

Sinclair Knight Merz

590 Orrong Road, Armadale 3143
PO Box 2500
Malvern VIC 3144 Australia

Tel: +61 3 9248 3100
Fax: +61 3 9248 3364
Web: www.skmconsulting.com



Committee Secretary,
Standing Committee on Environment and Heritage,
House of Representatives,
Parliament House,
Canberra ACT 2600

05/11/2003

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WC02685

Dear Sir or Madam,

Inquiry into Sustainable Cities 2025

Please find attached SKM's submission to the Inquiry into Sustainable Cities 2025. We have identified a number of important issues and responses that we believe must be addressed through the inquiry. We would also be pleased to participate in the Committee hearing process and to provide more detailed advice on the specific matters raised in the discussion paper supporting this Inquiry.

If you have any queries on our submission, please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to read 'N Fleming', with a stylized flourish at the end.

Dr Nicholas Fleming

Associate,

Manager - Sustainable Futures

Phone: +61 3 9248 3379
Fax: +61 3 9248 3364
E-mail: NFleming@skm.com.au

House of Representatives
Standing Committee on Environment and Heritage

Sustainable Cities 2025

Submission to the Inquiry



590 Orrong Road, Armadale, Victoria 3143
GPO Box 2500, Malvern, Victoria 3144
Tel: +61 3 9248 3100
Fax: +61 3 9248 3364

30 October 2003

Sustainable Cities 2025

Sinclair Knight Merz Pty Ltd (SKM) is pleased to provide the following contribution to the Inquiry into *Sustainable Cities 2025*. Our submission is based on our multi-disciplinary approach to sustainable development and our considerable research and practical experience in the field.

We feel that while the initiatives identified in the paper are legitimate and worthy, they largely represent tinkering at the edges of what is required, or at best, optimisation of existing systems. In many respects, more substantial change or innovation is required to achieve the outcomes that are consistent with sustainable development. We have therefore focused on providing some key messages rather than the more exhaustive response.

As a group of professional practitioners, we feel that there are a number of significant ‘primary’ issues that need to be considered before other actions and activities can be implemented. As it currently stands, the Sustainable Cities 2025 brief does not directly address these issues. We feel they are the fundamental to any conversation about the long-term sustainability of cities.

What is sustainable development?

There are many definitions of sustainable development, the most common being that proposed by the Brundtland Commission in 1987, with a further interpretation provided in Australia’s own *National Strategy on Ecologically Sustainable Development* (1992). Some people consider that the definitions of sustainable development are too broad or even vague. Rather, they indicate the substantial complexity of the concept and the difficulty of its practical translation into action. This represents an important barrier to progress. SKM and Philip Sutton have recently completed work for the Victorian Government¹ that provides a practical interpretation of sustainable development that can help to overcome this barrier.

Firstly, much of the conventional thinking about sustainable development centres on the reduction of human impacts on the environment, however this approach is far too narrow and simplistic. Instead, we propose that when considering sustainable development we must think about our social, economic and environmental *systems* and their interaction. Each of these systems has a link to the other and provides a flow of services that we value in some way. We should be endeavouring to maintain, enhance and adapt these systems so that their productive capacity is maximised, while the negative affects of one system on another is minimised. Sustainable development can thus be represented as attributes or characteristics of a system. Key attributes are:

- Resilience (to short-term shocks)
- Adaptability (to longer term change)
- Health and function (integrity)
- Efficiency (in production).

SKM has specifically interpreted each of these attributes for our social, economic and environmental systems to demonstrate their relevance and use. For example, we can understand that a community that is dependent on a single industry (say, car manufacturing or irrigated

¹ Sinclair Knight Merz (2003) *Vision for the Werribee Plains – Regional Sustainability Framework*, for Victorian Department of Sustainability and Environment, Melbourne.

horticulture) has low resilience to shocks or change. Diversity of businesses within a region (and indeed the regions of a city) is therefore a key feature of sustainable development. It is also underpinned, however, by providing the community with the capacity to be 'diverse' through the provision of local education and training opportunities.

Within this context, it is therefore useful to ask two questions that go to the core of a practical definition of sustainable development:

- What do we want to maintain? (sustaining)
- What do we want to change for the better? (development)

Sustainable development is about sustaining (continuity of those things we value) and developing (change for the better). In this sense, sustainable development is a concept relating to genuine progress. What constitutes progress relates to community values and aspirations, which define where we want to be in the future.

Core principles for sustainable development

Our interpretation can be further enhanced by identifying the relevant, key characteristics of sustainable development. It is clear that sustainable development should contribute to maintaining our natural capital and minimising environmental impacts, in part through efficient resource use and consumption minimisation and the effective application of resources to the highest value use. At the same time we must work to maintain a strong economy and enhance living standards and social equity.

More specifically, we believe that sustainable development of urban areas should embrace the following principles:

- Land development and management should be linked to landscape patterns and land capability, ensuring land is retained for agriculture, recreation, and nature conservation.
- Design of the urban form and the provision of services should maximise accessibility and travel choices, with public transport an attractive alternative to car use.
- Transportation of goods and people should be safe, cost effective and have low environmental impact.
- Buildings should be designed to minimise resource consumption both in construction and operation.
- Energy should be generated or sourced to minimise transmission losses and greenhouse gas emissions.
- Renewable resources should be used in preference to non-renewable resources. Consumption of renewable resources should be within their sustainable yields.
- Water should be used efficiently. Where appropriate, recycled water should be substituted for groundwater or natural surface water, particularly in irrigation of urban areas and agriculture.
- Resource stewardship principles should be adopted. Waste disposal and emission of greenhouse gases should be minimised.
- Activities should contribute to net gains in indigenous biodiversity.
- Jobs and other economic opportunities should be created to enhance regional self-sufficiency and resilience.

- Social equity and the recognition of differing economic, social and cultural differences that define urban communities and affect their capacity to engage with or lead change.
- Recognition of individual and community capacity to embrace and lead change.
- Education and learning systems should result in improved educational attainment by regional residents. They should extend and reinforce the regional culture of sustainable development.
- Urban forms and environments that support the development of individual and community capacity.
- Activities should enhancing community health, participation and cohesiveness.

Key challenges to delivering sustainable development

While we believe that the descriptions above provide a valuable starting point for designing sustainable development, we believe there are some critical challenges to the delivery of sustainable development that must be recognised and addressed through the Inquiry. The challenges are:

- **Providing integrated urban solutions:** economic, social and environmental systems operate at different spatial and temporal scales, and it is important to understand their function, interaction and rates of change. This is particularly important when providing new or renewed infrastructure in urban environments. Major infrastructure typically precedes industrial, commercial and residential development. The orientation and nature of that infrastructure largely dictates the form of development that follows. Infrastructure is often designed and constructed to operate for a long life time (e.g. 50-100 years) and yet flexibility and adaptability are critical requirements for sustainable development, as new technologies and solutions must be embraced, and as communities are likely to have to deal increasingly with environmental shocks and extremes.

Infrastructure is also provided optimally at different scales. For example, it is becoming clear that decentralised (or nodal) wastewater treatment facilities are superior to large, centralised treatment plants in the context of sustainable development. This signals an opportunity to embrace more of a village or town-based form of development, which aligns with similar concepts for providing other forms of infrastructure (e.g. transport infrastructure and the concept of transit-cities²).

Finally, more sustainable forms of development at our city fringes must be commended and pursued. However, it is the existing urban environments that are the source of much of our unsustainability. Adapting these environments represents a huge challenge that must nevertheless be addressed, and this requires integrated and visionary planning and implementation. Therefore, it is essential that infrastructure providers work together to provide integrated infrastructure solutions that support rather than confound sustainable development.

- **Providing economic drivers:** At the current time there are very few economic drivers or incentives for sustainable development. The policies and regulations of all levels of government must be reviewed and realigned. A number of the reforms being implemented through CoAG represent a step in the right direction, however such reform must be driven

² DOI (2002) *Melbourne 2030 – Planning for Sustainable Growth*, October 2002, Department of Infrastructure, Melbourne.

with a greater understanding and focus on sustainable development. It is not efficient, and often not feasible, to provide useful economic signals at a regional level, and this currently represents a substantial barrier to realising the aspirations of some governments and regional communities. Clearly this requires a major commitment by governments.

- **Maximising social equity:** Developing sustainable cities must include a discussion of the socio-cultural aspects of individuals and communities, that is, people's social and cultural backgrounds as well as their geographical contexts and their affect on how people can engage with and take up 'sustainability' activities and discourses. For example, if people do not have a general sense of community, sense of hope for the future because they are marginalised in some way from mainstream social and economic processes and forums, they are less likely to take up and respond to urban planning and environmental initiatives. They will remain in survival mode and continue with old habits. They will also remain outside the change paradigm because they will not have the financial capacity to afford, or be in a position of understanding to engage with, improved environmental infrastructures (such as improved washing machines) or basic activities (such as recycling). It is therefore important that notions and actions around 'sustainability' are understood as having a social and cultural component. In particular, what needs to be considered is the way that urban discussions around creating sustainable planning and urban forms for example, include both housing, community and employment and shopping infrastructure, urban design, transport, community and public space and visual amenity etc. These all interlink to influence people's sense of place and community and their capacity to engage with sustainability practices.

The following points therefore need to be considered in the overall framework for developing sustainable cities:

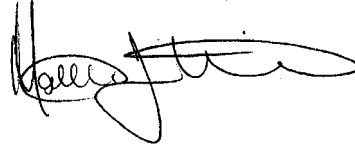
- **Education and knowledge development:** the institutions that we establish (whether organisations, markets or expected community norms) are all functions of community values and preferences. People's values and preferences are clearly molded by their knowledge and experiences. Any genuine pursuit of sustainable development will require shifts in people's thinking; communities will resist change unless effort is made to raise their level of awareness and knowledge. We would argue, however, that the Australian community is remarkably resilient and prepared to embrace change, so long as they are provided with a clear case for change and some appropriate level of support. Attitudes can and do change. For example, in the early 1990s, stormwater was not viewed as a resource and communities were concerned about suggestions of its harvesting and reuse. Today, any new urban development that does not incorporate stormwater harvesting is regarded as substandard. Hence, what Australian's today consider represents an "urban Australian lifestyle that should not be compromised" may not be relevant in 10, 5 or even 2 years time, and hence this notion of lifestyle may have little worth. Thus, education and knowledge development represents one of the most important emerging functions of government.
- **A critical need for strong leadership:** Until very recently, sustainable development had virtually dropped of the political agenda in Australia. Some ongoing progress has been made at a local government across Australia, and it has re-emerged at a State level notably in Western Australia, Victoria and South Australia. Its place on the agenda of the Commonwealth Government remains uncertain. Yet, sustainable development represents a major opportunity for Australia with the potential to provide a global competitive advantage. This fact is over-looked time and again. Sustainable development can be the vehicle to engage and translate Australia's considerable potential for innovation to the benefit of our country and

others. Furthermore, any credible assessment of our need for new modes of development indicates that the scale of change that is required in our current behaviours, practices and modes of development is substantial. Such change will not occur without strong leadership and governance from all levels of government.

This submission is made on behalf of Sinclair Knight Merz by the following professionals who practice in the field of sustainable development:



Dr Nicholas Fleming
Manager – Sustainable Futures



Matthew Ulterino
Sustainability Consultant



Dr Melissa Permezel
Senior Social Planner

with input also provided by:

William McDougall
Sustainable Transport Planner

Michael Read
Principal Planner

Tim Nott
Regional Economist

David Clark
Manager – Sustainable Buildings