

# Submission

## RE: NATIONAL BUILDING ENERGY STANDARD-SETTING, ASSESSMENT AND RATING FRAMEWORK

Public Discussion Paper March 2010



Australian Institute  
of Landscape Architects

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Building Framework Discussion Paper  
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## **RE: NATIONAL BUILDING ENERGY STANDARD-SETTING, ASSESSMENT AND RATING FRAMEWORK**

### **Public Discussion Paper March 2010**

The Australian Institute of Landscape Architects (AILA) welcomes the opportunity to comment on the above discussion paper.

The AILA is the peak professional body for Landscape Architects in Australia. Founded in 1966, the Institute currently represents the interests of approximately 3,000 landscape architects throughout the nation. The profession is committed to the creation of meaningful and enjoyable outdoor places and to the sustainable management of our built and natural environment.

AILA considers that the issues considered by the Senior Officials Group on Energy Efficiency within the above paper should be more proactively directed towards the context of broader sustainability challenges.

In relation to the "Coverage Principles" of the Framework<sup>1</sup>, AILA wishes to highlight the importance of looking beyond single-building-envelope solutions when seeking step-change improvements in national energy efficiency standards & outcomes, and to encourage greater focus on enabling such capacity within the proposed National Building Energy Framework.

While it is stated that the Framework in general will be "capable of extension over time to cover broader sustainability elements"<sup>2</sup>, including (maybe) "scope to expand the Framework to cover water management at a later date"<sup>3</sup>, it is evident that a broader focus has not been prioritized at this stage of development. It is AILA's position that the omission from the Framework of any capacity to consider implications of landscape and water management on building energy efficiency outcomes is a serious flaw, resulting in a weakened document.

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1 National Building Energy Standard-Setting, Assessment and Rating Framework March 2010, section 4.1, pg.8.

2 Ibid., section 3.1, pg. 5

3 Ibid., section 3.2.2, pg. 7

AILA strongly recommends that the Senior Officials Group consider expansion of the scope of the Framework to cover broader sustainability elements – including *green infrastructure*<sup>4</sup> - as a matter of priority.

This would enable a much broader range of energy efficiency gains to be leveraged – both in the short and long-term – particularly via the incorporation of *integrated assessment of the performance of both building and landscape design* across a range of scales and settlement typologies.

It would also enable assessment of the considerable (and currently untapped) potential for enhancing energy efficiency outcomes via improved planning and management of urban and regional green infrastructure networks - as part of the development of more collaborative, integrated and systems-based approaches to national sustainability challenges as a whole.

Internationally, there is much attention being paid to the potential for green infrastructure strategies to influence energy efficiency outcomes at a range of landscape scales:

- The Green Infrastructure for Clean Water Act 2009<sup>5</sup> - a bill currently before the US congress - proposes targeting national investment in research and implementation of green infrastructure strategies to improve energy efficiency and a broad range of complementary climate adaptation responses. (<http://dirt.asla.org/2010/04/29/scaling-up-green-infrastructure/>)
- The UK House of Commons Environmental Audit Report, March 2010 similarly highlights the strategic role of green infrastructure in strengthening existing national climate change adaptation & energy efficiency approaches. Key recommendations from this report include:

*“..... the Government should also promote green infrastructure as part of the National Adaptation Programme. **Departments must deliver green infrastructure that supports adaptation and wider policy objectives\*** by working more effectively across departmental boundaries. We recommend that the Government aligns the work of key departments on green infrastructure, and identifies a department to act as a green infrastructure champion.”*<sup>6</sup>

(\* emphasis added)

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<sup>4</sup> The term ‘green infrastructure’ describes the network of natural landscape assets which underpin the economic, socio-cultural and environmental functionality of our cities and towns – i.e. the green spaces and water systems which intersperse, connect and provide vital life support for humans and other species within our urban environments (refer: <http://www.aila.org.au/greeninfrastructure/>).

Green infrastructure is fundamentally different from other aspects of built (‘grey’) infrastructure in that it has the unique, inherent capacity to enhance and regenerate natural resources, rather than simply minimize the damage to environmental systems. In this respect it performs a valuable function in energy efficiency & climate adaptation strategies – with the capacity to offer ‘pay-back’ and ‘value-add’ potential rather than merely reducing draw down of existing resources.

<sup>5</sup> <http://www.govtrack.us/congress/bill.xpd?bill=h111-4202>

<sup>6</sup> UK House of Commons Environmental Audit Committee Sixth Report - Adapting to Climate Change – March 25th 2010. Pg 32 : <http://www.publications.parliament.uk/pa/cm/cmenvaud.htm>

Within Australia, landscape assets and the ecosystem services they provide are currently assigned only token monetary value in built environment decision-making, despite the extraordinarily high *actual* value of green infrastructure when measured across a range of ecosystem services classifications - including production, regulation, stabilization, life-fulfilling and future option-protecting services:

*“The benefits of green infrastructure are numerous. Green infrastructure is an effective and cost-efficient tool for absorbing and sequestering atmospheric carbon dioxide (CO<sub>2</sub>). Efficient use of green infrastructure can reduce energy usage through passive heating and cooling; filter air and water pollutants; decrease solar heat gain; provide wildlife habitat; reduce the public cost of stormwater management infrastructure and provide flood control; offer food sources; and stabilize soil to prevent or reduce erosion. Green infrastructure is crucial to combating climate change, creating healthy built environments, and improving quality of life.”<sup>7</sup>*

Values relating to energy efficiency gains are only one aspect of this provisioning potential – the US Environmental Protection Agency - [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=298#benefit](http://cfpub.epa.gov/npdes/home.cfm?program_id=298#benefit) - lists a range of environmental, economic and human health co-benefits of green infrastructure, many of which have the capacity to significantly leverage outcomes of existing climate adaptation and energy-efficiency measures. The value-add potential of these benefits is particularly accentuated in urban and suburban areas where green space is limited and environmental damage is more extensive – thus offering unique opportunities for ‘step-change’ improvements in energy-efficiency policy development and outcomes in these areas.

Healthy urban landscape/green infrastructure networks are a vital component of the infrastructure of a successful modern economy.

Ignoring the underlying value-adding potential of green infrastructure jeopardises our ability to meet existing and future challenges, including adapting to climate change and broader sustainability issues affecting food, water and energy security.

Conserving, enhancing and regenerating landscape performance potential via integrated green infrastructure strategies provides an efficient and cost-effective means to deliver a wide range of benefits to society – including significant improvements to energy efficiency outcomes - and this potential exponentially increases when both market and non-market values of ecosystem services provisioning are incorporated in infrastructure investment decision-making.

Investing in green infrastructure can help tackle future sustainability challenges in a way which enhances overall prosperity via the integration of innovative ecological and technological design solutions.

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<sup>7</sup> American Society of Landscape Architects - <http://www.asla.org/ContentDetail.aspx?id=24076>

At a government level, a range of measures for encouraging investment in green infrastructure can be implemented, including:

- Focusing fiscal measures on strategic incentives for enhancing and supporting green infrastructure potential – e.g. conservation-based land ‘banking’ schemes, community title arrangements, public/private partnerships, landscape contribution credits/offsets etc.
- Tailoring existing funding capacity and structures towards ‘value-added’ development, including promoting best-practice examples of economic advantages of urban-landscape based projects.
- Setting targets for green infrastructure provisioning, regeneration and ongoing management, and integrating social and economic indicators into this context.<sup>8</sup>

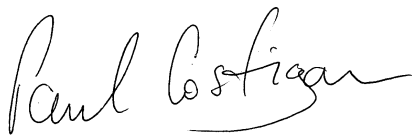
It is AILA’s position that there is an urgent need to incorporate ecosystem-services based landscape value assessment into energy efficiency and climate adaptation decision-making before it is too late, and the significant – and currently unrealized – potential of this vital aspect of our natural asset base is lost forever.

The Australian Institute of Landscape Architects (AILA) wishes to thank the Senior Officials Group on Energy Efficiency for the opportunity to comment on the discussion paper, and also to offer the expertise and experience of our collective membership base in developing new ways forward for the planning, design and management of Australia’s national green infrastructure assets.

Please don’t hesitate to contact the Institute if you have any queries relating to the issues raised in this submission, or if there are any other matters relating to the proposed Framework with which we may be able to provide further assistance.

Please contact: Catherine Neilson, AILA National Project Manager, 02 6248 9970  
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Yours sincerely,



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<sup>8</sup> AILA Green Infrastructure publication (<http://www.aila.org.au/greeninfrastructure>)