

**A Town Called Eco: What notions of
sustainable development do the
government's proposed eco-towns embody?**

by

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**A TOWN CALLED ECO: WHAT NOTIONS OF SUSTAINABLE DEVELOPMENT DO THE
GOVERNMENT'S PROPOSED ECO-TOWNS EMBODY?**

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ABSTRACT

The eco-towns agenda is intended to address social and environmental concerns through facilitating exemplar new sustainable settlements. Sustainable development, which traditionally combines environmental, economic and social aspects of sustainability, has recently been adopted as a cogent Government Policy. This research asks what notions of sustainable development have been embodied in the Government eco-towns agenda. Research consisted of nineteen semi-structured interviews with those involved in eco-towns design and delivery, and the wider sustainability movement. Archival research helped to position the agenda and trace its evolution. The results suggest that the Government has failed to account for the full complement of sustainable development notions in developing these eco-towns. There is a focus on environmental aspects, particularly the concept of zero-carbon, arguably at the expense of broader considerations. Eco-towns set a precedent for increased private sector involvement in the agenda, but employment provision within the settlements has not been thought through and they could thus become unsustainable economically. Social notions of sustainable development have been weakly integrated into the agenda and this threatens to undermine its overall success. It is argued that whilst an important move in the right direction, eco-towns are an imperfect idea and could benefit from refinement. In particular they could set more systematic environmental targets, such as for zero-carbon, and may be more successful communities if they challenged the very model through which new towns such as these are delivered.

KEY WORDS

Eco-towns, Sustainable Communities, New Settlements, Sustainable Development.

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1. ECO-WHAT?

As we come towards the end of the new millennium's first decade, it is remarkable to reflect on how far humanity has come in its profound reshaping of and impact upon the world. The past decade has seen a notable – and unprecedented – increase in knowledge and understanding of this impact: public awareness of environmental and social issues affecting global society has never been higher (Ipsos MORI, 2008a). As the current financial crisis has reminded us, we are a more globally interdependent species than ever before, and the impacts of our actions are similarly far-reaching.

1.1 The Scale of the Situation: The Environmental Challenge

Anthropogenic influence on climate change has recently been confirmed beyond reasonable doubt (IPCC, 2007) and it is now accepted that the phenomenon 'threatens the basic elements of life for people around the world' (Stern, 2006, p.56), necessitating 'strong and urgent global action to reduce greenhouse-gas emissions' (*ibid.*, p.23). Whilst the technology and capital to solve the problem exist, what remains uncertain 'is whether we have the political will to do so' (Burke, 2009, p.30). The ever-increasing ecological burden of our lifestyles is threatening the integrity of entire biomes in what is dubbed 'the ecological credit crunch' (WWF, ZSL and GFN, 2008, p.1), with our global environmental footprint exceeding the world's regeneration capacity by about 30%. The possibility of resource scarcity so intense that it could spark international conflict, such as so-called 'water wars', is now conceivable (Pearce, 2006).

Surveys consistently show that environmental awareness in the wider populace is increasing. In 2008 89% of Londoners believed climate change to be an important issue (Ipsos MORI, 2008a), with 77% of the national population fairly or very concerned about the issue (Ipsos MORI, 2008b); in 2000 commentators found climate change 'relegated to a few paragraphs inside the newspapers' (Bunting, 2000, p.19), and then only when international environmental negotiations were taking place. However, the connection between understanding the issues and making behavioural changes is a complex one, and there is little evidence that this new-found public awareness has translated into strong remedial action (Great Britain. DEFRA, 2008).

1.2 The Scale of the Situation: The Social Challenge

Coupled with these environmental issues are potent social challenges. In the UK there is an acute housing shortage with only 161,000 new-build completions in 2006, down from a peak of 353,000 in 1968: the level of house-building has declined steadily in the past 40 years (Barker, 2004; Great Britain. DCLG, 2007a, p.9). The new-build shortage exacerbates the lack of affordable housing: house prices doubled between 1995 and 2003, with average prices in the five years to 2006 increasing by 71% and 110% in the south-east and north respectively (BBC, 2003). This has prevented many first-time buyers, particularly so-called key workers, from entering onto the housing ladder (BBC, 2004) and has led to the development of a 'two-tier market' (Evening Standard, 2007, p.1).

Social commentators are keen to highlight the perceived threat from what is evocatively dubbed the decaying fabric of society. However, claims that we live in an 'ASBO Nation' (Squires, 2008) and a public perception of increased levels of crime year on year (Great Britain. Home Office, 2008, p.128) are not matched by statistics which show that recorded crimes have fallen consistently since a peak in 1995 (*ibid.*, p.2). There are concerns that the rapid expansion of supermarkets will erode the social glue which maintains communities and lead to the unwitting creation of 'Ghost Town Britain' (New Economics Foundation, 2002).

1.3 Housing since the Second World War: Setting the Stage for Eco-Towns

After the Second World War, the rate of house building increased steadily (Great Britain. DCLG, 2007a, p.9). Inspired by the Garden Cities ideal (Howard, 1902), over thirty New Towns were built in 'the most sustained programme of new town development undertaken anywhere in the world' (IDOX, 2008). The concept included both improvements to existing war-damaged towns and wholly new settlements (English Partnerships, 2007). Today they are home to over two and a half million people. Milton Keynes was the last New Town to begin development, with the largest projected population – and was 'reputedly one of the most successful' (Peiser and Chang, 1999, p.1679). Some have highlighted the absence of an obvious centre as indicative of a town without a heart: critics quoted the author Gertrude Stein's maxim, originally intended for her hometown of Oakland, California, that 'there is no there, there' (Stein, 1937, p.289). The town's concrete cows have come to symbolise the apparently inherent artificiality of any modern planned settlement, emphasising the lack of 'architectural heart that makes many of us think so highly of old towns and cities' (Glancey, 2006, p.12). There have been no new major housing developments since the 1960s, when the last New Towns were designated; new housing has been delivered through edge expansion of existing settlements and densification of urban cores (English Partnerships, 2007).

To address these issues, in 2003 the Government published its five-year Sustainable Communities Plan through which it hoped to foster a renewed enthusiasm for community-building, reinvigorate local democracy, and tackle fundamental issues of contemporary society including homelessness and disengagement (Great Britain. ODPM, 2003). It followed initiatives such as the New Deal for Communities and paved the way for the Sustainable Communities Act 2007, an attempt to cement the work begun by the 2003 Plan and promote the sustainability of local communities through legislation (Great Britain. *Sustainable Communities Act 2007*).

1.4 Eco-Towns

At the Labour Party Conference in May 2007 Gordon Brown announced that he planned to build five new eco-towns which would be exemplar sustainable settlements and help meet 'pent up' (BBC, 2007a) housing demand. The target was subsequently doubled to ten (BBC, 2007b). Drawing on the New Towns model and using much of the language of community empowerment from the Sustainable Communities Plan, the proposed eco-towns have become a highly contested and politically charged policy area. The two years since their initial announcement have seen three Housing Ministers and over a dozen planning, policy and consultation documents. Meanwhile, the timescale for their delivery has been repeatedly extended amid concerns over the quality of proposals, the legality of the planning delivery mechanism, and local opposition (Pickard, 2008, p.1). In spite of these setbacks, the Government seems determined to see eco-towns come to fruition.

1.5 The Research Question

This raises an interesting area of research which a literature review suggests has not previously been fully addressed, and leads to the research question of this thesis: what notions of sustainable development do the Government's proposed eco-towns embody?

Having briefly illustrated the key threats to contemporary society, the interactions between these and national level issues around housing and community, and the recent Government response which has culminated in the eco-towns agenda, the next section will review and critique the literature in this field. The methodological approach will follow in section three, with data analysed in section four. Conclusions and policy recommendations will be made in section five.

2. FRAMING THE RESEARCH

2.1 Scale and Scope

This section will review key strands of literature in the evolution of the eco-towns concept. The Garden Cities movement was conceived at the start of the twentieth century but its ideals inspired the New Towns agenda in post-war Britain and are still present in the contemporary urban regeneration and social development agenda. Meanwhile, the last forty years have seen environmental issues of global reach and scope become increasingly prominent in the public and political consciousness, with a resultant paradigm shift towards sustainable development. Consequently, more sustainable patterns and modalities of living have begun to move from the margins of the green agenda to political centre-stage. From China's Dongtan eco-city to Transition Town Totnes in south-west England, sustainable urban living is coming of age.

2.2 Sustainable Development: 'the watchword for the new millennium, and a guiding theme for all human activity' (Ravetz, 2000, p.3)

This sub-section will examine the evolution of the sustainable development paradigm.

Whilst the underlying principles of sustainable development have arguably been in existence as long as society itself, the concept emerged as a coherent discourse in the latter part of the twentieth century. The 1972 UN Conference on the Human Environment began the formal discussions which fifteen years later resulted in the now ubiquitous definition, commonly known as the Brundtland definition after the Conference Chair, that sustainable development is:

... development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987, p.43).

It rapidly became 'the most popular, emblematic, sacrosanct term in recent years', succeeding the concepts of 'holistic, integral or endogenous development' (Mega, 1997, p.7). It was a guiding mantra for Government, business, and society. Whilst deftly emphasising that it should be approached 'as a process and not as an end-point' (*ibid.*, p.8), the inherent difficulties in working towards an idealised, abstract concept were downplayed.

The Brundtland definition soon became branded, somewhat cynically, 'the latest development catchphrase' (Lélé, 1991, p.607). Daly (1996) cautions against the ambiguity of the concept, arguing that it can come to mean anything to anyone, becoming detached from any inherent meaning. This critique echoes the earlier wry assertion that whilst 'something or other is supposed to be kept going' (Holland, 1994, p.169), it is not always clear what this something is. This 'vagueness ... has led to a large political battle for influence over our future by linking interpretation to the concept' (Mebratu, 1998, p.493): sustainability has evolved from a sterile definition to a means of ensuring political power. It is argued that a conceptual analysis focusing on 'the metaphorical and epistemological basis of the different definitions' (*ibid.*, p.493) would be a useful path towards 'strengthening the logical coherency within the concept' (*ibid.*, p.518).

Some argue that this 'proliferation of alternatives' which take on 'different meanings in the hands of different commentators' (Dobson, 1998, p.42) does not facilitate engagement but makes the concept arbitrary and even obstructive. The traditional definitional approach, which had generated over 300 distinct definitions a decade ago, is thus unhelpful, whilst the chronological focus of a discursive method ensures it is immediately outdated. Dobson suggests a typological approach may be the answer, bringing 'the components of the concept ... more sharply into focus' and ultimately providing 'a form of orientation for finding one's way around the territory of environmental sustainability' (*ibid.*, p.35). However, it is important to note that 'even if it means

different things to different people at different times and in different places, it can provide a touchstone for reflection' (Layard, 2001, p.1). There is a value in its ability to unite people in their disagreement if the result is a greater engagement with the agenda.

The lack of clarity and consensus over the precise meaning of the term stems from its ubiquitous nature as a contemporary buzzword. Its use, say critics, is often mere 'rhetorical genuflection' since it 'has been appropriated by those interests which shape social relations in modern society' (Blowers, 2000, p.371):

In its ideological sense it has been annexed to serve and legitimise those practices, policies and institutions that support processes of economic growth (*ibid.*, p.372).

Paradoxically it is thus both inherently appealing and fundamentally vague: no-one would argue with the ideal of sustainability, no more than they would a concept like democracy or justice, but just as with those terms everyone has their own take on what it means and how to achieve it. The Government emphasises the attractive yet arguably unquantifiable notion of 'a better quality of life' (Great Britain. HM Government, 2005, p.6) in its Sustainable Development Strategy. Emotive arguments are posited in favour of sustainable development, often without answering underlying questions of what is being sustained and by whom:

The *monumental* challenge of ensuring, within less than two *human generations*, that as many as ten billion people are *decently* fed and housed without damaging the environment *on which we all depend*, means that the goal of environmental sustainability *must* be reached *as soon as humanly possible* (Goodland, 1995, p.21, emphasis added).

The three key tenets of sustainable development, broadly visible across the definitional and typological spectrum, are substitutability, irreversibility, and protection; these span economic, environmental and social objectives (see Figure 1) which '[i]n some business circles ... is referred to as the triple bottom line' (Sikdar, 2003, p.1928).

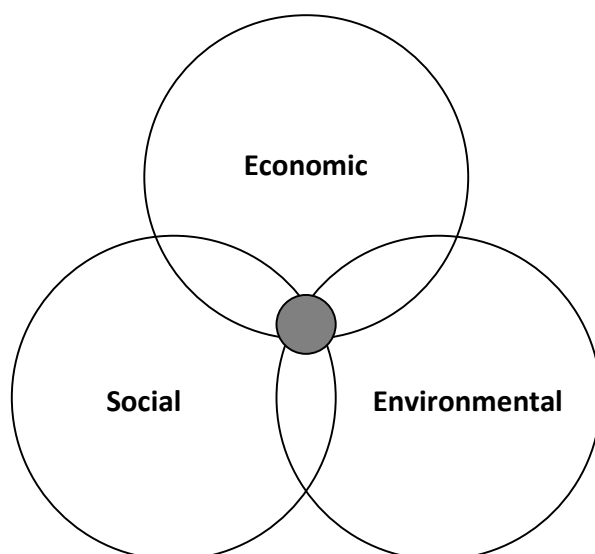


Figure 1. Sustainable Development Venn Diagram

Source: Adapted from WCED (1987).

This simple diagrammatic representation shows that Sustainable Development (the grey circle at the centre) is only achieved when economic, social and environmental aspects are considered simultaneously.

Recently, some academics have begun to recognise the 'era of post-ecologism' defined by the 'politics of unsustainability' (Bluhdorn and Welsh, 2007, p.185). Whilst sustainable development has been integral in establishing the 'ideological masterframe' (Eder, 1996, p.183) of environmentalism, it has been superseded by this new discourse. It is, they argue, a *Zeitgeist* centred on an uncomfortable question:

How do advanced modern capitalist consumer democracies try and manage to sustain what is known to be unsustainable? (*ibid.*, p.185).

This seems presumptuous: despite its shortcomings the concept remains at the forefront of public consciousness and political thought, and the Government's Sustainable Development Commission, instigated at the millennium, ensures that sustainability retains its position as 'arguably the dominant discourse of ecological concern' (Dryzek, 1997, p.123).

2.3 From Garden Cities to New Towns: 'The people: where will they go?'

(Howard, 1902, p.8)

This sub-section will outline developments in urban design and planning over the last century, with a focus on recent attempts to build sustainable communities.

Howard's 'Garden Cities of Tomorrow' (1902) is a seminal work in the evolution of urban planning and development, and Mumford's assertion that it 'has done more than any other single book to guide the modern town planning movement and alter its objectives' (1946, p.29) remains prescient (Parsons and Schuyler, 2002). His vision was 'to create new communities that would provide a better quality of life than was possible in a great city' (Schuyler, 2002, p.5) and the notion that community 'can be created, or at least enhanced, by conscious planning and design' (Ward, 2002, p.227) is part of his enduring legacy. His envisaged Town-Country ideal included 'social opportunity', 'pure air and water' and 'bright homes and gardens' (Clavel, 2002, p.38) but even the first Garden City of Letchworth, instigated and overseen by a Board which included Howard himself, failed to meet such high expectations. The key tenet of collective ownership of community assets was never realised. Nonetheless, the foundations laid by Howard's work arguably influenced the development of the 1947 Town and Country Planning Act and are visible in the thirty-two New Towns built after the Second World War in Britain and Northern Ireland (Ward, 2002) which are seen as the greatest planning outcome of Howard's ideas (Osborn and Whittick, 1977).

Planning has come to play a subordinate role in the evolution of the sustainable development discourse but, argues Blowers, it 'possesses the potential to make a singular contribution to the transformation towards more sustainable forms of development' (2000, p.371). Planning emphasises a long-term perspective in contrast to the short-termism of political and market cycles, and it engages with the social concerns ignored by the dominant discourse (*ibid.*, p.373). It is thus essential for planning to engage more fully with the sustainable development epoch, as this is the most effective way in which 'the power of dominant [unsustainable] discourses can be challenged' (Healey, 1997, p.67). The Environment Agency elaborates on this idea in maintaining that to achieve growth without placing undue stress on environmental infrastructure, '[e]arly investment and careful planning is the key to success' (2007a, p.1):

The best way to do this is to consider environmental infrastructure at the planning stage, and incorporate it in the design of new houses and communities rather than retrofitting existing ones (*ibid.*, p.2).

Fostering sustainable communities has arguably been most successful at the local and neighbourhood level, since the neighbourhood is 'the ideal setting for examining, experimenting with, and implementing a coherent program of sustainability' (Humber and Soomet, 2006, p.713). In the 1980s the then Prime Minister Thatcher challenged the very existence of the community in her imperious declaration that "there is no such thing as society" (Thatcher, 1987), and in so doing 'challenged the notion that Britain could be a community: at a stroke people were to be relieved of any responsibility for one another' (Kingdom, 1992, p.1). However, the decades since have seen a renewed enthusiasm for the belief that 'the atomized life, where each pursues his or her self-interest, does not produce the best for anyone in the long run' (*ibid.*, p.86). Working towards sustainable development at the community level should therefore be encouraged:

Linking sustainability concepts to concepts of community has particular advantages, since communities represent the social and physical expression of interdependence (Mazmanian and Kraft, 1999, p.25).

The Local Agenda 21 (LA21) framework emerged from the 1992 UN Conference on Environment and Development, and five years later the Prime Minister insisted that all Local Authorities should adopt LA21 strategies by 2000. Unfortunately, the agenda received only fluctuating support because whereas its success 'requires complex inter-departmental thinking', 'narrow compartmentalised approaches have often prevailed' (Church and Young, 2001, p.110). LA21 is both necessary and confused: necessary because the sustainability agenda requires engagement of actors at all levels, but confused because of the uncertainty regarding sovereignty and at which level the power of decision-making lies (*ibid.*).

The notion remains a striking advance in progressive politics (Christie, 1999), but more for its idealism than any substantive achievements. Its conception presented 'a rare opportunity for communities and their local authorities to develop new working relationships together' (Warburton, 1998, p.182) and gave an 'exceptional' (*ibid.*, p.188) mandate. True and active community participation, however, 'remains the exception rather than the norm on the ground' (*ibid.*, p.5). Some commentators have expressed concern that recent policy initiatives such as the Local Government Act 2000 have a remarkably similar remit to the pre-existing LA21 'and there is a worry that local authorities will duplicate efforts or overlook ten years of LA21 experience' (Lucas, Ross and Fuller, 2003, p.ii). There is arguably a danger that the desire to engage with the local communities agenda will not extend beyond well-meaning rhetoric and poorly thought-through policies.

Imrie and Raco (2003) provide a persuasive argument 'that the substance of urban policy has always been associated with particular discourses of community ... they [the Government] refer variously to 'the community' either as an *object* of policy, ... a policy *instrument*, ... or a thing to be created' (p.5, emphasis in original). The 2003 Sustainable Communities Plan (Great Britain. ODPM, 2003) was the Government's £38 billion attempt at the latter: engaging with the idea that communities should be inclusive, environmentally sensitive, well-designed and thriving, but above all that they could be created. The two strands of thinking that emerged two years later entitled 'Homes for All' (Great Britain. ODPM, 2005a) and 'People, Places and Prosperity' (Great Britain. ODPM, 2005b) emphasised that communities were about 'more than buildings' (Great Britain. ODPM, 2005a, p.6); they should be about people. Furthermore, 'real opportunities for all communities to exercise power' (Great Britain. ODPM, 2005b, p.7) were essential if vertical and horizontal integration were to be achieved.

A review article published a decade ago highlighted the 'widespread acceptance of the need to create more sustainable communities' but pointed out that there had hitherto been 'much woolly wishful thinking about what this might mean in practice' (Barton, 1998, p.159). It proceeded to argue that the rarity of successful projects emphasised the need for more proactive Government involvement. Furthermore, a radical agenda should be proposed to challenge the underlying assumptions behind urban developments, such as the primacy of the private car and the provision of services and utilities on demand, 'rather than managing demand or achieving local autonomy' (*ibid.*, p.176). The fundamental role of the car should therefore not be underestimated:

Today, green-oriented planners and the proponents of 'urban villages' believe reducing automobile dependence to be the most important urban design consideration (Roelofs, 1999, p.235).

2.4 Eco-Towns: 'genuinely sustainable living' (Great Britain. DCLG, 2008a, p.3)

The final body of literature is that relating to the recently proposed Government eco-towns. Eco-towns, it is argued, will help to 'deliver a step change in the quality and availability of homes' (TCPA, 2007a, p.1).

In 2005 the Government published a Sustainable Development Strategy that identified five guiding principles to achieve sustainable development, including living within environmental limits and ensuring a strong, healthy and just society (Great Britain. HM Government, 2005). One of the four priority focus areas identified was creating sustainable communities. The role of new free-standing settlements was then outlined in a Planning Policy Statement (Great Britain. DCLG, 2006) which also suggested a range of other options for housing growth, including urban extensions and managed growth of existing settlements. This developed into the eco-towns agenda, launched in July 2007 as part of the 'revolution in the way we build, design and power our homes' (Great Britain. DCLG, 2007b, p.9). The focus on urban extensions and new settlements was praised by the Town and Country Planning Association (TCPA) for being 'key development options [proposed] by forward-thinking local authorities and developers' (TCPA, 2007b, p.10). Three underlying challenges were identified in relation to housing: that demand outstripped supply; that there was a lack of affordability; and the need for houses to mitigate against and adapt to climate change (*ibid.*, p.6). Eco-towns were posited as addressing these issues. A Consultation Paper the following year elaborated on the concept, outlining the zero-carbon focus and their potential 'to transform the way that we live for the better' (Great Britain. DCLG, 2008a). This consultation received around 12,000 responses (Great Britain. DCLG, 2008b) and the zero-carbon focus was particularly contentious, with many arguing that the criteria should be more rigorous and 'apply to the settlement as a whole' (*ibid.*, p.10), including transport and the eco-towns construction, neither of which are projected to be included in the zero-carbon calculation.

The TCPA has been commissioned by the Government to produce a series of worksheets to inform eco-towns design and delivery. These focus on various aspects of the project, such as fostering community which it argues 'is as vital to its [an eco-town's] success as its physical infrastructure' (TCPA, 2008, p.1). Lessons from past and continuing initiatives can also inform the eco-towns agenda. Development in the Thames Gateway region is aiming to be water neutral, whereby the total water used in the area after a new development is no more than the total water used before the development. The Environment Agency recognised that engagement with existing local communities and encouraging public buy-in were as important as how the ambitious water neutrality targets themselves were to be achieved (Environment Agency, 2007b). The Government's Millennium Communities plan was an attempt at building innovative sustainable developments in socially deprived areas. Its review found that the initiative could

have benefited from 'experimenting with organisational and delivery models other than commercial competition between developer-led consortia with volume housebuilders as their drivers' (Great Britain. DETR, 2000, p.7). Whilst being initiated by the Government, the eco-towns agenda is developer-led and thus conforms to the same delivery model as Millennium Communities.

The Draft Planning Policy Statement outlines 'a range of minimum standards, which will be used to define an eco-town' (Great Britain. DCLG, 2008c, p.3). The underlying requirement is that they 'should demonstrate best practice in terms of sustainable development' (*ibid.*, p.10). How successfully they do this 'will depend very much on the degree to which they promote a genuine modal shift' (Great Britain. DCLG, 2008d, p.57). This is particularly true for transport, which is seen to be one of the key factors undermining previous attempts at building sustainable towns such as Cambourne, Cambridgeshire:

People identify ... the need to travel to work by car as the key issue in Cambourne's failure to be 'sustainable' (Platt, 2007, p.50).

Having outlined the policy background to eco-towns it is prescient to remember that reinventions and reforms of society are not possible without underlying attitudinal changes. Of course, 'new attitudes by themselves will not create an eco-society. In the language of logic, we must say that they are 'necessary but not sufficient' (Callenbach, 1999, p.19). Thus Government policy appears to have shifted in the last decade towards the sustainable development agenda, but it remains to be seen whether public opinion has changed correspondingly. People's inclinations can form part of a 'web of constraints' (RCEP, 2007, p.3) which needs to be overcome if the challenges of urban living are to be addressed. Blowers reminds us that '[a]ny fundamental shift in policies must be related to – indeed, preceded by – a change in values' (1993, p.12).

This section has reviewed key literature in the three bodies which relate to the Government's proposed eco-towns: sustainable development, urban design and sustainable communities, and the eco-towns themselves. The literature suggests that the Government is aiming to create eco-towns which primarily embody environmental notions of sustainable development, with less consideration of social and economic aspects. This study will examine if this is the case. There is a lack of academic research into how the three areas explored in the literature review relate, in regard to the development of eco-towns. The research will thus explore, through semi-structured elite interviews, what notions of sustainable development the Government's proposed eco-towns embody, as no research to date has engaged with this subject matter in depth.

3. GATHERING DATA

Whilst planning the research, attempts to increase the resilience and robustness of the data collected led to an attempt at triangulation. This 'multi-method approach' (Bell, 2005, p.116) is a means of cross-checking findings by collecting similar data through different means. This use of different sources and multiple methods also helps to 'maximise ... understanding of a research question' (Valentine, 1997, p.112). Thus a review of Government publications would be corroborated through elite interviews with key actors involved in the eco-towns agenda, and these would both be supported by direct experience and observation of existing sustainable communities, in particular those mentioned in literature and interviews. The scope of the research dictated that comprehensive triangulation would unfortunately be impossible but this ultimately encouraged a clearer focus on the research aims and desired outcomes. Triangulation as outlined here may have had the perverse effect of making the research broad and shallow instead of deep and narrow. This section will outline the methodological approach taken in attempting to answer the research question: what notions of sustainable development do the Government's proposed eco-towns embody?

3.1 Archival Research

A comprehensive literature search and review was carried out in the early phase of the research. Electronic resources were sourced through search engines such as ProQuest and Nexis Professional for newspapers and related media, and MetaLib for journals. Books and official publications were found either through library research or via online search engine Google Scholar. After preliminary reading, three broad bodies of interest emerged. The review was thus structured around the areas of: the evolution of the sustainable development concept; literature relating to urban design and sustainable communities; and publications on the proposed eco-towns. In addition, personal communication with potential and actual interviewees (see section 3.2) often yielded texts which were not publicly available. These included organisations' formal response to the eco-towns consultation, internal presentations given on the topic and briefing papers. These proved invaluable in building a comprehensive understanding of eco-towns evolution, particularly because, as a current policy initiative, there has hitherto been little published academic research into the topic.

Since, as mentioned, the agenda is both current and dynamic, and a number of key Government documents are forthcoming, regular searches of news and information websites were essential. These included the Department for Communities and Local Government (DCLG), which is the Government Department responsible for eco-towns delivery and BBC News Online. Many public bodies, pressure groups and consultancies published their organisation's response to the eco-towns consultation during the research period, so it was necessary periodically to investigate their current status. It was, of course, essential to consider possible underlying political bias and the institutional setting from which responses were made and therefore to treat them with critical scepticism.

3.2 Interviews

In-depth semi-structured interviews were chosen as the primary data collection method for a number of reasons. Interviews stimulate more wide-ranging discussion than tools such as questionnaires, and facilitate a thorough exploration of the issues (Bryman, 1988) through allowing respondents to raise issues which the interviewer may not initially have considered (Silverman, 1993). The resultant data is thus detailed and multi-layered (Burgess, 1984). As explained in the literature review, because eco-towns are a current policy initiative there have hitherto been relatively few academic studies on which to base this research. Since they have not yet been established, the research question could not be answered by visiting the eco-towns

or questioning those who inhabit them. Without elite interviews the research would have relied almost completely on Government publications which are unlikely to give a critical opinion.

When designing the interview schedule, care was taken to minimise subjective interviewer bias and avoid leading questions. However, whilst researcher objectivity is important to allow interviewees to give honest answers, it is worth remembering that 'our consciousness is always the medium through which the research occurs' (Stanley and Wise, 1993, p.157) and thus true detachment and objectivity in social science research is unattainable (England, 1994). Once an interview schedule was drafted, revisions were necessary as there was a concern that some interviewees would not have a sufficient degree of knowledge specific to these proposed eco-towns to answer many of the questions. Two schedules were therefore written, with one including questions relating to specific aspects of the eco-towns (see Appendix). Both included identical questions regarding definitional aspects and opinions on the potential legacy of eco-towns. The schedules were a guide rather than a strict prescription, since an interview should be approached as 'a dialogue rather than an interrogation' (Valentine, 1997, p.111). The use of two distinct but similar schedules broadened the range of potential interviewees and meant that a lack of technical eco-towns knowledge did not preclude their inclusion in the study. Feedback from interviewees suggested that an overview of subjects to be covered in the interview would help respondents to prepare. A brief outline was thus sent to subsequent respondents prior to their interview. Specific questions were not given to avoid the preparation of scripted answers.

Potential interviewees were identified towards the end of the literature search period. Some interviewees regularly appeared in eco-towns media reports. Others were those authoring or cited in key literature. Professional and academic connections also gave access to interviewees, as did certain organisations' gatekeepers: 'those individuals ... that have the power to grant or withhold access to people' (Burgess, 1984, p.48). Once the first interview had been carried out, the snowball technique (Donovan, 1988) was used 'to seek out more easily interviewees with particular experiences or backgrounds' (Valentine, 1997, p.116) relevant to this research.

One of the key problems in the collection of data was the difficulty of securing interviews with Government Ministers and staff. Responses from Government were protracted and an interview repeatedly refused with the current Housing Minister, of which three were in office during the research period. A short written response was eventually received from DCLG, but only after three months of emailing and telephoning reminders. However, I do not believe this lack of Government response affected the quality of the research, and in fact it encouraged a more thoughtful approach to identifying interviewees: if Ministers had not declined to be interviewed it is unlikely that I would have pursued interviews with those involved in Government at other levels, such as Local Authority and City Council Planning Officers. Interviews with politicians would likely be short because of the many constraints on their time, and it is improbable that they would reveal any details to a researcher that are not already publicly available. Furthermore, Government publications formed a substantial body of literature reviewed.

Around forty potential interviewees were contacted through email; nineteen of these were subsequently interviewed. As is inevitable with elite interviewing, there were a small number of cancellations and last-minute rescheduling. Of those who were not ultimately spoken to, around half were keen to participate in the research but time or work commitments did not permit it. Furthermore, as the eco-towns agenda is current and evolving, some potential respondents were too busy in their work developing the concept to be interviewed. Had the research period been longer it is likely that a further ten interviews could have been carried out.

However, the value of carrying out more interviews may be questioned as the nineteen respondents were from a broad range of backgrounds, professions and disciplines. They therefore provided a detailed, varied and balanced opinion on the politically contentious issue of eco-towns. Table 1 at the end of this section gives full details of interviewees' professional background, and the date and form of interview. They included Environmental Consultants, Academics, Local and Regional Planning Officers, a Property Developer, the Environment Editor of New Scientist magazine, and Senior Sustainability Advisors at Forum for the Future and the Environment Agency. Interviewees were not necessarily speaking on behalf of their organisation. Interviewing in person or by telephone was preferred as it enabled follow-up questions to be asked and clarifications to be made immediately. Email responses were not as detailed or expressive as a face-to-face interview (Yuksel, 2003) but for some respondents were the only option. Interviews took place over three months, during which time the eco-towns agenda progressed. In each interview, reference was made to the most recently published Government guidance and literature.

3.3 Observation

Observation, which is a balance 'between *participating in* a community ... and *observing a* community' (Cook, 1997, p.127, emphasis in original) did not occur to as great an extent as initially intended. It was hoped that directly experiencing some of the towns and communities discussed in interviews and literature could provide useful reference points. It was scaled back due both to constraints on time and resources, and through a need to maintain the research focus: there was a danger that it could become broad and shallow, lacking originality and depth. Furthermore, short periods of observation could give a misleading or superficial overview. Ultimately only two observation visits were carried out and these have not formed a substantive part of the analysis, but rather have given an introduction to many of the issues raised in the literature and interviews. Locations were Greenwich Millennium Village, East London; and Beddington Zero Energy Development (BedZED), South London. Further research in this area could perhaps benefit from a greater level of observation and direct experience, as even these one-day visits gave valuable insights into the developments and provided useful reference points whilst formulating this report.

3.4 Analysis of the Data Collected

Interviews were transcribed verbatim from digital recordings. A grounded theory analysis system was chosen as it provides a more rigorous and sophisticated approach, allowing key themes to emerge organically from the data (Eaves, 2001). First, key terms were underlined in the text and assigned a code. The purpose of the codes is not to be 'rigidly reproduced ... but as an aid to the researcher in making sense of the material' (Crang, 1997, p.188). Similar ideas were given similar codes, which then formed categories. These were expanded to give the meta-categories which formed the framework for attempting to answer the research question (see Appendices Three and Four for example mind-maps). The codes and categories are not an end in themselves, but emerge 'in an iterative process' (*ibid.*) which helps to 'tease out' (Strauss, 1987, p.32) different aspects of the data. Theoretical memos were used throughout data analysis to 'help clarify what were salient or recurring themes' (Crang, 1997, p.186). Whilst time consuming, the grounded theory approach to analysis encouraged a more thorough and critical reading of interviewees' responses, forming a stronger foundation on which to base conclusions.

3.5 Ethical Considerations

A consent form was sent to each interviewee two days before their interview, allowing time to consider and subsequently address any reservations they may have. Digitally recording interviews was desirable to assist transcription and allow proper attention to be given to the respondents rather than to taking notes (Valentine, 1997, p.123), but it was essential to gain permission beforehand. Of the nineteen respondents, four asked to be anonymised. They were given pseudonyms in this report to protect their identity. Other interviewees were not anonymised.

This section has outlined the methodology behind the collection and analysis of data, in particular the initial attempt to triangulate and the eventual focus on semi-structured elite interviews. With the strength of the grounded theory analytical framework now established, section four will analyse the data gathered in interviews.

Table 1. Interviews Undertaken

No.	Interviewee and date of interview	Code ⁱ	Type ⁱⁱ	Professional background and areas of expertise
1	Chris Church 17.09.08	CC	P	Environmental Consultant; urban sustainability professional; Chair of London Sustainability Board; involved with Local Agenda 21 research and delivery.
2	Tim O'Riordan 25.09.08	TO	P	Sustainable Development professional; chief member of Government Sustainable Development Commission; University of East Anglia Professor Emeritus.
3	Mark Walton 06.10.08	MW	P	Head of Every Action Counts at the Community Development Foundation.
4	Becky Fairman 06.10.08	BF	P	Senior Planning Officer (Sustainability) for Manchester City Council; previously worked for an Environmental Consultancy on an urban extension proposal.
5	Josh Fothergill 15.10.08	JF	W	Senior Environmental Advisor at the Institute of Environmental Management and Assessment.
6	Ted Trainer 15.10.08	TT	W	University of New South Wales Academic specialising in the transition to sustainability.
7	Alex House 20.10.08	AH	W	Projects and Policy Officer for the Town and Country Planning Association.
8	Kate Macintosh 24.10.08	KM	P	Architect involved in sustainable construction, Vice Chair of Scientists for Global Responsibility.
9	Paul Knowles 30.10.08	PK	P	Director of Building Partnerships, the Property Development group behind Rackheath Eco-Community, Norwich
10	Noel Longhurst 04.11.08	NL	P	PhD in alternative economic practices with relation to Transition Towns.
11	Tracy Gordon 13.11.08	TG	T	National Programme Manager for Millennium Communities and Carbon Challenge for the national regeneration agency English Partnerships.
12	Simon Fairlie 13.11.08	SF	T	Co-ordinates Chapter 7, a low-impact planning consultancy and campaigning group, part of The Land Is Ours.
13	Rachel Dalton 14.11.08	RD	T	Senior Sustainability Advisor for a leading UK Sustainable Development charity.
14	Broadland Council 17.11.08	BC	P	Planning Projects Officer for Broadland Council, overseeing the Rackheath proposal.
15	Fred Pearce 19.11.08	FP	T	Environmental Consultant; Environment Editor for New Scientist magazine.
16	Anna Tettmar 20.11.08	AT	P	Senior Sustainable Development professional for The Environment Agency.
17	Elizabeth Clark 27.11.08	EC	T	Professor of Town and Regional Planning at Sheffield University.
18	Larch Maxey 08.12.08	LM	T	Swansea University Academic; LAMMAS Network; contributor to the Government Sustainable Development Commission.
19	DCLG 16.12.08	DCLG	W	Department for Communities and Local Government, responsible for eco-towns delivery.

Notes: i – Code derived from the interviewee's initials.

ii – Three types of interview were undertaken: in person (P), written (W) and by telephone (T).

4. THE EXPERT OPINION

This section will attempt to answer the research question in analysing what notions of sustainable development the Government's proposed eco-towns embody. Three broad concepts emerged from the grounded theory analysis, namely economic, environmental and social aspects of sustainability. These will now be explored.

4.1 'Get the House-Builders and the Property Developers On Board' (PK:296¹)

The first theme regards economic aspects of sustainability. The perceived motives of the Government were unclear and ranged from a 'clearly recognised need for additional housing' (MW:202), to an engagement with 'the sustainability agenda' (TG:354), to a more cynical desire to 'keep the eco lobby happy' (RD:334) and 'make it more palatable to build on these sites' (BF:274). However, the motivation of the developers involved was more easily identifiable:

... it's now become absolutely blatantly a developers' charter to get past the planning restrictions (TO:315).

Concerns about this approach focussed on scepticism that 'I can't see the private sector delivering seriously long-term sustainability value' (CC:334). It could thus be argued that the underlying reason for private sector involvement is to further the house-building agenda and continue to develop profitable housing models. This could be seen as inevitable in a market economy, where 'no developer wants to build an energy-wasting house' (TO:277) because energy profligacy is less profitable than efficiency. However, a key reason cited for not already having wider support for sustainability was a failure 'to get any real traction' (TO:293) in both political and business thinking. The involvement of private profit-oriented developers in the eco-towns agenda could thus be encouraged if it represents a coming of age for sustainable development and a significant move towards mainstream adoption.

The Government recently mandated that all new homes will be zero-carbon from 2016 (Great Britain. DCLG, 2007c) (see section 4.2). This is 'a brave move – some would say foolhardy perhaps' (SF:141) and will require cross-Government coordination and unprecedented coalitions. Getting business on board and making sustainable developments like eco-towns both profitable and popular is therefore essential. A priority for this agenda should be 'proving to the development industry that you can build these developments and they do work and they are profitable' (PK:47). Criticism remained that the Government should be bolder in setting more stringent criteria for business:

... the way you change Barratts is that you say, "this is the way you will build your houses now, or you will go bust". You will change – it's creative destruction ... you have to adapt your business to the changing circumstances or you will go out of business. The Government should set the playing field! (NL:517).

... of course the development industry is averse to change – but to meet the sustainability agenda they need to take risks (TG:360).

Some saw private sector involvement as more of a threat than an opportunity. Pushing the eco-towns agenda whilst failing to support small scale community-proposed developments is 'very

¹ Quotes from interviews are referenced with a code formed by a respondent's initials (see Table 1) and the line number: thus (PK:296) refers to line 296 of the interview transcript of Paul Knowles.

hypocritical' (SF:96) of the Government and emphasises the continued corporatisation of sustainability. There were serious concerns over the 'attempt to annex the eco name' (CC:370):

... having 'corrupted the term sustainable communities ... it's [the Government's] now moved on to eco-towns' (BF:53).

There is some uncertainty amongst interviewees over whether the eco-towns will 'actually [be] built' (TG:368). The downturn in the housing sector over the last twelve months means that 'no-one is building now, let alone building eco-towns' (FP:81). This may be exaggerated, and it should be remembered that the political pressure to provide housing will not disappear, particularly whilst 'key workers are being pushed out' (CC:468) of the system. The role of the private sector in eco-towns delivery does however make them inherently vulnerable to market changes, such as conditions seen in the UK in recent months:

They were designed and proposed in the golden age of the housing market two or three years ago. They're almost irrelevant to the modern age, and I doubt very much whether any eco-towns will be built on any scale (TO:158).

Unless the Government 'approach it as a Keynesian infrastructure scheme' (FP:86) and underwrite the developments in the hope of encouraging further associated economic growth, eco-towns as they currently stand are unlikely to withstand the changed house-building climate. There is also the question of 'whether they'll get built to the standards promised' (MW:227):

Once you get on-site and construction begins then it's very easy for standards to slip (TG: 343).

This view was echoed in the Sustainability Appraisal:

There is a danger that the initial visions will be gradually eroded as time goes on and aspiration gives way to pragmatism and compromise (Great Britain. DCLG, 2008d, p.54).

On-going monitoring and evaluation are thus essential, but with ambiguity remaining over the nature and extent of long-term Government involvement in eco-towns, there is not yet a monitoring framework in place.

4.2 'Help People to Live a Low Carbon Lifestyle' (TG:77)

The eco-towns proposals emphasise the importance of their being zero-carbon developments. There was unanimous support for this focus, seen as 'the most important global aspect' (CC:289) because carbon is both a commonality and a relatively easily communicable concept:

Through that [carbon] you can influence absolutely everything else (TG:140).

An eco-town should be 'somewhere that people can choose to – but also are enabled to – live in a sustainable way' (BF:74). There is, however, uncertainty over the precise intention behind some of the buzzwords. The zero-carbon standard 'excludes embodied carbon and emissions from transport' (Great Britain. DCLG, 2008c, p.15) and some argued that this is a lack of honesty which 'is just completely misleading to people' (PK:710). Housing accounts for 'over a quarter of the UK's total CO₂ emissions' (Great Britain. DCLG, 2008d, p.29) and a large proportion is from their construction:

You can see the inconsistency ... The more houses we build, the more unlikely we are to reach our targets for CO₂ reductions (CC:194).

Scepticism therefore remains that whilst 'they may have some nodding to lower carbon' (TO:176), they lack a more fundamental and holistic consideration of wider resource use issues. For example, whilst the principle of living within environmental limits is a key tenet of the UK Sustainable Development Strategy (Great Britain. HM Government, 2005), 'there's no effort whatsoever to discuss the issue of consumption' (TO:216) in the eco-towns agenda. This suggests that the Government is taking a piecemeal approach in its understanding and implementation of the concept and the eco-towns will perhaps not embody all aspects of sustainable development. Ultimately their success 'will depend on how self-sustaining these communities can be within themselves' (KM:47), yet it is difficult to see how they will achieve the necessary critical mass.

Whilst it is relatively easily communicable and quantifiable, there is a possibility that the public will become disenchanted with the zero-carbon message that in its most rigorous application – more rigorous than that currently used in relation to eco-towns – is unachievable. Furthermore, the Government has perhaps 'not sold the positive aspects well enough' (TG:291) which in turn could encourage an unenthusiastic public opinion towards sustainable development:

... [eco-towns are] giving all eco-developments and projects a bad name. They've become a Central Government fad rather than a serious project (RD:255).

There's a danger that it can take the momentum out of the wider movement (LM:160).

It appears that lessons from previous initiatives such as the Millennium Communities could have been more systematically included. At Greenwich Millennium Village, ecological considerations were a priority. Technological innovation and attitudinal change develop organically when environmental aspects are given prominence from the outset:

... the first thing we did was to construct the ecology park right at the centre – so having biodiversity there and framing the housing around that (TG: 96).

An argument posited by the Eco-Towns Coalition, of which interviewee Alex House of the TCPA is a member, is that 'eco-towns present a real opportunity to ... address biodiversity loss'

(AH:150). A number of environmental pressure groups and Non-Governmental Organisations (NGOs) have joined the Eco-Towns Coalition, most recently the Grasslands Trust. However, this opportunity to systematically include biodiversity considerations does not yet seem to have been realised, and the claim appears to be made without substantive supporting evidence. None of the initial proposals outline in detail how the issue would be addressed, and the Prospectus makes only passing reference to the biodiversity impacts of eco-towns. The Draft Planning Policy Statement does include a section on biodiversity, but some interviewees were apprehensive. Indeed, some objections are framed around the expected impacts on species and habitat loss:

I think there are also genuine concerns about impacts on biodiversity. Some of the sites clearly are not appropriate (CC:415).

A further criticism is of the potential of eco-towns to be 'exemplars' (EC:217). The role of exemplar sustainable developments is to demonstrate best practice to make adoption by the private sector more likely, and bring the agenda to the attention of the public. Some argued that 'we know how to do all this stuff already' (NL:484) and what is therefore needed is not another demonstration site but a rolling-out of sustainable design elements across developments. Particular attention could therefore be given to existing buildings:

Eco-towns and all the new housing agenda ... can only do so much, as significant efforts will be needed to improve the existing housing stock (JF:199).

Others were more enthusiastic about the potential for eco-towns as 'a showcase' (RD:320), since 'bits of learning filter through from different examples, and that's all you can expect' (EC:220). The agenda appears to be a step-change from projects like BedZED, which 'is fine in itself' (PK:327) but small-scale and with limited capacity to influence housing developers:

Hopefully they [eco-towns] will be the start of a new way of thinking (BC:139).

4.3 'You Can't Build a Community' (CC:58)

The final meta-category which emerged from the grounded theory analysis, and the one which raised most concerns amongst interviewees, was social sustainability. Many thought that the vehement local opposition 'stems from the feeling that these eco-towns are being hoisted on to places. They have come from the agendas of building developers, not local agendas' (FP:60):

... I think it was mainly something that was dreamt up by a policy wonk (NL:476).

This sense of imposition has generated local resistance to the projects which have been seen as 'side-stepping' (RD:280) local communities and Local Authority decision-making. This is 'incredibly detrimental to Local Authorities. They need to be allowed to make decisions within their own jurisdiction and it's very patronising to have something like this thrust upon them' (RD:281). Furthermore, 'people need to be on board' (AT:234), particularly if those living near to an eco-town are not to resent the new residents. This concern was shared by the Sustainability Appraisal, which noted that:

For eco-towns to be successful, residents will need to be genuinely committed to, and intimately involved in, delivery (Great Britain. DCLG, 2008d, p.55).

This relates to the notion of the eco-towns as a top-down agenda promoted by Whitehall:

Central Government creates the context in which other things can happen, but you need everybody on board (EC:132).

These kinds of top-down agendas tend to meet local resistance ... they should be developed by the local community rather than being imposed from outside (MW:147).

This suggests that the Government is imposing its concept of sustainable development on communities, rather than allowing it to develop organically from the community level. The way in which sustainability is pursued is 'as important' (FP:18) as the goal itself, so this imposition could be a considerable flaw in the Government's eco-towns agenda.

The Government used a competition process as the method for proposing eco-towns. Private developers and Local Authorities made their proposals to a panel which short-listed fifteen sites, and these were taken to public consultation. This was 'ultimately a flawed process' (RD:418) as there wasn't 'a clear set of targets ... from the outset' (TG:198):

No-one, not even the people on the deciding panel, understood how they were going to choose the proposals – not even the people who were proposing them! (RD:296).

The competition element meant that 'there is a rolling programme of how they will be designed and what the targets are they're aiming for' (TG:198) and this meant initial confusion when the agenda was announced. Around eighteen months passed before the Draft Planning Policy Statement outlined in detail the expectations for an eco-town:

The Government should have announced its standards earlier, and if it had done, it would have been able to defend itself against some of the arguments about what these eco-towns are for (AT:410).

Furthermore, the uncertainty of the competition element created 'the impression of the initiative dying on its feet' (CC:420) as the number of proposed sites dwindled to eleven by the end of 2008.

The perceived lack of buy-in from those who will be directly impacted by the eco-towns relates to the way in which most of the sites have been proposed by private developers external to the local areas. The proposal for Rackheath, Norwich, is attempting to recognise that 'we have to get existing communities to sign up to doing something differently' (PK:473) and so the project is attempting to 'link back to the community' (PK:451) and foster a strong 'sense of the place' (PK:467). The sense of imposition relates to the definitional annexation and the way ideas become 'bastardised' (CC:251). This reinforces the argument that the Government's notions of sustainable development have largely been imposed on both Local Authorities and communities, with resultant distrust and resentment.

New settlements provide an interesting opportunity for 'increasing integration and cohesion' (CC:238) because they can be intentionally designed as mixed communities. There is 'a very real issue of building new communities in these places' (MW:238), something which has been largely overlooked in the eco-towns agenda, according to interviewees:

What really concerns me are the social impacts of these eco-towns ... I don't think these things have been considered (RD:167).

How do you incorporate liveability and the social side to create a place which is actually going to encourage people to live sustainably? (BF:192).

It appears that efforts at 'place-making' (RD:384) amount to little more than 'lip-service' (TO:250), and none of the initial proposals include a detailed outline of their attempts to foster a 'community core' (KM:87). Furthermore, it is acknowledged that 'developing a sense of community is likely to be challenging' (Great Britain. DCLG, 2008d, p.55). Indeed, the Summary of Consultation Responses shows that:

Respondents felt that the overall approach to 'creating a community' lacked clarity (Great Britain. DCLG, 2008b, p.28).

A criticism commonly made by interviewees was the unchallenged assumption of the primacy of the private car. Despite the recognised importance of addressing car use (Roelofs, 1999), 'every single one [proposal] doesn't have adequate transport attached to it, so they're just simply going to be car-driven towns' (TO:181).

Transport emissions will not be included when determining whether a site is at zero-carbon status. Aside from the environmental impacts, 'you need to consider the social and economic impact of transport' (EC:101). To create truly sustainable communities, 'what you really need to do is to cut car use' (CC:311) by making other options such as public transport more attractive. Urban areas typically prioritise vehicles over pedestrians, thereby increasing the physical division between pedestrians and drivers and creating hostility. In contrast, where 'cars and people share the space' (KM:184), areas are pedestrian-focussed and fatalities are reduced. Drivers 'look at people in a different way – as a person, not as an obstruction' (KM:172).

If eco-towns become car-driven towns they will 'have all the faults of the ways in which towns are anyway' (TO:183) and the same patterns of exclusion and dependency will be replicated. Those who cannot afford a car may be unable to engage fully with community life. Other road

users such as cyclists could feel increasingly marginalised by the dominance of the car. Ultimately the very notion of community will be more difficult to foster if there is little incentive to spend leisure time within the town itself, as happens when people can easily commute by car to nearby settlements. It is therefore important that eco-towns are 'genuine mixed-use communities' to minimise 'unsustainable commuter trips' (Great Britain. DCLG, 2008c, p.16).

The theory of individualism encouraged by 1980s Thatcherism has recently been developed to the hyper-individualism thesis (McKibben, 2007), which holds that society has become a collection of disparate individuals attempting to live in total independence. Eco-towns therefore seem to be a product of this hyper-individualistic mindset, which places a high value on personal freedom, particularly in relation to mobility. This suggests that social and community notions of sustainable development are not a focus for the eco-towns agenda.

Some interviewees expressed criticism of the way the agenda has been positioned:

I don't think the Government should have framed it as a housing issue because then it looks a bit dishonest. The only way you're going to make a difference on things like affordability is through the RSS [Regional Spatial Strategy], so it's actually damaging their position to make these claims about eco-towns impacting affordability (AT:450).

Furthermore, the eco-towns represent 0.4 per cent of the total UK housing stock (Great Britain. DCLG, 2008b, p.24) and the Consultation Summary shows a 'concern that the eco-towns delivery model would divert resources away from genuinely increasing the rate of housing supply' (Great Britain. DCLG, 2008b, p.24).

The planned built infrastructure does not match the radicalism of the zero-carbon idea. Many interviewees thought that the Government should be promoting more adventurous and challenging design criteria, including towards such concepts as 'Shared Space' (KM:177) whereby areas are designated for multiple uses by all members of the community. Some went further in arguing that a renewed focus on 'localising economies' (TO:173) was essential if the eco-towns were really to herald a 'revolution in the way we build, design and power our homes' (Great Britain. DCLG, 2007b, p.9).

4.4 The Economic, the Environmental and the Social

This section has outlined the three key areas of interest which emerged from the grounded theory analysis of data. Economically, eco-towns are pioneering new models of engagement with the private sector, which will be increasingly important if a rapid and widespread change in housing delivery is to be achieved. The zero-carbon focus has benefits of communicability but it appears ultimately to mask a lack of engagement with broader issues of environmental sustainability such as resource use and consumption. Social sustainability seems to have been weakly addressed by eco-towns, with little consideration given to the practicalities of community ownership of projects and a lack of radicalism in addressing aspects such as car use. The final section will draw together the findings of this research in concluding: what notions of sustainable development do the Government's proposed eco-towns embody? It will also outline key policy recommendations.

5. HEADING IN THE RIGHT DIRECTION

This report began by outlining the key threats facing global environmental and social systems. Climate change, resource exploitation and urban fragmentation are compounding other problems. An acute shortage of housing, particularly for key workers, is placing pressure on existing settlements. Three strands of literature were reviewed. The evolution of sustainable development was traced from a 1970s UN concept to an all-encompassing political buzzword for the twenty-first century, and the shortcomings of the discourse were examined. Literature relating to urban design and attempts at building sustainable communities revealed that the eco-towns concept can be traced back to the Garden Cities and New Towns of the twentieth century. Eco-towns literature gave an insight into recent policy progression and how the agenda has evolved. A gap in the academic literature was identified: there have hitherto been few studies examining how eco-towns fit into the broader sustainable development paradigm.

This research has attempted to determine what notions of sustainable development the Government's proposed eco-towns embody. In order to do so, nineteen semi-structured interviews were undertaken with a range of professionals involved in eco-towns and the broader sustainability and community development agendas. Interviews took place between mid-September and mid-December 2008, and were subsequently transcribed verbatim. Key ideas emerged through a grounded theory analysis and these can be grouped into three areas of interest. Interestingly, though perhaps not surprisingly, these fitted into the ubiquitous Sustainable Development Venn Diagram (see Figure 1).

The eco-towns agenda suggests that the Government has taken environmental notions of sustainable development on board. Their focus on zero-carbon development is a bold move, but there is some scepticism over precluding transport emissions and embodied carbon from calculations. Furthermore, other environmental considerations such as biodiversity conservation and reduced consumption seem to be largely undeveloped or side-tracked by the headline-grabbing zero-carbon concept. My recommendations for this area are twofold. Firstly, the zero-carbon calculations should attempt to include all carbon emissions across the whole settlement from the beginning of construction. Whilst inevitably more complex, this would help to foster public confidence and uphold the eco brand against criticism that the standards were being watered-down even before construction begins; the Government risks being accused of cynical greenwashing. Secondly, other environmental aspects must not become sidelined in the political wrangling over the zero-carbon idea. As such, standards which address issues such as biodiversity loss should aim to be as well-developed and communicable.

In considering economic notions of sustainable development, eco-towns unquestionably go some way towards a new level of private sector involvement in the sustainability agenda. The financial and political support they receive could make eco-towns a new milestone towards greater private sector buy-in. There is however a perceived danger that standards will be watered-down as they move towards delivery, particularly since the Government's criteria were not clear from the outset. I believe that with hindsight the Government could have avoided much of this confusion by producing its Planning Policy Statement before the proposals were invited. This would arguably have encouraged a higher standard of bids and thereby avoided the politically embarrassing situation of some of the sites dropping out once the process began. I believe public opposition has in part been fuelled by the Government appearing unsure of what the agenda is aiming for. This feeling would have been much less strong had there been a clear outline of criteria from the outset. The competition process appears to have exacerbated the uncertainty which also contributed to the marginalisation of public opinion, since consultation only began once a shortlist was announced. I believe that transparent public consultation should

have been the foundation from which the shortlist developed. It also appears that employment provision has not been fully considered and there is a likelihood that eco-towns could become dormitory settlements. Perhaps the Government should have made eco improvements to an existing growth agenda, such as the Growth Points, rather than attempting to deliver another from scratch. The Growth Points are more fully integrated into their local area, having been developed primarily by Local Authorities, and adequate provision of jobs is a key factor. This emphasises the notion of sustainable development as a concept largely imposed on communities and local governance structures by Central Government.

Considerations of social sustainability appear to have been the least well developed. Cohesive and vibrant communities are an essential aspect of sustainable community development, without which the implementation of ambitious environmental targets is more difficult (Goodland, 1995). The complex delivery of a community core does not seem to have been sufficiently thought through. In particular the primacy of the private car has not been effectively challenged and it remains to be seen how the Government's targets for reduced car use will be achieved in practice. Furthermore, failure to fully engage with the broad range of social needs could lead to an annexation of the eco concept and negatively impact on other eco-developments. I believe that delivering the eco-towns concept through an existing framework such as the Growth Points would have enabled a more systematic consideration of social and community aspects. An established agenda like this has been shaped by social sustainability criteria and has already been open to public scrutiny. As suggested by the literature (Lucas, Ross and Fuller, 2003), the new distinct eco-towns agenda thus appears to be something of a replication of effort in terms of linking new settlements to their local area. I also believe that the Government should challenge the assumption of car use more boldly. This could be through mandating eco-town design to include Shared Space principles, or through clear financial incentives towards public transport and working from home.

This research has thus developed the debate around what notions of sustainable development the eco-towns embody. When the question is considered through the lens of the Venn Diagram, I conclude that whilst the Government is aiming for the centre point of sustainability, eco-towns are in fact off-centre (see Figure 2). Economic notions of sustainable development have been the most comprehensively considered, and there are encouraging signs of a greater integration of environmental sustainability. However, eco-towns appear to give only superficial inclusion to social notions.

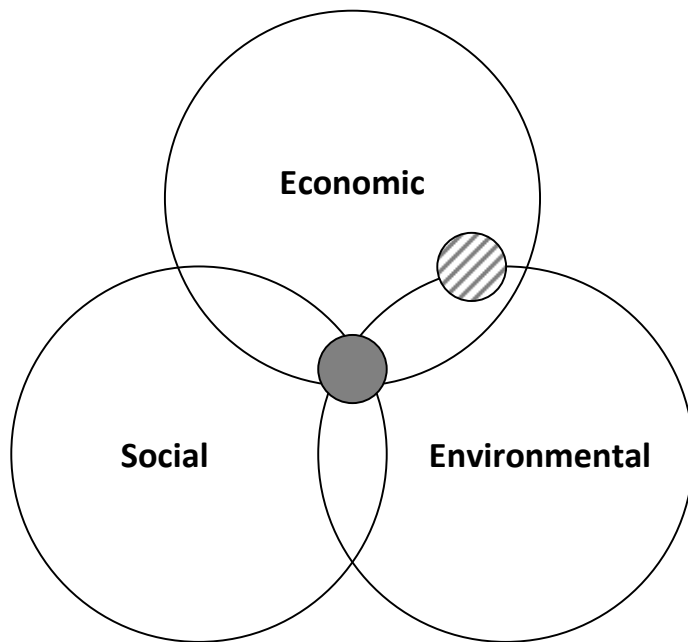


Figure 2. Sustainable Development Venn Diagram – where do eco-towns fit?

Source: Adapted from WCED (1987).

The grey circle at the centre represents Sustainable Development, but I believe that the eco-towns as they stand are off-centre (the grey hatched circle).

This thesis has thus attempted to answer the question: what notions of sustainable development do the Government's proposed eco-towns embody? The scale and scope of the issues affecting society demand a radical reshaping of how we live. The eco-towns agenda does not appear to consider all notions of sustainable development, with a focus on economic and environmental at the expense of social. More work is needed to develop the policy from 'just tinkering at the edges' (NL:565) and ensure that they do not become 'more town than eco' (JF:213).

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7. APPENDIX: INTERVIEW SCHEDULE

This schedule was written for those with sufficient knowledge of the eco-towns agenda and therefore includes questions specific to the eco-towns.

1. How would you describe your professional interest in the proposed Eco-Towns?
2. What does 'eco' mean to you?
3. What does 'sustainability' mean to you?
4. Are the two terms interchangeable?
5. What do they mean in practice in this situation?
6. The Government's definition comes from the 1987 Brundtland Report – 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. What are your thoughts on this definition?
7. What is a sustainable community or town to you? Are there any theoretical or existing examples that you could tell me about?
8. Can you suggest three priorities for a sustainable eco-town?
9. Which elements of sustainability do you think the proposed eco-towns focus on?
10. Are there any elements that you feel are missing from the current proposals, that could make the eco-towns more sustainable?
11. Do you think the Government is the most appropriate body to be pushing the eco-towns agenda?
12. What are your views on the eco-towns planning and consultation process?
13. What do you think are the major driving factors behind the Government's push to develop eco-towns?
14. How do you think these eco-towns will be viewed in a decade? Will they have a lasting legacy?