{PLUS 30} International Network, to name just a few.

Recommendation: That a detailed study be undertaken on the implications of sustainability for urban infrastructure, and this be used to develop a long-term plan to ensure future investment supports sustainable urban solutions.

Preserve bushland, significant heritage and urban green zones

The Discussion Paper's main focus is on the loss of vegetation on the urban fringe of expanding cities. Consideration also needs to be given to transforming the existing urban landscape to reflect native vegetation. This has implications for water consumption and biodiversity.

Many Australians associate an attractive urban environment with European vegetation, which is often at odds with achieving sustainability outcomes. If there is to be a significant effort to "Australianize" the urban landscape it will need to be based on raising the awareness of the community to the aesthetic and practical value of native vegetation.

Recommendation: That the development of more sustainable patterns of vegetation in Australian cities needs to be predicated on ensuring the community has an appreciation of the need for such measures and engages their support to take private action and support community revegetation programs.

Ensure equitable access to and efficient use of energy, including renewable energy sources

The Discussion Paper emphasises the importance of renewable energy. While this is to be encouraged, it should be noted that in all major Australian cities, it still is more expensive to buy energy from renewal sources than from carbon-based energy sources. Therefore purchases of "green energy" are often driven by customer altruism. This situation has arisen because externalities are not included in the price of energy. This market failure needs to be addressed.

A number of key factors affect the energy consumption of cities. They are:

- (a) Consumption patterns by individual consumers;
- (b) The shape of the city (eg relationship between places of employment and where people reside, and the transport infrastructure);
- (c) The ability of the private sector (secondary and tertiary sectors) to implement energy efficient technologies and practices; and

(d) The cost of resources¹⁵, where energy is undervalued.

Demand management (or sustainable consumption) is the best way to move towards more effective use of energy. Unfortunately since many energy utilities in Australia have been privatised, the level of activity in demand management seems to have decreased.

Programs that governments have run to support energy conservation are mainly targeted at large industries. SMEs¹⁶ (small to medium enterprises), and to a lesser extent the general public have been less well served. While programs like the Greenhouse Challenge and state energy conservation programs have made useful inroads into large industries, there is a lost opportunity of having industry address all their resource usages, so that they could also address water and chemical usage at the same time as improving their energy intensity.

Recommendations: That pricing of carbon energy sources be reviewed so that externalities are included.

That government eco-efficiency programs be integrated so that industry is encouraged to address resource effectiveness holistically.

That government and industry associations provide greater attention to helping SMEs improve their resource effectiveness.

That energy utilities be encouraged to actively promote demand management with their customers.

Establish an integrated sustainable water and stormwater management system addressing capture, consumption, treatment and re-use opportunities

Sustainable water use needs to be addressed in terms of the whole water (and nutrient) cycle. As a very dry continent, in which both population growth and economic development could be limited by water availability, it is essential that Australia develops effective consumption patterns. Based on current practices there is a lot of scope for improvement.

¹⁵ The issue for providing the infrastructure to deliver electricity to consumers also needs to be considered. Utilities often cross-subsidize provision of infrastructure between densely populated suburbs in the centre of the city with suburbs on the city edge, and therefore contributes to the urban sprawl.

¹⁶ Harry Blutstein (2003) "Review Of Assistance Programs Directed at SMEs In Australia" NZ Climate Change Office. Unpublished.

The concept of developing more localised, small-scale systems (as mentioned in the Discussion Paper) is strongly supported.

A case example that the Inquiry should consider exploring is at West Wyck¹⁷, in which both black and greywater are being retained on the suburban site of an old primary school, which is being developed into 14 accommodation units.

One of the main issues related to completing the water cycle relates to water reuse. The issues that need to be addressed before reuse becomes widespread are:

- (a) The cost of treatment and delivery of reused water to customers needs to be competitive with catchment water supplies. This issue is compounded by the fact that catchment water supplies are often under-priced, which undermines the economics of reuse.
- (b) Logistics can act as a barrier to reuse from sewerage treatment plants. Most capital cities have centralised their sewerage treatment into just a few plants, most of which are downstream and located on the coast. Furthermore they are located within the urban boundary. On the other hand, the potential customers of reused water are in rural areas, and supplying them adds a significant cost premium in terms of transporting it to them in pipes. In the long term, the current approach needs to be reviewed, and the viability of having smaller plants on the fringe of the city should be explored, so they are adjacent to potential customers.
- (c) Regulators in some jurisdictions have introduced barriers to reuse, reflecting their risk-adverse approach¹⁸. Such attitudes may discourage water authorities from pressing ahead with water reuse projects.
- (d) The public have been reluctant and in some cases hostile to using reused water. While most consumers have no problems with recycling grey-water, they do have problems with using recycled black-water.

The Discussion Paper needs to also consider biosolids, which are becoming a significant problem in completing the nutrient cycle.

An issue that has not had sufficient attention has been the use of the sewerage system to dispose of hazardous wastes from industry (trade wastes). These wastes have an unknown impact on receiving waters and sewerage assets, and reduce the potential for water reuse.

There are a number of encouraging technologies on water reuse used overseas, and reviewing their applicability to Australian conditions would be worthwhile. It should be noted that one of the problems of establishing small decentralised locally-operated treatment facilities is that the skills, which depend on biological rather than

¹⁷ Contact Mike Hill at West Wyck (492 Victoria St, West Brunswick) on ☎ (03) 9380-1459 or 0419 877 702 for an inspection tour.

¹⁸ Harry Blutstein (2003) *Liabilities for Reuse of Reclaimed Water*, unpublished.

engineering control systems, are often poorly developed resulting in poor performance.

The cost of service provision needs to be studied, as in many cities the cost of providing reticulated water and sewerage is cross-subsidized. This has meant that environmentally dubious developments on the urban fringe are being under-priced. If this situation were addressed it could provide an economic impetus to urban consolidation and encourage developments on the urban fringe to treat and reuse water on site.

In the industrial sector, as mentioned in the previous section, water conservation needs to be considered with other resources (energy, wastes) so that an integrated approach is taken to eco-efficiency.

Recommendations: That national action be taken to review the opportunities and barriers to completing the water and nutrient cycles in urban Australia. This review should address the economics, logistics and social aspects of sustainable water practices.

That sustainable water consumption practices in industry should be integrated with other eco-efficiency (eg energy, materials, chemicals) programs.

That the Inquiry inspect West Wyck and consider using it as a case example in its final report.

Manage and minimise domestic and industrial waste

As mentioned in the previous sections, waste minimisation, particularly in the industrial sector, needs to be considered with other resource use (water, energy) so that a consistent approach is taken to eco-efficiency.

The Discussion Paper would benefit from more attention to sustainable consumption, which is often not well addressed in product stewardship type programs.

The Discussion Paper would also benefit from discussion on industrial ecology¹⁹. This approach is based on industrial symbiosis in which wastes from one operation are used by other collocated industries, thus eliminating creation of hazardous wastes and ensuring efficient water and energy use. For example, in the eco-industrial park in Kalundborg (Denmark) waste gases from an oil refinery are burned by a power plant, waste heat from the plant warms commercial fish ponds, and other companies use by-products of combustion to make wallboard and concrete. According to one

¹⁹ B R Allenby (1999) *Industrial Ecology* Prentice Hall, New Jersey.

calculation, Kalundborg's waste-saving approach translates into \$120 million in savings and revenues on a \$60-million investment over a five-year period²⁰.

The big challenge remains SMEs, which often do not have the awareness, capability or incentives to embrace eco-efficiency, even when it can be shown to be in their economic interests.

The SME sector is very important to Australia where there are about 1,200,000 small businesses, which make up about 95% of the total business sector in Australia. Small business accounts for more than 56% of private sector employment, and has grown 3.2% over the last ten years. It is generally recognised that SMEs contribute significantly to Australia's economic well being. The environmental impact of individual SMEs is variable, but their combined impact is substantial. Improving the performance is necessary if wastes are to be reduced through greater resource intensity.

A number of approaches have been attempted by government agencies to encourage SMEs to incorporate eco-efficiency into their operations with little success. This lack of success has resulted in many agencies downsizing their programs targeted at SMEs, which, considering the importance of this sector and its inability to help itself, is unfortunate. A number of approaches, based on experience gained in Australia and overseas²¹, have been identified to assist this sector. They include:

- Deliver awareness programs to SMEs on the economic, as well as environmental benefits of pursuing sustainability.
- Provide government assistance to enhance the capacity of SMEs to implement eco-efficiency programs through the development and wide dissemination of eco-efficiency tools (eg materials monitoring, waste auditing) and training (eg total cost accounting)
- Encourage industry groups to help one another²² through regional cluster or industry associations.

²⁰ Steven Peck and Chris Callaghan (1997) "Gathering Steam: Eco-Industrial Parks Exchange Waste for Efficiency and Profit" *Alternatives Journal*, Spring.

²¹ Harry Blutstein (2003) *Delivering Government Environmental Programs to SMEs*, unpublished.

²² There have been a number of successful self-help groups, and it may be worthwhile for the Inquiry to feature one of these as a case example. NORTHLink operates in the north of Melbourne, drawing together SMEs in the automotive parts industry. Contact Mick Butera for further information on ☎ (03) 9471 9000.

Recommendations: That product stewardship needs to place greater emphasis on sustainable consumption, rather than relying on the waste hierarchy to encourage reductions.

That Governments address waste reduction in cities through encouraging the establishment of industrial ecological parks.

That SMEs need support to pursue eco-efficiency, and this can be done through government programs and industry self-help groups.

Develop sustainable transport networks, nodal complementarity and logistics

One of the most important considerations in developing a sustainable transport system is to ensure that it is coordinated with landuse planning and that this be done over the whole functional urban region.

Planning can do much to reduce the public transport costs by addressing the proximity of where people live and their places of work and play.

The other consideration that is relevant to sustainable transport is customer behaviour, which is currently poorly disposed to public transport. Behavioural research has been commissioned by various jurisdictions to design campaigns to increase patronage with limited success. This area requires more thought and perhaps additional coordinated research.

In terms of specific approaches, the Inquiry should consider whether OCED work on sustainable transport could be relevant to the Australian situation. Its definition of Environmentally Sustainable Transportation is:

Transportation that does not endanger public health or ecosystems and meets the needs for access consistent with (a) use of renewable resources at below their rates of regeneration, and (b) use of non-renewable resources at below the rates of development of renewable substitutes.

To support this definition, OECD published Guidelines²³ to assist governments at all levels in the development and implementation of strategies towards Environmentally Sustainable Transport. These Guidelines represent a desirable and feasible approach for the transport sector that may also be of value in the sustainable development of other sectors, and should be consulted for details of the approach taken.

In the business sector, sustainable transport is also an issue, where the issue is how to address long supply chains, in which goods and imports are brought into the city from

²³ Organisation for Economic Co-operation and Development (2002) *OECD Guidelines towards Environmentally Sustainable Transport*, May.

remote locations. The severity of this problem was demonstrated by the Wuppertal Institute that found that the ingredients in a jar of strawberry yoghurt had to travel 3,494 kilometres before reaching the supermarket²⁴. The Commonwealth and State governments have encouraged supply chain programs. Improved logical and supply chain management have been identified as areas in which Australian industry can improve its efficiency. Logical improvements will be realised by reducing transport times.

While the businesses can reduce transport costs through sustainable transport practices, a significant proportion of goods transported are foodstuffs, which could be grown locally through urban farming. While farms have the advantages of industrial-scale growing and harvesting, cities have the advantage of fertile land²⁵, an dense water reticulation (irrigation) infrastructure, availability of domestic wastewater and a willing workforce who garden for recreation. Organisations have been established to promote urban farming²⁶. The European Federation of City Farms, founded in 1990, represents 1,000 projects that focus on education in eight countries. In Berlin, for example, 80,000 residents tend community gardens while another 16,000 are on waiting lists²⁷. Among urban food projects in the United States are a youth-run system of farms and markets that generates \$1 million in annual sales and employs teenagers in inner-city Boston, and a half-acre organic market garden in San Francisco that offers jobs and hope to former prison inmates.

Recommendations: The city planners encourage greater integration of landuse and transport planning.

That national research be supported into what needs to be done to change consumer attitudes towards more sustainable patterns of transport use.

That the private sector be encouraged to improve its supply chain management through reducing the logistics of bringing goods to customers.

That urban farming should be encouraged.

²⁴ Wuppertal Institute *Road Transport of Goods and the Effects on the Spatial Environment*, cited in *Factor 4: Doubling Wealth - Halving Resource Use* (E von Weizsäcker, AB Lovins and L H Lovins) pp117-120.

²⁵ Most Australian cities were founded on productive land, which has been alienated from agricultural use by the urban sprawl.

²⁶ Examples taken from Molly O'Meara *Reinventing Cities for People and the Planet* Worldwatch Paper No 147, June 1999.

²⁷ Stephen R Gliessman (1998) *Agroecology: Ecological Processes in Sx Agriculture* (Chelsea MI: Ann Arbor Press).

Incorporate eco-efficiency principles into new buildings and housing

Housing is a major source of materials use in cities, and is a major contributor to their unsustainability.

While there are many sound economic as well as environmental reasons for pursuing “green” building practices, they are still not widespread.

While there is a certain level of knowledge of sustainable building practices, it is still a new area, and industry requires support to develop the knowledge in Australia in this area. Much has been done overseas, and this knowledge needs to be more broadly disseminated in Australia.

The main problems relate to the fact that commercial buildings and developments are usually funded through a developer, which means that the consumer has little influence over the design, other than their ability to “take it or leave it”. The delivery of commercial buildings and developments is complex, and depends on a dysfunctional supply chain, in which each component operates within its own silo. This discourages joint problem solving, which is necessary to build “green” buildings and developments.

There are a number of approaches to improving the sustainability of buildings. They include:

- Encourage the financial sector to develop criteria based on sustainability principles when they evaluate investment in buildings. As this is not currently done, developers base their decisions on capital costs, ignoring offsets by less expensive running costs, based on energy and water savings. Projects should be evaluated on total costs (capital, operating, disassembly). Financial institutions should also explore the development and use of alternative loan instruments to encourage more sustainable building practices.
- Encourage the building sector to develop better supply chain models for delivering “green” buildings and developments.
- Encourage the public sector to lead by example, and invest in “green” buildings. As government is such a large consumer of accommodation, by setting a good example they should have a major impact on the market.
- Support research into technologies and systems required to deliver “green” buildings and developments, through either CSIRO or a CRC.
- Address Australian Standards, Building Standards and council building regulations, which are conservative, don’t encourage innovation and often result in buildings and development infrastructure that are often over-designed, resulting in poor sustainable outcomes. While there was been a move towards performance-based standards, this process needs to be accelerated.

Recommendations: That financial institutions need to be convinced to develop new loan instruments that encourage sustainable building projects.

That total cost accounting needs to be adopted to assess building projects.

That the sector be encouraged to invest in establishing a knowledge base of "green" building practices and systems. New systems are required to promote more effective approaches to supply chain management.

That governments lead by example, and "green" their accommodation and building stock.

That council regulations, Australian Standards and Building Standards be reviewed to ensure that they facilitate "green" building practices.

Develop urban plans that accommodate lifestyle and business opportunities

The shape of the city, and how it accommodates where we live, work and play, is the keystone to determining the sustainability of cities.

Spatial planning systems are essential for the implementation of city-wide policies for sustainable development. Few cities in Australia have successfully developed long term strategic plans for the whole city; although the *Melbourne 2030 Strategy* provides a model of what can be done.

The formation of urban villages will encourage sustainable communities, which is an important element in building social capital.

Recommendation: That a strategic integrated approach should be taken to planning cities which encourages more sustainable ways of working and playing.

Capacity Building

Sustainable solutions requires increased capacity in both hard (technologies) and soft (systems and processes) approaches. Such capacity building is required in the public and private sectors and in the community.

Currently government agencies²⁸ at all levels address sustainable development out of a departmental silo, usually an environmental agency, whose role is to influence the other silos dealing with economic and social issues, through using their knowledge and expertise. This model has had limited effectiveness, and integrated optimal solutions are less likely than unsatisfactory compromises. Expertise to implement sustainable solutions needs to be widely dispersed within the government sector.

The process of urban shaping and management also requires a range of tools that address the environmental, social and economic dimensions of sustainability, and the capacity of decision-makers to use those tools effectively. Government agencies need to contribute to building this capacity.

There is also a need to build capacity within the community. This will enable civil society to become an active contributor to building sustainable cities. This can be done by fostering learning communities. Information about sustainability can be provided to such communities through external sources (eg universities, CRCs, NGOs, etc), generated internally and exchanged between communities.

Recommendations: That government agencies need to develop the capacity and be given the charter to apply sustainable development principles in their areas of responsibility.

That the capacity of local communities needs to be built up so that they are effectively contributors to sustainable development.

The National Agenda

While the transition of Australian cities to more sustainable patterns of consumption and production is best left in the hands of the cities themselves, the Commonwealth Government can provide leadership in a number of areas. They include:

- Develop national frameworks to assist cities in their transformation to sustainability (such as the *Melbourne Principles on Sustainable Cities*)
- Ensure national policies and programs, particularly in areas like resource allocation and infrastructure development complement the sustainability agenda of cities.
- Contribute to capacity building through generating knowledge on sustainable practices relevant to cities, through such programs like the CSIRO Flagship program and provision of tools to assist cities.

²⁸ Similar lessons apply to the private sector.

- Develop national sustainability accounts that measure the progress cities have made, and allow them to benchmark themselves against one another. This will provide data about the materials metabolism of cities, which can be used to manage them sustainably.
- Ensure that market failures, which act as a barrier to sustainability, are addressed.
- Lead by example, with Commonwealth Departments actively participating, as stakeholders, in the sustainable development of cities in which they reside.
- Market the sustainability credentials of Australian cities to the world.

Recommendation: That the Commonwealth Government complement and contribute to sustainable development in cities and promote Australia's achievements in this area overseas.

The International Agenda

At a global level cities are becoming the powerhouse of progress, acting as nodes for communication and IT networks, market places (global bazaars), centres for financial services and knowledge. While being important to our economic wellbeing, they also pose an environmental challenge.

The start of the twenty-first century marks the first time half the world's population will live in urban areas. Over the next two decades more than 95% of population growth in developing countries will occur in urban areas, and by 2020 it is estimated that developing country cities will need to accommodate an additional 2.5 billion people. It is expected that the number of mega-cities (population of more than 10 million) will double to 26, 18 of which will be in Australia's neighbourhood - Asia. These trends pose a daunting challenge to the world.

In a rapidly urbanised world the creation of healthy, safe, equitable and sustainable cities will be a keystone for a prosperous, secure and peaceful world.

Australia, as a country blessed with a high standard of living, has a moral obligation as a good global citizen to contribute to the international sustainability agenda. Such involvement can also serve Australia's own interests

As a developed country that has progressed in a number of areas to make its cities more sustainable (although there is still much more to do), Australia can contribute as a leader and share its knowledge within its region.

While the Inquiry targets Australian cities, there are several reasons that its scope should be extended to consider the international situation. They are:

1. While Australia still has a long way to go before it can claim that its cities are truly "sustainable", much progress has been made. The expertise has been developed in landuse planning, constructing green buildings, effective infrastructure and other skills should find a ready market in developing economies to our immediate north, where affluence should bring greater demand for liveable cities. As Australian cities enhance their sustainability credentials, they will generate case examples that can be used to market local capability into the international marketplace.
2. Unsustainable cities can fester social unrest. This can pose a peace and security threat to our region, as deteriorating city environments are a breeding ground for terrorists. Helping developing countries build healthier and more convivial cities will stem recruits to terrorist organisations from the disaffected.
3. Australia has an active aid program aimed at our immediate region, and it would be worthwhile to consider delivering more programs around developing sustainable cities. An example where this is done elsewhere is the Canadian International Development Agency²⁹ that has operated an effective program to deliver assistance to cities³⁰, mainly in Latin America. Such programs could be developed within the framework of the *Melbourne Principles on Sustainable Cities*.
4. With improvements in transport and communications, cities are now linked directly to international markets³¹. The reputation of cities can therefore contribute to their competitive advantage as they contend to attract skilled labour and business investment. This trend, coupled with increased intensity in the use of information, financial, and other services by all types of firms, means that cities face more exacting requirements as sites for high-quality services to producers and greater competition for foreign and domestic investment³². These changes imply that now, more than ever, cities need to provide solid public services and a business-friendly environment to retain their traditional firms or to attract new ones, domestic or foreign. In high value-added sectors, such as knowledge-based industries, issues like the liveability of cities is a strong attractor. Australia should therefore see that sustainable development programs around cities are linked to competitive advantage, and that achievements to date should be actively marketed to attract economic activity to Australia.

²⁹ Equivalent to AusTrade.

³⁰ CIDA's commitment is based on its 1998 "Statement on Sustainable Cities" which developed a framework that integrates the realities of urbanization and allows programming to be adapted to urban trends and conditions in developing countries and transition economies. The strategy links urban issues with the Agency's core mandates and proposes a programming approach that allows interventions to be directed to urban issues at the national, sub-national, municipal, and community levels.

³¹ Saskia Sassen (1998) "Urban Impacts of Economic Globalization" Occasional Paper 5, Woodrow Wilson International Center for Scholars, Washington DC.

³² Nigel Harris (1997) "Cities as Engines of Economic Growth and Development" Paper for the World Bank Urban Strategy Workshop, Washington DC, December.

Recommendations: That Australia should be active in helping overseas cities progress their sustainability agenda.

That creating sustainable cities in Australia should be viewed as a competitive advantage, and Australia's progress in this area should be promoted overseas.

ADDITIONAL INFORMATION HELD BY THE SECRETARIAT

ATTACHMENT TO SUBMISSION NO. 27

COPY OF MELBOURNE PRINCIPLES ON SUSTAINABLE CITIES.