
Eco-town: Living a greener future consultation

Response by the Royal Institute of British Architects

Introduction

The Royal Institute of British Architects (RIBA) welcomes this opportunity to comment on the Government's proposals for the development of Eco-towns.

The RIBA is one of the most influential architectural institutions in the world, and has been promoting architecture and architects since being awarded its Royal Charter in 1837. The 40,000-strong professional institute is committed to serving the public interest through good design. It also represents 85% of registered architects in the UK through its regional structure as well as a significant number of international members.

Our mission statement is simple – to advance architecture by demonstrating its benefit to society and promoting excellence in the profession.

The RIBA believes that rapid and significant reductions in global carbon emissions are necessary to reduce climate change, and has adopted the philosophy of Contraction and Convergence. The model points towards significantly tougher reduction targets than the UK Government has currently set itself, and a globally equitable solution.

RIBA Consultation Response Overview

The RIBA is actively involved in a number of strands of work supporting and informing the Government's Eco-towns project. These include:

- Input to the TCPA worksheets
- Participation of Sunand Prasad, RIBA President, in the Eco-towns Challenge Panel and expert group
- A partner, alongside the Prince's Foundation for the Built Environment and the Commission for Architecture and the Built Environment, in delivering an open design ideas competition encouraging inspirational and innovative proposals and exemplars.

The RIBA's detailed assessment of the Government's technical, economic and environmental criteria, the provision of best practice guidance and assessment of individual schemes will be taken forward via these forums. We will encourage our members wherever possible to become engaged with the Eco-towns programme, both professionally and via discussion and other forms of engagement. We will not, at this stage, comment on the merits or otherwise of any of the 15 sites selected for consultation.

What follows is a summary of our key principles in responding to the Eco-towns agenda, and more detailed comments setting out our thinking on individual issues raised in the consultation.

Response Summary

- The RIBA welcomes the Government's announcement on Eco-towns.

- To be successful, the RIBA believes that every Eco-town will need to be carefully considered and appraised in terms of its geographic and social sustainability.
- We support the Government's pledge to build 3 million new homes by 2020. However, while important in terms of embedding zero-carbon development in the development culture of the UK, and demonstrating the benefit of new and emerging processes and technologies, Eco-towns themselves can deliver only a small proportion of the overall need for new homes. Eco-towns are about quality and not quantity. We believe this point needs to be emphasised to the public.
- We urge the Government to consider carefully the practicalities of developing anything close to 10 Eco-towns concurrently. Instead, we would encourage the Government to choose a small number of the proposals best placed in terms of scale of ambition, locality, integration into the regional and local planning framework, proposal quality, existing transport links and infrastructure, local need and opportunities, and deliverability. This could inform a more measured programme and feed into other types of development, be they Eco-quarters in existing town or city centres, or Eco-extensions to existing settlements, as well as future Eco-towns.
- The successful development of entirely new communities on the scale envisaged by the Government will be dependent on creating settlements that are desirable as well as functional. Well designed homes, served by the necessary infrastructure and jobs, will be only part of the criteria for success.
- Eco Town concepts and designs should show an understanding of and response to their local context, creating a positive and distinctive identity. They should be places where people choose to live and work, now and in the future, recognisably attractive in form and appearance and inclusive to all. To be sustainable socially as well as environmentally, there need to be places which everyone can use with comfort, dignity and convenience, and that seek to further people's social and economic standing, regardless of their age, disability, gender and other circumstances. Exemplary design of streets and other public space as well as of buildings and infrastructure will be vital to realising the true ambition of the programme.
- Homes in Eco-towns should incorporate minimum space standards, and incorporate a range of types, tenures and sizes that match the local requirements both now and into the future including the development of Lifetime homes and wheelchair accessible homes.
- It is vital that Eco-towns inspire and reflect local needs and aspirations. This has not been evident to date and much more positive action by the Government and its partners, in terms of information and consultation, will be needed before local communities can be expected to support their development.
- The development of zero-carbon settlements will be a key weapon in mitigating and adapting to climate change, and mitigating its effects.

However, the means of promoting the actions, behaviour and skills necessary to adapt to changing conditions have not been sufficiently evident in the Government's Eco-towns pronouncements to date. More thought needs to be brought to bear on how to adapt to changing weather and seasonal conditions (and therefore the need to cool and heat buildings), increased flood risk, etc and the effects these issues might themselves raise, for example in terms of a settlement's future energy needs.

- The delivery mechanisms for Eco-towns must ensure that the quality keeps getting better as the plans are realised, rather than being compromised. To be trusted with developing Eco-towns promoters must be able to demonstrate their grasp of multidisciplinary working and a willingness to champion quality especially when it is under threat. Good governance and management will be essential to the success of Eco-towns.

Detailed Comments

The Eco-towns Concept

In the last fifty years we have learnt many lessons about how to make viable and popular towns and places in balance with the natural environment. The eco-town programme is an exciting once in a generation chance to put these in practice in a thoughtful and studied way so as to learn more and to apply that learning more widely.

We know that we have to eliminate reliance on fossil fuels and reduce damaging gas emissions. This can only be achieved through action on many interconnected fronts that range across most human activity. The Eco-towns proposals offer a chance to think through many aspects of future settlements in order to help improve all towns.

Design Quality

Ensuring design quality is a key parameter for the future and continuing success of Eco-towns, and we would like to work with the Government to explore ways of ensuring that the procurement of development in each Eco-town maintains high design quality. We believe that a combination of good planning, the application of design review, strong project leadership, and early engagement with appropriate professions will do much to encourage high levels of design quality.

Focus on practicality / delivery

Traditionally towns evolve over centuries. Developing a town from scratch involves a number of unique challenges as well as opportunities. Contemporary experience in the UK is limited, and we believe that much can be learnt from international examples, both in Europe and beyond.

Practical matters of programming, delivery and phasing will be crucial to successful development. At the earliest opportunity we would welcome a clear and unambiguous confirmation of the intended programme to 2020 across the Eco-towns programme, and considerable thought given to the key milestones in the process.

Spatial plans / planning framework

Even at a modest rate of planning and development, the evolution of the first Eco-towns is likely to take place before the scheduled review of the various Regional Spatial Planning documents, housing targets, Local Development Frameworks and other planning framework documents that underpin successful regional development.

We would therefore welcome confirmation of the manner in which the Government will ensure proper integration of the various Eco-towns proposals into these documents, including the necessary consultation, and by which planning mechanisms, current or intended, the Government intend to use to progress the developments outside of traditional timetables and mainstream planning processes.

To this end we look forward to responding to the draft planning policy statement on eco-towns later this year.

Energy Generation

Bidders will each need to review energy production and resources as part of the place-making agenda and conduct a sustainability appraisal for their Eco-town. Therefore we would expect the sites to be analysed carefully in terms of their locality and local resources, together with their potential for off-, on- or near-site energy generation. This should be articulated in terms of appropriate scales of energy generation – sub region / settlement / neighbourhood / building. Thought should also be given to how each Eco-town could be future-proofed to allow for further change in energy markets and availability through traditional and emerging means.

The associated questions of whether on-, off- and near-site solutions for energy generation (but also waste and water treatments, etc) should be prioritised, we believe that the Government should encourage on-site solutions. However, each case should be examined in terms of the most efficient or effective scale. Off- or near- site solutions can be inherently unsustainable and one must question whether such solutions genuinely deliver additionality (especially off-site energy generation). Despite this, there are cases where this option has proven to be most appropriate. The primary guidelines should be to seek solutions within the boundary of the settlement, but alternative solutions should be explored.

Zero Carbon

The RIBA supports the drive to develop truly zero-carbon developments. We believe that each consumer of energy in the UK needs to reduce their carbon emissions by 80-90% if we are to be truly sustainable and socially equitable in our response to climate change.

However, zero-carbon solutions are not only dependent on technological solutions and design and construction methodology. True success in seeking zero-carbon settlements will require a holistic approach – from the need for appropriate national planning, fiscal and development policy, to local community empowerment and behavioural change. From developments in transport infrastructure, to shifts in each of our daily lifestyle choices and consumer attitudes. Eco-towns are an opportunity for this to become embedded in the development proposals from the very outset. However, this is a significant challenge, and one that has not been addressed sufficiently in the proposals to date.

Adaptation to Climate Change

The need for adaptive measures in the development of Eco-towns is as important as measures to mitigate against climate change. This requires much greater emphasis from Government, a more detailed explanation, and should run throughout other issues. At the moment it is conspicuous by its absence.

Managing Water

Flood risk and drainage

Standard responses to the risk of flooding are often not well integrated with architectural and landscape designs. These include flood defence barriers and raising accommodation above the potential water level onto columns.

Barriers tend to isolate areas physically and visually leaving poor quality public and private spaces and limited opportunities for linkage. Developments characterised by empty under crofts or dominated by car parking at ground level tend to lack identity and a sense of neighbourhood.

The aim instead should be to integrate the control and mitigation of flood risk seamlessly into an overall design that in turn successfully achieves the goals of place making and sustainable development. In order to achieve this it is essential that the risk of flooding is recognised as a key constraint and the drivers of the risk as potential opportunities from the outset.

By identifying flood risk from the outset, by understanding the range of issues this gives rise to and also the potential contribution that analysis, engineering, hydraulics and landscaping can make it is possible to develop holistic design responses

The key principles to ensure a successful design response to flood risk are:

- Make efficient use of land at risk of flooding by matching a mix of uses with levels of risk and at the same time create sustainable communities with local centres and reduced need for travel.
- Work with the natural topography to develop cost effectively and sustainably minimising engineering land movement.
- Stack vulnerable uses over robust uses to create active frontages and a positive public realm at street level.
- Provide new outdoor amenity space, areas of biodiversity, and new recreational uses within areas of higher flood risk.

The RIBA is currently developing detailed design guidance for developments at risk from flooding. We are also working with Norwich Union to shortly launch a design competition to bring to the fore innovative design solutions to issues of flood resistance and resilience. We would be pleased to discuss both these issues in more detail with you.

A number of pertinent case studies exist in Europe, and increasingly across the UK. They demonstrate the essence and benefits of an holistic, site- and settlement-wide, integrated approach. The case studies listed below are only two such examples.

Case study: Scharnhäuser Park, Germany

http://www.energie-cites.eu/IMG/pdf/Scharnhäuser_Park_EN.pdf

The whole development is equipped with Sustainable Urban Drainage Systems. Run-off from the public land is directed to infiltration drainage swales located within the main public green spaces. Run-off from private land is required to be disposed of on plot, either by rainwater harvesting or through infiltration drainage swales. These arrangements have reduced the costs of sewer provision and especially in the case of heavy rain.

Case study: Albion Quayside, Gravesham

The site features a sustainable flood defence / river walkway. Also it integrates Sustainable Urban Drainage Systems and a heritage green canal. This is a mixed use scheme stacking residential over more robust uses to create a lively public realm. It

includes a safe refuge strategy, roof gardens and evacuation points, while maximising benefit of riverside setting.

Waste

While recycling material quotas are not included in the zero carbon definition, the management system of processing waste should be examined, including the collection of waste, processing plants and disposal of non-recyclable materials.

Green Space and Biodiversity

Each potential site will have a number of advantageous characteristics and also a number of challenges, therefore proposals should clearly express which elements of the landscape and local context can be celebrated and conserved and which have the capacity for change. We would expect that clear networks of green space will be encouraged through creation of a settlement-wide strategy in each case. These could provide a broad range of opportunities, for example to aid food and energy production, or to deliver health benefits. It is also important that a clear rationale is given to the edges of the settlement and an unambiguous understanding developed of how it relates to the surrounding landscape.

Transport

Thought needs to be given to the density of development so that it is balanced against the accessibility to public transport. Transport decisions should be influenced by the overall economic, environmental and social sustainability approach, with appropriate strategies developed to inform how the Eco-town may function and connect with surrounding areas and settlements at a sub-regional level. At the settlement level it is important that there is a clear logic to the hierarchy between primary, secondary and neighbourhood streets, how these link with the green infrastructure and how they can encourage activity amongst inhabitants.

Importantly, public transport needs to be fully accessible including adequate access to information about travel times etc, and affordable to those at the lower socio-economic level (that disproportionately include many disabled people) who have no alternative to public transport.

We would hope that an adequate transport strategy will in each case clearly demonstrate the route to reducing fossil fuel-based travel against local/national averages, and encourage the practical creation of car-free areas. Certainly the Government should aim to reinforce the use and primacy of non-motorised transport, and test the boundaries of how far one could go towards radically reducing or removing car use. Fully integrated public transport systems will lie at the heart of this, but domestic waste management strategies and local accessibility to services will also dictate how residential roads must be used.

Bidders should also be encouraged to look at developing ideas for non-subsidised public transport systems – e.g. through land value capture, ensuring increased development density at public transport hubs, and local/regional reverse flow.

Homes and Housing

Bidders should be encouraged to examine ways of extending the variety of housing sizes and tenures. Housing development should reflect the local character, aspiration and needs. Thought should also be given to the use of non-restrictive design codes, the encouragement of low cost self-build eco-homes and developing construction technologies, including pre-fabrication and sustainable materials and processes.

The planning of the settlement and neighbourhoods will contribute greatly to the success of other interlinked objectives, including health, security and transport. The overall layout of the blocks and streets should be configured in a way to allow the creation of walkable, safe, healthy neighbourhoods, with social and transport infrastructure and facilities within a short distance by non-motorized modes of transport.

Materials

Although the embodied energy of the materials used to construct Eco-towns is not included in the zero carbon definition, the materials used should be sustainably sourced - as detailed in the Code for Sustainable Homes.

Future Management of Place

Good place-making requires more than good urban design solutions. Eco-towns need to be places where communities can develop or they will be little more than dormitory housing estates. Bidders should be encouraged to consider ideas that will promote the formation of cohesive communities and governance structures. Sustainable places rely on long term governance and the management/maintenance of the public realm for their continued success.

Food production

The Government should examine the viability of on-site domestic or communal food production.

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