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Submission to the House of Representatives Standing Committee on Environment and Heritage: Inquiry into a Sustainability Charter by the Cooperative Research Centre for Construction Innovation

Tuesday, 30 May 2006

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Introduction

The *Cooperative Research Centre for Construction Innovation*[1] (hereafter called *Construction Innovation*) supports the notion of the establishment of a Sustainability Charter for Australia and is interested in working collaboratively to achieve this outcome. A number of challenges need to be addressed to develop this Charter. This submission outlines these challenges and possible responses to them by a Sustainability Commission.

Focus of this submission

The focus of this submission is to provide a preliminary answer to the following research questions:

- *What are some of the challenges to establishing a national Sustainability Charter?*
- *How might a Sustainability Commission respond to these challenges?*

These questions relate directly to Recommendation 1 and 2 of the *Discussion Paper: Inquiry into a Sustainability Charter.*

Structure of this Submission

This submission argues that there are a number of hindrances which need to be overcome for the successful operation of a Sustainability Charter. These hindrances are outlined in Part A of this submission. Part B outlines possible responses by a Sustainability Commission as it seeks to establish, measure and report on the Sustainability Charter. Other key issues, such as the role and powers of the Commission and Commissioner, and various policy instruments, such as incentive funding, will also be discussed.

[1] Further information about the CRC for Construction Innovation can be found in Attachment A

Part A: Challenges to the establishment of a national Sustainability Charter

There are a number of challenges to the establishment of a national set of sustainability targets. These can be broadly classified as:

- Achieving policy coordination in a federal system of government
- Gaining the attention and support of government(s)
- Establishing national values, objectives and indicators
- Cost to government and industry
- Utility of current ratings systems

These challenges are discussed in detail below.

1. Achieving Coordination in a Federal System of Government

Under a federal system, powers are divided between a central government and several regional governments. In Australia, power was divided at Federation between the Commonwealth Government and the governments of the six colonies, which were renamed 'states' by the Constitution. Specific areas of legislative power (which are termed "heads of power" in the Constitution) were given to the Commonwealth Government such as foreign affairs, whereas the states retained legislative power over all other matters that occurred within their borders, such as: police, hospitals, and public transport (Australian Government 2005). [2].

In some circumstances, however, the wording of the Constitution has often created situations where both the Commonwealth and the states claim the authority to make laws over the same matter (Australian Government 2005).

> In federations … policy must be negotiated between and across different levels of government, vertically between Commonwealth, state and local governments, and horizontally between states or local authorities. (O'Faircheallaigh, Wanna & Weller 1999:97).

Environmental policy has been seen historically as primarily the responsibility of the states, with responsibility occasionally being devolved to local government, with the Commonwealth having limited involvement (Department of Environment and Heritage 2001). Responsibility is further distributed between various government departments within jurisdictions, with a net result of a highly uncoordinated approach to planning and management of the environment (Department of Environment and Heritage 2001).

Even within a single jurisdiction such as the Australian Government, responsibility and budget for environmental issues are spread across multiple government departments and agencies (Department of the Environment and Heritage 2005:3). This multiplicity of government agencies presents challenges for the coordination of objectives and targets as the role, relationship and power of any Sustainability Commission would need to be clarified in relation to these other organisations.

Vertical and Horizontal Coordination

In order to overcome difficulties in vertical and horizontal policy coordination, a large range of intergovernmental committees have developed over time (Chapman 1989), the primary one being the Council of Australian Governments (COAG). Difficulties can arise from these intergovernmental committees however, as a state parliament is not necessarily legally bound by an intergovernmental agreement to enact legislation to implement a uniform scheme – even

[2] A complete list of Commonwealth heads of power can be found in Section 51 of the Constitution.

an agreement made at COAG (Farina 2004). In practice, however, most legislation is passed if there is federal funding associated with their enactment.

Variation in Indicators between Jurisdictions

State of the Environment (SoE) reports are important mechanisms for reporting on environmental conditions, trends and pressures in Australian jurisdictions, and form part of Australia's international reporting obligations. Unfortunately, SoE reporting can be hampered by incomplete or inconsistent data sets, particularly when data is collected comprehensively by some states and territories, but not by all jurisdictions, nor in all areas (Department of Environment and Heritage 2001). As CSIRO (2001:162) has noted:

> There is a lack of consistency and complete lack of integration between state EPAs, local governments and other state agencies … and an inability or unwillingness to report at an appropriate spatial scale. Most reporting is at a state and territory level, notwithstanding the fact that complaints are highly specific geographically.

Current SoE reporting appears to stretch the resources of state and territory governments (Department of Environment and Heritage 2001). While Sweden has been reporting every year on progress towards sustainability targets, most Australian jurisdictions are managing to report every three or four years while some have yet to report at all (see Table 1 below). Additionally, the content of existing reports tends to focus on environmental issues pertinent to individual state or territory, which inevitably leads to variations between the indicators reported by jurisdictions.

Table 1 – State of the Environment Reporting in Australia

	Year											
Jurisdiction	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
ACT	✓		✓			✓			Being prepared			
Australia		✓					✓					Being prepared
NT												
NSW	✓		✓			✓			✓			
QLD					✓				✓			
SA				✓					✓			
TAS			✓						✓			
VIC												Being prepared
WA				✓								Being released in June 2006
Comparison with Sweden												
Sweden						✓	✓	✓	✓	✓	✓	

Consideration should be given as to how coordination will be achieved between the Australian government, the various states and territories and local governments. This vertical and horizontal policy integration is a key element of any Sustainability Charter if it is to be effective. This is particularly true if the goals are aspirational, and require state and local governments to be involved in implementing a Sustainability Charter, as well as monitoring and reporting on it, as is the case in Sweden (Swedish Ministry of the Environment 2004: 9-10). As noted in the

Sustainable Cities Report (House of Representatives Standing Committee on Environment and Heritage 2005), there may be a need for significant initial investment in order to develop the capability of state/territory and local governments to monitor and report on environmental sustainability targets.

Given the fragmented nature of responsibility for environmental policy at the moment (Department of Environment and Heritage 2001), achieving coordination vertically and horizontally between agencies and jurisdictions is one of the key challenges that a Sustainability Commission is likely to face particularly given the federal system of government, and the dispersed nature of resources, data and authority.

2. Gaining the Attention and Support of Government(s)

According to Kingdon (1994) executive government has a limited attention span and pays attention in a significant way to only a limited number of policy objectives. Some of the ways in which an issue can emerge and become important to government, include the advocacy of an issue by political participants, or through an unexpected event, such as a natural disaster (Cobb and Elder 1972). The recent lack of water in many parts of Australia may present a "policy window" (Kingdon 1994) as drought directly affects Australians on a widespread scale, and achieving urban sustainability moves from being an issue to become an agenda of governments. COAG has likewise indicated strong interest in coordinated approaches to environmental issues in recent meetings.

In order to be effective, however, policy advocates are needed who can champion the policy agenda and mobilise resources to take advantage of opportunities (Guthrie & Koppich 1993). In this instance, the House of Representative Standing Committee on Environment and Heritage has indicated that the Australian Government is considering a lead role in advancing the Sustainability Charter in Australia which is welcomed. The bipartisan support that the *Sustainable Cities Report* enjoys also bodes well for the long term viability of the key recommendations of the report. Additionally, peak sustainability groups such as ASBEC have already indicated to the Committee their broad support for the first three recommendations of the *Sustainable Cities Report*. Likewise, many top quality research groups have interests and expertise in the area of sustainability. These champions need to be identified and mobilised at the national, state and local level to advance the notion of a Sustainability Charter.

3. Establishing National Values, Objectives and Indicators

Using Sweden as an exemplar, an Australian Sustainability Charter could arguably contain a number of different elements, all of which need to be agreed to nationally.

Table 2 – Elements of the Swedish Environmental Policy

Charter Element	Purpose	Number
Overall goal	Identifies main beneficiaries of the environmental reporting process	1
Principles	States the values that underpin the objectives	5
Objectives	Objectives define what the environmental policy is trying to achieve	16
Targets and Indicators	Indicators measure progress towards one or more objectives	80

The Swedish Government firstly identified an overarching aim that drives the entire environmental policy and which clearly identifies the main beneficiaries of the policy:

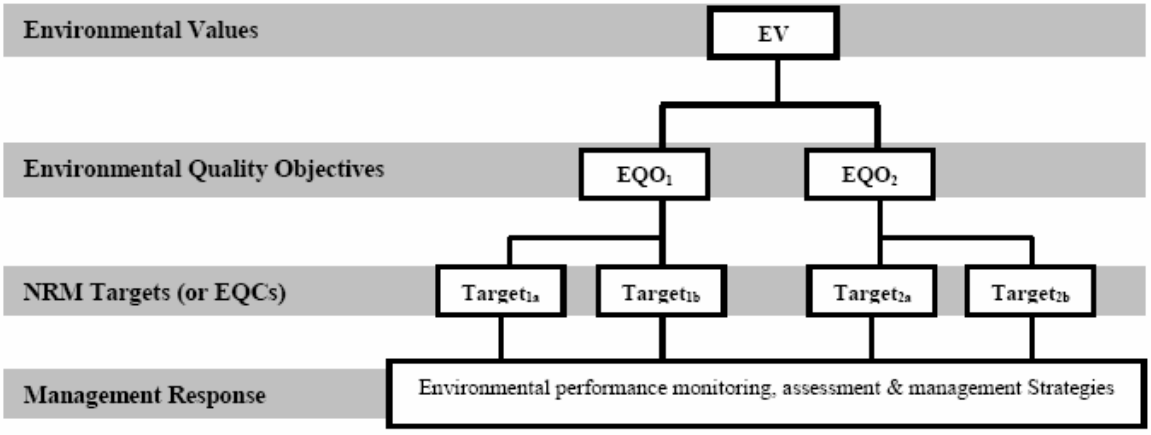
> "The Government's primary environmental objective is to hand over a society to the next generation in which the major environmental problems have been solved." (Swedish Ministry of the Environment 2000:6).

The other elements of the policy support this main aim:

> The environmental quality objectives define the state of the Swedish environment which environmental policy should aim to achieve, while the interim targets specify concrete environmental measures and timescales for implementation (Swedish Ministry of the Environment 2000: 11).

The Western Australian Government advanced a similar notion, using the term 'values' instead of 'principles', which clearly indicates the relationship between the different policy elements:

Figure 1 - EPA WA (2003:10)



The development of specific indicators is a highly technical process and the committee is referred to the submission by CSIRO in relation to these. However a national Sustainability Charter would arguably need values, objectives and targets in order to be effective.

Typically, SoE reporting in Australia has followed *Core Environmental Indicators for Reporting on the State of the Environment* (ANZECC 2000). However, reviews of SoE reports completed to date indicate variations in objectives and targets between jurisdictions. Part of this is due to the specificity of issues at a local level. For example, much of the latest Australian Capital Territory (ACT) report was overshadowed by recent fires which consumed significant tracts of forest and some suburbs in the territory. Other jurisdictions include measures monitoring the population of specific species of indigenous animals (the brush tailed possum in Tasmania for example (Resource Planning and Development Commission 2005). The reporting of these issues at a local level is significant and important as the measures are important indicators of local ecosystems. There is a challenge however, in relation to how to aggregate these multiple local stories and statistics to a coherent whole at a national level.

One of the key successes of the implementation of Swedish Environmental Objectives (Swedish Ministry of the Environment 2004) has been their ability to gain national agreement on the objectives, and to engage numerous levels of government on the implementation, measurement, and reporting of values, objectives and indicators, together with endorsement by industry on a large scale. It should be noted that regional governments in Sweden do not appear to function in the same way as Australian states, with the governor of each region directly appointed by the National government, for example (Government Offices of Sweden 2004). Regional and local government boundaries and rules of operation are established under an act of national parliament (Swedish Local Government Act 2004).

While not wishing to downplay the considerable consultation process evident in developing the collaborative and cooperative system of environmental reporting currently in place in Sweden, the ability for a unitary government such as Sweden to achieve policy coordination is likely to be higher than a federated government structure such as Australia.

The process of gaining agreement of a national set of values, objectives and targets which comprise a Sustainability Charter, and are agreed upon by all spheres of government is likely to pose a challenge for any Sustainability Commission. Policy coherence may be achieved, however, by a multi-layered consultative approach similar to that implemented in Western Australia, providing agreement can be reached by all stakeholders.

4. Cost to Government and Industry

While the *Construction Innovation* is supportive of the notion of a Sustainability Charter, as with other submissions to the *Sustainable Cities Report*, we would like to draw the attention of the inquiry to the potentially large costs which may be involved in establishing such a charter. As a model similar to that in place for Sweden has been foreshadowed in the inquiry, reference to the costs experienced by the Swedish Government and industry is informative.

Cost to Government

Budget appropriation related to establishing and reporting environmental quality objectives in Sweden increased 70% from 2001 to 2004, with total costs to the Swedish Government estimated at 45 billion Swedish Kroner (approximately $AUD 7.3 billion[3]) from 2001 – 2010 (Swedish Ministry of the Environment 2000:78). This is an average of 5 billion Swedish Kroner per year ($AUD 800 million)[4]. In contrast, current budget estimates for total expenditure on environmental activities across all Australian government departments show a decline from approximately $AUD 3.9 billion for 2000-2007, to approximately $AUD 1.9 billion in 2009-10 (Department of Environment and Heritage 2006). Unless significant budget allocation is appropriated for the Sustainability Charter, it is unlikely that a system similar to that currently in operation in Sweden could be implemented in Australia.

Cost to Industry

The Swedish government estimates that the cost to industry for complying and reporting on environmental objectives to be in the region of 1 billion Swedish Kroner per annum (Swedish Ministry of the Environment 2000:78) (approximately $AUS 160 million).

Lack of resources has been noted as a factor hindering effective SoE reporting in Australia (Department of Environment and Heritage 2001:17). Additionally, there is likely to be costs for implementing a Sustainability Charter for local governments, particularly if they are charged with responsibility for implementing, as well as measuring and reporting on sustainability targets. As noted above, there may also need to invest in 'joined up government' and developing the capability of various spheres of government to implement, evaluate and report on the Sustainability Charter. If a Sustainability Charter was initiated in Australia, indicative costs from Sweden suggest that it would require funding at a significant level, which is not currently included in forward budget estimates. This budgetary appropriation is crucial to the effectiveness of the charter. A lower cost alternative may be to network with existing research institutions such as Cooperative Research Centres, or similar research organisations, which have demonstrated capability in the measurement of sustainability targets. This option is discussed further in Part B below.

[3] Conversion rates here assume 1 Swedish Kroner is equivalent to approximately $0.1622 Australian Dollars.
[4] These costs are central government expenditure only, and do not appear to include costs to regional and local government(s)

5. Utility of Current Ratings Systems

The Inquiry has raised the question as to whether existing sustainability tools could be used as part of the reporting of the Sustainability Charter. One of the issues facing the construction industry at the moment is that there are a plethora of tools currently on the market, all of which have different functionality and performance. The following is an indicative list:

Figure 2 - (based on Crawley et al 2004)

Tool Name	Location	Creator	Coverage	Coverage
AccuRate	Australia	CSIRO	Residential developments	Energy
Australian Building Greenhouse rating (ABGR)	Australia	Sustainable development authorities from NSW, VIC, WA, QLD	Commercial developments	Energy
Building Energy Rating Scheme (BERS)	SEQ Australia	Solar Logic	Residential	Energy
Building Sustainability Index (BASIX)	NSW, Australia	NSW Department of Infrastructure, Planning and Natural Resources	Residential developments, Commercial developments	Energy, Environment, and Social
FirstRate	Vic, Australia	Sustainable Energy Authority Victoria	Residential developments	Energy
Green Star	Australia	Green Building Council of Australia	Commercial developments	Energy, Environment, and Social
Life Cycle Analysis of Design (LCADesign)	Australia	*Construction Innovation*	Commercial developments	Energy, Environment, and Social
Melbourne Docklands ESD Guidelines	Vic, Australia	Docklands Authority and VicUrban	Commercial, residential and other developments	Energy, Environment, Social and Economic
National Australian Building Environmental Rating System (NABERS)	Australia	Commonwealth Department of Environment and Heritage	Commercial and residential developments	Energy, Environment, and Social
Nationwide House Energy Rating Software (NatHERS)	Australia	CSIRO	Residential developments	Energy and Environment
Sustainable Housing Code	SEQ Australia	South East Queensland Regional Organisation of Councils	Residential developments	Energy, Environment, and Social
Sustainable Project Appraisal Routin (SPeAR®)	Australia	ARUP	Commercial, residential and other developments	Energy, Environment, Social and Economic
THG Eco Index	SEQ, Australia	The Heilbronn Group	Residential and other developments	Energy, Environment, and Social

Graham (2003) identified a further eight tools that have some levels of functionality for assessing environmental performance of buildings in the design phase. Additionally some of these tools only function in the design phase of a building, whereas others are able to provide estimations for design, build and operate phases of a building (Tucker et al 2003).

Construction Innovation is intending to undertake further research in order to develop a comprehensive ratings tool, which will function across the diverse geographic landscapes of Australia, for different building types. This tool will simplify the process of estimating the ecological impact of constructions, regardless of their intended use, or location in Australia, and estimate environmental impact at all stages of the construction process.

Part B: Responses by the Sustainability Commission to these Challenges

Having identified some of hindrances to the establishment of a Sustainability Charter, this section will seek to articulate how a Sustainability Commission might address these issues. The first issue is the role, power and authority of the Commission, and Commissioner.

Role of the Commission

A range of possible roles is envisaged for a Sustainability Commission, from a legislative role through to a voluntary coordinating role. If the Commission is to champion a Sustainability Charter vertically and horizontally through all spheres and agencies of government, then a coordinating role would seem appropriate, however, the 'push' of some mandated action may enhance the achievement of policy coherence and a consistent approach. The fragmented nature of environmental policy in Australia (Department of Environment and Heritage 2001) noted above, presents both a challenge and an opportunity (O'Faircheallaigh, Wanna & Weller 1999:97). Given the fragmentation evident, there is a clear role for a single Sustainability Commission to coordinate the establishment, measurement and reporting of sustainability in Australia.

Gaining the Attention of Executive Government

If the Commission is able to leverage the existing interest and capability of government agencies, professional associations, industry leaders and community groups, the Sustainability Charter may be able to mobilise widespread support. Additionally, the Commission may be able to identify social, industrial, political and intellectual champions for the Sustainability Charter from these organisations, who could work with the Sustainability Commission to advance the cause of a Sustainability Charter.

Coordination of Values, Objectives and Indicators in a National System

If the role of a Sustainability Commission is indeed one of coordination, then a key role would be to implement processes that lead to national agreement on the establishment, measurement and reporting of values, objectives and targets.

The Swedish model utilises an Environmental Objectives Council to establish objectives with representatives from all members of government agencies that have responsibilities for various aspects of the environmental quality objectives, as well as regional and local councils, businesses and non-government organisations (Environmental Objectives Portal 2006b). SoE Reports have typically required the engagement of specialist scientists with expertise in specific reporting areas. Additionally, states such as Western Australia and Victoria have undertaken significant consultation with industry and the community in order to establish the reporting frameworks for SoE reports.

For a Sustainability Charter to be effective, significant agreement needs to be generated on the values, objectives and indicators that form the charter. A mechanism (whether mandated or voluntary) may need to be considered to facilitate collaboration vertically between different spheres of government, horizontally across specific governments, and include representatives from industry and the community.

Cost

One way to partially defray costs associated with a Sustainability Charter is to engage with various government departments and research organisations with interest and capability in measuring progress towards sustainability objectives. For example *Construction Innovation* is well positioned to conduct research into sustainability in the built environment through its extensive industry, government ad research network. Various government departments could

take responsibility for reporting on specific national targets and measures, such as Bureau of Meteorology for climate change, Australian Greenhouse Office for greenhouse emissions, and Australian Bureau of Statistics could report on a range of social and economic indicators. If Sweden is taken as an exemplar, the implementation, measurement and reporting burden is spread across a number of government departments, and across the various spheres of government (Swedish Ministry of the Environment 2005). Indeed specific Swedish Government departments are charged with the coordination of specific environmental objectives, while local government is involved in the establishing, measuring and reporting of environmental objectives.

The Terms of Reference in the Inquiry mention the use of incentive funding to the states and territories. Consideration could also be given to fund the development of capability of various jurisdictions, including local councils, in order to underpin the implementation of a Sustainability Charter.

Ratings Systems
As noted above, *Construction Innovation* will continue to work with its partners to develop a comprehensive buildings rating tool, capable of working across jurisdictions in Australia.

Summary

Construction Innovation supports the notion of the establishment of a Sustainability Charter and would be interested in working collaboratively to achieve this outcome. A number of challenges to the implementation of such a charter have been identified, together with possible responses by a future Sustainability Commission:

- Achieving coordination between jurisdictions
- Gaining political attention
- Establishing the national values, objectives and indicators
- Cost to government and industry
- Utility of current ratings systems

Construction Innovation is working to develop more coordinated approaches to sustainability – particularly in the areas of urban ratings tools and in public policy. We look forward to being able to extend this policy agenda in association with our industry, government and research partners and the Parliamentary Standing Committee on Environment and Heritage. Ongoing support for *Construction Innovation* will ensure this independent national research and implementation centre is able to deliver national and industry value.

Attachment A – *Further Information on Construction Innovation*

Construction Innovation is a national research, development and implementation centre focused on the needs of the property, design, construction and facility management sectors. *Construction Innovation* was established in 2001, and is developing key technologies, tools and management systems to improve the effectiveness of the construction industry.

Membership of *Construction Innovation*
Current partners of *Construction Innovation* include:

Industry	University	Government
ARUP	CSIRO	Australian Building Codes Board
Bovis Lend Lease	Queensland University of Technology	Brisbane City Council
Brookwater	RMIT University	Building Commission (Victoria)
dem	University of Newcastle	Building Services Authority (QLD)
John Holland Group	University of Sydney	Queensland Department of Main Roads
Rider Hunt		Queensland Department of Public Works
Woods Bagot		Queensland Department of State Development, Trade and Innovation

Construction Innovation maintains a number of national and international collaborations to further the research objectives of the organisation, these include:

- Australian Construction Industry Forum (ACIF)
- Australian Sustainable Built Environment Council (ASBEC)
- Australian Property and Construction Council (APCC)
- International Construction Research Alliance (ICALL)
- International Council for Research and Innovation in Building and Construction (CIB)

Of particular interest to the Committee would be the Australian Sustainable Built Environment Council. *Construction Innovation* played a key role in the formation of ASBEC, and was a founding member of this council. As you would be aware, ASBEC met in October 2005, and endorsed recommendations 1 to 3 of the Sustainable Cities report. Representatives of *Construction Innovation* were present at this meeting.

Many research projects conducted by *Construction Innovation* focus on sustainability. These projects include research into sustainable subdivisions and housing developments, sustainability and the Building Code of Australia, tools which assess the sustainability of building designs, and economic sustainability of the construction industry in Australia. More recently *Construction Innovation* commenced research into the regulatory environment in which the construction industry operates in Australia.

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