SURVIVING THE ECONOMIC CRISIS: CAN CREATING 'ECO-TOWNS' HELP THE REAL ESTATE SECTOR?

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Abstract

Like most major economies aiming to attract knowledge based industries, the UK has sought (prior to the onset of the global economic crisis) to address chronic real estate shortages by planning for more housing, built to modern environmental standards. In June 2008, the UK Government's National Housing and Planning Advice Unit called for 297,700 new homes delivered per annum. However, the credit crunch has thwarted this ambition, at least in the short term. With a mere 75,000 new homes built in 2008, and a lower number in 2009, this target will almost certainly be missed for the 2016 finish line.

The UK Government's eco-town programme has invited considerable controversy. Advocates argue that this programme is a necessary step to help kick-start an economy where one-fifth of the GDP is tied to Real Estate activities; and to lead the way towards low-carbon sustainable living. In contrast, opponents see eco-towns as another socio-economic experiment with uncertain outcomes.

Drawing comparisons with the legacy of the post-war 'new towns' programme in the UK, this paper will examine the organisation and finance structure of the current eco-town programme. The paper concludes that, whilst the eco-towns programme may eventually succeed, the UK has missed an opportunity to maximise the projected benefits from the programme, by opting entirely for new settlements, and not including existing housing stock.

A more serious concern raised in this paper focuses on the low level of public sector involvement in financing eco-town developments. How realistic is it to facilitate private sector engagement in the development of new settlements, without significant public co-funding, especially when trying to achieve sustainable communities? A private sector led development will naturally seek to vary the scale and pace of development to suit market conditions; and the profit margins of the bidding developers will be the most decisive determinant in the development process especially under limited credit availability. In the current economic climate, raising capital will be a massive challenge to developers because no matter how buoyant the eventual market might be, both banks and the Real Estate sector are still afraid that a repeat disaster may not be far away.

There is little dispute that the financial cost of developing an eco-town will be enormous for the Real Estate sector, so there must be sufficient public financial backing. Higher levels of public-private partnership, similar to those employed in the past (following the Town Development Act 1952, for example, in the UK) may be the best way forward. Experience from Singapore, Malaysia, and other countries, points to this model of investment as potentially the best way forward for the Real Estate industry, especially where social and environmental agendas are also involved.

Recent Eco-Town Developments in the UK

On February 8th 2010, the UK Housing Minister, John Healey, announced the funding allocations for the four first wave eco-town locations. £60 million was made available from the government's Growth Fund in July 2009.This will help fund some local infrastructure improvements and early demonstrator projects at the sites.

The UK Department for Communities and Local Government (CLG) funding has been designed to support a range of technological innovations:

- In Whitehill-Bordon, Hampshire, 25 homes to be built to 'Code for Sustainable Homes Level 6', powered by a biomass-fired Combined Heat and Power plant;
- in Rackheath, Norfolk, a project to encourage long lasting behaviour change;
- In Bicester, Oxfordshire and St Austell, Cornwall, projects to promote eco-home systems in existing neighbouring area.

In addition, the Department for Children Schools and Families (DCSF) has provided £2.5million match funding for education related projects in the eco-town locations. Projects that will be taken forward, as a result, include retrofitting primary schools and a library in the Whitehill-Bordon area (Hampshire) and the inclusion of eco-features for a new sixth form school building in Bicester (Oxfordshire).

According to an extensive report by the BBC, these locations could house up to 30,000 people in eco-friendly dwellings in five years' time (BBC, 2010).

Whitehill-Bordon, Hampshire

There are plans to build up to 5,500 homes on this Ministry of Defence-owned site situated west of Whitehill-Bordon. In an area where more than 2,700 people are on the waiting list for affordable housing, the proposals could eventually lead to the building of 2,000 affordable homes. Between 70 and 200 eco-homes are to be built on the site first, while low interest loans will be given to those already living there so they can adapt their homes.
Government money will also be used to fund improvements to public transport, installing electric car charging points and a feasibility study on re-opening a rail link.

St Austell, Cornwall

The second project to get permission to proceed is a development of about 5,000 homes on former industrial and clay mining sites near St Austell in Cornwall. Proposals have centred on building 1,500 affordable homes in an area where more than 5,000 people are on the affordable housing waiting list.

Some of the central government funding will pay for an initial 37 affordable environmentally friendly show homes in the town centre. The iconic Eden Project, which in the vicinity, is to support the developers to run a community hub, as part of its role as a conservation attraction and educational charity. It will display new environment technologies and provide educational projects for the community. This development will also see a new bus station where the emphasis will be on green transport, with the inclusion of electric bike charging points.

North West Bicester, Oxfordshire

The North West Bicester proposal is for an eco-town with 5,000 homes in an area where more than 7,000 people are on the waiting list for affordable housing. The eco-town would provide at least 1,500 affordable homes. Although not all details have yet been published, the government funding will pay for up to 200 pilot eco-homes. Proposals to improve the public transport in the area include a pedestrian-only path from Bicester North station to the town centre and extended bus routes.

Rackheath, Norfolk

The fourth project to be given funding by the government will lead to the building of 6,000 homes on the northeast edge of Norwich. The developers hope to build 1,800 affordable homes in an area where more than 12,000 people are on the affordable housing waiting list. All the new homes will be built to high environmental standards; and will incorporate rainwater re-cycling, low flush toilets, high insulation fittings, as well as environmentally friendly roofs. There are plans to build an initial 200 eco-homes showing the different types of houses and technologies possible. There is also a plan to build a demonstration biomass-fuelled combined heat and power plant, which could sell electricity back to the grid. Resident who use very little energy may be able to partake in a pioneering personal carbon-trading scheme while others can also apply for grants to help make their homes more carbon-neutral. The grant will have to be paid back when their houses are sold.

The Eco-Town Programmes in South East Asia

Towards the end of January 2010, a report by Jessica Cheam, of Singapore's Straits Times, confirms that interest in eco-towns is as keenly felt in Asia, as it is in Europe and North America (Cheam, 2010). According to the report, the former fishing town Punggol has been designed to promote sustainable living, and is planned to have smaller estates, with common green spaces, supporting municipal facilities, and a well-integrated public transport network to enhance accessibility. One of the key green initiatives for Punggol is the introduction of a waterway traversing through the town.

Large-scale trials of new green technologies and urban solutions in the areas of energy, waste and water management will also be carried out, with the hope of replicating these across other towns. Cycling paths, charging stations at car parks and spaces for car sharing services in the estates will be built to encourage clean commuting.

As elsewhere in the world, the Singapore project is designed to achieve the following objectives (Berkel et al, 2009):

- Introducing effective, participative planning and design concepts to make it conducive for residents to adopt eco-lifestyles;
- Exploiting new urban technologies to achieve cleaner environments;
- Educating residents to be part of the green life style.

In Malaysia, similar aspirations are being promoted in relation to eco-towns. In a speech by Penang's Chief Minister, Yab Tuan Lim Guan Eng, at the Penang Eco-Town Stakeholders' Roundtable Discussion (24th August 2009), Mr Eng stressed that the development of eco-town in Penang will create what he described as a 'sustainable industrial environment'.

As Mr Eng put it (Eng, 2009):
'The scope of activities in the Penang Eco-town will cover integrated waste management, encompasses the practice of 3Rs of reduce and recycle, reuse, green planning, green purchasing, eco-efficient use of natural resources and air emission controls... I understand that some of the SMEs have constraints in terms of capital and expertise for improvement in their environmental performance; however, I hope that SMEs will look closer proactively into the green incentives given by the

federal government and the long-term benefits that will be brought by good environmental management. Let us work together to transform our working and living environment into a sustainable international city that ensures resources used today are still available to be used tomorrow. If we are to make eco-town a successful project, there are three important issues that we need to address: energy and water consumption, effective public transportation and affordable housing...'

It is worth noting that the concept of eco-town has often been used in two contexts. In Japan (and to some extent, what is being proposed for Penang), eco-town projects focus on transforming industrial estates to become more environmentally friendly, through a number of measures:

- Waste minimisation and reduction of pollution;
- The 3 Rs: recycle, reuse, reduce
- Waste exchange or process compatibility (using a by-product from one process as input in another one)
- Ecological modernisation: use of cleaning and cleaner technologies to reduce waste and pollution impacts

In the European context (and in Singapore's Punggol project), eco-towns involve either:

- the creation of new environmentally friendly settlements (as in the UK); or
- transforming existing towns into more environmentally sustainable settlements (as practised in Germany).

In the UK, all but one of the new eco-towns are new settlements. The exception is Whitehill-Bordon (Hampshire), which owing to political pressures has been included as a direct replacement when the Ministry of Defence vacates the location in 2013.

How should Eco-Towns Work within a Planning Context?

According to the UK approach to eco-town development (as outlined in the relevant Planning Policy Statement on Eco-Towns), eco-towns are intended to meet the following broad principles:

- Affordable housing: with a minimum of 30% affordable housing in each eco-town;
- Zero-carbon: eco-towns must be zero-carbon emitters over the course of a year (but not including transport emissions);
- Green space: a minimum of 40% of eco-towns must be comprised of greens paces;
- Waste and recycling: must have very high recycling rates and make use of waste to generate energy, etc;
- Employment: at least one job opportunity per household (with the job marker being accessible by public transport, walking or cycling);
- Services: retail premises, schools and other services within walk distance;
- Transition/construction: facilities should be in place before and during construction
- Public transport: a high degree of environmentally friendly transport systems;
- Community: mixed used development, with a mixture of housing types and densities, and with residents involved in the governance of their local communities and neighbourhoods;
- Home developers must aspire to build to the highest Code for Sustainable Homes (at level 6).

The UK has been the pathfinder country for many years when it comes to designing sustainable residential communities, and the UK urban landscape provides considerable lessons and experiences for other countries (DCLG 2007a, Falk 2008, Ward 2005). However, when it comes to sustainable living, the exemplar countries are currently Germany and Sweden.

The present eco-town programme can be characterised as the UK Government's attempt to regain the initiative. The main aims of this programme are to build "new settlements that will have sustainability standards significantly above equivalent levels of development in existing towns and cities, and which are separate and distinct, but well linked to higher order centres and have sufficient critical mass to achieve the eco-town objectives". They are also to "encourage and enable residents to live within environmental limits and in communities that are resilient to climate change". As such they would "provide a showcase for sustainable living and allow Government, business and communities to work together to develop greener, low carbon living" (DCLG 2008a pp 1-3).

Notwithstanding the merit of the UK government's focus on eco-towns, a number of controversies may have not been adequately addressed. For example, in choosing a location that could meet the criteria, the Government's approach has been to invite bids from developers. This is somewhat contrary to the more established, and democratically accountable approach, of allocating sites through development plans outlined by local authorities in consultation with the local communities. Furthermore, to assist prospective bidders with their proposal, and to provide some legitimacy to the whole process, the government set up an eco-town challenge panel, consisting of those with expertise in aspects of sustainability and the delivery of new settlements, to provide advice to prospective bidders. This was apparently designed to drive up the proposed eco-towns standards, but also to root out "putative green utopias which were speculative housing projects already turned down by planners" (Girling 2008 p2). A case in point was the Eagle Star proposal for Micheldever, in Hampshire.

As elsewhere in the world, the UK government consolidated its support for the delivery of eco-towns through the planning system (DCLG 2008b). The stated intention was not to by-pass the plan-led approach that forms part of the statutory planning process. However, since the timing of this programme is clearly out of kilter with the review of most of the relevant Regional Spatial Strategies presented by local authorities, the Eco-Towns Planning Policy Statement (PPS) has been prepared as a 'material consideration' which under the UK Planning Acts allow the decision-maker to overturn a proposal that is contrary to a local development plan. There has clearly been a careful timeliness underpinning this governmental approach, as waiting for the next review of the key Regional Spatial Strategies would have considerably delayed the rollout of this programme (TCPA 2008).

Furthermore, the eco-towns Planning Policy Statement does not seek to, nor does it specify shortlisted locations. The two exercises – standards and locations – appear to be running in parallel, a matter that has confounded supporters and critics alike. The outcome of the programme, as recently announced, has therefore been a short-list of locations that the government considered sustainable, combined with a Planning Policy Statement that sets appropriate standards of what constitutes an eco-town. Paradoxically, however, any successful bid from real estate developers will still have to be submitted as a planning application to the local planning authority. The role of the planning authority in this context will be a limited one: deciding whether the bid meets the criteria set out in Planning Policy Statement on eco-towns.

Remaining Questions

The eco-town programme has polarised opinions. On the one hand, many supporters, such as the Town and Country planning Association and the homelessness charity Shelter, argue that new housing is required, and that this is an opportunity to contribute positively to the wider Government climate change programme (TCPA2008). However, there is also considerable opposition, from political parties, the media and local communities living in close proximity to the locations of the shortlisted schemes. Indeed in only two cases – Whitehill-Bordon and Rackheath – is there less opposition or anything resembling positive support.

Opposition to the eco-towns may usefully be summarised in three points (Finch 2008):

- Why is the eco-town initiative required, when it will provide only a fraction of the government's own housing target? Many real estate organisations, such as the House builders Federation and the British Property Federation, have argued that despite its merit, the eco-town project unnecessarily detracts the government from its major task of delivering its housing agenda;
- Environmental groups, such as the Campaign for the Protection of Rural England among others (CPRE) put forward the idea that a further alternative would be to turn an existing small town into an eco-town or to promote other forms of urban development. The government's eco-town scheme does not appear to pay sufficient attention to the need for higher environmental performance for existing housing stock; and
- Many of the eco-towns are simply being built in the wrong place from the standpoint of transportation and infrastructure pressures. This has been the primary reasons why most local community groups have not welcomed the government's eco-town scheme.

There is also an intense political interest in the future of the Labour government's eco-town scheme in its current form. Most of the proposed bids are in Conservative constituencies, and may therefore not come to fruition in the event of a Conservative victory in the 2010 General Elections (Shapps 2008). Furthermore the Conservative media have roundly criticised the programme from the outset. As a leading columnist in the Daily Express put it (McKinstry 2008):

"Socialist planners who repeatedly promise a new utopia and always end up building a concrete nightmare...the scheme is being driven by an unedifying mix of Stalinist central control from Whitehall planners and naked greed from the Major developers and retailers"

The controversy has also led to claims that this whole programme was being driven by political pressure rather than a systematic attempt to allocate the most appropriate sites (CPRE 2008). The most vociferous opposition, however, came from the local Government Association (LGA) and local residents. Indeed, the LGA, in fear that the proposed approach might undermine the planning system, commissioned legal advice, which confirmed that there were solid grounds for seeking judicial review of the eco-towns programme (LGA 2008).

Financial Challenges

In so far as financing eco-towns is concerned, the fundamental question for the UK government is: How desirable is it to facilitate private sector development in the creation of new large real estate assets, whilst at the same time achieving balanced communities and sustainable development?

The 1946 Reith Committee report (examining post World War II residential real estate needs) closely reflected the principles espoused by Ebenezer Howard (famous for his publication in 1898 of Garden Cities of To-morrow). However, there were some clear differences to reflect the political, economic and environmental position of the time. One such difference was the heavy and direct involvement of the state in financing the scheme, signalling top-down real estate planning and finance over bottom-up self-governance (Cherry 1998).

The subsequent New Towns Act of 1946, which implemented most of the findings of the Reith Committee, set out the legislative framework for delivering New Towns. The key feature was the creation of New Town Development Corporations, set up and sponsored by government with the express aim of constructing each new town. Not surprisingly, they had wide-ranging powers. Original funding came from the government in the form of loans, which were then expected to be paid back as revenue from the sale and rent of housing (ODPM 2002). The role of the private developer was extremely limited to that of a building contractor. Largely, this organisational structure lasted throughout the whole New Town Programme. In later years as the Development Corporations were wound down, the remaining assets were transferred to the Commissions for New Towns, who had a remit for disposing of them (House of Commons 2002). Although the New Town programme stopped in the 1970s as Government policy switched towards urban renewal (Pacione 2004), a number of the third generation New Towns (in particular Milton Keynes, Northampton and Warrington) continue to be developed largely under the terms of the New Towns legislation.

During the 1960s, as public-sector sponsorship of new towns declined, the private real estate sector took over (Pacione 2004). The first notable examples of such settlements – Cramlington in Northumberland and New Ash Green in Kent – were on a far smaller scale to the original New Towns, and financed entirely by private companies (Ward 2005). Whilst Cramlington was built out as planned, the New Ash Green proposal faced a number of practical difficulties. Its ambition for combining housing with local employment and a mixed community started well; but a combination of factors – including the need to provide upfront expenditure of the required infrastructure – meant that the original vision had to be modified. The settlement was eventually built by a real estate development firm, but the original vision was watered down.

However, as Pacione (2004) points out, the experience of the New Ash Green raised a number of issues relevant to new eco-town project: the appropriate development vehicle, finance and social composition. Large sceal estate developments such as South Woodham Ferrers (TCPA 2007) and Lower Earley proved to demonstrate that private sector developers could construct reasonably sized new settlements on privately-owned land (Ward 2005). In the current marker and political environment, whether a new settlement is to be promoted through the public or private sector will be driven primarily by political rather than planning pressure. There are clear advantages with either option: the private sector approach minimises the use of public expenditure, but also leaves the pace of the development open to the market (Pancione 2004). However, as we experienced during the recent economic climate, the private sector will seek to vary their pace of development to suit market conditions. This may present significant difficulties in planning for new municipal and transportation infrastructure which are difficult to implement in a piecemeal fashion.

With the government - in stark contrast to the New Towns programme - not making available major financial contribution outside the Growth Fund, the financial health and predicted profit of the proposed bidders will play an important role in the overall process. In this context, it is interesting to note that Breheny et al (1993) argue that public sector involvement is a necessary requirement, whether through legislation such as the New Towns Act or in partnership with the private sector.

At present, the main basis for funding the eco-towns is a private sector-led approach. There also appears to be no additional government financing of the programme, except for those proposals which fall within a government growth area (in which case developers and local authorities might be able to bid for the Growth Area funds that have been made available to support additional housing in these areas) (DCLG 2007a, 2007b, 2007c, 2007d). As such, the risk now falls almost entirely on private real estate developers and their financiers. Although it may be some time before any development gets underway, the current economic climate makes it far more difficult for developers to obtain the required backing.

Of course, part of the finance is likely to come through the uplift in land values once planning permission had been granted. Indeed land values traditionally accounted for 30-40% of the value of a home, but this has risen to near 50% in some high profile locations (Falk 2008).

Equally, through planning gain ('Section 106 Obligations') the developer is likely to be required to fund the provision of much of the infrastructure needed to sustain a new development. Historically, successive governments have been grappling with the principle of community gain Since the Uthwatt report in 1942: how much of any increase in land value should be kept for the benefit of the community? How much of the proposed infrastructure should the private sector be responsible for financing? The issue is fundamental to establishing the balance of power between public and private interests on the use of land (Pacione 2004). How this balance plays out in the eco-town initiative will have some influence over the success of the programme.

It is highly likely that Local Planning Authorities will seek to ensure that they receive their slice of the uplift in land and, quite possibly, the government will want to ensure that a further slice of funds – via the Community Infrastructure Levy – will be invested in infrastructure. This puts considerable premium on the value of land and raises questions about the real estate developers' business model and capacity to absorb the cost.

The further challenge is those real estate developers' costs in implementing the Code for Sustainable Home requirements will be higher in eco-town developments. Youkee (2008) argued that, for a real estate developer, the additional cost per house of improving up to Code level 3 is manageable at £5,000 per unit, rising to £15,000 per unit at Code level 4 and £26,000 per unit at Code level 5. The standards put forward by government in the Planning Policy Statement will exceed those in the Code. Consequently, the additional costs will be significant and raises the important question of whether the financial and institutional arrangements are in place to deliver the proposed eco-town programme.

It appears that the current financial debate is focussed on a nearly exclusive private-sector approach. There seems to be little consideration of the merits of alternative business models. One logical model would be more public-private partnership, similar to those already employed in the past (including under the Town Development Act 1952). There is no dispute that the financial cost of developing an eco-town will be enormous, so there must be sufficient backing. Despite the 'spin', existing government funds are very limited at present.

Conclusions

The eco-towns programme has raised a number of principles, which affect the sustainability, and success of this grand project. In the first instance, this relates to the physical environment: choosing the size and location; and ensuring that each settlement contains a suitable balance of housing and employment are key to the eco-town programme. Secondly, the organisational and financial issues must be properly resolved in a workable fashion.

The proposed size of settlement on each of the eco-towns is potentially larger than most previous private sector development of new towns, but the government is still requesting a private sector-led approach. Yet, there appears to be no firm discussion about the prospects of alternative financial models to support such an important programme. There appears to be vulnerability with the overall approach. Whether or not these particular proposals go forward in a substantive fashion in the near future, there is clear need for a better business model that can support the higher costs of the higher environmental standards required for eco-towns.

There are likely to be significant benefits in the eco-towns programme, but they may take some time to materialise, and the whole programme is not without risk. Choosing an urban extension or urban infill might well have provided wider benefits to the existing housing stock; as well as learning from European examples.

The right financial framework for a new settlement is critical if a New (eco) Town is to be delivered. Being a private sector led approach, the eco-town programme in the UK runs a higher risk of delay, especially if costs – through rising land values and planning gain in particular – climb. Again, on this point, the UK government may not have explored the benefits of a public-private partnership, which would be more robust and less susceptible to the volatility of the economic climate.

Matters are not helped by the timing of the programme. The credit crunch has totally undermined the current house building agenda, virtually making impossible an already challenging housing subject. Unless the UK government is willing to prop up the proposed eco-town programme with higher levels of public funding, it is hard to see how the new eco-towns will be built and assessed in time to realise maximum benefit.

The eco-town concept, in both the UK and elsewhere, will certainly provide lessons for the creation of new communities. However, it is unlikely that the lessons learnt can apply fully to existing housing stock where the focus will be on retrofitting much of the existing infrastructure. Unfortunately, it is too early to gauge the impact of the eco-town initiative; and how it plays out alongside other government initiatives. However, like it or not, future urban form in the UK and elsewhere is inescapably going to be more sustainable than in the past, and there will be plenty of opportunities to assess such benefits.

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