

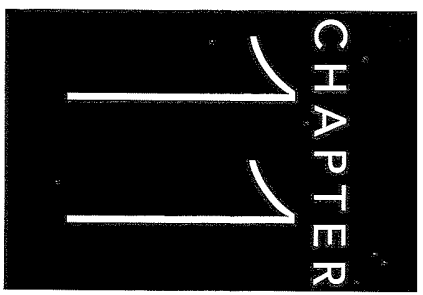
# **BRITAIN'S NEW TOWNS**

**GARDEN CITIES TO SUSTAINABLE COMMUNITIES**

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**ROUTLEDGE**  


## New Towns in the age of sustainable communities



The future renewal of the New Towns may unlock their potential as low-carbon, sustainable communities. Image shows a cargo-cycle on Milton Keynes' red-way network.

The question of the long-term success of the New Towns is fundamentally one of the notion of sustainability. Since the 1990s, sustainable development, defined by The United Nations Brundtland Report, has sought to ensure that decisions in the present do not undermine the quality of life of those living in the future. Social and economic sustainability relate to the continued existence of fundamentals such as decent schools or employment needed to underpin the success of a place. The British planning system was created in the 1930s precisely because a boom of poorly planned urban development had failed to provide the basic amenities to ensure places that functioned properly. As described in Chapter 2, residents of the vast council housing estates created in the interwar period sometimes had to pay so much money to commute to work that they could not afford to eat. Even the middle class commuter suburbs forced people into spending over two hours a day sat on a train.

The New Towns gave this vision of the planned community the opportunity to prove itself. Seeking balanced communities, echoed the later goal of the sustainable community. In its original version, the Garden City idea, that prompted the New Towns, had the goal of self-sufficiency in food and electricity forshadowing later concerns over environmental sustainability. So how might the New Towns be said to have been socially, economically and environmentally sustainable communities? And to what extent can any failure in this be addressed in future? In terms of towns and cities, unsustainability in social and economic terms was clear from problems of urban decline. Places that were getting worse, not better, were not able to sustain themselves. Buildings that were in need of refurbishment, or at risk of demolition, highlighted the difficulties in achieving sustainable places.

The Sustainable Communities Plan was the name given to the UK Government's national planning strategy of 2003. The definition of a sustainable community was, in its simplest formulation, 'Places where people will want to live and work, now and in the future' (CLG, 2003). The plan was backed by some £22 billion of public investment to address sites where new development could be encouraged that would contribute to such future communities. This essentially saw a return to the ideals of the post-war planners to banish urban deprivation through a rational approach to development aimed at

achieving a higher quality of building and place-making. Of primary concern was the dire state of the inner cities, to be galvanised through a programme of urban renaissance. In the wake of privatisation and de-industrialisation in the 1980s and 1990s, many industrial towns and mining towns had their main source of income eliminated. These communities had become effectively socially and economically unsustainable. Second, a lack of housing supply in the south created other problems of social sustainability. A lack of available housing supply meant that key workers, such as firemen or nurses, could not live near to their places of work, and had to commute extremely long distances to provide essential services.

The eighteen years of the Conservative Government from 1979 to 1997 had transformed Britain in many ways, shedding old heavy industry and nurturing the growth of a knowledge economy instead. The closure of mines, steel works and car factories resulted in population migration and the onset of urban decay, arguably the greatest since the Second World War.

Some New Towns were directly affected by the process of deindustrialisation in the 1980s and 1990s, such as Corby, the town originally built by private enterprise around a new steel works in the 1920s. In the early 1990s the end of the Cold War meant that in Stevenage, Hatfield and Redditch, defence contracts being halted, led to layoffs in the large numbers of local private firms supplying components to major military and aerospace programmes. With globalisation opening-up foreign competition, the light engineering firms that many New Towns hosted also started to suffer.

By 2002, the House of Commons Select Committee responsible for scrutinising the government's housing and planning policy, drew attention to the state of the New Towns. Evidence from a range of groups including the local authorities responsible for the towns revealed problems related to the way they had been designed and managed.

Infrastructure, housing and other buildings, were all growing old at the same rate, suddenly leading many councils with repair and refurbishment bills far higher than their annual budgets could handle. The change in the way the towns were managed, from control by dedicated development corporations to a combination of local authority, central government agency and private sector could also confuse attempts to address these issues.

Problems in the physical condition would lead to a declining image, and as people would choose to live or work elsewhere these problems could become amplified. Yet at the level of national statistics pockets of poverty could be masked by the relative success of the wider local authority boundaries in which some New Towns now found themselves. Being located in the south east, in close proximity to London, with good transport links meant a popular location for businesses to set up and lower than average unemployment and higher than average cost of living. Yet individual wards could often show worse than average on common social indicators such as teenage pregnancy or school exam pass rates. In Crawley for instance, despite having had an exceptional record on employment because of the quantity of work provided by neighbouring Gatwick Airport, in terms of education parts of the town featured in the bottom 10 per cent of the country's most deprived wards (evidence submitted by Crawley Council, cited in House of Commons, 2002a).

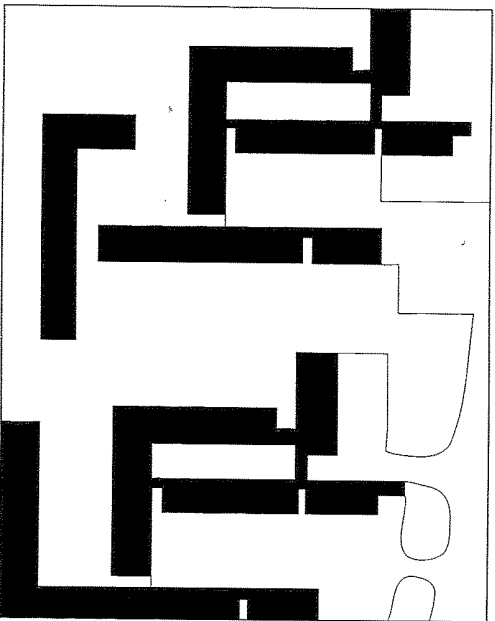
The consequence of this was that declining estates declined further. Low educational attainment fed back into higher unemployment, greater welfare dependency, greater incidence of crime and anti-social behaviour, and – in the most extreme cases – housing abandonment or widescale demolition. How did the New Towns get to have such major problems, when their creation so ardently sought high-quality communities? When did they go from being places that were growing, to ones that were shrinking? How did the ambition for what would now be a sustainable community fade away in reality?

That the New Towns changed from a heyday when they attracted the best new industries in the UK, to one where they became marked by decline, must be contrasted with the state of the country as a whole. Job losses in the manufacturing sector or mining affected towns and cities across the country on far greater scales than existed in the New Towns. Yet, the problems that the New Towns faced were compounded by the fact that they were young places, and that their local governance and management was altered. The government's response to the Select Committee report pointed out that firstly, the New Towns were subject to regeneration programmes. Many were in growth areas, and the national regeneration agency, English Partnerships (formed by a merger of the Commission for the New Towns and the Urban Regeneration Agency) was actively

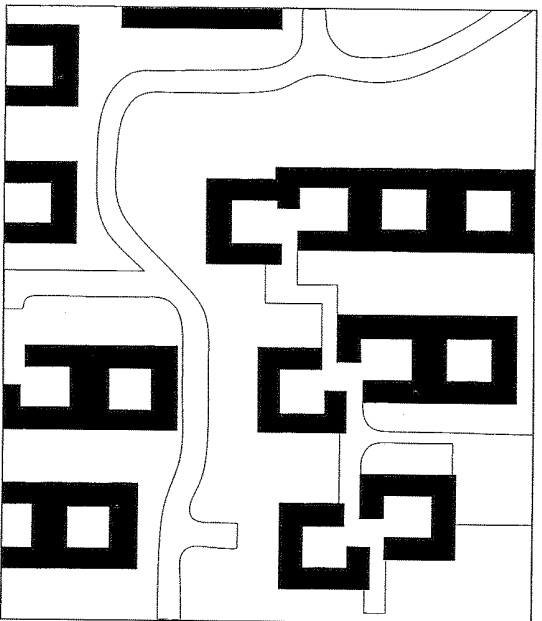
involved in working in strategic partnership with the local authorities, the Regional Development Agencies, the private sector and others to improve the conditions of the New Towns, revitalise their town centres and attract new housing and employment. Secondly, the problems of the inner cities or former industrial towns were of a far greater scale and thus were more needing of direct government support. Nonetheless, the existence of deprivation within the New Towns speaks of the troubles of urban policy, especially given the ambition of the creators of the New Towns Programme was to eliminate the appalling conditions present in cities in the early twentieth century. A single example, submitted by a resident to the 2002 Select Committee, is a reminder of the social outcome of poor building and poor management. Mrs P.E. Denne, chair of the residents association of the Five Links Estate in Basildon, recalls the phases of change, and the vicious spiral of social decline,

*With my family, we came to live on the estate in August 1973... we got a mutual exchange to move from Dagenham. This was a place everyone wanted to come to, in its design it was modern, pedestrian walkways only so no traffic was allowed, laid out in courtyard fashion, which were all landscaped, and family friendly, children could play outside their front doors, parents knew where they were. It made for an excellent community feeling. There were gardeners, regular cleaning teams, including drains... For the first ten years things were great, then the word was we were to change landlords. It did not make much of a change, then gradually the upkeep started to deteriorate. Through lack of money the cleaning facilities started to disappear, maintenance of the estate became minimal, the whole area started to slowly look like a slum, broken walls, un-repaired foot paths, broken slabs in courtyards... Trees that had been planted all around the estate, even in the courtyards, through lack of coppicing, just grew out of order. This started to cause damage to properties, walls, damage to foot paths and safety roads, because of root growth, subsidence became inevitable, once again lack of maintenance.*

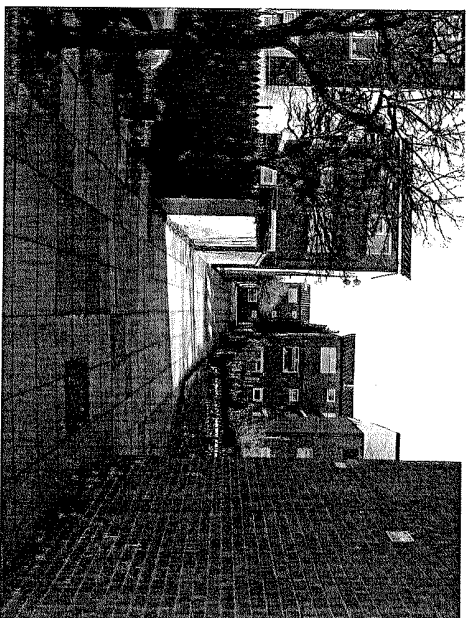
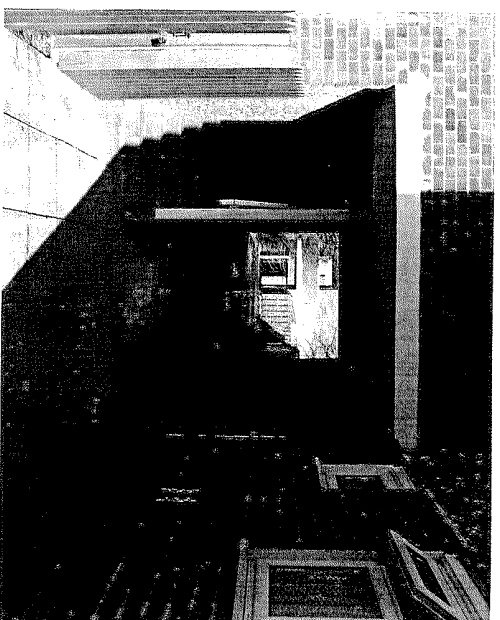
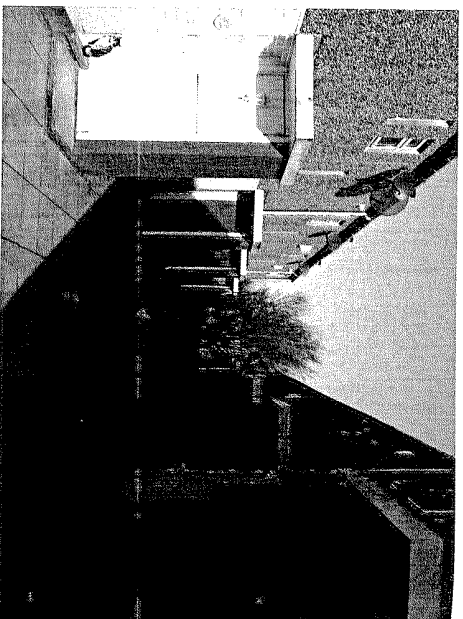
*After about 15 years of neglect, and being fed up not being listened to, residents decided to get together to*



The Courts, Telford.



Radburn layout on the Five Links Estate, Basildon.



Car-free housing layouts in the Firbeck estate in Skelmersdale.  
Courtesy of West Lancashire District Council.

form a group to try and get the local council to wake up to their responsibilities, towards the residents complaints. This was in May 1997.

(evidence submitted by Five Links Estate residents association, Basildon cited in House of Commons, 2002a)

The poor physical conditions soon attracted criminal activity. Houses were easy to break into as windows and doors were easy to force open. Pedestrian-only routes reduced natural surveillance. Stolen cars and fly-tipping would be dumped on the estate. Overall, this represented a failure of estate management. Social housing estates descending into this state of disrepair and disrepute had long been common, largely as a result of a lack of on-site presence from estate management, unlike some of the nineteenth-century housing estates (Power, 1987). Although problems on estates were not uncommon, in the New Towns the situation resulted in a rapid change from being managed by the housing department of the development corporation to becoming a new responsibility of a local authority's housing department or of a housing association. Both such organisations would be responsible for a large number of estates across a wider region than the development corporations, and would have none of the long-standing knowledge and experience of the estates and their occupants. (ODPM, 2002: 6).

Run for decades by responsive local staff engaged in achieving the best for the towns, in the wake of their 'normalisation' some New Towns and specifically certain neighbourhoods in certain towns became deeply troubled. Yet, as the official response to the House of Commons Select Committee 2002 investigation into the New Towns pointed out,

The Government accepts that some of the New Towns have problems relating to their non-traditional housing design and infrastructure. There are, however, many other urban areas that are not New Towns but were built at the same time and to the same specifications. This is not a problem specific to the New Towns.

(ODPM, 2002: 12)

Indeed, the change in ownership exacerbated problems that were there, but these problems were also found elsewhere

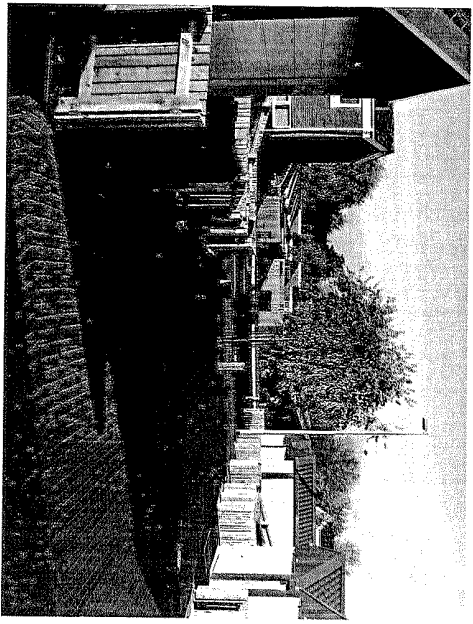
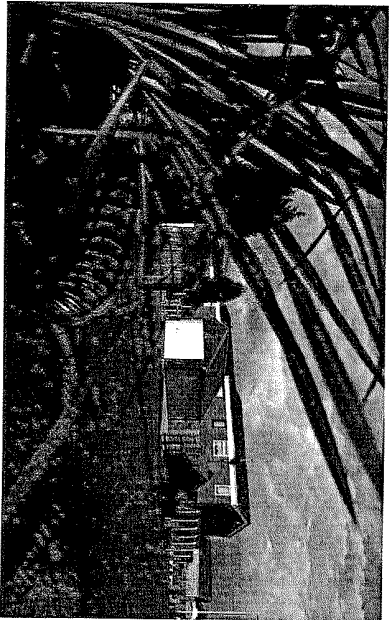
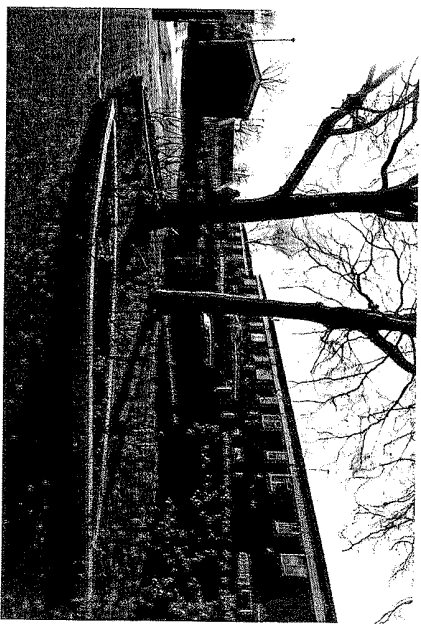
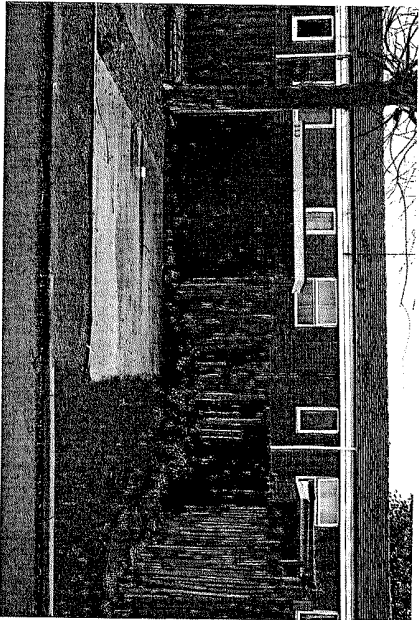
and on larger scales. The New Towns may have suffered severe deprivation in some areas but these areas were smaller in size than similar issues in post-war housing elsewhere such as the inner cities, and were generally not coupled with scale of economic collapse that marked Britain's old industrial and mining towns. The 'worst first' approach to regeneration, administered through the Neighbourhood Renewal Fund, focused on the local authorities ranked the worst in the country. For the New Towns, the overall performance of the local authority in which they resided could mask the levels of deprivation in some neighbourhoods. Only when viewed at the scale of local wards – which, naturally, in the New Towns followed the boundaries of the neighbourhood units – was it clear that the majority of the New Towns included wards in the bottom 20 per cent of most socially deprived wards in the country (Gardiner, 2004).

### **Adaptability: responding to future changes**

Responding to the poor condition resulting from poor build quality in some of the New Town estates, major refurbishment programmes were set up in the 1980s and 1990s. In Harlow, the 'three hills' estates – Fernhill, Honeyhill and Clarkhill, built as part of the 1960s extension – were the most progressive in their design, demonstrating car-free housing areas in a complex of modernist buildings. Yet some parts of the estate suffered acute problems of damp and decay in the buildings. Flat roofs were taken out and replaced with pitched roofs to prevent leaking, and car parking was provided in garages rather than parking bays to reduce vehicle crime. Yet by 2000, it was deemed that these refurbishments had failed and plans were put forward for demolition and rebuilding. In some cases the residents objected, claiming that an aesthetic prejudice against modernist architecture was being applied. The neighbouring Bishopstield estate, also featuring modernist architecture and car-free arrangements, gathered a spirited local and national campaign to defend against its demolition (*Building Design*, 2008).

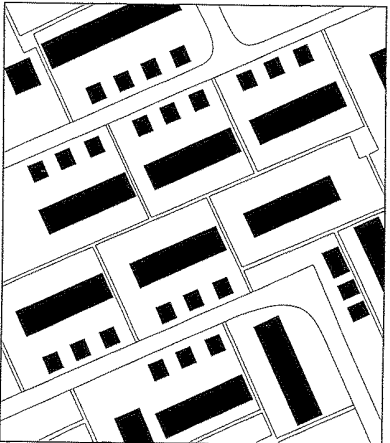
The investment in infrastructure, roads, water and sewage systems, gas pipes, electric cables, telephone wires, which the development corporations had to struggle so hard for in the early days, illustrate how wasteful poor-quality construction,

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Woodside, Telford – a Radburn estate whose regeneration programme has involved public realm improvements to the car-port areas to make them into more people-friendly ‘home-zones’. Images courtesy of Transforming Telford.

long-term neglect and subsequent demolition could be in the long run. The first housing estate in the UK built to the Radburn principles, Lairdon in Basildon, was demolished in the 1990s and rebuilt to a tight but suburban arrangement of houses on culs-de-sac with garages at the front and gardens at the back. James Stirling’s Southgate estate in Runcom and parts of Milton



Keynes also faced demolition. An inevitable factor was the relative value of the land and potential increases in value from replacing housing of a low spec built in low-density arrangements, with a greater number of units of a higher spec.

However, part of the peculiar circumstances of the New Towns' neighbourhoods meant that in some instances demolition has not been an option. The case of the Woodside neighbourhood in Telford provides a strong example of this challenge. With around 80 per cent of the properties privately owned as a result of the right-to-buy policy, demolition was restricted to a cluster of problematic deck-access flats known as The Courts. The remaining 2,000 homes were also in themselves good quality. The problems were the surrounding environment and its Radburn layout, which had altered the traditional relationship between buildings and streets. Instead of the street combining pedestrian and vehicle movement, Radburn layouts separated these two functions, in order to create extensive car-free areas. The local road network led to car parking areas at the rear of the properties, while the fronts of the houses faced onto pedestrian-only walkways that connected via nearby green spaces to the neighbourhood centres. Unlike in the original Radburn, New Jersey, a desirable leafy suburb a few miles from downtown Manhattan, in British Radburn estates few people used the pedestrian footways. Instead, people invariably relied on their cars for daily needs, so always entered their houses by the service entrance at the rear. In the case of Woodside and other Radburn estates, extremely complex, expensive and time-consuming processes were needed to work out how the overall area could be improved, without resorting to total demolition and remodelling.

When a process of regeneration began in Telford in 2003, the Woodside Estate achieved the worst score on the government's Indices of Multiple Deprivation (IMD) for the town and was in the worst 5 per cent nationally. The initial design approach applied to regenerate the estate proposed to invert the logic of the Radburn layout through a 'turnaround solution'. This suggested inverting the internal layouts of the houses back again, so that the vehicle-facing entrance became the formal front of the house and the vehicle areas remodelled to more closely resemble a normal street. At the other side of the house, the underused pedestrian routes would be sealed-off to become back gardens.

However, this design proved unworkable as, first, residents did not like the disruption of having rooms such as kitchens moved from one part of the house to another, or the possible inconvenience of carrying everything to their now landlocked gardens through their house. Second, the utilities companies ruled-out converting the underused pedestrian walkways into closed back gardens, as this was where the services had been laid. Uninterrupted access was needed for future repairs to water, sewers, gas pipes or electricity wires, which would be impossible if they had gardens laid over them. Whereas in the traditional street services ran under the road or pavement, in the Radburn estates the apparently less disruptive laying of services along pedestrian walkways and adjoining green verges prevented any alteration of the unsuccessful layout (Schofield, 2008).

The solution eventually adopted was devised by a firm of Dutch architects who, through a community-led design process, modified the service areas according to the idea of the Home Zone. This turns car-dominated areas into more people-friendly places by changing the design of the streetscape (see [www.homezones.org](http://www.homezones.org)). Asking residents what they wanted provided vital feedback on maintaining the positive aspects of the existing buildings. In terms of establishing the success of these alterations, Woodside housing manager, Will Schofield, said,

It is difficult to get scientific measures, but we have been carrying out resident satisfaction surveys over a long time looking at the differentials between different areas. Satisfaction levels are rising faster in the parts of the estate that have had the works done than those which have not. Property values are also rising faster in the areas that have been done, than those that have not. (Schofield, 2008)

At the larger scale of the area or neighbourhood-level development further examples of a fundamental lack of adaptability can be seen in the road structure. In Washington, the large-scale road network, arranged in a grid predating that of Milton Keynes, resulted in neighbourhood units – called villages – being cut off from one another. As the local authority described it, 'The road network acts like a collar therefore new development and change is unable to straddle more than one village' (House of Commons, 2002a). Separating the cars into their own



dedicated network meant high mobility, which was good, but long-term severance, which was bad. The dedicated pedestrian-only movement routes also created problems. The extensive use of cycle ways and pedestrian paths separate from roads creates problems of safety and way-finding. As the authorities in Washington described,

Whilst all the villages are interlinked with footpaths, these are often poorly lit and fail to create an attractive environment conducive to encouraging more people to walk. The separation of roads from pedestrians means that the town is difficult and confusing to navigate.

(House of Commons, 2002a)

Furthermore, these car-free routes are expensive to keep in good condition. As the local authority for Runcom reported, 'Maintenance costs can be disproportionately high due to the difficulties of machine access away from the road' (House of Commons, 2002a). The legacy of the celebrated decision to separate road, pavement and cycle path thus reveals the huge natural efficiencies that existed in traditional street patterns by having these three modes of transport all sitting adjacent to each other. The innovation of the Radburn design, transferred into a practice of car-free neighbourhood design and total segregation of different modes of movement, had a huge impact on the nature of place created in the New Towns.

The situation encountered in the New Towns of poor physical condition has counted against their becoming sustainable communities. Their poor build quality is amplified by the weakened economic status of the towns themselves. For a time they ceased to be places that people wanted to live and work. Writing in *The Guardian*, journalist Jason Cowley, who grew up in Harlow in the 1970s, described how his town changed from a booming to a declining place.

When I lived in Harlow, in the 1970s . . . it seemed to offer everything an energetic young boy could want in those days: department stores, an Olympic-size swimming pool, a hi-tech sports centre, a dry-ski slope, a skating rink and a golf course set in a landscaped park through which a river meandered. It even had its own water gardens, at the gateway to which was a Henry Moore sculpture of a

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family – which, my father told me, symbolised all the new families that had started in the 1960s when Harlow was known as 'pram town' . . . It had a leftwing council, a progressive, liberal intelligentsia, which congregated around the excellent local playhouse, eight comprehensive schools and a well-funded network of children's playschemes and recreational sports facilities (Glenn Huddle emerged from the Harlow leagues). It was a well-organised town . . . Just outside the town centre was a football stadium, the home of Harlow Town, who, for a brief period in 1979, became the most celebrated non-league club in the country by beating Leicester City, among others, on their way to the fourth round of the FA Cup. Harlow eventually lost 4–3 away to Elton John and Graham Taylor's Watford in a thrilling game that was shown on *Match of the Day*. I was in the crowd that afternoon when, for large parts of the game, my home team dominated. In retrospect, that match was the high point of my time in Harlow. Not long afterwards, my parents moved away, already alarmed by what they saw as the precipitous onset of decline.

(Cowley, 2002)

The New Towns enjoyed a spirit of optimism, community and growth when they were being built, and when they were run by their local development corporations. The end of the development corporation changed the fundamental functioning of the towns, and arguably they have struggled to find their feet in the wake of this, alongside other challenges such as national economic change and issues with their designs. Yet, just as things changed for the worse, in time as the British economy shifts again, their economic prospects are likely to improve. In time, the quality of the built environment, and the quality of the towns as a whole, will improve.

### **Sustainability as a changing understanding of the natural world**

The challenge of sustainability is fundamentally to ensure the upward direction of social progress. This is impossible in the face of unstable economic conditions and the persistent

growth of environmental pollution and resource depletion. The concerns of sustainability are therefore the primary concerns of the planning system – a point that the TCPA have been hampering home throughout the last few years to great effect (see [www.tcpa.org.uk](http://www.tcpa.org.uk)). Fundamentally, the TCPA have always been at the forefront of new directions in planning, with public interest being the primary objective: homes for all, sustainable development and community empowerment. These objectives of planning are still valid, even if the precise methods for achieving these objectives are continually refined.

The New Towns serve as a vital body of knowledge about how particular design principles or decisions over strategic planning have turned out in the long run. The examples of inflexible layouts caused partly by their physical design, partly by their ownership, or segregated pedestrian and cycle routes made troublesome by high cost of maintenance and fear of crime. Each of these is the result of wider social and political factors that were impossible to anticipate when the designs were first conceived. The difficulty in predicting the future evolution affected the designers but also the civil servants in charge of the finance. As discussed in Chapter 10, in the 1960s, the Treasury, desperate to establish whether the New Towns Programme was providing good value for money, determined that it was logically impossible to separate the complex variables at work or draw meaningful comparison between different economic conditions or other parallel programmes such as the 1950s Expanded Towns Programme (Cullingworth, 1979: 537).

Research into the New Towns represented what Melvin Webber was later to call ‘a wicked problem’, one that was essentially too complex to be capable of simple answers. But this is not to say that there cannot be useful empirical knowledge learnt. Rather than being predictive, like the science of ballistics or mechanical engineering, the study of towns should be perhaps more like the science of biology. This produces significant scientific knowledge but in a different form. Towns are, after all, natural phenomenon just as human society is. Until the late 1960s, the mindset of those involved in the design of the New Towns belonged to an age of mechanical reason, after which the subsequent ecological mindset started to gain ground.

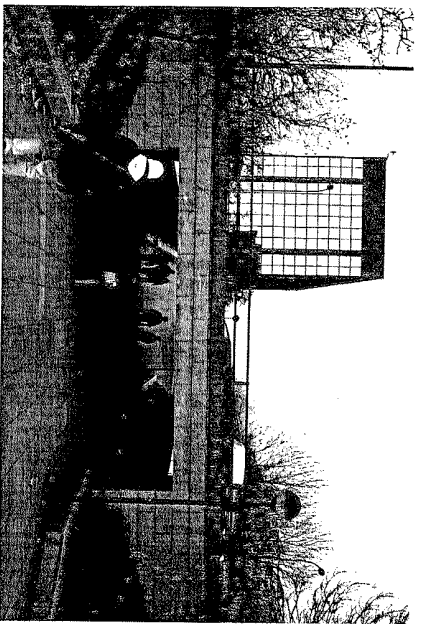
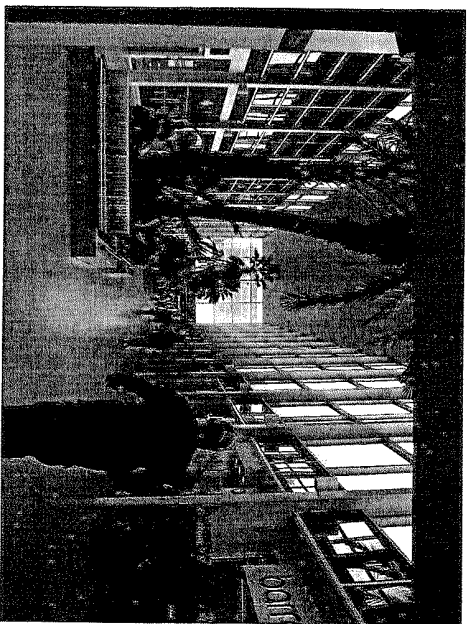
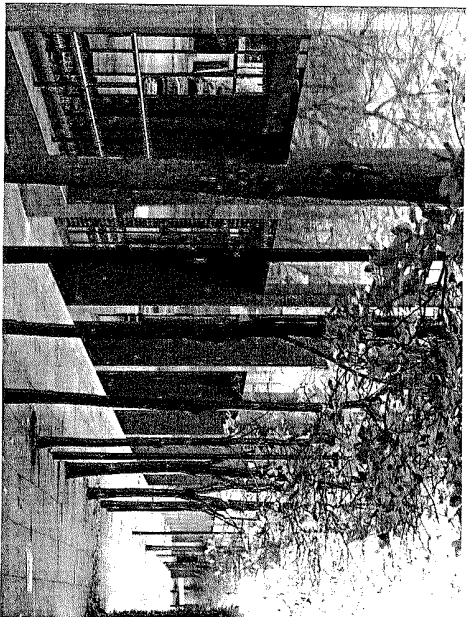
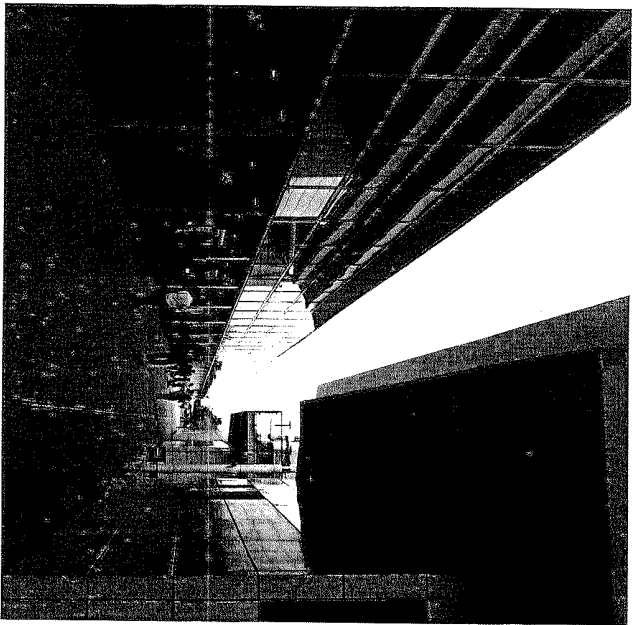
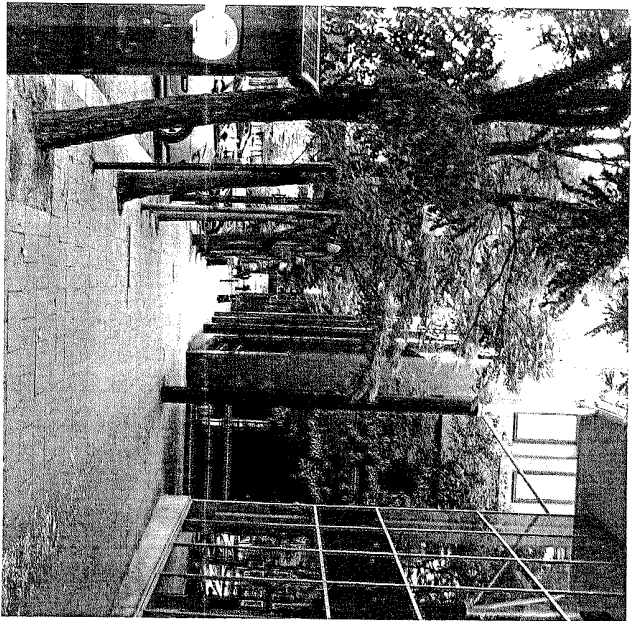
The urban development underway at the cusp of this change was Milton Keynes. One of the architects, Christopher

Woodward, described their approach saying, ‘We regarded existing new towns are inadequate, sentimental, insufficiently rigorous, not theoretically based, and patronising’ (Hill, 2007: 23). Another Milton Keynes Development Corporation architect, Stuart Mossrop, said of the grid pattern of the town, ‘The straight line is the only distinctive mark that man can make on the face of the Earth. Nature can make any other kind of shape but can’t make a perfectly straight line’ (Hill, 2007: 15). The urban designers and architects applied their vision of the modern age in the built fabric of towns such as Milton Keynes. The flat landscape of Bradwell Common was to have the geometrically pure concept of the grid imposed upon it by the architecture, planning and civil engineering of Central Milton Keynes. This attitude sought to impress upon nature a rigid, scientifically justified mark, as proof that humankind had conquered the natural world. This view was the essence of the mechanical concept of nature that understood humanity’s role upon the earth as controlling nature for the benefit of human needs. This view had grown throughout the nineteenth century with the industrial revolution and had been furthered by every new technological marvel from the steam train to the spaceship.

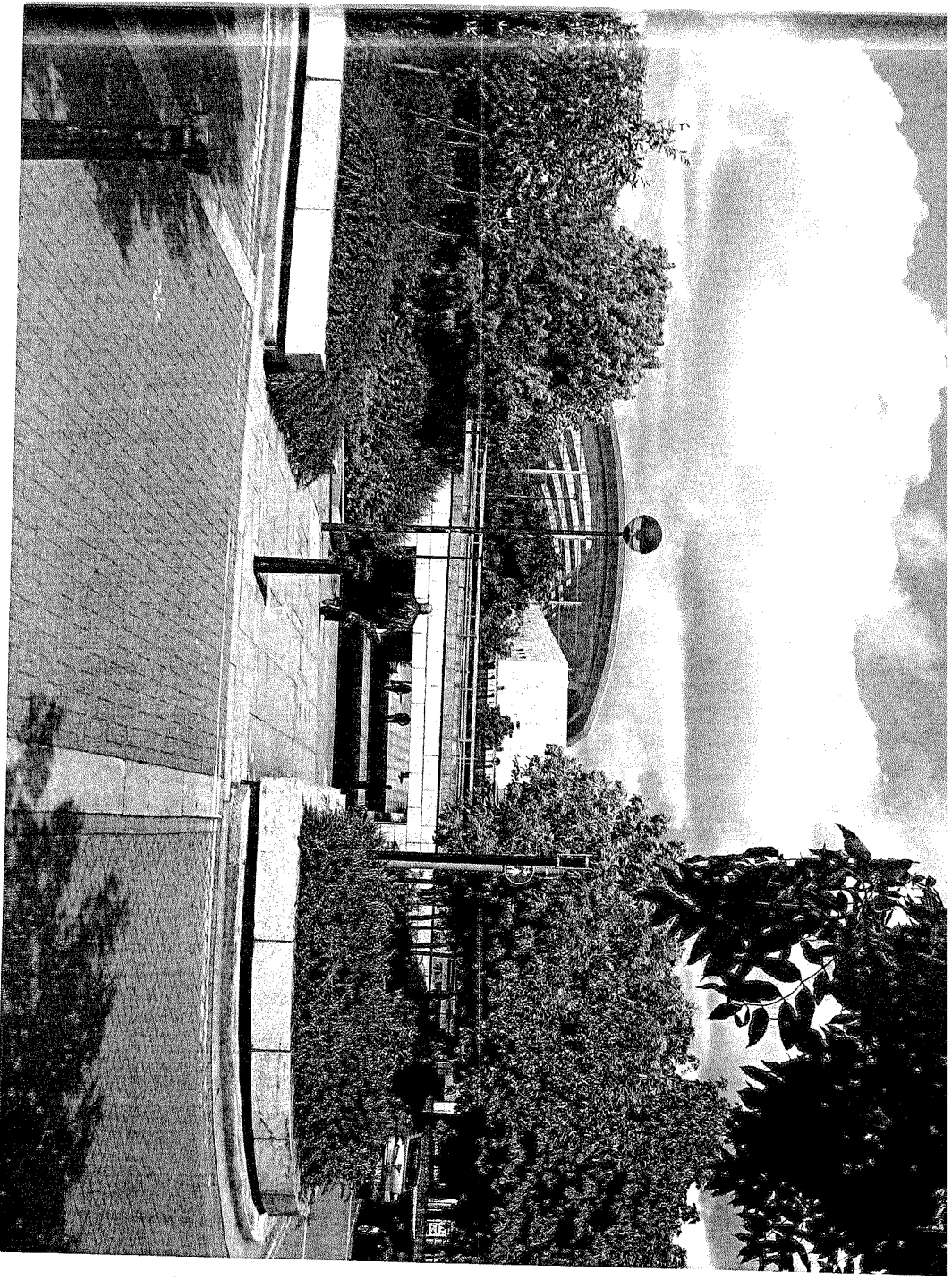
In the design of Central Milton Keynes this belief manifested itself in the street pattern of the city. The continuous line of Midsummer Boulevard reaches from the train station to the shopping mall centre, through it and on to Campbell Park beyond in a single uninterrupted line. The aesthetic experience of walking along this straight line is one of a persistent and extreme vanishing point. The interior of the Central Milton Keynes shopping centre is similar to being in an airport, which were subject to major growth at the same time.

Yet just as the philosophical ideas underpinning modernist architecture were being implemented in the plan for Milton Keynes, science itself was becoming more sophisticated in its view of the world. The ecology movement was starting to demonstrate the impact that industrialised human action was having on the natural world, and the Apollo missions to the Moon showed that the whole Earth was just a tiny marble in a sea of infinite darkness.

Appreciation of the link between people and nature was then revolutionised in the 1970s by the work of environmental psychologists such as Stephen Kaplan, Rachel Kaplan and Daniel Berlyne. Their work proved from extensive research that



Milton Keynes' unique public realm produces an aesthetic experience different from traditional British towns. The grid system produces strong vanishing points, especially for pedestrians, except where the footpaths dip under the roads. The Centre, Britain's first 1 million square foot shopping mall, bares a similarity to the British airport concourses designed around the same time.



Central Milton Keynes.

certain environments were naturally more appealing to people. This rang with the logic of evolutionary biology. Our aesthetic experience had a rational basis. Detailed, interesting views that offered basic qualities of shelter and exploration were naturally appealing. Their work also proved that exposure to nature automatically relieved mental fatigue that built up from repetitive views or contained spaces.

There was a fundamental preference, common to all people regardless of cultural background, towards certain types of view. What people innately found attractive and comforting were scenes akin to an open valley with trees in it. A vista should allow one to see danger approaching, offer somewhere to shelter – from attack or from the rain – and, crucially, an element that appeared hidden that encouraged exploration. In an urban context, a bend in the road or entrances of buildings provided naturally compelling views (Kaplan et al., 1998). According to the Kaplans, urban layouts with roads that form clear sections of 100 metres or so make naturally more successful communities than long terraces. Such street patterns are often found in historic European towns and cities – either because they have grown gradually, and thus show incremental and organic change, or because the designer had an instinctive appreciation

for these universal aesthetic principles. The curve of Regent Street in London's West End is a clear example. Similarly, buildings with views of trees or open space are inherently more appealing and more calming to be in. In light of this fact, the aesthetic experience of Milton Keynes' repetitive clean lines and vanishing points, from a pedestrian point of view at least, is alienating. In the car, of course, it is a different experience, and the car-based residents are rightly proud of their unique city with its tree-lined boulevards.

An aesthetic analysis of Central Milton Keynes is far from clear-cut, but does suggest positive or negative qualities of design. Grid cities exist across the world and throughout history, and the qualities of their spaces have numerous factors to consider, from sense of enclosure to level of activity on the street. Such an assessment of the New Towns on the grounds of environmental psychology would find various complex questions. The maturity of the New Towns is reflected in that of their trees and hedgerows. In many cases the New Towns preserved their mature trees. Milton Keynes even built its main shopping centre around an existing oak tree. On the surrounding streets, the trees in Milton Keynes will take ninety years to mature. This means that by the middle of the century – assuming they survive

the onset of global warming – it will be possible to see clearly across Midsommer Boulevard. The extensive presence of trees and landscaped green banks, throughout the New Towns, according to Kaplan and Kaplan means inherently calming and attractive locations. Yet how is this effect countered by the pedestrian experience of traffic or a repetitious street experience, with unattractive underpasses? Clearly, the presence of trees and plants is preferable to a barren and hard public realm, but questions remain as to whether such greenery in the New Towns might be revitalised. Might it better provide habitat for promoting biodiversity, and should town planners treat their urban green infrastructure in light of climate change (see BRANCH, 2007)?

In terms of the overall pattern of streets, the grand geometric boulevards of nineteenth-century Napoleonic Paris served a specific purpose of allowing the military to control the city. The statement of control over chaos was not merely a philosophical one, but a pragmatic one. The barricading of tight and complex medieval streets had been a crucial element of success in the French Revolution. The bold new avenues meant cavalry could move rapidly through the city and create firing lines across which people could not move. These principles were soon established in city building across continental Europe from the Baltic to the Black Sea.

The vision of order in the urban layout of towns, built on the geometric rationalism and impression of control over untidy nature, or the mob, did however also epitomise the mindset of the industrial age. The 1970s mark the start of a new way of thinking about humanity, technology and the natural world. The ecology movement grew until by the 1990s its stark warnings of the impact of the industrial mindset were finally taken seriously by the political establishment, and by the 2000s became a mainstream concern. Today, the contribution to climate by pollution from power stations, factories and vehicles – especially cars – as meant an urgent need to address the environmental sustainability of our towns and cities. The fundamental principles of urban industrial society are challenged by these new agendas. Future development is expected to meet new standards and new design principles. Existing settlements must be refurbished in such a way that their negative environmental impact is reduced, and that they can adapt to the now inevitable changes in the climate.

The New Towns offer a great example in this respect. First, their story reminds us that this zeal for radically altering the nature of urbanism leads to unforeseen side-effects. Second, demands change as society changes, and as such the attributes of a place may turn from a disadvantage to an advantage again. Third, the New Towns are places that are in many ways ideally equipped to pioneer the move to sustainability.

The New Towns were built to be socially sustainable communities, in sharp contrast to the bleak estates or suburban sprawl of the 1920s, where local facilities or sense of identity may be absent. They have been economically sustainable wherever the mix of employment has meant a sufficient variety of work in event of the collapse of any particular employer or sector. In terms of environmental sustainability, all the New Towns have extensive habitat such as woodlands, comprehensive cycle paths that other towns could never dream of and a range of sites that are already pioneering a range of environmental aspects, from industry to housing. The new paradigm of sustainable development, more holistic, organic, accepting of limitations, not naively asserting control over nature begins at the point the designs of the New Towns end. Yet even though the grand gestures of the New Towns plans may have epitomised the mechanical view of humanity asserting control over nature, the future belonged to the new wave. Throughout the 1970s, the TCPA was involved in campaigns such as Greentown, Milton Keynes, and the Lightmoor Community in Telford. These were prototypes for low-impact developments, but Greentown was rejected, and Lightmoor was extremely small scale (Hardy, 1991b).

The clamour today is that all towns must be sustainable. Rather than Parker-Morris room sizes and industrial system building, the new standards are for 'eco-homes'. Essentially, the regulations such as the Code for Sustainable Homes are encouraging super-insulated buildings, oriented to achieve maximum solar gain and with technological features such as heat-recovery ventilation systems, grey-water recycling systems and roof-mounted solar panels. Heating, electricity and water systems are also being re-considered at a neighbourhood level, with 'energy from waste' plants capturing low carbon bio-gas from rubbish dumps and sewage works, in place of high carbon fossil gas. These ambitions are driven by careful consideration of policy objectives, yet there is a risk that they

will eventually deliver precisely the same unforeseen consequences as housing standards in the past. Just as in the past, these might take decades to come to light. Achieving three goals of high-quality housing, in large volumes and with rapid delivery, is generally never met. Either there is high-quality build, delivered quickly, but in small quantities, or large volume of homes, delivered quickly but of lower quality, or large volumes of high quality, but delivered slowly. This problem is by and large intractable.

### The lessons of the New Town design concepts

In the New Towns, where mass-production techniques were encouraged to speed the delivery of housing targets, these produced buildings with low potential for future modification. In places that included parts of Harlow, Basildon, Runcorn and Telford, whole neighbourhoods have been marked as impossible to refurbish. By contrast, the high volumes of late Victorian housing, or interwar suburban semi-detached houses, often built by small teams of builders, were of variable quality, but the building design was inherently adaptable. Extensions could be added to the back or the side, lofts could be converted, details augmented or removed, and each would have its own drive, giving space for one or more cars outside the front door. The New Towns development corporations largely ignored this housing type, opting instead for lines of terraces surrounded by open space. Suburban semi-detached housing was predominantly built by private developers, but this represented a small proportion of the total.

At the level of the street, the way that repetitive terraces were built prevented individual buildings being replaced. In the town centres, the large 'monumentalist' block structures also lacked the quality of traditional street patterns where small building plots with diverse ownership could be individually replaced over time. This fine-grain pattern can respond to the changing needs of a place over time. Clear examples of this can be seen in the post-war reconstruction of Köln in Germany compared to Coventry in England. As with the New Towns, Coventry centre was built as a modernist superstructure, where coarse-grain buildings containing office and retail surrounded

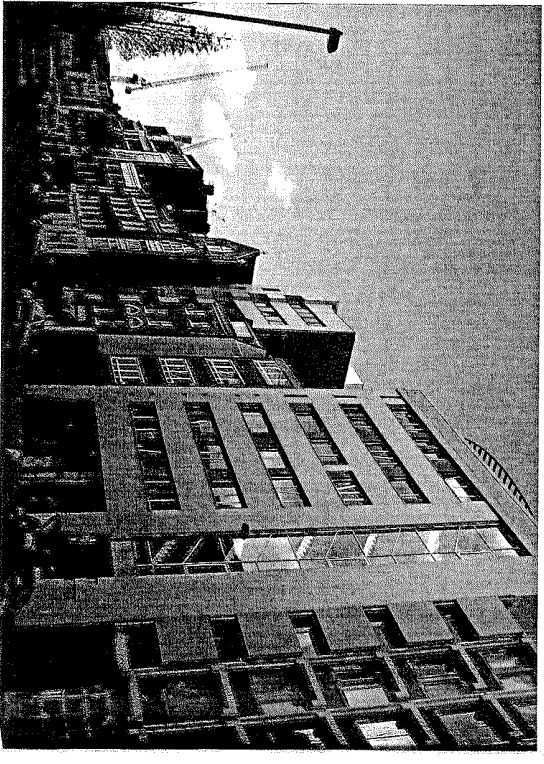
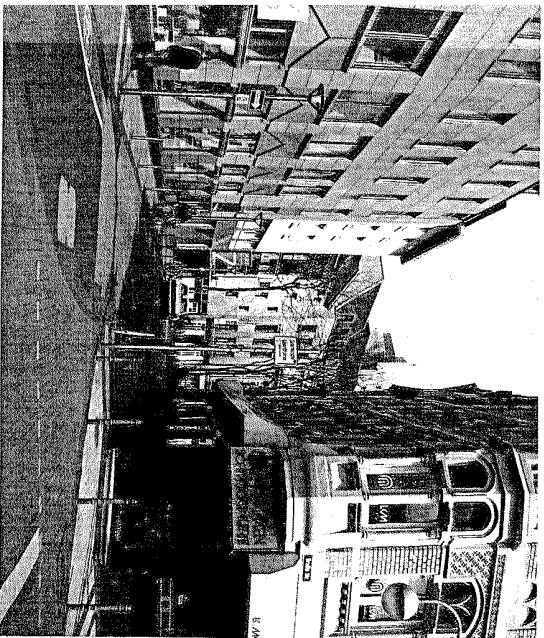
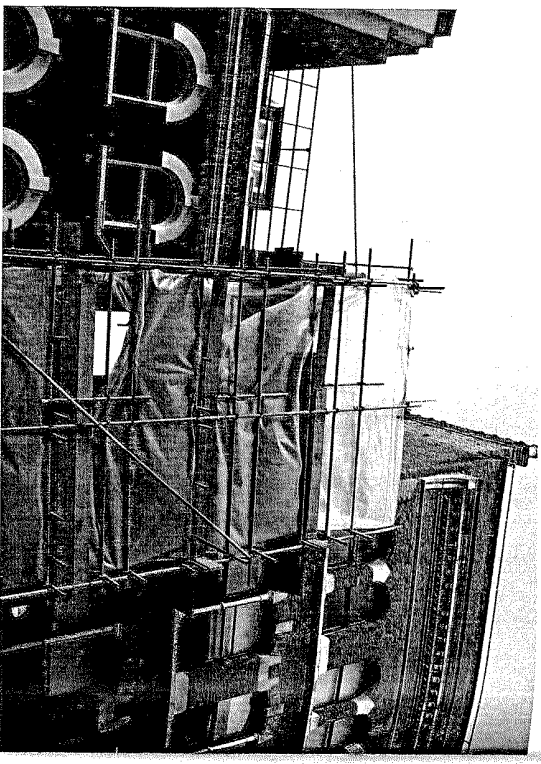
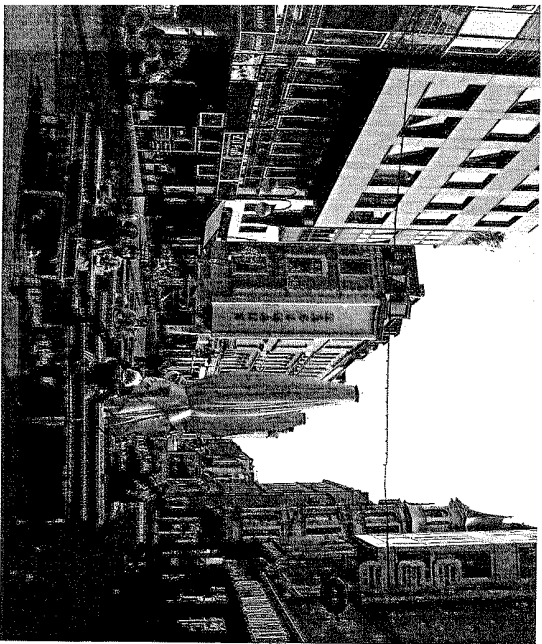
pedestrian precincts. These need to be refurbished as a whole, and the essential properties of the buildings are difficult to alter. In Köln, the city centre had also been destroyed in the war and only one in ten of the original buildings remained. Unlike Coventry, the city was rebuilt to the old medieval street pattern, reproducing the plot sizes and building heights that had been there before. The result is that whereas Coventry feels partly like a product of the 1950s and 1960s, Köln largely feels like a historic city even though practically all the buildings in the centre are post-war. Its streets, now largely pedestrianised, have an attractive lack of regularity, many hidden spaces and buildings that can be removed and replaced over time, creating a richly textured urban environment. Each building can be removed and replaced if desired. Poor-quality buildings might be replaced with a higher spec one, offices can become apartments or vice versa, depending on what the building owners decide to do.

The coarse grain centres throughout the New Towns were favoured by department stores and retail chains, but made specialist independent retail less likely. The designers of Milton Keynes were aware of this and getting the shopping centre they hoped for proved to be a challenge. As Allen Duff, Commercial Director of MKDC from 1978 to 1983, recalled,

We took advice from a lot of people, and one of the most vociferous was Terrance Conran [Britain's leading furniture magnate]... He argued that specialist retail made shopping centres different. You don't go to another town to go to Woolworths because you've got one of your own. But you might go for a really good book or music shop. We took this advice very seriously, agreed with it completely, but found that the quality specialist shops were usually family-run businesses. [They'd] been in a particular location for a long time, owned the freehold on their property [and were] successful because of their good will and personal attention.

(Hill, 2007: 31)

To try to get small retail in, certain tenants were offered zero rent up to £100,000 turnover per annum and 10 per cent thereafter. An arcade was dedicated to smaller shop units. As MK's Centre took off however, it became impossible to



In the post-war era Köln was rebuilt to its traditional street pattern, building heights and plot sizes, keeping the character of the streets, their sense of enclosure and intricate public spaces, with buildings essentially 80 per cent new build.

A further benefit of this urban form is that over time single buildings are easily capable of being removed and replaced to reflect changing needs and producing an engaging, fine-grain street. Images above show Clerkenwell in London.



Modern, up-market, self-build houses in Amsterdam's Eastern Docklands show extremely creative responses within a coherent pattern of traditional building heights and plot size outlined by a neighbourhood design code.

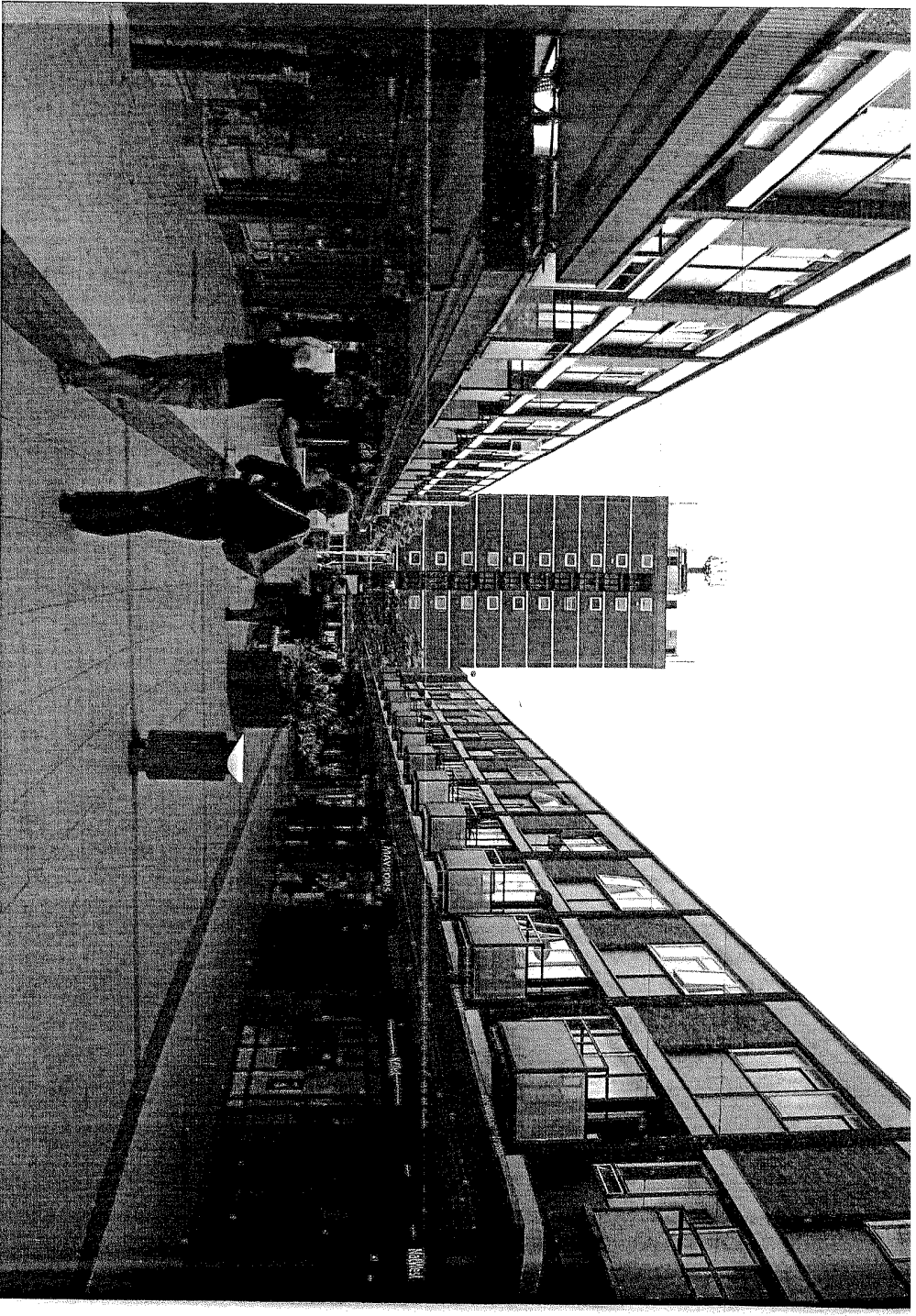
enforce this mix. Tenants were offered huge sums of money to move out by national retailers desperate to take their place (Hill, 2007: 51).

Research conducted in 2005 by the think tank the New Economics Foundation noted that, throughout Britain, town centres were becoming indistinguishable because major retailers were becoming dominant. Individualistic places defined by specialist retailers were becoming rare. They dubbed this the rise of 'clone towns' (NEF, 2005). In new urban development

today, creating a high-quality town centres with interesting specialist retailers would benefit from fine-grained streets where affordable commercial plots are available for sale, preferably with small mortgages. This should complement the recognised need for affordable mortgages for key public workers such as the police and fire service.

At the wider scale than the individual building or street, the neighbourhood unit and zoning were major design principles of the New Towns. This rejection of the historic urban form from





In Britain's New Towns – and elsewhere – single large structures containing a set number of housing units or retail units of a set size could prove extremely difficult to adapt to different uses in the future. The 'form-follows-function' argument meant a built-in lack of flexibility to changing needs of society over time. Photo: Stevenage town centre.

the 1940s onwards was intended to solve perceived problems in cities blighted by traffic, factory smoke and poorly maintained housing. Housing arranged into neighbourhood units of around 5 to 10,000 homes, with shops in a local neighbourhood centre, and separated by major roads, produced physical severance. Today, as the English Partnerships Urban Design Compendium notes,

The neighbourhood unit can provide a useful organising device – but only when it is overlaid on an integrated movement framework and conceived as a piece of town or city whose activities and forms overlap. This is to move away from large-scale projects envisaged or described as neighbourhoods, but designed as disconnected enclaves. It is also to move away from estates and layouts – terms which in themselves serve to emphasise single use and segregation.

(EP, 2000: 41)

The design principles in the New Towns were put into practice in the 1940s, 1950s and 1960s, with an appearance of scientific rationality, but no strong understanding of how they would

work in reality. Such an understanding was never going to be easy to determine, as the effects would take time to become apparent, and unforeseen consequences were an inevitable consequence of social and technological change. The clear example of this is the impact of the car on the validity of the design principles. This point was argued extensively over the years, with the modernist architects and the highways engineers carrying far more influence than public transport lobbyists or Garden City idealists. Only in the last twenty years has the trend reversed and the focus shifted towards the necessity for sustainable transport.

The failure to understand movement patterns can be seen clearly in the case of the first New Town, Stevenage. Movement plays a fundamental role on the nature of place so changes in movement patterns mean changes in the way a place functions. Nick Matthews, editor of the TCPA journal and a resident of Stevenage, describes this change,

The large scale road infrastructure ensured rapid mobility, yet this increased mobility meant the neighbourhood centres only had residual usage. In general, the neighbourhood units were successful, but in the

1960s, increased mobility diffused sense of identity at the neighbourhood level.

(Matthews, 2008)

Ironically, bike shops are an example of successful retail in a neighbourhood shopping centre, yet this zero-carbon mode of transport is not ideally catered for. In many New Towns, the cycle network goes to the town centre, but not through it. The lack of movement through the centre is the long-term result of the design principle that traffic should move to and not through centres. These have led to long-term concerns for the future development of the town centre. As Matthews describes,

The problem with the town centre is there is no flow. It is in the centre of a ring of dual carriageways so there is no opportunity for organic growth. It is in the hands of a single, institutional management. It is very difficult to make it feel like a place you want to visit.

(Matthews, 2008)

As discussed in Chapter 9, road systems that encouraged rapid movement by car meant people could as easily drive away from the centres of the New Towns as into them. In Stevenage, ironically, the centre of historic Stevenage Village was a more common draw for some residents than the New Town centre.

The old town centre is the strongest of the neighbourhood centres because it has a large supermarket (Maitrose). It has lots of pubs because of its old coaching history, and a plethora of takeaways. For a long time it was the centre of the town's nightlife, until the Leisure Centre opened on part of the old industrial estate.

(Matthews, 2008)

This trend is seen elsewhere too. For Crawley, the historic high street that had built up along the old London to Brighton coaching route, sits to the side of the New Town shopping precinct opened in the 1960s. In the 1980s, a major new shopping centre, The County Mall, again shifted the centre of economic activity to a new site. Ultimately a car-based leisure park in the 1990s, with a multiplex, bowling alley and franchise

restaurant chain, shifted evening entertainment away from the centre (see photos on page 86).

A further significant aspect of changing movement patterns relates to speed. In terms of retail provision, Stevenage centre struggled to pull people in from a larger area, partly because of the ease with which people nearby could get to London. The Garden City rationale of locating satellite towns a certain distance away from their parent cities was eroded by changes in the speed of rail services. Where Stevenage was once effectively self-sufficient by virtue of it being around an hour from central London by rail, since the late 1970s the same journey could be done in half the time.

Increases in rail speed affected all the London satellite towns, including as far away as Peterborough. Not only was day tripping to the retail or cultural amenities of the capital extremely easy, but also these New Towns became attractive locations from which to commute to London. If one worked relatively close to the relevant mainline station in London, it could be a quicker door-to-door commute from a satellite New Town than commuting from another part of London. The ambition for social balance and a lack of outward commuting was undermined by increased mobility, as was the economic success of the town centres.

How the New Towns were affected varied, depending on the regional context. Bracknell for instance suffered from its proximity to the shopping facilities of Reading. Despite being in a highly populated area of the country, Bracknell, like Stevenage, could not attract people in from other nearby towns. The town centres had been designed to meet the needs of their surrounding neighbourhood units, but these people did not necessarily see the need to use the town centres when better shopping was available elsewhere, and outsiders thought the same.

On the other extreme, Peterborough is a major local centre with excellent transport links to the rest of the country as a whole, but located in the sparsely populated East Midlands region it could not draw many people in to support its retail or leisure sectors. By comparison, small cities such as Oxford and Reading in the Thames Valley are surrounded by a large number of towns with modest populations in the tens of thousands, and are within easy striking distance of each other, and large towns such as Swindon. As such, a large population

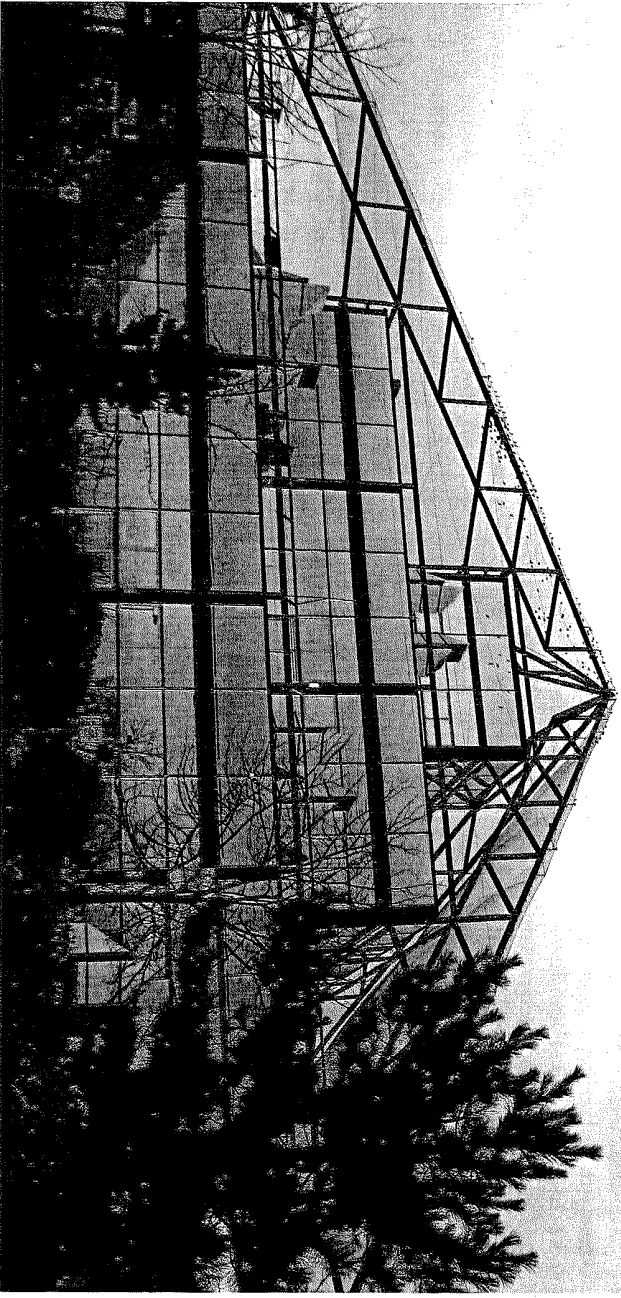


The Stevenage Leisure Centre on part of the former industrial estate immediately to the west of the train station and the town centre, represents a major new centre of activity for the town. As with Crawley (described on page 86) this new development represents growth but also draws economic life away from the former places of activity in the town.

in the surrounding area support the shopping and nightlife of both Oxford and Reading.

The prize for the best plan for regional connectivity belongs to Milton Keynes. Located far enough from London and of a sufficient scale, it instantly became a regional centre in its own right. It is also located midway between the vast centres of London and Birmingham, connected by motorway and mainline rail, and also lies midway between the top tier university towns

of Oxford and Cambridge. The government's Sustainable Communities Plan identifies this as the east-west science arc, with Milton Keynes being a major point for growth at its centre. The strategic value of its location is that Milton Keynes has ready access to the markets of Britain's largest two cities, and provides space for the commercial development of innovations generated by the adjacent university towns. Its role today is a new investment focus for British technological innovation.



The Point in Milton Keynes opened in 1985 and was Britain's first multi-screen cinema.

This role continues that the tradition of all post-war New Towns in providing business premises and workforces for emerging British industries.

### **The heritage value of the New Towns**

Questions of how the New Towns should be regenerated extend from their housing through their road layouts to the

nature of their centres. How can such interventions be done in a way that respects the existing place, as the recent government guidance requests? The New Towns have always had something of a 'science-fiction' aesthetic – parts of Kubrick's *A Clockwork Orange* were filmed in Harlow, and the futurist pyramid of Milton Keynes' Blatchley Leisure centre became part of an alien world in *Doctor Who*. These progressive designs produced places that are unique, even if their reputations have become tarnished. This provides something of a challenge

for their ongoing refurbishment: Should they attempt to preserve the ethos of the 1950s and 1960s, or is that a lost cause? Incremental changes have seen the originally bold architecture and never completed super structure of Cumbernauld town centre, crowded out by 1990s big box retail stores. In Harlow, the public park area of Gibberd's Water Gardens was converted into an additional shopping mall and multi-storey car park. These changes may have secured employment and commercial gain in the short term, but have created changes that challenge the prospects for building in keeping with the original intentions.

The first generation New Towns were products of the 1950s. Their designers and early residents felt like pioneers, not only because they were moving to new lands but because they sought to build a new way of life using new techniques. Whereas house building in the early twentieth century had used horse and cart to bring building materials to site, by the 1950s new machines were massively extending human capabilities. As such, engineers were designing features such as extensive landscaping and vast pedestrian underpasses with greater ease than before.

These early New Towns also belonged to an era defined by a paternalistic view that the authorities did what was best. Reith, for instance, forbade the inclusion of dog racing tracks in the New Towns, even if there had been demand. The New Towns were founded on the idea that life consisted of a steady job and weekends of idle bliss tending to one's garden. By the later New Towns, the liberal and progressive mood of the swinging sixties meant different values, reflected in the personal mobility made possible by the car. The civic amenities of the town were its sports centre and swimming pool, its library and arts centre. Many clearly demonstrate principles that are resolutely of their time, and should be respected as such.

Against the backdrop of changing political attitude, acute areas of deprivation and depressed town centres that demand regeneration, the New Towns nonetheless have an architectural character and a place in history that should not be lightly dismissed. With their reputation sullied by negative press, especially in the wake of major unemployment affecting Corby, Runcom, Skelmersdale or Hatfield, the significance of the New Towns has been lost. The New Towns can in some ways be seen as identical to their contemporary buildings in the Expanded Towns or in the inner cities, yet these lacked the coherence and

scale of the New Towns. Leading the campaign for this period of architecture as part of British heritage is The Twentieth Century Society. Campaign director, Jon Wright, described the challenges,

Generally in the New Towns there is a lack of understanding about what was trying to be achieved. Until the late 1970s, the buildings, public art and street patterns of the Victorian era were considered poor quality, out of touch with modern needs and best demolished. Today the same is occurring in the New Towns. Large architectural statements of the era that are now listed such as the Byker Wall in Newcastle or Park Hill estate in Sheffield, are widely known, but the New Towns are neglected. They are not places that people other than their residents or people working there ever visit.

(Wright, 2008)

The unique character of the New Towns is shaped by their origins in the Garden City Movement and what it aimed to achieve. This Edwardian vision that sought to combine the best features of both urban and rural environments, the town and the country, mean that the New Towns green space and balance of housing to jobs are extremely significant. However, many New Towns have been afflicted by the poor consequences of their strategic location, uncertainty over their intended size, poor build quality, or later alterations or additions. A fundamental shift in Britain's economy away from manufacturing was inconceivable in the early days of the New Towns. The prospect of future economic decline of the New Towns was never considered by their original masterplanners.

Interestingly, as a product of their time, the New Towns heritage points to some of the key – and perhaps not widely known – figures of the twentieth century. Telford of course was renamed as such, from its original name of Dawley, to pay tribute to Thomas Telford, the civil engineer whose construction projects helped develop the industrial revolution in nearby Ironbridge. A less well known figure in New Town heritage – other than to local residents that is – is Caroline Haslett DBE, from Crawley; an Edwardian physicist who campaigned for the benefits of domestic electricity supply to be understood. The Electrical Association for Women she co-founded produced the

first 'all-electric' home in 1935; a pioneering idea when few homes had electric light, let alone appliances. Housework was toil, she argued, and so electrical machines should be invented to liberate us. Twenty years later the National Grid was built to bring electrification into British homes.

Electrification led to electronics and computing (originating in the work of Alan Turing, at Bletchley Park, which coincidentally is now part of Milton Keynes). These new industries were as significant in the 1960s, 1970s and 1980s as the rise of the car in the 1950s and 1960s, or the radio and telephone in the 1920s and 1930s. Various post-war New Towns, such as Stevenage, Glenrothes and Cumbernauld, provided brand new facilities for new emerging market sectors and so were at the forefront of building computers – or tabulating machines – as they were originally known. The New Towns have thus been the centres for innovation in Britain. They have thus been vital in developing new sectors for British industry and have played a critical role in shaping the whole of the modern world. Besides their scientists and engineers, the New Towns also have their fair share of world famous actors, musicians and sports stars.

The economic sustainability of any town is based by and large on the strategic value of its location, and the range and type of employers that prosper there. In their heyday, prior to the economic downturns and asset stripping of the Thatcher and Major years, the New Towns performed impressively. Between 1960 and 1978, overall national manufacturing output fell by 11.5 per cent but in the New Towns increased by 25 per cent. By 1989, this had extended to new, high-tech industries, 50 per cent of the urban centres for new technology jobs were in the New Towns (CLG, 2006: 63). Furthermore, the goal of creating well-balanced towns where all residents could work locally was achieved. The towns were remarkably self-contained (CLG, 2006: 61). However, the technological change that brought them success, and the rising consumer culture that brought domestic appliances and the private car, ultimately upset the goal of a balanced community. Clearly, a return to the vision of low commuting via local employment, and spaces designed to attract new businesses, perfectly fits the contemporary goal of the sustainable community.

In the first decades of the twenty-first century this also means the New Towns are starting to contribute to the challenge of environmental sustainability. Their engineering and manufac-

turing bases will become the centres for the development of low-carbon products and services. Already there are powerful moves in this direction. The Corby steelworks site now hosts the Eurohub rail-based freight centre that links the heart of England to the whole of continental Europe via the Channel Tunnel. The Nissan plant in Washington was among the first to be powered by wind energy, and the nearby Smith Electric Vehicle company has been a leader in the delivery of zero-emission service vehicles. Peterborough has re-branded itself an 'eco-city' to focus on its cluster of environmental companies and new eco-housing. Glenrothes is home to the Fife Energy Park, pioneering the construction of major sustainable energy infrastructure, such as off-shore wind turbines.

The constant waves of technological change and social change can be seen in Hatfield. The former aerodrome site, now the Hatfield Business Park, is host to numerous firms including mobile phone company T-Mobile and the online grocery store Ocado. The vast computerised distribution facility for Ocado is a creation of the Internet age. It can distribute goods to 60 per cent of the country with a lower total carbon footprint than any conventional supermarket (even when the customer walks to the store) given that its total distribution pattern is so much more efficient in comparison. In a carbon-constrained world this approach may become dominant.

A final example of how the New Towns have been advancing the agenda of environmental sustainability is in recent housing provision utilising the eco-homes standards. Due to the public sector land-ownership transferring from the Commission for the New Towns to English Partnerships (becoming the Homes and Communities Agency in 2008), and English Partnerships requiring all housing on their land to be built to the government's Code for Sustainable Homes standard ahead of it becoming a mandatory requirement, the New Towns have hosted some of the first and largest developments built to this new standard. These include the exemplar sustainable urban extension at Upton in Northampton, and major sites in Telford, Corby, Peterborough and Milton Keynes. These have all aimed to apply new environmental standards ahead of these being required for all new house building. In Bracknell, English Partnerships and the local strategic partnership have been adapting the former RAF training college, located close to the centre of town, into a site of several thousand new eco-homes (see table on page 143

for the volume of English Partnerships land in the New Towns and its values as of 2001).

So what are the lessons from the post-war New Towns that future town builders should take on board? Towns are around for a long time, so they must be made to accommodate change. First, they must be large enough to be self-supporting and expand over time. Second, they need a built form that is adaptable to change. A broad range of employers should be attracted, but since their needs might not yet be known, commercial sites should be adaptable to alternative uses over time. Housing must be physically capable of being altered over time. Mortgage lenders have to be on board, as their failure to be brought into the New Towns was a major barrier to the development of a balanced demographic that included the home-owning middle classes. Small-scale developers, building small numbers of units (as happened in the late Victorian housing boom) or self-build to design codes, will create a varied and adaptable townscape. To encourage interesting, specialist retail, affordable commercial plots need to be made available for purchase. A fine grain, traditional street pattern, as seen in the post-war reconstruction of Köln, is preferable to the coarse-grain superstructures seen from Welwyn Garden City to Central Milton Keynes, or the effectively short-term metal sheds of box retail.

At the level of strategic planning, new towns in the future should be located in the right place. The long-term fortunes of the New Towns show that new settlements must be built on strong existing movement routes. Towns must also be intended to be of a sufficient overall size. Towns should be big enough to be self-supporting, but also – to avoid the fate of Skelmersdale or Newton Aycliffe – it is important that the agreed targets are not revised (either up or down) midway through their construction.

Ebenezer Howard thought that once towns had reached the right size they should stop. Yet, towns are never really finished. Change goes on continually over the decades. The ebb and flow of urban inflow that fuels high density, versus the decentralisation to suburban expansion or the building of brand new settlements, is like a decades-long in and out breath of our towns and cities. The moment of these turning points are the political decisions, taken by small groups of people in a certain position at a certain time. Howard created the Garden Cities as campaign and real construction programme. Osborn took it

on to Silkkin, Reith and Abercrombie who formally created the policy of urban decentralisation. Gibberd and Stein helped build the first New Towns. Macmillan decided to form the Commission for the New Towns to take over when the construction was complete. Shore decided to end the decentralisation policy. Thatcher decided to wind up the development corporations as soon as possible. Today, small numbers of dedicated people will set future paths for urban development. Just as in the past, ideas should not be adopted dogmatically just because they appear to be the latest thing. Ideas should be tested by reasoned debate, and with an understanding of what happened in the past.

Howard saw the Garden City as an invention, but really it was a hypothesis. It was an idea about how we could build that needed to be tested in reality to prove whether it was valid. This experiment was an immensely complicated one. It would take generations to run, and be subject to so many influences, it would be hard to get to the bottom of it. The scale of knowledge to be gained from the New Towns Programme remains vast. This account has merely scratched the surface. Each town has a wealth of insight to be gained from its experiences, both positive and negative. The different national context of the Scottish, Welsh or Northern Irish New Towns has been neglected in this account. Yet certainly, some insights are clear.

Howard's model for self-financing urban development introduced in the Garden Cities, and taken forward by Reith into the New Town Development Corporation model, was immensely successful. It was blown off course by the unstable economic conditions of the 1970s. Yet, today, the Letchworth Heritage Trust, and the Milton Keynes Parks Trust – the only two independently surviving elements – remain immensely successful. The Milton Keynes Roof Tax that funded infrastructure for new developments has also been a successful revisiting of this idea. These show the benefits of being allowed to control one's own affairs. Indeed, Community Land Trusts are now widely recognised as a vital tool for establishing sustainable communities. Understanding the needs of a place – whether a whole town, or a modest housing estate – is best done by people on the ground with a personal stake in getting it right.

The story of the New Towns is really one of scale. Political power, technological power, public will and the desire to create

a break with the past and promote the new, all came together to allow very different ideas to be put into place on a very large scale. The greatest risk for new development in the twenty-first century may be that thinking big will be disastrous. Mistakes would thus be replicated on massive scales. An incremental, fine grained, individualist approach to buildings is needed to

be able to adapt to change. The technological change of the industrial revolution wrought social change, and ultimately environmental change. Predicting the long-term changes that will face society is difficult, but what is certain is that there will be change.