Communities and Local Government

Best Practice in Urban Extensions and New Settlements

A report on emerging good practice

TCPA

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The Town and Country Planning Association (TCPA) is an independent charity working to improve the art and science of town and country planning. The TCPA puts social justice and the environment at the heart of policy debate and inspires government, industry and campaigners to take a fresh perspective on major issues, including planning policy, housing, regeneration and climate change.

The TCPA's objectives are:

- To secure a decent, well designed home for everyone, in a human-scale environment combining the best features of town and country.
- To empower people and communities to influence decisions that affect them.
- To improve the planning system in accordance with the principles of sustainable development.

Printed by RAP Spiderweb Ltd, Clowes Street, Hollinwood, Oldham OL9 7LY

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Acknowledgements

The TCPA gratefully acknowledges help and advice from the following individuals in carrying out this study:

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The TCPA gratefully acknowledges support provided by the Communities and Local Government department for this study.

Foreword

Housing pressures in England are becoming acute: recent under-supply, particularly of 'social' housing; demographic trends towards an ageing and more long-lived population and greater numbers of people living alone (but still requiring decent living space); and the rise of second-home ownership are all contributing to the problems we face, and are just some of the factors contributing to alarming increases in the cost of housing. The question we must answer is – to re-cast the famous question posed more than a century ago by Ebenezer Howard – 'The people: where will they live?' This report seeks to establish good practice in developing new settlements and urban extensions by drawing lessons from some recently developed examples. The case studies featured here – Caterham, Dickens Heath, Hampton, Newcastle Great Park, South Woodham Ferrers, and Upton – are all very different in composition and size, but they have all been successfully brought forward through the planning system and have used innovative approaches to providing good-quality development on the ground.

The TCPA believes that the full range of planning solutions – urban regeneration, sustainable urban extensions or, where appropriate, new settlements – should be available to communities to choose from as they search for the most sustainable pattern of development locally. This study is a not statement of or any alteration to this 'balanced portfolio' approach, or indeed of any other TCPA policy. It is, however, an important study for the TCPA and, we hope, for planning in general. It endorses no one particular solution as right in all cases, but provides an opportunity for us to focus on urban extensions and new settlements – the first TCPA project to do so for nine years. The study must be seen in the context of recent and ongoing TCPA work to encourage best practice in regeneration and the greening of our cities – an increasingly urgent imperative given the growing need for urban cooling measures as the effects of climate change take hold. The TCPA's policy statement on *Housing Market Renewal* (2006) and its report on *Sustainable Energy by Design* (2006) are two examples of this work. The case studies included in this report also demonstrate the opportunities offered by development on the edge of an urban centre (or at a new centre) to raise investment for regeneration in the urban core. In reality, these different forms of development are usually interlinked and part of an organic networked cluster.

Nor does this study reiterate the historical concept of the new towns programme developed by post-war Labour and Conservative governments, although it might be noted that these governments achieved decent-quality new homes for some 3 million people. In relation to the new settlements part of this work, the focus is on a new interpretation of the new settlement model – a linked new settlement. In some senses this builds on the 'beads on a string' form expounded by Peter Hall and Colin Ward in *Sociable Cities* (1998), but in other respects it differs. This linked development form is more closely drawn together in a cluster of settlements, perhaps around a major existing town. Recent communications and related innovations explain the emergence of this variant, which must now be regarded, particularly with the unfolding of new Government guidance, as a usable part of the planning lexicon.

This study draws heavily on the contributions of TCPA Trustees Professor Sir Peter Hall and Professor David Lock CBE, most particularly for the exposition of the new concept of linked new settlements. The TCPA is once again extremely grateful for their contributions. The TCPA's submissions on the East of England Plan are referred to in this report, and Graeme Bell deserves most generous thanks for his work on these, while Ove Arup & Partners Limited should be acknowledged for the expert supporting papers (too lengthy to cover in detail) provided to the TCPA in support of that work. Finally, staff team member David Waterhouse provided project management and carried out the bulk of the research. The TCPA is also very grateful for the expertise and support provided by the Communities and Local Government department, without whose support this study would not have been possible.

Gideon Amos
Chief Executive, TCPA
March 2007

1 Literature Review and Historical Context

BJP Photography, Letchworth

Letchworth Garden City

1.1 Introduction

There is a long tradition of planned town-making in Britain, arguably dating back to the model communities and settlements of the 17th and 18th centuries. The notion of a programme to provide planned new communities in the public interest emerged at the end of the 19th century. New communities were first built through philanthropic and private initiative, as exemplified by the Garden City movement, but were subsequently developed by public authorities through the government new towns programme. This history is well documented and is not considered in great detail here. The related development form of the urban extension was first sponsored by public authorities under the auspices of the Town Development Act 1952. Today, the 'sustainable urban extension' is an important element in a portfolio of solutions to the problem of meeting the need for housing and related development. Both new settlements and urban extensions provide opportunities for concentrated rather than sprawling development. By virtue of their scale, and if carefully designed and developed to produce integrated, 'holistic' settlements, they can encourage and accommodate highly-sustainable patterns of living.

Although the garden cities and government new towns may not all have lived up to the expectations under which they were built, they nonetheless offer a rich and varied range of achievement, environmentally, socially and economically, and many are among the greenest places to live in the UK today. In 2007 there are the beginnings of a new wave of new settlements and urban extensions. Not least among the reasons for their re-emergence are the possibilities they offer for

holistic and sustainable development, in contrast with the limited scope of smaller, one-off or 'penny packet' developments. The TCPA has thus studied emerging new settlement and urban extension best practice, with a view to producing advice, detailed in this report, on realising a more sustainable future through development.

Clearly, urban regeneration also has a key role to play in meeting housing and planning objectives. Indeed, the aim behind the development of many urban extensions and new towns has been to directly boost investment and redevelopment in the urban centre, as is the case in Newcastle upon Tyne (see Section 4). The relative merits of in-town, edge-of-town and new settlement development will vary depending on the circumstances of particular locations; but, together, regeneration, urban extensions and new settlements provide a portfolio of solutions from which local communities must be free to choose the most sustainable option for the location concerned. Earlier TCPA reports have focused on the regeneration aspects of this portfolio, including the need to regenerate the regional economies of the core cities; this report focuses on urban extensions and new settlements.

Without doubt, new settlements and urban extensions have played a major role in providing solutions to housing shortages, but lessons from the past must be learned and implemented if we are to provide liveable, viable and sustainable communities today. Developments that provide for organic growth, and do so in ways that enhance the environmental performance of the community as a whole, offer a valuable way of delivering the much-needed housing that key regions of the country need, and are also much less likely to meet with high levels of opposition. The careful balance between growth and good environmental performance can only be achieved through education, investment and good planning.

The purpose of the literature review carried out for this report is to provide an overview of the textual sources on urban extensions and new settlements published since the new town developments of the 1950s, as well as a brief historical review of these urban forms and their development. It provides a context for the case studies presented in the later sections and offers lessons in good practice on the development of sustainable urban extensions and new settlements.

1.2 Bibliographical search

A bibliographical search was undertaken using relevant published documentary and internet-based sources. It was not intended to be a comprehensive evaluation of all the available literature produced over the last 20 years on garden city settlements, new towns or new settlements, but rather to give a flavour of what exists and to set the context for this project and its resulting good practice advice. Selected works are included within the reference list in Section 10 of this report.

1.3 Historical overview

During the 1880s, land was an intensely debated issue as agriculture was in a structural crisis, with poor harvests and declining agricultural rents. Many of the rural population consequently moved from the country to the cities. As they did so, an increasing number of businesses set up, which resulted in many residential buildings being converted to factories. Commuting was expensive, and steam railways and trams meant that travel to work was slow. Together with a surplus of births over deaths, this led to a housing crisis, and an inadequate supply of housing forced people to live in city slums.

As urban areas grew increasingly overcrowded and more insanitary during the latter part of the 19th century, intervention in the interests of social well-being became essential. Local authorities were given powers to enforce building bylaws, which in turn helped to restrain overcrowding, improve the worst living conditions and consequently improve social welfare. However, while the bylaws brought some improvement, the character of England's urban areas was changing. Raymond Unwin noted that *'there are growing up around our towns vast districts, under these very bye-laws, which for dreariness and shear ugliness it is difficult to match anywhere'*.[1] In response to this new urban landscape and continuing concerns over public health and welfare, social reformers began to look for solutions to the ills of much of the urban environment. This was context in which Ebenezer Howard published *To-morrow: A Peaceful Path to Real Reform* in 1898 (republished in 1902 under the more widely-known title of *Garden Cities of Tomorrow*) and founded the Garden City movement.[2] The 'strategic' concept expounded by Howard was the 'marriage of town and

country' in the 'Garden City', a new form of development in which people would live close to places of work in an environment that brought the trees and open spaces of the country into the city. 'Human in scale', garden cities would separate residential uses from non-residential uses to give cleaner living environments, but still offer easy access to employment areas, the town centre and the countryside.

Howard proposed clusters of cities, self-contained and encompassed by a green belt yet connected together by adequate transport networks. The aim behind this concept of a 'Group of Slumless, Smokeless Cities' or 'Social City' was to relieve the overcrowding of economic activities and people in the big cities. The movement of people to garden cities would relieve tension in urban areas; and the green belt would help to prevent urban sprawl and, by limiting the growth of individual garden cities, help to decentralise the population into further self-contained settlements.

The ideas spread by the Garden City movement led to planned new towns becoming part of the spatial development pattern of the UK. The Garden City idea was something new and inspirational to others, as Dennis Hardy has concluded: *'Earlier proposals were drawn upon but now they were cast in a new mould – 'a unique combination of proposals'.'* [3]

The Garden City movement proved to be the precursor to state involvement in new community building. During the Second World War, following the publication of the Barlow Commission Report on the Distribution of the Industrial Population (1940), plans began to be laid for a programme of government new towns. Patrick Abercrombie's Greater London Plan of 1944 combined plans for both urban renewal and ten new satellite towns to be built outside London, to provide for new businesses and homes as well as to tackle overcrowding within the city. After the passage of the New Towns Act 1946, the development of new towns got under way. In nearly all cases an existing minor settlement provided a basis for wider development. Some new towns were intended as almost entirely stand-alone settlements (such as Cwmbran, Harlow and Stevenage) while in other cases the new town was, in fact, an addition to an already substantial existing town, such as at Northampton, Warrington and Peterborough. The first recognised urban extensions, or town expansion schemes, were developed following the passage of the Town Development Act 1952. The new towns were usually developed by agencies of central government (new town development corporations), but local government was also heavily involved – working in partnership in Peterborough, for example, and in the case of Northumberland County Council building two new towns of its own (Cramlington and Killingworth).

The term 'new settlement', sometimes used simply in fashionable jargon for a new town, might more accurately be considered as a smaller and distinct variation of the holistic new town model. While a new town might approach a population of 100,000 and beyond, a new settlement might be for 10,000-20,000 residents. This new settlement ideology is perhaps most extensively considered in *Sociable Cities*, by Peter Hall and Colin Ward, in which clusters of new settlements together constitute 'social cities' of 250,000 people as advocated by Ebenezer Howard.[4] Hall and Ward argue that the central concern in building any new settlement should be the impact of development on human beings – through both human society and the wider ecological system within which they live. The perennial question of how much development is needed and where it should be located is discussed, and a strong case is made for smaller settlements linked together by efficient public transport links. The authors noted that the awakening of interest in environmental issues and the widespread local antagonism to new development created by the growth pressures in the South East made this approach a more attractive option. They also noted that there had been a considerable wave of privately-sponsored, small new settlement proposals.

However, throughout the 1980s and the 1990s, the development focus was clearly on existing urban centres, epitomised by Lord Richard Rogers' Urban Task Force Report of 1999, which set out an array of measures to tackle urban decay.

More recently, as concern over the disturbing economic effects of massive housing shortages has grown, interest in meeting need through urban extensions and new settlements has once more begun to take root. This renewed interest has also, in part, been fuelled by unease over rising housing densities, a fall in building to meet 'traditional' family housing

needs, and the increasing loss of open space within cities, all issues now addressed by Planning Policy Statement 3: *Housing*, issued in November 2006. In fact, the development of some of our existing new towns continues today, on land formerly held by the Commission for the New Towns, which was responsible for the management and disposal of the unused land and property assets of former new town development corporations until it was merged into English Partnerships (itself soon to be merged with the Housing Corporation to form Communities England). Such land-holdings in Milton Keynes are a key element in one of the four key growth areas being developed under the Sustainable Communities Plan, launched in 2003.

As a response to the housing shortage brought about by, among other things, recent under-supply, changing demographics, people living longer, and more people living alone, urban extensions and stand-alone settlements are increasingly being considered as key development options by forward-thinking local authorities and developers.

One recent, although brief, study of *Lessons Learned from the New Towns*[5] is evidence of renewed interest in the topic. The report itself shows that many lessons are transferable to the growth areas and to new settlements. It noted that some key strengths of the new towns and their development corporations include strong land acquisition powers, the fact that the new town development corporations were landlords of large amounts of housing, and the fact that many new towns were successful in attracting employment that matched the skills of the local workforce. The importance of green space is also acknowledged as contributing to a neighbourhood's liveability. Many of the lessons coming out of this research are positive and focus on the key elements which make up the new towns, their environment and landscape.

In assessing the evidence and reaching its own planning policy positions, the TCPA itself has once more begun to address the case for new settlements in more detail. Although usually concentrating its work at the regional and national level, the TCPA, in the context of the emerging Regional Spatial Strategy for the East of England in 2006, chose to focus on a highly significant sub-region in the United Kingdom with a view to establishing the most sustainable planning solutions. Because of the identification by the Government of the London-Stansted-Cambridge corridor as a key national growth area, and because of its own assessment of Cambridge as being of unique significance to growth in the UK, the TCPA undertook a study of the future of the Cambridge sub-region. An expert team was assembled involving TCPA Trustees and Vice-Presidents, along with leading consultancy firm Ove Arup & Partners Limited. Eight major growth locations around Cambridge were selected and assessed, as well as the potential for one or more strategic urban extensions of Cambridge itself. Key factors applied in the development of a sustainability matrix included public transport and road connections, flood risk, green belt protection, topographical considerations, and access to jobs and services. The conclusions of the work clearly favoured the development of new settlements with strong public transport links into Cambridge as a sustainable way forward. The integrity of the city of Cambridge was an important consideration which many, particularly the Cambridge Civic Society, were keen to maintain. The work led the TCPA to be supportive of agreed plans for the new settlement at Northstowe, but also to promote the idea of other linked settlements in the sub-region, which would preserve much of the countryside around the city in ways highly accessible to local people. More detailed case studies of a range of other urban extensions and new settlements follow in later sections of this report.

1.4 Key aspects and features of new settlements and urban extensions

1.4.1 Types of development

The report *Alternative Development Patterns: New Settlements* by Breheny *et al.*[6] categorises urban development into five distinct forms, depending on scale and composition rather than detailed design issues. These are:

- urban infill;
- urban extensions;
- key villages;
- multiple villages; and
- new settlements.

The authors define a new settlement as: *'a free standing settlement, promoted by private and/or public sector*

interest, where the completed new development – of whatever size – constitutes 50 per cent or more of the total size of a settlement, measured in terms of population/dwellings'.

The Planning Portal glossary[7] defines an urban extension as a development that *'Involves the planned expansion of a city or town and can contribute to creating more sustainable patterns of development when located in the right place, with well-planned infrastructure including access to a range of facilities, and when developed at appropriate densities.'*

1.4.2 Physical and design aspects

The numerous and varied characteristics of high-quality urban extensions are detailed in the *Sustainable Urban Extensions: Planned through Design* report from The Prince's Foundation *et al.*,[8] which focuses in particular on the quality of new housing. Higher density, a mix of housing types and tenures, legible neighbourhoods, communal areas of green space, and communal amenities and facilities are all seen as essential. *Alternative Development Patterns: New Settlements* also considers the design characteristics of new settlements and notes that, overall, there is a dominant tendency towards oversimplified spatial and functional concepts. In any new settlement or urban extension, there is a tendency to focus on the traditional features of an English village, and the urban extension to Dorchester at Poundbury has had a profound effect on the design approach towards new settlements and urban extensions.

1.4.3 Environmental sustainability

As might be expected of planned development, the 'green' characteristics of new settlements and urban extensions are given a high priority. The *Sustainable Urban Extensions* report affirms that impact assessment is essential to an understanding of the ecological and environmental footprint of new development. While new settlements are frequently planned for greenfield sites, redundant defence establishment sites often provide suitable brownfield sites, where environmental impact may be less. Any major development, but perhaps particularly one on a greenfield site, provides opportunities to create green infrastructure networks. The *Alternative Development Patterns: New Settlements* report argues that multiple village developments pose least threat to habitats, and that they offer the potential to deliver environmental benefits in terms of 'green' energy consumption. However, smaller settlements are likely to give rise to more journeys, and thus require high-quality public transport links. Trip generation is likely to be less in relatively large settlements, provided they are reasonably self-contained, and provided that services and places of employment are located in close proximity to places of residence.

Major planned developments such as new settlements and urban extensions provide an opportunity to design-in the greenest of technologies and infrastructure from scratch, in ways that are not possible in smaller infill schemes. Sustainable urban drainage systems (SUDS) provide just one example, as demonstrated at Upton (see Section 3). Wildlife sanctuaries and preserved habitats have been a feature of many new settlements and urban extensions, from Hampstead Garden Suburb in London to Cambourne in Cambridgeshire. Other environmental sustainability features include public transport systems and local energy generation and supply systems. The costs of such investments are also supported by the usually higher yield from land value increases in new settlements compared with those commonly arising from urban sites. In the case of urban extensions, land value gains may be lower owing to their location.

1.4.4 Regeneration inside the city

As far back as the end of the 19th century, Ebenezer Howard understood that a programme of complementary development outside a city could offer opportunities to renew the city itself. Howard believed that the construction of 'Social Cities' would lead to out-migration from the big cities and a consequent fall in ground rents, which in turn would enable slum property to be torn down and a better environment created. There are much more recent examples of the funding of urban regeneration through new settlements and urban extensions – as at Newcastle Great Park (see Section 4). However, the historical example provided by London's development remains compelling. The overcrowded and insanitary conditions common throughout the capital a century ago are now often forgotten, but the post-war new towns programme was delivered hand in hand with major urban improvements, from the creation of Burgess Park in South London to the removal of slums and new

housebuilding in East London and the provision of green spaces throughout Greater London.

1.5 Conclusions from the literature review

1.5.1 The time taken to build sustainable communities

The Government is promoting the development of sustainable communities, but as demonstrated by experience from various types of new development, ranging from garden cities to new towns and expanded settlements, communities take time to develop and grow. We need to plan for the interests of future generations, rather than for the short term.

1.5.2 Vision and commitment

Places of quality can be developed if we start with the right level of commitment and the appropriate vision. Previous experience shows the importance of working to a framework of social, environmental and economic principles.

1.5.3 Capturing land value

Experience from the Garden City movement shows how difficult it is to find appropriate and sustainable ways to capture land value in the interest of the community. In particular, it demonstrates the complexities in capturing land values to fund infrastructure. *'For over half a century, debate has raged in Britain over the right way to recoup the share of the profits from land development that rightly belongs to the community, since public agencies have had to provide much of the physical and social infrastructure, and since the land value arises in large measure through the grant of planning permission. What has eluded us all this time is a way of capturing this added value that is effective, efficient in operation and politically acceptable enough to be stable over time.'*[4]

The Garden City movement experience also illustrates the financial difficulty of drawing a balance between up-front expenditure and long-term returns. *'We have seen that, ever since Howard's day, this interrelated question has proved one of the most intractable: we have never been able to devise a solution that successfully combined public and private agencies and financing, and we have never... come near Howard's vision of a self-governing, self-financing commonwealth.'*[4] The challenge is *'how to marry private finance and enterprise with strategic planning and with development and funding procedures so as to put new homes in the right places, thus to produce a pattern of development that is convenient, efficient, equitable and above all sustainable'*.[4]

1.5.4 The problem of developing on a large scale

A review of garden city and new town settlements today illustrates the problem of developing on a large scale. When developments are built at the same time, they mature at a similar rate and often need repairing or regenerating at the same time. This has obvious resource issues as well as social, environmental and economic implications.

In *Tomorrow's New Communities*,[9] Darley *et al*. provide a useful summary of some of the key ingredients necessary for a successful new settlement, most of which would apply equally to major urban extensions. Among these key lessons are the need to provide the widest possible selection of housing tenures; the vital importance of ensuring that there is ample open ground; and the essential requirement to incorporate communal buildings and facilities to match the scale of the settlement. It is also fundamental to the success of a new settlement or urban extension to ensure that transport serves rather than dictates the form of settlement, to allow organic growth which is sustainable and served by a variety of good-quality public transport modes.

2 New Settlement Case Study: Dickens Heath, Solihull

2.1 Introduction

The new village of Dickens Heath began taking shape in 1997. It is located in a rural setting beside the Stratford upon Avon Canal and within the Solihull metropolitan green belt. The village is three miles from the nearest main settlement, Solihull, and will house around 4,000 people when completed. The origin of the new village lies in a decision made by Solihull Metropolitan Borough Council (Solihull MBC) in 1989, in response to its housing allocation requirement of 8,100 new homes between 1988 and 2001. The adopted 1997 Solihull Unitary Development Plan (UDP) originally proposed a settlement of 850 houses adjacent to the existing hamlets of Cheswick Green and Tidbury Green.

2.2 Key facts

- 1,672 units approved, of different sizes, types and tenures
- Two-form-entry primary school
- Green belt location
- Village centre accommodating shops, businesses, a library, a medical centre, a church and homes
- three miles from nearest large settlement (Solihull)

2.3 Pre-planning stages

Solihull MBC determined that the scheme should not simply result in a housing estate in the country. Taking advantage of the opportunities afforded by the canal and nearby woodland, as well as its green belt surroundings, the scheme sought to incorporate the best features of town and country, featuring traditional village components in a modern situation. Following a public inquiry into objections, held in 1991, the scheme was approved in principle in December 1992. In tandem with this process, Solihull MBC appointed John Simpson & Partners as architects and masterplanners.

Solihull Metropolitan Borough Council

Housing at Dickens Heath

The masterplan approved in 1995 was underpinned by four key overarching principles:

- The village should have a clear identity which gives residents a sense of place and belonging.
- It should echo the traditional features of village development, including homes, employment, recreation and social and welfare facilities, intermixed to create a cohesive whole.

- The village should provide a range of housing from first-time through to family houses, together with smaller units for the elderly, thereby creating a mixed community for all ages and incomes.
- The village should create a safe and pleasing environment for pedestrians while still accommodating the car, but without allowing it to dominate.

Applying these principles, the intention was to create a unique settlement characterised by a well-planned layout featuring individualistic and rural styles. The design of the village is based around a high-density core village centre, with densities diminishing towards the edge and therefore presenting a softer transition to the countryside. A series of public squares link the highway network, forming a grid approach to create attractive and active street frontages.

2.4 Planning policy context

The allocation of Dickens Heath as a site in the Solihull MBC UDP was laid out in the Written Statement, which was adopted in April 1997. Three fundamental principles underpin the wider policy context within Solihull Metropolitan Borough's approach:

- a commitment to regeneration of the West Midlands and its return to prosperity;
- a commitment to protect and enhance the quality of life in Solihull; and
- a commitment to the further protection and maintenance of the green belt within the borough, particularly the strategically important Meriden Gap.

The UDP determined that land for 7,500 dwellings should be provided in the borough in the period 1998-2001. Following an inquiry, this figure was subsequently raised to 8,100 dwellings, representing an average building rate of 623 dwellings per annum.

Policy H2, 'Location of new housing land', of the 1997 Solihull UDP stated that the provision of strategic new housing sites should be spread geographically across the borough. In strategic guidance, the Secretary of State proposed a four-stage process to identify strategic sites when determining where development needs should be met:

- As much development as possible should be located within the present built-up areas.
- For development which has to be outside the present built-up areas, as much as possible should be in areas not covered by green belt policies.
- For development which cannot be located inside built-up areas or outside on land not in the green belt, as much as possible should be accommodated through the careful drawing of green belt boundaries in areas where they have not been defined either in adopted local plans or in the former development plan.
- Only if a deficiency still remains after the first three options should alterations be contemplated to green belt boundaries which have already been defined in adopted local plans or the former development plan.

With this policy in mind, the local planning authority identified the need for longer-term housing assessments which followed from strategic guidance. This guidance required that in defining green belt boundaries, local authorities must relate their proposals to a longer time scale. At the time it was believed that the borough could not absorb further housing sites without an unacceptable loss of character, amenity and environment to the existing urban and suburban areas.

An area action plan (AAP) for the Hockley Heath parish was developed and included in the 1997 Solihull UDP. Policy HH2, 'A new village', allocated land at Dickens Heath for the development of a new village to help meet housing needs. The 850 homes that, at the time, were required for the Hockley Heath parish could be accommodated in three ways – first by expanding some or all of the existing local settlements of Cheswick Green, Tidbury Green, Whitlocks End, Dickens Heath and Illshaw Heath; secondly by extending the built-up area of Shirley southwards; and thirdly by concentrating development in one area.

The following factors were considered in deciding where to locate development:

- the need to minimise the impact on the green belt and re-establish firm green belt boundaries;
- the need, wherever possible, to 'round off' a settlement rather than encourage its outward expansion into the green belt;
- opportunities which might be available within the built-up areas;
- highway and drainage infrastructure;
- proximity to local services, such as schools, shops, health facilities and public transport;
- the impact on existing properties and on the character and heritage of the settlement;

Solihull Metropolitan Borough Council

Dickens Heath village centre

- the impact on agricultural land and the landscape;
- the need to use redundant public sector land;
- the possibility of some form of community benefit; and
- opportunities that might be available to reinforce the natural centre of a settlement and to support services provided there.

Three housing sites were taken forward as options, one of which was Dickens Heath, and policy HH3, 'Master plan', identified the need for a masterplan for the site. Policy HH6, 'Community and social facilities', identified key areas where community facilities were to be developed to meet the needs of the population.

As development progressed on site, Planning Policy Guidance Note 3: *Housing* was introduced, which required local planning authorities to raise densities significantly. Coupled with an increase in the desirability of apartments, this effected a shift in how the development progressed, leading to 1,672 units being delivered on the ground. Developing 1,672 new dwellings carries a need for land to be designated within the village centre to provide essential services. The following key facilities were provided for on-site, outlined in policy HH6 as follows:

'(i) Local shops – larger centres such as Shirley and Solihull will meet the principal shopping needs of the community. Land will therefore be set aside for convenience shops in order to satisfy local need

(ii) Medical facilities – the plan provides for the need for an additional doctors' surgery should ones in surrounding settlements become full

(iii) Other community facilities – the plan sets out provision for community buildings such as a village hall, church and public house as and when necessary

(iv) New school – a site will be reserved for a new two form entry primary school to meet the needs of the new settlement. Review of the need for a secondary school will take place periodically over the development of the settlement.'

These facilities have now been built.

2.5 The design concept

The key to the design of the masterplan for the village was the creation of a series of public places that are attractive and enjoyable to walk through. The overall aim of the layout at Dickens Heath is to encourage street activity by making it easy, convenient and pleasurable to move around the settlement as a pedestrian. The design ethos focuses on a range of shared public spaces, as opposed to dispersed estates which tend to foster lifestyles focused around the private car.

The masterplan prepared by John Simpson & Partners does not treat houses just as isolated objects, but instead arranges them as a backdrop to a system of squares, streets and lanes to create an identity and

sense of place. Simpson claimed in a proof of evidence dated May 1991 that *'for a village to work, [with] the sense of being a recognisable community with a distinctive identity and character, it must be perceived as one cohesive whole'*. This ethos underlies the whole design and development at Dickens Heath, and all the facilities and components that make up the village are therefore within walking distance of each other.

The site has strong physical boundaries, with the Stratford upon Avon Canal to two sides, and a site of nature conservation importance, football playing fields and existing development forming the other boundaries. The buildings around the centre are closely packed, and the public buildings such as shops, a post office, church, village hall, library, surgery and public house are placed so as to relate to each of the public spaces.

A series of blocks have been developed, radiating out from the village centre and providing sufficient flexibility to cater for the housing needs of today. Housing is built close to the edge of each block, with the centre reserved for parking, garaging and the development of smaller mews-type development, containing an element of sheltered housing, small studios and workshops, and housing suitable to meet the needs of disabled people.

A great strength of Dickens Heath lies in the mature woodland setting which has been maintained throughout the development, giving the settlement a feeling of maturity from the start. The linkages and connections with the Stratford upon Avon Canal, and the relationship of the canal to the topography of the land, are also very important in establishing views of the canal from the settlement core.

2.6 Components of the village

The approach to planning Dickens Heath and creating a new village environment was underpinned by the core objectives of the masterplan listed in Section 2.3 above.

A number of existing buildings lay within the confines of the new village's boundary, but only one, Wharf Farm, a two-storey tile and brick house with an adjacent barn, had any particular architectural merit.

The central main village square is located at the highest point in the village, at the junction of two main routes. The street frontages around the square contain a mix of uses, and along the radiating streets the pattern of uses is predominantly retail at ground floor and residential and commercial at first- and second-floor levels. The creation of a village centre and village square, with short walking distances between different uses and activities, encourages pedestrian movements and thus significantly reduces the number of car movements made by residents within the village.

Housing development across the village site follows a traditional pattern, wherein an urban system of higher densities and more enclosed spaces is found towards the centre of the settlement, with decreasing densities towards the periphery. Low-density housing has been developed on the edge of the settlement, with houses hidden behind hedges and walls and larger detached properties facing out towards the canal. The housing densities on the periphery are at 6-10 dwellings per hectare, rising to 10-14 dwellings per hectare moving towards the village, and rising again to 14-18 dwellings per hectare near the urban core. The urban frontages to the high street and parts of the interconnected squares take a similar form to the special edge treatment area and include landmark buildings and non-residential uses within the street frontage.

2.7 Concluding issues

Dickens Heath has attracted a mix of businesses and residents. Despite its proximity to larger urban centres, a sense of community cohesion has been established, as borne out in the range of retail, restaurant and commercial uses in the village centre. There are issues to be resolved related to car parking and the inadequate provision of public transportation. However, in terms of the planning policy context and the process of steering the scheme through the local and sub-regional planning systems, Dickens Heath offers a valuable lesson in delivering growth on the ground and in achieving good relationships between local authorities and developers. The scheme was developed at a time before sustainable construction techniques and the on-site energy generation agenda began to emerge into the mainstream, but Dickens Heath nevertheless offers many lessons for a new small-scale settlement developed within or close to the green belt.

3 Urban Extension Case Study: Upton, Northampton

Housing and sustainable urban drainage system at Upton

3.1 Introduction

Upton forms part of Northampton's 'South West District', a key area of strategic urban expansion lying to south west of the existing built-up area. It is located at the junction of the A45 and A43 main roads and is accessible via junctions 15A and 16 of the M1 motorway. The site was comprehensively assembled by English Partnerships. As phase one of the South West District expansion, Upton was granted outline planning permission in 1997.

An 'Enquiry by Design' process carried out in 2000/01 by Northampton Borough Council, English Partnerships and The Prince's Foundation further developed the original plan associated with the permission granted and led to the formulation of a design code for Upton. A Working Group was established in 2001 to oversee implementation of the Upton project, which included representatives from English Partnerships, Northampton Borough Council, The Prince's Foundation and a consultant team led by EDAW. A variation to the original planning approval was granted in February 2003, covering relocation of the local centre from its central site to Weedon Road, at Upton's northern edge and adjacent to existing housing. In conjunction with this variation, another outline planning permission was granted to introduce mixed uses along the frontage to Weedon Road, a key gateway into Northampton. The Upton Design Code was first published in April 2003.

3.2 Key facts

- Planning permission granted for 1,020 homes
- Local centre with up to 700 square metres of retail facilities
- Building designs to reflect local character, developed through an 'Enquiry by Design' process
- Design code defines the environmental standards applying to the whole site
- Sustainable urban drainage system integrated throughout the site

3.3 The Upton Design Code

The Upton Design Code established standards and set a framework for development. The Design Code was also the starting point for a dialogue between developers and their design teams and the Upton Working Group. The underlying intention in producing the Design Code was to establish a co-operative and creative partnership with individual development bidders who are keen and able to work with the project team. The Design Code also ensures co-ordination between the different development sites within Upton and provides a level of certainty to developers of the quality and character of adjacent development. The framework for development set by the Design Code is outlined under sub-section headings below.

3.3.1 Achieving social cohesion

When completed, Upton will comprise a minimum of 1,020 homes. Together with surrounding communities in Upton Grange and Duston village, a critical mass of local population will be established to sustain local amenities and viable public transport. Social cohesion is sought through the following requirements laid down in the design code:

- *Diverse dwelling types and tenure mix:* Upton will include a wide range of dwelling types, sizes and tenure to cater for people with different incomes and at different stages of their lives.
- *Indistinguishable affordable housing:* A minimum of 22 per cent affordable housing will be provided, pepperpotted throughout the development. The external design of the social housing will be indistinguishable from that of market housing, as is the case at Poundbury.
- *Mix of uses:* The local population will support a mix of uses, including a primary school, local shops and live-work units. Other commercial office, retail and community uses will form a local centre along Weedon Road at Upton's northern edge.
- *Area-wide integration:* The local centre will form the activity focus for Upton and other communities to be developed within the South West District, including the Princess Marina and St Crispin's Hospital developments.

Notably for this study, the development is not expected to support higher-level functions such as a secondary school.

3.3.2 Environmental sustainability and long-term biodiversity

In an attempt to set a new benchmark of environmental sustainability in the volume-housebuilding industry, every building in Upton is being built to the BREEAM EcoHomes 'Excellent' standard and assessed at design and post-construction review stages to ensure the rating is achieved.

A sustainable urban drainage system (SUDS) is being put in place to manage rainwater run-off, and rainwater harvesting technologies are being incorporated into block and building design to allow for rainwater use within homes. The SUDS network will also promote local biodiversity by allowing new wildlife habitats to be established and by creating an ecological network linking Upton with the Upper Nene River Valley and the surrounding areas.

3.3.3 Local distinctiveness

The design of Upton draws inspiration from the Northamptonshire vernacular, including local urban morphology, architecture and landscape design. The use of local materials and an innovative approach towards their application will help to establish Upton as a part of Northampton but with its own distinctive identity. The Design Code contains detailed background guidance on the style and character of developments in Northampton throughout the last century.

3.3.4 Liveability

To reduce reliance on cars and encourage a walkable environment, public transport facilities will be in place at the early stages of development. And to further promote healthy lifestyles, Upton offers easy access to the Upton Country Park and associated recreational facilities.

A legible structure of streets and blocks links Upton to adjacent developments and amenities, such as the Upton Grange and Princess Marina Hospital developments, a supermarket, other facilities at nearby Sixfields, and the Country Park. To promote long-term stewardship, a management company will be set up and will eventually be run by local residents. The scope of the company will include the management of the SUDS and the maintenance of communal courtyards within the residential blocks.

3.3.5 Urban character

Upton is divided into four distinct character areas. Each has a different role to play within Upton and relates to the overall urban hierarchy within the wider South West District. The main features of each are outlined below:

- *Urban Boulevard:* Focused on Weedon Road at Upton's northern edge, the Urban Boulevard area is the most urban part of the community. It will contain offices, shops, community uses and live-work spaces, supported by a high-quality public realm and a public transport route. Within the wider context of the South West District, the Urban Boulevard will form a focus for Upton and for other communities to be developed near Weedon Road, a key artery into the town.
- *Neighbourhood Spine:* Extending south from the Urban Boulevard, the Neighbourhood Spine will bring activities and public transport into Upton, allowing the Main Street to evolve into a high-density, mixed-used core in the longer term. The Main Street will be the primary route through the community, connecting two urban boulevards.
- *Neighbourhood General:* The majority of the residential area at Upton falls into this category and is located away from the main streets. The homes will be built in clearly-defined blocks with secure courtyards providing parking along with communal spaces and rear access. Typically, housing in these areas will be mews-style development, with smaller residential units pepperpotted throughout.
- *Neighbourhood Edge:* At the southern and western edges of Upton, the intensity of development will be lower than elsewhere. The block structure of the street pattern will be retained, but semi-detached and detached homes will be introduced. A broader variety of boundary treatments will be used, contributing to the diversity of urban forms that make up Upton.

3.4 Sustainable urban drainage

The sustainable urban drainage system is a fundamental part of the infrastructure at Upton. One of the most important aspects of the design and layout of streets within a SUDS network is the need to maximise the system's exposure to sunlight. At Upton the broad alignment of streets is on north-south and east-west axes. The swales (the drainage channels leading run-off water to the storage or discharge system) on the north-south running streets must therefore be situated in the centre of the street. Consequently the street width is reduced, with one-way traffic flows on either side of the swale. To allow maximum exposure to sunlight on streets on the east-west axis, the swales are situated on the north side of the street.

Photovoltaic cells in place at Upton

The SUDS also allows a network of green fingers to permeate through the site. Green infrastructure such as SUDS will become increasingly important as the effects of climate change take hold and urban areas suffer temperature increases. The role of green areas and green cover in cooling the urban heat island effect will be vital if settlements are to remain attractive places to live in 50 to 100 years' time.

3.5 Concluding issues

One of the most striking features of the Upton development is that comprehensive land assembly by English Partnerships enabled, through re-investment of land value gains, investment in green infrastructure. The installation of the SUDS and the provision of photovoltaic cells in pursuit of reaching the BREEAM EcoHomes 'Excellent' standard were made possible indirectly through the comprehensive land assembly and therefore the comprehensive development of Upton. It is also clear that the Design Code has played a significant part in the process.

4 Urban Extension Case Study: Newcastle Great Park

4.1 Introduction

Newcastle Great Park is a 485 hectare (1,200 acre) mixed-use urban extension located three miles north west of Newcastle city centre. Land for the development, at the time designated as green belt, was identified in the 1998 Newcastle City Council Unitary Development Plan (UDP). Two primary justifications were put forward for allocating land in the green belt for development: first the need to boost the economic performance of the North East region as a whole, and secondly the need to react to the significant out-migration of residents from the city core, in search of suitable family homes.

The location straddles the A1 trunk road, with development completing the Kingston Park area of Newcastle to the east of the A1, and retail, business and residential uses to the west of the A1. Transport interchange with the A1 is provided from the business park, and dedicated bus services link the site to the nearest Metro station.

4.2 Key facts

- 485 hectare (1,200 acre) site
- Design code for the site
- 2,500-dwelling mixed-use development
- Average density of 35 dwellings per hectare
- 20,000 square metres (net) of retail space
- Innovative Newcastle Great Park Management Board, which guarantees a level of service to residents and businesses
- Single advisory committee at Newcastle City Council purely for issues related to Newcastle Great Park
- 40,000 households surveyed during a community consultation exercise
- Bus gates and branded bus services running through the site to link to the Tyne & Wear Metro station at Kingston Park

4.3 Strategic aims and objectives

The strategic aim of Newcastle City Council when developing the planning brief for this area was (as set out in the UDP) to *'assist in reversing the trend of outward migration as part of city-wide regeneration initiative through a sustainable development consisting of an 80 ha business park and 2,500 homes over a 12 year period'.*

The core principles underlying the development of the site are:

- To provide 2,500 dwellings, including a range of house types and sizes, at a rate that does not prejudice satisfactory progress on the development of housing on inner-area brownfield sites.
- To provide employment for residents of Newcastle through allocation of 80 hectares of land for economic development and the creation of the right conditions to attract inward investment.
- To ensure that housing and economic development are accompanied by all necessary social and physical infrastructure, including education, local shopping, community and recreation facilities, in order to meet the needs of the new community and to protect the interests of existing communities.
- To protect and enhance the environment so as to benefit the landscape and wildlife, to improve recreation and access, and to provide an attractive setting for development.
- To secure appropriate transportation infrastructure and services so as to maximise journeys other than by private car and to minimise the impact on surrounding communities created by additional traffic.

Newcastle Great Park housing

- To promote sustainability through best practice in construction of infrastructure, buildings and landscape, and to ensure that the end product can be exhibited as an example of sustainable development as set out in Government guidance on achieving excellence through the urban design process.

4.4 Planning policy context

The planning policy which designated for development the area now known as Newcastle Great Park (NGP) was established in the 1998 Newcastle upon Tyne Unitary Development Plan. The plan identified what was then called the 'Northern Development Area' as the major site for growth outside the built-up metropolitan area. UDP policy IM2 focused on the development and preparation of masterplans and development briefs. The masterplan for the Northern Development Area did not form part of the UDP and instead has status of supplementary planning guidance.

The aim in creating the Northern Development Area was to encourage and attract national and international investment, and to create employment and housing of the highest quality together with community, social and leisure facilities. Policy HO1.2 of the adopted UDP states that housing development in the Northern Development Area will only be permitted in a series of defined phases. The release of each phase of land is subject to an annual review of progress being made across the city in bringing forward land for housing development, national planning policy guidance, overarching City Council objectives, and the extent to which infrastructure is to be provided or supported by the defined phase of housing.

A revised masterplan for the NGP area was published as supplementary planning guidance on 18 October 2006. A design code had been approved as supplementary planning guidance on 13 November 2000. Key principles of the code include:

- To create places for people which have a distinct identity and are safe and attractive.
- To respect and enhance local character and connect well with the wider locality.
- To give priority to the needs of pedestrians and cyclists rather than vehicles in residential areas.

4.4.1 Housing

Six cells of housing development will provide 2,340 privately-owned homes and 160 housing association homes. The affordable housing is to be pepperpotted around each development 'cell' and not specifically located in the town centre, in accordance with the City Council's wish to see NGP developed as a mixed community, catering for all stages in the life of households. A specific and welcome policy within the revised 2006 masterplan and supplementary planning document for NGP refers to '*housing for older people and those with mobility difficulties'.* This policy (SPD policy NGP5) notes that developers *'shall consider the lifetime needs of residents in building the general needs of private housing for sale. Levels of access and other provisions in the Building Regulations should be considered a minimum standard.'* The TCPA has been pressing for the inclusion of such a policy in all development plans so as to ensure that homes become more flexible for an ageing population.

The release of a large greenfield site on the edge of a city in a strategic location such as this was undoubtedly controversial. However, SPD policy NGP8 asserts that to *'assist in the achievement of targets for progress on housing sites in inner areas of the city, the developers shall support the initiatives of the Council and other organisations through the construction period of housing in NGP'.*

The resulting partnership approach between the developers and promoters of NGP and the City Council pursues a balanced greenfield/brownfield strategy, with particular emphasis on site assembly and the identification of viable development opportunities within the Bridging Gateshead Newcastle Housing Market Renewal Area. Policy H.1.2 of the 1998 UDP identifies a need to fund inner city regeneration through a section 106 agreement linked to NGP. It states that the policy will be invoked if housing development in the inner city falls below 180 units per annum. A revised joint venture agreement (JVA) between the City Council and NGP developers will be part of the new section 73 agreement that is currently being negotiated. In this way the strategy for NGP promotes the concept referred to elsewhere in this report in which proceeds from development at the edge of or outside the city can be directed to regeneration of the urban core.

4.4.2 Economic development

UDP policy ED1.1 states that the Northern Development Area economic development land allocation is for *'offices, high technology industry and research and development [within] Class B1 of the Use Class Order'*. Cells A, B and C are earmarked for economic development. Sage Computers has located its international headquarters at the site in a move that has also provided associated improved infrastructure and road layouts linking the site to the A1. The edge of city location has therefore proved attractive to investors, perhaps providing an example of the counter-urbanisation of employment and investment identified by the TCPA report *The People – Where Will They Work*.[10] In a similar attempt by a major city to retain its key investors, Birmingham City Council has been considering relaxations of its green belt for satellite business parks, again taking advantage of this edge city phenomenon.

The development of these cells at NGP must also take into account the need to protect wildlife, landscape and archaeological features and the amenity of existing residential properties, as well as the need to create wildlife buffer zones and undertake habitat creation enhancement along the edges of the development.

The City Council requires 'development site strategy statements' (DSSSs) to be submitted for each development cell in accordance with SPD policy NGP2. The DSSSs for cells A and B have been completed, and the statement for cell A includes mitigation measures to compensate for the loss of some of the retail areas following the adoption of the new masterplan in 2006.

4.5 Green transport plan

A green transport plan was prepared for the whole of NGP to assist in delivering a sustainable and integrated transport system for the development. Green transport plans have generally been targeted at commercial developments, but this plan targets residential, educational and commercial elements of the scheme. The September 1999 plan asserts important principles for mixed-use urban extension schemes. Residential travel plans are now accepted components of large-scale developments, but the innovative approach used at NGP is worthy of study.

Housing with roof tile photovoltaic systems at Newcastle Great Park

A list of pledges binding on the developers and the local planning authority has also been agreed. Some of the more innovative pledges include:

- funding to the sum of £20,000 per annum for ten years for a green transport co-ordinator;
- a contribution of £300,000 to the City Council to create a real-time information system at bus stops and on board vehicles;
- free travel to employees at the business park;
- no property to be more than 400 metres from a bus stop;
- a sum of £840,000 provided to ensure that transport operators buy in to running services from the start of development;
- all vehicles to have distinctive NGP branding and be fully wheelchair accessible;
- funding of £180,000 provided for the installation and maintenance of automated bus gates;
- provision of a secure 1,000-space park-and-ride car park, enabling higher-frequency public transport to be provided;
- £1.2 million to be spent on providing and improving off-site cycle facilities;
- any new occupier of NGP to be entitled to a discount of up to 50 per cent on the cost of a new cycle through a nominated supplier; and
- safe routes to schools linking all the residential areas.

All the above pledges were written into a section 106 agreement and agreed by the developers of NGP. The overarching objective of the green transport plan is to bring about a modal shift among the occupiers of the development. The plan sets a target of reducing the current average of 90 per cent of employees driving to work to a maximum of 60 per cent by the time the development is completed. Furthermore, it is intended to reduce the proportion of children being driven to primary school to just 10 per cent, and in the longer term to increase the proportion of NGP residents who travel to work by public transport, walking, cycling, or car sharing to more than 50 per cent.

4.6 Sustainable housing and energy efficiency

SPD policy NGP15 asserts that the developers, in conjunction with the City Council, must promote and secure the efficient use of energy in all business, industrial and non-residential buildings in NGP. While there is resistance in certain quarters to engaging in low-energy-consumption buildings owing to the perception that higher construction costs are involved, the City Council is working to overcome this and promote good practice. Regarding housing, SPD policy NGP16 promotes energy-efficient standards above that required by the Building Regulations. Policy NGP17 requires the developers to *'bring forward as part of each Housing Development Cell Strategy Statement proposals for an energy project'*. The resulting pilot projects promoting sustainable construction methods and efficient energy use are a welcome feature of the development. It is required that at all times after the

occupation of the 50th house and before completion of the 2,400th house, there shall be an energy project open for public viewing in each housing development cell.

Working with One North East (the North East regional development agency), Scottish and Southern Energy, Arup, BP Solar, Newcastle City Council, Bryant Homes and Persimmon Homes, consultants The Northern Energy Initiative (TNEI) have developed and acted as project managers for a domestic photovoltaic trial programme. This has involved the installation of six different photovoltaic (PV) systems (five tile systems and one retro-fit modular system) on 12 houses in development cell H. The installations, using commercial PV systems, have been designed by Arup to produce the equivalent of 30-40 per cent of the total electricity requirements of the properties, or 8-10 per cent of the total energy demand of the building. Neither developer involved had previous experience of using PV systems in the domestic sector, so the programme provided useful experience in adapting to emerging Government regulations and the Code for Sustainable Homes. The project has also engaged local service suppliers in the installation of PV systems on domestic properties, thus strengthening the region's capability in providing services related to this technology. Monitoring and follow-up questionnaires have been distributed to all the residents who have purchased houses with PV installations, to allow the project team to assess the perceived benefits of and problems related to domestic PV systems.

4.7 Concluding issues

Newcastle Great Park represents a significant departure from traditional planning in the North East, not least in the release of a large greenfield site bisected by a primary Trans-European Network route (the A1). In this context the agreement to realise more investment in the city centre through the edge city development is both innovative and commendable, in that it recognises the interdependence of these differing elements of a conurbation. It must be considered disappointing that the agreement has not served to realise such investment owing to the city centre development boom that has rendered this part of the agreement inoperable.

The inclusion of many sustainable construction and energy-efficiency measures is to be welcomed, again as a feature that can be realised at an urban extension or new settlement scale. As these measures are rolled out across the site over the next ten years, they will bring benefits not only to individual householders, but also to the developers as they showcase good practice in environmental technologies. The design coding and legibility of the site is also of huge advantage in delivering a cohesive settlement that has a distinct identity but also clear links with an adjoining 1950s development (Kingston Park).

Attracting Sage to the site to develop its international headquarters has given a huge boost to Newcastle Great Park's attractiveness to inward investment, in turn boosting the city as a whole. Clustering high-tech industries near to the regional airport and major road and rail links will ensure that the retail centre, when developed, will be viable and attractive to retailers.

The management trust that has been developed to manage and run Newcastle Great Park should assist greatly in ensuring that the landscape features and facilities are maintained and modernised as required. Lessons from the new towns suggest that when land is under the same ownership or managed by a trust, infrastructure can be delivered quickly and effectively, and an interest in the settlement as a whole is established among those who move into the development.

The selection and development of Newcastle Great Park has been driven through the local and sub-regional planning processes. Establishing a planning committee purely to consider issues relating to Newcastle Great Park issues has been useful in achieving cross-party support in a situation where the implementation period will last longer than several electoral cycles.

5 Urban Extension Case Study: Hampton, Peterborough

5.1 Introduction

Hampton lies to the south of the city of Peterborough and is a 1,000 hectare brownfield site straddling the A15 road, abutting the East Coast Main Line railway to the east and bound to the north by the Fletton Parkway and the existing urban area. The site abuts the city boundary to the south, with a series of man made-lakes creating a buffer between the development area and agricultural land to the south.

The site formerly accommodated two operational brickworks and extensive brickfields, producing the Fletton brick throughout the first half of the last century. Following the closure of the brickworks, the site was allocated as the fourth planned township of Peterborough in the 1980s. Owing to the legacy of former industrial activity on site, significant land reclamation and recontouring was needed before it could be made available for built development, with three years of on-site remediation before the completion of the first house on site.

Outline planning consent was granted in 1993 for the new township. A framework plan formed part of the consent, setting out the general structure and layout of development in terms of land use and highway infrastructure. The 1993 framework plan proposed a masterplan dominated by a traditional hierarchy of highways, segregating land uses and not conducive to public transport provision or the creation of walkable neighbourhoods. Pre-Planning Policy Guidance Note 3: *Housing*, the masterplan advocated average densities of 25 dwellings per hectare. There were also extensive dedicated employment areas which would have delivered a locational imbalance between population and jobs, thereby creating a potentially unsustainable settlement composition.

Peterborough itself is an expanded new town, developed largely in the 1970s to encompass a series of townships linked by radial routes into the city centre. Unusually for an urban expansion area of its size, Hampton lies within two miles of Peterborough city centre, and following electrification of the East Coast Main Line in the late 1980s accessibility to Hampton improved, with London King's Cross less than an hour away.

5.2 Key facts

Original 1993 consent

- The 1993 Framework Plan proposed 5,200 dwellings with low-density core residential areas and 12,000 jobs within dedicated commercial and industrial areas. At this time, the township was perceived and marketed as a separate entity from the rest of Peterborough
- Part of the site's regeneration has included the creation of a 120 hectare nature reserve for the largest population of great crested newts in Europe. This site, lying immediately adjacent to the residential neighbourhoods of Hampton Hargate and Hampton Vale, is now designated as a special area of conservation, supporting 24,000 adult great crested newts, 9,000 adult smooth newts, 20,000 adult common toads, 1,000 adult common frogs, and 66,000 young amphibians

Masterplan updates

Key objectives for Hampton include the following:

- maximising opportunities for areas of mixed use;
- establishing a broad mix of tenures;
- establishing a permeable and legible network of streets;
- designing human-scaled development;

- promoting accessibility through good linkages to public transport;
- building in flexibility, allowing buildings, spaces and functions to be adapted over time
- achieving a high-quality, secure and attractive public realm

Within the context of the original consent and implemented development, the framework plan for Hampton has been updated to deliver:

- a better balance between housing and employment uses to deliver a more integrated community, functionally and physically
- an integrated public transport strategy and walkable neighbourhoods
- an increase in the range of residential densities proposed, ranging from 25 to 40 dwellings per hectare within residential neighbourhoods, with more urban densities of between 60 and 120 dwellings per hectare in the township centre.

Delivery

- The first neighbourhood of Hampton Hargate is now completed (1,600 dwellings plus neighbourhood centre)
- The second neighbourhood is well under way, and includes two areas of self-build housing (one complete and the other about to be implemented)
- To date, 3,600 dwellings in three neighbourhoods have detailed consent
- Community infrastructure provided to date includes a secondary school, a medical centre, a police station and two primary schools
- Subsequent outline applications within the Hampton area have permitted 7,000 dwellings in total, plus an additional 700 dwellings at Hempsted (an additional brownfield site related to the brickworks on the northern boundary of the township). A further 400 homes are planned on the site of the former Orton Brickworks to the immediate south of Hampton Vale

5.3 Delivery mechanisms – ingredients for success?

5.3.1 Adopting a master-developer role

O&H – as landowner and developer of Hampton – assumed the role of the master-developer. Operating in a distinctly different way from a housebuilder or specialist property developer, the master-developer ensures that the non-profit-making elements of the development are cross-subsidised and securely in place to guarantee the long-term effectiveness and success of the 'piece of town'. The master-developer's commercial position is based upon the belief that a place is worth more than the sum of its parts. The master-developer recognises that a high-quality place with attractive public spaces and social and cultural facilities will add value to serviced development parcels, the release of which the master-developer will orchestrate.

The master-developer or 'town-builder' is an essential element in the success of developing a new community or mixed-use area. The master-developer takes a long-term view of the scheme and ensures that the essential infrastructure, facilities and components that turn a development into a place are planned and phased to support the implementation of development parcels. As such, O&H committed to the early provision of strategic infrastructure (highways, drainage, open space) and advance planting – in much the same way as the development corporations operated when delivering the other planned townships.

5.3.2 Preparing detailed development guidelines

One of the advantages of the 1993 outline permission was that it included in its conditions a requirement to prepare a series of neighbourhood development briefs, approved by the local planning authority, designed to guide detailed development on site. Over the ten years since the first house was built on site, this process has proved a successful mechanism for translating a strategic masterplan into a more detailed development framework capable of being interpreted effectively by third-party housebuilders and developers.

Development briefs have been prepared and adopted for the two residential neighbourhoods of Hampton Hargate (1,600 dwellings) and Hampton Vale (1,900 dwellings), and for the first two phases of Hampton Centre (retail, commercial, community uses and 600 higher-density residential units).

Central to the development briefs, and indeed to sustainable development, are issues related to:

- the reduction of car dependency and traffic movement;
- the efficient use of land for new development;

O&H Hampton Ltd

Aerial view across Hampton (Hampton Vale in the foreground)

- energy efficiency in design;
- cultivating elements of the natural and built environment;
- a mix of housing types and tenures to allow the resident population to stay within the township while meeting changes during their lifetime.

The development brief for the most recent neighbourhood (Hampton Vale) differs from the 1993 masterplan in a number of ways. It introduces a second area of mixed use within Hampton Vale related to catchment of population and provision of public transport services. The increase in housing density has consequences for the provision of local facilities and services to support new communities. In order to be successful and viable, mixed-use areas must operate as centres of activity, rather than as a collection of non-residential land uses. Public transport therefore needs to be woven through such mixed-use areas in order to create a certain threshold of activity. Activity-generating uses are also vital in promoting successful mixed-use areas: in Hampton Vale, the primary school and neighbourhood centre create this focus.

The development layout of Hampton borrows heavily from existing waterways and pit edges and therefore creates a grid of street patterns within which primary streets and a network of lanes can be formed. The development brief identifies a 'permeable grid' in Hampton Vale to permit continuous street frontages and a clear distinction between private and public spaces. The network of routes is not produced in order to create a hierarchy of routes, but rather to provide a number of equally accessible and legible routes through the neighbourhood centres and to the township centre.

Although the content of the briefs was set out in the conditions of the original consent, the first briefs for the residential neighbourhoods were prescriptive only in certain aspects of detailed design. Numbers of dwellings, dwelling mix, parcel size and boundaries, and delivery of section 106 obligations on site were specified, but the remainder of the document was limited to providing guidance for third-party developers on building types and styles, density, landscaping and creation of character areas, and street design.

During the ten-year implementation period at Hampton, it has become evident that although the development brief mechanism provides essential information to third parties and is an effective tool for

setting parameters for development, it does not guarantee high design quality on the ground, particularly for the predominantly residential areas.

As a consequence, the brief mechanism has been revised in two ways. First, the more recent development briefs (those for Hampton Centre) have included more design 'fixes' – for example, specifying primary street design and dimensions, key building locations, building heights and orientation, essential elements of public realm, and alternative solutions for parking arrangements and refuse storage.

Secondly, for the residential neighbourhoods, O&H agreed to introduce a second layer of design requirements through the preparation of design briefs for each phase of development within each neighbourhood. These include a detailed parcelisation plan (specifying sites capable of being sold as serviced land to individual developers without compromising the continuity of street frontages and the delivery of communal open space), specifying key buildings and frontages, detailing options for parking and storage of the car, and specifying building heights and massing.

This approach has been more successful in delivering high-quality frontages and influencing housing style and type, particularly along primary streets. Although under the terms of the current outline consent the design briefs are not formally approved by the City Council, they form part of the binding sales documentation issued to third-party developers when purchasing sites from O&H, and are used by the City Council as an effective implementation tool when negotiating over detailed planning applications.

5.4 Areas for improvement?

The quality of built development and the environment at Hampton is consistently improving. Developers are delivering more innovative responses to design challenges – among which are the need to deliver higher-density family housing; the need to address the impact of increasing car ownership on parking/car-storage requirements; and the need to make space for on-plot refuse and recycling storage without compromising on garden size or frontage design. Set in maturing landscape and extensive areas of lakes and open space, Hampton has retained its open, spacious feel while delivering housing at a current average density of 35 dwellings per hectare across the site.

It is recognised that there is still room for improvement in delivering design quality for the future phases of Hampton. Current challenges include improving the consistency of decision-making when negotiating detailed planning applications with housebuilders in terms of design requirements; and encouraging third-party developers to employ designers/architects to be able to effectively interpret the requirements of the briefs.

Nonetheless, the development brief and detailed design brief mechanism undoubtedly contributes to the success of Hampton as a strategic urban extension to Peterborough. The retention and enhancement of the many waterways and the nature reserve in the former brickworks site also show that much-reclaimed, edge-of-city land can be used positively and efficiently to provide the houses and facilities together with employment that make up a modern, mixed and sustainable community.

5.5 Concluding issues

On current trajectories, Hampton will be complete by 2015. A focus for current phases of development is now on moving forward with the established public transport strategy to introduce leading-edge bus-priority measures to provide access to the city centre. A further important focus is on introducing higher environmental standards for new development at the micro and neighbourhood scale. This includes encouraging development to accord with the Code for Sustainable Homes, in advance of anticipated changes to the Building Regulations. This development therefore offers a major opportunity to implement carbon-reduction strategies.

6 New Settlement Case Study: South Woodham Ferrers, Essex

6.1 Introduction

South Woodham Ferrers was developed from the mid-1970s onwards as a riverside country town by Essex County Council; a 'new town' outside the formal legislation of the New Towns Act. It is one of a comparatively small number of local-authority-sponsored new towns.

The context for the new settlement was set by Burns Report of 1970, which had approved medium growth for Essex as a whole, and by the reaction to a piecemeal approach to providing new housing in South Essex. The powers and part of the funding for the Council to develop South Woodham Ferrers were granted under the provisions of Circular 102/72: *Land Availability for Housing*.[11] Essex County Planning Committee chose South Woodham Ferrers for further residential and ancillary land use owing to its convenient geographical location. During the 1960s new housing estates had been built near to the railway station and the population grew from 690 to 2,904. Following consultations to determine the development limits of the area and given the availability of a £14.2 million loan sanction, the decision to permit further growth vastly increased the expected population of the area to 17,000-18,000.

6.2 Key facts

- 4,600 homes
- 12,000 square metres of shopping space
- Three industrial areas
- Community school, library, primary schools, country park and church
- Land assembly undertaken by local authority control
- The influence of the *Essex Design Guide*
- Existing rail links to London

6.3 Pre-planning stages

The Essex County Development Plan of 1957 highlighted land areas at South Woodham Ferrers as available for development, but, in the absence of comprehensive development proposals, suggested that existing land uses should largely remain undisturbed. The initial County Development Plan of 1964 envisaged a population growth to 2,750 by 1981 through further allocation of land to residential use.

However, these early population estimates had to be reviewed as new areas not previously considered were permitted for development through planning appeals to the Minister of Housing and Local Government in the late 1960s. The County Council then decided that more land should be made available for residential use. Following further investigations, the County Council issued an appraisal document for South Woodham Ferrers in January 1971 for public opinion. The agreed plan for development was to provide 60 hectares for housing and increase the population of the area to 9,000 by 1981.

With the publication of the Department of the Environment's 1972 *Land Availability for Housing* circular, Essex County Council borrowed £14.27 million to make more land available for private housebuilding and develop its 'new town' at South Woodham Ferrers. The County's comprehensive development area proposals of 1973 covered a total area of 526 hectares, including the existing village, with 162 hectares set aside for housing, 7.3 hectares for industrial development, 5.66 hectares for town centre purposes, and 202 hectares for public open space. The population was estimated to rise to 15,000 within a decade, with capacity for growth beyond that. South Woodham Ferrers emerged as a key site owing to its geographical location within

the outer metropolitan area and its proximity to the employment centres of Basildon, Chelmsford and Southend-on-Sea; its access to road and, importantly for this study, rail infrastructure; and the recreational and leisure opportunities offered by the environment. The designated areas were made clear following a public local inquiry, and a comprehensive development plan and compulsory purchase orders were issued and subsequently confirmed under the new government in September 1974.

6.4 Planning policy context

Essex County Council had identified several key objectives that the development at South Woodham Ferrers was to achieve. Today, for a newer settlement such as Dickens Heath, or indeed for an urban extension such as Poundbury or Upton, these objectives might appear outdated and lacking 'modern credentials' such as green infrastructure, biodiversity networks, and environmentally-sustainable construction techniques and methods, and could be seen as too outcome focused. However, they did include some of the key sustainability outcomes that would be sought today, like the provision of key 'public services' such as a rail link and community facilities. The objectives appear to have been reasonably robust, perhaps because they cover both public and private sector concerns. They thus guided South Woodham Ferrers through to completion. The development is one of the most interesting new settlement projects since the new towns, not least because of the pioneering *Essex Design Guide* which accompanied it.

The overarching objectives for the development included the following:

- To ensure that the existing development and the new housing areas would be integrated and enjoy all the advantages of a small country town.
- To encourage the right type of industrial development and provide for the relocation of small industries displaced from other surrounding areas.
- To provide all the necessary public services to enable the development to proceed.
- To meet the needs of all sections of the housebuilding industry, including the larger developer, local builders and those requiring single building plots.
- To attain the highest possible standards of design and layout, having regard to the economic use of land and the level of investment required, and leading to the integration of the residential areas with the schools, public open space and other facilities.
- To assemble the multiplicity of ownerships, both known and unknown at the outset, to enable the commencement and continuation of the development.
- To achieve a comprehensive planned development within the area programmed and controlled by the local authorities.
- To make further land available quickly for private residential development in accordance with the wishes of the government.

6.5 Design concept

The design concept underpinning development at South Woodham Ferrers was influential when it was first devised and implemented. Essex County Council had become increasingly concerned about the poor visual standard of speculative development, which was seen as highway-dominated 'prairie planning'. In December 1973, Essex County Council published the *Design Guide for Residential Areas*, later to become the *Essex Design Guide*,[12] which had a profound effect on the future planning of developments and made possible a greater degree of design control. The *Essex Design Guide* identified a 'pattern book' of designs that developers were permitted to use and introduced a range of road standards as well as a framework within which a more varied and imaginative approach to housing area design could be achieved.

6.5.1 Housing

New road standards and a more imaginative approach to housing were the cornerstones of the design guidance. Modern mews-style development was pioneered as a result of the influence of design guide, along with steeper pitched roofs, clusters of housing served by a single driveway, and delineation between pedestrian and vehicular space. Local distinctiveness was a key outcome for the originators of the guide, and designs were rooted in the vernacular and in the use of local materials. Some initial problems were encountered, partly owing to a downturn in the housing market at the time the design guide was introduced, and partly owing to the innovative nature of development that the guide sought to achieve. In *South Woodham Ferrers – Planning and Development Case Study*,[13] it was noted

that the design policy *'must evolve over time if a new type of visual boredom is ultimately to be avoided'*.

External private amenity space was also stipulated in the design guide, 100 square metres of private garden being specified as the minimum. However, this became increasingly difficult to achieve as smaller houses (one- and two-bedroom properties) were constructed, and eventually the policy was adapted and 50 square metres of external space was accepted as the minimum for the smaller dwelling units. Minimum external space standards, once commonly demanded, are today more rarely required. Green wedges and infrastructure are also embedded into the South Woodham Ferrers development through the division of industry and housing, and also through flood defence systems along the River Crouch. However, in newer schemes such green infrastructure tends to be featured to a greater extent throughout the urban fabric.

6.5.2 Industry

Small-scale industrial units were provided in two industrial areas within the development. The comprehensive development area scheme as submitted to the Secretary of State allocated an industrial area of only 7.28 hectares (18 acres). At the public inquiry in 1973 the County Council stated that around 16 hectares (40 acres) would be appropriate for a community the size of Woodham Ferrers. The Eastern Industrial Development Area brief featured certain fundamental changes to the standard industrial layout and design, which had not evolved since the building of the new towns, and introduced a domestic scale of architecture to industry. The legacy that this has left, nearly 30 years after development, is questionable. Mixing the industrial areas in with residential development has created a strange transition between the two. Craft units were developed to blur the distinction between the two areas, and green wedges were introduced to act as a boundary to the north of the eastern area. The buildings themselves were brought forward to the edge of the footpath, echoing the design principles outlined in the design guide for residential areas.

Basic policy objectives outlined in the Eastern Industrial Development Area brief included the following:

- To relocate small industries displaced from surrounding areas.

Housing at South Woodham Ferrers

- To encourage industry that provides a high density of employment, thereby increasing local job opportunities and reducing the levels of commuting.
- To encourage industry that meets the potential demand for second-earner and part-time employment.
- To ensure a high standard of design and layout.
- To speed up the processing of planning applications for industrial development.
- To ensure the provision, where appropriate, of space for expansion.
- To ensure the effective management of the estate to enable it to function efficiently after development.

6.5.3 Town centre

Delivery of the town centre in tandem with residential development was crucial in order for the settlement to be viable from the outset, and in order to attract people to live in South Woodham Ferrers. Developing such a centre for a population of between 5,000 and 6,000 was problematic, and consultants Drivers Jonas were commissioned to undertake feasibility options. Four main options were put forward:

- Allow a number of temporary permissions for additional shops in the existing development.
- Provide a range of temporary buildings in the new centre to cater for short-term needs.
- Construct a traditional shopping centre with a variety of smaller shops and one or two supermarkets.
- Develop a new centre as soon as possible, with a larger store and a variety of specialist shops which would rely on a catchment area beyond the town.

The fourth option was chosen following an economic assessment, and further consultation with the public then took place. A *Town Centre Phase One Design and Development Brief* was published in May 1977 and had five main objectives:

- To fulfil the needs of a town of this size and its catchment area. It was deemed imperative that the shopping and commercial facilities were provided at the right time, in tandem with residential and industrial facilities.
- To harness private development in order to construct the central area development. As Essex County Council lacked the powers of a development corporation, finance had to come from developers and retailers prepared to enter into partnership with the Council.
- To promote as high a standard of design and layout as had been required in residential and industrial areas.
- To ensure financial viability.
- To integrate different land uses and create a small country town.

The town centre masterplan originally identified an area of 6 hectares (14 acres) for the provision of shops, car parks and community buildings, together with some comparatively high-density residential development. The site is located to the south east of the residential area, on low-lying, virtually flat land. The town centre exhibits a variety of uses commonly found in traditional market towns, such as a church, major public buildings, a railway station and a hotel.

South Woodham Ferrers town centre

A cornerstone of this phase of development was to be a supermarket store. The bulk of the major store, which after long negotiations was taken up by Asda (only the second Asda in the South East at the time), was camouflaged in order to appear less dominant and comply with the ethos of the *Essex Design Guide*. Low-pitched roofs and smaller 'terminal' buildings face the pedestrian square and the car park, and the materials used include hand-made clay roof tiles and Essex red stock facing brick, rendering and boarding. The Asda store is 4,645 square metres in area and the company also built a 1,115 square metre furniture store and a total of 1,395 square metres of other shop units. As the land was owned by a single body (Essex County Council), and the development was undertaken by a single developer, the store development was completed in ten months. A further site to the north of the town centre was allocated in 1983, and the subsequent development comprised a 930 square metre retail store, as well as the William de Ferrers Centre, which incorporates an eight-form-entry school, a public library and community facilities. An ecumenical church is also provided adjacent to this site. The first phase of the town centre was therefore completed well in advance of its surrounding residential areas, and its presence undoubtedly assisted in attracting people to live in South Woodham Ferrers. This example has to rate as a major achievement of planning and delivery of a new settlement in a timely and integrated manner.

6.6 Current issues and lessons learnt

South Woodham Ferrers, now approaching its 30th anniversary, offers many lessons from what was, at the time, its pioneering approach. The introduction of the *Essex Design Guide* was instrumental in achieving the coherent yet distinctive identity which its early phases possess. The design criteria used to further the development ensured that while different phases evolved, there were linkages and a continuation of themes to ensure that the settlement read as a whole, rather than as merely a number of housing estates grouped together.

Undoubtedly the ownership of land by Essex County Council was fundamental in delivering the infrastructure to support the first phases of development. Roads, water and other vital service infrastructure were in place before parcels of land were made available to housebuilders for developing.

The fabric of the town centre is now ripe for refurbishment and is currently the subject of further detailed work by Chelmsford Borough Council and Essex County Council. The materials that were used to deliver local distinctiveness are somewhat faded and have suffered from poor maintenance. While the quality of the materials in terms of facing bricks, boardings etc. is sound, the hard landscaped area of the town centre is in poor repair and requires urgent attention. Continued maintenance of shared areas, including town and neighbourhood centres, hard and soft landscaped areas, signage and street furniture, along with surfaces, is essential if the quality of the environment and the valuable features of the settlement are to be sustained.

Today the development would be planned in a different way, with more public and permeable space creating linkages from the town centre, through the residential areas and out to the countryside beyond. South Woodham Ferrers is referred to as a 'riverside country town', and yet there appears to be little reference to the riparian setting which the town occupies. The creation of green infrastructure networks, biodiversity habitats, 'land canal' wildlife corridors and other soft landscaping measures is now ingrained into the masterplanning and strategic planning process.

However, some features of the settlement are still very pertinent to planning today's new settlements and urban extensions, such as its mixed-use nature, which is evident in the town centre, mixing schools and retail, residential and (in the form of craft workshops) semi-industrial uses. Not only does this combination attract footfall, but it also ensures that human activity creates a safe and inclusive environment.

Clearly there are issues around the level of parking, public transport and road space throughout the development, and car parking standards are higher than found in developments such as Hampton, Newcastle Great Park and Poundbury. The rail service is perhaps sub-optimal in capacity for a settlement of this size. The line between South Woodham Ferrers and Wickford (where it branches from the main line) is single track, and so direct trains to London Liverpool Street are only operated at peak periods and do not, for example, serve the major commuting destination of Chelmsford. Public transport provision is integrated to a much greater extent in Newcastle Great Park and Hampton, where there are regular bus services at the latter and a Tyne & Wear Metro commuter link at the former. Strategic urban extensions and new settlements benefit significantly by the addition or expansion of rail infrastructure, as has been witnessed at 'mark one' new towns. Cwmbran in South Wales, for example, was designated a new town under the 1946 New Town Act and was located on the Cardiff to Shrewsbury and Crewe route. A new station opened to serve the town in 1986 and has since been expanded to a commuter station with frequent, and heavily-loaded, direct services to Bristol and Cardiff. Such transport planning needs to be integrated within the masterplanning stages of a new development, as at Hampton in Peterborough, which is located adjacent to the East Cost Main Line.

South Woodham Ferrers, while being walking- and cycling-friendly, is still road dominated, and as a result residential areas appear bounded by busy through-routes as opposed to permeable links to the commercial core. This manner of transport planning is clearly a product of its time, but it serves to highlight an important issue for future new settlements and urban extensions.

6.7 Concluding issues

The leadership and strategic planning role played by Essex County Council has undoubtedly created a strong community with key elements required for everyday living. The details of public transport, regeneration, future expansion, environmental credentials are peripheral to the finished product, which provides a variety of housing stock in a country setting and within easy access of London, Southend and Chelmsford. The comprehensive land assembly that took place at South Woodham Ferrers was pivotal in realising the development. Significant investment was needed early on to prepare and plan the location and to ensure that infrastructure was delivered on the ground in preparation for the residential, commercial and industrial phases of the development.

7 Urban Extension Case Study: Caterham Barracks, Surrey

7.1 Introduction

Since 1877 Caterham Barracks have been a dominating presence in the community of Caterham on the Hill, Surrey. The 23 hectare (57 acre) Barracks site comprises three parcels of land, the largest of which is 16 hectares (40 acres) in size. The site is located to the north west of the urban centre of Caterham and is adjoined on two sides by 1930s development. The site lies within the District of Tandridge and abuts the London Borough of Croydon to the north. The metropolitan green belt boundary lies to the west of the site. To the south is a development of 450 homes on the site of the former St Lawrence hospital.

The Barracks site was originally purchased by the War Department in 1875 for a new depot for the Foot Guards regiments, and the first buildings were erected in 1875. In 1967 the IRA bombed the nearby Caterham Arms public house, and the Barracks then became out of bounds to the local community: perimeter wall and fencing was strengthened and the site became divorced from its surroundings. In 1995 it became surplus to Ministry of Defence requirements and was prepared for sale.

7.2 Key facts

- 1992: Local plan adopted without specific proposals for the Barracks
- 1995: Barracks closed
- 1996: Majority of the site designated a conservation area
- 1996: Consultation on an urban development brief

- 292 new-build dwellings, including sheltered accommodation and 96 'affordable' units
- 56 converted dwellings
- 50-bed nursing home on site
- 5,297 square metres of B1 office space
- 12 live-work units
- 2,500 square metre retail store

7.3 Pre-planning stages

The site was marketed in 1997 and an offer from developer Linden Homes was accepted. The contract was completed in April 1998. It was deemed important that the overall character of the site was maintained, and in 1996 Tandridge District Council initiated a consultation exercise which included an opportunity for local people to view the site. The Council subsequently resolved that the majority of the site would become a conservation area, which would encompass the site's one listed building – the Chapel of St Michael the Archangel, designed by William Butterfield.

An urban design brief was prepared and published for consultation by Tandridge District Council in July 1996, and following on from this a development brief was published in July 1997. The draft development brief proposed that the majority of buildings on site should be retained for a mix of community and employment uses, and suggested that around 110 homes could be created on site. In February-March 1998, Linden Homes held a community planning weekend which has since won several awards, including the Royal Town Planning Institute's 'Planning for the Community' award in 2001. The event was attended by over 1,000 people over two days and identified a desire for more homes across the site. The Council's draft development brief was consequently modified significantly before the final version was adopted in March 1998.

Housing at the former Caterham Barracks site

Temporary planning consent was granted in June 1998, permitting B1 and B8 uses in a number of existing buildings on site, and five tenants took occupation in October 1998. Duplicate planning applications for the scheme were submitted to Tandridge District Council in July 1998, and a number of Council working groups were established to look at: townscape and heritage; employment and enterprise; sports and leisure; arts and culture; young persons; environment; and community management. These groups reported to the Council's planning committee and made recommendations in support of the applications received. The second application was approved in April 1999 – the first being refused on grounds that a supermarket proposed to serve the site, and adjoining residential areas, was too large (at 2,500 square metres) and would take trade and custom away from Caterham town centre and local neighbourhood parades. The area was reduced to 510 square metres in the second application. However, the larger store was approved on appeal, and consent was granted in January 2000.

7.4 Excellence in community participation

John Thompson & Partners were appointed by Linden Homes as community consultation consultants and were given a brief to prepare a masterplan for the site.

A community planning weekend was held on the site between Friday 27 February and Tuesday 3 March 1998. Over 1,000 people attended and joined in workshops and hands-on planning sessions held on the first two days. Many aspects of the workshops were new to residents, and the sessions were divided up to cover all aspects of community development – housing, the local economy, social provision, movement, transport, and the quality of the environment. A consensus emerged in favour of an integrated community with a mix of uses that would serve both new residents and businesses, as well as the existing community at Caterham on the Hill.

Topic workshops were structured around three distinct planning phases: problems; dreams; and solutions. In

the subsequent hands-on planning sessions, participants and team members worked together to explore the physical implications of the ideas that were established in the workshop sessions. Traditionally 'hard-to-reach' groups – the young in particular – were catered for, and workshops enabled local children to put forward their ideas and thoughts.

John Thompson & Partners then spent the remaining two days analysing the results and drawing up a masterplan to create a 'Vision for the Future'. This vision focused on several key elements that were believed to be essential to the success of the new community, including:

- pedestrian and cycle ways throughout the scheme;
- a community farm with a nature reserve and a skateboard and cycle park;
- the retention of the barrack blocks, converted into flats and town houses with a tree-lined avenue running between them;
- health care services to meet the needs of the community, to be sited in the former officers' mess;
- sports, community and leisure uses;
- residential, live-work and leisure uses to be distributed around a new urban square; and
- a landmark, mixed-use building at the main entrance to the site.

Seven groups drawn from the local community were established to consider a range of topics. These 'interest groups' met on over 50 occasions and involved over 100 local people in examining the proposals put forward following the community planning weekend.

The seven interest groups all made explicit policy reference to relevant local and regional strategies as they stood at the time. The interest groups focused on the following topics:

- *Sports and leisure:* The interest group identified existing facilities in nearby areas and the needs and aspirations of the potential new community. Recommendations included planning for the provision of a gymnastics centre, a climbing and abseiling wall, and outdoor sport and recreation pitches.
- *Young people:* The interest group looked at playground and open space provision within the masterplan and at where hard-surface recreational areas would be sited in relation to the street pattern. It also considered options such as the provision of an internet café, a youth centre and a community farm.
- *Townscape and heritage:* This was perhaps one of the most important aspects of regenerating this site, as not only were significant numbers of new homes proposed, but there was also an essential core of the site which would form the link between the old and the new, both in terms of architecture and community. Retention of the quartermaster's store and barrack blocks was integral to the whole masterplan.
- *Arts, culture and performance:* Owing to the site being somewhat divorced from the main settlement of Caterham, by virtue of the area's topography, the group identified a small theatre and cinema club as important to the cultural life of the community – both proposed and existing – and as a means of aiding cohesion between the existing settlement and the proposed development.
- *Environment:* The topic group looked at the environmental legacy that the site would leave and possible mitigation strategies. The site was developed before EcoHomes standards were well established in the development industry, so softer measures such as community composting, a nature reserve and wildlife corridors to enhance the biodiversity and green infrastructure of the site were discussed.
- *Employment and enterprise:* Exhibition and conference space was seen as vital to attracting inward investment, and the provision of adult education facilities to maximise training on site was also discussed.
- *Community management organisations:* Management mechanisms for the overall site and its communal areas are essential if the urban and public realm is to be maintained to a high standard. The group recommended establishing the community development trust which has since become one of the most successful of its kind and has been a useful model for other organisations to follow.

7.5 Housing issues

The then Tandridge District Plan policy HO5 (and Surrey Structure Plan Policies DP4 and DP5) sought to secure an appropriate phasing of new housing development. Where there was an identified housing land supply equivalent to an excess of more than 20 per cent above the five-year requirement, new residential development on previously-unidentified sites larger than 0.4 hectares or providing more than ten units were not to be permitted. Exceptions to this

Crescent layout at the northern end of the site

would only be accepted where it could be demonstrated that the development would result in a significant social, community or environmental benefit. The initial proposals for a total of 348 new dwellings therefore had to be justified by the level of overall benefit to the wider community. Local plan policy HO7 specifically addressed proposals for residential development on the Barracks site: while the Barracks were to be held in reserve for possible housing requirements post-2006, an exception would be made if it were satisfactorily demonstrated that the development would result in a significant social, community or environmental benefit.

It was subsequently deemed undesirable in planning, economic and environmental terms for the Barracks to remain undeveloped until 2006, or even beyond, until such time as the District's housing land supply justified its release. To have left the site undeveloped for any significant period of time would have resulted in the rapid deterioration of the quality of the conservation area and the buildings of character which contribute to it and which were to be retained.

The development proposals that were placed before the planning committee also included a substantial package of development-related benefits, including community and recreation facilities, public transport enhancements, local environmental and highway improvements, affordable housing and a contribution towards education provision.

Surrey County Council, as the strategic planning authority, had advised that, with the base date for the then current Structure Plan Review being March 1996, any permission for new housing after that date should count towards meeting the housing provision required in the new Structure Plan period up to 2011.

7.5.1 Housing mix, layout and phasing of development

The application proposed the following overall mix of accommodation types (giving 348 dwellings in total):

- one- and two-bedroom: 137 (39 per cent);
- three-bedroom 127 (37 per cent);
- four-bedroom 77 (22 per cent); and
- five-bedroom 7 (2 per cent).

The mix included units to be provided within the retained and converted barrack blocks and the former married quarters, and all the affordable units.

The smaller dwellings were provided as terraced/semi-detached houses within the southern half of the site. The overall density of development decreases northwards, with larger and detached properties at the northern end of the site, where a crescent layout, in

which the houses are set back from the site's northern boundary, creates an appropriate transition to Coulsdon Common to the north.

Within the site the scheme features terraced housing on the northern side of a village/cricket green, a mixture of terraced and semi-detached housing around the former running track in a layout reflecting that circuit, and elsewhere properties grouped around small squares.

The development of the site was phased over a period of ten years, as follows:

- phase 1 (1998-1999): 52 dwellings;
- phase 2 (1999-2001): 85 dwellings (including 35 affordable);
- phase 3 (2001-2003): 107 dwellings (including 45 affordable);
- phase 4 (2003-2004): 54 dwellings (including 16 affordable);
- phase 5 (2004-2005): 26 dwellings; and
- phase 6 (2005-2006): 24 dwellings.

7.5.2 Affordable housing

During the course of the application process the proposed affordable housing was amended to provide a mix that would be more suited to the needs of the area and to meet the requirements of Tandridge's Directorate of Community Services.

The initial scheme proposed that the affordable housing would be developed in all phases of the development. However, a subsequent requirement was for the affordable housing to be delivered primarily in the earlier phases: 35 of the 96 proposed affordable units in phase 2, 45 in phase 3, and 16 in phase 4 (with none in phases 1, 5 and 6). Phase 2 included eight units that were delivered as a joint venture with the Guinness Trust and Surrey Community Development Trust. These units were funded with Capital Challenge money and were made available as 'move on' accommodation for people with learning difficulties. Within phase 3 there were nine two-bedroom flats for shared-equity sale.

The overall outline scheme, and the scheme which was built, indicated that the affordable housing would be dispersed around the site in a number of different locations, thereby avoiding a concentration of housing types in any one part of the site.

The 96 affordable dwellings on the site represent 27.5 per cent of the total number of dwellings. The Tandridge District Local Plan now requires 30 per cent of the total number of dwellings provided in the plan period to be affordable, but the proportion proposed and delivered at Caterham is higher than had been achieved previously in the district. In addition, providing the affordable units 'up front', before all the other residential phases were developed, and in a suitable mix to allow the rehousing of nearby occupiers, was a significant benefit.

The draft local plan policy under which agreements were negotiated indicated that the level of discount on the affordable housing would be expected to be 100 per cent of the land value, but that this might vary, depending on site characteristics, the proportion of affordable units and the extent of the total development-related benefits agreed. The discount in this case was calculated using the Total Cost Indicators (TCI) formulation in the Social Housing Grant funding framework set by the Housing Corporation. The formula calculated in discussion with the housing association results in an overall discount of 50 per cent on the land, which should maximise the chances of the scheme receiving funding. The agreed TCI figure for the affordable units, in effect, caps the maximum price the developer can charge the housing association for each type of unit.

The section 106 agreement determined that, if appropriate funding were not available to a housing association, the owner should retain the land for affordable housing until such time as funding became available. This represented an improvement on previously-negotiated agreements, in which the land had reverted to market housing on payment of a commuted sum after an agreed period of time. In conclusion, the overall package of affordable housing benefits – including the proportion, the mix and phasing within the development – was greater than had been previously achieved.

7.5.3 Barracks conversion

The detailed proposals for the conversion of the six main barrack blocks emphasised the need to retain and enhance the essential character and appearance of the buildings, which are important to the site and the conservation area. The landscaped boulevard

(incorporating parking) provided between the two rows of these imposing buildings enhances the setting of the converted barrack blocks and creates an attractive and distinctive environment for the new dwellings. The access road running along the western side of the cricket green in front of the Monck and Cambridge blocks was removed so as to provide gardens for the town houses created for these buildings. This also enhances the setting of the buildings as seen across the cricket green.

7.6 Development

While the planning applications were working through the system, Linden Homes and Tandridge District Council established the Caterham Barracks Community Trust to lease the buildings and spaces from Linden. The heads of terms of the section 106 agreement also provided for a new bus service to link the site (which is located on a hill some way out of Caterham) with Caterham itself. Other agreements made under the heads of terms of the section 106 agreement included £100,000 in contributions to education provision, £50,000 towards transportation and highway improvements, and £60,000 towards local area bus vouchers for residents.

Overall, the site provides a modest amount of housing, but nonetheless the development demonstrates excellence in community involvement techniques, and is an exemplar of a mixed-use scheme that has been integrated within the existing urban fabric in an edge-of-green-belt location. Valuable lessons can certainly be learned in consultation at stakeholder and resident level, in negotiation with developers, and in achieving a balanced approach to new development in terms of the mix of tenure and stock.

Upon completion, the site provides for 348 homes, 96 of which are affordable (built under contract for the Guinness Trust) and 70 per cent of which are two- or three-bedroom houses, in response to local housing needs surveys.

7.7 Concluding issues

The development has recently been completed, and the site is now fully occupied. A key issue throughout

Bus service running through the former barrack blocks

the development process has been keeping the size of the retail facilities in proportion to the development and its hinterland. The current size (2,500 square metres) was won on appeal, and the retail facility somewhat dominates the approach to the site.

However, a continuing success has been the Caterham Barracks Community Trust which was negotiated through a section 106 agreement. Representatives from the local authority, the developer, and existing Caterham and new residents, as well as from commercial and local business interests, sit on the Trust's Board and oversee the management of the community facilities.

While the Caterham Barracks site is small, the combination of an edge-of-green-belt location and the redevelopment of a former Ministry of Defence site makes the scheme worthy of study. The decisions taken at local level, and the political support for the scheme, ensured that the development was steered through the planning system relatively smoothly. Involving the community throughout the process has also ensured that the development has been integrated well with the existing neighbourhoods of Caterham.

8 The Case for Linked New Settlements

8.1 Introduction

The conclusions from this study, including those from the case studies, are set out in the final chapter. However an theme emerging from the overview of recent history and the literature review and from a number of the case studies is the growing movement towards linked new settlements, in a new interpretation of the new town conception of the past. This significant conclusion is therefore fully set out in this section.

8.2 Towns must have a stop

Ideas about town and country, urban and rural, and their differences and complementarities, are going through another period of change. Our post-industrial culture leaves us with strong feelings of affection for industrial urban townscape. There is enthusiasm to inhabit former mills and warehouses, characterful docks and military depots. These feelings join a long-standing affection for the rural landscape, and demand for homes and retreats in country villages in attractive areas has never been higher.

It is evident that our mental maps of England retain the very clear idea that town and country can and must be clearly delineated, one from another. Urban sprawl, a half-hearted form of town, smeared carelessly across the countryside, is reviled by all. Our planning system was devised to stop it happening, and that remains one of planning's main objectives.

This point was captured by one of the pioneers of the town and country planning movement, Sir Frederic Osborn, in the phrase *'towns must have a stop'*.[14] No matter how rationally efficient and economical (and relatively easy) it might be to add to a town another housing estate, suburb, business park or 'sustainable urban extension', a town must eventually reach its limit. This might be some physical boundary such as a river, a motorway or a railway line. It might be a physical feature such as a waterfront, or an embracing range of hills. Or it may just be the sense – which could actually be measured for those that feel the need for science on this subject – that the latest town expansion is so removed from the heart of the place that it might as well not be part of the place at all.

8.3 The alternatives to sprawl

After a relatively relaxed attitude towards urban growth in the 1970s and 1980s, when there was rising national wealth and rapid increase first in population and then in our propensity to form households (to leave home sooner, to live apart and even to live longer), there was an understandable backlash.

A priority was asserted for urban regeneration, to ensure that the habitable industrial urban landscape was recycled where possible, and that advantage was taken of modern clean air and clean employment activity to encourage people to live at higher densities, in smaller homes, and without use of a car. As part of the drive to recover the difference between town and country, the second priority, after urban regeneration and recycling previously-developed land, was to extend carefully and artfully at the edge of existing towns. The major expansion of towns and villages and the building of new towns and villages was to be a choice of last resort.

Thanks to local prosperity, and often thanks to a shortage of recyclable land and buildings, pressures for

new homes and associated uses, including employment, has led many towns to reach their 'stop'. In high-growth areas, and especially where green belts have been designated and add a policy stop to what may be a physical or psychological one, the choice is having to be made between hugely expanding a small town or village nearby, or starting a whole new town. This decision has already been made, for example, in the Cambridge, Exeter and Plymouth sub-regions. It is an idea bubbling under again in Cambridge, but also around Oxford, Stansted, Maidstone, and in parts of Surrey and Sussex.

It is significant that in the latest edition of PPS3: *Housing*,[15] the idea of 'new settlements' is no longer generally to be the choice of last resort. In some areas the point will be approaching where existing towns 'must have stop', and a bold new step will have to be taken to meet the need for housing and urban development in such a way that the distinction between town and country is not confused by sprawl.

Government-funded research suggested in 1993[6] that a 'new settlement' could be defined as a place that was either wholly new or a place planned to be expanded to more than twice its existing size. The words 'new settlement' were a necessary euphemism for the words 'new town' because, in that period, new towns were regarded as government-funded projects under the New Towns Act, with all the iconography (very good, and sometimes very bad) attached to that programme. Today we can use the words 'new town' without awkwardness. The government new towns have matured and in large part regenerated, and are mostly highly regarded, but with the perspective of history we can see that there were other types of new town before and since, and a wider legacy on which we can now draw, and to which we can now add.

8.4 A new interpretation of new settlement development

So, if it is understandable and responsible sometimes to consider the new town option, maybe instead of (or as well as) a major urban extension, as part of a designed response to sub-regional, city-regional or even regional development requirements, has anything changed in the way we might plan them?

8.4.1 Less need for high-level self-containment

One major change is in the approach to be taken to the concept of 'self-containment'. It is axiomatic that sustainable communities will provide for their own education requirements up to a certain level, and that the same approach might be taken to other aspects of living such as some shopping, recreation and employment. In fact in the government new towns programme the goal was usually to ensure that new town residents worked in the new town, and they were often located as far away from pre-existing employment centres as possible.

8.4.2 A connecting thread of public transport

Today it could be said that the attainment of self-containment is almost impossible in the more crowded parts of England, and in any case may be undesirable in locations where building a major town offers a less sustainable answer than might be offered by a cluster of new and existing settlements. It can also be said that in many circumstances it is unnecessary if excellent public transport can join places together. The guided bus joining Cambridge to its new town Northstowe, or the railway line joining Exeter to its new town Cranbrook, for example, show that new towns do not have to be so big or so distant as to be self-contained in all respects. They do not each have to carry their own higher education establishment or general hospital, theatre or Olympic swimming pool. But the test of the 'networked new town' must be that the connecting thread is public transport, and not just cars. The idea of the networked new town was well illustrated by Peter Hall and Colin Ward in their book *Sociable Cities*,[4] where clusters of old and new places are suggested, connected by railway line, in areas as diverse as East Kent, Cambridgeshire and Milton Keynes and the South Midlands.

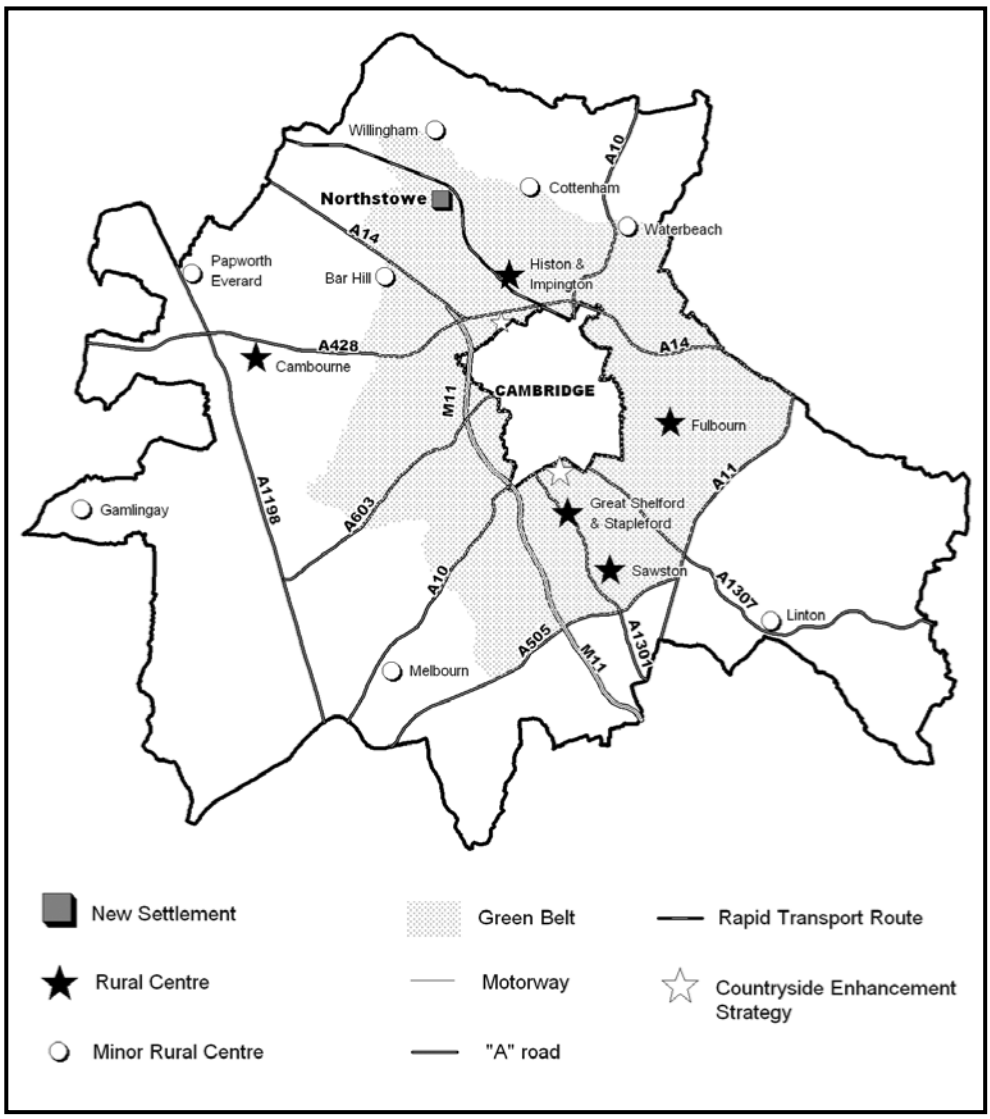
However, the concept of clustered towns and cities takes on a different form and has a new relevance in 2007. As seen in both Dickens Heath and South Woodham Ferrers, the linked concept of the smaller settlement relying upon the larger neighbour for higher-level functions has a solid and successful record. Securing transport links that are public- rather than private-transport based will clearly be a major factor in ensuring that such places advance the cause of reduced carbon emissions.

8.4.3 Networked local economic development

Linked new settlements chime well with EU spatial planning and economic development concepts, which are founded on the argument that clustering widens the economic and cultural frame for residents, increases innovation and economic growth, and assists international competitiveness. In parallel with this the UK Government has consistently prioritised the small and medium-sized enterprises which frequently gain from a clustered approach to their growth and development. Small places are one voice among many. A cluster can punch well above its weight – the North Northamptonshire growth area of Corby, Kettering, Wellingborough and East Northamptonshire is actually a cluster of more than 300,000 population which, it can immediately be seen, raises all sorts of possibilities for the quality of life in the area that as separate places they could never have contemplated. All high-level functions do not have to be in a new town for it to be a valid and valuable part of the cluster, and an investment win in one part of the cluster can be a win for the whole.

8.4.4 Accessibility provided by communications technology

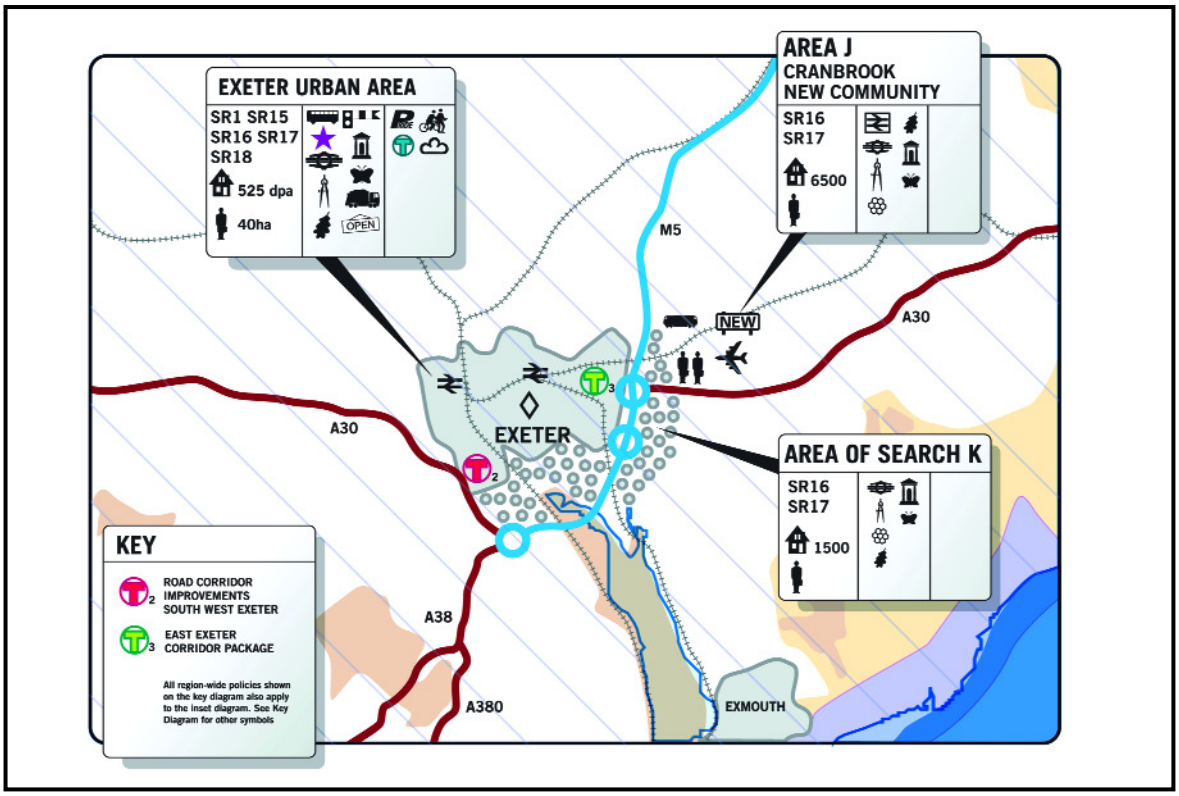
Information and communications technology reinforce the concept of the networked new town and the clustered city-region, and provide a further reason why in 2007 high-level functions do not need to be located all in the same place. The technology obviously reduces the need to travel at all during peak hours, and helps makes public transport more effective when we do travel. It allows more working from home, which re-invigorates residential areas and increases the



South Cambridgeshire District Council

The linked new settlement concept as demonstrated in (on this page) the South Cambridgeshire Local Development Framework[16] key diagram, with the Northstowe new settlement; and in the Draft South West Regional Spatial Strategy for the South West,[17] with (above and below, respectively, on the facing page) the Cranbook and Sherford new communities

sustainability of community life even in small places in the network. It also allows for significant growth in the amount of retail and education services delivered through the internet rather than through attendance in person at the supermarket or place of learning. An encouraging feature of the use of the technology seems also to be, however, that we may travel more, perhaps because we have more time – to meet a widened circle



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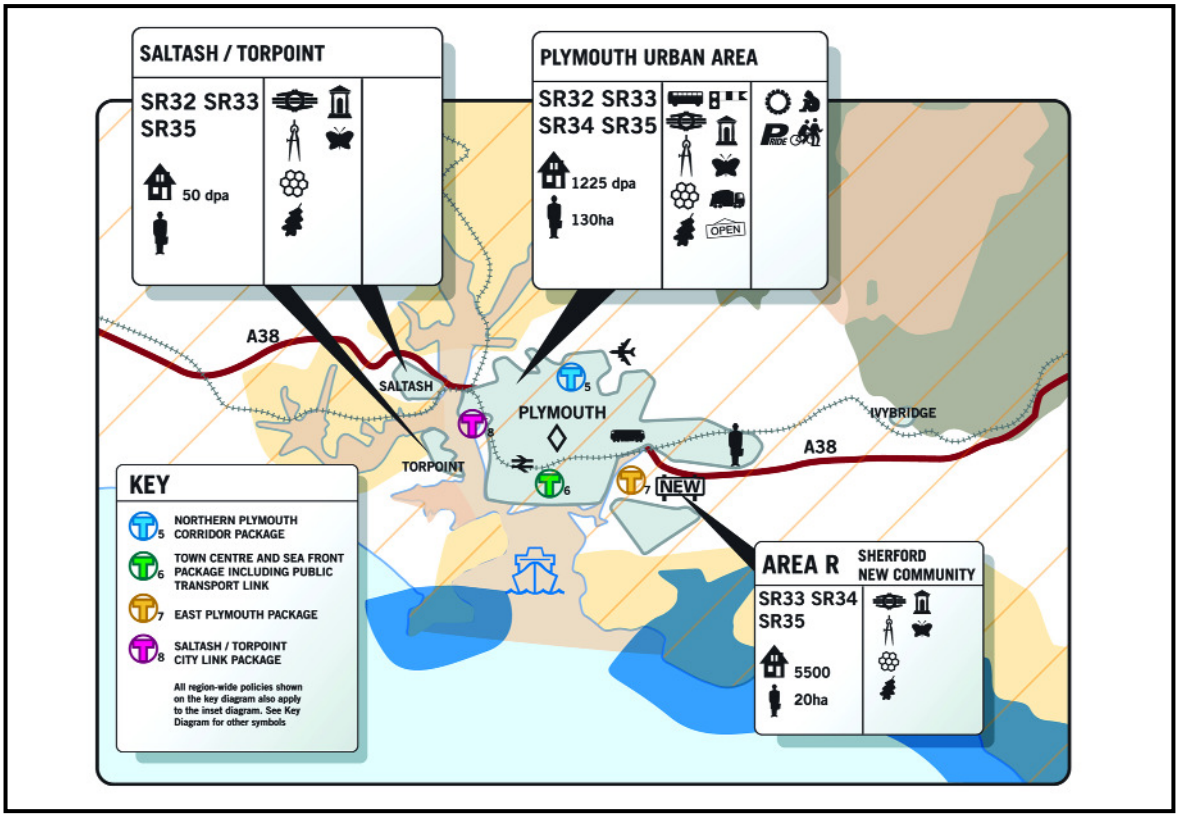

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of friends, customers or business associates. Travel in itself is a desirable feature in society – the key is that travel should be by environmentally-friendly modes and spread through the hours of the day
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8.4.5 A critical mass of 5,000-10,000 dwellings

This clustered view of the concept of self-containment does not mean that any size of place can be regarded as a sustainable community. A place needs to be large enough to support a secondary school. This means the number of homes will be in the range 4,000-5,000 at least. The reasoning is that a community that cannot provide for its children through to adulthood is not sustainable, and that the quality of community life is impoverished if older children do not participate because they are sent elsewhere each day. Growing up in a sustainable community also provides a sound foundation for citizenship. Secondary school catchments can be used as the basic building block when designing the size of a new town.

8.4.6 High environmental and carbon emissions standards

As rehearsed earlier in this report, major concentrated development of any significant size, whether as an urban extension or new settlement, brings with it clear opportunities to maximise sustainability gains. This principle applies as much to smaller as to larger new towns, but perhaps in the case of linked new settlements the smaller scale of development ensures a closer proximity for residents to rural open space and other green features. Evidence of green achievements is abundant in the post-war new towns programme, but is also found in the case studies of smaller settlements – for example in the huge investment in sustainable urban drainage systems at Upton and in the wide use of photovoltaic fuel cells at Newcastle Great Park. The freestanding linked new settlement can also deliver more substantial land value gains to fund such investments. This concept was recently recognised in draft planning guidance on climate change,[18] which would, for example, allow authorities to demand higher than the national standards on renewable energy where land values support this.

8.5 A portfolio of solutions – new opportunities

Viewed in these ways it is possible to imagine a spatial strategy for an area to present a portfolio approach – a mixture of urban regeneration and sustainable urban expansion schemes and one or two new towns, connected by excellent pubic transport and by information and communications technology, which as a whole could cover the choices, amenities and attractions of a city or city-region, yet which offered a wide variety of local urban environments set within and engaged with a distinctive and protected countryside. Up until the new PPS3 was published it was not possible for local planning authorities to piece together their own portfolio according to the most sustainable solutions locally. Today, this is possible. The need to appraise the plan in the economic, environmental and social terms usually required will remain the vital test.

9 Summary and Conclusions

9.1 Summary – what is already known

Donald Rumsfeld was never politically correct; nor is he now politically fashionable. But he did justifiably enter the political lexicon for his distinction between known knowns, known unknowns and unknown unknowns. However disastrous its application in its original context, it is surprisingly useful in thinking about best practice in urban extensions and new settlements.

First, we have a century of experience – both here in the United Kingdom and in countries that have borrowed from us and improved on us – in designing sustainable settlement forms. We do not have to devise best practice in a vacuum.

In the UK the private sector had started building small new towns in the late 1800s as an investment in their workforce and community. Examples such as Rowntree at York, Cadbury at Bournville and Lever at Port Sunlight are well known.

The vision of fully-fledged, whole, mixed-use mixed-economy towns built on land in common ownership was set out by Ebenezer Howard in his little book *To-Morrow: A Peaceful Path to Real Reform*, published in 1898.[2] His 'Social City' was a highly novel polycentric urban form that combined the qualities of life in a small country town (qualities that, in survey after survey, still prove especially attractive to British respondents) with the economic and social advantages of life in a bigger city of metropolitan weight. The basic element in the polycentric cluster was the powerful idea of the 'Garden City', and the private sector was so stimulated by the TCPA (originally the Garden City Association) that Howard's first Garden City at Letchworth (1903) and the second at Welwyn (soon after the end of the First World War in 1919) were supported by low-interest loans from friends and supporters as well as ordinary (if unusually courageous) bank lending.

Our experience of designing and implementing new towns is therefore much longer and more varied than is commonly supposed.

The UK found the limit of the reach of the private sector, however. The government had reached the conclusion early in the Second World War that it would need to take the lead on a whole programme of new towns to meet the needs of modern industry and properly house the people in healthy conditions. Lord Reith was asked to chair a committee to advise on how they might be built. He concluded[19] that the private sector could not cope adequately, and proposed the idea of publicly-appointed and funded new town development corporations. That idea was enshrined in the New Towns Act 1946 and the 32 new towns since built in the UK are home to around 2 million people today.

However, in the same way that Howard's larger vision of the Social City region was upstaged in popular imagination by his Garden City component, so the literature and practice about building new towns regards them as distinctive and separate places, each with a designed boundary and each separately brought into being by its own development corporation, without much sub-regional or regional context. Indeed, the first wave (the ring around London chosen by Abercrombie in his Greater London Plan 1944) were spoken of as 'satellite towns', and the target was set that each new town should be as 'self-contained' as possible. This not only meant physical separateness, but also that the town should be self-sustaining in

employment and other needs. There should be as little reliance as possible on travel to another town or city.

Howard's polycentric city-region – in which many towns and cities (old and new) would be networked to allow the whole to be metropolitan in scale and ambition, yet the parts would be homely and distinctive – did not figure in the government's plans. It was not until Central Lancashire Development Corporation was created in 1970 that the powers were applied to a cluster of places. The Central Lancashire project came to a premature end when development in all the government new towns was progressively stopped after 1976 (the Labour government decided that the new towns' conspicuous funding and marketing was undermining the confidence of voters in Labour's traditional power base in the old cities, including London, Sheffield, Birmingham and Glasgow).

We can be sure that while he was inventing his idea of the Social City Howard had never heard of the now-fashionable concept of economic clustering, but as a Parliamentary shorthand writer he had almost certainly heard the economist Alfred Marshall invent it without naming it. And Howard's 'Three Magnets' diagram specifically and clearly identified the real benefits – increased economic opportunities, superior services – of life in the city. Some of these have been somewhat eroded in the intervening century; Howard could never have imagined a world in which television and broadband, not to mention the electricity that made them possible, would diffuse universally across the countryside. But, in a world in which service industry depends increasingly on face-to-face contact, the density of interaction still makes the city a favoured location for economic activity. Recent research[20] has demonstrated how technology and market forces, aided and abetted by intelligent planning – the Abercrombie Plan of 1944, the South East Strategic Plan of 1970 – have diffused and reconcentrated employment and population from the capital into an ever-extending mega-city-region, already stretching up to 100 miles from the centre. This polycentric form of networked urban places of interaction is the ultimate realisation of Howard's Social City, on a scale far vaster than even he can ever have imagined.

It does not necessarily have to take this precise form. Stockholm in its General Plan of 1952 and Paris in its Schéma Directeur of 1965 both chose a more concentrated polycentric form, in which satellite towns would be located much closer to the central city and would be deliberately linked to it, and to each other, both by networks of urban motorways and by high-quality express public transport. Both formulae have worked well for their cities, and that same recent research[20] has demonstrated just how concentrated is the Parisian regional economy compared with London's. There are advantages as well as disadvantages in both forms. Paris gains by shorter commuting distances and times, with consequently better access to a greater range of jobs and sophisticated urban services. London gains by closer access to open countryside and lower-density single-family housing, which most English people (and increasing numbers of French people) prefer. There is a range of possibilities and a need to trade off these qualities.

This is important for strategic planning at the present time. The entire evolution of the South East mega-city-region, since the 1944 Abercrombie Plan, is marked by the increasing scale of diffusion and reconcentration: from the eight original Abercrombie new towns, most of which were built at or close to their planned locations, 21 to 35 miles distant from London, through the 1970 South East Strategic Plan with its emphasis on major polycentric concentrations between 40 and 80 miles distant, to the 2003 Sustainable Communities strategy (which in two of its four growth areas – the Thames Gateway and the London/Stansted/Cambridge/Peterborough corridor – strangely harks back to the 1967 South East Planning Council concept of beads-on-a-string along major transport corridors stretching out from London, up to 80 miles distant).

This last concept, too, admits of more than one variant. Peter Hall and Colin Ward, in a contribution of 1998 to mark the centenary of Howard's *To-Morrow*, suggested clusters of urban extensions and new settlements, both large and small, in locations quite distant from London: Northamptonshire, Cambridge-Peterborough, and East Kent.[4] The 2003 Sustainable Communities strategy locates new development in the same areas, but clusters it into major extensions of existing cities and towns, some of them – Milton Keynes, Northampton, Peterborough – third-generation new towns of the 1960s, which were themselves deliberately planned at greater distances from London, between 50 and 75 miles distant, than were Abercrombie's first generation.

The known known here is that the further distant from the central major city, the greater the probability of self-containment in terms of jobs, homes and services. Ray Thomas showed this in pioneering work in the 1960s,[21] and additionally demonstrated that planned new towns were more self-contained than other places at similar distances. Michael Breheny later showed that some of this advantage had eroded by 1981, as people used newly-acquired motor-mobility to seek employment opportunities at greater distances.[22] But recent research has again demonstrated that beyond about 40 miles from London, local travel-to-work areas become highly self-contained: 75 per cent and more of residents find work locally.[20] This alone would provide justification for the policy of continuing to stress longer-distance decentralisation, even though – as evidence again shows – a small minority will use high-speed transport links to commute up to 75 miles each way each day, as from Peterborough to London.

The known unknown here is the precise local balance of jobs and homes, and also the critical question of density. Evidence assembled by David Rudlin and Nick Falk suggests that a residential density of 25 dwellings per hectare (100 persons per hectare) will support an adequate bus service, 60 dwellings per hectare (240 persons per hectare) a light rail service.[23] Other work seeks a viable bus service (i.e. a profitable one) and prescribes higher densities. This urgently needs further research. Common sense suggests that the design of major urban development should balance a number of issues, and that the profitability of bus operations should not necessarily be the determining element (no city on earth has a profitable public transport system). Also unclear is the difference in the precise effect on travel patterns, both in terms of distance and mode, between the Hall-Ward pattern of local polycentric diffusion, and that part of the Sustainable Communities strategy which is more concentrated on urban extensions of relatively stand-alone places.

There are, too, unknown unknowns. Suppose advances in information and communication technology, coupled with deteriorating conditions on the roads and the railways, made possible and desirable a huge extension in home-working? Suppose a long-promised breakthrough in automotive technology, replacing today's internal combustion engine with a fuel cell or electric motor, removed many of today's objections to the growth of car-based commuting? Suppose a similar breakthrough made possible automation of the motorway system, increasing its capacity without physical extension? All these appear perhaps remote, but in the realms of the possible. So they should be constantly monitored for their possible effect in changing all the parameters within which we plan.

9.2 Conclusions

So as we scan past experience, we see that the idea of new towns – even the use of the words – appears to have become almost exclusively associated with the government new towns programme started in 1946. This programme has not been adequately researched, despite the recommendation of the House of Commons Transport, Local Government and Regions Committee.[24] Yet the government programme of 32 new towns is not the extent of our experience. There is half a century of work before that on which we can draw and, even while the government programme was under way, there were other new town projects taking place, such as New Ash Green in Kent and South Woodham Ferrers in Essex.

The focus in UK planning policy for the past ten years has been on urban extensions, rather than new towns. It has been asserted as a general rule that it is better to add on to the facilities, amenities and infrastructure of an existing town than to start a new one. Until the latest edition of PPS3: *Housing*,[17] the possibility of a new town (euphemistically called a 'new settlement') has been last in the sequence of possibilities that can be considered by planning bodies.

This general prescription has proved to be very difficult to apply in practice. Particular issues within a region or sub-region sometimes have required a strategic planning response that broke the sequence. Thus, for example, Cambridge is surrounded by green belt and the sub-regional strategy has established the need for a new town for around 20,000 people at Northstowe. The private sector initiative has recently been joined by English Partnerships, who wish to make it more dense. A small private sector new town has been agreed on land outside Bedford, called The Wixams. Two have been brewed in Devon through the proper planning system – Cranbrook to manage some growth from Exeter, and Sherford to relieve pressure in Plymouth.

In the parts of the UK subject to rapid growth and change – and the enlarged South East and its 'Oxford to Cambridge Arc' are the most conspicuous in this regard – a regional and sub-regional strategic design response is required. There will be the case for some more major urban extensions and – because the scope for urban extensions in some areas is becoming exhausted if sprawl is to be avoided – there will be the case for an increasing number of new towns. The precise choice, size, location, form and function must be designed at regional or sub-regional level; but while it can be seen that the idea of the project as 'self-contained' remains locally desirable, it was probably always mythical, and anyway is not an entirely appropriate concept for the networked future. Towns and cities are clustering already, for economic social and cultural reasons. Indeed the pressure for a cluster at Cambridge is seeing some realisation in the form of the emerging Northstowe new settlement. Major urban extensions and new towns will certainly be joining an existing or emerging cluster and will need to be configured accordingly. In tackling the strategic design, the best course, as usual, will be to hold to the present framework of knowledge. Nationally we must seek to remove some of the known uncertainties – in particular, those that affect the specific patterns of diffusion versus concentration, and lower versus higher densities – if we are responsibly to shape the emerging sub-regions in the South East mega-city-region.

9.2.1 The need for regional and sub-regional planning rather than national specification

The first lesson from our modern history and from this study is that the choice of new town or major urban extension is one that should be made through strategic design at the regional or sub-regional level, not by application of fixed theory or sequence set at national level.

9.2.2 Twenty-year time horizons

The second lesson is that there needs to be a long lead time. It is not possible for a major urban extension or new town to yield completed homes or other development for a number of years, and implementation is almost certain to continue beyond current statutory development plan periods.

9.2.3 The linked new settlement

The third lesson is that we can now conceive of the cluster of linked new settlements (as set out in Section 8) as a new and appropriate form of the new town model. Previous goals of 'self-containment' need to be tempered by an understanding of the benefits of inter-operability of places to their mutual advantage. It hardly needs stating that excellent public transport is essential to the operation of a networked cluster.

9.2.4 The need for comprehensive land assembly

The fourth lesson is that the new town or urban extension is best achieved by comprehensive assembly of the land, and by capture of a major proportion of the land values created by the grant of planning permission. Re-investment of land value gains in green infrastructure is key to realising the pressing carbon emission reduction and other sustainability gains.

9.2.5 The need for a specialised team

The fifth lesson is that the implementation of the project is a serious and distinctive task requiring a highly-focused and motivated team. It cannot be undertaken in the margins of another task or occupation.

9.2.6 The need for consensus

The sixth lesson is that the project needs cross-party support. The implementation period will last longer than several electoral cycles.

9.2.7 The need for upfront investment

The seventh lesson concerns money. The lesson from history is that, properly managed and underwritten by the capture of land values, major comprehensively-planned urban development can be good business. Unfortunately it takes time; and whether the source of borrowing is public or private, the fact is that significant investment is needed early on to prepare and plan the location and to create the infrastructure, even though excellent commercial returns will follow for the investor in due course.

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