From New Towns to Eco-Towns: Transferable Lessons in the Building of New Cities in Great Britain

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Abstract

This thesis looks to Great Britain for lessons in building New Towns, with an eye towards the nascent Eco-Towns program. Specifically, three areas in urban design are considered: the employment of the neighborhood unit, the attitude towards green space, and transportation strategy and modal shift.

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For the late Mark Schuster, whose enthusiasm and warmth led me to MIT.

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"We may well produce in the New Towns a new type of citizen – a healthy, self-respecting, dignified person with a sense of beauty, culture, and civic pride."
– Lewis Silkin, Minister of Town and Country Planning, 1946

"[Eco-Towns] create an opportunity, unparalleled since the third generation of the New Towns, to radically rethink how we design, plan and create genuinely sustainable developments, not just in our physical surroundings and services, but in how we live and interact with those around us."
– Caroline Flint, Minister of Housing and Planning, 2009

The New Town

The creation of new towns is not a new phenomenon. Throughout history, new towns have been formed on high ground, important intersections, river fall lines and mountain passes. All towns were once “new,” and even those named after their new status (the Newton’s, Villeneuve’s, and Novigrad’s scattered throughout Europe) have long since become old, the significance of their names ostensibly overlooked in everyday life. Until the 20th century, new developments were often spurred by geographic impetus and a consideration for defense or commerce. Sites were selected based on geographic or cultural significance, precipitated out of necessity, often occurring organically, or, if dictated by the government, to convey symbolic significance (as in the case of national capitals).

Only in the 20th century have new towns been conceived holistically to combat the perceived ills of urbanization. In the introduction for New Towns: Their Origins, Achievements, and Progress, Lewis Mumford asserts that “until the [British] New Towns came into existence hardly a single city was conceived as a whole, with public provision for all the physical and social components needed for a well-balanced environment.” Of course, this phenomenon was not unique to the United Kingdom: France, Denmark, the United States, Australia, the Netherlands, and Japan (to name a few) all embarked on ambitious town building programs during the early-mid 20th century with varying degrees of success. The opportunity to design new towns from scratch was alluring for the up-and-coming profession of planning, and it provided a platform to promote ideas about ideal urban configurations and situations.

Now that these “new towns” are approaching a degree of maturity – in general they are between 40 and 80 years old – we see clearly that we ignore lessons from the past at our own peril. Ideology, intentions and product often do not align, and “success” can be a fleeting achievement. How do we design and build new cities that will age gracefully? Remain loved and stewarded long after they are substantially “complete”? Become economically self-sustaining? What can we learn from past attempts at building new cities for future endeavors? This thesis will explore these questions through the lens of urban design.
in the British New Towns program, seeking lessons that are transferable to the nascent Eco-
Towns program.

**New Towns Through History**

The building of new towns is often associated with utopian ideals and reactions against existing conditions. Beginning in the late 19th century, the existing urban condition came to be seen as increasingly dysfunctional: cities were associated with disease, over-crowding, poor housing, and general filth. Inner cities became more industrial, and as the motorcar replaced horse-drawn carriages and suburbs developed along transportation links, cities became polluted and daily commuting populations increased. Victorian London, in particular, was no stranger to these urban ills. With a population that increased four-fold during the 1800’s, rapid industrialization and the advent of the railroad, the bustling metropolis set the stage for great literary tales and radical reactions against its squalor.\(^5\)

One of these reactions took the form of a proposal for a new way of thinking about the urban condition. In Ebenezer Howard’s 1898 *To-morrow: A Peaceful Path for Real Reform*, a vision of town living is presented where networks of communities are set away from large cities, residents have access to verdant countryside, jobs are local, and the town is economically self-sustaining and propagating.\(^6\) This “Garden City” idea eventually morphed into the British New Towns, a legislative agenda that produced 32 New Towns across Great Britain and the Republic of Ireland from 1946 until 1976. These towns, which range in size from around 25,000 people to 250,000 people, were initially conceived to assist in decentralization of Great Britain’s crowded metropolises of London and Glasgow but eventually expanded to include isolated industry towns and expansions of existing sizable settlements. Taking cues from the Garden Cities movement, the towns held the promise of balanced and self-contained communities, tight-knit neighborhoods, cutting-edge architecture and urban design, sociable town centers, and access to plentiful and high-quality green spaces.\(^7\)

The success of the New Towns is widely debated. While they have largely met their population goals and returned their government loans ahead of schedule, they are popularly seen as out-of-date, unloved, car-dominated, and undesirable places to live.\(^8\) Part of this image can be attributed to the long lineage and palimpsest of development most British cities enjoy – the New Towns are startlingly young comparatively. Part is attributable to the decline of government and academic interest in the New Towns – with the Thatcher administration’s shift toward revitalizing inner cities in the 1980’s, the New Towns program suffered from an unclear mandate and a financially unfavorable change in local administrative structure. But the success of a town is relative and never absolute: when given different contexts and happenstances, what might have worked in one New Town can be demonstrated to have failed in another, and the perception of that success often changes over time.
Learning From the Past
At the beginning of the 21st century, we are again faced with an urban condition that is seen as deeply dysfunctional, this time regarding excessive energy and land consumption. The desire for “sustainability” has spawned a wave of development proposals for new towns to serve as models for future urban developments. In Great Britain, this has manifest into the Eco-Towns program, a central government initiative to develop zero-carbon, self-sufficient communities with a minimum of 5000 homes each. To date, four of these have been approved to move forward, and at the time of writing, they are in the master-planning phase. While the ecological expectations of the towns have been clearly detailed in government planning documents, there is a lack of specificity regarding the urban environment the towns seek to create. Seeing the United Kingdom’s vast experience in developing new towns (no other coherent government initiative in the world comes close to the output produced under the New Towns Act), it is surprising that lessons from the New Towns program are not being employed in developing the Eco-Towns. It is surprising, until one discovers the dearth of New Towns research since 1979 and the general negative attitude surrounding their current condition, making them largely anathema for use as public precedents.9

This thesis argues that there is a wealth of lessons, warnings, and metrics to be taken from the New Towns and transferred to the Eco-Towns. Indeed, it would be irresponsible to “reinvent the wheel,” particularly when the two programs have astonishingly similar goals. With any comparison of this scope, there will be lessons that are not transferrable and lessons that are only partially transferrable, due to differences in physical, social, and governmental context. But this study is timely and necessary, lest we recreate the mistakes of the past, miss opportunities for success, or simply fail to understand the constantly evolving nature of our cities and how to plan and design with many future generations in mind.

Obviously a full study of transferable lessons is beyond the scope of this research. I will instead review three aspects of the New Towns specific to urban design: the employment of the neighborhood unit, the attitude towards green space, and the transportation strategy and current modal shift, in order to understand goals, current relevancy, how these aspects were translated into built form, and what lessons they may hold for the Eco-towns.

This thesis will begin with a basic overview and history of the New Towns Program, focusing on the three aspects that will be further explored. This will be followed in chapter 2 by an overview of the Eco-towns program, including profiles of the four currently approved Eco-Towns. Looking at the New Towns in three distinct phases, chapters 3, 4, and 5 will explore how the three urban design goals morphed throughout the program, both ideologically and in implementation. Chapter 6 will explore how each of these urban design goals are being employed in the Eco-Towns, and chapter 7 will present conclusions and further areas of research.
The British New Towns Program

Hundreds of volumes have been written on the history and evolution of the New Towns Program, focusing on every aspect from balance and self-containment to implementation mechanisms and economic development. However, little has been written since the late 1970's, a time that also corresponds with the last of the designated New Towns. Combined with a central government administrative move in the early 1990's that removed any special designation for the former New Towns and, in many cases, realigned borders and governmental districts, there is very little writing on the legacy of the New Towns, especially writing that is steeped in data. As such, it is difficult to ascertain metrics of long-term success for many of the towns. Presented here is an abbreviated history of the New Towns program, with salient aspects offered and discussed.

The New Towns have a clear lineage from Ebenezer Howard’s 1898 To-morrow: A Peaceful Path for Real Reform (also known by its 1902 reprint title, Garden Cities of To-morrow). Lewis Mumford asserts “until Ebenezer Howard came forth with his proposals in Tomorrow no one had the audacity to conceive a new form of the city, which would utilize the facilities of modern technology without sacrificing the social advantages of the historic city.” Howard called for towns outside of congested cities that would represent a marriage of town and country, presented in his famous “three magnets” diagram (figure 1.1). In Tomorrow he specified the ideal size of the town, both in terms of physical characteristics and population (32,000 people and 6000 acres, respectively).

A specific focus was on limiting these sizes: for the population, a town of less than 15,000 lacks many of the amenities of the city, while a city of over 100,000 people loses its sense of being a concrete whole. For the physical parameters of the town, the city was to be built at the center of 6000 acres, covering an area of 1000 acres. The remainder was to be a preserved greenbelt of active agricultural land. In two famous diagrams, he details the overall form of the garden city – a distinct center with boulevards radiating out into agricultural land (figures 1.2 and 1.3). He acknowledges that this physical model of the city would necessarily be adapted to the site, but the devastatingly simple diagrams of the city proved to have longevity.
Howard's book soon produced an implemented outcome in the built Garden City of Letchworth in 1903-4. Welwyn Garden City, later designated a New Town, followed in 1919-20. The plans for each show the clear influence of the initial Garden City diagrams – both have a discernable center with main roads radiating out to agricultural land (figures 1.4 and 1.5). It can be argued that they lack the coherency of the initial diagram, but their undeniable success – both are still viable, attractive towns today – contributed heavily to the development of the New Towns program.

It should be noted that Howard's primary focus in Tomorrow was not the physical form of the Garden City, but instead on the ownership and development model, which pushed for an eventual end to private land ownership in favor of a collective model. This agenda was not pursued in the New Towns, and it is an aspect often overlooked in discussions of the Garden City. What is relevant here is that these simple diagrams for the city were perhaps only conduits for a more radical agenda, though they were certainly more thoroughly developed by the Garden Cities Association (now the Town and Country Planning Association) during the forty-five years between the conception of the idea and the passage of the first New Towns Act. Indeed, the simple, digestible Garden City model, coupled with two complete demonstration towns, no doubt led to its eventual role as model for the New Towns.

Two further aspects are of particular note: first, Garden Cities were never meant to be suburbs in the sense of being primarily residential estates. They were to be self-sufficient with residences, services, jobs, and a local food supply. Garden Cities and suburbs were conflated throughout the last century, including by some of the early proponents and designers of Garden Cities. Many decades of reinterpretation of the Garden City diluted its original intentions. Second, a much-overlooked
chapter in 1898's version of tomorrow included a discussion of "social cities," or clusters of Garden Cities (figure 1.6). The chapter was dropped in the 1902 reprint, though was reintroduced in later editions. Howard states, "the idea of a carefully planned town lends itself readily to the idea of a carefully planned cluster of towns." While this section was largely ignored during the New Towns era, it has played a more prominent role in the design and development of the Eco-towns.

The Garden Cities Association/Town and Country Planning Association spent the next forty years quietly but assertively promoting the ideals of the Garden City. Lacking a political pedagogy, the idea gained traction and played a prominent role in Patrick Abercrombie's 1944 plan of Greater London Plan. The plan called for a reduction of London's population by over a million people to allow for redevelopment at lower densities. This decentralization would flow into nearby towns and newly designated satellite towns, which would be conceived to be self-contained in terms of jobs and services. He went as far as to designate ten possible sites for new towns within a 25-mile radius of central London, just beyond a proposed greenbelt (figure 1.7).

In 1945, bolstered by a populace eager for post-war reform, the newly elected Labour government created a committee to recommend guiding principles for New Town development. The New Town Committee quickly produced a report – commonly referred to as the Reith...
Figure 1.6: Social Cities
Source: Howard. Garden Cities of Tomorrow

Report – that would become the single most influential document on the New Towns Act of 1946. It envisioned "towns established and developed as self-contained and balanced communities for working and living." In terms of "balance," it specified that the towns should attract a variety of social classes, and in terms of "self-containment," it foresaw a range of social services, amenities, and jobs that would eliminate the need for commuting. In addition, it set the target population at 50,000, though said an ideal range would be between 20-60,000. It recommended housing to be built at a low density (thirty people to an acre), organized by neighborhoods and possessing a greenbelt. It can be said the Reith Committee was essentially proposing more sophisticated versions of Garden Cities, and an underlying current was that these New Towns could produce "true communities," capable of strengthening social ties, families, and a sense of citizenship. The report referred to the decline of communities to be "one of the most serious of modern urban ills."21

The New Towns Act of 1946 was passed within a week of Parliament receiving the Reith Report. It contained most all of the major recommendations, with the exception of the required greenbelt. Soon thereafter, Stevenage, identified as a potential decentralization site in the Abercrombie plan, was designed as the first New Town. Over the next thirty years, thirty-two New Towns were designated across Great Britain and the Republic of Ireland (figure 1.8). These fell into three distinct phases, commonly referred to as Mark I, II, and III. There is no universal
Figure 1.8: The 32 New Towns of Great Britain and the Republic of Ireland

Source: Hall and Ward. Sociable Cities
agreement on which cities fall into which category, particularly for the Mark II and III towns. For the purposes of this thesis, I have followed the recommendation of Peter Hall and Colin Ward in *Sociable Cities* and designated those New Towns designed to accommodate a much larger population than either the Mark I or II New Towns, typically between 170-250,000, as Mark III. These towns also mark a radical departure in planning philosophy from the Mark I and II New Towns. In addition, this thesis omits discussion of the four New Towns from the Republic of Ireland, as they were produced under a different statute and under significantly different conditions and philosophies.

The differences between the designations will be explored in detail throughout the thesis. As an overview, the Mark I New Towns were characterized by their adherence to the Garden City ideal and the recommendations in the Reith Report. They are rather formulaic, always organized by neighborhood units that are centered around a distinct, often pedestrianized, town center. Industry is carefully separated from the town as a whole. The Mark II New Towns, exemplified by Scotland’s Cumbernauld, began to see the erosion of the neighborhood unit as the guiding principle. In most cases, the town center became a monolithic structure and the pedestrian mall was enclosed, resulting in what would commonly be called a “mall,” though it included city services as well as retail. Most of the Mark II New Towns, like the Mark I predecessors, were located close to their provincial cities, still reflecting the desire to capture population “overspill” in satellite towns. The primary difference between the Mark I and the Mark II New Towns is that the latter were designed consciously for widespread use of the private car, and there was an almost obsessive concentration on separating auto and pedestrian traffic. The Mark III New Towns represent a radical departure from the previous generations – they were designed to be much larger and were characterized by adaptable and flexible planning, both in terms of political processes and physical realities. Goals for high levels of mobility and personal choice dominated planning documents. The most
famous of the third generation of New Towns, and perhaps the entire New Towns program, is Milton Keynes. While the three generations of New Towns represent vastly different physical realities and influences, the underlying philosophy of all of them can be traced back to Howard's Garden Cities, with its emphasis on a marriage of town and country, allowing residents ample access to verdant countryside.

A handful of events have been referred to as the death nail of the New Towns Program. The 1970's saw a dramatic shift in political priorities across the western world – shifts that culminated with the 1980's newfound focus on leveraging private development. A 1976 decision to pull the plug on Stonehouse, a proposed New Town in Scotland designed to relieve population pressures of Glasgow, and instead invest that money directly into the inner-city was followed up with the Inner Urban Areas Act of 1978 which effectively transferred resources from the New Towns to inner cities. While the New Towns Act stayed on the books, it has not been used to designate a New Town since.

**British New Town Ideals**
The nearly universal failure to collect data and critically monitor and report on the New Towns while the program was being actively funded has hindered scholars' ability to provide in depth analysis of the towns. In addition, building new towns in Europe and the Americas fell out of favor with planners and designers in the 1980's, as focus shifted from public to private investment and from central government directed efforts to ground-up community development. Nominally in the UK, focus shifted from building New Towns to revitalizing inner cities, but the state of England's inner cities by the late 1980's could not be considered a testament to that investment. However, during the past decade, building new communities has slowly regained favor, particularly amongst new urbanists in the United States, designers of large-scale urban projects in China, and, of course, for the UK's own Eco-Towns program. Goals for these towns ring familiar: provide walkable, dense, live-work communities with local services and amenities. Provide ample access to green-space and recreation opportunities. Provide choice in transportation modes. To not look at the New Towns for transferrable lessons would be irresponsible.
Bibliography


Notes
10 Ibid. pg 5.
12 Howard and Osborn, Garden Cities of to-Morrow pg 54.
13 Ibid.
14 Ibid.
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16 Buder, Visionaries and Planners : The Garden City Movement and the Modern Community pg 108.


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The Eco(New) Town

The Eco-Town program has evolved over the last three years – indeed, it is still evolving, as at the time of writing, the UK is transitioning from a very supportive Labour government to a Conservative coalition government that is plagued by budget woes and skeptical of the Eco-Towns. However, all signs indicate the four currently designated Eco-Towns will move forward as demonstration projects, though perhaps with less public financing than originally proposed.

In many ways, Eco-Towns pick up where the New Towns left off in the UK. While touting cutting edge technology designed to lessen the town’s ecological footprint, the basic premise is the same: design and build a city where people want to live and where they can meet their daily needs. All of the cutting edge technology in the world cannot ensure a desirable place to live, and Eco-Towns run the danger of focusing too heavily on eco-credentials to define success. This thesis is concerned with the place-making aspects of the Eco-Towns: those things that, when combined with ecologically focused technology, will produce truly sustainable and desirable communities.

The Evolution of an Idea

On May 14, 2007, while still Chancellor of the Exchequer, Gordon Brown announced an ambitious program to build five new “Eco-Towns” in England. These were meant to be free standing, carbon-neutral communities containing a total of 100,000 new homes. The announcement couched the program within Britain’s growing housing crisis, the desire for more environmentally friendly development, and the need for more affordable housing. Obviously anticipating controversy, Brown said prior to the announcement, “If we are to meet the aspirations of every young couple to do the best for themselves and their children, then we need to build new homes, and we need to deliver well-planned, green and prosperous communities where they will want to live. And I say to those who always say, “Yes but not here”, you are denying people their rightful aspirations and you are condemning our children to never put a foot on the housing ladder.”

Within the month, Gordon Brown took office as Prime Minister, making the Eco-Town idea his first major policy announcement. By July, the Communities and Local Government Department had published the “Eco-Towns Prospectus,” a document that detailed the government’s vision for the program and outlined next steps, including inviting local authorities and developers to submit proposals for development.

The Eco-Towns Prospectus

The foreword to the Eco-Towns Prospectus recalls the lineage of building new cities in the UK stating, “After the second world war, Britain faced an unprecedented housing crisis. The post-war government led a nationwide consensus in support of new housing and greater environmental protection too. A major programme of house building including New Towns developed along side the introduction of strong planning controls and the Green Belt. Sixty years ago, the post war generation recognised the importance of promoting economic and housing growth and protecting...
the environment at the same time." It went so far as to add, "We need to learn the lessons... from both the successes and the mistakes of previous generations. New developments need to be of the highest design standards as well as the highest environmental standards. Homes need to be built in truly mixed communities with strong economic underpinnings to support jobs and sustainable growth." Eco-Town documents have made no further substantial reference to New Towns. This thesis will not address the environmental technology facet of the program and will instead focus exclusively on those elements that have precedent within the New Towns program.

The Eco-Towns Prospectus insists that Eco-Towns "must be new settlements, separate and distinct from existing towns but well linked to them. They need to be additional to existing plans, with a minimum target of 5,000-10,000 homes." This requirement that Eco-Towns be completely new settlements would prove to be among the most controversial aspects of the program, with critics concerned about the consumption of greenfield space (particularly on green belt designated land), the potential for new development to circumvent existing planning processes, and the resource-rich nature of creating all-new infrastructure and development.

The Prospectus also specifies as an "essential requirement" a "management body which will help develop the town, provide support for people moving into the community, for businesses and to co-ordinate delivery of services and manage facilities." While it does not specify the composition of the body, it does state "Eco-Towns are a major opportunity for local authorities, house builders, developers, and registered social landlords to come together." This requirement added to the fear that these proposals would be able to skirt existing planning processes, as there was no explicit requirement to involve the local authority.

The Eco-Town Prospectus goes further to comment on several issues seen as key to the success of the towns: Environment and Carbon, Design, Transport, Community, Jobs as well as Homes, Health, and Land Use. These perhaps provide the best insight into the goals and intentions of the program. Critical and relevant points in each category are reproduced below:

Environment and Carbon:
- Incorporate renewable energy systems such that, not only homes, but schools, shops, offices and community facilities can reach zero carbon standards, with innovative town scale generation of renewable energy.
- Planned in a way which supports low-carbon living and, in particular, minimises carbon emissions from transport.
- Integrate green space and features to enhance biodiversity.

Design:
- A commitment to high standards of architecture and urban design throughout the development, across all housing tenures and buildings including commercial and community buildings and extending to the quality of the streets, public realm, parks and open spaces, consistent with planning policy.
- Masterplans and building specifications which are clear yet adaptable, as they will be
delivered over a number of years, and should encourage continuous improvement over time, as more sustainable patterns of living and working are developed.

Transport\textsuperscript{11}  
- An area-wide travel plan should be provided for each Eco-Town scheme, with local targets, setting out how it intends to achieve a significantly higher proportion of journeys on foot, by cycle and by public transport than comparable sized settlements.  
- High quality public transport links (and easy access to a wide range of sub-regional employment and leisure facilities) and to reduce car dependency including cycling and walking.

Community\textsuperscript{12}  
- Community empowerment in both the development and operation of the Eco-Town to hold those who make the decisions affecting the town to account and give greater power for more people to control their lives with community ownership of assets.  
- Encouraging active communities by creating the conditions for community participation and involvement in civic activity, for example residents undertaking formal volunteering on a regular basis. Encouraging participation in cultural and recreational activities.

Jobs as well as Homes\textsuperscript{13}  
- A clear economic strategy for the town relating business potential in the settlement to nearby towns and economic clusters.

Health\textsuperscript{14}  
- Eco-Towns should promote healthy and sustainable environments through design and planning to deliver physical and mental health benefits.

Land Use\textsuperscript{15}  
- Wherever there are good opportunities to do so, schemes should make use of suitable surplus public sector land, or brownfield land.  
- Above all, sustainable locations, which relate well to the existing network of surrounding towns and villages.

Planning goals were appropriately vague at this stage, with none being accompanied by target numbers or percentages (with the exception of a requirement that 30-50% of housing units be “affordable”\textsuperscript{16}). Key priorities and attitudes are evident:  
- The development will be zero carbon, and the primary carbon generators to be addressed are buildings and transportation  
- Masterplanning should be adaptable and flexible  
- Development should mostly take place on brownfield and other previously developed land  
- Good design and planning can encourage higher quality civic engagement  
- Development should be well-linked to the existing regional structure, both in terms of infrastructure and economy

A few presumed priorities are conspicuously absent, however:  
- There is no mention of community involvement in the planning process, which compounded the concern that residents would have these developments imposed on their communities (mention is made of later
community participation through “formal volunteering,” but no mention is made of participation in the early planning processes.

- The priority for jobs is on the regional economy, not on the local development. This led to criticisms that the Eco-Towns would be mere bedroom communities, and considering the UK has almost completely halted the building of new railways since Thatcherism in the 80's, would significantly increase auto emissions.

The Eco-Towns Prospectus ended with a request for feedback from stakeholders and a call for developers and local governments to submit proposals for Eco-Towns. Amid initial public skepticism tempered with cautious optimism, proposals came forth over the next six months with unexpected frequency. In September 2007, emboldened by the response of the development community, Gordon Brown announced the government would move forward with 10 Eco-Towns instead of the initial five proposed.

The Shortlist – Eco-Towns: Living a Greener Future
In April 2008, the Department of Communities and Local Government announced an initial group of fifty-seven proposals had been narrowed to a short-list of fifteen to go through the next stage of consultation. The overall goal was to have five Eco-Towns completed by 2016 and up to ten by 2020. The government detailed the next steps in the process:

- Stage One: Three month consultation on preliminary views on Eco-Town benefits and the shortlisted locations;
- Stage Two: Further consultation over the summer on a sustainability appraisal, to provide a more detailed assessment of the selected locations, and a draft planning policy statement;
- Stage Three: A decision on the list of locations with the potential to be an Eco-Town as part of the final planning policy statement, later in the year;
- Stage Four: Like any other proposed development, individual schemes would need to submit planning applications which would be decided on the merits of the proposal.

Synopses of each of the shortlisted sites were published in the document Eco-Towns: Living a Greener Future. In the document’s foreword, Housing Minister Caroline Flint wrote: “The shortlist being published here represents only the very best proposals. Not only are these the most creative and imaginative ideas, they are also practical and realistic about what can be achieved. The emphasis is not only on affordable housing in the new community, but the benefits to nearby residents.”

The document specifically asked for feedback on: “the way in which the Eco-Towns concept is being developed and the different potential benefits that an Eco-Town could offer; how particular features such as greenspace or innovative approaches to housing can best be developed in an Eco-Town; and preliminary views on the fifteen locations going forward for further assessment.” The Department of Communities and Local Government collected feedback from April-June 2008.

To say the shortlist stirred controversy would be a significant understatement. Local authorities and citizens heard about many of
the proposals for the first time when the list was published. Even more astonishing, many of these proposals were developer-driven and had been rejected by local authorities in the past. The Communities and Local Government Department attempted to quell fears of projects bypassing the planning process in Eco-Towns: Living a Greener Future by highlighting that “Eco-Towns will be subject to a planning application which we would generally expect to be decided by the Local Planning Authority.” This statement did little to stop reports that Eco-Towns would be forced upon local communities, creating a thick web of knee-jerk NIMBY'ism amid serious concerns about the eco-credentials of these new developments.

In general, Living a Greener Future provided further guidance and information on how the Eco-Towns would be different from existing development, how they would be evaluated, and what the approvals process would look like. It sought to clarify that the local community would have a say in development through the traditional approvals process, and it also sought direct input on the program itself.

The report and shortlist generated 12,000 direct responses. Respondent groups included local authorities, regional development agencies, environment organizations, transport groups, house-builders, consultants, and members of parliament. The majority of respondents, however, were members of the public. In Eco-Towns: Living a Greener Future: Summary of Consultation Responses, the responses are characterized as having a “good level of support amongst stakeholders for the Eco-Towns concept – nearly two-thirds were in favor of the idea.” However, it also cites that two-thirds did not support one or more Eco-Town locations, leading to the conclusion that in general, people supported the idea of Eco-Towns, as long as they did not directly impact their communities.

The Summary of Consultation Responses, which analyzed and presented the most salient responses from the April-June 2008 consultation period, was published in November 2008 alongside the Draft Planning Policy Statement: Eco-Towns. The number of locations being considered for Eco-Towns dwindled from fifteen to nine, with six schemes withdrawn from contention by developers, mostly due to poor local support.

The Final Four – Planning Policy Statement: Eco-Towns

The Policy Planning Statement: Eco-Towns sets out: the planning process Eco-Town developers will need to follow; the Eco-Town standards – the standards any Eco-Town proposal will have to meet; the list of locations currently assessed as having the potential to have an Eco-Town; and arrangements for monitoring implementation of the standards as Eco-Town schemes are brought forward. It is the primary governing document for the Eco-towns.

Underlying program values did not change considerably from the Eco-Towns Prospectus to the Draft Planning Policy Statement nor from the Draft Planning Policy Statement to the Planning Policy Statement: Eco-Towns. The addition of specific targets (such as the definition of zero-carbon and the requirement that 40% of development be green space)
advanced the program and gave concrete goals to normative standards, while the evolution of development proposals saw how these ideals might be put into practice.

Perhaps the most controversial aspect of the Eco-Towns from the beginning was the requirement that the developments be separate and distinct settlements. This position was vigorously defended in the Eco-Towns Prospectus and the Draft Planning Policy Statement, despite concerns that building new infrastructures is inherently unsustainable, and new developments too close to existing settlements would increase auto traffic and struggle to produce local jobs. The Department of Communities and Local government responded to concerns about increased traffic by stating: "Eco-Towns are intended to break the mould by reducing levels of car dependency and by making it easier for people to live, work and access education in the same town. They will be designed to reduce car dependency, and give people better opportunities to use other, more sustainable, transport options. Services such as health centres, shops and entertainment, and lots of green space, will all be provided within the Eco-Towns. High quality public transport will be required within the Eco-Towns themselves, with new transport links to and from them providing a benefit to people in the surrounding area." In an effort to not be overly prescriptive, the government left it up to the organizations putting forward Eco-Town proposals to determine how best to meet this goal.

The Government responded to concerns about jobs not being local by acknowledging that they, in fact, would likely not be. While also calling for there to be a job within walking, cycling, or public transport distance of each dwelling unit, the Draft Policy Planning Statement explicitly stated: "At this scale they are not expected to be entirely self-sufficient, particularly in terms of employment." This notion of regional interconnectedness recalls Howard’s Garden Cities more so than the New Towns, where cities were to work in concert at a regional scale (as opposed to being entirely self-contained, a primary goal in the New Towns). While the tacit acknowledgement that self-sufficiency is neither laudable nor attainable is admirable, the reliance on “other, more sustainable, transport options” to prevent a corollary increase in auto traffic is vague and too reliant on fortuitous regional and national economies. Precedent exists in unsuccessful attempts in New Towns to introduce public transportation and the dangers of a single-shot approach to address a complex problem.

However, in the Planning Policy Statement: Eco-Towns the Department of Communities and Local Government relented slightly on the requirement that Eco-Towns be “separate and distinct” developments, instead stating that they “should have the functional characteristics of a new settlement; that is to be of sufficient size and have the necessary services to establish their own character and identity and so have the critical mass necessary to be capable of self-containment whilst delivering much higher standards of sustainability.” Language regarding jobs in neighboring communities was dropped, though ostensibly the original intentions remained. The addition of “capable of self containment” to the planning...
<table>
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<th>Percent</th>
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*Average CO2 emissions of a UK Resident, 2001*  
*Source: Draft Policy Planning Statement: Eco-towns*

The Planning Policy Statement, for the first time, set out specific key targets in many areas of "sustainability" for the Eco-Towns. Namely, the program was aligned with goals outlined in the 2008 Climate Change Bill, which committed future governments to cut CO₂ emissions by 80% from the 1990 levels by 2050. Using data from the Resource and Energy Analysis.
Programme (REAP), the average CO₂ emissions of a UK resident were broken into eight categories, reproduced above. The definition of zero carbon in Eco-Towns was articulated: “over a year the net carbon dioxide emissions from all energy use within the buildings on the development are zero or below.” Notably missing from this definition is the carbon output of transportation. Given that emissions from transport are the same as those from home energy – both 23% of an individual’s emissions – this omission is surprising and became controversial. But while controversial, the omission was clearly not accidental, as evidenced by the following statement in the Planning Policy Statement: “It excludes embodied carbon and emissions from transport but includes all buildings.”

In addition to defining key criteria and standards for the Eco-Towns, the Planning Policy Statement: Eco-Towns identified four Eco-Town sites to move from proposal phase to the master-planning phase, to be supplemented

![Figure 2.1: Sites of the Four Currently Approved Eco-Towns](image-url)
by a total of £60 mil in grants. These sites are Northwest Bicester in Oxfordshire, Rackheath in Norfolk, St. Austell in Cornwall, and Whitehill-Bordon in Hampshire (figure 2.1).

As this thesis will explore lessons from the New Towns to the Eco-Towns in three key areas, it is important to note the goals detailed in the Planning Policy Statement: Eco-Towns regarding them.

**Neighborhood Goals**

The Planning Policy Statement: Eco-Towns makes only two specific references to neighborhoods – one requiring Eco-Towns detail the delivery timetable of neighborhoods, and the other requiring homes be within a ten minute walk of neighborhood services. This implicit assumption that neighborhoods will exist within the Eco-Towns is not accompanied by details regarding their characteristics.

In the following chapters, this thesis will explore the history of the neighborhood unit – including the evolution of its ideal size – but it's important to note now that during the time of the New Towns, the ideal size of the neighborhood was on occasion larger than the largest proposed Eco-Town: 5500 homes. Thus, the scale of these Eco-Towns, particularly those that are essentially additions to existing towns, is in line with that of a large neighborhood.

The Planning Policy Statement: Eco-Towns details standards that affect the role and function of the neighborhood. In particular, it requires:

- At least 30% of homes be “affordable”
- At least one employment opportunity per new dwelling unit should be easily reached by walking, cycling, and/or public transport
- Homes should be within ten minutes walk of frequent public transport and neighborhood services
- There should be a maximum walking distance of 800m from homes to the nearest school for children aged under eleven
- Eco-Towns should be designed and planned to support healthy and sustainable environments and enable residents to make healthy choices easily
- Services that should be provided include: leisure, health and social care, education, retail, arts and culture, library services, sport and play facilities, and community and voluntary sector facilities

Other documents, such as the Eco-Towns Prospectus and worksheets produced by the Town and Country Planning Association (TCPA), reinforce these neighborhood intentions – primarily that they be walkable to schools and shops, offer a range of transportation options, and have ample affordable housing. As will be further explored in chapter 6, they are not overly prescriptive about the neighborhood requirements – stipulations on issues such as neighborhood size, boundaries, density, and thru-traffic do not appear, as they did in the first generation of New Towns. However, distances specified for walkability necessitate a distinct scale, as do services Eco-Towns are required to provide.

**Green Space Goals**

The Planning Policy Statement: Eco-Towns devotes considerable attention to issues surrounding green space. For the purposes of
this thesis, I am focusing primarily on those that have tangible, specific impacts on urban form – omitting important issues such as flood-risk management and water efficiency.

Three primary requirements emerged in the Planning Policy Statement: Eco-Towns regarding green space:\footnote{28}

- Forty percent of the Eco-Town’s total area should be allocated to green space, of which at least half should be public and consist of a network of well managed, high quality green/open spaces which are linked to the wider countryside.
- Particular attention should be given to land to allow the local production of food from community, allotment and/or commercial gardens.
- Eco-Town proposals should set out measures to conserve and, where appropriate, enhance heritage both assets and their settings through the proposed development.

Private gardens, road medians, and urban greens are included in the 40% green space requirement – making the allocation less impressive than it might initially seem. Virtually anything that is not hard-surfaced infrastructure or building is included. This thesis will show that for New Towns with current data, the amount of green space often exceeds 40% of the town, and that a set percentage requirement does not necessarily guarantee green space will be of high quality and can, in fact, detract from goals regarding compact development.

Transportation Goals

As already noted, carbon emissions from transportation will not be included in the calculations for one of the Eco-Town’s foremost goals: carbon neutrality. However, considerable requirements for lessening dependency on the automobile are presented in the Planning Policy Statement: Eco-Towns, and their impacts will presumably be monitored.

Namely, the Planning Policy Statement requires:\footnote{39}

- The town should be designed so that access to it and through it gives priority to options such as walking, cycling, public transport and other sustainable options, thereby reducing residents’ reliance on private cars.
- Homes should be within ten minutes’ walk of (a) frequent public transport and (b) neighborhood services.
- Eco-Towns should be designed in a way that supports children walking or cycling to school safely and easily. There should be a maximum walking distance of 800m from homes to the nearest school for children aged under 11, except where this is not a viable option due to natural water features or other physical landscape restrictions.
- Planning applications should demonstrate how the town’s design will enable at least 50 per cent of trips originating in Eco-Towns to be made by non-car means, with the potential for this to increase over time to at least 60 per cent.
- Planning applications should demonstrate how transport choice messages, infrastructure and services will be provided from ‘day one’ of residential occupation,
- Planning applications should demonstrate
how the carbon impact of transport in the Eco-Town will be monitored
- Where an Eco-Town is close to an existing higher order settlement, planning applications should also demonstrate: options for ensuring that key connections around the Eco-Town do not become congested as a result of the development, and significantly more ambitious targets for modal share than the 50 per cent (increasing to 60 per cent over time) mentioned above and for the use of sustainable transport.
- Where Eco-Town plans intend to incorporate ultra low carbon vehicle options, including electric car schemes to help achieve a sustainable transport system, planning applications should demonstrate that: there will be sufficient energy headroom to meet the higher demand for electricity, and the scheme will not add so many additional private vehicles to the local road network that these will cause congestion.

As is the case with neighborhood and green space goals, transportation targets are not prescriptive in how they may be achieved. As will be shown in the New Towns, however, not getting transportation strategies right and implemented from the outset can cause woes for decades, resulting in chronic underutilization and an over-dependence on private automobiles. Without transportation factoring into the carbon neutrality calculations, there is a legitimate concern that Eco-Towns may end up appearing sustainable on paper, but not in actuality.

The Eco-Town Sites
The four Eco-Town sites currently in the master-planning phase represent a variety of existing situations – from an agriculturally active greenfield site to decommissioned mining land. Original goals for up to 20,000 homes have been scaled back considerably: the four proposals will include only a modest 5000 homes each, and the four sites vary widely in their overall size (figure 2.2).

North West Bicester
Located fifteen miles northeast of Oxford, Bicester is the largest of the towns slated to become an Eco-Town. With 30,000 residents, it sits prominently located on rail lines between Oxford and Cambridge (which currently does
not have service, though the option is being explored) and between Birmingham and London.\(^4^0\) The Eco-Town site is northwest and adjacent to the town, with the 345ha slated for development currently existing as low-grade agriculture (\textit{figure 2.3}).\(^4^1\) Northwest Bicester was not one of the original Eco-Towns presented for comment in \textit{Eco-Towns: Living a Greener Future}; instead, a proposal at Weston Otmoor, a proposed new development between Bicester and Oxford, was put forth by a private developer. The proposal was opposed by the Cherwell District Council, who later put forth the alternative proposal at Northwest Bicester.

The Northwest Bicester proposal calls for neighborhoods to be created based on the existing composition of the farmland on the site. Hedgerows and waterways would form an extensive green infrastructure that would extend into the existing city, and farmsteads would create the basis for development to grow from farm to hamlet to village, complete with neighborhood centers, services, and
Figure 2.4: Northwest Bicester - Masterplan Strategy
Source: P3Eco Ltd

Figure 2.5: Northwest Bicester - Growing the Existing Development Pattern
Source: P3Eco Ltd
employment (figures 2.4 and 2.5). Overall, 5000 homes are slated to be developed, along with facilities for an additional 5000 jobs. Housing would be developed at an average density of forty dwellings per hectare.

The economic strategy for the Eco-Town acknowledges the difficult conditions in and around Bicester currently. With the exception of Oxford, all local authorities in Oxfordshire lost employment over the last six years. The Eco-Town proposal relies on attracting knowledge based sectors, in theory enticed because of Eco-Town branding, but without a precise strategy and early commitments, new residents will likely seek other locations for employment.

Given the proximity of Oxford and the strong transportation connections, this seems a definite possibility.

However, with masterplanning by the firms Farrells and ARUP and little local opposition, the site has the potential to quietly become the model development desired by the government. Perhaps the largest design concerns are the lack of unique characteristics of the landscape and the overwhelmingly pragmatic approach to design development currently being employed.

**Rackheath**

Located five miles from the center of Norwich, Rackheath was the only Eco-Town location deemed to have met Eco-Town sustainability and deliverability requirements in the government’s 2009 decision that led to the final four designated sites (the others were deemed to have the “potential to meet” these requirements) (figure 2.6). On first glance, it contains most everything desired in the original
Ecotowns Prospectus: a separate and distinct settlement that is well linked to a higher-order settlement, a plan to include affordable housing, and a range of existing facilities. 47

Rackheath currently has 1500 residents, and the Eco-Town, with an additional 4000 homes, would allow for an increase to 11,600 (figure 2.7). 48 There are limited existing facilities including a primary school, retail, an industrial estate, and a community hall. The town has strong transport connections, including frequent bus and rail to Norwich, though it has poor cycle and footpaths. An existing industrial estate provides approximately 1000 jobs.

The bulk of the Eco-Town site is a World War II military airfield that currently functions as large-scale agriculture. The 293ha site will be designed to have an average density of forty dwellings per hectare. Overall, the site is described as having little biodiversity, which provides the opportunity to create a variety of habitats across and around the development. 49 One mile to the northeast of the site is Broads National Park, Britain’s largest protected wetland and third largest inland waterway. 50

The town is not being designed to be self-contained – residents are expected to utilize the resources of Norwich, both in terms of regional shopping and services and jobs. The total number of jobs within Rackheath will be increased to 3500, far short of the goal to have one local job within walking/cycling/public transportation of each dwelling unit. There are three primary areas of expected employment in the immediate vicinity – Norwich City Center, Norwich Airport, and the Broadland Business Park. The transportation strategy for the Eco-Town has been designed around this reality. 51

Noted concerns about the development are few – especially those that impact physical design. The developer – Barratt Homes – has extensive experience in developing “eco-villages” around Britain. 52 With a myriad of transportation modal strategies detailed from the outset and an early acknowledgement that not all jobs will be local, there is little initial concern about this proposal, outside of the number of local jobs. Perhaps its success will lie in creating a distinct, unique identity outside of the Eco-Town moniker.
Located in Cornwall near the town of St Austell, this Eco-Town development is located on surplus decommissioned mining land owned by Imerys, a china clay mining firm. The Eco-Town is actually a group of five small communities, each with a distinct identity and some connected to existing small villages (figure 2.8). The model is based on the rural growth model outlined in the Living Working Countryside: The Taylor Review of Rural Economy and Affordable Housing, a 2008 report that advocated for existing market towns (in this case, St Austell) to provide a central hub for the community with ‘spokes’ leading to smaller neighborhood-sized centers. In this case, St Austell is an existing town of 22,000 people, and the proposed eco-sites would range from approximately 1000-4000 people each. This model is reminiscent of Howard’s Garden Cities, albeit on a much smaller scale.

Overall, the Eco-Town will add 5500 homes and has the potential to add 5000 jobs. The five sites, Nanpean & Drinnick, Blackpool, West Carclaze & Baal, Goonbarrow, and Par Docks, will vary in size, though each will have housing and employment. West Carclaze & Baal, Blackpool, and Par Docks are slated to have limited community facilities, including retail and primary schools (figure 2.9). Overall, 40% of housing will be affordable, though

Transferable Lessons | Eco(New) Town
none is slated to be built at Par Docks, bayside resort-style community. However, given that in 2009 annual gross earnings in Cornwall were 25% lower than for England as a whole, a “mixed income community” – a stated goal for the project – would necessarily include more higher-income residents than currently exist in the region.54

The largest site of the Eco-Towns by far – 700ha – includes former industrial land of striking geologic character. Shoring the pits, capitalizing on the tips, and taking advantage of natural geo-thermal sources will give this development a unique character within the Eco-Towns and the United Kingdom. Together with the nearby Eden Project, this development has the potential to become a premier destination for eco-tourism.

However, the dispersed nature of the communities within the Eco-Town and the lack of current public transportation infrastructure raises concerns that the development will have a high rate of car usage. Also, plans for only three of the villages to have any community and retail services – and for those to be minimal – raises concerns that these communities will be mere housing estates and not holistic communities. The developer, Orascom

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Development, has a reputation for building “sustainable tourist and residential towns” around the world—a goal perhaps just shy of the vision of integrated live/work communities espoused by the Eco-Towns.\(^5\)\(^5\)

**Whitehill Bordon**

Located in East Hampshire, Whitehill Bordon is forty-six miles from London between the A3 and M3 motorways and the London/Portsmouth and London/Alton railways. It has a current population of 14,000 and largely developed around Bordon Garrison, a Ministry of Defence site that will be vacated by 2011 and serves as the primary site of the Eco-Town (figure 2.10). With the loss of the Ministry of Defence activities, over 2000 local jobs are in jeopardy, and there is the possibility of a 40% reduction in school rolls. Proponents of the Eco-Town consider the imperative of the proposal to be as much economic as it is environmental.\(^5\)\(^6\)

With 14,000 existing residents and a plan to expand to 30,000, this Eco-Town did not meet initial requirements that the Eco-Town be a “separate and distinct” settlement. However, the planned increase would create the largest town in East Hampshire\(^5\)\(^7\), which has the potential to increase local accessibility to jobs, services and facilities, possibly reducing “existing high levels of car dependency.”\(^5\)\(^8\) On the other hand, it is distant from any “higher order settlements” and existing transport connections, particularly by rail, are weak. If the Eco-Town is able to attract ample additional employment, it has the potential to achieve a high level of self-containment.

The Eco-Town site consists of 340ha, all of which is publicly controlled. The bid is being led by the public sector and enjoys a 77% approval rating.\(^5\)\(^9\) The Green Town Vision for Whitehill Bordon was actually adopted prior to the Eco-Town program being announced, demonstrating an early commitment to the ideals which would eventually be embodied in the program. The town grew around the Ministry of Defence site during the 20th century. It has little of the history and charm enjoyed by many small towns in England and lacks a discernable town center.\(^6\)\(^0\)

The Eco-Town bid highlights the creation of 5500 new homes and 7000 new jobs (figure 2.11). As previously stated, the creation of jobs will be paramount to the success of this Eco-Town. To date, areas for job development have been identified, but specifics have not been articulated. These areas are: sustainable development and green industries, an innovation and technology cluster, a tourism
and leisure gateway for a new national park, and technical skills training linked to the existing engineering focus of the Ministry of Defence site.61

Led by the firm EDAW (now AECOM), the initial masterplan for Whitehill Bordon has been published and is currently being publicly reviewed. It highlights, in particular, the rich opportunities for linked green space, including England’s newest national park, South Downs. Four identified Special Protection Areas will be enhanced for wildlife conservation, open to the public, and connected through green loops for walking and cycling. 62 Whitehill Bordon anticipates its rich natural heritage to be a major draw for new residents and businesses. 63

Primary concerns as the proposal moves forward revolve around transportation connections and economic development. The proposal puts much stock in the potential for better rail connections to existing settlements. Also, by its own admission, it has some of the poorest local transportation in Hampshire and a high rate of commuting by car, both locally and between towns. 64 Combined with a significant dispersal of land uses, overcoming the inertia of
car use may prove difficult. Also, the loss of jobs with the Ministry of Defence creates an extra burden for economic development, beyond that associated with doubling the population of the town. While an in-depth discussion of economic development is beyond the scope of this thesis, this factor may prove to be the linchpin of long-term success for the Eco-Town.

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Chapter Three
Mark I New Towns
The fourteen New Towns of the first generation primarily followed the model proposed by Abercrombie in the Greater London Plan; that is, they were designated to accommodate overspill populations from the UK’s great metropolises of London and Glasgow. They were mostly existing small towns, the largest of which (Basildon) had an original population of 25,000 people. Very few of the New Towns were, in fact, completely New Towns, though in most cases the remnants of the original towns are almost nonexistent. The existing populations often opposed the New Town, as the sites were decided by the central government with no input from local citizens. In a curious anecdote recalled by Alexander in Britain’s New Towns, Lewis Silkin, the government minister responsible for the New Towns, was subject to “booing and heckling” when visiting the first designated New Town, Stevenage. As he left, he went to his car to find it sabotaged and to witness signs at the local train station changed from “Stevenage” to “Silkingrad.” Building in Stevenage, like many of the first generation of New Towns, was stalled for a few years after designation due to pending litigation.

Once building commenced, towns took over a decade to build. Coordinating phasing of housing, services, and jobs proved difficult, and in early years, future residents were required to have guaranteed jobs, generally at newly built factories, before they could move into the town.

The first generation of New Towns are characterized by their distinct center—a grouping of city services and shops that are often open exclusively to pedestrian traffic—and neighborhoods, each with their own local center, separated from each other by expansive green spaces and/or major roadways. Pedestrian and auto traffic is separated, though not with the tenacity seen in the later New Towns. Architecture, particularly that in the town center, is starkly modern. Houses

---|---|---|---|---|---
Stevenage  | 1946 | 6,700 | 2,532 | 80,000 | 79,400
Crawley  | 1947 | 9,100 | 2,396 | 85,000 | 100,100
Hemel Hempstead  | 1947 | 21,000 | 2,391 | 65,000 | 81,000
Harlow  | 1947 | 4,500 | 2,588 | 80,000 | 78,300
Newton Aycliffe  | 1947 | 60 | 1,254 | undefined | 29,000
East Kilbride  | 1947 | 2,400 | 4,148 | 82,500 | 73,300
Welwyn Garden City  | 1948 | 18,500 | 1,747 | 42,000 | 43,300
Hatfield  | 1948 | 8,500 | 947 | 25,000 | 27,900
Peterlee  | 1948 | 200 | 1,133 | 28,000 | 30,000
Glenrothes  | 1948 | 1,100 | 2,333 | 55,000 | 38,900
Basildon  | 1949 | 25,000 | 3,165 | 103,000 | 100,000
Bracknell  | 1949 | 5,149 | 1,337 | 55,000 | 50,100
Cwmbran  | 1949 | 12,000 | 1,278 | 55,000 | 47,200
Corby  | 1950 | 15,700 | 1,791 | undefined | 49,200

Source: Alexander. Britain’s New Towns

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are generally bricked and terraced, a design decision that has led to difficulty in renovating and updated structures that are now aged and out-of-fashion.

**The Neighborhood Unit**

The neighborhood unit sections of the following chapters will explore the history and goals of the neighborhood throughout the life of the New Towns Program, and ask: How did the concept, role and ideal size of the neighborhood change throughout the program? How did the physical nature of cities and neighborhoods change in response to these shifts in thought? How are the Eco-Towns planning to deploy the neighborhood unit? What can be learned from these physical manifestations of theory, and what is the relevance of planning by neighborhoods today?

The neighborhood unit has become a basic building block of physical town planning — through it, administrative and funding decisions are made, assets are distributed, identity created and defined. Indeed, Houghton-Evans posits it as the “most significant theoretical advance of lasting importance” of the last one hundred years in physical planning. The use of the neighborhood in planning has shifted considerably, however: it has moved from what was perceived to be an important social organizing and citizenship development tool to something that is more akin to an administrative tool. The physical layout of a place was once seen as having the power to produce better lives, happier, more involved citizens and to create social ties between people. Over the last thirty years, the utopian rhetoric of the neighborhood has been all but abandoned, written off as environmental determinism. The prevailing purpose of the neighborhood unit has shifted to one that aids municipalities in allocating funds and social services, but with the return of ideas of “traditional neighborhoods” and the search for a more environmentally friendly physical form, the potential impact of physical form and design on lives of residents is being explored again, and its potential benefits being touted without looking to lessons of the past.

While the idea of the neighborhood may seem ubiquitous in current times, it really only formally developed as a planning tool in the 1920’s. Clarence Perry, working in the United States and greatly influenced by the Garden City movement, is widely seen as the progenitor of the neighborhood concept, though it was actually originally coined by Chicago architect William Drummond and widely exhibited during the years 1913-22.1 Drummond and Perry both employed it as an organizing tool for the layouts of residences in suburbs, and Perry further developed it in the New York Regional Plan of 1929-31.6 It subsequently influenced Abercrombie in the *County of London Plan*, the New Towns Committee in the Reith Report, and early advocates and builders of the New Towns.

In 1946’s *Homes for the People*, Boyd explores the nascent concept in detail. He establishes that the “neighbourhood is formed naturally from the daily occupations of people, the distance it is convenient for a housewife to walk to do her daily shopping and, particularly, the distance it is convenient for a child to walk to school.” This basic definition has
withstood the test of time – even when the term "neighborhood" is substituted, its core organizing idea, walkability for shopping and school, has retained its importance in British planning. What has shifted is the level of prescription for neighborhood services, the ideal size of a neighborhood (both in terms of people and physical boundaries, and the desire to find that ideal), attitudes towards modal shift, and the rhetoric regarding the ability of the neighborhood to foster social ties.

Much discussion has centered on the neighborhood's ability to foster and nurture stronger social ties and citizenship. The origins of this idea in British planning are unclear – Ebenezer Howard is often credited with the concept, but a close reading of Garden Cities of To-morrow reveals no such bias. In addition, it is often assumed and sometimes asserted that this concept is present in New Towns legislation, but, again, a close reading of the New Towns Act of 1946 and subsequent updates contains no reference to these ideals. The Reith Report – the most influential document on the New Towns legislation – is specifically prosaic about the idea that people will relate primarily with their neighborhood. Individual plans of the New Towns are equally pragmatic when discussing neighborhoods and their functions. One can look to the post-Perry neighborhood unit evolution in the United States to see language explicitly touting its benefits. Ben-Joseph recalls a 1936 Federal Housing Administration document – Planning Neighborhoods for Small Houses – which captures the sentiment unambiguously: "Where a neighborhood can be identified and comprehended as such, the feeling of pride and reasonability which the owner has in his own parcel, tends to be extended to the neighborhood as a whole. A sense of community responsibility and a community spirit thus develops, which acts as a stabilizing and sustaining influence in the maintenance of realty values."

While the concept often does not explicitly extend to the neighborhood scale in British planning documents, the intentions of a better, more cohesive and healthy populace at the town scale are unmistakable. The Reith Report states, "In great cities the sense of community membership is weak and this is one of the most serious of modern ills. In a true community, everybody feels, directly or through some group, that he has a place and a part, belonging and counting." The report goes on to prescribe specific building programs that should be in each New Town, including the cinema: "the programmes shown in commercial cinemas have a limited cultural range and American productions dominate. There may be room for a civic cinema... where documentary, scientific and other films of all countries which rarely appear on commercial screens, could be shown." The prescription of the types of movies that might be shown indicates a clear desire to impose values on future residents. Seemingly contrasting this statement, though, the struggle with paternalism that will mark the duration of the New Towns program is already evident in the Reith Report: "It is not possible, and even if it were it would not be wise, to prescribe the social and cultural pattern of a New Town. The interests, grouping and cultural activities must grow of themselves... It is this variety that gives character to towns,
and any thought of standardizing the pattern, or even standardizing the equipment, must be dismissed.16

So while the language surrounding the potential social benefits of the New Town as a whole is more prevalent than those surrounding the benefits of the individual neighborhood, it is reasonable to assert that they were intended on the neighborhood as well as the town scale, particularly in the early New Towns, where the neighborhood unit was the primary organizing tool. With the County of London Plan and the Reith Report, the sanctity of the neighborhood unit was established by the time the first New Towns were being built: theoretical questions centered around its appropriate size and function and not on its validity as a building block for towns.

A further reading into Boyd reveals early thinking on the neighborhood that is consistent with a desire to exert maximum control on the planning process generally seen through the early New Towns: “The neighbourhood unit is the area that can be served by one elementary school and it works out at from 6,000 to 10,000 inhabitants. Grouped centrally near the school are the local shopping centre and such community buildings as a clinic, or a communal restaurant. There is no through traffic in the neighbourhood unit: it skirts it, along one of the main roads... The community will have one or more secondary schools and a shopping and civic centre consisting of larger shops and community buildings, town hall, library, fire station, health centre, etc.”17

This philosophy was generally carried through in the Mark I New Towns – neighborhoods of varying size, each with their own local center and primary school, were set apart from each other by major roads, which led to (but not through) the town center. The town center was often fully pedestrianized, but the design was such that accessing it on foot or cycle was often difficult, especially as car ownership rose during the first decades of the New Towns being built.

**Green Space**

The green space sections of the following chapters explore evolving attitudes towards incorporating green space into the New Towns. The axiom of marrying town and country never faded from the plans, but its design and implementation transformed throughout the duration of the program.

For the first generation of New Towns, primary thoroughfares separated neighborhoods. Houses were separated from these thoroughfares by wide green verges that also contained utility services, thus allowing them...
to be repaired without disrupting traffic. The generous green swaths allowed for a feeling of having left the town while driving along the thoroughfares, and the swaths through the neighborhoods, detailed with pedestrian and cycle paths leading to the neighborhood and/or town center, gave residents ample access to green space (figure 3.1).

Mark I New Towns responded gingerly to existing topography, curving roads and designating parks to sensitive and significant sites. The effect truly is a town within the country, particularly in towns like Harlow, where it was executed masterfully. But the low densities of the housing estates coupled with this effect occasionally leave the residents psychologically far from the very sites that are supposed to be comfortably walkable. When green space serves as a barrier instead of as a fabric-knitter, its value should be questioned. This will be of critical importance for the Eco-Towns, which require 40% of all land to be "open space," though views it indiscriminately; all green space does not have the same value.

Modal Share and Transportation
There is perhaps no cultural change more significant to the New Towns than the proliferation of the personal automobile from the 1950's to the 1970's. The sections in the following chapters explore the shift from low level of car ownership to high levels, and its impact on public transportation and modal share and urban design.

The first generations of New Towns were designed with low levels of car ownership in mind. As such, not every unit had a parking space or garage and roads were not designed to carry high levels of traffic. In general, towns were not designed around conceptions about transportation. Footpaths led from residences to neighborhood centers and to town centers. Industry was separated from neighborhoods but was still accessible by cycling. Buses traversed main roads and led to the town center, but, ironically, often did not become ubiquitous until car ownership rose. Transportation innovations associated with the New Towns generally occurred during the second and third generations of the program.

As car ownership rose, garages were fit into housing estates, often crowding them and significantly changing their designed character. Parking decks were built around the town centers, further isolating them from the local...
neighborhoods and making them difficult to access in any way other than by automobile.

The separation of automobile traffic and pedestrian traffic that would come to characterize the New Towns was evident in the first generation. This was directly influenced by Henry Wright and Clarence Stein's 1920's design for Radburn, New Jersey, dubbed the "Letchworth" of America. Radburn, a "town for the motorage," introduced the separation of automobile and pedestrian traffic, with service rooms of houses facing garages and the road system, and living spaces facing a garden and pedestrian pathway system (figure 3.2). Radburn was a victim of the Great Crash of 1929, and the town originally designed for 25,000 people amounted to a handful of culs-de-sacs backing onto a central area with a primary school. It is accessed by a small parkway named "Howard Ave," in homage to its Garden City heritage.

Excellent links to the center cities for each of the New Towns, via road and rail, is one element virtually all of the first generation of New Towns have in common. While an explicit goal of the New Towns was self-containment, these links have proven to allow for longer-term viability of these cities, especially as commuter populations increase and regional economies increase in importance. Howard's Social Cities model has proven more relevant than he likely ever anticipated.

**As Built: Stevenage**

Included in Abercrombie's *County of London Plan* as a suggested site to relieve overcrowding in London, on November 11, 1946, Stevenage became the first designated New Town. Controversy and litigation would stall its development for a number of years, such that other towns actually commenced building prior to Stevenage, but Stevenage remains a clear built product of the ideals embodied in the first generation of New Towns.

Thirty miles from the center of London, Stevenage is located on the North-Eastern Region main railway and the A1(M) roadway, providing easy access to London and Peterborough. The 6100 acre site set up a
Figure 3.5: Stevenage - Outline Plan
Source: Osborn and Whittick, New Towns
town expansion from 6500 people, living in the historic district of Stevenage and the rural districts of Hitchin and Hertford, to 60,000 people, which was later revised to 80,000 people (figures 3.3 and 3.4). The railway and A1(M) run along the eastern edge of the designated site, such that industry is situated between them and residential areas and the town center are situated to the west.

Stevenage follows the traditional first generation model of being organized by neighborhoods, with main roads separating each unit, leading to the town center, but not through it. Pedestrian paths lead to neighborhood centers, schools, and the town center (figure 3.5). The town center is particularly iconic, with its modern clock tower and pedestrianized walkways (figures 3.6 and 3.7). As roads lead to the center, around it but not through it, the center is very inward-looking, and not well-connected to the pedestrian network (figure 3.8).

**Stevenage: The Neighborhood Unit**

The original population specification of 60,000 was divided into six neighborhoods of roughly 10,000 each, a large allotment compared to the other early New Towns. Each of these neighborhoods was designed to serve two primary schools (many now have three), rather than the one served by neighborhoods in most of the first generation New Towns. Each neighborhood has a shopping center, in addition there are sub-center shopping centers designed to serve smaller segments of the neighborhood. Main roads physically separate the neighborhoods from each other, such that children never have to cross one to go to school.

The neighborhoods were developed over a period of roughly fifteen years and show influences of shifting thoughts on urbanism and development. In general, however, they follow a first generation model characterized by layouts that respond sensitively to the existing landscape, two-storey houses (either terraced, semi-detached, or, more rarely, detached), and the separation of vehicular and pedestrian traffic. In Stevenage, the Pin Green neighborhood is of particular interest as being emblematic of Mark I New Town neighborhood development and in expressing warnings for the Eco-Towns.

![Figure 3.6: Stevenage - Pedestrianized town center](image)

![Figure 3.7: Stevenage - Pedestrianized town center](image)
The Pin Green neighborhood is the largest in Stevenage and was the last to be developed. Serving a population of nearly 20,000, it is considerably larger than the first generation ideal, but with a structure of six sub-neighborhoods, each served with a sub-center and primary school, and a “district center” (comparable to the “town center”), the development is a veritable microcosm of the larger town (figure 3.9).

Each sub-neighborhood within Pin Green is served by a sub-center, with a smattering of a few stores of local necessity, a pub and/or a community gathering center. These sub-centers are much on the same scale as a typical first generation New Town neighborhood center, though these are augmented with a “district center” and a “town center.” This hierarchy of development has proven simultaneously advantageous and problematic. As the city has grown in recent years, the fine-grained neighborhood structure has allowed new developments to be added to existing neighborhoods as relatively self-contained modules with local retail. It is important to note that while the town’s population is currently 80,000 – the precise number projected in the 1966 update to the master plan – the average number of people per household has decreased from an expected 3.5 persons per household to a current 2.4 persons per household. Thus, the town has needed more houses to maintain the population, and it has largely met that need through more family housing on the edges of existing neighborhoods.

The problematic side of maintaining sub-centers for local retail is one that will likely plague the Eco-Towns as well. As car ownership increased in the New Towns, so did choice in retail. Neighborhood centers were never designed to meet all of one’s retail needs – they were intended to have a handful of shops that might be needed ‘in a pinch’ – a pharmacy, a corner store – a pub and possibly a church, and for the bulk of shopping needs to be met by the town center. With newfound mobility, the significance of the neighborhood shopping center decreased significantly, especially if that center was not most easily and conveniently accessible on foot. Stevenage contains two examples emblematic of why neighborhood centers have failed to be largely successful: many of the centers are deeply hidden within neighborhoods, with very little street frontage and parking, accessible only through roadways that appear as driveways and pedestrian routes buried within vegetation, and many other neighborhood centers are along busy main roads, only accessible by vehicle. When the development is only accessible by vehicle, it is just as easy to patronize it as it is to patronize one a little further away with better amenities.
With Eco-Town goals to have neighborhood shopping within a half-mile walk of every dwelling unit, it will be especially critical that retail be most easily accessed on foot and for the nature of retail to be conducive to hand-carrying goods back home. However, it is also critical to recognize that the role of the neighborhood retail center has become less important as mobility has increased; when one chooses to drive to shopping destinations, immediate proximity becomes less relevant than the store’s ability to fulfill a shopper’s needs. Unless neighborhood retail offers specific goods unavailable at other places nearby or is seen as having the utmost convenience, it will be placed in competition with other neighborhood, town, and regional centers.

Indeed, with increased mobility comes a question of the relevance of the neighborhood unit in general. This is seen in current
development projects in Stevenage as planners and residents both struggle to identify new developments as part of one neighborhood or another, recognizing that people more often identify with their towns as a whole rather than by their neighborhood. This questioning of the validity of the neighborhood unit was seen more strongly in the second and third generation of the New Towns.

**Stevenage: Green Space**

Similar to Harlow, the plan of Stevenage was based on the existing topography and natural features. Original plans stressed the need for an open town, designating an ideal ratio of nineteen acres per thousand residents. Over the years, with increasing population estimates, this number was reduced to thirteen acres per thousand residents. While this number sounds generous, a close inspection of the types of open space reveals holes. Much of the land has been retained as agricultural land on the periphery of town, including land that is beyond the motorway and disconnected from the town. Extensive woodlands have been maintained, but problems of litter and vandalism have encumbered its usefulness.

A stern warning exists in Fairlands Valley Park. As a valley running through the middle of the New Town, it was originally Fairlands Farm, and the master plan retained its agricultural use, but required it be open to cyclists and pedestrians. The romantic ideal of farming within the town quickly turned sour, as the farm had constant problems of vandalism and trespassing. A 1966 update to the master plan proposed converting the site into a park that would become the principal area of open space and recreation for the town. While it suffered early from logistical implementation problems, the park now is popular, well used, and an amenity to the town.

The bulk of in-neighborhood open space occurs in strategically placed recreation fields and places where the pedestrian paths open to small squares of green (figure 3.10). This fine grain of programmed and unprogrammed green space has proven successful.

**Stevenage: Modal Share and Transportation**

In 1946, based on a survey in Welwyn Garden City, it was estimated that 16% of workers would use private cars, some 40% might use bicycles and the balance would travel by bus. By 1965 a Stevenage survey showed that 53% were car users, either drivers or passengers, 17% were cyclists, 22% used public transport and 8% were pedestrians.

A gross underestimation of the proliferation of the automobile is prevalent in all of the first generation of New Towns. Uniformly, the assumption was that at least 50% of residents...
would walk or cycle to work and to shop; this was not a pipe dream – a survey at Welwyn Garden City in the 1940's revealed that 40% of residents biked to work. The adoption of the Radburn layout was a response to this reality, and the idea that most households might own a car seemed to be in the very distant future. Of course, this reality came much faster that planners originally imagined – the built implications in housing estates of this were for these “alleys” to have a significant build-up of garages to meet demand, in many cases added after the housing was built.

The pedestrian and cycle paths which characterize the first generation of New Towns have problems other than the increase in automobile usage, however. In having the houses face the pathways, the neighborhoods turn towards a false front (figures 3.11 and 3.12). Even if these pathways were widely used, the detailing of the front of the houses makes the pathways inherently anti-social. Houses open onto private gardens with high wooden fences. Peeking into many of these gardens reveal that they are not well-maintained (similar to the “rear” gardens), but even if they were immaculate, the design of the private, enclosed space between the houses and the pedestrian path leaves the pedestrian path feeling isolated, unsafe, and disconnected from the very neighborhood it purports to knit together. This assertion has been widely made in New Town literature and being in the space reinforces the sentiment. Also, a close inspection of the pathways in the neighborhood reveals they are not as connected as they might ideally be – many dead-end within the neighborhood (figure 3.13) and few actually connect directly to the neighborhood center or sub-center (and certainly not to the town center). When Osborn said “It can be appreciated that such layouts conduce to quiet, privacy, and safety, while being aesthetically very pleasant,” we can safely view this, thirty years later, as having been shortsighted.

The Trotts Hill “neighborhood” within Pin Green provides an early example of a modified Radburn layout typical in the first generation of New Towns (figure 3.14). Terraced houses face pedestrian and cycle pathways, with the back facing garages and parking. Of course, the conception of “front” and “back” is different as
one arrives via car: the car exits a main road
onto what feels like an alley, peppered with
freestanding garages, high wooden fences, and
glimpses of unmaintained private gardens.
What would typically be the “front” of the house
has become completely utilitarian space, and
in many cases, the door to residences is only
available through a garage or an obviously
private fence. To say this sight is unwelcoming
is an understatement.

The pathways throughout Pin Green do,
however, consistently connect to the nearest
primary school, in relatively direct routes.
While there is no data on how many students
actually use them to get to school, having a safe,
direct route has intrinsic value for primary
school students, and it is a goal in the Eco-
Towns. Indeed, in observing these pathways
over several days at different times of day, it
was clear that they were most enthusiastically
used by this age group, on foot and bicycle,
and relatively rarely by other groups (with the
exception of leisure walkers and modern “pram
pushers”). Curiously, a closer look at the master
plan, aerials, and walking to and from the sites
reveals the primary school inevitably was not
designed with the student pedestrian primarily
in mind – schools are often set in vast fields,
surrounded by parking, and lacking a series
of direct routes to surrounding residential
developments. Many times, the student is left
to enter the school along the same path as an
automobile, even after traversing pedestrian
and cycle paths from their front doors. While
in most cases the absolute distance for a
student to walk to primary school falls within
the specified guidelines in the plan (less than
a half-mile), the experience of doing so falls
short of the ideal when one gets to the last few
hundred feet at the school site. This warning
should be heeded as Eco-Towns endeavor to
have a primary school within a half-mile of
every student: if the pathway itself is unsafe or
is perceived to be unsafe, it will result in fewer
students using it.
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Notes


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Mark II New Towns

Criticisms of the first generation of New Towns began to appear in the early 1950's, particularly amongst International Modernists. In The Failure of the New Towns, Richards derides the New Towns for their lack of urbanity and architectural whimsy. He says of the inhabitants, "instead of feeling themselves secure within an environment devoted to their convenience and pleasure, find themselves marooned in a desert of grass verges and concrete roadways." His critique is ostensibly architectural: "Looking at [the New Towns], one might almost imagine oneself back, not only in the era before the war but in that of the nineteen-twenties, when the little red-roofed villa scattered over mile upon mile of countryside was the only kind of housing thought of." But in reality his critique was about urbanism, or the perceived lack of it in the New Towns: "They are dominated by the same pretence of being in the country (a relic of the reaction against the over-crowded Victorian industrial town) that was characteristic of the nineteen-twenties, and they commit again every one of the faults committed then: eating up valuable acres of agricultural land; scattering housing along either side of draughty expanses of roadway; marooning the unhappy housewife on the distant rim of their sentimental green landscape so that she has to tramp for miles with her shopping basket and is altogether cut off from the neighbourliness of closely built-up streets."

The influence of the International Modernists was felt more strongly in the second generation of New Towns, both architecturally and urbanistically. The sanctity of the neighborhood unit began to erode, housing estates were built at higher densities, and design took on a much more modern language. Exemplifying this were the town centers of the second generation of New Towns – in Cumbernauld and Skelmersdale, the town centers were monolithic structures, architecturally brutal, but functioning much in the same way a mall would today (figures 4.1 and 4.2). The Cumbernauld town center, in particular, was lauded as an architectural masterpiece (figure 4.3). In a 1972 Washington Post article, Leonard Downie commented, "The steep climb from all directions to the town center is too

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Source: Alexander. Britain's New Towns
difficult to make with baby carriages or laden grocery cards, and often is too dangerously slippery without encumbrances in bad weather. Although the stores, offices, and apartments were put right into the first stage of the center, relatively few social facilities, outside several bars in a new hotel, were open. So, while the world’s architects visited, studied, and debated the unusual Cumbernauld center, the community’s new residents got into their cars and drove elsewhere to shop and play.  

The second generation of New Towns is characterized by an almost obsessive effort to keep pedestrian and auto traffic separate, as automobile usage was rapidly increasing during the design and building phases. In addition, provision for public transportation was conceived from the outset, and in many cases, the design of the town was a direct product of the design of a transportation system.  

Mark II New Towns: The Neighborhood in Transition  
Beginning with Cumbernauld in 1955, the formula for the neighborhood unit in the Mark II New Towns was less rigidly applied. The obsession with the neighborhood as a basic organizing unit gave way to a newfound reality of high automobile ownership, and concerns over moving traffic efficiently while also protecting pedestrians dominated early planning discussions for the Mark II New Towns.  

In addition, the credibility of the neighborhood unit was beginning to be called into question. Early proponents touted its inherent sociological benefits, but by 1961 government studies were revealing discontents in the early New Towns. Coined the “New Town Blues” by the media, the “condition” was marked by residents unhappy with their new, mostly
unfinished settlements and disconnected from their families in the cities they left. A 1961 Time Magazine article recalls, “Used to the grubby intimacy of city life, transplanted urbanites missed the profusion of corner pubs, neighborhood dance halls, local cinemas, and the ready help of neighbors and friends.” A Stevenage teenager remarked, “This town is a dump unless you like walking around looking at new buildings. There’s certainly not much else to do.”

Of course, this sentiment is at odds with the expectations of the first generation of New Towns, which touted these very cinemas and pubs as critical to meeting their sociological goals. By 1961, however, many town amenities, including neighborhood centers and town centers, had not yet been built. This is widely seen as a failing of the early New Towns, as a primary reason for “New Town blues,” and attempts were made to have services be more equally delivered with housing in later New Towns. Indeed, subsequent government documents and many sociologists reported in the mid-to-late 1960’s that the New Town Blues were temporary, short-term, and relatively minor.

Important to take away from the New Town Blues is the flailing optimism seen between the first and second generation of New Towns. In the ten years that passed between the first generation of New Towns being designated and the bulk of the second, the optimism and economic boom that characterized the period...
immediately after World War II had waned, and
so had the nation’s enthusiasm for planning and
what it could accomplish. Thus, the second generation of New Towns met
the neighborhood unit with a certain amount of ambivalence and skepticism. Clapson recalls
studies from the early 1960’s that call into
question the neighborhood’s ability to foster
social connections. A Peter Willmott study
on Stevenage in 1962 revealed a “friendship
map” that demonstrated the neighborhood
was not a major influence on friendships. Similarly, studies were beginning to show an
inclination for residents to choose shopping
and schools outside of their neighborhood, no
doubt enabled by the increase in car ownership,
but also perhaps demonstrating a lack of
sentimental attachment to neighborhood.

In the 1961 article “Neighbourhood Units in
British New Towns,” Anthony Goss further
investigates this emerging suspicion that the
neighborhood unit is not meeting expectations. He explores statistics in neighborhoods
in ten New Towns, looking at economic
distribution, the amount of open space and
facilities available and planned. While the
study is not exhaustive, it reveals the lack of
consensus and understanding of what makes a
neighborhood successful, particularly socially. He concludes that in addition to providing
services in a timelier manner, that “there is a
certain rigidity in interpretation which seems
unnecessary.” Specifically, he is referring to
the size of the neighborhood both in terms of
population and geography. This is an evolution
in thought that will be implemented in the
second generation of New Towns. Still, he does
not propose abandoning the neighborhood,
and still clearly believes the values it purports
to embody are relevant and achievable: “There
seems to be a general lack of information about
how communities work; there is also the great
difficulty of estimating people’s reactions
in hypothetical situations. For unless social
and community facilities are provided for in
full measure in well-planned neighbourhood
units it will be very difficult to judge whether
important social benefits will accrue when
people are placed in such circumstances. It
would seem wholly admirable to make the
attempt to restore such values even if such
community life is more reminiscent of the
village or small town than of president-day
metropolis.”

The result of this vacillation is seen in the
built form of the New Towns, particularly in
Cumbernauld and Skelmersdale. In both towns,
the neighborhood is still present but does not
guide the overall design. Both towns place
emphasis on the town center as a unifying
locale, and being able to easily reach the center
on foot, separated from cars, takes precedence
over the importance of a specific neighborhood
center. The second generation of New Towns
also sees the decline in the usage of the term
“neighborhood,” instead being replaced by
terms like “village” or “community,” but it
can be argued that while the towns did not
adhere to the earlier, formulaic notions of
neighborhood, the concept was still prevalent
and useful as a design tool.

**Green Space**

Green space in the second-generation of New
Towns is characterized by a sensitivity to
landscape design, particularly in the usage of native plants and flora. Like the first generation, town plans respond to natural topography and significant sites.

A greater effort is promoted in the second generation of New Towns to create a network of green spaces, especially as the primary large-scale open spaces were pushed to the edge of the towns in order to allow neighborhoods to be more compact and closer to the center.

**Modal Share and Transportation**

Innovations in transportation strategies are apparent in the Mark II New Towns. In Runcorn, a bus rapid transit system was developed that is still in use today (*figure 4.4*). The study of traffic influenced town form, where towns like Irvine were developed along corridors that formed a loose grid and would allow for easy access to local and town centers (*figure 4.5*). In addition, Mark II New Towns are characterized by a complete separation of pedestrian and automobile traffic.

**As Built: Skelmersdale**

After Cumbernauld in 1955, Skelmersdale was the first of the second generation of New Towns to be designated in 1961 – this group being mostly designated to relieve congestion around Liverpool and Glasgow between 1961-1966. Thirteen miles to the northeast of Liverpool, Skelmersdale was originally designed to...
accommodate 80,000 people (figures 4.6 and 4.7). This number was later reduced to 61,000 and the 1999 population was 37,100.16

The design bears a strong resemblance to the more famous Cumbernauld – designed by the same group of architects/planners, Skelmersdale lies close to its major city, was designed to accommodate “overspill” population, and is linked to the wider region by motorway (much more so than by train or other public transportation). In design terms, both are organized around a town center that is geographically and socially the primary focus of the town. Housing developments are compactly designed to be close to the town center – over half of the residents are within a half-mile, eighty percent are within a mile – and “country side” – each are designed to be within a half-mile of “nature.”17

Key to this compact design and connection to the town center are pedestrian pathways. Skelmersdale and the second generation of New Towns saw a full deployment of the Radburn principle of pedestrian and automobile separation. At Skelmersdale, this separation is so extreme that it’s difficult to envision the geographies super-imposed on each other – driving through the town and walking through it are vastly different experiences, completely disconnected from the other.

The Neighborhood Unit
Housing developments in Skelmersdale are internally closely knit – they are almost exclusively terrace houses of 2-3 stories with small, fenced gardens surrounded by concrete (figures 4.8 and 4.9). Pathways weave in and out of courtyards, often with units having no direct connection to the road, their parking space, or green space other than their private gardens. The effect is maze-like. Only when one leaves the development – which can number in the hundreds of units – is there vast green and open space. Each of these developments is, like the “neighborhood unit” in the first generation New Towns, served by a primary school and local shops, with the latter being much less of a

Figure 4.6: Skelmersdale Regional Context
Source: New Towns Record

Figure 4.7: Skelmersdale Sub-Regional Context
Source: New Towns Record
“focus” for the neighborhood’s social landscape than in previous towns (figure 4.10).

The Little Digmoor neighborhood is typical of this type of development. Terraced houses are grouped around concrete courtyards. Osborn describes the setting without a sense of irony: “The paved pedestrian ways broaden occasionally into squares, many of which are utilized as children’s playgrounds, some furnished with groups of concrete objects for play purposes, and there are occasional trees and beds of shrubs and flowers neatly bricked round.”18 The New Towns Record sites, “Development of a lower density with larger gardens would have been preferred by residents. Nevertheless, it should be stressed that the new homes into which most people moved were infinitely better than anything they would have encountered in their previous areas which was, more often than not, slum housing in Merseyside.”19 Visiting Skelmersdale, it is difficult to imagine the designs were ever met with a sense of optimism.

Both the New Towns Record and Houghton-Evans assert that Skelmersdale and Cumbernauld represent an abandonment of the neighborhood system.20 While there has been a shift in its application, I would contend this characterization is premature and not wholly accurate. The importance of the neighborhood in enabling social ties undoubtedly faded to the background, as did the assumption that the neighborhood center would meet many everyday social and commercial needs. The neighborhood center itself shifted from a focal point development to a strategically placed corner store and meeting hall. The primary school as the basis for the neighborhood remained, however, as did the idea that the “neighborhood” was physically separate and distinct from other neighborhoods.

In the second-generation New Towns the neighborhood lessened in preeminence, but remained a critical organizing and design tool.

The neighborhood center was replaced in importance by the town center, especially for those 80% of residents within a mile walk. If the ideal of the first-generation town centers was for a pedestrian-only shopping experience surrounded by parking, the second-generation could be characterized as that plus a roof,
or what is now commonly called a “mall” (figure 4.11). Pedestrian paths from the neighborhoods lead directly into the structure, which contains an impressive number of functions, including: shopping, a bus station, the Magistrates court, the library, police headquarters, a cinema, and an ecumenical center for religious uses. There is ample parking, both surface and deck, surrounding the structure, with entrances for those who arrive via automobile on the ground floor. Pedestrian paths, as always completely separated from roads, dive into the building on the second story, mostly along impressive bridges (figures 4.12 and 4.13). This arrangement allows no flexibility from the pedestrian path – there is no comfortable and safe route around the building or into the building from any other entrance than the path one is currently on. This is not a problem when the building is open, but becomes a significant obstacle when the building is closed. Currently, the building opens daily at 9:00am and closes between 5:30 and 7:00pm. The very building designed to "bring
the town together" creates an impenetrable barrier when its doors are locked. This is even more significant when one considers the town's primary bus station sits on one far side of the building.

The local centers and corner shops within neighborhoods have struggled as well. Initially deemed a huge success – there were even plans to extend them – they met hard times when the town center was completed in 1974. Many of them currently sit vacant, a product of increased mobility, choice, and a general lack of discretionary funds within this relatively poor community. Nevertheless, the New Towns Record asserts local shopping centers and corner shops continue to provide an important service for less mobile sections of the community, particularly the elderly.

Green Space
A primary goal of the original master plan was that every resident of Skelmersdale have direct access to countryside within 800 meters of most dwellings. For the most part, this has been achieved through very compact development around the center of the city – most open space lies to either the east or west of the town. Within the housing estates, there are small areas of open space that include original wooden gullies that traverse the site. An aerial view shows these green swaths – unlike in the first generation of New Towns, walking from neighborhood to neighborhood reveals that the green verges do not create a barrier (figure 4.14). Often, they are narrow enough that within a hundred yards, glimpses of the next neighborhood are visible.

Modal Share and Transportation
Skelmersdale suffered a major early setback in the loss of rail service between Liverpool and Manchester. The service has since been restored, but it is infrequent and the station is near the southern barrier of the town, resulting in less than 2% of the population using the train to commute. This does not indicate a high-level of self-containment, however, as roughly half of all residents in Skelmersdale commute out of the town to work, and half of all workers in the town are from other towns. With very poor bus service, less than 5% of the population uses public transportation to go to work. Curiously, this does not correlate
with a high rate of car ownership, as one might expect. Roughly forty-percent of households do not own a car, an significantly higher rate than the 22% in the local authority district of West Lancashire, 30% in the north-west region of the country, and 27% of all of Britain. Only half of residents commute via car (this includes car pooling), and nearly 20% walk to work. While this would typically be lauded – indeed, they fit with difficult to reach Eco-Town ideals – it’s important to note that Skelmersdale is poor: the average resident makes nearly £400 less per month than their fellow residents in the North West, a region that is already comparatively low-income to the rest of the country.

Yet, spending time in Skelmersdale reveals the unexpected: something about it works. It is not
glamorous, it suffers from high unemployment and low levels of education, buildings are showing their age; but the town is working. The first few hours wandering the pedestrian paths are reminiscent of Stevenage – they feel unkempt, slightly unsafe, but then the details come into focus: they are heavily used by children and adults alike. While children seem to shun playing on the concrete objects designed for play in the courtyards, they run free on a nice day through pedestrian paths and open fields. Adults move along with a sense of purpose, often with a shopping bag in tow. Once you leave your car, cars are rarely seen. If “urbanity” is about walkability, choices, and the chance, unexpected encounter, this New Town unexpectedly possesses it.

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Notes

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Mark III New Towns

If the Mark I New Towns were direct descendants of the Garden Cities, the Mark II New Towns a response to the failings of the Mark I New Towns, then the Mark III New Towns can only be characterized as a complete break from either model, and instead a re-interpretation of the intentions of the Garden Cities. Two primary shifts directed these changes: the proliferation of the automobile and the advent of “advocacy planning” which placed more control of the planning process in the hands of residents.

The 1963 report “Traffic in Towns” (also referred to as the Buchanan Report) called for a scientific approach to reduce traffic congestion and pollution in cities. Traffic management was an evolving science, at the time based on the premise that roads themselves were the cause of congestion (we would now be more likely to characterize congestion as a product of the car instead of the road). The Buchanan Report went so far as to regard transportation as the planners primary concern. As such, Mark III planning began with a consideration of the transportation system rather than residential organization.

Concurrently, Paul Davidoff was promoting “advocacy planning” in the United States, which became greatly influential on the later New Towns. In advocacy planning, planners regard the residents of a planned area as their primary clients. This led to far greater public participation than had been seen before in planning, and shifted the perceived expertise from planners to the future inhabitants of the cities. Master plans shifted from a prescriptive, detailed and final nature to being more open-ended and adaptable.

Flexibility and planning for growth were urged as the real concerns of new-town planners, and the Mark III New Towns were marked by efforts to give residents a wider range of personal choice. Buder posits that, “Ebenezer Howard doubtlessly would have approved of all of this in theory, but the results could only have startled him.”

Mark III New Towns: The Non-Neighborhood Neighborhood

If the Mark II New Towns met the concept of the neighborhood with skepticism, the Mark III New Towns were downright dismissive of its relevance. The third-generation of New Towns were extensions of existing settlements (with the exception of Milton Keynes), designed to be significant “counter-magnets” to their regional center cities. The general focus was no longer on the neighborhood, but on

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Source: Alexander. Britain’s New Towns

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sustaining a regional economy, providing choice in housing, transportation, and shopping and accommodating flexibility and adaptability in planning and the planning process.

As has been demonstrated, the Mark II New Towns represented a period of shifting thought on the urban condition. Unlike the Mark I and the Mark III New Towns, the second-generation was not tied to a strict pedagogy or prevailing urban theory; instead their development was influenced by the mistakes of the past, yet planners were unconvinced and unready to test nascent theories that would come to characterize the third-generation of New Towns. This is especially true regarding the attitude towards neighborhoods.

Lending weight to the skepticism on the neighborhood was Christopher Alexander with his seminal paper *A City is not a Tree* in 1966. A mathematician and an architect, he posited that thoughts on the urban condition had become over-simplified and over-engineered. In making an analogy to the linear, singular branching of a tree, he postulated that the city was best viewed as a “semi-lattice” with complex and overlapping associations, not as a tree (*figure 5.1*). He does not call for a return to the sentimental state of historic cities, but for a planning process that can encourage the “right kinds” of overlap and complexity. He does not define those conditions, indeed, he readily admits he does not have the answers: “You are no doubt wondering, by now, what a city looks like which is a semi-lattice, but not a tree. I must confess that I cannot yet show you plans or sketches. It is not enough merely to make a demonstration of overlap – the overlap must be the right overlap... The work of trying to understand just what overlap the modern city requires, and trying to put this required overlap into physical and plastic terms, is still going on. Until the work is complete, there is no point in presenting facile sketches of ill thought out structure.”

Working at the University of California – Berkeley at the same time as Alexander, Melvin Webber was exploring a parallel frustration with the state of planning and design. His focus was perhaps less theoretical at this point: the suburb, and the cars that go with it, are here to stay, and the urban condition must accommodate that. Those very cars give people the freedom to shop and associate however they please, and so an idea of community based solely on locality is invalid. He hints at technological advances which will come to fruition over the next forty years; advances that will render distances irrelevant with real-time communication. Communication is regarded as spatial, but not linked to land, and thus he contends that “we have been searching for the wrong grail, that the values

![Figure 5.1: Urban Structure is best viewed as a 'semi-lattice' (left) and not a 'tree' (right). Source: Houghton Evans. Planning Cities](image-url)
associated with the desired urban structure do not reside in the spatial structure per se. One pattern of settlement and its internal land use form is superior to another only as it better serves to accommodate ongoing social processes and to further the nonspatial ends of the political community." He "flatly reject(s) the contention that there is an overriding universal spatial or physical aesthetic of urban form." One will recall that the Reith Report said in 1946 that "any thought of standardizing the pattern... must be dismissed," but it has been demonstrated that the pattern was, in fact, standardized and often scrutinized by its adherence or failure to adhere to established norms.10

As such, Webber declared planning by neighborhood to be 'wholly misguided.'11 Communication advances and car proliferation allowed people to choose where they wanted to be, rendering traditional planning inflexible for progress. He says of the future role of planning: "'Metropolitan planning, then, would become the task of mutually accommodating changes in the spatial environment and changes in the social environment. And, because so much of the future is both unknowable and uncontrollable, the orientation of our efforts would shift from the inherently frustrating attempt to build the past in the future to the more realistic strategy of guiding change in desired directions – from a seeking after predesign end-states to a continuing and much more complex struggle with the processes of becoming.'"12 This emphasis on planning as process and accommodating for adaptability would greatly influence Richard Llewelyn-Davies, whose firm was responsible for the masterplanning of Milton Keynes. Webber was invited to consult in the masterplanning process – to explore putting these nascent ideas into practice at the blank-slate that was Milton Keynes.

**Green Space**

With the advent of the transportation system as the primary generator of urban layout, the sensitivity to topography and existing conditions that characterized the Mark I and Mark II New Towns begin to wane. The superimposition a transportation system – rather it be linear, radial, or cellular, necessitated a certain ambivalence towards existing conditions, but one that still emphasized a great sensitivity than what is commonly seen in England and the United States today.

Green space materialized in two distinct ways in the Mark III New Towns: alongside primary roadways and in pedestrian and cycle networks that traversed the town. Gone are neighborhoods separated by dramatic topographical features, as seen in Harlow and Stevenage. Instead, green networks form a web over the entire city, with parks generally taking a linear form, being accessible to many communities and residents. Green verges along major roadways are dramatic – particularly at Milton Keynes where while driving along the major roadways, one could truly not be aware they had entered the city.

**Modal Share and Transportation**

As previously mentioned, the shift in attitude towards transportation is a primary noticeable difference in the Mark III New Towns.
"Scientific" inquiries into traffic management explored the benefits of various forms of networks. Two primary forms emerged: a closed circuit, as seen at Runcorn, and a gridiron, seen in Washington and Milton Keynes.

Runcorn, designated in 1964 with a target population of 100,000, is very much a hybrid of a Mark II and III New Town. With defined neighborhoods, compact development, and responsiveness to existing topography, it falls into Mark II ideals. However, its form was largely generated by its transportation system – a closed-circuit loose figure eight that provides bus-rapid transit in close proximity to almost all residents – is a characteristic of Mark III New Towns (figure 5.2). While the form was successful – the transit system is still in use today, and the city has higher rates of residents taking public transportation than other cities in the region – it has proven to limit growth and expansion opportunities. Newer neighborhoods built away from the transit system, such as Heath and Halton Brook, have
extremely low rates of ridership and higher rates of car ownership.

The Mark III New Towns, on the whole, saw the grid as the best form to promote ideals of adaptability and choice. Diagrams for Washington show the rationale—a loose grid, with roads spaced roughly one-half mile apart, could accommodate multiple villages, focal points, and overlap, while also allowing for unencumbered commuting to areas across town (figure 5.3). In theory, all roads would be traversed by buses, with bus stops along the mid-points, easily accessible through the pedestrian and cycle paths. Providing public transportation proved to be more difficult than originally assumed.

As Built: Milton Keynes

Milton Keynes, the largest and most well-known of the New Towns, epitomizes the ideals of the Mark III generation. Midway between London and Birmingham, it was not designated in order to accommodate overspill from either, but instead to create a new regional center (figures 5.4 and 5.5). The form is a loose

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grid, intersections are at every kilometer, and residential, industrial, and commercial uses are interspersed, with a regional shopping and employment center near the center (figure 5.6).

Designers envisioned a city full of choice: choice in where one shopped, choice in housing typology, choice in mode of transportation one might take. For the first time in the UK, designers grappled with how rising affluence might impact urban form. And while Milton Keynes has the lowest density of any New Town, it also actively worked to provide a variety of housing types at different price points.

As Built: Milton Keynes Neighborhood
The Mark III New Town proposals came to be characterized by an emphasis on open-ended planning, dispersal of land uses, and responsiveness to changing conditions. Houghton-Evans remarks, “There seemed to be considerable uncertainty about urban structure and the tendency was to keep the options open.”14 To the extent that the end product was not foreseeable in great detail, this type of planning has been criticized as being a form of “nonPlanning.”15 Instead of laying out neighborhoods in great detail, planners at Milton Keynes set up a framework and allowed flexibility to develop the individual parts of the city. The Plan for Milton Keynes sums up the aim well, “The Plan is a beginning. It is a master plan in the sense that it provides a strategic framework in which the city can be developed, but – as with all good strategies – it defines the main aims, while retaining flexibility to allow adjustment to new situations as they develop.”16

The physical portion of the “framework” referred to in the plan refers, primarily, to the design of the road system.17 The foreword of the plan emphasizes this feature, “The Plan describes the shape of the main road system, and where development is to take place in the first five years and in the first ten years. But how the strategy is translated into homes and jobs and leisure, as the city grows, and as the needs of those who live in it change, will be a continuing process of research and consultation between the Corporation and the citizens of Milton Keynes.”18 This “framework” road system

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Figure 5.4: Milton Keynes Regional Setting
Source: New Towns Record

Figure 5.5: Milton Keynes Sub-Regional Setting
Source: New Towns Record
takes the form of a loose grid, with intersections occurring every kilometer. The spaces created within the grid house a variety of land uses.

According to Edwards, the grid structure was designed:
- To be easily comprehensible and navigable;
- To permit unconstrained use of the motor car;
- To avoid the inefficiencies and costs of tidal flows between home and work which arise where jobs are in a single work area;
- To offer residents a choice between private and public transport;
- By mixing homes with workplaces, shopping, educational and other services to create at least the potential for people to make short trips, and to have a choice of service centers to use;
- To contribute to pedestrian safety by ensuring that all roads were clearly either for car priority (the grid) or for pedestrian priority (the local roads).

The spaces within the grid were less important than the framework of the grid itself, so long as designers developing those spaces followed simple guidelines regarding maximum walking distances to shops and schools, the provisions of safe pedestrian and cycle paths, and allowing for a desired character of the main roads. The plan recalls a new fixation with the growing affluence experienced by Britons around this time – this increase in affluence led to a higher rate of car ownership, the desire for more choice in shopping, and the want of modifiable detached houses with gardens. These influences combined to give residents far greater say in their environment than previously seen in the New Towns. A.
Figure 5.7: Planned activity centers (left) and activity centers as built (right)
Source: Bendixson. Milton Keynes: Image and Reality

Alexander recalls prevailing attitudes amongst the Mark III planners, "Urbanists should attempt to enable development in a bottom-up, responsive manner, rather than provide urban developments on the basis of predicting the nature of a future settlement." 20

Planners in Milton Keynes eschewed the term "neighborhood," instead acknowledging that "communities" were mostly formed without regard to locality. Clapson acknowledges that "'community' as neighbourliness, as a local formation of similarly placed and like-minded people, is only one element, and deserves to be treated as only one element, in our understanding of the evolution of postwar working-class life." 21 Webber goes further to say, "Spatial separation or propinquity is no longer an accurate indicator of functional relations; and, hence, mere locational pattern is no longer an adequate symbol of order." 22

Even without "neighborhoods," however, goals still existed regarding choice in establishments to patronize. While this is commonly associated with choice in reaching establishments by car, it is clear from the Plan for Milton Keynes that this "choice" would extend to those who chose to walk or cycle to their destinations. 23 "Activity Centers" were intended to occur roughly midway between each block in the mega-grid (referred to as an "environmental area"), linked to the other side of the road by a safe pedestrian under or over-pass. Each of these activity centers would have various combinations of schools, shops, health centers, offices, and so on, dictated according to the Plan, by the needs and wishes of the local community. As these would not be identical in function (unlike the neighborhood centers in the Mark I New Towns) and there would be at least one within a half-kilometer and up to two others within walking distance, residents would be free to use different activity centers for different purposes or according to their needs and wishes (figure 5.7).
As these activity centers would occur along the main roads, the mega-grid was not intended to create isolated, inward looking neighborhoods, but instead to create "overlapping catchment areas" which would be based as much on locality and interest and not tied to a specific place and boundary. The plan accurately points out that different functions typically appropriated to the neighborhood serve different catchment populations, anyway: 2,000 for a primary school, 4,500 for a secondary school, 15,000 for a youth center, as examples. Yet, Hall and Ward challenge the assumption that the neighborhood has disappeared in the Mark III New Towns: "Because of their size, they could not reject the neighbourhood principle, and though the Milton Keynes planners tried to replace it by a concept of spatial ambivalence, in which people would be free to patronize one centre of another more or less indifferently, nevertheless these centres were just as much a definite part of the structure as was the giant central shopping mall." (figure 5.8) As these centers were explicitly not readily accessible or visible by the main road, and the city shopping center was such a definitive regional success, they have suffered a similar fate to the Mark I and II New Town local centers - thinly patronized, lacking accessibility, and difficulty in maintaining tenants. Of course, there are exceptions to this, but they only serve to concentrate the viable retail, effectively taking away the choice which would be provided by having many successful "activity centers." As road exits and "environmental areas" are named after these activity centers, and a single architecture firm often designs individual environmental areas, the result has been to create defacto neighborhoods - areas where residents seem to associate and congregate (figure 5.9).

**Green Space**
The strategy for green space fell into three categories in Milton Keynes: wide verges

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along the main roads, a linear park system, and finer-grain green spaces within individual developments.

When driving along the loose grid that defines Milton Keynes, it is possible to not even realize you have arrived in the city. The vast green verges to either side, coupled with, in many cases, the roads being somewhat sunken, lead to the illusion that one is still driving along a motorway crossing the country (figure 5.10). That the roads intersect at round-abouts, and not signaled intersections, adds to the illusion. This green space, it is important to note, is not accessible to recreation or any other purpose. If Milton Keynes were an Eco-Town looking to calculate its overall open space percentage, this would be included. Its usefulness begs the question of how relevant a simple percentage requirement of green space really is.

The system of parks that traverse Milton Keynes deserve special recognition. Carved out of two valleys that move across the site, the parks were designated in the original master plan, but poised challenges to the landscape architects, as the land was subject to flooding and trees were riddled with disease (figure 5.11). The largest of the parks, in the Ouzel valley, is ten times the size of London's Hyde Park.26 Instead of treating the entire site as a designed park, the landscape architects divided the valley into a series of "strings and beads," where the strings were well-maintained routes for cycling, riding, or walking and the beads were activity centers. The bulk of the park consists of self-maintained land-uses such as woods, golf-courses, and a farm for disabled children.27

Green spaces are also interspersed through carefully designed housing estates, with many developments facing local parks and playgrounds (figure 5.12). These were the "flexible spaces" within the master-plan, and what they lack in connecting to each other, they make up for in providing a fine-grain of quality, usable green space.

Figure 5.10: Green along roadways in Milton Keynes
Source: Alexander. Britain's New Towns

Figure 5.11: Linear parks through Milton Keynes
Source: Benedixon. Milton Keynes: Image and Reality

Transferable Lessons | Mark III New Towns
cross the main road by underpass and wait under cover a few minutes for the right bus

Figure 5.13: Journey to work as envisioned by MK planners
Source: Bendixson. Milton Keynes: Image and Reality

Modal Share and Transportation
The design of the loose grid in Milton Keynes was supposed to allow for ease of public transportation. Buses would traverse the roads, stopping at mid-points in the grid. These bus stops would be within a half-kilometer of most dwelling units, and would provide access to most jobs with, at the most, one bus transfer (figure 5.13). A decision late in the design process, it is argued by Michael Edwards, changed the fundamental nature of Milton Keynes and rendered public transportation nonviable.28

The road network was originally designed for a speed of 35mph, a speed common to other urban centers. Each intersection would meet at a conventional signal, which would have produced a rather classic grid system. The grid system would have only been penetrable at every half-kilometer (in mid-block and at the road intersections). Instead, a high-level decision was made late in the process that raised the speed-limit for the roads and turned the intersections into round-abouts (figure 5.14). This move essentially created four-lane freeways separating the “cells” that were designed to be relatively flexible in their boundaries. The increase in speed also diminished the viability of the public transportation system, a problem that has plagued Milton Keynes since its conception.

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Notes


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7 Ibid. pg 52.

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Osborn's seminal classic "New Towns" is precisely this - comparing the plans of each New Town to a set of established expectations, mostly based off of TCPA thought and development. Osborn and Whittick, *New Towns : Their Origins, Achievements and Progress*.


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Edwards, "City Design: What Went Wrong at Milton Keynes?.”
The Eco-Towns
This chapter will explore the Eco-Towns through the three lenses used to explore the New Towns – the role of the neighborhood, the role of green space, and transportation and modal shift. As the Eco-Towns are currently in master-planning phase, it is useful to look at both general guiding documents and the early, published plans of the Eco-Towns themselves.

The Neighborhood in the Eco-Town
The neighborhood rhetoric within Eco-Town governing documents straddles lines of using the neighborhood as a basic organizing tool and using it as a tool to induce healthier behaviors. The actual proposals for each of the Eco-Towns demonstrate slightly different approaches to neighborhood layout, but these are not new: there are clear precursors in the New Towns, both in terms of layout and in terms of rhetoric, and lessons to be learned from their successes and failures.

Like the Mark III New Towns, Eco-Town planning documents generally avoid the term “neighborhood,” and thus avoid explicit discussions of boundaries, required size, and services that would be provided within a neighborhood. However, specific recommendations within documents inherently define the neighborhood, as do goals set forth for “community building.” There are two primary ways this happens: through the official government document identifying minimum standards and objectives in planning (Planning Policy Statement: Eco-Towns), and through government consultation documents and resource worksheets provided by the Town and Country Planning Association (TCPA), which convey ideals, goals, and intentions of Eco-Town policies. In addition, the four initial Eco-Town plans provide some insight into the current intentions of neighborhood structure within this program.

As previously mentioned, the Planning Policy Statement: Eco-Towns refers specifically to neighborhoods only twice, once defining maximum walking distance to “neighborhood services” (without specifying what those services might be) and second in requiring planning applications detail the delivery timetable of neighborhoods.² There is clearly an expectation that neighborhoods will exist, but their sizes and specific characteristics are not dictated by the official government planning statement. The walkability requirements – that all houses be at least one-half a mile from a primary school, neighborhood services, and frequent public transport – do not in themselves dictate the size, characteristics, or nature of the neighborhoods. Indeed, they open considerable flexibility in meeting the requirement that neighborhoods exist (a relatively tacit assumption, given the lack of language in the Planning Policy Statement). Without much direction from official government requirements, it is useful to consult other documents that contain ideals and goals of neighborhood-sized development.

The Department of Communities and Local Government sponsored a series of evolving worksheets produced by the Town and Country Planning Association (TCPA), the organization originally created, under the name Garden City Association, to promote Garden Cities and, eventually, the New Towns.² These worksheets
provide planners and developers of the Eco-
Towns with recommendations and planning
aspirations in areas such as transportation,
green infrastructure, economic strategies,
housing, and inclusive design. The worksheet
on communities, Towards Sustainable
Communities: Eco-Towns Community Worksheet,
provides further insight on planned function
of neighborhoods within the Eco-Towns, as
follows:

- "The formation of sustainable communities
  within an Eco-Town is as vital to its success as
  its physical infrastructure." 4
- "Build a central resource centre for the
  community: Such buildings can have a key
role in giving space for the new community
to meet, as well as giving organisations such
as small start-up businesses and charities
a place to grow. They should be adaptable
buildings to provide flexible space as well
as services, facilities and security (and they
should be warm!)." 5
- "Community infrastructure delivered early
and on time: New infrastructure must be co-
ordinated with existing facilities in the area. It
is essential that vital services such as health
centres, schools and sports facilities are ready
before the first people move in." 6
- "Open space and allotments: Applying
good urban design principles will produce
high-quality public space that is inherently
 safe, pleasant to use and delivers a range
of positive health and other benefits to all
sections of the local community." 7
- "Lessons from the development of [New
Towns] demonstrate that the developer must
not just concentrate on the physical aspects
of the Eco-Town, but must also support
community development." 8
- "Experience suggests that poor physical
and environmental design, even if it
is environmentally sound, can lead to
community cohesion problems. In the
past, designers have too often prioritised
aesthetic design at the expense of considering
the people who would actually live in the
development. Community engagement will
begin to identify issues that can be tackled
more easily - and cheaply - at the design
stage. A sustainable community is one where
no-one is excluded and one which is designed
with the social model of disability in mind.
This model recognises that it is physical and
attitudinal barriers which are disabling rather
than an individual person's impairment." 9
- "Communities are not homogeneous - they
are multi-dimensional and multi-layered.
Often there will be communities of interest
(i.e. sports, arts, etc.) which are strong and
cohesive rather than being tied to a particular
place. Therefore a range of approaches
will be required to engage with the various
strands." 10
- Not only is play crucial to a child's personal
development, but providing space in this way
also facilitates an 'encounter culture' in which
it is normal to meet with people from other
backgrounds and cultures. This provides the
foundation for future citizenship and social
cohesion. Safe places in which to play are
also safe places to live, and such places will
encourage greater community engagement
and cohesion." 11
- "Beautiful green spaces can provide
an opportunity to meet other residents
within the Eco-Town and can also help to
create a sense of pride in place, ownership
and shared identity. This in turn builds a
sense of protectiveness and community
togetherness.”

- “Sports hubs and other interest groups
create communities of interest, which can
be more effective than trying to create
community through encouraging people to
become involved in leadership activities.”

While some of these goals may be redundant,
the preceding excerpts highlight “community”
as both a physical and social construct. Key
words and phrases that repeat throughout
the document include “mixed”, “healthy”,
“active”, “cohesive”, “work and live”, and “well-
being,” creating a more intentioned portrait
of the types of communities that are desired
to exist within Eco-Towns. These – like the
final planning statement – avoid the specific
language of “neighborhood” and often use
the term “community” to mean a physical
community within the Eco-Town and the
Eco-Town itself. Still, the documents reveal an
underlying assumption that space influences
behaviors, and connections, though it is
presented rather modestly.

Language in this worksheet is far more
reminiscent of goals and ideals scattered
through three generations of New Towns than
the government documents themselves, no
doubt related to the fact that the TCPA was a
primary driver of Garden Cities, New Towns,
and now Eco-Towns. In the TCPA worksheet,
we see a return of “the power of place” to
enhance lives – once derided as environmental
determinism, but now making a return, albeit
on a more modest scale. This idea of the “power
of place” is perhaps most potent in the planning
documents presented thus far for the four Eco-
Towns.

**Green Space**

A hallmark of the Eco-Towns program is its
goal that 40% of the Eco-Town’s total area be
allocated to green space, of which at least half
should be public. As mentioned in chapter
two, private gardens, road medians, and urban
greens are included in the requirement. Indeed,
virtually anything that is not hard-surfaced
infrastructure or building is included.

In the TCPA’s worksheet, *The Essential Role
of Green Infrastructure*, the intention of green
infrastructure is set out, defined as “a network
of multi-functional green space, both new and
existing, both rural and urban, which supports
the natural and ecological processes and is
integral to the health and quality of life of
sustainable communities.” It goes on to state
that the local planning authority “core strategy
should be supported by evidence of what
physical, social, and green infrastructure is
needed to enable the amount of development
proposed for the area, taking account of its
type and distribution.”

A typology of green infrastructure assets reveals the broad nature
of what is included: parks and gardens;
amenity green space, allotments, community
gardens, city farms, orchards, roof gardens,
urban edge farmland; cemeteries and church
yards; grassland, woodlands, and wetlands;
green corridors, including river banks, road
and rail corridors, cycling routes, and rights
of way; national and local nature reserves;
archaeological and historic sites; and functional
green space such as sustainable urban drainage
and flood storage areas.

The worksheet goes further to stipulate that
green infrastructure should be a primary

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consideration in planning, developing and maintaining an Eco-Town and that it should be varied, widely distributed, and interconnected. Eco-Towns should offer more than 'amenity' or "easy-maintenance green spaces, providing a broad range of ecosystem services." 

The worksheet is specific about the types of green space that must exist in each Eco-Town. While they would seem somewhat commonplace - including a major park, local playgrounds for children, sports facilities, semi-natural spaces, etc - it also represents a move back towards prescriptive requirements in planning in the UK, even if they are less prescriptive than those seen in early New Towns.

**Modal Share and Transportation**

Lofty goals to have half of all generated trips not be taken by private automobile will likely be difficult to achieve, especially as transportation is not included in carbon neutrality calculations. This will also be difficult to calculate, as currently national statistics are only gathered based on commuting to work, not for all trips. But even for those trips to work, outside of a handful of districts in the center of major urban areas or academic towns, reaching 50% would be difficult.

In the TCPA's *Eco-Towns Transport Worksheet*, principles for the design of the overall transportation system are set out, and they put focus on the pedestrian and cyclist first, public transportation second, and the private automobile third. This is unlike anything witnessed in the New Towns; indeed, it is somewhat of a hybrid of the three generations. While choice reigns supreme, the idea of choice has shifted from having the choice of places to reach via automobile to the viable choice of transportation mode. The auto-centric planning of the last forty years has left residents, particularly those outside of the urban cores of London, Glasgow, and Edinburgh with little choice but to take an automobile. The Eco-Towns, and much of land-use planning in general, has shifted thought from why separation of uses were necessary to why, in many cases, they are not only not necessary, but in fact destructive to the urban fabric.

The TCPA calls for Eco-Towns to be designed around the concept of "filtered permeability." That is, separating sustainable modes of transport from private motor traffic in order to give them an advantage in terms of speed, distance, and convenience. Ways this can be accomplished include separate cycle and walk ways, bus-only lanes, and bridges and tunnels solely for sustainable modes. It also calls for the development of "car-free zones" where car use

![Figure 6.1: Bicester: The existing site](source: Halcrow)
Figure 6.2 Bicester: masterplan concept
Source: Halcrow
would be discouraged by creating a traffic-free environment, such as along shopping streets or through entire neighborhoods, and limiting parking and separating it from residential areas. These are ideas that seem sound in theory, but applications from the New Towns reveal that when design details are not considered, car-free zones can create desolate environments.

However, there are indications that the TCPA has been exploring what can make these ideals successful, evidenced by the precedents put forth in the transportation worksheet. The real test will be the developer's interpretation of the examples shown.

**Northwest Bicester**

The Northwest Bicester Eco-Town is an extension of the existing town of Bicester, located in Oxfordshire. A 345ha site, it is currently low-grade agriculture, and the existing farmsteads will be used as guiding forms for the plan (*figure 6.1*). The proposed layout (*figures 6.2 and 6.3*) includes residential units linked by green space to a central spine of employment and transportation. The concept for the individual neighborhood is defined by an organic street pattern with a central green space (*figure 6.4*).

**The Neighborhood Unit**

Within the "wedge" of Northwest Bicester the active farms will be the basis for development, forming a "collage of small hamlets." These "hamlets" will form eco-neighborhoods of "varied character," using the farmsteads and existing water ways for productivity and educations. Existing footpaths and hedgerows and field patterns will be exploited to form neighborhood boundaries (*figure 6.5*). These neighborhoods will be small – the Eco-Town proposal calls for 5000 homes and the initial diagrams show eight neighborhoods, or roughly 625 households per neighborhood (*figure 6.6*).
Hedgerows and field patterns extend into new hamlets

Existing tracks and footpaths become new connectors

Green Landscape fingers extend through new eco-settlement

Existing water courses integrated with new settlement

New eco-settlement composed as a collage of small hamlets

Green links extend into urban fabric first hamlet

The Parklands get a central position in the first hamlet

Figure 6.5
*Source: P3Eco*

Figure 6.6: Bicester: neighborhood locations
*Source: P3Eco*

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Figure 6.7: Bicester: Neighborhood Centers
*Source: P3Eco*
They would be separated by green space, with landscape as the primary infrastructure. The report indicates: “village centres become the focus for the social and cultural infrastructure.” *(figure 6.7)*

As this development is in early stages, it’s difficult to ascertain what the character of these neighborhoods might be, or what their intentions might be, other than to meet the goals set forth in the policy planning statement.

**Green Space**

The early proposals call for the Eco-Town to take advantage of existing patterns of topography, settlement, drainage, and growth to dictate the green infrastructure network *(figures 6.8 and 6.9)*. Goals for the green infrastructure include creating linkages with the wider countryside, letting the countryside infiltrate Bicester, and increasing the biodiversity of the area. The network of green would create a continuous landscape park that would traverse the entire site and link to the existing town.

The proposal calls for taking advantage of the agrarian legacy of the site by retaining some farming activities, and educating children about food, farming and the local environment by using the Eco-Town itself as a “classroom.” In addition, community gardens would be encouraged, as would establishment sourcing of local foods.

There are three identified “character areas” of the site that are based on existing natural features. To the northeast are the “Brooklands,” a residential area north of the railway line that is bisected by several waterways. To the southwest is the “Park View,” a residential area that will center around a new park and...
be the focal point for the green network. In the center is the central employment area, which would contain a bio-mass plant and community facilities, along with the possibility of higher density residential.\textsuperscript{24}

Woodland plantings surrounding the site would serve to create an intentional barrier between northwest Bicester and the small village of Bucknell, which would otherwise oppose the development, citing that it would ruin views of the countryside.\textsuperscript{25}

**Modal Share and Transportation**

As called for in the TCPA worksheet, plans for Bicester Eco-Town focus primarily on creating a high-quality pedestrian and cycle network which links residents to employment, schools, and services. This is done mostly through the proposed green infrastructure.

For the Eco-Town site itself, some consideration is given to reworking existing street alignments, mostly to relieve current congestion and create larger employment areas, but also to focus on street design and discourage automobile traffic altogether (figure 6.10). Footpaths will be provided alongside all streets, and the open space network will have extensive dedicated foot and cycle paths.\textsuperscript{26}

In order to meet the Eco-Town goal of enabling at least 50\% of trips to be made by non-car means, Bicester proposes increased bus service in and around the Eco-Town; encouraging high containment of trips within the Eco-Town itself; street plans that discourage car movement; and increased train services between Bicester and Oxford.\textsuperscript{27}

In particular, reducing car dependency is a significant goal and challenge. Strategies to decrease car usage center on providing amenities within walking distance of each dwelling unit in the Eco-Town. In addition, car usage would be discouraged through street
design, particularly home zones and car-free areas. No physical plans have yet been produced that demonstrate these efforts.

The bus network within the Eco-Town will be given priority on streets and local centers, as well as connecting to Bicester’s existing bus network and train station (figure 6.11).

**Rackheath**

Rackheath, located only five miles from the center of Norwich, has an existing population of 1500 residents located mostly to the south of a World War II decommissioned airfield that comprises the Eco-Town (figure 6.12). The proposed master plan groups housing in the center of employment and recreation opportunities, with strong transportation links into Norwich and the existing small town of Rackheath (figures 6.13 and 6.14).

**The Neighborhood Unit**

The early proposals for Rackheath indicate one large neighborhood of roughly 11,600 people. This proposal, like St Austell, is virtually a blank slate – there are currently 1,500 people living there and the site is a former airfield that has been returned to farming for the last thirty years. Norwich is five miles away, and it’s anticipated that it will be a main job and shopping source.

Concept planning documents recall the optimism of the first generation of New Towns, interspersed with “letters” from local children in future years exclaiming the benefits of living in the town. One, a letter from “Tim” who is thirteen in the year 2020 portrays a child who has lived in Rackheath most of his life. His dad has a job in the factory (reminiscent of first generation New Towns, except this is a job
Figure 6.14: Rackheath - Masterplan Strategy  
*Source: Barratt Homes*
“designing sustainable packaging”), and his mom works from home. He takes the train to shop with his dad in Norwich, and is free to explore the city on separated bike paths, as long as he is home in time for tea.28

Early proposals describe the housing strategy as “facilitating a low carbon lifestyle... to arrange housing in separate development “blocks” with dwellings organized around the perimeter and open space, with access to parking in the centre. Blocks will be separated by streets or the “green grid.”29 “Typical block” renderings show few detached houses, mostly being similar in form to terrace houses of the first and second-generation of New Towns (figures 6.15 and 6.16).30 Limited community facilities would be located at the north and south ends of the site, linked by pedestrian and cycle separated paths, along with roads.

**Green Space**

The proposals at Rackheath significantly exceed the minimum green space requirements outlined in the Planning Policy Statement: Eco-Towns by calling for over 50% of the site to be green space of which 85% will be publically accessible.31 The green space strategy was developed around ideas of connection and multi-functionality (figure 6.16).

The site itself consists mostly of open agricultural landscape, but its boundaries include Broads National Park, Britain’s largest protected wetland, and existing large park landscapes. Thus, the green infrastructure seeks...
to link these resources, both for recreation and to link habitats and provide additional safeguards for wildlife.

This “connected landscape” will be defined by its multifunctional nature. In addition to enhancing biodiversity, the network will bring together recreation, learning landscapes, productive landscapes, and a focus for artistic and cultural activities (figure 6.17).

This strategy will be pursued through four zones, the western landscape corridor, the northern landscape reserve, the eastern landscape corridor, and the cross of the former airfield, referred to as the “cultural axis.” Each of these will be detailed independently, but with considerations for how they form an entire network and web over the city.

Modal Share and Transportation
Objective for Rackheath's transport strategy are in line with those in the Planning Policy Statement: Eco-Towns. A specific emphasis is placed on improving contacts with Norwich, as its anticipated that it will remain a significant
destination for employment and shopping needs.

As mentioned in Chapter 2, the proposal at Rackheath only call for 3500 jobs to be located in the town, a number which includes existing jobs. Thus, the rest of the employment need will be absorbed by Norwich, and three sites in particular: the Norwich City Center, Norwich Airport, and the Broadland Business Park. The increase in public transportation links to surrounding areas directly reflect this reality (figures 6.18 and 6.19).

The internal network of walking and cycling paths is expected to only significantly absorb trips generated by local shopping needs (and to provide recreation opportunities), not to greatly contribute to the modal share of trips generated by employment. The plan also calls for a significant increase in incentives for taking alternate modes of transportation including: subsidized rail and bus travel, subsidized bicycle purchase vouchers, free travel during off peak hours for seniors and children, and subsidized car share membership. Of course, these incentives will be contingent upon favorable economic and governmental circumstances.

St Austell

The Eco-Town at St Austell is actually a group of five small proposed communities outside of St Austell that are located on surplus decommissioned mining land owned by Imery's, a china clay mining firm. These five communities will each have a distinct identity and will be connected to each other and St Austell by road, rail, and public transportation (figures 6.20-25). They are currently in a very early proposal phase. Eco-Bos, the consortium of developers, land owners, and district councils involved in the project, has recently issued a competition brief for the town that will
Figure 6.20: St Austell - Baal and West Carclaze Concept
Source: Eco-Bos

Figure 6.21: St Austell - Par Docks Concept
Source: Eco-Bos

Figure 6.22: St Austell - Blackpool Concept
Source: Eco-Bos

Figure 6.23: St Austell - Drinnick and Nanpean Concept
Source: Eco-Bos

Figure 6.24: St Austell - Goonbarrow Concept
Source: Eco-Bos
be the first to be developed – Baal and West Carclaze.

The Neighborhood Unit
The St Austell development, put forward by Imery’s Clay, will exist completely on surplus mining land in the far southwest corner of England. The current proposal is for development to be spread over six sites, set to initially house 5000 dwelling units. The area, being privately owned, currently has virtually no infrastructure unrelated to mining, and sits just north of the town of St Austell, population 22,000. Each of these six communities would be linked together with a Bus Rapid Transit system, new railway stations (with no current commitment from the British government), and separated cycle ways and footpaths.  

In an architectural competition brief released in early 2010, one of these developments is solicited for design (Baal and West Carclaze), but current concept masterplan drawings reveal little in the way of attitude towards neighborhoods; the focus at this point seems to be on showcasing the unique physical characteristics of the site (figure 6.26 and 6.27).  

As Baal and West Carclaze are the furthest developed at this point, analysis will focus on that area. Designated to have between 1800 and 2500 dwelling units, this town will also be a flagship employment site, a village center,
Figure 6.26: St Austell - Baal and West Carclaze
Source: Eco-Bos

Figure 6.27: St Austell - Baal and West Carclaze
Source: Eco-Bos
and a new primary school. The individual neighborhoods (figure 6.28) designate between 30-60 dwellings per hectare and recall potential influences such as “the Victorian housing at Falmouth” and “typical Cornish townscape.”

To date, documents regarding the St Austell Eco-Town read more like a vacation town pamphlet than a strategy to produce a holistic, sustainable town (figure 6.29).

**Green Space**

To date, the green space strategy at Baal and West Carclaze is based on what are essentially truisms in what the Eco-Town should accomplish. They include: “more open space with better access; working with the landscape rather than against it; and maximizing the attraction of having sustainable development at the heart of the scheme.” The uniqueness of the site will hopefully generate significant ideas and strategies for a green network, both onsite in the towns and between them.

**Modal Share and Transportation**

Like the green space strategy, the transportation and modal share strategy consists mostly of generalities such as, “create an efficient transport and movement infrastructure in a number of ways: new bus service, provision for alternative modes of transport such as electric cars, making sure facilities are within walking distances of most homes, and a new public transport hub.”

Overall strategies for the larger site and linking to St Austell depend on heavy public sector investment, as roads, railways, and public transportation systems have to be created.
virtually from scratch. St Austell has indicated in general terms that if government funding is decreased (a distinct possibility with the administration elected in mid-2010), the proposal will not be feasible.

**Whitehill Bordon**

At Whitehill Bordon, a master plan has been produced for public review (figure 6.30). It focuses on several topics for feedback: green infrastructure, the town center, location for a new school, neighborhood concepts, transportation, employment options, and phasing and delivery.\(^{30}\) Whitehill Bordon, perhaps to a greater extent than any other Eco-Town, has relied on a system of constant public feedback in creating the master plan. As nothing concrete has been produced yet, it is still too early to ascertain how (or if) this will impact built form.

**The Neighborhood Unit**

The consultation master plan document is careful to link responses from numerous community meetings into its proposals, asserting that the process is still very much

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open. The plan lays out three neighborhoods. In keeping with the Eco-Town “brand,” they’re named the “green roots,” “green streets,” and “green views” neighborhoods (figure 6.31 and 6.32). They are only defined in terms of housing typologies and density at this point, however, and there is a clear reluctance to declare too many pieces of the plan as “solved.” The emphasis, instead, is on getting residents on board with the ideals and goals of the Eco-Town, likely a result of the considerable controversy and opposition the Eco-Towns in general have experienced to date.
Green Space

As mentioned in Chapter 2, Whitehill Bordon has a sizable existing population of 14,000 people. Its green strategy, more than any other Eco-Town, takes into account the whole town, not just the site of the Eco-Town (figure 6.31). Indeed, the existing town is threaded to the Eco-Town through the proposed green network. This network includes preserving two main wildlife corridors, restoring water ways, and creating a “green loop” of footpaths and cycleways around the town that link residents to large open spaces and recreation opportunities.40

Modal Share and Transportation

Like the green space strategy, the transportation strategy is essentially a redefined transportation system for the entire city, including an improved road network, pedestrian and cycle paths, and improved public transportation (figure 6.33). A specific
emphasis is placed on technology – real-time public transportation information in each house, electric cars, and the ability to monitor carbon output in house. This strategy – combined with a feasible and well-linked transportation network – is what all Eco-Towns should strive for and what has produced success in precedent cities highlighted by the TCPA.

Bibliography


Notes


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Transferable Lessons
This thesis began in search of transferable lessons from the New Towns to the Eco-towns. The exploration has taken us through the three generations of New Towns, looking at three examples specific New Towns, and through a quick analysis of the nascent Eco-town proposals to the transferable lessons. Perhaps more than anything else, the study has exposed that successes and failures aren’t absolute, and the perception of them change over time. In addition, small, seemingly insignificant decisions can have tremendous and long term impacts, as seen in the roadway speed decision at Milton Keynes. Ideals often don’t translate to built form, and a decision that seems good in theory can have unintended consequences down the road. This reality brings into question the appropriateness of the current pervasive model of normative planning (certainly seen in the Eco-towns thus far). If we are engaging citizens only in discussions at the normative level, yet the most critical decisions happen in implementation, is the entire public process only a charade?

The haphazard way in which implementation occurs is also problematic for drawing lessons – if one can’t look to plans to gauge success, how can meaningful, systemic lessons ever be learnt? Perhaps the most important knowledge for a planner and designer to have in their arsenal during the inherently political, evolving nature of implementation is which elements of the plan are negotiable and which are not. It is not enough to merely identify “low-hanging fruit” in phasing plans, the planner must have convictions about what works and what doesn’t.

At one point, this knowledge was derived from data, but data has been somewhat anathema to planners since the late 1960’s. At the very least, it continues to play a secondary role to public participation in the planning process.

Neighborhood Unit
The evolution of the New Towns during the life of the program saw extreme differences in how neighborhoods were conceived and the role it was imagined they could play. Christopher Alexander and Melvin Webber could not have known how correct they were in anticipating the erosion of boundaries in communication and movement – but this erosion has left theorists again contemplating the meaning of “community,” both in the physical and sociological sense. The breakdown of physical communities has created a movement to embrace the notion of neighborhood championed by the first generation of New Towns, an ideal that never quite materialized as mobility rapidly increased. The romanticism of a neighborhood lost is alluring, but its position on one far end of the spectrum does a disservice to the realities of a modern society. Residents want their locally owned bookstores but would rather purchase books online. The next iteration of the ideal of the neighborhood must acknowledge the new realities of an internet consumer society as well as the desire to have physical contact with humans, even if not directly interacting with them.

Green Space
Universally, the New Towns succeeded in bringing green space into the city. New Town concerns that low-density housing and vast green spaces created impenetrable boundaries
were alleviated by the increase in mobility seen during the 1960's. Today, the green infrastructure so carefully planned by designers of all three generations of New Towns is almost universally well-used and loved.

The current focus on wetlands and wastewater management in the Eco-towns is laudable, yet these very goals can create impenetrable barriers when not carefully considered in initial design phases.

**Modal Share and Transportation**

Buchanan's assertion that transportation should be the first step of planning has proven to have longevity, especially when planning goals call for a choice in transportation options. The current model being employed in the Eco-towns (at least in the initial documents) is for separated pedestrian and cycle ways, ample public transportation, and a demotion of the importance of the automobile. These are ideals that cannot be denounced, especially if land-use planning backs up transportation planning. However, the New Towns have shown that in high poverty situations, the segregated pedestrian and cycle paths can add to the perception of crime and illegal behavior. Eco-towns don't often propose complete separation, but more important than complete or incomplete separation is the legibility of the path system, especially as compared to the road network and the green space network. The lesson of Skelmersdale shows that a pedestrian network completely separate of the auto network creates a city that is difficult to navigate by outsiders and is perceptually open to crime and degradation.

The current focus on significantly decreasing automobile usage goes against fifty years of infrastructure development and developed attitudes. While this is a relatively short period of time, increased mobility is not going to shift into a reverse mode. The Eco-town governing documents' focus on technology to mitigate auto usage and to promote public transportation is spot on: perhaps Milton Keynes would have encountered a different fate regarding public transportation if the mechanisms we have in place now were in place then. The ability to GPS track a bus or participate in car-share programs greatly alleviates the burden of not owning a car in modern society.

**Conclusions**

Transferable lessons drawn from one program to another program can certainly have value, but it seems as though they have the most value in this context on two levels: a general level and a very specific level. The general level is where this thesis has centered, and perhaps it has produced ideas that are commonplace. The specific level is unattainable given the resources available, but they are also less relevant at a larger scale: they are almost certainly not systemic, and instead rely on knowledge passed from one entrenched expert to another. Thus, the general idea is where we have explored, and while the shortcomings on the New Towns program are somewhat well known amongst the community with exposure to them, they have not been compiled with an eye towards the current state of new town building. This thesis has worked to provide that viewpoint.