Department for Communities and Local Government
Eco-towns: Living a greener future

Consultation, June 2008 – Response of the Landscape Institute

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Introduction
The Landscape Institute is the Chartered Institute in the UK for Landscape Architects, incorporating designers, managers and scientists, concerned with enhancing and conserving the environment. The Landscape Institute promotes the highest standards in the practice of landscape planning, design, management and research, representing members in private practice, at all levels of government and government agencies and in academic institutions and commercial organisations.

There has never been a more important time to emphasise the role of landscape architecture because of growing social, political and economic concern over the use of our natural resources and the development of sustainable communities. Landscape architecture is the profession best able to provide a holistic approach to creating places where people want to live and work both now and in the future and we believe it is this all-encompassing approach to place shaping that will best deliver the sustainable settlements of the future.

Before moving on to our specific comments relating to the content of the consultation document, the Institute would like to emphasise the importance of the European Landscape Convention (ELC) to the decision making process. The ELC came into force in the UK on 1st March 2007 and defines landscape as:

> *"An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors".*

The premise of the ELC is that landscape, regardless of quality and whether rural or urban, built or natural, should be recognised, understood and fully integrated in the policy and decision making process. The Landscape Institute is disappointed that this consultation document does not sufficiently value the landscape context of eco-town development and would like to see greater recognition of its importance throughout the revised document. The Landscape Institute urges the Department to revise the eco-towns guidance to require a full landscape and visual impact analysis (LVIA) as part of any application and design development. This is something that is not currently a requirement and, in our view, represents a serious oversight. The development of the new eco-towns must be based on landscape character as part of the place-making agenda and the Landscape Institute would be more than willing to offer further assistance in this regard.

The views of the Landscape Institute, as set our below, relate to a number of themes within section 4 of the consultation document entitled "What will eco-towns provide?". This section sets out a number of areas of interest to the Institute, many of which are interlinked, though they are addressed here in the order in which they appear within the consultation document.

Zero carbon, climate change and water management
The Landscape Institute believes that the design and functionality of open space will be at least as critical, and possibly more so, in adapting to climate change, contributing to energy efficiency and effective water management than the delivery of houses to Level 6 of the Code for Sustainable Homes. The Institute feels that all hard and soft open space at all scales within eco-town developments should be multifunctional, not only providing visual amenity and recreational uses, but

planned, designed and engineered to deliver other tangible benefits relating to climate change and water management.

For example, many new open spaces such as sports grounds, play areas, car parks and even private gardens can be used as ground source heat pump inputs, with pipework installed both vertically and horizontally to provide a significant and renewable resource contributing to both hearing and cooling of nearby buildings. This is now an established, but under-utilised, low-maintenance technology that is most cost-effective when installed at the initial stages of the construction process.

With regards climate change adaptation, open urban spaces at all scales, both private and public and including streets, should incorporate substantial vegetation cover, particularly trees. These reduce the urban heat island effect, provide effective shade and glare reduction, reduce solar gain in buildings, improve air quality, aid biodiversity and provide visual amenity. In the longer term they also have the potential to contribute as a biofuel resource. The Landscape Institute considers that all new streets within eco-towns should be tree-lined and that tree planting is required as a significant component for all public and private open spaces unless there are overriding technical reasons not to make such a provision.

Full consideration should be given, wherever feasible, to the use of green roofs and green walls, including the use of climbing plants as effective external cladding for walls and structures. These measures will provide an additional layer of weather-proofing and insulation and will contribute to reducing both the urban heat island effect and surface run-off during intense precipitation. Structures within eco-towns must be designed to accommodate these measures which have dual benefits in terms of climate change mitigation and adaptation.

The Landscape Institute believes that sustainable drainage systems (SUDs) should be an essential prerequisite for water management in new development, especially where this is on greenfield land. Wherever possible, rainwater should be harvested and stored at both a domestic and municipal scale, and integrated into dual function water supplies to contribute to a source of grey water for irrigation, toilet flushing and appropriate municipal, commercial or industrial use (e.g. fountains, car washes, cooling), in addition to filtered recycling of water where appropriate. Swales, rain gardens, balancing ponds, water meadows and reed beds may all contribute to the more efficient management of water, as would the use of rivers, streams and canals where available.

The Landscape Institute believes that all buildings within the new eco-towns, especially housing and underground services, should be designed and constructed with appropriate foundations or other preventative measures which avoid the risk of subsidence or other damage arising from tree root activity or extreme drought, especially on shrinkable subsoils. The cost of providing such safeguards at the construction stage which will be considerably cheaper and less disruptive than remedial measures required in the event of future damage. Given the importance of trees and other vegetation in ameliorating and adapting to the effects of climate change, it is vital that structures are designed to withstand subsoil shrinkage or movement arising from tree root water demands or due to drought conditions.

Green space and biodiversity

Whilst the Landscape Institute is encouraged by the specific reference to green space and biodiversity as one of the benefits that can be achieved through eco-town development, we wish to see this section of the document worded in a way which is far more demanding. For example, with regards Future Climate Change, the document states that:

> *"Eco-towns should show that they are sustainable under present climatic conditions…"*

However, with regards Green Space and Biodiversity, the document only states that eco-towns "can" demonstrate the provision of high quality infrastructure. We suggest that it is an absolute requirement that high quality green infrastructure is demonstrated throughout all eco-town developments.

Reference is made in the consultation document to the need for multi-functionality and networks in respect of green space. The arguments are made in the previous section of the Institute's response for such multi-functionality to involve a carefully considered engineering approach to green space to enable it to truly offer a variety of uses and contribute tangible value in terms of energy efficiency, climate change adaptation and water management. In these respects, green space has significant economic value. Making best use of this will require detailed consideration by multi-disciplinary design teams operating at the landscape scale at the earliest stages of masterplanning and layout. It will also entail attention to matters such as location and orientation of structures and access routes to take full advantage of, for example, local topography.

Actively managed urban and peri-urban woodlands should form a significant component of new green open space within the new eco-towns and around the perimeter of the new developments. This provides containment of development and screening of undesirable views, reducing intervisibility and assisting in integrating new development into the wider landscape. At the same time, this can offer a high capacity recreational resource, biodiversity value and a renewable source of biomass that has the potential to be used locally in CHP plants, thus reducing transportation costs.

Strategic greenspace should be defined by a typology, as is being developed by the Town and Country Planning Association (TCPA) and based upon that set out in PPG17. It should receive a level of protection in the planning system through formal designation, thereby recognising and confirming its role as essential infrastructural provision.

The Landscape Institute believes that green space should be considered as a connected network, potentially including relatively narrow corridors alongside transport or other linear routes connecting larger spaces to ensure continuity. This is not only important to promote biodiversity value but will also encourage greater uptake of sustainable forms of travel, such as cycling and walking within the eco-town itself.

Whilst standards of green space provision may be helpful in determining land uses for masterplanning purposes, the suggestion of 1 acre per 400 homes is somewhat vague, as is the overall suggestion that 20% of the town area, excluding gardens, should be green space. The Landscape Institute would like to recommend that the Natural England ANGSt (Accessible Natural Greenspace Standard) model should be adopted as an objective for eco-towns. This states that:

> *"No person should live more than 300m from their nearest area of natural greenspace of at least 2 ha in size; that there should be at least one accessible 20ha site within 2km of home; that there should be one accessible 100ha site within 5km of home and that that there should be one accessible 500ha site within 10km of home. Its areas of search (up to 10km) extend from towns and cities into rural areas."*

The Landscape Institute suggests that, for the purpose of developer contributions, at least 2ha of designed, laid out and equipped amenity/recreational open space (whether semi-natural or otherwise, depending on location) should be provided for each 1000 of population and that full management costs for a minimum of twenty years should also be provided for through a commuted payment.

Of equal, if not greater, importance than quantity of green space however is the quality of its provision and future management. Management will need to be adequately funded and resourced and should be based upon management plans and maintenance regimes that form part of the original design plans. The Landscape Institute would like to stress that in developing eco-towns there is a real need to properly design green space and appreciate its value as essential infrastructure, infrastructure that is equally critical to the success of the settlements as roads, services and other 'grey' infrastructure components. It is equally important that this green infrastructure is safe, attractive, useful and usable and respects the context of its location and the underlying landscape character and biodiversity interests of the locality of the eco-town. This will enable green space to make a positive and diverse contribution to good place-making and the health and wellbeing of the eco-town communities.

A considered and multi-disciplinary approach is required to achieve this, and to ensure that the benefits are felt at town, local and neighbourhood levels. The provision of high quality and well-equipped urban spaces and streets, sports grounds, play areas and events arenas at all scales needs to be supported by areas for passive recreation, informal activities and access to large, semi-natural areas and the wider countryside, all within a connected green network.

The Landscape Institute believes that landscape planning, design and management is critical to the sustainability of eco-towns. The eco-towns provide an outstanding opportunity to create sustainable towns and communities. One of the primary means to achieving this is adequate investment in the planning, design and management of green infrastructure. It is an holistic approach to viewing the natural environment which acknowledges the multiple benefits and vital functions it provides for the economy, wildlife, local people and communities alike.

The Landscape Institute would like to thank the Department for Communities and Local Government for being given the opportunity to contribute to these proposals. For any queries relating to this response, or for future consultations, please contact:

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