

Urban Planning and the Motor Car, 1955-1977: Responses
to the growth of private motoring in Leicester and Milton
Keynes

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Abstract

This thesis examines the response of British urban planners to the rise of private motoring in the 1950s, 1960s and 1970s. The examination begins with an exploration of important planning documents and events of the 1950s and 1960s, relating to the issue of rising car ownership. It is followed by an exploration of the response of urban planners to rising car ownership in Leicester and Milton Keynes. This research covers an important stage in the rise of car culture in Britain and an important stage in the evolution of urban planning. From 1950 to 1960, the number of cars on Britain's roads rose nearly two-and-a-half times to 5.5 million, which was seen as the beginning of mass car ownership. Although this prospect was often welcomed as a sign of affluence, it was also deemed to require a robust response from physical planners to prevent widespread traffic congestion and environmental nuisance. In this thesis I make four arguments. I argue, firstly, that it was in the 1950s and 1960s that a durable framework for approaching questions of urban transport in a motorised Britain was first worked out. Secondly, the prospect of motorisation posed fresh questions about the type of urban society that planning should be employed to support. The planners elected to encourage automobility and consumerism, but were also obliged to give more recognition to the importance of building conservation, urban environmental quality, and public transport. Thirdly, urban planners were directed by a powerful set of economic and social forces to plan in the car's favour. Fourthly and finally, I argue that the decision to accommodate motorisation helped to provoke a backlash against sweeping redevelopment and top-down planning that altered planners' relationship with the public, giving rise to a greater appreciation for the value of the existing urban fabric.

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List of abbreviations

BRF	British Road Federation
CBS	Centre for Buckinghamshire Studies
CMK	Central Milton Keynes
DoE	Department of the Environment
EMOHA	East Midlands Oral History Archive
GLC	Greater London Council
ICE	Institution of Civil Engineers
JUPG	Joint Urban Planning Group
LCC	London County Council
LWFB	Llewelyn-Davies, Weeks, Forestier-Walker and Bor
MHLG	Ministry of Housing and Local Government
MKDC	Milton Keynes Development Corporation
MOT	Ministry of Transport
ROLLR	Records Office for Leicester, Leicestershire and Rutland
RRL	Road Research Laboratory
TNA	The National Archives

Chapter One

Urban Planning and the Coming Motor Age

The subject of this thesis is the response of British urban planners to the challenge of accommodating rising car use in the 1950s, the 1960s and the 1970s. In the late 1950s, urban planners correctly inferred that the rapid rise in car ownership in that decade was a sign that private motoring was switching from the preserve of a privileged few to an activity that the mass of ordinary people could afford to pursue. The number of cars on Britain's roads rose nearly two-and-a-half times to 5.5 million in the ten years from the beginning of 1950. It more than doubled in the following decade.¹ Although many observers thought that this development was welcome in itself, it was considered that a robust response was required from physical planners to prevent widespread traffic congestion and environmental nuisance that would otherwise be the result of mass motorisation.

Amongst the first people to speak in favour of such a response was Colin Buchanan, a road engineer and civil servant who also had a background in town planning. He would later become a central figure in transport planning in the 1960s, following his authorship of *Traffic in Towns*, also known as the Buchanan Report, which was the outcome of a study commissioned by the Ministry of Transport (MOT). However, he first made an impression with an extensive discussion of the issue of urban traffic, entitled *Mixed Blessing*, which was published in 1958. He set out the scale and nature of Britain's urban traffic problems, noting that there were six million motor vehicles using 'the road system of the coaching days', which led to traffic congestion and was 'steadily grinding away all the amenity and pleasantness of our roads and ... adjoining lands.'² He explored the phenomenon of urban traffic and its associated problems in detail, but could offer no straight-forward solution to the latter, stating that the remedy did not lie solely with engineering or building. This assertion, together with Buchanan's acknowledgement that urban motor traffic was a very complex phenomenon that involved every aspect of urban life, characterised the way that British urban planners would approach the issue in the following years. Buchanan concluded by stating that he

¹ British Road Federation, *Basic Road Statistics* (London, 1971), p. 2.

² C. Buchanan, *Mixed Blessing: The Motor in Britain* (London, 1958), p. 82.

hoped that *Mixed Blessing* would draw attention to the subject of urban traffic as one of ‘extraordinary complexity ... deserving of further and deeper study’. He went on to write that ‘[n]ew urban arrangements are needed ... [a]lternatively, the old arrangements may yet suffice if the new mobility is surrendered, or at least drastically restrained. It is certain there has never been a choice so significant to the future of our towns.’³

In its closing lines, Buchanan’s book pointed to the twofold nature of the challenge: to accommodate traffic efficiently, thus reducing congestion and allowing towns to continue functioning as economic and social units, and to reduce the negative effects of heavy traffic on the local environment. Such was the size of the challenge that urban traffic became the major urban planning issue of the 1960s, and remained a significant one in the 1970s and beyond. This thesis looks at how this issue was approached by urban planners and other interested professionals in the two-and-a-half decades from 1955. It opens in the second chapter with an examination of the effects that this challenge had on the theory of urban transport planning, through the interrogation of a selection of key planning documents and the proceedings of planning conferences.

The remaining chapters of the thesis focus on the responses of the planners in two British cities: Leicester, an established city of Roman (or possibly pre-Roman) origins, and Milton Keynes, a New Town designated in 1967. These cities have been selected as case studies, because each city attempted to find comprehensive solutions to the problems associated with urban traffic congestion. In the former city, the analysis concentrates on the period from 1962 to 1972, when Konrad Smigielski assumed responsibility for urban planning in Leicester as the city’s first City Planning Officer. Smigielski’s first major act was to reassess the road provisions of Leicester’s 1952 Development Plan in the light of what he called the ‘motor revolution’, resulting in the *Leicester Traffic Plan* of 1964. The far-reaching proposals of the plan form the main objects of analysis within a wider examination of the city’s transport planning. The analysis of the response in Milton Keynes concentrates on the late 1960s and early 1970s, when the outline plans for the new city were formulated. It also includes an examination of the unrealised plans for Milton Keynes’ forerunner, North Bucks New

³ Ibid., p. 207.

City. In examining the evolution of transport planning in these two localities, special attention has been paid to their reception by central government.

The rise of the car

This thesis addresses one of the key historical developments of the last 130 years: the rise of the motor car. Kingsley Dennis and John Urry, in *After the Car*, described the car and the practices and technology associated with it as the most powerful system of institutions and consumption to emerge over that time, noting in addition that some have described the twentieth century as ‘the century of the car’.⁴ They went on to assert that the car system has become ‘a way of life’ with distinct characteristics that make it different from any other means of transport. They offered various reasons for this: car manufacture is a huge industry; the car is a major item of personal consumption that is used habitually and has formed an integral part of the social fabric and daily life; car use is linked to and supported by a variety of major institutions, industries and occupations; and the car has heavily influenced the shape of cities, use of natural resources, and both popular and high culture.⁵

Naturally, a work the length of this thesis cannot cover every element of the car’s influence in detail, but it touches on its relationship to notions of technological and social progress, freedom of choice, and consumerism in post-war Britain, as well as on the nature of formal and informal urban government. More specifically, it explores the influence of the car on urban morphology, the conduct of urban planning, and (to a lesser extent) the contribution of urban planning to the car’s expansion. As Helen Meller has noted, town planning has directly and indirectly encouraged car use by facilitating the building of the infrastructure necessary to support private motoring, and by following a policy of separating homes from places of work, thus creating a greater need for urban transport.⁶ This process had left a lasting physical mark on the cities of today in the form of urban roads, car parks, as well as new residential, commercial and industrial development that bears the hallmarks of the motor age in terms of layout, location or both. Beside this, the late 1950s and 1960s left an intellectual legacy,

⁴ K. Dennis and J. Urry, *After the Car* (Cambridge, 2009), p. 1.

⁵ *Ibid.*, pp. 35-9.

⁶ H. Meller, *Towns, Plans and Society in Modern Britain* (Cambridge, 1997), pp. 1 & 71.

because it was in these years that a framework for understanding and approaching urban transport policy in the era of mass car ownership was first worked out. Urban planning was put to a stern test in attempting to deal with rising car use, which made it subject to significant changes. In particular, the attempt to build new transport infrastructure was necessarily destructive and disruptive and brought the issues of building conservation and public participation to the fore, leading to greater importance being attached to each in planning practice.

In short, the urban planners of the third quarter of the twentieth century worked out ways of approaching issues that still confront us today. They dealt, for example, with questions of how to maximise physical mobility without harming the urban environment, and what sort of transport was most appropriate to an urban setting, which remain important today. Many of these issues remain politically charged, such as the question of how urban planning should be conducted and whether or not urban planning and transport policy adequately take account of city-dwellers' needs. New concerns form part of the background to some of these questions, particularly the question of urban planning and transport's relationship to global and local ecology, but older concerns are important. In particular, this thesis addresses the question of the extent to which planning and transport policy was influenced by powerful interests, such as the motor and construction industries. These matters are growing in importance as the world's urban population and global car ownership continue to rise.

The historiography of the car and urban planning

It is advantageous to explore the effects of private motoring on planning and the urban environment at this point in time, because there has been a significant rise in scholarly research and writing in this area, as well as in the study of other urban networks, such as those relating to the provision of water, electricity, lighting and foodstuffs. This scholarship has added greatly to our understanding of urban society and has been drawn from in my research. It has provided insights into such diverse areas as urban government and politics, wider power structures, technological development and notions of individual freedom. In addition to this recent work, there is also an older body of work that has explored the post-war history of urban planning, architecture, and car culture, upon which I also have also drawn in my research.

Two of the earliest commentaries were Buchanan's *Mixed Blessing* and Lewis Mumford's *The Highway and the City*, from the late 1950s and mid-1960s respectively. Mumford was an American planner and commentator on planning, whose work above was a warning to Britain not to follow the example of the United States by adapting cities to allow for mass motorisation at the expense of both public transport and the urban environment.⁷ Neither Buchanan nor Mumford was attempting to write a historical account. They were chiefly concerned with discussing motorisation with a view to establishing the best planning and political response to it. Nevertheless, in doing so, they provided early analyses of the car's rise and its consequences for the urban environment and society in general.

Mumford wrote that Britain was making the same mistake as the United States by allowing the car to replace the railways and other forms of public transport. In the latter, reliance on the car had been 'fatal both to the habitability of cities and to the economy and efficiency of urban transportation.'⁸ The programme of railway rationalisation proposed by the Beeching Report, and the plans to build a network of inter-urban motorways, were put forward by Mumford as early signs of this disastrous transport policy in Britain. His view of urban transport was mostly derived from American experience, which he saw as being a story of sacrifice to the 'religion' of the motor car. As such Mumford's work has been useful to my research by drawing attention to the extraordinary power of car culture to spread and entrench itself in advanced capitalist societies, a notion that has been taken up by more recent writers like Dennis and Urry.

Mumford partially accounted for this propensity for car culture to entrench itself, whilst discussing the environmental costs (especially noise and air pollution from heavy traffic and loss of open space) of attempting to accommodate the motor car. He noted that swathes of rural and urban land had been sacrificed for highway construction, which failed to deal with the congestion generated by growing car use and led to suburbanisation that made the desired countryside more distant and car ownership obligatory. Although he was more interested in proposing alternative transport strategies than in establishing the precise causes of America's apparent surrender to the motor car,

⁷ L. Mumford, *The Highway and the City* (London, 1964).

⁸ *Ibid.*, p. 9.

Mumford also noted that the needs of the motor industry and the wider economy were important driving forces, as well as the car's popularity amongst consumers, who associated ownership with prosperity, progress, and freedom.

Buchanan's primary concern was to analyse the nature of the congestion problem in order to arrive at an appropriate planning response, although he also noted the car's importance to the British economy and its allure in an increasing affluent Britain as a comfortable and flexible form of transport. Buchanan also expressed anxiety over the propensity of the car to encourage urban sprawl and also analysed in detail the many and various negative consequences of uncontrolled car use in urban areas. Such material has proven useful, not only as analyses of the car's place in urban society, but also as evidence of the way that road building was discussed in post-war Britain and America. In particular, they explore the role of the planner and road engineer in facilitating the car's rise, showing that road building and growing car use can become mutually reinforcing. Although British planners could not be so readily accused of doing so, Mumford's attacks on American highway engineers, for working according to a narrow set of priorities that excluded environmental and social considerations, also draws attention to the fact that their British counterparts often struggled to find a satisfactory compromise between the needs of private motorists and the urban environment.

Such was the durability of many elements of both Buchanan's and Mumford's analyses, that later commentators often found themselves in agreement with them. Most notably, it was widely accepted that the car and its associated infrastructure had had a profound effect on British society and urban morphology. Indeed, it was this historical fact that attracted much of the commentary itself, which ranged from David Starkie's history of post-war road building, *The Motorway Age*, to John Gold's history of architectural modernism in post-war Britain, *The Practice of Modernism*, and William Plowden's political history that sought to account for the car's dominance of Britain's roads. Together with Lionel Esher's *A Broken Wave*, which is an insider's account of the partially realised project to remodel Britain's cities in the post-war era, they provide a broad and detailed account of the car's rise in Britain and the planning responses to it.⁹

⁹ L. Esher, *A Broken Wave: The Rebuilding of England 1940-1980* (London, 1981); J. R. Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007); W.

Plowden described his investigation, *Politics and the Motor Car*, as an attempt to understand the process by which it had become possible for motorists 'to dictate the pattern of traffic to every other road-user.'¹⁰ A key question for Plowden was the extent to which transport policy had been influenced by the British motor lobby, which he identified as consisting of motor manufacturers and traders, motoring organisations, and various bodies with a financial interest in road building. The resulting analysis was thorough and detailed, addressing one of the key socio-political aspects of the car's rise to dominance on Britain's roads. It has proven to be useful to this research, especially in terms of the role of the motor lobby and the attitude of central government towards private motoring.

Despite noting that the lobby, particularly under the guise of the umbrella organisation, the British Road Federation (BRF), was very active and highly organised, Plowden concluded that '[i]t is clear that the influence of the motor car interests is at least variable and uncertain.'¹¹ The reasons advanced for this included: the absence of a central point in the Government at which lobbying could be effectively directed, the diversity of interests within the motor lobby, and the undemocratic constitutions of the Automobile Association and the Royal Automobile Club, which allowed governments to 'to ignore them when necessary'.¹² However, the most important attribute of national policy towards the motor car, in Plowden's view, was that it was never settled. Lulled into complacency by very low estimates of future car ownership, no positive long-term decision was taken by central government, either to limit or to facilitate greater car use. This situation prevailed until the late 1950s, when it gradually became apparent that the car's popularity was much higher than previously appreciated, by which time policy appeared to be constrained to follow a reactive path. Plowden characterised the political history of the motor car as: 'a story of choices not made, nor even defined, by government – and consequently made by default.'¹³

Plowden, *The Motor Car and Politics: 1896-1970* (London, 1971); D. Starkie, *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982).

¹⁰ Plowden, *The Motor Car and Politics*, p. 11.

¹¹ Ibid., p. 389.

¹² Ibid., pp. 376-7.

¹³ Ibid., p. 415.

Writing twelve years after Plowden, David Starkie created an excellent survey of the development of British traffic policy and road building in the post-war years. Although the actions of the motor lobby were relatively minor concerns in the context of this work, Starkie nevertheless hinted that it had had a stronger influence than that allowed by Plowden, but only as part of a wider lobbying effort that included the TUC and various employers' associations. Active lobbying aside, Starkie agreed to some extent with Plowden that national policy tended to be reactive, noting in particular that the rise in car ownership had not been anticipated. This was reflected in the planning decisions of the immediate post-war period, such as the modest provision of road and garage space on council estates and the relatively modest urban road plans.

Starkie also noted that there was a multiplicity of driving forces behind transport policy, rather than simply the desire to encourage or accommodate mass car ownership. In particular, he demonstrated that the late-1950s policy of building inter-urban motorways had its roots in a scheme from 1946, which was conceived to accommodate long-distance industrial and commercial motor traffic, rather than private motoring. It was partly for this reason that Starkie's view of national policy diverged from Plowden's. He described the Government as having a 'positive policy' towards roads, both in terms of its long-term plan for inter-urban motorways and in terms of its encouragement to local authorities to prepare new urban road plans in the 1960s, in the light of rises in car ownership.

Although, Plowden was correct in noting that Britain's post-war Government was taken by surprise by steep rises in car ownership, I have found Starkie's analysis more convincing and useful. In particular, once it was apparent that mass car ownership was a realistic prospect, Starkie demonstrated that the Government took a clear decision to accommodate it as far as possible without sacrificing other planning aims. Starkie's work has also been useful in providing insights into the evolution of post-war urban traffic policy and management. His writing on the influence of the Buchanan Report as a filler of an intellectual vacuum, that neatly framed planners' options as a choice between traffic restraint and substantial redevelopment, has been particularly helpful. I have also found his remarks on the propensity of urban road schemes to stimulate local public protest and, eventually, a wider reassessment of urban transport policy

particularly relevant to my research on Leicester and, to a lesser extent, on Milton Keynes.

With respect to my research, the works of John Gold and Lionel Esher stand as useful companions to the work of Plowden and Starkie. Their accounts of the apparent rise and fall of architectural modernism, in the context of a wider attempt to redevelop Britain's towns and cities, provide a useful background against which to view the accommodation of private motoring. Both Gold and Esher were aware that planning for mass car ownership was integrated into the wider project of urban redevelopment, as well as being alert to the socio-political context of post-war urban architecture, planning and development. Gold, for example, noted that modernism and planning benefited from the post-war 'social consensus' that 'heavily backed the principle of progress through technology and supported the idea that architecture could contribute decisively to solving pervasive urban problems.'¹⁴ I have found this to be an important notion that helps to explain why planners and other important decision-makers saw the car positively and felt equal to the challenge of fitting its use into the urban fabric satisfactorily.

In their discussions of the wider context of urban redevelopment, Esher and Gold helped to account for the readiness of planners to embrace motorisation. Each identified the prospect of mass car ownership as a stimulus to urban redevelopment, with Esher noting that it worked alongside other things, such as projections of population growth and the desire to increase the availability of modern housing with modern amenities, to create a powerful rationale for radical redevelopment of towns and cities. I have drawn on this notion in my own work, noting that Starkie also identified the association of redevelopment with broader social progress, or as he put it, Britain's 'mania for comprehensive redevelopment', as combining with expectations of economic growth to justify the creation of an urban form more suited to the motor age.¹⁵

I have also drawn on Esher and Gold's account of modernism's dramatic fall from favour in the late 1960s to help explain why urban road building lost its appeal. Gold pointed to the infamous examples of modernism's failings, such as the partial collapse

¹⁴ Gold, *The Practice of Modernism*, p. 12.

¹⁵ Starkie, *The Motorway Age*, p. 152.

of East London's Ronan Point tower block in 1968, and also to the critiques of comprehensive redevelopment and high-rise living, such as Oscar Newman's *Defensible Space*, published in 1972. He concluded gloomily that: '[m]any cherished ideas were being challenged, calling into question the bases of the self-legitimising constellation of design and social imagery on which modernist intervention in the built environment rested.'¹⁶ Since urban redevelopment was no longer expected to achieve its social and material aims, and no longer sought, a key justification for road building was removed, because it was proposed as an integral part of a wider programme of redevelopment.

Since the turn of the millennium, a new wave of scholarship has explored various aspects of the car's rise and the attending consequences, which I have integrated into my work in various ways. Partly attracted by the enduring importance of the car to technologically advanced societies, writers from various disciplines have been involved in this endeavour beside historians, from sociologists like John Urry, to cultural geographers like David Matless. Indeed, such is the complexity of the car's rise as a social phenomenon, that many writers have stressed the importance of a cross-disciplinary approach to a better understanding of it. Another distinguishing feature of the new scholarship is a particular interest in the social and cultural aspects of private motoring. This has often been explored in new ways, such as Peter Merriman's examination of the social impact of motorway construction through the study of Britain's first completed motorway, the M1. By contrast, John Urry's work, *Mobilities*, attempts to describe the economic, physical, political, and – above all – social impact of the 'car system' on advanced economies, as well as touching on the consequences of rising car ownership in some developing ones.¹⁷

Urry made a number of observations about the embedding of car culture in industrialised societies that I have found useful. In particular, he points to the various ways - often overlooked - that local and national government action has strengthened and maintained the car's position. He noted that the car was at the centre of a vast system that included not only its manufacture and maintenance, but also its supporting

¹⁶ Gold, *The Practice of Modernism*, p. 289.

¹⁷ P. Merriman, *Driving Spaces: A Cultural-Historical Geography of England's M1 Motorway* (Oxford, 2007); J. Urry, *Mobilities* (Cambridge, 2007).

physical infrastructure of roads and car parks, as well as the institutional structure of traffic police, driving schools, and other bodies devoted in various ways to regulating or promoting its use. He saw his study, therefore, as an important part of the ‘mobility turn’ in sociology that sought to direct research towards a closer examination of the effects of travel and migration on society. Urry also thought that the study of transport had suffered from a ‘technological determinism’, which attributed the triumph of one mode over another to putative technological superiority. Amongst other things, such as Fordist methods of mass-production, Urry identified the importance of government action in facilitating car use, such as the hard surfacing of roads by governments in the United States and Northern Europe.

Urry went on to state that the car might be seen ‘as a way of life’ and, therefore, unlike any other transport system. The reasons for this are many and varied, but include: its being the ‘sign of adulthood, a marker of citizenship and the basis of sociability and networking’, its ‘many technical and social interlinkages’, and the scale of its ‘environmental resource use’.¹⁸ He set out in detail some of the ways that the car system has influenced aspects of modern life in the West. With particular relevance to this study, he noted that it had led to the ‘unbundling’ of home, work and leisure ‘territories’ (i.e. their greater physical separation) and other physical alterations, such as the rise of ‘car only environments’.¹⁹ Unsurprisingly, other writers have commented on this aspect of car culture, including Helen Meller, who also noted that British planning in the post-war years served private motoring very well and also encouraged car use unintentionally. She wrote, for example, that ‘the domestic ideal’ occupied a central place in the planning policy for Britain’s New Towns, which was manifested in the wide physical separation of homes and workplaces. This in turn necessitated daily travel at a time when the car was increasing in popularity. These assessments have been useful in my research by serving as a reminder of the extent of the car’s influence on urban morphology and the everyday lives of those living in motorised societies. In particular, in Chapters Two, Three and Four, I have examined how car use was related by planners to patterns of consumption, work and leisure, as well as to housing.

¹⁸ Urry, *Mobilities*, p. 115.

¹⁹ *Ibid.*, pp. 119-22

Urry was adept at describing the way that the influence of the car has ramified into many aspects of societies where its use is greatest. This being the case, it is unsurprising that the rise of car culture has attracted the recent attention of social historians, such as Simon Gunn. As an urban historian, Gunn has examined the effect of rising car ownership on British urban planning and transport policy through case studies of Leicester and Leeds, whilst also carrying out research on the social impact of private motoring.²⁰ I have drawn upon this material in my own analysis, noting the difficulties that urban planners had in implementing Buchanan's recommendations, and the overall failure in Britain to achieve a neat transfer to partial motorisation. Heeding the call for an inter-disciplinary approach to examining car culture, Gunn engaged with the work of Urry and concluded that his work and that of others on automobility deserved 'a much wider circulation among social historians than they have so far received.'²¹ In his own work, however, Gunn attempted to qualify some of Urry's assertions about the occurrence of a 'motor revolution', which implied a clean break with the past. Instead, he concluded that the British experience of motorisation was consistent with the broad history of technology, whereby 'innovations often operate alongside older practices rather than immediately replacing them, and tend likewise to be integrated with pre-existing social and institutional arrangements rather than overturning them.'²²

Whilst Gunn explored the pace and nature of Britain's transition to a society where the car was the dominant form of transport, other historians have sought to provide more detailed explanations for the car's rise. Concentrating chiefly or entirely on American experience, researchers such as Brian Ladd, Peter Norton and Cotten Seiler have looked variously at the cultural, social, political and institutional context of this rise.²³ This commentary is heterogeneous, but united in a desire to get away from any simple explanation based on the technological determinism that Urry criticised. Peter Norton, in *Fighting Traffic*, asserted for example that 'before the city could be physically reconstructed for the sake of motorists, its streets had to be socially reconstructed as

²⁰ S. Gunn, 'The Buchanan Report, Environment and the Problem of Traffic in 1960s Britain', *Twentieth Century British History*, 22, no. 4 (2011), pp. 521-542; S. Gunn, 'People and the Car: The Expansion of Automobility in Urban Britain, c.1955-70', *Social History*, 38, no. 2 (2013), pp. 220-237.

²¹ Gunn, 'People and the Car', p. 222.

²² Ibid.

²³ B. Ladd, 'Cities on Wheels: Cars and Public Space', in G. Bridge and S. Watson (eds.), *The New Blackwell Companion to the City* (Chichester, 2011), pp. 265-74; P. D. Norton, *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge, Mass., 2008); C. Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago, 2008).

places where motorists unquestionably belonged.’²⁴ He maintained that widespread public anger in the United States of the 1920s, provoked by deaths and injuries associated with car use, had been frequently overlooked by historians. Norton identified this as the historical moment when motor interests became self-aware and began to campaign against restrictions on the car, promoting road building and restrictions on other road users as alternative solutions to the problems of congestion and road accidents.

The importance attached to public propaganda on the part of the motor lobby is an interesting insight of Norton’s, showing that a scrutiny of such activity can yield useful insights into the ideology of the various bodies established to promote car use. I have followed his example in Chapter Two. Norton noted that the motor interests’ line of attack was to apply the arguments of laissez-faire capitalism to the issue of urban transport. They claimed that restrictions on the use of motor cars allowed mass transport (especially trams) to compete unfairly with cars, so demanded their removal in order to bring into being what the motor lobby presented as a free market in transport. This recasting of the issue in the narrow terms of freedom of choice allowed matters of ‘justice, order and efficiency’ to be sidestepped.²⁵ As a companion to this manoeuvre, traffic engineering was promoted as an alternative to traffic control as a way to combat congestion, thereby helping to promote a conception of roads as commodities to be supplied in response to demand, rather than as public utilities to be regulated for all users. I have engaged with these notions in my research, noting that the issue of urban traffic congestion was presented by British motor lobbyists in similar terms as a technical challenge arising out of the exercise of consumer choice, but also couched in terms of urban redevelopment to ensure a safe and pleasant urban environment for all.

Cotten Seiler described his book, *Republic of Drivers*, as a cultural history. Although it addressed the same broad theme of the embedding of car culture in the United States, it concentrated much more strongly on the importance of appeals to the American ideal of freedom, thus demonstrating the complexity of car culture’s roots. In short, Seiler accounted for the car’s triumph in the United States as the product of a ‘highly specific

²⁴ Norton, *Fighting Traffic*, p. 1.

²⁵ *Ibid.*, p. 5.

notion of what it means to be free'.²⁶ This conception of freedom was the American notion of rugged individualism, which Seiler identified as having been undermined by the imposition of industrial discipline on American workers. Seiler suggested that a new individualism was created in response, which was partly propped up by 'commodified leisure and consumption' of which 'its cardinal practice was automotive car driving'.²⁷ Such a strong identification of driving with notions of freedom is not noted in the literature on British car culture, but my research indicates that urban planners, together with sociologists and other observers, were aware of the intimate relationship between car driving and consumer capitalism, both in terms of the car as a particularly desirable item of consumption and as a means to visit sites of leisure and consumption, and sought to plan accordingly. Referring back to Urry's observations about the growing importance of car manufacture to industry, my research also shows that British urban planners were influenced to plan in the car's favour by the notion that domestic demand for cars supported Britain's substantial car industry. Furthermore, the supply side of the economy was also considered by planners in relation to the car's role in moving people to, and from, the workplace.

Brian Ladd engaged more directly with the ideas of Norton, reaching the same conclusion that changes in the way that streets were viewed helped facilitate greater use of private cars. Ladd, like Norton, wrote that roads came to be seen primarily as carriers of vehicular traffic, rather than as places where people assembled, socialised and conducted business. This resulted in restrictions on urban drivers being successfully resisted, whilst pedestrians and slower moving traffic were increasingly pushed to the margins. Ladd concluded, however, that the transformation of the street was completed by the arrival of the car and the motor interests, but not caused by it. Ladd identified a growing social divide as the underlying force of this visible struggle, whereby wealthier citizens were attracted to the motor vehicle as a way to insulate themselves from the urban poor whose behaviour they found distasteful. The growing use of the car, together with middle- and upper-class flight to new suburbs and changing patterns of commerce, helped to make the street as a place for socialising the preserve of the poor. Ladd's work has been valuable in my research, not only in terms of showing, once again, how changes in urban morphology and transport can be mutually reinforcing, but also in

²⁶ Seiler, *Republic of Drivers*, p. 6.

²⁷ *Ibid.*, p. 13.

showing how car use could discourage public interaction in urban open spaces. Chapter Four explores how urban planners sought to reverse this trend and to allow for such interactions in a motorised environment.

Recent research into Britain's relationship with the car has concentrated less on accounting for its rise than on describing its effects on British culture and society. For example, Peter Merriman and Joe Moran wrote about the impact of motorways and other roads built to support private motoring. Joe Moran described his book, *On Roads*, as 'a study of the road as a cultural artefact as much as a concrete one', in which the main theme was Britain's 'falling out of love with roads'.²⁸ Moran's study is particularly useful in analysing public attitudes to road building against a cultural background, particularly in terms of the development of anti-roads activism from the 1960s to the 1990s. He noted that such were the anxieties about top-down planning, and runaway development that road building engendered, that road building became a target for highly committed groups of activists who were also dissatisfied with the social realities of Britain in the late twentieth century. Moran contrasted this with the widespread excitement accompanying the opening of the first motorways in Britain, at a time general optimism over the country's economic and social prospects, underlining the importance of the socio-political context as an influence on the way that road building was viewed. I have drawn on this notion to some extent in Chapters Two and Five, which discuss the ways in which road building and related development were both promoted and opposed.

Peter Merriman's *Driving Spaces* concentrated rather more narrowly on one part of the motorway network, namely the M1, in what he described as a work of cultural-historical geography. Merriman was interested in the social and physical impact of the motorways and the experience of driving and working on them or, in his words, 'how the M1 was constructed and experienced as a space of modern consumption'.²⁹ One of Merriman's useful insights is that motorway driving imposed new forms of discipline on the users. He noted that it very soon became apparent after the opening of the M1 in 1959 that motorway driving demanded new skills and practices on the part of drivers, and new methods of law enforcement. Moran made a similar point, stating that: '[t]he road is

²⁸ J. Moran, *On Roads: A Hidden History* (London, 2009), p. 15.

²⁹ Merriman, *Driving Spaces*, p. 140.

almost a separate country' with its own 'laws, rituals and codes of behaviour'.³⁰ I have found this notion useful in encouraging me to think of new urban road systems as attempts to regulate urban dwellers' actions, in much the same way that Patrick Joyce approached the urban infrastructure of the nineteenth century (as will be discussed further below and in the succeeding chapter).³¹

Merriman drew upon David Matless's work of cultural geography, *Landscape and Englishness*, to explore the aesthetic debates surrounding the place of British roads and, later, motorways in the landscape. In each case, this approach yielded insights into broader British attitudes to design as well as into roads. Matless's broader study of the rise of the 'planner-preservationists' in the 1920s and 1930s, was particularly insightful and provides parallels to my own study. The planner-preservationists constituted a loosely organised planning and aesthetic movement, which 'sought to ally preservation and progress, tradition and modernity, city and country in order to define Englishness as orderly and modern.'³² Its members, according to Matless, set themselves in opposition to the runaway development and ugliness associated with *laissez-faire* commercial culture, much of which was associated with growing use of motor vehicles. One of the key aims of the movement was to maintain a sharp division between town and country: its members disliked suburban and, especially, ribbon and 'pepper pot' development. This exposition has been useful in explaining some of the anxieties relating to the car expressed by planners in the following chapters, especially Konrad Smigielski.

Matless observed that, as a prerequisite to the achievement of their aims, the planner-preservationists promoted the institution of new planning powers and a corresponding reduction in the rights of property. Thus the effects of limited motorisation helped to provide impetus towards a stronger planning regime in Britain. This relationship between car culture and planning was also addressed in Helen Meller's *Towns, Plans and Society in Modern Britain*. Meller employed a similarly cultural approach to Matless in attempting to understand the growth of the British town planning movement in the twentieth century, within a framework of economics politics and culture. Like Gold and Esher, Meller asserted that planning and redevelopment in the post-war era

³⁰ Moran, *On Roads*, p. 8.

³¹ P. Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London, 2003).

³² D. Matless, *Landscape and Englishness* (London, 1998), pp. 14-15.

came to be associated with social progress. In this connection, I have found the formula used by Matless to describe the attitude of the planner-preservationists to be useful: he maintained that they wanted to remodel the towns (spoilt by the nineteenth century) and preserve the country (threatened by the twentieth). These twin aims were reflected in visions of how ‘radically different towns might be set harmoniously in a green and pleasant land’.³³ In my own study, I have noted the desire to make a break with the past, as embodied in nineteenth-century architecture and its associations with inequality and squalor, by redeveloping Britain’s cities.

The work of Matless suggests that planners saw the economic and technological developments of the twentieth century as both deeply problematic, in terms of ugly and chaotic development, and bringing opportunity, by providing the material and technical resources necessary for a remodelling of towns and cities. I have drawn inspiration from this idea, and integrated it into my discussion of the way that growing car ownership was seen both as a threat and an opportunity. In this respect, I have also noted the work of Guy Ortolano on the doomed plans for a new city in Buckinghamshire in the south-east of England, called North Bucks New City and the forerunner of Milton Keynes, which was designed around a monorail system.³⁴ Ortolano noted of the planners of the new city, as Matless did of the planner-preservationists, that they were not simply carried along by a utopian vision of the future. He wrote that they sought to manage the social changes that they concluded growing automation was likely to bring, which included not only greater leisure time and consumption, but also delinquency amongst the bored and disconnected young. Congestion caused by the car, in particular, was seen as a potential threat to the orderly running of the new city, hence the promotion of the monorail. Ortolano wrote that the triumph of the car ‘ironically generated critiques of the car and quests for alternatives.’³⁵ This finding is reflected in my own research, as discussed in Chapters Two and Six.

The insights gained by Ortolano and others through their examinations of urban transport serves as a reminder that they are part of a broader examination of urban networks, which researchers have used as a method of deepening our understanding of

³³ Ibid., p. 189.

³⁴ G. Ortolano, ‘Planning the Urban Future in 1960s Britain’, *The Historical Journal*, 54, no. 2 (2011), pp. 477–507.

³⁵ Ibid., p. 477.

urban society. Stephen Graham and Simon Marvin, for example, studied the development of urban transport systems alongside energy and water supply, and telecommunications.³⁶ They asserted that the relationship between infrastructure, technology and the development of cities had been largely neglected, because the social and political neutrality of applied technology had too often been assumed. Graham and Marvin undermined this assumption, concluding that such networks were tied to capitalist accumulation and power structures. This is a notion that I have engaged with in Chapter Two, where I note that the remodelling of towns and cities was supported by a number of powerful groups, such as the motor lobby and property developers, which were likely to gain materially from such an undertaking.

Maria Kaika and Chris Otter have also looked at various networks, revealing a similar narrative of a thwarted ambition to create systems that were efficient, safe and offered universal coverage.³⁷ Maria Kaika looked at urban water supplies in *City of Flows*, which built on the work of such writers as William Cronon and David Harvey, to integrate nature into the study of the urban environment.³⁸ Kaika traced the rise, through the technological developments of the nineteenth and twentieth centuries, of an intellectual construction of the city as independent from natural processes. Chris Otter, meanwhile, looked at the modernisation of the urban food supply chain in nineteenth-century Britain. Each study demonstrated that the technological improvement of new infrastructure could lead to material improvements, but also to unforeseen problems. Kaika, for example, found that the creation of networks bringing a constant supply of water to homes in some advanced capitalist societies fed an ‘intense interaction’ between nature and the city, whereby a failure to manage growing consumption led ultimately to a greater vulnerability to drought.

Otter wrote that national and local authorities responded to pressures to improve the poor quality of milk, meat and other foodstuffs, which was often adulterated or produced in unsanitary conditions, by making the construction and operation of dairies

³⁶ S. Graham and S. Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (Abingdon, 2001).

³⁷ M. Kaika, *City of Flows: Modernity, Nature and the City* (New York, 2005); C. Otter, ‘The Vital City: public analysis, dairies and slaughterhouses in nineteenth-century Britain’, *Cultural Geographies*, 13 (2006), pp. 517-37; see also C. Otter, *Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago, 2008).

³⁸ See, for example, W. Cronon, *Nature’s Metropolis: Chicago and the Great West* (London, 1992); D. Harvey, *Justice, Nature and the Geography of Difference* (Oxford, 1996).

and slaughterhouses subject to progressively more effective inspection and regulation. In this process, Otter observed that supply networks ‘were becoming longer, more technologically mediated and concentrated’, making them ironically more difficult to inspect and extensive enough to spread pathogens quickly and widely.³⁹ Kaika and Otter’s work has shown that governments, which are charged with ensuring that urban societies function effectively, have often played a decisive role in the periodical updating of urban infrastructure. More importantly, for the purposes of this study, their work shows that the creation of new infrastructure often has unintended consequences. In the case of new urban roads, this took various forms, most notably encouraging an embrace of alternatives to both the car and comprehensive redevelopment amongst large sections of the public, as well as a greater appreciation for conservation and public participation in urban planning.

The place of my work in the wider historiography

I see my own work as a piece of planning history that draws strongly on the recent scholarship on urban networks, mobility, and planning. The work also owes a debt to an older body of work, which remains an indispensable guide to the development of urban planning and transport in the post-war decades, much of it written by participants or close observers of that development. However, I have attempted to emulate the more recent writers at times by delving a little deeper into the relationship between private motoring and planning, on the one hand, and British society and government on the other. In particular, I have explored the links between urban transport planning and consumer capitalism and post-war visions of social progress. More specifically, I have explored the participation of urban planners in a wider project to shore-up liberal capitalism by planning to create efficient urban transport and pleasant urban environments geared to consumption and leisure. In this respect, I have also drawn on the work of Patrick Joyce, who has examined the way that transport, architecture and other aspects of Victorian cities were used to support behaviour deemed desirable by nineteenth-century liberalism.⁴⁰

³⁹ Otter, ‘The Vital City’, p.517.

⁴⁰ Joyce, *The Rule of Freedom*.

Given that the specific subject matter of my research is urban transport planning in Britain, I have also drawn particularly from the work of David Starkie and John Gold, amongst others. Mention should also be made of a group of studies that address aspects of transport planning in either Milton Keynes or Leicester, including: Simon Gunn's article on attempts to apply aspects the principles of the Buchanan Report in the latter and in Leeds, Mark Clapson's social history of Milton Keynes, and the account of the planning and early development of Milton Keynes by Terence Bendixson and John Platt.⁴¹ The work of Gunn and Clapson have a particularly strong link to my own, since they demonstrate some of the ways that the challenge of coping with rising motor traffic helped to bring about substantial changes in the way that urban planning was conducted. The effect of the motor car on the conduct of urban planning is the central concern of this work. Last, but not least, my work has much in common with Guy Ortolano's article on North Bucks New City in exploring the point of intersection between motorisation and urban planning to address wider questions about British society.

The conduct of my research

The bulk of the research in this study of urban transport planning has been directed at the experience of Leicester and Milton Keynes in the 1960s and 1970s. These cities were selected as case studies, because the planners in each city not only sought to arrive at comprehensive solutions to the problem of urban traffic congestion, but also directly addressed the deeper question of how urban society would function in an era of mass motorisation. As such, they reveal much about the changes in urban planning stimulated by the rise of private motoring, not least because both sets of planners explained their methodology and underlying philosophy. Furthermore, because the planners in both cities were so forthcoming on the type of urban society that they wished to support, the research has revealed insights into the governmentality of urban planning, i.e. its deployment as a technique of urban government designed to encourage certain types of behaviour. In addition, the planners experienced difficulties in implementing various elements of their plans, which provide examples of the changes that were wrought in planning under the pressure of circumstances, particularly in the areas of environmental planning, conservation and public consultation. The cities have also been chosen due to

⁴¹ M. Clapson, *A Social History of Milton Keynes: Middle England/Edge City* (London, 2004); Gunn, 'The Buchanan Report'; T. Bendixson and J. Platt, *Milton Keynes: Image and Reality* (Cambridge, 1992).

the contrasts between them. Since Leicester was an established city and Milton Keynes was a new city, the challenges facing each set of planners were very different, allowing a broader analysis of transport planning to be made.

The material that has been examined in the course of the research can be grouped into three main categories. Firstly, there are the major plans that deal with overall policy, and the associated documents that relate to the process of their formulation. The second group relate to responses to such plans, particularly those of central government, but also those of the press and public. Thirdly, there is the material that relates to the detailed implementation of planning policy. There is an abundance of material in all three categories for Milton Keynes, but rather less material on Leicester. In particular, the *Leicester Traffic Plan* and other plans have few available supporting documents that could shed light on their development. This deficiency is partly compensated by the inclusion of remarks on methodology in the Traffic Plan and by various published commentaries on urban planning and car culture by Konrad Smigielski, Leicester's City Planning Officer.

Naturally, comparisons are made between the experiences of the two cities, but the decision to have two case studies was not made with the especial aim of making a comparative study, but to broaden the analysis. With this in mind, research has also been carried out into the response of key decision-makers (including politicians, urban planners, engineers, and other professionals) nationally to the prospect of mass motorisation. A selection of important planning documents and planning conferences has been interrogated to provide a unique survey of this response as it developed in the 1950s and 1960s. The research demonstrates that the challenge of accommodating private motoring has a profound effect on the aims and methodology of urban planning in Britain as a whole. In exploring some of these aims, the research reveals insights into the influence of various political, social and economic forces on the nature of urban transport planning and urban society more generally. Furthermore, by presenting the fruits of this research in the second chapter, it allows the national situation to be presented as a background against which the cases of Milton Keynes and Leicester can be examined. Finally, by looking at the broader developments in transport planning, I have tried to make it easier to address some of the bigger questions in the historiography, such as those relating to the role of planning in facilitating private

motoring and to the influence of the motor lobby and other forces on transport and planning policy.

The conduct of this study has been guided by the four research questions listed below, which have proven to be productive lines of enquiry.

1. How did urban planners respond to the prospect of mass car ownership in the 1950s and 1960s?
2. What, apart from easing urban congestion and countering its damaging effects, did planners in the 1950s, 1960s and 1970s seek to achieve in responding to rising car ownership?
3. What was the influence of wider economic and political forces on the conduct of urban transport planning in the 1950s, 1960s and 1970s, and how far was it used to facilitate the car?
4. How has the approach of urban planners to the question of congestion affected the conduct of transport planning within the wider scope of urban planning, especially in terms of consultation, public transport and the urban environment?

These questions are not directly referred to in the following chapters, but their contents closely relate to them. Instead, the chapters are arranged in order to address different aspects of urban planning and transport in Leicester, Milton Keynes and beyond, such as conservation, environmental planning and so on. I return to the research questions in the conclusion.

The structure of the thesis

This thesis is divided into seven chapters. After this introductory chapter, the next chapter looks at how British urban planners developed strategies for dealing with urban traffic in response to the prospect of mass motorisation. It explores, through the examination of key planning documents and planning conferences, the attempts by urban planners and others to formulate new approaches to the accommodation of private

motoring in Britain's towns and cities. Discussions of various aspects of this effort are analysed, including road building and urban redevelopment, motor vehicle design, public transport and alternative forms of personal transport, and traffic management. The chapter concentrates mainly on the late 1950s and 1960s when mass motorization first appeared to be a realistic possibility.

The following four chapters deal with various aspects of this planning response in Milton Keynes and Leicester. Chapter Three explores the attempts to apply emerging ideas about the relationship between land use and travel patterns in the planning of new road systems in Leicester and Milton Keynes. Amongst other things, it looks at the influence of the planners' thoughts and preferences in relation to urban society in the motor age, as well as sociological techniques and theories, on the planning of these road systems. It also examines the response of central government to these road plans. Chapter Four examines the approaches used in Milton Keynes and Leicester to protect the urban environment from the harmful effects of motor traffic. As part of this investigation, it is noted that the nature of these approaches were influenced by the planners' notions of what constituted a good urban society. Such concepts as urban amenity, that took in urban-dwellers' need for safety, cleanliness, peace and quiet, clean air, open space, and pleasant views, were important to these notions. The chapter also explores how the planners' relationship with the public changed as a result of attempts to implement elements of their plans.

The fifth chapter explores the attempts of planners to reconcile the desire for accessibility for motor vehicles with building conservation in the two cities. It looks at how the relationship between transport planning and conservation evolved in response to these attempts, as well as to the pressures of post-war modernity, in the form of demand for modern housing and more commercial and industrial floor space. In this context, the chapter also examines public involvement in the planning process in Leicester.

Chapter Six, the penultimate chapter, looks at how planning for transport modes other than the car was carried out in Leicester, Milton Keynes, and its forerunner, North Bucks New City. It examines attempts to achieve a transfer from private to public transport as a means to alleviate traffic congestion and its associated problems, as well

as to cater for those who did not drive. These attempts stimulated interest in utilising emerging transport technology, such as monorails and moving walkways, as well as established modes of transport, such as walking and existing forms of public transport. The seventh and concluding chapter draws on the material of the previous chapters to answer the broad questions mentioned above about the relationship between urban planning and private motoring in the context of twentieth-century capitalism.

Chapter Two

Motorisation and Urban Transport Planning in Britain, 1955 – 1973

This chapter examines the emergence of new ideas in British urban transport planning in response to substantial rises in private car use and ownership experienced in the 1950s and 1960s, which were interpreted by contemporaries as the beginning of a transition to mass motorisation. Such a transition was seen as presenting an enormous challenge, not only in terms of allowing for the free movement of vehicles, but also in terms of limiting the environmental nuisances and danger associated with heavy traffic. As David Starkie has argued, the last years of the 1950s signalled the end of a ‘conservative era’ in British urban road planning, which prevailed in the immediate post-war years.¹ The transport planning of this era, which was based on low estimates of car use, was characterised by plans for modest increases in urban road capacity and parking provision. As Starkie made clear, expectations of further increases in car use stimulated a reassessment of both urban transport plans and the methods by which such plans were created. With this in mind, this chapter uses a selection of key planning documents from the 1950s and 1960s, as well as conferences of interested professionals from the same period, as lenses through which to examine the influence of Britain’s emerging car culture on the theory of urban transport planning. In doing so, this chapter serves as a companion to the succeeding chapters, which look at attempts in Leicester and Milton Keynes to put emerging ideas about transport into practice.

I argue that these years witnessed a transformation in the way that urban transportation planning was viewed. It was no longer seen largely in terms of the provision of adequate roads, and rather as the management of a complex system, which contained many elements that needed to be brought into harmony. These elements ranged from road networks, car parks, public transport modes and traffic interchanges, to architecture, motor vehicle design, and (the arrangement of) land use(s). In particular, good transport planning was seen as necessitating a better understanding of how transport related to land use and to people’s travel habits, incomes and patterns of

¹ D. Starkie, *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982), pp. 10-19 & 31-42.

consumption. As a result, the planning of road systems was increasingly considered together with other elements of urban planning, such as housing and land use. The collection and interpretation of sociological data also became important. Furthermore, it was in the 1950s and 1960s that a durable framework for approaching the issues of urban transport in the motor age was first constructed.

I argue, furthermore, that attempts to plan for the free movement of private motor vehicles was tied-up with notions of liberal democracy, technological progress and consumer choice. In doing so, I draw a parallel between these attempts and the links that Chris Otter identifies between the installation of new lighting technology in cities of the nineteenth century and Victorian notions of freedom and modernity. In common with Otter, I draw on the concept of material agency and on Patrick Joyce's concept of liberal governmentality.² In particular, I identify attempts to allow for freedom of movement for private motorists and the safe circulation of pedestrians with Joyce's conclusion that the institutions and morphology of Victorian cities were shaped by a desire to promote freedom for the self-governing liberal subject. In drawing these conclusions, this chapter anticipates the chapters of the thesis that relate to transport planning in Milton Keynes and Leicester. In these two cities, the same trends can be discerned. The planners in both cities identified car culture as one of their key concerns, which profoundly influenced other elements of their planning, not least in their use of sociological techniques and theory.

The chapter is divided into six sections, starting with a section that explores the development of British transport planning between 1955 and 1973 in broad terms. The basic themes of the chapter are introduced in this section. They are explored in more detail in the following five sections, which are divided thematically. The first of these sections looks at the ways in which highway engineering, road building and the physical reconstruction of the urban fabric were discussed as a method of meeting the demands of a motorised society. The next section explores how developments in motor vehicle design, both potential and real, were promoted and received as an aid to urban traffic flow and a way to soften the environmental impact of private motor vehicles. The

² P. Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London, 2003); C. Otter, *Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago, 2008).

section after that looks at similar discussions of the role of new and improved forms of public transport. There follows a section on the development of traffic management techniques and technology, before the chapter ends with a concluding section.

Trends in British traffic planning, 1955 - 1973

Following the end of official post-war austerity, car ownership in Britain began to rise rapidly in the mid-1950s, as the affordability of private motoring was increased by the reduction of sales tax on motor cars and the easing of restrictions on the hire purchase of consumer goods. The number of cars in use on British roads rose nearly two-and-a-half times in ten years, from 2.25 million in 1950, to 5.5 million in 1960. By 1970, the number had risen to around 11.5 million.³ Many observers identified this rise as the start of a trend towards mass car ownership as experienced in the United States for the first time three decades earlier. Given the profound effects of motorisation across the Atlantic and the growing problem of traffic congestion in Britain, concern over how best to accommodate the motor car duly rose in proportion to the numbers of cars on British roads. Although anxieties were voiced about conceding too much to the car, in the form of invasive new urban roads or multi-storey car parks, key decision-makers in Britain responded to the prospect of mass motorisation by seeking to accommodate car use in urban areas as far as practicable, rather than to pursue an alternative strategy of restriction. Such a response was implicitly and explicitly tied to the pursuit of economic growth and a consumerist culture. In short, attempts to motorise the late-twentieth-century city were made as part of a wider project to support what might be termed the consumer capitalist subject.

First of all, growing car ownership provided an extra stimulus for the national government to press ahead with a long-delayed programme of inter-urban motorway building, which resulted in the construction of around a thousand miles of motorway in the years leading up to 1970. It also called into question the road provisions of post-war urban Development Plans, which were typically limited to road widening and the addition of ring roads to provide links between the main arterial roads that radiated from city centres. Such measures were increasingly seen as inadequate, especially since most

³ British Road Federation [hereafter BRF], *Basic Road Statistics* (London, 1971).

towns and cities (despite some reconstruction in the wake of war-time bomb damage) retained a medieval street pattern in their cores, which were surrounded by deep rings of nineteenth-century development.

The motor lobby in Britain was quick to respond to the perception that the towns and cities of Britain needed to adapt to accommodate the car more fully. It provided some of the first public forums at which this notion could be discussed. The Road Campaign Council, for example, ran a competition in 1959 to design a new road network for the capital, entitled *New Ways for London*. The competition attracted town planners as competitors, including two working in academia: Alan Proudlove (University of Liverpool) and Konrad Smigielski (University of Leeds), who came first and second respectively, the latter becoming directly involved in urban transport policy in his role as Leicester's first City Planning Officer. Three years prior to this event, the BRF organised a conference on urban motorways, which they claimed was the first conference to be held anywhere that was devoted solely to the subject of urban motorways.⁴ The conference, which promoted the building of new urban highway systems as a solution to traffic congestion, brought together representatives of local and national government, academia and industry, and attracted considerable press attention.

The motor lobbyists were not the only ones to provide such forums. The Institution of Civil Engineers (ICE) staged a similar event in 1957, entitled the *Conference on the Highway needs of Great Britain*, which also proved to be popular with interested professionals and the press.⁵ The engineers themselves formed one of those interested groups, particularly those engineers and surveyors involved in building roads. One such road engineer became a central figure in transport planning in the 1960s. Colin Buchanan, who also had a background in town planning, became interested in the problem of urban transport whilst working as a civil servant with the planning inspectorate. It was at this time that he wrote *Mixed Blessing*, setting out the nature of Britain's urban traffic problems as he saw them. In addition, Buchanan discussed the merits and demerits of various forms of redevelopment to alleviate the problem and built on the proposals that police commissioner Alker Tripp made in 1942, in *Town*

⁴ BRF, *People and Cities: Report of the 1963 London Conference* (London, 1964).

⁵ Institution of Civil Engineers [hereafter ICE], *Conference on the Highway Needs of Great Britain: At the Institution 13-15 November, 1957: Proceedings* (London, 1958).

Planning and Road Traffic, by advocating development to segregate heavy traffic and pedestrians. He also appeared to draw from the work of William and Aileen Tatton Brown who, like Tripp, proposed the adaptation of architecture to the motor age. Buchanan asserted that society was faced with a choice of either adapting towns and cities or drastically restraining car use, and called for more research into finding the best solution to the complex problem of urban traffic congestion.⁶

In 1959, Ernest Marples replaced Harold Watkinson as the Minister of Transport, which proved to be the start of a greater level of involvement in the issue of urban transport by central government. At the same time as Marples' appointment, the MOT lost its responsibility for the administration of civil aviation, thus adding to the impression that the focus of the Ministry's attention was changing. The new Minister commissioned two far-reaching inquiries into ground transport. One was on the future of the railways carried out by Dr Richard Beeching, who Marples appointed as the first chairman of the British Railways Board. The other, instituted in 1961, was to explore ways in which motor vehicles could be effectively integrated into urban areas, which the Minister hoped would provide the Government and local authorities with some direction in responding to the phenomenon of rising urban traffic. Marples appointed Colin Buchanan to chair the inquiry's working group, which was instructed to 'study the long term development of roads and traffic in urban areas and their influence on the urban environment.'⁷ The report of the inquiry, entitled *Traffic in Towns*, drew considerable press attention and sold 17,000 copies in four months.⁸ As David Starkie observed, the report - often referred to simply as the Buchanan Report - offered little that was new in terms of dealing with town traffic, but it integrated the many branches of contemporary thinking about the subject into a coherent and easily comprehensible whole.⁹ This being the case, it is worth spending some time examining how Buchanan viewed the phenomenon of rising motor traffic in Britain.

The Buchanan Report began by asserting that something close to full motorisation appeared to be on its way. The existence of one car per adult was held out as only a

⁶ C. Buchanan, *Mixed Blessing: The Motor in Britain* (London, 1958), pp. 150-3; L. Esher, *A Broken Wave: the Rebuilding of England 1940-1980* (London, 1981), pp. 44-5 & 52.

⁷ C. Buchanan, *Traffic in Towns: A Study of the Long Term Problems of Traffic in Urban Areas* (London, 1963), p. 7.

⁸ Starkie, *The Motorway Age*, p. 37.

⁹ *Ibid.*, pp. 32-7.

distant prospect, but it was asserted that that was ‘the direction in which we are heading’.¹⁰ Buchanan wrote that the growth of motor vehicle ownership was hard to establish ‘with so many variables and imponderables’, but thought that a rise to 25 million motor vehicles (from 10.5 million in 1963) was ‘virtually certain’, with the possibility of the number reaching 40 million by 2010.¹¹ Another important starting point for Buchanan’s Working Group was that, although there were many problems associated with its use in 1960s Britain, the car itself was not the problem. On the contrary, it was praised as a ‘beneficial invention with an assured future’.¹² Speaking at the BRF’s People and Cities conference in 1963, Buchanan described his working group’s task as ‘to try to discover the limit [of car use], and to show how far, having regard to other considerations, it was possible to accommodate it’.¹³

To Buchanan, successfully accommodating the car meant road building and redevelopment to allow both for greater freedom of movement for motor vehicles and for the protection of urban areas from the environmental effects of heavy motor traffic. The practicality or desirability of his detailed recommendations for redevelopment could be debated, the precise nature of which are discussed in the next section, but the view that towns and cities needed to be redeveloped to accept the car was a popular view amongst important decision-makers. This reflected the growing importance of car manufacture to British industry, and was also linked explicitly – especially by members of the motor lobby – to the notion that the car was a symbol of an affluent and free society.

By the time that the Buchanan Report was published, the term ‘car-owning democracy’ had become a stock phrase used by those who looked favourably at both growing car ownership and its context of affluence, consumerism and free enterprise. Car ownership was often presented as the outcome of consumer choice and individual freedom that, as such, needed to be accommodated by decision-makers. Alfred Goldstein, a senior partner of engineering consultants R. Travers Morgan and Partners, stated in his summing-up speech to the ICE’s Transportation Engineering Conference of 1968 that: ‘No amount of technical criticism [of traffic surveys] ... can change the realities of

¹⁰ Buchanan, *Traffic in Towns*, p. 10.

¹¹ Ibid., pp. 26-7.

¹² Ibid., p. 191.

¹³ BRF, *People and Cities*, p. 16.

consumer preference for private transport ... a telling criterion ...[in] a democracy governed by consent'.¹⁴ The utility and growing popularity of the car also encouraged Buchanan and others to see motorisation as a trend that would be extremely difficult and problematic to arrest. It was noted in the Buchanan Report that, as well as for commercial and industrial uses, the motor vehicle was 'making itself well-nigh indispensable for a thousand-and-one domestic purposes'.¹⁵ In the same document it was claimed that 2,305,000 people were employed either in the motor industry or in motor transport, together making an employment sector that was the second biggest in Britain, and thus acknowledging that motorisation had already grown to a level that gave it deep economic roots.¹⁶

This state of affairs was frequently alluded to by advocates of greater accommodation of urban motor vehicles. Some – such as Rowland Nicholas, Manchester's City Surveyor and Engineer – went as far as to suggest that following such a policy would help exports by supporting domestic demand for British cars, thereby lending manufacturers greater strength to compete in the lucrative export market.¹⁷ The perception of the car's popularity and economic importance was such that, even in the face of growing public disquiet and opposition to urban road building in the second half of the 1960s, key decision-makers were still speaking in terms of giving private motoring as much freedom as practically possible. Buchanan's words on the limits of car use were echoed in 1968 by Richard Marsh, one of Marples' successors as Minister of Transport: 'Our job is to give the car as much scope and freedom as we can without sacrificing our environment and living standards'.¹⁸ The planners of Leicester and Milton Keynes were amongst those who directly addressed the question of the car's social utility and economic importance, concluding that this situation made it difficult to pursue transport policies that didn't allow for its extensive use.

The utility and economic importance of the motor car did not blind even its enthusiasts to the difficulties attending the rise in private motoring. In the following chapter, it will be noted that, whilst rising car ownership was broadly welcomed in Leicester and

¹⁴ ICE, *Transportation Engineering Conference: Proceedings of the Conference Organized by the Institution of Civil Engineers, London, 23-26 April, 1968* (London, 1968), p. 197.

¹⁵ Buchanan, *Traffic in Towns*, p. 10.

¹⁶ *Ibid.*, pp. 12-13.

¹⁷ ICE, *Conference on the Highway Needs of Great Britain*, p. 85.

¹⁸ ICE, *Transportation Engineering Conference*, p. 1.

Milton Keynes, Smigielski in Leicester was anxious about the propensity of the public to be seduced by the freedom offered by the car, leaving the vexed question of how to counteract its attending problems to the planners. These problems were set out in detail in the Buchanan Report and were widely acknowledged elsewhere. The report maintained that the difficulties in an urban context were of two kinds: traffic congestion due to the number of motor vehicles on the roads, which restricted mobility, and the 'by-products' of high traffic volumes and congestion: noise, fumes, vibration, road accidents and so on.¹⁹ Buchanan not did shrink from describing the size of the problem, warning that the price of inaction would be that '[e]ither the utility of vehicles in towns will decline rapidly, or the pleasantness and safety of surroundings will deteriorate catastrophically' and that 'in all probability both will happen together.'²⁰ Buchanan saw two reasons why the difficulties mattered: without appropriate action, motorisation would destroy the quality of life in cities and also severely curtail their ability to function as economic units. The report noted that it was difficult to put a price on congestion, but quoted a tentative figure produced by the Road Research Laboratory (RRL) of £250m lost to the economy due to congestion in 1963.²¹

The notion that congestion could act as a drag on the national economy was the other side of the coin to the association of mass car ownership with continuing economic growth. This provided another powerful argument for action to accommodate the car more effectively, especially since it tapped into fears that overseas economies were stealing a march on Britain technologically. Although Britain's economy was growing, in the 1950s and 1960s, and expected to do so for decades to come, it was also notably growing modestly compared to other developed nations. Many commentators, including C. P. Snow and Patrick Blackett, thought that Britain was falling behind its industrial competitors, because it was not modernising fast enough and not devoting enough resources to scientific research and industrial research and development. This school of thought, referred to today by the historian Jim Tomlinson and others as 'declinism', was particularly influential in the late 1950s and early 1960s. Such was declinism's potency that it worked its way into a central position in party-political discourse, with both the Conservative and Labour parties making pledges to improve the productivity and

¹⁹ Buchanan, *Traffic in Towns*, pp. 14-23.

²⁰ Ibid., p. 7.

²¹ Ibid., p. 14.

competitiveness of British industry, most notably in the run-up to the 1964 general election. The Labour Party, which won the election, was particularly keen to make modernisation an election issue, as characterised by the ‘White Heat’ speech of 1963 by its leader, Harold Wilson.²²

Declinism was certainly a powerful discourse that simultaneously held out the possibility of economic disaster, if nothing was done, and the promise of a prosperous future, if corrective measures were taken. Guy Ortolano noted that it could be, and was, used as a ‘rhetorical weapon’ in support of various causes.²³ This was certainly true in the case of the motor lobby’s aspirations for urban redevelopment: its members were alert to the power of declinism, just as they were alert to the allure of consumerism. The Earl of Gosford, Chairman of the BRF from 1962 to 1966, announced that ‘our aim must be the sensible accommodation of the motor vehicle, for it is on that, more perhaps than on anything else, that our prosperity as a trading and industrial nation depends.’²⁴ This was a key argument of the BRF, and lay behind much of the academic research into the putative economic benefits of road construction that it sponsored.

The notion that an expansion in road capacity was economically necessary was not restricted to members of the motor lobby. Sections of the press, for example, supported urban road building partly on these terms. An editorial article in the *Guardian* from 1957, for example, lamented the ‘strange paralysis of national will’ relating to road building. It asserted that Britain’s record of investment in roads was ‘shameful’, before noting that (after Italy) national spending on roads was the lowest per capita in western Europe, and finally warning that British cities were in danger of becoming economic liabilities.²⁵ Such concerns were by no means limited to press commentary or road lobbyists. It was implicit in a statement contained in a report of another inquiry established by Ernest Marples, entitled *Cars for Cities*, published in 1967, which looked at the technical possibilities of developing small cars for use in urban areas. In the

²² On the party-political aspects of declinism, see J. Tomlinson, ‘Inventing “Decline”: the Falling Behind of the British Economy in the Postwar Years’, *Economic History Review*, 49, no. 4 (1996), pp. 731-757; on declinism more generally, see D. Edgerton, *The Warfare State: Britain, 1920-1970* (Cambridge, 2006); G. Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge, 2009); D. Sandbrook, *White Heat: A History of Britain in the Swinging Sixties* (London, 2006), pp. 44-64.

²³ Ortolano, *The Two Cultures Controversy*, p. 163.

²⁴ BRF, *People and Cities*, p. 10.

²⁵ ‘Traffic block’ (editorial article), *Manchester Guardian*, 16 November 1957, p. 4.

steering group's report, it was stated that minimising urban traffic congestion was essential to Britain's economic interests in a 'highly competitive and not particularly sympathetic world.'²⁶

Expectations of mass car ownership, and other aspects of consumer capitalism, together represented only part of a vision of a better and more prosperous future. Economic growth also allowed for the creation of better housing and better urban environments. It was hoped that haphazardly constructed slum areas, full of cramped dwellings and choked by industrial pollution, would be replaced. Their populations were to be moved to new housing with modern amenities in New Towns or new estates that were carefully planned with amenities and open spaces. Such a vision had particular appeal in the late 1950s and early 1960s, when architectural modernism was at the height of its popularity in Britain. It was felt that architecture and town planning combined could help to achieve a healthier and more equitable society. Car culture – and redevelopment to accommodate it – could be fitted neatly into this wider vision of urban renewal. This was especially the case after the publication of the 1961 census, which appeared to show that earlier estimates of population rises in the coming decades had been far too low.²⁷

Expectations of substantial increases in car use combined, therefore, with expectations of significant social and demographic changes to create an intellectual environment that was favourable towards bold innovation in the worlds of transport and urban planning. In particular, the planning goal of providing new and improved housing for a growing population at low densities – either in new and expanded towns or in redeveloped areas of previously nineteenth-century housing – created greater opportunities to re-model urban areas for the motor age. Slum dwellings and so-called outmoded areas could be swept away and room made for urban motorways and multi-story car parks, as well as for modern housing.

²⁶ Ministry of Transport, *Cars for Cities: A study of Trends in the Design of Vehicles with Particular Reference to their Use in Towns. Reports of the Steering Group and Working Group Appointed by the Minister of Transport* (London, 1967), p. ix.

²⁷ Esher, *A Broken Wave*; J. R. Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007); H. Meller, *Towns, Plans and Society in Modern Britain* (Cambridge, 1997); F. J. Osborne and A. Whittick, *New Towns: Their Origins, Achievements and Progress* (London, 1977); S. V. Ward, *Planning the Twentieth-Century City: The Advanced Capitalist World* (Chichester, 2002).

This new urban vision did not exclude public transport, which was seen both as a practical necessity, even by members of the motor lobby, and as amenable to improvement through the application of new technology. Despite anticipations of a substantial increase in the amount invested in new roads, there was an understanding that there would be a limit to the amount of road space that could be provided without making cities uninhabitable. This point was made clearly by Smigielski in his justification, discussed in the following chapter, for promoting a policy of compromise between investment in roads and financial support for public transport. It was understood, furthermore, that adapting cities to the motor car would be a long process: Buchanan suggested that it would take the rest of the twentieth century to complete.²⁸ Both in the short- and long-term, therefore, planners looked at ways to manage the finite resource of road space in the best way possible. This implied that some degree of restriction needed to be applied to the use of personal motor transport. It was recognised that this could be achieved in various ways, including greater use of public transport on certain types of journey.

Particular attention was focused on discouraging commuting by car, which accounted for the bulk of traffic at times of the day when traffic flows in cities peaked. This was partly achieved in the short-term by the increasing limitation of long-term parking in city centres, but other methods were sought in anticipation of greater traffic volumes. This often meant turning once again to new technology, such as new or improved - and therefore more attractive - forms of public transport, and new interchanges between different modes of transport, designed to encourage suburban commuters to perform the last legs of their journeys to work without cars. Other options included using traffic signals to discourage suburban commuters by delaying their ingress into city centres, or road pricing, which meant using monitoring equipment to log the journeys that drivers made and charging a premium rate for journeys made at peak times on heavily used routes. Explorations of such concepts were done, on the whole, not with the intention of limiting car use more generally, but with the desire to allow the car to be put to the widest possible use in situations where it had a clearer advantage over other modes of transport. Smigielski was a keen subscriber to this view. Chapters Three and Six show how the limitation of commuting by car through the use of interchanges was a key part

²⁸ Buchanan, *Traffic in Towns*, p. 193.

of his compromise transport strategy for Leicester.

This proposition found acceptance amongst the most partisan in favour of motorisation, such as the Chairman of the Automobile Association, Viscount Brentford, who supported the concept of car parks on the periphery of city centres with links to improved public transport, and felt that a certain amount of restraint was acceptable if appropriate action was taken towards implementation of the recommendations of the Buchanan Report.²⁹ Similarly, planners like Richard Edmonds, Chairman of the Roads Committee of London County Council (LCC), saw road building and the development of other modes of transport as two sides of the same equation. He asserted that an urban motorway system was essential to London's future as well as a 'first-rate public transport system', including extensions to its underground railway network.³⁰

The apparently high level of agreement over the broad approach to planning should not be allowed, however, to obscure the fact that there was some measure of disagreement with this generally permissive attitude to car use. A. E. T. Griffiths of the British Railways Board felt that public transport was being unfairly marginalised: 'What is worrying is the guarded, qualified, but clear acceptance of the car solution to our urban transportation problems'.³¹ Furthermore, there was no clear agreement amongst interested parties over what the exact balance should be between granting accessibility to motor vehicles and protecting the urban environment. Such uncertainty taxed the minds of planners. Richard Edmonds of the LCC, for example, lamented the absence of a 'yardstick' to measure an urban area's capacity to absorb traffic without undermining its character.³² Buchanan also saw this absence as a problem. He suggested that more research was needed to establish the levels at which noise, vibration and pollution from traffic were tolerable on various types of urban thoroughfare, thereby allowing the 'environmental capacity' of any given street to be determined.³³ Some members of the road lobby argued, however, that there was no balance to be struck, because urban redevelopment would allow for greater accessibility, whilst safeguarding the environment through the physical separation of heavy traffic from environmentally

²⁹ BRF, *People and Cities*, pp. 258-60.

³⁰ *Ibid.*, pp. 110-11.

³¹ ICE, *Transportation Engineering Conference*, p. 49.

³² BRF, *People and Cities*, pp. 110-11.

³³ Buchanan, *Traffic in Towns*, pp. 49-50.

sensitive areas. A. C. Durie, speaking as Vice-Chairman of the BRF (he was also Director General of the Automobile Association), insisted that ‘conventional streets will have to give way to entirely new designs’ and that the ‘physical form of the town’ was responsible for conflict between environment and accessibility.³⁴

This implied a completely new urban form, which some planners warned could create environmental problems of its own if planned badly. L. Hugh-Wilson, Chief Architect and Planning Officer of the New Town of Cumbernauld, warned at the 1963 People and Cities conference that ‘the motor car must be regarded as the servant and not the master’.³⁵ Arthur Ling, Coventry’s City Architect and Planning Officer, concurred, stating at the same event that attempts to segregate traffic and pedestrians often obliged the latter to negotiate an unwelcoming and inconvenient combination of steep ramps or steps and narrow walkways.³⁶ Such remarks were coupled with concerns that large structures, like urban motorways, could be visually and aurally intrusive and might sever one urban area from another, if insensitively designed or routed. Chapters Four and Six explore how the planners of Leicester and Milton Keynes addressed these concerns. Each chapter discusses how they attempted to promote pedestrian circulation in safety and comfort, whilst Chapter Four also looks at their approach to road design.

In the latter half of the 1960s, road building and modernist redevelopment lost much of its attraction. This combined with economic problems in the late 1960s and early 1970s to undermine the project to recast urban areas to support car culture and the consumer capitalist subject. Many urban dwellers had, by then, directly experienced either modernist redevelopment or urban road building and had often found it wanting. New housing estates were frequently criticised as being either cheaply built or poorly managed, whilst new roads often proved to be physically intrusive. Many road projects attracted local opposition, not least because their construction phases threatened to be disruptive and often obliged the demolition of housing and other properties. The Labour Party, which had ruled out the expenditure necessary to follow the kind of redevelopment recommended by the Buchanan Report, began to lean towards transport

³⁴ BRF, *People and Cities*, p. 268.

³⁵ *Ibid.*, p. 183.

³⁶ *Ibid.*, p. 246.

policies more favourable to public transport.³⁷ The Conservative Party remained publicly in favour of urban road building, but in the context of straightened financial circumstances, the Conservative-controlled government of the early 1970s drastically cut back its spending plans in this area. Finally, the steep rise in oil prices that followed the 1973 Oil Crisis dealt a triple blow to the advancement of car culture in Britain: higher petrol prices meant that the cost of motoring to the individual motorist increased, Britain's oil-dependent economy suffered, and the cost of road-building materials increased.³⁸

The changing context of the late 1960s was reflected in the conduct of the Transportation Engineering Conference organised by the ICE in 1968. Calls continued to be made for urban redevelopment in favour of the car, but the tone of the speakers was more hesitant and defensive. This was discernible, for example, in the paper on the design of urban roads, delivered by J. S. Moulder of the Department of Highways and Transportation at the Greater London Council (GLC). Moulder's remarks on the relationship between urban roads and their environment reflected growing public anxiety over the negative environmental impact of urban road building. He noted that urban motorways needed to be integrated into urban areas carefully to minimise their effect on the community, using all the engineering tools available, but conceded that '[t]here are no set rules or theory' on how to achieve this. Moulder also acknowledged that it was 'not desirable' to create new lines of severance between urban areas by building new roads.³⁹ The engineering consultant, Alfred Goldstein, also seemed concerned about the problems associated with threading roads through Britain's densely developed cities. He used his summing-up speech to warn that the difficulty of providing 'adequate' roads would mean that transport studies might 'underplay the need and importance of radical development of road systems'.⁴⁰

Faith in the good prospects for urban redevelopment, together with Britain's economic future, was shaken, rather than lost altogether. At least until 1973, the remodelling of urban areas to accommodate highly mobile, affluent citizens of a technologically advanced society remained the ultimate aim. The question was of selecting the

³⁷ Gold, *The Practice of Modernism*, p. 107.

³⁸ Starkie, *The Motorway Age*, p. 79.

³⁹ ICE, *Transportation Engineering Conference*, pp. 125-9.

⁴⁰ *Ibid.*, p. 197.

appropriate methodology for the long and short term. At the ICE conference, confident calls for sweeping redevelopment were replaced by a warning from Richard Marsh, who served briefly as Minister of Transport from 1968 to 1969, that better traffic management would be as important as new infrastructure whilst gradual progress was made on reconstruction. He also hinted that redevelopment would take longer than expected, due to tightening of the Government's finances. He stated that, even with sufficient financial resources, '[w]e cannot buy our way out of the crisis'. In short, Marsh stated, Britain faced 'a yawning gap of years in which we could only survive as efficient urban beings by squeezing the last drop of mobility out of what we already have'.⁴¹

Since road building faced delays and opposition, the spotlight fell on the application of new technology and traffic management, such as computer-controlled traffic signals and new forms of transport. At the ICE conference, there were several papers on the potential to improve public transport, and to develop alternative personal transport systems, which could both play an important supporting role to the car. Naturally, a conference dominated by engineers might have been expected to look for technological or engineering solutions to the congestion problem, but interest in new technology had a broad base. Indeed, the Labour government of the 1960s, elected partly on promises to modernise Britain's economy, attempted to redirect its own scientific research efforts from military to civilian uses.⁴² Closing the proceedings of the ICE conference, G. T. Fowler, Joint Parliamentary Secretary of the Ministry of Technology, noted with satisfaction 'the increasing extent to which problems of transportation are being tackled by the application of scientific methods and of advanced technologies'.⁴³ The continuing faith placed in technological advance in the latter 1960s was significant, because without it anticipations of mass car ownership and general affluence would be called into question. This being the case, the delegates at the ICE conference continued to think in terms of expanding personal mobility. The car's central role in this expansion was openly challenged by only one delegate: A. E. T. Griffiths of the British Railways Board, who protested that public transport was being unfairly marginalised. There was, however, an acknowledgement that the achievement of a highly mobile urban

⁴¹ Ibid., p. 1.

⁴² Edgerton, *The Warfare State*, pp. 230-69.

⁴³ ICE, *Transportation Engineering Conference*, p. 203.

population would take time: Marsh noted the absence of a ‘technical marvel’ that would allow Britain to ‘enter the millennium of maximum mobility immediately’.⁴⁴

Urban redevelopment and highway engineering

As the accommodation of growing urban motor traffic was discussed, the spotlight fell initially on highway engineering and, increasingly, on urban redevelopment more generally as the main means of accommodating it satisfactorily. The planning of new urban road systems became increasingly sophisticated and bound to other elements of urban planning, such as public transport, architecture and the arrangement of land uses. As an indication of this trend, greater use was made of sociological data in attempts to make informed predictions of future patterns of transport use. In *Traffic in Towns*, Colin Buchanan was not alone in observing that ‘[t]he more we examined the urban traffic problem the more complicated it seemed to be’.⁴⁵ Urban planners were trying to achieve a range of objectives, which were sometimes in conflict, such as providing safety and space for pedestrians and accessibility for drivers, or providing urban space for new roads and providing modern housing for a growing population. Although the level of urban redevelopment necessary to meet these objectives was substantial, it fitted well with post-war notions of material progress through technological advancement, as well as the association of existing nineteenth-century housing with poverty and decay. Nevertheless, a number of awkward questions were raised about the negative environmental and social impact of new roads.

In the late 1950s, the discussions of how to adapt urban areas to motorisation tended to concentrate on the provision of adequate roads. However, it was also understood that adapting towns and cities to the motor car necessitated other changes. At the urban motorways conference, organised by the BRF in 1956, Dr W. H. Glanville and J. F. A. Baker (respectively of the Department of Scientific and Industrial Research and the MOT) spoke of the need for urban motorways to form part of a ‘comprehensive solution’ to the problem of traffic congestion. They noted, for example, that the routing of major roads should be related to land-use to prevent them from becoming physical

⁴⁴ Ibid., p. 1.

⁴⁵ Buchanan, *Traffic in Towns*, p. 9.

barriers that split neighbourhoods.⁴⁶ Speaking the following year at the conference on highway needs, Rowland Nicholas demonstrated some of the ways that the urban motorway was expected to operate, drawing on his experience of directing the planning of Manchester's new roads. He maintained that an urban motorway was more than simply a high-capacity road and contrasted it with the traditional street. Older streets, he noted, were accessible from adjacent properties, with roadside parking, and single-level junctions, and were, therefore, inadequate as a thoroughfare in the coming motor age.⁴⁷

Urban motorways were considered more suitable, because the entry and exit of traffic took place at a restricted number of specially designed junctions. This eliminated the delays associated with both crossing streams of traffic and traffic emerging from side roads. Furthermore, its single purpose of carrying motor traffic eliminated conflict with pedestrians and slower vehicles. Nicholas also spoke at a meeting jointly sponsored by the ICE and RIBA in 1960, stating that in previous years there had been 'little appreciation' of the need to segregate pedestrians and motor vehicles, and suggested elevating busy roads to help achieve this.⁴⁸ In advocating segregation, Nicholas touched upon a key planning concept that was also promoted by Buchanan and others, which implied further redevelopment in the form of elevated pedestrian decks over busy city streets, channelling traffic away from residential areas and creating pedestrian precincts.

It was noted in the previous section that Colin Buchanan was amongst those in favour of redevelopment to accept the car. He took such concepts as pedestrian-vehicle segregation and urban motorways and integrated them into a coherent whole in *Traffic in Towns*. The key to Buchanan's recommendations for urban redevelopment was the creation of new urban road systems, based on a hierarchy of roads, at the top of which stood urban motorways and, at the bottom, local access roads. This hierarchy's aim was to canalise heavy and fast-moving traffic streams, filter vehicle movements smoothly down through the hierarchy of roads, and to eliminate through-traffic from environmentally sensitive urban areas. In this way, Buchanan saw towns and cities being divided into 'corridors', representing the busier roads, and 'rooms', representing

⁴⁶ BRF, *Urban Motorways: Report of the London Conference Organised by the British Road Federation, 1956* (London, 1957), pp. 19-22.

⁴⁷ ICE, *Conference on the Highway Needs of Great Britain*, pp. 79-97.

⁴⁸ R. Nicholas, 'The Impact of Motorways on Cities', paper given at a joint meeting of the ICE and the RIBA, 15 March 1960, pp. 1-2.

places where through-traffic was eliminated. In proposing the creation of such rooms, he was building on Alker Tripp's concept of largely traffic-free 'precincts', which Buchanan re-named 'environmental areas'.⁴⁹ Naturally, these proposals implied extensive changes to urban road systems, as well as the selection of localities to act as environmental areas. Buchanan suggested that the selection of such areas would be influenced by the division of economic and social functions within towns and cities. Buchanan was also amongst those who advocated full segregation of vehicular and pedestrian traffic, where appropriate, to eliminate conflicts between them. He thought that this could be achieved either through pedestrianisation, also referred to as 'horizontal segregation', or via 'vertical segregation' in the form of elevated roads and pedestrian walkways, road tunnels, sunken roads, pedestrian subways, and large pedestrian decks above ground level. Again, such concepts were not entirely Buchanan's own. William and Aileen Tatton Brown, for example, had advocated the use of pedestrian decks and raised walkways in the early 1940s, as part of a wider system of pedestrian-vehicle segregation.⁵⁰

Figure 2.1: *Horizontal and vertical segregation as depicted in the Buchanan Report.*

Source: C. Buchanan., *Traffic in Towns: A study of the long term problems of traffic in urban areas* (London, 1963), p. 157.

⁴⁹ Buchanan, *Mixed Blessing*, pp. 150-3; Buchanan, *Traffic in Towns*, pp. 41-2.

⁵⁰ Esher, *A Broken Wave*, pp. 44-5 & 52.

Buchanan also drew inspiration from outside Britain and he was not alone. The way in which British planners responded to traffic congestion evolved partly in response to increased exposure to overseas examples of urban transport planning. From the 1950s, developments in other European countries, particularly Germany, Belgium, Holland and France were followed with interest, as well as those in the United States. The famous (or infamous) Robert Moses, Chair of the Consolidated Triborough Bridge and New York Tunnel Authority, was just one of a number of foreign planners invited to speak at British planning events. He was a speaker at the conference on urban motorways alongside his New York colleague Arthur S. Hodgkiss. The invitations were mirrored by fact-finding trips abroad by British planners. One delegate, speaking at the same conference session, reported on his recent experience as part of a British delegation that toured five American cities, for example, and returned with praise for its 'bold and imaginative roads'.⁵¹

Traffic and Towns appeared to offer a way to allow the car freedom of movement, whilst limiting damage to the quality of the urban environment. As a consequence, it was well-received by the motor lobby, which sought to capitalise on the interest it had stimulated. The BRF, in particular, was quick to take advantage by convening the 1963 People and Cities conference in the same year to discuss its implications. By holding this conference, which was organised in association with the Town Planning Institute, the BRF built on its work at the urban motorways conference of 1956, in which it had marshalled the support of key decision-makers. Glanville and Baker, each representing a government department, were important amongst these. They maintained that the alternatives to accommodating the car had been explored, including limitations such as bans on cars in busy centres, and found to run counter to the wishes of the population. This was an early indication that urban planning was moving towards redevelopment, rather than restriction, as the appropriate response to traffic congestion. They concluded that 'a comprehensive solution ... must include new roads.'⁵² They were certainly not alone. At the end of the conference the following resolution was passed unanimously: '*Resolved* that this Conference is of the opinion that: the economy needs and traffic problems of large cities demand the construction of Urban Motorways.'⁵³

⁵¹ BRF, *Urban Motorways*, pp. 61-76.

⁵² Ibid., pp. 22-3.

⁵³ Ibid., p. 5.

In much the same way, *People and Cities* acted as an effective platform for Buchanan's ideas. It also demonstrated that comprehensive redevelopment along broadly similar lines to that which he advocated enjoyed a healthy level support amongst other urban planners and key decision-makers. As Lionel Esher correctly pointed out in *A Broken Wave*, Buchanan insisted that he was essentially setting out the choice open to society in dealing with urban motor traffic: it either needed to accept substantial redevelopment or impose severe restrictions on private motoring.⁵⁴ The Buchanan Report contained four case studies in which its principles were applied to real places (including Leeds and a block in central London) that clearly showed sweeping redevelopment as Buchanan's preferred option in the larger cities. At the *People and Cities* conference, the motor lobby members were in no doubt about what society should choose. They were only too happy to lay the 'blame' for traffic congestion and its associated environmental ills on the 'physical form of the town' as A. C. Durie had done. At the close of the conference, Durie also noted with satisfaction that there had been 'general agreement that urban development planning should be aimed at making town and city centres attractive and accessible to motorists.'⁵⁵ Experience would prove that adapting cities to accommodate the motor car was easier to advocate than to execute, with Leicester serving as a good example. Milton Keynes, by contrast, was constructed very largely along the lines that Buchanan and others envisaged, incorporating pedestrian-vehicle segregation and a hierarchical road system.

Buchanan's belief that urban redevelopment to accommodate the car was justified related to his view of the twentieth-century city as being burdened by obsolescence. In his famous report, he wrote of a 'vast legacy of obsolete development from the industrial revolution'.⁵⁶ Such statements were part of a powerful wider narrative in which nineteenth-century development was associated with slum dwellings, fussily ornamental styles, semi-derelict properties with soot-blackened facades, houses that lacked modern facilities, and cramped offices and shops. At the *People and Cities* conference, Ernest Marples insisted that urban Britain needed 'big-scale development' and that it should 'no longer have to be prisoners of whatever building stood in a certain

⁵⁴ Esher, *A Broken Wave*, p. 52.

⁵⁵ BRF, *People and Cities*, p. 268.

⁵⁶ Buchanan, *Traffic in Towns*, pp. 7-8.

place before'.⁵⁷ The language of obsolescence was also employed by many others, including L. S. Marler, a property developer, who spoke at the same conference. A champion of large-scale planning, towers and vertical segregation, he dismissed the area to be cleared for his company's Knightsbridge Green development as 'a jumble of all the worst features of the second half of the last century'.⁵⁸

Such jaundiced views of a sizeable slice of Britain's urban legacy left little room for building conservation. Many redevelopment projects would subsequently find themselves mired in controversy, as threats to historic buildings stimulated a conservationist backlash. Leicester did not escape such controversies, despite having a City Planning Officer, Smigielski, who was alert to the dangers posed to historic buildings by road building. Chapter Five explores how both he and the planners of Milton Keynes experienced difficulty in finding a suitable compromise between access for the car and conservation. More generally, however, the concept of obsolescence combined with pressure to meet the housing needs of a growing population, and the pressure to provide more floor space for retail and industry in an expanding economy, to lend justification to comprehensive redevelopment for the motor age.

In a contrast to the negative view of nineteenth-century buildings, modern architectural design was identified as promising new ways to adapt urban areas to motorisation. Early British examples of this idea could be seen in concepts developed by the Tatton Browns in the early 1940s in a hypothetical redevelopment of a bombed London district published in the *Architectural Review*.⁵⁹ Buchanan was also enthusiastic, lending ample space in the Buchanan Report to this approach, and referring to its outcomes as 'traffic architecture'. This was a broad category that could be used to describe any structure that was designed to be integrated with modern highway design. It could simply mean buildings that were built with their windowless 'backs' to busy carriageways, such as the Heston Grange development in London, which was mentioned in the 1968 ICE conference.⁶⁰ More typically, it applied to complex multi-level structures in city centres straddling whole blocks of streets with spacious pedestrian decks. Buchanan described such buildings as being related to, but not dictated by, the road pattern. He looked to the

⁵⁷ BRF, *People and Cities*, p. 14.

⁵⁸ Ibid., pp. 97-101.

⁵⁹ Esher, *A Broken Wave*, pp. 44-5 & 52.

⁶⁰ ICE, *Transportation Engineering Conference*, p. 129.

United States for examples to describe in *Traffic in Towns*, but the New Town of Cumbernauld would later provide one of the most startling British applications of the concept in the form of its multi-level town centre, which sat on top of a main thoroughfare and car parks.⁶¹

Buchanan also thought that particularly large complexes likely to attract traffic could provide special levels for various transport modes, including (as the choice might be) underground bus and rail stops, ground-level access for cars, multi-level parking, and upper storeys for pedestrians. Creating structures whereby various modes of transport could be brought together, in a more effective partnership, was seen as an important aid to the smooth operation of urban transport by some planners. Buchanan saw public transport as playing a relatively minor role in urban transport, but nevertheless delighted in the example of Philadelphia's multi-level Penn Center, in which various transport modes were neatly merged.⁶² Other planners saw such orderly mergers as particularly desirable at existing transport nodes such as railway and bus stations. Providing adequate parking at such places was put forward as a simple method of helping to achieve this, whilst following more ambitious designs reminiscent of the Penn Center was suggested as another. Such places were often referred to as 'transport interchanges', which were designed to allow travellers to switch modes. One writer described the 'complex interchanges of an integrated system' as possibly comprising 'four, six or even eight levels to deal with the merging of several transport media'.⁶³ Smigielski, as an enthusiastic architectural modernist, integrated interchanges and elements of traffic architecture into his planning vision for Leicester, whilst the planners of Milton Keynes looked rather more coolly upon such concepts.

Despite the widespread approval of redevelopment amongst urban planners, there was a growing sense of anxiety about its implications for the urban environment. Such anxieties were voiced from a very early stage, particularly relating to the negative impact of urban motorways. G. A. Jellicoe made the following remark on the soon-to-be-opened Chiswick flyover, for example, in an address to the Town Planning Institute in 1958: '[w]hat a splendid conception ... [but] I cannot help feeling that the overhead

⁶¹ Gold, *The Practice of Modernism*, pp. 153-4.

⁶² Buchanan, *Traffic in Towns*, p. 46.

⁶³ P. M. Danforth, *Transport Control: A Technology on the Move* (London, 1970), pp. 132-5.

road is not one normally to be encouraged'.⁶⁴ A fuller and far less complimentary view was offered by the architect, Frederick Gibberd, in a paper delivered at a joint ICE and RIBA meeting in 1960.⁶⁵ For Gibberd, the environmental impact of motorways in cities meant that the phrase 'urban motorway' was a 'contradiction in terms' and that their construction was only acceptable when no alternative existed. The prospect of elevated roads in particular was not welcomed. Flyovers were the most invasive example of urban motorways, which dominated and 'cut across' the views of existing buildings. In any case, Gibberd felt that the scale and function of urban motorways rendered it impossible for them to be related to the surrounding buildings. Furthermore, they carried with them the potential to promote the kind of squalor and neglect that he found in the vicinity of the Boston Freeway in the United States.

In a companion paper, Rowland Nicholas took the opposite view, stating confidently that elevated motorways 'can be made aesthetically satisfactory ...[and] used to enhance the street scene' in the course of modernising 'squat, unpretentious and outdated' cities. This was an unashamedly modernist sentiment, but Nicholas appeared to concede that urban motorways were not always 'aesthetically satisfactory' in practice. He concluded that '[w]e should not be dismayed by American example'.⁶⁶ Gibberd was not alone within the architectural profession in having doubts about the acceptability of urban motorways. Lionel Esher noted that Basil Spence, as the RIBA president, 'pioneered the campaign against the visual threat of urban motorways'.⁶⁷

Urban road development also attracted criticism for creating new lines of severance. This was the term used in urban planning to describe the tendency of new infrastructure, such as roads or railways, to split urban areas and to act as barriers to social and economic interaction. Gibberd thought that this was especially true of motorways, which due to their size and nature, made 'a homogenous city impossible'. Fast-moving traffic and wide roads divided spaces: 'the effect is of running a footpath through a living room'.⁶⁸ Supporters of urban motorways admitted that severance was

⁶⁴ G. A. Jellicoe, 'Motorways - Their Landscaping, Design and Appearance', Fourth Rees Jeffries Triennial Lecture, Town Planning Institute, 1958.

⁶⁵ F. Gibberd, 'The Impact of Motorways on the Urban Environment', paper given at a joint meeting of the ICE and the RIBA, 15 March 1960.

⁶⁶ Nicholas, 'The Impact of Motorways on Cities'.

⁶⁷ Esher, *A Broken Wave*, p. 73.

⁶⁸ Gibberd, 'The Impact of Motorways on the Urban Environment'.

unavoidable, but not all were willing to admit that it was problematic. Glanville and Baker, in their contribution to the urban motorways conference, for example, considered severance to be acceptable if the major lines of severance ran between established neighbourhoods or environmental areas.⁶⁹ Others, like J. S. Moulder of the GLC, were anxious to point out that the creation of Britain's railway system meant that severance was nothing new. He conceded, however, that it was 'not desirable' to make new lines of severance and that the integration of new roads into the urban environment was a considerable challenge. Nevertheless, he expressed confidence that dislocation could be suitably minimised by following existing lines of severance and neighbourhood boundaries, and by building tunnels, flyovers, and sunken highways.⁷⁰

Sunken and elevated roads had the virtue of allowing pedestrian and other traffic to move freely at ground level. It was quite a different matter if the road was to remain at ground level, yet still maintain physical separation of motor and foot traffic. This was another matter of concern to traffic planners, since negotiating steps and ramps leading to underpasses or elevated walkways involved physical exertion for walkers. L. Hugh-Wilson, probably drawing on his experience of planning Cumbernauld, agreed that the separation of pedestrians and motor vehicles should be of 'maximum convenience to both' with more direct routes for pedestrians: '[i]f one accepts the function of a town as a meeting place, it follows that the pedestrian has certain rights'.⁷¹ Arthur Ling also noted that vertical movement was easier for vehicles: 'I would say that man has an inherent right to walk on the ground, and if we are going to push anyone around let us push the vehicle around'.⁷² The property developer L. S. Marler, Chairman of the Capital and Counties Property Company, summed-up the dilemma facing planners, stating that 'we simply cannot leave things as they are; nor must we, as in Los Angeles for instance, create a desert of concrete ramps, causeways, and tiers of flyovers.'⁷³

It was generally acknowledged that adapting towns and cities to the motor age would be a complex affair, involving some difficult compromises between, for example, automobility and pedestrian circulation. The more the matter was discussed, the more

⁶⁹ BRF, *Urban Motorways*, p. 19.

⁷⁰ ICE, *Transportation Engineering Conference*, pp. 127-9.

⁷¹ BRF, *People and Cities*, p. 183.

⁷² *Ibid.*, p. 246.

⁷³ *Ibid.*, pp. 97-101.

difficult the task appeared to be. This view was reinforced in the light of practical experience, not least in the planning of Leicester and Milton Keynes as will be discussed in Chapter Four, where both groups of planners displayed concerns over the environmental effects of private motoring and the infrastructure that was required to support it. The task was further complicated by the need to provide adequate housing for a growing population.

The dispersal of large urban populations to new settlements was seen by most planners as the best way to meet both the population's housing needs and to ease overcrowding in the larger cities. It had been recommended by the Barlow Report of 1940, and had been pursued by the Government after the passing of the New Towns Act (1946). Many planners in the 1960s concluded that new settlements could also be planned to meet society's apparent desire for greater mobility. The creation of new settlements, some argued, limited the expansion of the largest urban areas where traffic problems were greatest, whilst providing modern homes in smaller and more rationally planned settlements that were suited to the motor age.

One of the most startling proposals along these lines came from R. M. Newland of the University of Birmingham. He stated at the 1963 People and Cities conference that 'the activities of the Birmingham conurbation could be transferred to new towns in Wales' and be linked by rural motorways. Apparently underlining his view was the opinion of his colleague, F. D. Hobbs, who maintained that only towns up to a maximum of 300,000 inhabitants could allow for full use of cars.⁷⁴ Further support for dispersal came from the sociologist Dr Mark Abrams, who opened a discussion at the same conference, entitled 'The Sociology of the Motor Age'. He felt that 'new self-contained towns' not only could 'reconcile the mass ownership of cars with the advantages of urban life', but also that they offered everything that the larger cities could in terms of leisure and employment.⁷⁵ The contribution of Abrams was an indication that social scientists were involving themselves in urban planning. As Managing Director of Research Services Ltd, he had carried out investigations relating to the housing of London's 'overspill' population and the planning of the New Town of Peterlee, as well as several transport and traffic surveys. As the following chapter will demonstrate, they were intimately

⁷⁴ Ibid., pp. 261-2.

⁷⁵ Ibid., pp. 51-8.

involved in the planning of Milton Keynes, making predictions about the future shape of urban life, which provided the theoretical basis for the overall plan for the new city.

A better understanding of patterns of travel became a major preoccupation of planners, arousing interest in the relationship between land uses and travel habits. In particular, it was noted that industrial and commercial activities tended to be concentrated in the centres of urban areas, which was contrasted with a drift of urban residents to the suburbs. This gave rise to heavy concentrations of road traffic in the centres and along radial routes when people moved between their homes and workplaces. To produce a more even and manageable distribution of traffic many urban planners proposed the partial relocation of commerce and industry to the fringes of urban areas. This process was often referred to as 'decentralisation' (although this term was also, rather confusingly, applied to the dispersal of populations to New Towns). Organisations like the Society for the Promotion of Urban Renewal (SPUR) promoted decentralisation as a way to revitalise the centres of the larger cities. In its first annual report, in 1960, the organisation argued that dispersal was sapping the life and energy of older metropolitan areas by attracting investment and the brightest workers. The report proposed that industry should be removed from central locations and be replaced with housing.⁷⁶

Decentralisation was popular with the Government, which saw in it the potential to reduce the amount of money needed for new roads by limiting the overall volume of traffic. The comments made at the People and Cities conference showed that the idea was also enthusiastically adopted by local planners. Manchester's Rowland Nicholas and Wilfred Burns, Newcastle's Chief Planning Officer, both saw it as a way to reduce congestion associated with over-concentration of commerce and industry in central locations. Nicholas saw it as a necessary part of a much wider process of urban renewal that also included slum clearance and the provision of more open space. His 'ideal' was a series of local authority areas having their own centres and being separated by a margin of open space, perhaps influencing the routes of parkways.⁷⁷ Although dispersal formed a key part of the transport strategy in Milton Keynes, the following chapter shows adherence to the concept was by no means universal. In Leicester, Smigielski rejected it in favour of preserving Leicester's established pattern of land uses, insisting

⁷⁶ Esher, *A Broken Wave*, p. 68.

⁷⁷ BRF, *People and Cities*, pp. 215-22 & 235.

that dispersal would be too disruptive to the city's industry.

As well as examining the possibility of altering land uses to help traffic flow, urban planners also began to pay greater attention to land uses in the preparation of new road systems. Buchanan was amongst those who believed that it was vitally important that new road plans took account of land use, as well as changing patterns of mobility. He criticised the road plans of the immediate post-war era, typified by the 'ring-and-spoke' model, which involved the addition of ring roads to existing main roads that radiated from city centres like the spokes of a wheel. Such plans, Buchanan felt, were based on intuition rather than on an informed prediction of the future distribution of road traffic.⁷⁸ He was by no means the first to note the importance of good information on traffic flows: at the ICE conference of 1957, W. H. Glanville spoke of the need for a greater understanding of the travel habits of a changing society. He suggested that more research 'into the basic factors governing the use of the roads', was required, and noted the 'fragmentary' state of knowledge relating to the socio-economic profiles and habits of the urban population.⁷⁹

Many urban planners saw the answer in the adoption of new survey techniques pioneered in the United States that attempted to take underlying socio-economic trends and spatial considerations into account, rather than simply counting vehicles using the roads. Land-use/transportation surveys, as they were known, adapted data-gathering techniques used in sociology, such as surveying representative samples of the population and conducting face-to-face interviews. The surveys involved the selection of a representative cross-section of households, according to age, employment, household size and gender balance, income and so on, who would then be questioned in their homes by a trained operative about their lifestyles and travel habits. Particular attention was paid to making a record of the regular journeys respondents made in the course of their socialising, employment and leisure. The basic assumption behind the surveys was that land use, particularly the positions of industrial and commercial areas relative to residential areas, was a basic determinant of travel patterns, along with the socio-economic profile of the population. It followed, according to this notion, that if the types of journey undertaken by various socio-economic groups could be determined,

⁷⁸ Buchanan, *Traffic in Towns*, p. 43.

⁷⁹ ICE, *Conference on the Highway Needs of Great Britain*, pp. 120-1.

survey data could be married with data on land use and traffic volumes, and larger data-sets relating to local socio-economic trends, to produce a projection of the future level and distribution of road traffic.

In the 1960s, British planners began to employ such methods, demonstrating that they were increasingly willing to look at the way that people lived their lives when making decisions about urban transport policy. Neville Borg, of the City of Birmingham, described his authority's use of the new techniques at the 1968 ICE conference. He asserted that planning for roads required more sophisticated survey techniques than those that had been employed in the past: '[t]here has grown up also some sense of unreality about the process of justifying individual highway schemes by origin and destination ... techniques'.⁸⁰ Origin and destination surveys were the simpler forerunners to the land-use/transportation survey. They combined traffic counts with the gathering of data about individual trips. Information was gleaned from samples of drivers, who were stopped and asked the origin and destination of their trip, or from workers at large workplaces, who were asked the origin of their trips to work. Borg went on to explain the composition of a 'household survey' that involved the classification of the households examined into 108 types, according to various sociological criteria. The size and complexity of the survey prompted Birmingham to use computers in its analysis of the data, without which Borg admitted the task would have proved too great. As the following chapter demonstrates, Smigielski was an enthusiastic adopter of the new survey techniques, launching an extensive study, also aided by computer technology, in Leicester in one of his first undertakings as City Planning Officer.

Personal transport: improvements and alternatives

Such was the size of the challenge of allowing for automobility whilst protecting the urban environment, that interest in the potential of alternative forms of private transport and alternative motor car designs was considerable. There was particular interest in the practical benefits of smaller, quieter, less polluting vehicles that would take up less road and parking space. This interest was another reflection of the fact that the conception of

⁸⁰ ICE, *Transportation Engineering Conference*, p. 15.

what urban transport planning could entail was widening. This development, in turn, encouraged further interest in sociological questions, such as what the social benefits of the car were, and how social trends were likely to affect its use. The conduct of such discussions provide further evidence that transport planners anticipated greater affluence and supported high mobility and consumer capitalism. Such discussions also underlined the great extent to which new technology was embraced in an effort to alleviate the problems associated with motorisation.

Alternative forms of personal transport featured in many explorations of the urban transport question, even those that did not recognise them as having much value. They were explored briefly in the Buchanan Report, for example, alongside various alternative forms of mass passenger and goods transport. The list of alternatives identified was long, and included many transport modes that were in the early stages of technological development: monorails, tracked hovercraft, air-cushion craft, pipelines, pneumatic tubes, conveyor belts, moving walkways, chair-lifts and personal jet packs. The report concluded that 'it is difficult to see any new method of movement coming along which will be seriously competitive on a big scale with the motor vehicle'.⁸¹ In contrast, walking was given more serious consideration as an essential complement to the car (and other forms of transport) that allowed people to complete short journeys and intermediate parts of longer ones. Walking was integrated into Buchanan's overall approach rather straightforwardly as an activity complementary to longer-range travel which needed to be considered in physical planning. His lack of consideration for walking as an alternative to other forms of transport was reflected in other commentaries on pedestrian movement. There was very little discussion of arranging urban functions to allow movement from home to work on foot for instance. Neither was there much consideration of cycling as an alternative. Investigations concentrated instead on either alternative motorised modes or alternative motor car designs.

One such design was the Auto-Taxi, which was under development by the Brush Electric Engineering Company, in association with the Government's National Research Development Corporation. This was a small car-sized vehicle that was automatically controlled and ran on a specially designed track, from which it drew

⁸¹ Buchanan, *Traffic in Towns*, pp. 24-5.

electrical power. An outline of the system was presented at the 1968 ICE conference. The vehicle gave no emissions and had the advantage of running on a network of elevated tracks of modest dimensions, the paper explained, leaving the roads free for conventional vehicles. The system aroused the interest of the Road Research Laboratory, which it deemed to be a realistic proposition that could be available for cities to pursue if the necessary technical development was undertaken. It was concerned, however, that people would be reluctant to entrust themselves to automatic control. Although there was real interest in the potential of new transport systems, there were also clear hints that many decision-makers were cautious about their practicality and prospects: Dr L. R. Blake, one of the developers present at the conference, felt the need to stress that the project was ‘not a wild idea’.⁸²

Alternative designs of conventional motor vehicles also attracted interest. In the People and Cities conference, Coventry’s Arthur Ling had voiced frustration that the onus for adaptation had been placed on the urban planner, rather than on the car manufacturer. He stated that ‘[w]e should push the motor car industry around and tell them that we want them to devise the kind of transport which will serve our cities’ and not to dictate ‘what kind of cities we have’.⁸³ Whilst this appeared to be a minority sentiment, the potential benefits of adapting motor vehicles to towns and cities were not lost on central government. In 1964, the MOT established a study to investigate the design possibilities for motor vehicles purpose-built or adapted for use in urban areas. Amongst other things, it was given the task of establishing whether smaller vehicles might ease urban congestion. This study was launched at the instigation of Ernest Marples once again, who explained its purpose as follows: ‘just as the towns of the future must be rebuilt to come to terms with the motor vehicle, so the car must be designed to come to terms with those towns.’⁸⁴

As this statement indicated, the study was a compliment to the work of Buchanan, by suggesting car designs that would increase traffic flow and reduce the environmental impact of traffic noise and fumes. In the report of the study, entitled *Cars for Cities* and published in 1967, it was asserted that altering car designs could prove to be

⁸² ICE, *Transportation Engineering Conference*, pp. 105 & 112.

⁸³ BRF, *People and Cities*, p. 249.

⁸⁴ Ministry of Transport, *Cars for Cities*, p. iv.

indispensable in the task of easing traffic problems, because urban conditions in Britain were both unfavourable to mass motorisation (a ‘spider-web pattern of roads’) and to wholesale urban redevelopment (a lack of available land and the presence of historic buildings). It was also noted that, as redevelopment was expected to take several years to complete, changes to car design could form part of a remedial transport strategy over the next 20 to 25 years.

The working group behind the study spent much of its time attempting to assess how far smaller vehicles could contribute to freer urban traffic movement. In doing so, it drew strongly on the work of the RRL, which had conducted experiments with fleets of small Austin Minis as part of its research. The RRL found that smaller cars had only a marginally positive impact on traffic flows in mixed traffic, but a significant one when they had sole use of the road. The group concluded, in the light of this, that the best arrangement of small cars would be to have vehicles of uniform length on special lanes.⁸⁵ Its next step was to explore possible designs for private passenger vehicles. A number of configurations were examined, including two-, three- and four-wheelers, with varying numbers of seats in various juxtapositions. Appropriate levels of performance were also discussed, such as higher acceleration, which was also considered to offer a capacity gain. The group’s research indicated that dedicated designs had the potential to make very economical use of road space: travelling at 30mph on a segregated way, 220 examples of the design known as ‘Citycar One’ could be accommodated in the same amount of road space as 100 average saloons, it was asserted, or 170 examples of the larger ‘Citycar Four’.⁸⁶ The group was also interested in implications for parking arrangements, which drew much attention in traffic planning generally, since parking space was often at a premium in urban areas. Again, smaller vehicles offered the chance to make space savings, either at the roadside or in off-street car parks. Interestingly, the study noted that vehicles of uniform size offered a chance to exploit technological advances, because they were especially suited to using car parks where vehicles were stored and retrieved mechanically.⁸⁷

Technological advances in car design were also explored in the study, particularly in the

⁸⁵ Ibid., pp. 12-17.

⁸⁶ Ibid., pp. 22-7.

⁸⁷ Ibid., pp. 12-17.

field of power plants. A wide net was cast in search of engine designs worthy of consideration, including gas turbines, rotary engines, electric motors powered by zinc-air batteries or fuel cells, as well as various modifications to conventional engines. Battery electric vehicles were given much attention, because they appeared potentially to satisfy a number of the study's requirements for use in urban areas: they had no emissions, low running noise, and low running costs. Although the Group felt that a refined zinc-air battery might be a 'major development', it concluded that '[u]nforeseen developments in power units are always possible. But on the basis of what is at present foreseeable we consider that the reciprocating or perhaps the rotary internal combustion engine will remain for many years the best form of power unit for road vehicles'.⁸⁸

Other methods of reducing noise and air pollution were considered, as well as the development of new features to improve safety, such as anti-lock braking systems and collision warning devices. Various other technological developments were assessed for their potential benefits and practicality, including the use of automatic vehicle control to improve safety and to promote efficient use of road space. In particular, the notion that city cars could be supplied with their own urban highway network, which would be vertically segregated from its surroundings, was enthusiastically entertained. Using a hypothetical network in central London as an example, the report, noted that narrower, lighter and lower structures would be possible, which could be constructed 'without the extensive re-development and severance of neighbourhoods usually associated with major urban road projects'.⁸⁹

Most of the opening remarks of *Cars for Cities* related to social and economic matters that were considered relevant to the study. In their analysis, the authors of the report used expectations of rising demand for mobility to provide greater justification for the study. Unsurprisingly, the report identified trends that were frequently cited as likely to stimulate car use, such as rising car ownership, suburbanisation, higher incomes and extended leisure time.⁹⁰ Yet the haziness of predictions relating to social change and the complexity of their possible effects was also carefully noted. The report stated, for example, that: '[i]t is sometimes suggested that automation will eventually eliminate

⁸⁸ Ibid., p. 92.

⁸⁹ Ibid., pp. 30-1.

⁹⁰ Ibid., pp. 1-9.

commuter congestion ... [a]t the moment however it is impossible to fit a time-scale to such prospects'. It was acknowledged, furthermore, that greater automation was likely to be attended by the rising incomes and leisure time that were normally expected to increase the demand for mobility.⁹¹ It was also felt that the trend towards two-car families could help to make cheaper and smaller town cars more popular, which it was suggested could be used for commuting, leaving the family car free during working hours for more general purposes.⁹²

The study judged the rising use of cars in the 1960s as a positive development. Neither the advisability of meeting the rising demand for mobility, nor the growth in consumerism that fuelled it, was questioned. Instead, the car was praised as 'an intrinsically desirable and useful method of transport'. The study group interpreted the rise in car ownership as not only a consumer choice, but also as an indication of the general will of the population. The report stated that '[i]n this study we have particularly sought to establish how the community could make extensive use of the car, *as it evidently wishes*' whilst reducing 'the penalties and difficulties' [*italics mine*].⁹³ It also took a consumerist line, seeing no reason why the type of motor vehicles available should not be the sort that 'the individual user broadly wants'. Rather like a manufacturer of consumer goods undertaking market research, the study group conducted a survey of car owners' preferences to gain some insights into the public acceptability of specially designed urban vehicles. When the survey confirmed that objections to unorthodox designs were manifold and strongly held, the study group displayed a preference for a soft approach to moulding car owners' choices. It concluded that the best approach to increasing the popularity of more appropriate car designs would be to offer financial incentives, such as lower road taxes and parking fees.⁹⁴

The MOT was rather cool on such measures. The Minister of Technology, Anthony Wedgwood Benn, suggested in 1968 that giving tax advantages to drivers of electric cars might encourage their use, thereby cutting pollution from motor vehicles. The MOT replied that it preferred to encourage manufacturers to develop improved designs for

⁹¹ Ibid., pp. 8-9.

⁹² Ibid., pp. 21-2.

⁹³ Ibid., p. 97.

⁹⁴ Ibid., pp. 33-9.

electric cars in order to make their adoption more likely.⁹⁵ Giving support to developers of new car designs continued to be seen positively by the Ministry of Technology and the MOT. Together, they created the Joint Transport Research Committee to investigate ways that the Government's research facilities could be utilised to help the technological development of various public and private transport modes. The Committee was active in investigating a range of projects, such as steam-powered and electric cars. The social benefits of such developments were acknowledged, such as the lower emissions and noise of steam-powered vehicles, but slow technical progress was judged to preclude their imminent exploitation. Generally, new car designs were seen as offering benefits in the longer term.⁹⁶

Public transport: improvements and alternatives

The question of how to integrate public and private transport added an extra layer of complexity to the issue of urban transportation. Ironically, as its relative importance declined, the place of public transport had become a more important consideration than when it was the main form of urban transport. The issue was further complicated by the opportunities offered by new technology to extend the capacity of public transport and to alter its relationship with the motor car. Whilst in the 1950s attention focused mainly on roads, the role of public transport featured more prominently in discussions of urban transport in the 1960s. So much so, that the full integration of public transport into urban transport planning was given official endorsement by the MHLG and MOT in their promotion of the 'Leeds Approach' in 1969, which combined support for the operation of buses with road building and other aspects of physical planning.⁹⁷

Although facilitating private transport remained the primary goal, achieving a limited transfer to public transport for certain types of journey gained the support of many important decision-makers. Overall, public transport became increasingly important to and integrated into urban transport planning theory, and attempts were made to put some of the new ideas into practice in many British towns and cities, including Leicester and Milton Keynes.

⁹⁵ TNA, MT, 149/40, Transport economics: joint Ministry of Transport and Road Research Laboratory research into electric cars and other vehicles: cost-benefit assessment.

⁹⁶ Ibid.; TNA, MT 164/1, Joint Transport Research Committee: minutes and papers of first meeting, February 1969; TNA, MT 164/2, Joint Transport Research Committee: minutes and papers of second meeting, March 1969.

⁹⁷ Gunn, 'The Buchanan Report', pp. 536-7.

The enduring importance of public transport as part of the urban transport infrastructure was almost universally accepted, not least by Colin Buchanan in *Traffic in Towns*. Such was the magnitude of the urban congestion problem that the report could not ignore any method of transport. A consideration of various alternative transport modes to the car included emerging forms as well as established ones, but none were considered to be serious rivals to it. The limited space in *Traffic in Towns* devoted to alternative transport methods concentrated on forms that impinged as little as possible on automobility, like moving walkways above street level and monorail systems. The monorail was singled out for particular praise for its ability to follow the lines of existing roads without taking highway space from road vehicles.

However, Buchanan was clear in his insistence that public transport was essential and lent mobility to those whose circumstances might prevent them from driving, particularly the infirm, the elderly and the very young. Indeed, his interest in rail, road and air transport was reflected in the parts of *Traffic in Towns* relating to interchanges. He envisaged regular personal car use as becoming the norm, however, foreseeing those not using cars dwindling to a small minority. In other words, he saw urban public transport largely as a filler of the gaps in mobility that the car could not fill, or - at its most positive - as a reliever of pressure on urban roads by carrying commuters and others making voluntary transfers from cars. As Chapter Six demonstrates, the planners of Leicester and Milton Keynes engaged with these issues. The possibility of achieving a transfer to public transport was explored, with the former group adopting it as a long-term goal. In Milton Keynes, despite the city's deserved reputation as a city designed for the car, the potential of various public transport modes was carefully explored, with a desire to prevent the social exclusion of those who didn't drive particularly in mind.

Although the Buchanan Report identified public transport as playing a relatively minor role in urban areas, it was an important one within a system envisaged to provide mobility to everyone. This acknowledgement of public transport's importance to a wider system of urban transport was common amongst urban planners. Buchanan's promotion of transport interchanges, that would facilitate switching between transport modes, underlined this identification of public transport as one element of a wider system. The conduct of the 1963 People and Cities conference indicated that many

planners were thinking along these lines. Both Wilfred Burns and Rowland Nicholas talked about public and private transport complementing each other. Whilst Burns insisted that '[l]arge cities need an integrated transport system', Nicholas spoke of the desirability of having multi-storey car parks at railway stations and 'car park structures' on the urban periphery to facilitate switching between transport modes.⁹⁸

The appreciation of public transport, especially amongst urban planners, was such that some were critical of the Buchanan Report for its rather superficial treatment of it, and for suggesting only a minor role for it in urban areas. Alderman D. S. Thomas, the Chairman of Birmingham's Public Works Committee, felt that the Buchanan Report 'did not delve deeply enough' into alternative methods of transportation.⁹⁹ Meanwhile, Peter Mason, of consulting engineers, Brian Colquhoun and Partners, expressed disappointment that 'there is nothing like an argument for a comprehensive transport system', before noting that 'the implications of the report are financially vast and anything that can be done to assist in disposing of the motor car on the roads surely should have our most important consideration.'¹⁰⁰ Mason's proposition that allowing public transport to retain a greater share of its patronage could reduce the scale of road building, and its associated costs, gained favour in subsequent years. So too did his notion that new and improved methods of public transport could help to achieve this in an era possessing a 'wealth of technical ability'. Smigielski was an early adopter of both these ideas.

In the early 1960s, public transport had already become a particular interest for many people who had anxieties about maximising accessibility for the motor car. Walter Bor, Liverpool's City Planning Officer, complained to a speaker from Paris that the plans for the French capital appeared to suffer from an inadequate consideration of public transport. At the same time, he was worried by the French speaker's call for more flexibility when dealing with historic buildings: 'on no account must we sacrifice civilized urban environment to accessibility.'¹⁰¹ Bor left his post at Liverpool in 1966, moving into private practice, and subsequently becoming a lead consultant in the planning of Milton Keynes where, as explored in Chapter Five, conservation would be

⁹⁸ BRF, *People and Cities*, pp. 215-40.

⁹⁹ *Ibid.*, p. 174.

¹⁰⁰ *Ibid.*, pp. 151-2.

¹⁰¹ *Ibid.*, pp. 73-4.

an important consideration.

In the years following the publication of the Buchanan Report, interest remained high in allowing public transport to play a role beyond catering for a small minority. This was especially so, given the mounting political and financial obstacles to road building. Some of the attention was focused on consolidating and improving urban bus and rail networks through a combination of technical development and favourable policies. This was the case in a case study of Leicester carried out on behalf of the East Midlands Economic Planning Council and the MOT in the mid-1960s. In their report, published in 1967, the investigators started by noting the impracticality and expense of planning for full motorisation, stating that the study's main theme was that public transport was the 'main hope of improving urban transportation without massive investment or completely redesigning our towns'.¹⁰² They concluded that a partial transfer from private to public transport was both desirable and achievable, through relatively simple expedients, such as special lanes for buses, running rail services for commuters at a loss, and better co-ordination of town and country bus services.¹⁰³ The notion that public transport should carry a generous share of commuters was a popular one, since commuting by car contributed significantly towards the morning and evening peaks in urban road traffic. Back in 1963, at the People and Cities conference, Wilfred Burns, had spoken of overseas evidence that suburban rail systems could be made economically viable. He cited the example of Stockholm's rail network, which was supported by having suburban development planned around it.¹⁰⁴

In the years separating the People and Cities conference and the ICE conference of 1968, a considerable amount of work investigating the possibilities offered by new technology had been undertaken. Whilst the enthusiasm for road building had waned somewhat in these years, interest in new transport technology remained undiminished. This was exemplified by a paper by A. Hitchcock of the RRL, in which he described research on new urban transport systems and on new car designs.¹⁰⁵ These included Switzerland's Bouladon, an underground moving beltway for pedestrians, and the buses of Throughways Ltd, which could run either automatically at high speed on a special

¹⁰² C. Sharpe, *Problems of urban passenger transport* (Leicester, 1967), p. 25.

¹⁰³ *Ibid.*, pp. 91-8.

¹⁰⁴ BRF, *People and Cities*, pp. 215-22.

¹⁰⁵ ICE, *Transportation Engineering Conference*, pp.103-15.

track, from which they derived power, or on normal roads under their own power. The fact that the RRL was taking an interest in such developments reflected the wider interest coming from central government. This was underlined by Hitchcock's announcement that the Ministries of Transport and Technology were drawing up 'a collaborative research programme' into transport systems. Broadly speaking, therefore, two lines of attack presented themselves to those hoping to improve the usefulness of public transport: the exploitation of new modes or the improvement of existing ones. Milton Keynes would eventually adopt the latter approach, whilst Leicester would embrace both approaches, making tentative plans to utilise a wide range of platforms, including moving walkways, a monorail, and a range of modified bus types.

In the late 1960s, when the practicality, popularity and desirability of urban road building were in greater doubt, promoters of public transport became emboldened. They took the opportunity to argue for a large role for public transport and, in some cases, to criticise what they saw as the privileged place that private transport had been afforded. As mentioned above, A. E. T. Griffiths, of the British Railways Board, made a complaint along these lines at the 1968 ICE conference. He observed drily, that despite the wide acknowledgement that complete freedom for private motorists was impossible, 'we are still frequently invited to attempt it because the statistical calculations apparently suggest that it is a good thing'.¹⁰⁶ Two of his colleagues delivered a paper later, promoting rail transport.¹⁰⁷ Reaching similar conclusions to the Leicester study, they spoke of the areas of advantage that rail enjoyed in providing services, such as suburban commuting, fast inter-city links and freight transport. They also listed the technical developments that were under way: better track, better signalling, better rolling stock, faster trains with light alloy construction, expanded electrification, and computerised central control of train traffic. He concluded ambitiously that '[t]he target now is radical change'.

W. M. Little, Chairman of the Scottish Bus Group used the same conference to promote buses, which were also undergoing a process of modernisation. He gave examples, including experiments in mechanical fare collection and new types of service provision

¹⁰⁶ Ibid., p. 49.

¹⁰⁷ Ibid., pp. 84-91.

like the London Red Arrow.¹⁰⁸ This service, and others like it, such as the Stevenage Blue Arrow, was conceived as an alternative to commuting by car. Their attraction lay in providing services that picked up and set down passengers closer to homes and work places, and did so quickly, by having fewer intermediate stops.¹⁰⁹ Little's desire to see the adaptation of existing public transport modes to contemporary needs was clearly shared by others, and extended to the planners of Leicester and Milton Keynes. Chapter Six explores how both cities examined the possibilities offered by new types of bus service, such as the Dial-a-Bus, which operated as a kind of half-way house between a taxi and a scheduled service.

Although at the 1968 ICE conference there was no suggestion that public transport would gain ascendancy over the car, there was certainly evidence of a renewed interest in its potential to secure significant voluntary transfers from private transport at certain times and places. This renewed interest went hand-in-hand with reappraisals of what urban transport was for, and what criteria should be applied in making decisions about when and where to favour one mode over another. Griffiths felt that the much-praised new survey techniques and cost-benefit analyses of road building privileged the car over other modes. He objected to the absence of any weighting of trips by distance and the largely absent weighting by destination or purpose in such analyses. Thus a trip to a nearby shop by car for cigarettes that was made quicker by a new road was deemed to have benefited society as a whole financially. He noted also that no attempt to quantify non-financial factors was made, and that public transport was 'set to do a job for which it is not designed' in the surveys and, therefore, came off second best.¹¹⁰

The compilers of the Leicester study concurred, noting that planners suffered from inadequate machinery for decision making when deciding on the balance of provision for private and public transport. They noted that an apparatus had 'only just been formed' for roads, but that none existed overall, leaving decisions more dependent on value judgements that they might have been otherwise.¹¹¹ Such remarks enriched the urban transport debate, not only reminding planners that all modes needed to be

¹⁰⁸ Ibid., pp. 95-7.

¹⁰⁹ TNA, MT 149/107, Road transport (passenger) urban transport: bus planning (provincial): Stevenage Optimal Bus System Study.

¹¹⁰ ICE, Transportation Engineering Conference, p. 49.

¹¹¹ Sharpe, *Problems of urban passenger transport*, pp. 23-4.

considered together, but also that the social implications of any increase in mobility needed to be considered, including what sort of trips were being facilitated, and who the main beneficiaries were likely to be.

Getting the most out of the roads: road pricing and traffic management

This section describes some of the ways that traffic management grew in sophistication and became more intimately involved in transport planning in response to rising levels of urban motor traffic. It notes that, whilst one-way systems and parking controls remained attractive as methods of traffic management, attention was also directed increasingly towards more technologically mediated measures, such as computer-controlled signals and automatic road pricing systems. Meanwhile, the assessments of the practicality of road pricing and other methods of regulating the flow of traffic increasingly became related to discussions of people's travel behaviour and motivations for making particular journeys at particular times. In this section it is noted that this exploration once again involved the participation of social scientists – this time in the form of economists, who were the main advocates of road pricing. Overall, the interest in traffic management techniques as a way to regulate traffic flows and make better use of road space added an extra level of complexity to the practice of traffic planning. Furthermore, it underlined the trend towards seeing urban traffic and its supporting infrastructure as a complex system that required careful study and regulation in addition to design.

Each form of traffic management fell into one of two categories: the first was a form of day-to-day management that acted upon drivers as they undertook journeys, whilst the second aimed at influencing drivers' decisions about the types of journeys to undertake. For example, a one-way system influenced a driver's choice of route, putting such systems into the first category, whilst restrictions on long-term parking in city centres deterred private motorists from commuting to work, putting it in the second category. The second type is explored in the latter half of this section, but first it is interesting to note some developments in the first category. As David Starkie wrote, various forms of day-to-day traffic management became increasingly popular methods of increasing the

flow of traffic in the 1950s and 1960s.¹¹² He noted that the introduction of such methods as the restriction of street parking and, especially, one-way systems often resulted in significant road capacity gains. In the 1960s, these gains alerted people to the potential for using more technologically mediated methods to increase traffic flows still further. In particular, the growth in the processing power of computers opened up the possibility of using computers to control traffic signals and, thereby, better regulate competing traffic streams.

Manually operated and automatic traffic signals had been in operation for decades by the 1960s, whilst signals that changed in response to approaching vehicles were well established concepts, which could improve traffic flows. To make further gains, what was needed was a form of dynamic control that would be responsive to the changing and competing needs of multiple streams of traffic. Such control would require adjacent sets of signals to work in concert to facilitate the smoothest flow of traffic. It was hoped that this approach could be scaled up so that centrally controlled signals could govern traffic movement in several city blocks. This was the aim of technicians who sought to develop computer programs that would allow signals to respond to the surrounding traffic conditions. This type of technology was first applied in Toronto, Canada, and attracted active interest in the United States, Australia and elsewhere, as well as in Britain.¹¹³

The University of Birmingham's Graduate School in Highway and Traffic Technology was amongst the first group of institutions to pursue this interest. One of its researchers delivered a paper on computer control of traffic signals at the Second International Symposium on the Theory of Road Traffic Flow in 1963. In the paper, the findings of a study were presented that it was hoped would be the first fruits of a larger programme of research.¹¹⁴ The paper explained that computer control could be used to allow signals to make suggestions to drivers about optimum speeds and routes, in addition to the control of junctions. The research tested the effects on traffic flow of a set of computer-

¹¹² Starkie, *The Motorway Age*, pp. 20-30 & 49-58.

¹¹³ Danforth, *Transport Control: A Technology on the Move*, pp. 43-7; M. C. Dunne and R. B. Potts, 'Algorithm for Traffic Control', *Operations Research*, 12, no. 6 (1964); J. T. Morgan and J. D. C. Little, 'Synchronizing Traffic Signals for Maximal Bandwidth', *Operations Research*, 12, no. 6 (1964).

¹¹⁴ A. J. Miller, *A Computer Control System for Traffic Networks: Paper to be read at the Second International Symposium on the Theory of Road Traffic Flow. London, June 25th-27th, 1963* (Birmingham, 1963), p. ii.

controlled signals, which would feed traffic data to a central computer via detectors at their approaches and stop lines. The system was tested on computer-simulated traffic.

This was another demonstration of the growing importance of computer technology and of the growing conception of road traffic as a complex system that both required and was amenable to study. The growth in the reliance of computers reflected this notion, so much so that it pushed at the limits of what computer technology could achieve at the time. The demands of this particular study were such that a more sophisticated computer simulation was deemed desirable, which appeared to induce the equipment, a Ferranti Mercury Computer, to develop a fault. The author of the paper stated that the intention was to re-write the programme for a more powerful KDF9 computer. In the conclusion to the paper, it was stated that the research conducted so far was ‘only a beginning’ and that more research was needed to establish an economic justification for such systems.

By the end of the decade, the exploration of these computer control techniques had progressed to in-situ investigations. In 1969, the RRL launched its Glasgow experiment, in which 81 signals in the city centre were controlled by a Marconi Myriad digital computer.¹¹⁵ The RRL published a paper on this work, which noted that co-ordinated signals were in use in North America and elsewhere in Europe, using either ‘digital computers or special purpose analogue devices’, and that little evidence had been produced on the relative merits of such devices. The paper also noted that urban road traffic was growing faster than Britain’s road system, thus pointing to a key stimulus for research into traffic management techniques. Such research continued to be attractive, because it offered ways to increase road capacity at a time when the provision of sufficient capacity appeared to be years distant. The paper’s conclusions were restricted to an assessment of the hardware used and the programming required. This demonstrated that the complexity of traffic management continued to stretch the capabilities of the systems that supported the researchers’ efforts. The research involved ‘five man-years’ of programming work alone, whilst the paper noted that ‘a suitable hardware store-protection facility’ was desirable ‘to confine the effect of programme errors to the programmes in which they occur’.

¹¹⁵ M. Woolcock, *Traffic Signal Control in Glasgow by Computer* (Crowthorne, 1969).

Progress on the development of this type of technology was steady rather than spectacular in the 1960s, but the results of trials of computer-controlled signals in Glasgow and West London were encouraging. Travelling time in Glasgow was reduced by an average of 16 per cent, whilst in West London there was a reduction of nine per cent.¹¹⁶ The first permanent system of computer-controlled signals for an entire city was eventually installed in Leicester in 1974. Prior to this, in October 1972, the authorities in Nottingham announced their intention to use conventional traffic signals in its ‘zone-and-collar’ scheme. This approach used signals on main roads leading from the suburbs, in combination with other controls to limit the number of cars entering the city centre at peak periods. The scheme, designed to discourage commuting by car, was an example of an integrated transport policy: at the same time as putting restrictions on the car, it gave priority to buses by allowing them to bypass the controls placed on private cars.¹¹⁷

Methods of influencing drivers’ choices of journey to induce a more efficient use of urban road space attracted scrutiny in the 1960s and early 1970s. In particular, various ways other than Nottingham’s scheme were examined of reducing car use at peak times and on the busiest urban routes. The Government commissioned two separate studies: the first, which was established in 1962, looked at road pricing; the second, established in 1965, looked at road pricing as well as other methods such as parking controls and permits.¹¹⁸ Both studies looked upon road pricing positively; it was seen as most effective in promoting more efficient use of road capacity. The concept of road pricing was the brainchild of economists, some of whom saw the solution to traffic problems as resulting from the inefficient use of scarce resources (roads) which could be corrected by allowing the price mechanism to determine the nature of its use. In a nutshell, road pricing was the charging of drivers according to mileage, route selection, and the time in which journeys were taken. Thus, journeys on the busiest routes, taken at the busiest times would attract the highest charges. The system was contrasted with the (then) current system of road and fuel taxation, which was criticised in the first study, because it ‘[did] not effectively restrain the use of the roads in the right places at the right

¹¹⁶ Starkie, *The Motorway Age*, pp. 92-3.

¹¹⁷ *Ibid.*, pp. 85-6.

¹¹⁸ Ministry of Transport, *Road Pricing: The Economic and Technical Possibilities. Report of a Panel set up by the Minister of Transport* (London, 1964); Department of the Environment, *Better use of Town Roads: The Report of a Study of the Means of Restraint of Traffic on Urban Roads* (London, 1967).

times'.¹¹⁹

In 1962, the MOT directed a panel of experts, under the chairmanship of the RRL's deputy director of traffic and safety, Reuben Smeed, to consider the technical feasibility and economic impact of road pricing. To help make a meaningful assessment, the panel included personnel from the National Physical Laboratory, a scientific research arm of the Government, but the driving force of the panel was a small group of economists and statisticians, including Smeed himself and Gabriel Roth, a transport economist who had previously worked for the RRL.¹²⁰ Their view was that an appropriate system of charging for using roads had been overlooked as an alternative to road building. In its report, entitled *Road Pricing: The Economic and Technical Possibilities* and published in 1964, the panel criticised various methods of traffic restraint in its report. Such measures as parking charges and differential licences were found to be unsatisfactory, because they did not fulfil what the panel viewed as the economic objective: 'to obtain the maximum benefit from the available road system'. The aim was not to force traffic from the road, the report insisted, but to 'reduce the traffic which is not worthwhile in the sense that it is not prepared to pay the real cost of its being there.'¹²¹ Road pricing was promoted as encouraging economically efficient driving habits, such as having larger payloads on goods vehicles, car sharing, off-peak travelling, and the use of less busy alternative routes. The panel was particularly keen to stress the potential economic benefits of reduced congestion through the operation of road pricing: a tentatively estimated annual saving of £100-150 million for the British economy was quoted.¹²² Thus, the theme of national efficiency lay at the heart of the road pricing debate.

Although road pricing was promoted by its supporters as an alternative to the engineering solution of building more roads, it was itself reliant on engineering in the form of monitoring equipment. This was made evident in the technical discussion in the panel's report, which assessed the practicality of a range of basic system configurations, which were of three main types: roadside recording of vehicular movement (on a point-to-point or continuous basis), driver-operated meters fitted to vehicles (clockwork or

¹¹⁹ Ministry of Transport, *Road Pricing*, p. 10.

¹²⁰ D. Rooney, 'The Political Economy of Congestion: Road Pricing and the Neoliberal Project, 1952–2003', *Twentieth Century British History*, 25, no. 4 (2014), pp. 628–650.

¹²¹ *Ibid.*, pp. 12–13.

¹²² *Ibid.*, p. iii.

electronic) and automatic meters (governed by point-to-point or continuous monitoring systems). All the systems would have involved the manufacture and installation of a considerable amount of equipment, therefore, necessitating an equally significant financial outlay. The panel was mindful of this, suggesting that the running costs of any system should be no more than ten per cent of the total measurable economic benefit. The costs of road pricing systems were such that one system, off-vehicle recording, was criticised by the panel for being too expensive. Incidentally, off-vehicle recording was also considered by the panel to be threatening to privacy, since it monitored people's movements. Generally, however, the panel did not concern itself overly much with such questions as privacy or public acceptability of road pricing and, after balancing the benefits and drawbacks, expressed a preference for either electronic meters operated by drivers or automatic meters. Overall, the panel was firm in its belief that there was 'every possibility' that a system could be developed that would 'yield substantial benefits'.¹²³

The second of the two studies was established by the Department of the Environment (DoE) to consider 'methods of deliberately limiting the amount of traffic in towns ... [for] a better relationship' between motor vehicles and road space.¹²⁴ Unlike its counterpart, it was directed to give priority to short-term methods of restraint, such as direct regulation (bans or permits) or restraint by price (based on where vehicles were kept, the time and place they were driven, or time and place they were parked). In its report, entitled *Better use of Town Roads* and published in 1967, the study group saw the objective of restraint as being: 'to get the best use of scarce road space, by inhibiting those uses of the road which cost more to others than they benefit the users'.¹²⁵ Commuting fell into the category of those uses warranting inhibition. It was considered to be, alongside goods traffic, one of the 'most significant' areas open to change under the stimulus of appropriate forms of restraint.¹²⁶ It was thought that goods traffic could be shifted to quieter periods, whilst scope was identified for a switch to commuting by public transport. It was also suggested that alleviating road congestion by restraint would help buses and, as elsewhere, it was noted that it would improve road safety and

¹²³ Ibid., 42.

¹²⁴ Department of the Environment, *Better use of Town Roads*, p. vii; the Department had been created in October 1970 by merging the MHLG, the MOT and the Ministry of Public Building and Works.

¹²⁵ Ibid., p. 3.

¹²⁶ Ibid., pp. 3-16.

the urban environment. However, the report was clear in its insistence that, although these developments would be welcomed, they were ‘incidental to the principal objective’ of combating congestion.¹²⁷ This was an interesting remark, which reflected both the narrow terms of reference of the study and the way that questions of environmental standards could be side-lined as the pressing need to keep traffic moving made itself felt. The desire to maximise national efficiency was never far away from such considerations: the study group reported that the total cost of congestion to the national economy would be between £500 million and £1,000 million per year.¹²⁸

The study group concluded that road pricing was ‘most promising’ in the long term, but also stressed that ‘congestion is with us now and is becoming more of a problem all the time. Prompt action is needed’.¹²⁹ This, of course, reflected the fact that the demand for urban road space continued to outstrip supply. Unfortunately for the aims of the study, most of the alternative methods of restraint were found to be unsatisfactory. Regulating car ownership in busy areas was condemned as ‘very blunt’ and not related to use. Meanwhile, controlling entry to busy areas was also all but dismissed, whether by total bans (a poor use of road space) or through a system of permits (the criteria impossible to frame and likely to arouse ill-feeling). Charging for entry was found to be equally problematic: it was noted that legislation was needed for its application on public roads, even for a trial. In any case, a system of supplementary licences or tickets was considered too complicated, and a flat rate ‘inefficient and unequal in its effects’.¹³⁰ Parking control was considered the next best thing to road pricing: the group calculated roughly that it had 40 per cent of the effectiveness of road pricing in terms of saving resources. Naturally, parking control commended itself to the study group, because was relatively quick and easy to bring into being. It also had the desirable effect of discouraging commuting by car.

Both studies had concluded that road pricing was the most effective method of promoting efficient use of road space. The concept commended itself to each study as the best way to manage what they acknowledged to be complex systems of urban traffic. Many of the participants in the first study continued to promote road pricing

¹²⁷ Ibid., p. 3.

¹²⁸ Ibid., pp. 5-6.

¹²⁹ Ibid.

¹³⁰ Ibid., pp. 22-9.

after the study had concluded, whilst the latter study recommended that a research and development programme be established to explore the concept further. However, the second group of researchers, which comprised officials from local authorities, Government officials and senior police officers, was much more aware of the drawbacks of introducing road pricing in a social context that was not particularly conducive to its success or acceptance. It was noted, for example, that using the price mechanism to govern road use ‘gives more weight to the preferences of the better off’.¹³¹ It was noted, furthermore, that drivers would be resistant to paying for the use of roads built at public expense. The study group’s concern about road pricing’s political acceptability was perceptive, but its members failed to appreciate that the concept would encounter deeper political resistance.

David Rooney has written that road pricing went against the conventional wisdom of the 1960s that saw road building as the answer to the urban traffic problem. He noted that whilst Buchanan promoted redevelopment as a way of ensuring that absolute environmental standards could be set and maintained in relation to urban traffic, the supporters of road pricing saw the environmental effects of traffic congestion as a market externality that could be traded against other things. Rooney concluded that road pricing failed to win sufficient support, because it appeared to throw obstacles in the way of people’s aspirations towards car ownership and flew in the face of the broader idea of personal and consumer freedom. Thus it gained the outright opposition of the motor lobby and only weak and intermittent support of successive governments of the 1960s and 1970s.¹³² It certainly appeared to be an awkward fit with the vision of mass car ownership and affluence promoted at the People and Cities conference. Harold Wyncott, the Editor-in-Chief of the *Investors’ Chronicle*, who had been invited to speak on urban renewal and the economy, said of road pricing: ‘I can imagine nothing more calculated to infuriate and antagonize the motorist than such devices’.¹³³

Conclusion

In the years between 1955 and 1973, under the pressure brought to bear on it by the

¹³¹ Ibid., p. 7.

¹³² Rooney, ‘The Political Economy of Congestion’.

¹³³ BRF, *People and Cities*, p. 82.

prospect of mass motorisation, urban transport planning came to be seen as the planning and management of a complex system that involved the consideration of many different elements. Such things as public transport, traffic management, road building, and car design began to be conceived as parts of a comprehensive whole in respect to urban transport. In addition, it was acknowledged that urban transport needed to be fully integrated with other elements of urban planning, such as the arrangement of land uses. To achieve a better understanding of this complex system, urban planners turned to new aids, such as the methods of social scientists and emerging computer technology. These changes in the intellectual approach to urban transport planning resulted in the establishment of a new framework for understanding the issue, within which debate about particular political choices could take place. A major element of this framework was that transport needs had to be satisfied in ways that recognised wider planning aims and did not work against their fulfilment. In particular, it was acknowledged that a balance needed to be struck between mobility and environmental quality, and that on each side there were minimum requirements that had to be met. To meet such requirements, it was also understood that – with the aid of appropriate land-use planning and traffic management - a balance needed to be achieved between private and public transport, and between restrictions on motoring and the provision of road and parking space. This framework was the most significant legacy of this period, overshadowing its achievements in concrete terms of road building and the enactment of transport policy. Although public transport evolved and new traffic management techniques were employed, road building and redevelopment was patchy, road pricing was rejected, and little progress was made towards the introduction of new transport modes or car designs. In the following chapters of this thesis, the attempts of the planners of Leicester and Milton Keynes to apply elements of this emerging transport theory to real situations will be examined. In both cities, a comprehensive response to the challenge of mass car ownership was attempted, with varying results.

An important insight that went into the building of this new framework was the realisation that urban transport planning was not concerned simply with the provision and management of transport infrastructure and hardware, but was also related to making decisions about what urban mobility should be designed to achieve and what sort of journeys were to be facilitated. Transport planners came to realise that the making of such judgements meant using techniques borrowed from sociology and

exploring social and economic questions. The one question that received a resounding ‘yes’ above all others was that towns and cities should be adapted to accommodate the car. The key decision-makers saw the growing affordability of the car as a beneficial product of consumer capitalism, which allowed for individual freedom of movement and greater access to sites of leisure and consumption.

Despite the fact that public transport continued to enjoy a very high level of patronage, the rise in car sales was often interpreted as a reflection of a popular preference for private transport. Furthermore, it was suggested that severe restrictions on the car’s use would not be tolerated by the public. The rhetoric that was often employed gave the impression that the purchase of a car was equal to the casting of a vote in favour of road building and urban redevelopment. Mass car ownership fitted into a wider vision of the urban future in which an affluent population would live in spacious modern homes, in well-planned areas, with access to a wide range of shopping and entertainment choices. An efficient and environmentally benign transport system, with the car at the centre, was central to this vision, as it allowed for the proper economic functioning of the city and supported car manufacture as a key industry.

In short, with the help of urban planners, the twentieth-century city was to be re-ordered to regulate the behaviour of the autonomously mobile consumer-capitalist subject. This notion, of course, brings to mind Patrick Joyce’s ‘liberal subject’ of the Victorian city and, furthermore, the car’s place in this re-ordering also calls to mind the work of Joyce, Tony Bennett and others in *Material Powers*. Joyce and Bennett wrote that infrastructure, as well as being planned, shapes society without ‘the mediating agency of human consciousness’, whereby material changes promote changes in people’s behaviour in ways that are unforeseen and unintended.¹³⁴ The rise of car ownership in post-war Britain had, in this sense, a power of its own: the convenience and mobility offered by the car made it a desirable consumer item, driving its spectacular rise, which was not anticipated by Britain’s urban planners. It was not planned or necessarily welcomed by key decision-makers who, when confronted with the phenomenon, decided to integrate it into a wider project to adapt urban areas to the consumer capitalism of the late twentieth century. In the following chapter, the way that the

¹³⁴ T. Bennett, and P. Joyce, ‘Material Powers: Introduction’ in T. Bennett, and P. Joyce (eds.), *Material Powers: Cultural Studies, History and the Material Turn* (Oxford, 2010).

planners of Leicester and Milton Keynes saw urban planning in an anticipated era of mass motorisation will be explored. In both cities, in common with urban planning more generally, there was an appreciation of the profound effect the car was likely to have on the life of towns and cities. Unusually, however, there was also genuine attempt to come up with a comprehensive planning response, putting into practice the main ideas discussed in this chapter, and attempting to take changes in patterns of employment, leisure and travel into account.

Chapter Three

Land Use, Road Networks and Mobility

The challenge to British urban planning presented by the rapid rise in private motoring stimulated new thinking about how to deal with urban traffic in the 1950s and 1960s. This challenge embraced a range of fields, including highway engineering, architecture, and vehicle design, as well as urban planning. Amongst the planners, there was a growing appreciation of the need to take account of land use when planning for urban transport needs. Coupled with this was a growing interest in new transport survey techniques, which factored in demographic, behavioural, traffic and land-use data to enable planners to make informed long-term decisions about road building and land use.

This chapter examines attempts to apply this new thinking in Leicester and Milton Keynes, and the assessments of them by central government. The cities make good case studies, because the planners in each city attempted to find comprehensive solutions to the problems associated with urban traffic congestion, in the process of which they addressed deeper questions about the type of urban society that planning should be employed to support. The cities were also chosen for the contrasts between them: Leicester was an established city; Milton Keynes was a new city. The challenges facing each set of planners were very different, allowing a broader analysis of transport planning to be made.

The analysis reveals that, despite using the same tools and having the same basic assumptions about the relationship of traffic to land use, the planners in the two cities were prompted to produce very different plans by their opposing views on urban life and its relationship to car culture. In Leicester, a traffic plan was created in 1964 that was radical in many ways, but conservative in its arrangement of land uses, with commercial and industrial development largely restricted to a dense central core. This arrangement represented a rejection of decentralisation, which was identified as a cause of urban decline in the United States. In Milton Keynes, by contrast, decentralisation was embraced as a way to fight traffic congestion and as a way to promote freedom of movement and association, which were identified as positive features of decentralised cities in the United States. The chapter also reveals that neither the Ministry of Housing

and Local Government (MHLG), which had overall responsibility for physical planning, nor the MOT had formed such a strong vision for motorised cities, but were anxious instead to support only those measures that they judged to be practicable and cost-effective.¹

The chapter opens with a section on Leicester's traffic plan and the establishment of a new planning regime by the city's local authority. The next section looks at the response of central government to the traffic plan. The following section explores the events leading to the designation of Milton Keynes as a New Town, including the formulation of Buckinghamshire County Council's independent plans to build a settlement in the same area. There follows three sections outlining the planning of Milton Keynes in three stages: the appointment of key personnel and the initial planning of the new city, the publication of the Milton Keynes Interim Report and central government responses to it, and the publication of the Milton Keynes Master Plan and the assessment of it made by the central government. Finally, the chapter ends with a concluding section.

Konrad Smigielski and the Leicester Traffic Plan

Leicester, located in the English East Midlands, had a population approaching a quarter of a million in the 1960s, and was the largest constituent of a larger conurbation of around 400,000 inhabitants. In 1962, Leicester City Council took the bold step of transferring responsibility for town planning from its Surveyor and Planning Officer to a dedicated City Planning Officer in a new City Planning Department. In doing so, it made Leicester only the second provincial city after Newcastle-upon-Tyne to create a department devoted solely to urban planning. The Council was particularly concerned that the amount of work imposed by the rapidly developing city was too great for a single department, noting in particular that the 'advent of traffic responsibilities had already greatly increased the work-load of the Surveyor's Department.'² The Council's Town Planning Committee also felt that appropriate management of changes to the built

¹ The MHLG and MOT were happy to allow local authorities to take the initiative in physical planning, preferring to influence decisions through the publication of advice in the form of joint circulars and planning bulletins. The cost of road schemes was one of their particular concerns, because the bulk of funding for urban roads came in the form of grants from central government (with local authorities paying the remainder).

² Records Office for Leicester, Leicestershire and Rutland [hereafter ROLLR], DE 3277/15, Minutes of Council Meetings, 25 May 1961 - 1 May 1962.

fabric of Leicester, demanded by post-war modernity, required the skills of a trained planner:

‘the Committee do not accept the view that planning is subordinate and subsidiary to engineering ... It is a specialised profession and a positive science which can shape the social as well as the architectural pattern of a city’s life ... Already a planning decision can multiply the value of land many times over and it is increasingly important to provide for these events to the benefit of the city as a whole.’³

The man selected to be the first City Planning Officer, from a field of thirty applicants, was a Polish-born academic called (Walter) Konrad Smigielski. By 1962, Smigielski had had a varied career: he had been head of planning in the Polish city of Krakow and had fought in the Second World War under British command, before moving into academia. He taught at the Polish University College in London, before taking a post at Leeds University, which he held for ten years immediately prior to taking up his new post at Leicester. In 1958, whilst at Leeds, Smigielski gave an indication to his adopted country of both his ability as a planner and his interest in the problems of urban motor traffic by entering the Road Campaign Council’s competition to design a hypothetical new road network for London. The quality of his entry caught the eye of Colin Buchanan, who walked out on his fellow judges in protest at their decision not to award the plan first prize. This near miss apparently brought Smigielski more acclaim than the winner: the *Journal of the Town Planning Institute* published his entry in preference to the winning one.⁴ The members of the sub-committee that recommended his appointment to the Council recalled being impressed with Smigielski’s record and abilities: ‘[w]e were looking for a man with experience and with energy and vision and he was our choice. We recognised his originality and his determination.’⁵

Once Smigielski moved to the East Midlands, his first task was to organise his new Department and to appoint staff members, many of whom he selected from the body of his former students.⁶ It was not long, however, before he embarked on his first major project. The stimulus was the review of the city’s 1952 Development Plan, in relation to

³ Ibid.

⁴ H. Martin, ‘Konrad Smigielski: my tempestuous love affair with Leicester’, *Architecture East Midlands*, no. 54, (1974), pp. 15-16.

⁵ Ibid., p. 16.

⁶ BL, C900/09006 C1, Helen Hampson, interview with Konrad Smigielski [sound recording], Smigielski, Conrad, 1908 Apr. 13- (speaker, male; Retired Town Planner) (Radio Leicester, 1998).

which he wrote: '[i]t soon became evident that in the light of the Motor Revolution, which has taken place in this country since the war, the road proposals of the Development Plan could no longer form a basis for planning in Leicester'.⁷ An alternative plan was deemed necessary and the result was the *Leicester Traffic Plan* which was published in 1964.

The Traffic Plan was not simply a road plan: it was broadly conceived, including diverse elements, such as traffic architecture, pedestrian movement, and public transport. In this way, and in its embrace of new technology, it had much in common with the new thinking about transport discussed in Chapter Two. Indeed, Smigielski was receptive to new ideas in traffic planning and wrote of his own plan as being an example of 'a new approach ... based on more scientific methods'.⁸ In particular, he was anxious to see the routing of new roads tied to land use and supported by the latest survey techniques. This approach was central to the Traffic Plan and, along with its wide conception of traffic planning, was something which he had been arguing in support of for some time previously. Three years earlier, in the *Town Planning Review*, Smigielski wrote the following:

There is little doubt that traffic engineering cannot be treated in isolation ... The relation between the use zones and the traffic density, between the building density and the generated traffic, the technological means of traffic segregation, local circulation and civic composition, and finally the complex economic considerations - these are the fields of inquiry which need to be explored urgently if our cities are going to survive.⁹

The Traffic Plan aroused interest in the planning world and beyond, reflecting wider concern with urban traffic congestion and its remedies. Multiple copies of the plan were sold, and it was reprinted twice, and articles covering it appeared in *The Journal of the Town Planning Institute*, *Urban Studies*, *The Times*, the *Observer*, the *Guardian* and the *Economist*.¹⁰ In particular, it was an indication of the growing interest in new

⁷ W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), p. xiii.

⁸ Ibid.

⁹ W. K. Smigielski, 'Review of Roads and their Traffic, Ernest Davies (ed.) (London, 1960)', *The Town Planning Review*, 32, no. 2 (1961), p.166.

¹⁰ Anon, 'The Leicester Traffic Plan', *The Journal of the Town Planning Institute*, 50, no. 10 (1964), pp. 454-5; P. Hall, 'Leicester Traffic Plan/Traffic in a New Zealand City', *Urban Studies*, 3 (1966), pp. 167-9; 'Traffic plan for Leicester has national importance', *The Times*, 5 November 1964; 'How to keep the cars away', *The Observer*, 8 November 1964; 'Planning an act of reconciliation', *The Guardian*, 5 November 1964; 'City on the move', *The Economist*, 213 (1964).

approaches to transport planning, which had been heightened by the publication of *Traffic in Towns* in the previous year. The affinity between the Traffic Plan and the Buchanan Report was often highlighted in the commentary and was acknowledged by Smigielski. He wrote in the opening passages of the Traffic Plan that '[r]evolutionary changes require a revolutionary approach ... [and] the New Approach found a clear statement in the Report "Traffic in Towns".'¹¹

The Traffic Plan certainly shared some basic assumptions with the Buchanan Report. Most important of these was the attempt to tie its planning of land uses and the planning of its proposed road system together, so that each reflected the other. This was so much the case that Smigielski suggested that the Traffic Plan was a statement of overall planning policy for the city 'with the stress on traffic', rather than simply a traffic plan.¹² In a further reflection of Buchanan, Smigielski rejected the road proposals of Leicester's 1952 plan as 'obsolete' and 'basically intuitive'.¹³ Nevertheless, Smigielski was keen to stress that the Traffic Plan did not claim to follow the principles set out in the Buchanan Report exactly. He was critical of the report, because he felt that public transport was dealt with in a 'general and rather superficial way' and that '[n]o consideration was given to the new survey techniques'.¹⁴ Public transport and the new survey techniques were, in contrast, both central planks of the Traffic Plan. In this latter consideration, Smigielski was looking towards the United States, where the land-use/transportation survey originated.¹⁵ He concluded that it was the special cord that allowed land use to be bound together with traffic planning: '[it is] a revolution in planning comparable in its importance with the Garden City movement. It removes town design from the vague field of intuition and puts it on a firm quantitative basis'.¹⁶

The use of the new survey techniques was described in the Traffic Plan in some detail, reflecting its comparative novelty in Britain, which was underlined by the fact that Leicester's City Planning Department was the first to carry out a survey of this type

¹¹ Smigielski, *Leicester Traffic Plan*, p. 2.

¹² W. K. Smigielski, 'Leicester Traffic Plan', *The Journal of the Town Planning Institute*, 51, no. 2 (1965), pp. 65-71.

¹³ Smigielski, *Leicester Traffic Plan*, p. 1.

¹⁴ Smigielski, [article] 'Leicester Traffic Plan', p. 66.

¹⁵ On the introduction of the new survey techniques to Britain, see D. Starkie, *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982), pp. 59-70.

¹⁶ Smigielski, [article] 'Leicester Traffic Plan', p. 66.

outside London.¹⁷ It was stated that Leicester's survey consisted of four main elements, reflecting the broad scope of the new technique: a 'Home Interview Survey', a 'Commercial Vehicle Survey', an 'External Cordon Survey', and a 'Public Transport Survey'. The most important and innovative of these components was the home interview, which was used to gather information on household composition, employment, income, leisure, and social activities with a view to building a pattern of present and future patterns of travel. The plan drew attention to the technique's novel sociological character: 'not only [is] comprehensive information concerning people's travel habits ... obtained but the socio-economic characteristics can be investigated in some detail'.¹⁸ The complexity and volume of the data that was gathered from the interviews encouraged the Leicester planners to break further new ground by exploiting new computer technology. The responses of the interviewees were converted into numerical code, placed onto punch cards, and fed into the computer at IBM's Birmingham Data Centre for analysis.¹⁹ The Centre was one of only a hand-full of places in Britain that possessed a machine capable of performing the necessary calculations.

Armed with a wealth of information from its multi-faceted survey, the Leicester planners eventually settled upon a network of urban motorways that would form a single central ring and seven radials. These roads were intended as primary distributors, which would be supported by a three-tier network of subsidiary roads. The road proposals were a significant departure from those of the 1952 plan, which envisaged the augmentation of the existing network of radial roads with three concentric ring roads. The new ring road was the most important single element of the new network: it was designed both to distribute traffic flowing into the centre and to divert cross-town traffic away from the centre. The ring would encompass a wider area (referred to in the Traffic Plan as 'Inner Leicester') than the 1952 plan's inner ring so as to be large enough to include all the industrial and commercial land uses of the central area. The road system was only one element of what the Traffic Plan referred to as an 'Integrated Transport System', which was based on the 'balanced interplay' of 'Interchange Car Parks', public transport and a 'High Capacity Road Network'. The interchange car parks were

¹⁷ TNA, HLG 136/200, Leicester traffic survey.

¹⁸ Smigielski, *Leicester Traffic Plan*, p. 28.

¹⁹ *Ibid.*, pp. 31-2.

designed to encourage drivers (especially commuters) to switch to public transport for the last leg of their journeys into the centre. To this end, they were to be located along the main radial routes and around the central ring. They were crucial to the Plan, because they allowed the roads of Inner Leicester to be reserved for an ‘essential minimum’ of traffic, consisting largely of commercial vehicles and longer distance traffic.²⁰ Outside the central area, the plan allowed for unrestricted movement of the motor car.

Figure 3.1: *A new road system for Leicester, as proposed in the Traffic Plan of 1964.* (Inner Leicester is picked out in a check pattern; the interchange car parks are marked in orange.)

Source: W. K. Smigielski, *Leicester Today and Tomorrow* (London, 2nd edition, 1971), p. 48.

The Integrated Transport System contained in the Traffic Plan was designed to take advantage of a range of technological advancements, although not all of them were concrete proposals. These elements will be examined in more detail in succeeding chapters, but in this range were included: a monorail line, new types of buses, electric

²⁰ Ibid., p. 74.

taxis, and moving pedestrian ways. The estimated cost of the proposed primary road system and the new car parks was a substantial sum of £135 million, but was offered as an economic way to make the best of motorisation and to avoid the worst.²¹ It was presented as a compromise between the extremes of providing for full penetration of private cars in the centre and their total exclusion in favour of public transport. The second of these options was identified as ‘theoretically possible’ and commended as cheap and un-intrusive, but crucially it was deemed to be ‘least attractive to the motorized society’.²²

Full penetration was rejected, because it was concluded that the road network required to support it would be too costly to build and physically intrusive. Motorways of up to sixteen lanes in width were thought necessary, supported by a ‘network of secondary distributors of formidable proportions’. Catering for parking would have meant ‘comprehensive redevelopment of areas around the shopping core’.²³ The plan also identified and rejected decentralisation as a fourth option. As was noted in Chapter Two, this option had its supporters in the planning profession, but Smigielski’s rejection was emphatic. He noted that in the United States, where decentralisation was popular, there were ‘signs of the decline of the urban civilization’.²⁴ Smigielski was particularly concerned that decentralisation had sapped the vitality of city centres on the other side of the Atlantic, by draining them of social and economic activity. To his mind, therefore, decentralisation threatened a city’s very status as a city. Smigielski wrote that ‘[t]he true city is the continental city ... [t]he inhabitants of continental cities live and work in cities and spend their leisure in city centres’. This preference for a compact urbanism also made Smigielski critical of the tendency of British cities to follow a pattern of low-density residential growth on their fringes, and warned that many were in danger of becoming ‘one continuous suburb’.²⁵

Responses to the Leicester Traffic Plan

As was mentioned above, the novel features of the Traffic Plan attracted wide public

²¹ Ibid., p. 80.

²² Ibid., p. 58.

²³ Ibid., pp. 62-5.

²⁴ Ibid., p. 57.

²⁵ W. K. Smigielski, ‘Urban Form in the Motor Age’, *Proceedings of the Town Planning Institute Newcastle upon Tyne Conference* (London, 1968), pp. 326-7.

and press attention. The responses from the press - both mainstream and professional - were generally positive, noting in particular that its attempts to apply new planning ideas and techniques to a real situation contributed to a wider understanding of how these ideas might be applied effectively. *The Times*, for example, stated that the plan 'defines clearly for the first time on an actual basis the choice first enunciated by Professor Buchanan between complete motorization and limited entry to the central area'.²⁶ Peter Hall, meanwhile, described it as one of the 'outstanding examples of the do-it-yourself transportation study'.²⁷ Most important however, from the point of view of Leicester's planners, were the reactions of the MHLG and the MOT. The plan's conversion from a paper plan to a transport system would ultimately rest on their approval. Unfortunately, they both had very serious reservations from the beginning, which were articulated in a report by the Joint Urban Planning Group (JUPG).²⁸ The Group thought that the published Plan contained 'errors and contradictions' and concluded that '[i]t is extremely doubtful that the concept as propounded is tenable'.²⁹ In particular, it was not convinced by the arguments given against full motorisation in the plan and felt that it was 'over-preoccupied with the central area'. The Group was clearly concerned by Smigielski's flat rejection of decentralisation, complaining that the 'possibilities of adjusting future land use and density ... [to improve] traffic conditions have not been explored'. The Group had many other technical concerns, including doubts over the practicability of the interchange car parks.

It also strongly suspected that the estimated cost of the Traffic Plan was too low at £135m, because the cost of improving secondary roads had been omitted. Yet, having mauled the Plan, the Group felt unable to deliver the *coup de grace*, instead insisting that it did not contain enough data for a detailed assessment to be made. The report's acknowledgement of Leicester's pioneering use of new survey techniques was the only other crumb of comfort. The Traffic Plan received further criticism from an anonymous paper, apparently written by an MOT officer and forwarded to the MHLG. Doubts were expressed over the practicality of the plan, which was characterised as being rather

²⁶ 'Traffic plan for Leicester', *The Times*.

²⁷ Hall, 'Leicester Traffic Plan', p. 167.

²⁸ The JUPG was established in 1962 by the MHLG and the MOT to examine problems of urban redevelopment and to advise its member ministries.

²⁹ TNA, HLG 136/200, Leicester traffic survey. All the observations on the Traffic Plan made by officers of the MOT and MHLG come from this file, which originated from the MHLG, as do the responses to them by officers of Leicester City Council.

fanciful. The 'essential point' was, however, that public transport would still be needed on 'a substantial scale', even at a cost that was 'grossly over-estimating the amount of capital Leicester can expect over the foreseeable future'. It was suggested that increased investment in buses would be more cost-effective than such an ambitious transport plan. These two assessments set the scene for the interactions between the Leicester planners and officers of the MOT, MHLG and JUPG, in which doubts over the practicality of the Traffic Plan, its considerable cost, its rejection of decentralisation proved to be major barriers to its acceptance.

On 8th July 1965, a meeting was held at Leicester's Planning Department between officers of the City Council and officers from the JUPG to discuss the Traffic Plan. During the meeting, from which Smigielski was absent, a firm agreement to undertake a re-appraisal of the plan was secured from Leicester's planning officers. The purpose of the exercise, which was supposed to be completed by the end of the month, was to establish the implications of a reduced investment of £35-50m in the road system. At the same meeting, the JUPG suggested that some measure of decentralisation could be examined. This suggestion was resisted by Donald Sabey, Leicester's Deputy City Planning Officer, because he felt that decentralisation might prevent the renewal of the centre. A renewed and intact centre, Sabey explained to the visitors, was wanted for 'liveliness and activity'. He stated that, furthermore, disturbing the established land-use pattern was considered problematic due to the central location of inter-dependent industries and the associated workforce.

The appraisal eventually reached the MHLG in November after some false starts and further wrangling over its precise nature, which had prompted one of its officers to observe that: '[i]t is hard to avoid the impression that Leicester are resorting to stalling tactics to avoid committing themselves in any way which might threaten their plan'. The appraisal was written by Smigielski, who vigorously defended the plan's main points. In particular, he forcefully rejected the suggestion of the JUPG for some measure of decentralisation, arguing that it would disrupt a well-established pattern of land use. Such a move would, Smigielski maintained, result in the city's 'inevitable decline as an industrial city'. He also rejected a JUPG proposal for an outer ring as being intuitive and not justified by the anticipated pattern of traffic flows. Smigielski concluded by stating that primary network costs could be reduced to a minimum of

£65m, if lower design standards were adopted.

The MHLG was unimpressed by Smigielski's refusal to give serious consideration to alternatives such as decentralisation. Many of its technical questions also remained unanswered. Its doubts over the Traffic Plan were raised at a meeting in Leicester on 15th November after the technical appraisal had been completed, during which Smigielski insisted that its main concepts were sound. On the other side of the table, the Ministry reserved the right to press for alternative plans based on decentralisation. In the middle of this debate, Leicester's City Engineer, William Shirrefs, expressed his own doubts over the road scheme. Shirref's department had lost responsibility for urban planning to the new City Planning Department upon the latter's creation, and the former City Engineer, John Beckett, had clashed with Smigielski previously over the City's road-building plans.³⁰ Shirrefs was sufficiently unattached to the Traffic Plan, therefore, to agree to the request of the MHLG to carry out an investigation of the highway proposals, and to suggest a programme of works based on this analysis. In March 1966, Shirrefs proposed twelve schemes for completion between 1970 and 1978. Half of these schemes did not form part of the Traffic Plan, which Smigielski refused to support. Leicester's Planning Committee accepted the six that were supported by the City Planning Officer, including sections of the proposed inner ring, plus one other scheme. News of this development prompted one MHLG officer to write: '[m]y guess is that Smigielski intends to fight to the last ditch to preserve his plan in its entirety.'

Smigielski's tactics successfully prevented any serious consideration of an alternative scheme, but he failed to win the active support of central government for the Traffic Plan as originally conceived. Such tactics appear to be consistent with his priorities, which included the promotion of the scheme and its supporting concepts to a wide audience. As well as writing about the Traffic Plan in professional journals, Smigielski had also delivered lectures on it in various forums, including the House of Commons.³¹ In particular, he wanted to promote the traffic planning techniques as well as to reject planning for full motorisation. In 1965, Smigielski wrote: '[a] Plan without a vision is meaningless. A city planning officer cannot go any further than to provide a vision

³⁰ TNA, MT 107/49, Development Plans – Leicester County Borough Council: initial proposals.

³¹ ROLLR, DE 3277/214, City of Leicester Town Planning Committee minutes, 27 May 1964 – 20 May 1965, p. 264.

...The people of Leicester will have to change their hearts and minds towards the motor car which is rapidly becoming a tyrant of our life instead of being a servant'.³² In this context, gaining wider support for his ideas was perhaps more important to Smigielski than securing the Government's support for a compromise plan. His attachment to an idea could be so strong, apparently, as to undermine its acceptance. A former colleague at Leicester, Henry Blacknicki, recollected of Smigielski that he not only wanted approval for his decisions, but also approval for 'for the right reasons'. Blacknicki continued: '[i]n other words, he could talk his way out of the very thing he wanted'.³³

North Bucks New City and the designation of Milton Keynes

As Leicester's Traffic Plan was being debated, plans to build a new city in the north of Buckinghamshire were being finalised by its County Council. The site chosen for the city lay close to the M1 motorway, between the towns of Bletchley in the southwest and Wolverton and Stony Stratford in the northeast. The authorities in Buckinghamshire concluded that developing the north of the county would release high pressure for development in the more populous south, whilst providing a stimulus to an economically stagnant area. It would also take advantage of the routing of the M1 through that part of the county. The settlement was planned with a target population of 250,000, much higher than any post-war New Town, and was named North Bucks New City.

The development of the plans for this new city was pursued entirely at the initiative of Buckinghamshire County Council. Buckinghamshire's chief architect and county planning officer, Fred Pooley, was the main promoter of the concept, and had convinced his employers to support the idea. Along with his deputy, Bill Berrett, Pooley had worked on the detailed planning of the new city from September 1962.³⁴ Pooley envisaged a settlement for the motor age, which would combat traffic congestion with a free-to-use monorail service financed through local rates. Townships of 50,000 inhabitants each were to be constructed along the lengths of the monorail lines, like beads on a string. Although the plan included a generous provision of open space, the

³² Smigielski, [article] 'Leicester Traffic Plan', p. 71.

³³ Martin, 'Konrad Smigielski', p. 18.

³⁴ For further insights into the planning of North Bucks New City, see G. Ortolano, 'Planning the Urban Future in 1960s Britain', *The Historical Journal*, 54, no. 2 (2011), pp. 477–507.

townships themselves were to be of a relatively high density to allow development to remain within seven minutes' walking distance of monorail stations. The plan's heavy bias towards public transport was not indicative of a complete rejection of the car. Instead, Pooley reasoned that complete freedom for the motor car was impossible in towns the size of the new city and, furthermore, that the main responsibility for intra-urban movement would be most efficiently and cost-effectively shouldered by public transport. Sections of the local press were enthusiastic about the new city and its basic conception. The *Chronicle and Echo* announced boldly in its editorial: '[p]icture a city the size of Leicester sited between Aylesbury and the Northants border! See it as Britain's first motor-age city, planned around a free mono-rail system.'³⁵

In seeking to limit car use through a voluntary transfer to public transport, the plan for the new city had an obvious parallel with the Traffic Plan. The choice of a monorail as a mode of transport was another. These parallels, which will be discussed in more detail in Chapter Six, serve to underline the conclusion of Chapter Two that the rise of the motor car in Britain stimulated interest in the development of alternative modes of transport. In terms of land uses, there was a further parallel. In common with the Traffic Plan, the commercial functions of the new city were to be concentrated in its centre. The new city's industry, meanwhile, was planned to be situated in two zones on its periphery. Thus, there was some decentralisation of land uses, but the new city's traffic-attracting areas of employment and leisure were heavily concentrated in three zones. In a sense, the plans for North Bucks New city were like the Traffic Plan turned inside out: commercial and industrial land uses were concentrated to support the operation of a public transport system, rather than the other way round.

As in Leicester, Fred Pooley's failure to consider a greater level of decentralisation counted against his plans, when Buckinghamshire County Council presented them to the MHLG in an effort to win its support. Beside this, as will be explained in more detail in Chapter Six, the Ministry did not look with favour on the basic concept of the plan and refused to provide financial backing. The Ministry was, however, supportive of the basic idea of a large new settlement in the area. It had recently produced *The South East Study*, which provided a stimulus for the undertaking, predicting that the

³⁵ 'Editorial', *Chronicle and Echo*, 7 January 1964.

population of England's South East region would rise from 18 million to 21.5 million by 1981. The pressure for jobs and new housing would be particularly acute in London, the report predicted, and recommended the creation of new settlements elsewhere in the region to act as counter-magnets for people and investment.

Figure 3.2: *The position of Milton Keynes relative to London and Leicester.*

Source: Milton Keynes Development Corporation, *The Plan for Milton Keynes* (Milton Keynes, 1970), loose insert.

When Buckinghamshire put its plans on hold, because it felt unable to proceed without financial support from central government, the impetus passed to the MHLG. The Ministry was keen to proceed with a project under its own auspices, so it used its powers under the New Towns Act 1946 to create a development corporation, which would act as a planning authority for the proposed new settlement. An area of 21,900 acres was formally designated as the site of the New Town, which was to go by the new name of Milton Keynes, on 23rd January 1967. Although the target population remained the same, the site was different from that which North Bucks New City would have occupied: it did not extend as far south and included the existing settlements of Bletchley, Wolverton and Stony Stratford. Given the inclusion of these small towns, it

was considered wise to name the new city after a small village in the designated area, rather than after one of the larger settlements, to avoid enflaming rivalries between them.³⁶

The planning of the new settlement effectively started from scratch and the concepts behind North Bucks New City did not survive the process of creating a new plan. A few days prior to designation, John Palmer of the New Towns Directorate of the MHLG wrote to the local authorities affected, outlining the Ministry's basic approach to the planning of the new city. Flexibility was to be the key, due to the time needed to reach the target population, together with the introduction of new principles of structure and design. Palmer noted in particular that '[t]he traditional centralised form of town based on a radial pattern is not likely to be satisfactory for this new town, designed for the rapidly changing circumstances of the late twentieth and twenty-first centuries'.³⁷ The Milton Keynes Development Corporation (MKDC) was established in March and Labour peer, Lord Campbell of Eskan, was appointed its chairman the following month. He was joined on the Corporation's board by Walter Ismay, his deputy and the Corporation's Chief Executive, and six others, including four local councillors. The Buckinghamshire contingent was increased by the appointment of Fred Pooley as a part-time special advisor, thus preventing the impression that the project for the new city had been wrenched completely from local hands. Pooley's appointment prevented his becoming a vocally critical outsider and allowed, as Chapter Six shows, his difference of opinion with the Corporation's planners on transport policy to be worked out privately.

The planning of Milton Keynes

One of the corporation's first tasks was to appoint a group of consultants to create a master plan for the new city. Four companies were sent a master plan brief, which included transport as one of the key areas for consideration. The brief stated that 'solving the problems of transportation will be a prime factor in the physical success of

³⁶ On the context of Milton Keynes' designation, see: M. Clapson, *A Social History of Milton Keynes: Middle England/Edge City* (London, 2004), pp. 23-33; T. Bendixson and J. Platt, *Milton Keynes: Image and Reality* (Cambridge, 1992), pp. 1-31.

³⁷ TNA, HLG 118/441, New Towns Act, 1965 - proposed New Town in North Buckingham.

the city'.³⁸ Amongst other things, the consultants were instructed to be mindful of the expectation that car ownership would rise to 1.5 cars per family in the city. The winning firm went by the unwieldy title of Llewelyn-Davies, Weeks, Forestier-Walker and Bor. It had advised on the expansion of Swindon and oversaw the planning of the New Town of Washington in the North-East of England. It had worked on the latter in the mid-1960s (Washington was designated in 1964) and had given the town some novel features, including an unconventional grid system of primary roads, which underlined its status as one of a new generation of New Towns that adopted fresh principles of design.

In a statement to the Corporation's board, the company described itself as being 'concerned throughout its history with bringing science and social science to bear on new problems in building and planning'.³⁹ This desire to put transport planning on a more firmly scientific basis reflected the ambitions and approach of the Leicester planners. In common with Smigielski, Llewelyn-Davies *et al* were interested in changing patterns of employment, travel and consumption. They stated to the board that the planning of Milton Keynes needed to be based on an informed prediction of the lifestyles that the population would pursue over the next twenty years. Also in common with Smigielski, they were reacting to earlier planning practices, which they also saw as heavily reliant on intuition. Walter Bor, one of the senior partners, wrote: '[s]ince Cumbernauld, the rule-of-thumb hunch planning of the earlier new towns has given way to a more sophisticated approach and a more scientific methodology'.⁴⁰

However, the statement to the board went on to provide a strong hint that the consultants would steer the planning of the new city in a different direction to that of Leicester. It was noted that high density in residential areas was advantageous, in terms of helping social interaction and the functioning of public transport, but also that it 'must be reconciled with convenience and accessibility for private motor cars'. The consultants' awareness of the potential of car ownership and rising incomes to alter social preferences and habits was no doubt sharpened by their understanding of the

³⁸ Centre for Buckinghamshire Studies [hereafter CBS], D187/1, Extracts from board meetings and press cuttings, 1963-69.

³⁹ CBS, D187/77/3, Milton Keynes: statement to the board by Llewelyn-Davies, Weeks, Forestier-Walker and Bor, 17 July 1967.

⁴⁰ W. Bor, 'Milton Keynes: the First Stage of the Planning Process', *The Journal of the Town Planning Institute*, 54, no. 5 (1968), pp. 203-13.

American experience. Many of the planners of the new city were educated in the United States or had American links.⁴¹ This was certainly true of the traffic consultants for the project selected by Llewelyn-Davies *et al*, the Traffic Research Corporation Ltd, a subsidiary of Kates, Peat, Marwick and Company, which had worked on transportation studies in the United States with its Canadian sister organisation.⁴²

Llewelyn-Davies *et al* also employed a number of American and British academics working in the social sciences to give advice on the project. Their involvement was consistent with the approach of Richard Llewelyn-Davies, a founding partner, which was to use the products of social research to inform his planning decisions. Llewelyn-Davies had helped to form the Centre for Environmental Studies, to encourage research that would help urban planners to tackle planning issues. The Centre included a network of sociologists in its membership, including David Donnison, Professor of Social Administration at the London School of Economics, who was also amongst those invited to give advice on the planning of Milton Keynes.⁴³

The most influential of the advisors was Melvin Webber from the University of California, who had studied the social effects of the car on cities on America's west coast. In Webber's view, motorisation had encouraged the decentralisation of land uses in these cities and had widened the social horizons of their inhabitants, who were no longer restricted to associations with their near neighbours. Thus, the warnings of urban decline issued by Smigielski in reference to decentralisation in American cities were turned into a hymn of praise by Webber. His views matched those of his British hosts, who had made an assertion to the same effect in their statement to the board. Llewelyn-Davies *et al* also described Webber as 'one of the leading minds on future patterns in urban living' in their statement. According to one of Milton Keynes' junior planners, America's traffic planning and its relationship with the car were more likely to be seen as worthy of emulation than as a warning by the consultants. Bill Berrett, who had worked on Milton Keynes' implementation strategy, as well as under Fred Pooley,

⁴¹ D. Walker, *The Architecture and Planning of Milton Keynes* (Ann Arbor, 1982), p. 8.

⁴² Rather confusingly, Traffic Research Corporation Ltd. also referred to themselves as *Peat, Marwick, Kates and Company*.

⁴³ Clapson, *A Social History of Milton Keynes*, pp. 27-9.

reflected (not entirely positively) that amongst the planners of the new city ‘the image of Los Angeles ... had a profound effect’.⁴⁴

The ideas of Webber surfaced very early on in the planning of Milton Keynes. From late 1967 to early 1968, a series of seminars were held to establish the broad planning goals and the strategies to achieve them, in which the intellectual resources of the consultants, visiting academics, officials from central government, and board members were pooled. Webber was prominent in the discussions and, along with David Donnison, provided much of the sociological context for the seminars. The aim of the first seminar was to build a generalised picture of the forces likely to shape the development of the new city. A paper had been prepared to aid the discussion, in which Webber and others sought to make predictions about the urban society of the future. The owner-occupied single-storey house with a garden was identified as the best setting for the family to ‘create its own way of life’ by Donnison, which was an early indication of the thinking that would push the planners towards a low-density city. Meanwhile, Webber wrote that the nature of cities was radically changing in what he called the ‘post-industrial era’, which meant that ‘the future urban situation ... [had] to be completely reinvented’. Milton Keynes, Webber thought, could be a ‘spearhead’ of this new phase. Finally, J. D. Jones of the Ministry of Transport noted that ‘demand for the private vehicle is increasing very, very rapidly and will become the dominant factor in the development of new urban areas’.⁴⁵

This seminar was followed by a number of subsidiary meetings to discuss particular aspects of Milton Keynes’ planning, each attended by smaller groups. The process was repeated with a second set of meetings a few weeks later. Webber chaired a subsidiary meeting under the title ‘Urban Society of the Future’, in which it was asserted that ‘transportation and communication are improving, loosening the structure and intensity of community organisation’.⁴⁶ The themes of this and the previous discussion were developed further in a startling paper written by Webber and Peter Cowan, entitled ‘Milton Keynes in Britain’s urban future’.⁴⁷ In the introduction, it was stated boldly that

⁴⁴ CBS, D187/77/5, Bill Berrett, ‘Where is Milton Keynes?’, paper delivered at the Open University, 1982.

⁴⁵ CBS, D187/1, Extracts from board meetings and press cuttings, 1963-69.

⁴⁶ CBS, D-MKDC/223/7, Papers on new town design.

⁴⁷ Ibid.

the growth and spread of knowledge in the West was ‘likely to provide social changes more profound even than those which have marked the last two hundred years’. The changes expected were largely positive, reflecting a widely held view in the 1960s that technological development would fuel prodigious economic growth. Scientific progress, it was stated, would deliver ‘virtually unlimited power from nuclear fission’ and therefore economic productivity ‘far beyond’ economies based on fossil fuels. Automation would reduce working hours and leave greater time for leisure, another common expectation of the 1960s, which would increasingly involve off-peak travelling to engage in diverse recreational activities distant from the home.

Such predictions were used to support the paper’s assertion that ‘[t]he personal freedom afforded by the motor car is eagerly sought and ample provision must be made to facilitate its use’. The paper also concluded that Milton Keynes ‘must be designed as a city-of-change’ with a flexible road system to make it more easily adaptable to those technological and social changes that could *not* be anticipated. Overall, the paper asserted that technological and social changes provided an opportunity for greater social mobility that should be grasped in Milton Keynes: ‘geographic and cognitive boundaries of living must be opened to permit individuals to explore where their curiosity and capabilities lead them’.

Transportation was considered important enough to be the subject of two special seminars, chaired by Walter Bor, one of the senior partners of the main consultants.⁴⁸ The first session ranged over a number of issues, but was dominated by discussions relating to the appropriate level of car use and the merits and demerits of new forms of public transport. These were subjects to which the planners would frequently return, as will be examined further in Chapter Six. Land uses were only briefly touched upon when it was suggested that Milton Keynes was in a ‘chicken-and-egg situation’, where neither roads nor land uses yet existed. In the second seminar, the consultants pressed home two points. Firstly, they insisted that the issue of transport was a complex one that contained many interlocking and diverse elements that needed to be considered together, such as the relative importance of public and private transport, the rationality of travellers’ choices, even the ‘sociology of parking’. Secondly, they argued that the

⁴⁸ Ibid.

largely undeveloped site of Milton Keynes (its chicken-and-egg situation) afforded a rare opportunity to achieve ‘a far higher level of autonomous movement’ via the private car than in existing cities, due to the greater freedom it allowed for the planning of land uses and roads to facilitate it. Such a proposition appeared to be novel and difficult to believe for some of the participants. This being the case, it was considered necessary to state that ‘[t]he suggestion from the first seminar that road congestion is a reasonable method of trip constraint is to be challenged and though this is in fact happening in all other major cities it would be a confession of failure at Milton Keynes situated as it is at this point in time’.

The consultants appeared to be using the seminars to prepare the board members to accept that maximising freedom for the car was not only desirable, but also achievable in Milton Keynes. In a paper entitled ‘Milton Keynes: Transportation’ (possibly intended as a discussion piece for another of the seminar series) the main consultants explained in more detail how freedom to plan land uses and the road network in the new city would allow a higher level of car use.⁴⁹ It started by contrasting the form of existing cities with the situation that could be engineered in the new city. It stated that ‘most existing towns have gone through decades of unplanned growth and their over concentrated and radial structures are unable to cope with modern traffic requirements’. In a new city, however, a major benefit was identified as being ‘ease of movement including private car usage’. The paper continued, stating that a ‘fully integrated land-use/transport plan for Milton Keynes should ... strive to optimise accessibility between traffic generating and attracting land uses, through the location of these uses and the provision of direct transport links between them’. Even at this early stage (the paper was dated March 1968) the consultants were clear that decentralisation of land uses was the way to achieve optimal accessibility. The paper put forward four main transport options, featuring various options for public transport, all of which included a decentralised pattern of land uses.

The consultants had thus presented the board with a full exposition of their basic approach to the transport planning of Milton Keynes and its underlying sociological rationale. They acknowledged, however, that maximum car usage and decentralisation

⁴⁹ Ibid.

remained controversial goals, given that Pooley and some members of the board were strongly attached to the monorail idea that relied on higher densities. A board meeting, held on 29th April 1968, confirmed that the views of the board on transport were mixed, but the board gave the consultants enough room to plan land uses as they saw fit.⁵⁰ Richard Llewelyn-Davies told the meeting that the best way to go forward was for certain land uses to be planned first, then for transport to be attended to in a generalised way. The consultants proceeded with testing models with various densities and locations of functions in line with Llewelyn-Davies' suggestion.

Initially, five different basic arrangements of (traffic attracting) commercial and industrial areas were selected and tested, including one with employment concentrated in the city centre. The best configuration was identified as being a set of evenly distributed small centres, because it provided for the shortest travel between home and work and the lowest road use. A spider diagram of trips was generated based on peak-hour travel under this configuration. The somewhat diffuse pattern of trips displayed was used to justify a grid pattern of primary roads, which the consultants maintained appeared to be the most appropriate format for this even pattern of journeys.⁵¹ The consultants also acknowledged that they were working with a set of hypotheses about social and economic trends, which suited this arrangement by pointing strongly towards a low-density layout. In particular, citing the work of Webber, they suggested that a doubling or tripling of real incomes would result in a higher demand for homes with gardens.⁵²

In a report dated 30th September, the consultants presented an outline plan for transport in the new city to the board, which confirmed their preference for a diffused pattern of employment areas and a grid network of primary roads. They also re-stated their confidence that greater freedom of movement could be achieved in the new city.⁵³ They underlined their confidence by identifying another set of physical constraints common to existing cities, which could be engineered out of a single-purpose grid network of primary roads. The constraints were identified as over concentration of junctions,

⁵⁰ CBS, D187/1, Extracts from board meetings and press cuttings, 1963-69.

⁵¹ Llewelyn-Davies, Weeks, Forestier-Walker and Bor [hereafter LWFB], *Milton Keynes: Interim Report* (Milton Keynes, 1969), pp.145-9.

⁵² CBS, D-MKDC/757/21, LWFB, 'Formulating Hypothetical Land-use/Transportation Diagrams', 4 July 1968.

⁵³ CBS, D187/6, Extracts from board minutes, 1967-70.

frontage access to buildings from primary roads, and conflict between motor vehicles, pedestrians and cyclists. The report stated that providing for the use of the private car ‘in a free manner unrestrained by congestion’, was described as a ‘critical’ goal. The board reacted favourably to the report, despite the negative implications of a low-density layout for the operation of fixed-line transport systems, such as the monorail.

Figure 3.3: *The proposed network of primary roads and land uses in Milton Keynes. The land uses displayed include: housing (yellow), employment (purple), retail and commerce (red), education (blue) and parkland (green).*

Source: Milton Keynes Development Corporation, *The Plan for Milton Keynes* (Milton Keynes, 1970), loose insert.

Fred Pooley was critical, however, no doubt appreciating its implications more than his fellow board-members. He accused the consultants of getting their planning back-to-front by insisting that the grid was the ‘basis of the whole plan’.⁵⁴ The board was pre-occupied, meanwhile, with the question of whether or not to include a fixed-line system

⁵⁴ CBS, D187/1, Extracts from board meetings and press cuttings, 1963-69.

at all. This debate would continue, as will be explored in Chapter Six. The consultants remained carefully non-committal on the question of such a system's inclusion. They preferred to put most of their energy into securing backing for their land-use and road plans, which was duly forthcoming. The board accepted them as the basis for further transport planning.

The Milton Keynes Interim Report

The Development Corporation published *Milton Keynes: Interim Report* on the planning of the new city in February 1969. It gave a good indication of the overall direction in which the planning of Milton Keynes was heading, although it remained undecided on many detailed aspects. For example, the planners' grid system of roads was included, but the question of what form of public transport the city would use was kept open. Copies of the report were sent to the MHLG who sent copies to the MOT in turn. It stimulated much discussion in the two ministries, which revealed much about their views of land use and transport planning.

With respect to the consultants, the tone of the report suggested that the sociological ideas articulated by Webber and others had had a marked effect on the new city's planning, by indicating that Milton Keynes would respond to the social trends that the sociologists had identified. With reference to the seminars, the report stated: '[t]he most general conclusion was that Milton Keynes must be planned to give people what they want and that no communities or experts should try to dictate the future pattern of life in the city'.⁵⁵ Although it remained unstated, this appeared to be a reaction to the planning of the first generation of New Towns, which was criticised for being inflexible and paternalistic.

In Milton Keynes, by contrast, freedom of choice was to be the guiding principle. Amongst other things, this affected the way that land uses would be arranged. It was asserted, for example, that housing densities 'must be determined very largely by market trends and consumer preferences'.⁵⁶ This promotion of the market as an indicator of popular will chimed with the rhetoric of the motor lobbyists described in

⁵⁵ Ibid., p. 12.

⁵⁶ Ibid., pp. 80-2.

Chapter Two, and showed that the consultants were prepared to plan in a way that would support the consumer capitalist subject. The report stated that low-density housing would be preferred by residents, so provision would be made for a density of approximately eight dwellings per acre. The idea of the self-contained neighbourhood, put into practice in earlier New Towns, was rejected. In the Interim Report the following was noted: '[i]t must be stressed that we are not proposing that a residential area within the primary grid is a "community" or a "neighbourhood"'.⁵⁷ To this end, clusters of shops and amenities were deliberately placed to allow access to (and encourage the use of) more than one cluster from each square of the grid. Derek Walker, one of the architects involved in the detailed planning of the new city, noted the particular influence of Webber's ideas in this context. He later observed that: 'Webber's ideas of a community based on voluntary association rather than propinquity are fundamental to the thinking behind the Plan [for the new city] ... he could claim more than anyone to be the father of Milton Keynes'.⁵⁸

The Interim Report received a mixed reception from the MHLG and the MOT. The latter ministry had been discussing the planning of Milton Keynes in the run-up to the report's publication, both internally and in correspondence with officers of the Corporation. The views of the officers of the MOT were varied, but a fair summary would be that they held a number of reservations, but did not have a firm objection to the basis of the plan.⁵⁹ One officer, John Berry, for example, considered the city's layout to be 'weighted in favour' of the car and that diverting travellers from private cars would require a costly standard of public transport, which would be 'unlikely to be self-financing' due to the city's low density.⁶⁰ Similarly, the practicality and costs of the grid roads were questioned. The MOT reasoned that the identical capacities proposed for the main roads implied equal use, which could result in a waste of resources if some roads were under-used. One MOT paper also criticised the grid for its 'high route factor', which meant longer journeys in comparison to actual 'straight-line' distances between destinations. Overall, however, the Ministry was prepared to reserve judgement. Berry remarked to a colleague that '[t]his package is sufficiently unconventional to give rise to

⁵⁷ Ibid., p. 23.

⁵⁸ Walker, *The Architecture and Planning of Milton Keynes*, p.8; see also Clapson, *A Social History of Milton Keynes*, pp. 28-31.

⁵⁹ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

⁶⁰ Ibid. and TNA, HLG 116/519, MKDC: Master Plan Interim Report.

a number of doubts on our part and the desire for more evidence to support it'.⁶¹

Although it also had reservations, the view of the MHLG was generally more positive. It was stated that 'planning theory' at the time favoured grid layouts and that a grid seemed to be 'an appropriate planning basis for Milton Keynes'. The grid system was deemed to allow for a traffic distribution that was as even as possible.⁶² However, the MHLG was particularly mindful of the cost implications of the grid that had been highlighted by the MOT. It was with this sense of cautious optimism that I. V. Pugh of the MHLG wrote to Walter Ismay at the Corporation in March 1969, setting out the views of the two ministries.⁶³ Perhaps with public transport in mind, the ministries expressed a particular desire for the planners to consider a lower level of decentralisation. It was also suggested that officers from the ministries and from the consultants meet regularly in a process of 'professional liaison'.

The Corporation appeared to take the assessment in its stride, reflecting its considerable political and planning experience. Its consultants demonstrated their willingness to work with officers of the MOT and MHLG by meeting informally with them before being prompted to do so in Pugh's letter. Furthermore, in a marked contrast to Smigielski's attitude at Leicester, it was fully acknowledged by the consultants that the onus lay with them to satisfy the MHLG that the plan was sound. Richard Llewelyn-Davies wrote to Ismay that March, stating that 'we should take very seriously the questions raised and answer them fully'. Rather shrewdly, Llewelyn-Davies also cautioned him not to raise new issues with the ministries and take what was not raised by them as accepted.⁶⁴

The Milton Keynes Master Plan

On 24th November 1969, the Corporation sent draft copies of the first volume of the *Plan for Milton Keynes* to the MHLG, which it examined as well as forwarding copies to the MOT.⁶⁵ The plan, usually referred to as the 'Master Plan', contained few surprises

⁶¹ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

⁶² TNA, HLG 116/519, MKDC: Master Plan Interim Report.

⁶³ CBS, D-MKDC/165/4, Correspondence with various ministries.

⁶⁴ Ibid.

⁶⁵ Milton Keynes Development Corporation [hereafter MKDC], *The Plan for Milton Keynes (Volume One)* (Milton Keynes, 1970).

or significant departures from the outline drawn in the Interim Report. The new report, itself, stated that the concepts in the earlier report had been ‘developed and subjected to testing’ and the new city’s ability to function ‘efficiently and economically’ using them had been fully confirmed. At the core of the Master Plan, there remained the guiding principle of freedom of choice, which found expression in passages like the following: ‘[the Plan] is not based on any fixed conception of how people ought to live’.⁶⁶ There was some justice in this claim: the planners had sought to avoid dictating to the inhabitants of the new city. The planners had, however, embraced a particular vision of how people would *want* to live, basing their plan on firm expectations of high personal consumption and automobility.

The arrival of the drafts of the Master Plan at the ministries provoked another round of correspondence and meetings, which had been continuing in the meantime. Just prior to the draft Master Plan’s arrival at the MHLG, Ismay had written to Howard Marshall at the Ministry on the 8th November about land-use densities. The consultants, Ismay wrote, had tested the effects of increased employment in the centre as requested.⁶⁷ Their predictions of the likely effects were discouraging and reflected their unwillingness to compromise on decentralisation. Whilst an increase of 50 per cent in city-centre employment would lead to ‘severe congestion’, the consultants stated, an increase of 25 per cent was ‘technically feasible ... [but] socially unacceptable’. Neither the MOT nor the MHLG were entirely satisfied with the level of decentralisation thus proposed. The MOT did not feel in a position to give an ‘unqualified blessing’ to the Master Plan.⁶⁸ Howard Marshall, at the MHLG, said that ‘[t]he main bone of contention from our point of view is low density’.

The MOT thought, in addition, that the MKDC had not demonstrated that the uniform grid was cheaper to build than a hierarchical system of roads.⁶⁹ Its verdict, as set out in a letter to the MHLG in June, was that only the grid idea had been fully investigated out of all the alternatives and that there remained good evidence that grids involved longer

⁶⁶ Ibid., pp. 23-4.

⁶⁷ CBS, D-MKDC/165/4, Correspondence with various ministries.

⁶⁸ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

⁶⁹ TNA, HLG 115/730, MKDC: Submission of the Master Plan.

average journeys and underused road mileage.⁷⁰ However, the letter went on to state that '[w]e make this point, but accept that it would be unrealistic to ask for a fundamental review at this stage'. The letter indicated that the most urgent consideration was the avoidance of financial waste. This was something that the MHLG also acknowledged in an internal memo: '[i]n general the MOT comment reflects the reservations both departments have expressed throughout preparation of the plan. The possibility that a hierarchy of primary and secondary roads will emerge from the undifferentiated grid has been central to our doubts'.⁷¹ These reservations and others were communicated to the MKDC in January 1970 along with requests for further information. Meetings were duly held between the traffic consultants and the MOT after which the MOT pronounced itself ready to make an overall judgement.⁷²

In May 1971, the MHLG wrote to the MKDC to give its official approval of the Master Plan as establishing 'the broad strategy for the development of Milton Keynes'.⁷³ It accepted the grid on the basis that alterations were to be made if the necessity arose during development. It also expressed its more detailed concerns, such as the layouts at junctions between primary and access roads. These, the letter stated, should be 'closely studied in collaboration with the highway authority and the Department of the Environment when detailed planning is undertaken.' This was a typical response to any element of the plan, in which the ministries wished to exert their influence. Overall, the letter stressed that '[t]he criticisms which have been made of the Master Plan are minor in relation to the overall conception of a New Town of a quarter of a million people.' In winning approval for the Master Plan, Milton Keynes had succeeded where Leicester had failed.

Conclusion

The planners of Leicester and Milton Keynes, in common with the planners, politicians and professionals discussed in the previous chapter, were responding to the urban planning challenges associated with mass motorisation. In attempting to meet this

⁷⁰ TNA, HLG 115/756, MKDC: The Plan for Milton Keynes - consultations with government departments.

⁷¹ TNA, HLG 115/757, MKDC: The Plan for Milton Keynes - consultations with other branches of MHLG.

⁷² CBS, D-MKDC/165/4, Correspondence with various ministries.

⁷³ TNA, HLG 115/758, Plan for Milton Keynes: Inspector's report and decision letter.

challenge, they both followed the principle of tying urban transport planning to land use. They were also in agreement that the planning of road systems and land uses needed to be based on a detailed prediction of future patterns of travel, employment, leisure and consumption. Where appropriate, they thought that predictions of traffic flows would be made more meaningful if the techniques of the new land-use/transportation surveys were utilised.

Both sets of planners were reacting to British urban planning of the 1940s and 1950s, which had failed to predict the rise of private motoring and had not paid enough attention to social trends. Smigielski felt that they had produced road plans that were based on crude traffic surveys and intuition, whilst the planners of Milton Keynes felt that people's preferences had been inadequately catered for in earlier New Towns. Making effective use of the expertise of social scientists to make better judgements in this area was a central aim of the Milton Keynes planners. Although the sociological advice that they received was conjectural, and based to a large degree on American experience, on the evidence presented here, they had indeed attempted to base the planning of the new city on an informed prediction of future residents' lifestyle choices. As mentioned above, many of the academics and professionals associated with the planning of Milton Keynes were also members of the Centre for Environmental Studies, whose main purpose was to encourage the use of the social sciences in urban planning. It appears that the agenda of the Centre was an important influence on the planning of Milton Keynes.⁷⁴

Despite the similarities in approach, the two groups of planners produced starkly different plans. This was partly due to the profound differences in the planning tasks before them: Smigielski's team were faced with a well-established city with a long-standing pattern of land use and a central road system that largely pre-dated the private motor vehicle, whilst Milton Keynes' planners had a largely undeveloped area with which to work. The restrictions placed on the motor car proposed in the Traffic Plan reflected the difficulty in providing complete freedom for motor traffic in such an established city, whilst the dense clustering and inter-dependence of Leicester's key manufacturing businesses in its core served to deter a dispersal of land uses. The

⁷⁴ Clapson, *A Social History of Milton Keynes*, pp. 27-9.

designated area of Milton Keynes held no such restrictions and allowed for a road plan and dispersed pattern of land uses that were designed to permit freedom of movement for private motorists.

The differences in the two cities' plans were also due to the influence of two very different visions of urban living. For the planners of Milton Keynes, the model was the low-rise and low-density Californian city; for Smigielski, the model was the compact continental city. Smigielski saw the historic cores of cities as being the places where their unique social spirit or *genius loci* (literally 'spirit of place') resided and as being the primary sites of entertainment, leisure and social interaction. He did not want to undermine what he saw as Inner Leicester's crucial social function by dispersing land uses. Indeed, as will be discussed in Chapter Four, he wished to enhance the attractiveness of the centre by excluding through-traffic and creating pleasant open spaces for pedestrians. Whilst Smigielski and his colleagues saw the dispersal of land uses in American cities as detrimental to social and economic cohesion, the planners of Milton Keynes saw it as a trend that allowed for accessibility and the opening of new social horizons for urban residents. It appears that this view originated in part from the contributions of Webber and Donnison that are described in this chapter. Webber's view of American urban car culture, as part of his broader theory of community without propinquity, appeared to provide the theoretical underpinning for the whole plan, thus supporting Mark Clapson's view that the planners of Milton Keynes 'broadly shared' Webber's opinion regarding the social and practical implications of urban dispersal and had set out to facilitate these forms of more distant interaction.⁷⁵

The MOT and MHLG gave the Traffic Plan a much less favourable assessment than the Milton Keynes Master Plan, although they also had some reservations about the latter. The ministries had many practical concerns about the Traffic Plan, particularly over the operation of the interchange car parks, and deemed it too costly. The rejection of decentralisation in the plan also contributed to the ministries' refusal to accept the Traffic Plan in its original form, and the Leicester planners' subsequent refusal to give any further consideration to the dispersal of land uses was a further cause of frustration. Although it was never articulated in the exchanges between Leicester and Whitehall, the

⁷⁵ Ibid., pp. 28-33.

successful attempts by the ministries to pare down the former's road-building plans, thereby reducing costs, suggest that cost considerations played an important role in their attachment to dispersal as a means to reduce spending on roads. The record of their exchanges with the planners of Milton Keynes lends further support to this view. Financial matters certainly had an influence over their assessments, which contained a concern that the grid network would lead to investment in under-used roads. Furthermore, the dispersal of land uses in the Master Plan was welcomed in principle, but also raised concerns about the cost implications for public transport due to the high degree to which it was pursued. As a result, they encouraged the planners to consider more intensive use of land in the central area.

The officers of the MOT and MHLG did not necessarily share the Webber-inspired vision of Llewellyn-Davies and his colleagues, but they were sufficiently satisfied that it had given rise to a practicable and affordable plan. Their generally positive attitude to dispersal was an important factor in their acceptance of the Master Plan, which lends support to Guy Ortolano's assertion that Milton Keynes was designed at a 'decisive moment' when dispersal was popular in planning circles.⁷⁶ The overall response of the MOT and MHLG to the plans of Leicester and Milton Keynes indicates, however, that it was cost-effectiveness and practicality that counted in the final analysis. Ortolano and Clapson also noted the importance of the political and professional connections of Llewellyn-Davies *et al* in securing their role as the planners of Milton Keynes. To this observation, I would also add that their political experience also helped to secure acceptance of the final plan. By contrast, Ortolano and Clapson noted that the North Bucks New City concept suffered from Pooley's status as an outsider. Clapson described him as a 'provincial operator' in the 1960s, who was 'not permanently at the heart of the influential network of planners, politicians and academics based in London.'⁷⁷ The evidence of Smigielski's interactions with the MOT and MHLG also point to his similarly marginal status, although it is somewhat doubtful that the Traffic Plan would have succeeded in winning ministerial support had he been better connected.

As will be discussed in Chapter Six, the Traffic Plan bore many similarities to the plans

⁷⁶ Ortolano, 'Planning the Urban Future', p. 498.

⁷⁷ Clapson, *A Social History of Milton Keynes*, pp. 34-5.

for North Buck New City in its attachment to new technology, high density of land use, and reliance on public transport. The parallels between them, together with the evidence from the previous chapter clearly demonstrate that Ortolano was right to insist that Pooley's plans were 'by no means otherworldly or especially eccentric' in the context of the 1960s.⁷⁸ Indeed, all three plans were bold assertions of the power of urban planners to create better towns and cities.

⁷⁸ Ortolano, 'Planning the Urban Future', p. 490.

Chapter Four

Reconciling the Car with the Urban Environment

This chapter explores the approaches used in Milton Keynes and Leicester to allow for freedom of movement for motor vehicles in the 1960s and 1970s, whilst protecting the urban environment from the effects of motor traffic. Rather like the last chapter, which looked at traffic planning in relation to land-use planning, it examines the relationship of the former to the pursuit of another set of planning aims. It also returns to an issue that was discussed in relation to transport planning more generally in Chapter Two. In that chapter, it was noted that reconciling automobility with the maintenance of a pleasant urban environment was a central question in traffic planning in the 1960s. Indeed, it was the question that Colin Buchanan's Working Group sought to answer in *Traffic in Towns*. The report described the nature of the question very well, starting with a description of the environmental nuisances associated with motor traffic. These were listed as the physical danger from moving vehicles to pedestrians, noise, fumes, physical intrusion of parked cars and encroachment of open spaces, 'the destruction of architectural and historical scenes', oil stains on the roads, parked cars trapping litter; the clutter of 'signs, signals, bollards, railings' and other fixtures associated with traffic movement; and 'dreary, formless car parks'. The environment was a broad concept, therefore, that took in urban-dwellers' need for safety, cleanliness, peace and quiet, clean air, open space, and pleasant views. Buchanan went on to note that an inherent difficulty lay in reconciling 'the efficient distribution ... of large numbers of vehicles' with the achievement of 'a satisfactory standard of environment'.¹

Buchanan concluded that much of the difficulty could be overcome by substantial redevelopment of the kind described in Chapter Two, which would allow for the creation of environmental areas. In these areas traffic volumes and speeds would be kept at a level appropriate to the local environment. This necessitated the construction of new urban roads, which Buchanan admitted had the potential to cause environmental problems of their own. He noted that severance, the sundering of one area from another by the construction of a new road, was a danger, as well as the visual intrusion of

¹ C. Buchanan, *Traffic in Towns: A Study of the Long Term Problems of Traffic in Urban Areas* (London, 1963), p. 40.

highway works ‘violently out of scale’ with adjacent development.² Writers like John Gold and Stephen Ward, have asserted that only the plea by Buchanan for greater accessibility for motor transport was heeded by planners, to the detriment of environmental protection.³ The insensitive siting of some new urban roads in the 1960s demonstrated that road building could be environmentally intrusive by generating noise and pollution, and necessitating the destruction of parts of the built urban fabric. David Starkie noted that this aroused considerable public anger and opposition to further road building that, combined with public spending cuts, helped to rein in urban road-building programmes dramatically in the 1970s. This backlash was evidence of the remoteness of urban planners and architects from the people for whom they were planning, which Helen Meller has remarked upon in the context of traffic planning.⁴

In this chapter, I argue three things. Firstly, I argue that environmental protection was taken very seriously by the planners in Leicester and Milton Keynes, which, rather than undermining the assessments of John Gold and Stephen Ward of 1960s town planning as environmentally insensitive, shows that there was much variation in the planning response to the car at a time when the appreciation for environmental protection in relation to the car was evolving rapidly. Secondly, I argue that, although attempts were made in Milton Keynes to use social scientific research to draw conclusions about the lifestyle preferences of the new city’s inhabitants, the planners in both cities were remote from the people for whom they were planning. Thirdly, I conclude that transport planning in both cities became more sensitive to the urban environment and, in Leicester, more responsive to public opinion. This final observation supports Starkie’s view that transport planning in the 1960s and 1970s changed in the light of rather painful experience.

Before reaching a conclusion, this chapter is arranged into four sections, in which different aspects of the environmental transport planning effort in Leicester and Milton Keynes are discussed. Starting with the design of Central Milton Keynes and the proposals for the redevelopment of Inner Leicester, the chapter moves on to determine

² Ibid., p. 22.

³ J. R. Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007), p. 107; S. V. Ward, *Planning the Twentieth-Century City: The Advanced Capitalist World* (Chichester, 2002), pp. 239-41.

⁴ D. Starkie, *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982), pp. 70-82; H. Meller, *Towns, Plans and Society in Modern Britain* (Cambridge, 1997), pp. 69 & 87.

how far the design and alignment of planned major roads took account of environmental considerations. The attention of the following sections shifts outside the centre of each city. The sections examine, respectively, the contrasting ways that new development was planned and pre-existing development was adapted in an attempt to accommodate the car without harming the local environment.

City centre planning: the proposals for Inner Leicester and Central Milton Keynes

The planners of both Leicester and Milton Keynes placed great emphasis on the need for good planning in the centres of their respective cities in order to support their essential commercial and social functions. In terms of transport planning, this meant not only allowing for easy movement of people and goods, but also providing a pleasant and attractive physical environment free from the danger, noise and pollution associated with heavy traffic. Although the basic aims were the same, the transport plans were very different. The plan for Inner Leicester relied on the partial exclusion of motor traffic and on the segregation of pedestrians and vehicles to a great extent, both horizontally and vertically. The plan for Central Milton Keynes, on the other hand, allowed greater access to motor traffic and featured only a limited measure of segregation, which was almost entirely horizontal. This was in part a reflection of the differences between the two sites (Inner Leicester was already densely developed, Central Milton Keynes was not) but it was also a reflection of differing approaches. Beyond the obvious differences, however, lay strong parallels: the plans for both centres sought to facilitate pedestrian circulation and to provide pleasant open spaces, which indicated that the planners shared the basic assumption that city centres should serve as meeting places.

In Leicester, Konrad Smigielski had ambitious plans for the centre of the city. As has been noted in Chapter Three, his Traffic Plan proposed to retain the centre's role as the main site of commerce and industry. In addition, he wanted to see an increase in office and retail space with the construction of multi-storey modernist blocks. He expected and welcomed private redevelopment of this nature as part of a trend that would make the centre an attractive place to live and work. If this trend continued, he predicted, 'the city centre of Leicester will become highly concentrated, with a great diversity of uses ... with a strong civic composition, full of vitality and colour, and very close to the idea of

the best Continental cities'.⁵ At the same time as being optimistic about the effects of redevelopment, however, Smigielski was also deeply concerned about the negative effects of rising car ownership. In an echo of the strongest warnings by Buchanan, he wrote in the Traffic Plan: 'towns and cities are threatened with disintegration under the onslaught of the motor car.' For this reason, he stated clearly that in the hierarchy of urban planning 'Environment comes first and Traffic afterwards';⁶ hence the proposal in the plan to reject 'full penetration' by restricting motor traffic to an 'essential minimum', and eliminating through-traffic completely from Inner Leicester.⁷ This was a very bold measure that represented far tighter restriction than that proposed for any other British city.

As explained in the previous chapter, the exclusion of 'inessential' traffic from Inner Leicester relied on the installation of innovative transport infrastructure. The Inner Motorway allowed for the elimination of through-traffic, whilst the system of interchange car parks would allow private motorists to gain access to the city centre by bus or taxi. The tight restriction of motor traffic had the obvious demerit of hampering the movement of people and goods *within* Inner Leicester, so the Traffic Plan also contained detailed proposals to compensate for this. First of all, 'essential' motor traffic would circulate via a secondary road system, which would be free from street parking and consist of a series of one way loops. Secondly, public transport was to shoulder more responsibility for moving people around the centre. It was tentatively proposed that this should take the form of various new types of public transport designed to have a low impact environmentally.

A range of public transport modes was suggested, including small buses, a monorail, and small taxis. One proposal was for 'crush buses', which reserved most of their interior for standing passengers. Such vehicles, which allowed for quick and convenient entry and exit, were familiar sights at airports. Other suggested designs, meanwhile, indicated a readiness to exploit radical forms of new technology. The Traffic Plan noted the possibility that the taxis employed in the centre might take the form of 'a small vehicle of the "rickshaw" type, probably electrically driven'. Finally, movement on foot

⁵ W. K. Smigielski, 'Leicester', in J. Holliday (ed.), *City Centre Redevelopment* (London, 1973), p. 174.

⁶ W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), p. xiv.

⁷ *Ibid.*, p. 74.

was to be facilitated by the creation of a network of pedestrian ways created through partial pedestrianisation of existing streets, the connection of important streets via new passageways between buildings, and the installation of ‘pedestrian conveyor belts’ (moving walkways, also referred to as ‘travelators’) above street level.⁸ A further measure of vertical segregation was also proposed, in the form of underpasses and pedestrian walkways, to allow pedestrian movement across the western section of Leicester’s inner ring road. Thus, in common with the Buchanan Report, the Traffic Plan offered an engineering solution to the environmental problem of traffic. Its reliance on the creation of pedestrian precincts was also in line with the Buchanan philosophy, but the emphasis on pedestrian movement was not. This heightened concern with pedestrian circulation and alternative transport technology, which will be discussed in more detail in Chapter Six, demonstrated Smigielski’s independence of approach.

Figure 4.1: *A map of Inner Leicester, showing the proposed Inner Motorway (in bold black), pedestrian network (green) and multi-storey car parks (black circles).*

Source: W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), colour plate between pp. 4 & 5.

⁸ Smigielski, *Leicester traffic plan*, pp. 66-71.

The inclusion in the Traffic Plan of emerging transport technology, and some elements of multi-level pedestrian circulation, can also be seen as evidence of Smigielski's enthusiastic embrace of modernism and modern technology. Further evidence of this can be found in more detailed plans for the centre that were created subsequently and presented in an overview of planning intentions for the city, entitled *Leicester Today and Tomorrow* and produced in two editions in 1967 and 1971.⁹ The document revealed Smigielski's ambitions to introduce many more modernist elements within Inner Leicester (as well as outside). This was most clearly illustrated by the photographs of a model of a radically redeveloped Inner Leicester created by Leicester's Planning Department. The inclusion of extensive high-rise development and multi-level pedestrian circulation was particularly noteworthy. This putative city centre of the future included concrete plans for a new civic centre on its southern edge, as well as a tentative proposal for a radical redevelopment of the Clock Tower area.

The Clock Tower stood at the confluence of Leicester's major roads in the centre of Inner Leicester and, as such, was seen as the city's symbolic centre and key landmark. Its significance was not lost on Smigielski, who described the area as 'the physical and emotional heart of the city'. He also felt, however, that the current arrangement of roads and buildings had allowed the motor car to spoil its environment. The Clock Tower was 'the most congested spot in Leicester, where formidable local traffic is mixed with through-traffic and very intensive pedestrian circulation'.¹⁰ It was this type of situation that the measures proposed in the Traffic Plan were designed to rectify, but Smigielski wanted to exclude motor vehicles altogether from this area. His Department proposed to create a pedestrian square, necessitating the truncation of the existing streets and the replacement of the surrounding buildings. The style of the development around the square was envisaged as an integrated modernist showpiece, featuring several levels of pedestrian walkways skirting its exterior and bounding the square on three sides. The development included roof gardens, high-rise office blocks and a complex of luxury flats.

⁹ The material used in the following passages comes from the later edition, W. K. Smigielski, *Leicester Today and Tomorrow* (London, 2nd edition, 1971).

¹⁰ *Ibid.*, p. 55.

Figure 4.2: *The Clock Tower area of Leicester in the 1960s, looking west with Humberstone Gate at the bottom of the picture.*

Source: Urban Design Group, Leicester City Council

Some of the transport modes proposed for Inner Leicester would have had a visual impact similar to the Clock Tower development. *Leicester Today and Tomorrow*, for example, included proposals for the construction of elevated and covered moving walkways that were more extensive than the Traffic Plan. These would have run either along the centres of main streets or straddled them as required. In addition, the proposed monorail track ran north-to-south through the centre of the city via the Clock Tower. Far from being seen as potentially intrusive, these structures were presented as exciting new elements of the urban scene. In the Traffic Plan, it was stated that the ‘monotonous corridor’ of Charles Street ‘would gain visually by the elevated structure with its touch of science fiction.’¹¹ Although the car would largely be excluded from Inner Leicester, the infrastructure that would support its use was equally monumental. The proposed

¹¹ Smigielski, *Leicester traffic plan*, p. 70.

Inner Motorway was to be elevated in several sections and, therefore, highly visible. In addition, several multi-storey car parks were to be built in the city centre and on its fringes. Smigielski did not necessarily welcome their construction on aesthetic grounds, but he nevertheless noted them as striking symbols of post-war modernity, remarking that they might be viewed as ‘motor age cathedrals’.¹²

The plans for Inner Leicester were not simply the product of modernism combined with fears over the impact of car uses. They were also deeply rooted in Smigielski’s desire to create a city centre based on a Continental model. In Chapter Three, he was quoted as celebrating the Continental habit of living and spending leisure time in city centres, but allied to this was the sense of the city, especially its centre, as a meeting place. This function represented, for some, the very essence of civilisation, which allowed for the exchange of knowledge and ideas in addition to goods. Smigielski agreed, and felt that the city’s historical role as a meeting place was under threat by uncontrolled use of the car. He quoted Jean Cocteau on Paris, who complained that the city had turned from an agora into a garage.¹³

He identified the centre of Leicester as the spiritual heart of the city and made its development a planning priority. The Traffic Plan contained detailed plans for Inner Leicester, but left the demarcation and detailed planning of environmental areas outside the centre for a later date. This decision drew criticism from the JUPG, who remarked that the plan was ‘over-preoccupied’ with the centre.¹⁴ Further detail on the planning of Inner Leicester followed, as outlined in *Leicester Today and Tomorrow*. In each of these documents, there is a strong sense that the measures to protect the area from the car were intimately bound up with the desire to enhance its role as a meeting place. This is reflected, first of all, in the plan to create a ‘formal urban space’ around the Clock Tower. The retention of the tower, which was laden with historic and symbolic meaning, would help to underline the purpose of the space. The addition of a reflecting pool would reinforce the tower’s effect by creating an inverted image of the monument on its surface. It was also suggested that the square could be used to exhibit modernist

¹² W. K. Smigielski, ‘Leicester Traffic Plan’, *The Journal of the Town Planning Institute*, 51, no. 2 (1965), pp. 67-9.

¹³ W. K. Smigielski, ‘Urban Form in the Motor Age’, *Proceedings of the Town Planning Institute Newcastle upon Tyne Conference* (London, 1968), p. 325.

¹⁴ TNA, HLG 136/200, Leicester traffic survey.

sculptures, hinting that Smigielski wanted to encourage appreciation for art as well as fostering a sense of local identity.¹⁵

The proposed pedestrian network, of which the Clock Tower area formed the hub, also appeared to fulfil a social function beyond the practical. Not only was it designed to link sites of commercial and practical importance, such as the railway station, the shops of High Street and the Market Place, but also those sites that also had civic or historical importance, such as the Cathedral and the proposed new Civic Centre. Creating a unity from these elements via the pedestrian network was the key, as Smigielski explained: '[t]he central area, although containing some parts of historic and architectural quality, is rather disjointed and an attempt will be made to link the unrelated parts into a logical civic composition'.¹⁶ Smigielski drew further from the historic fabric of the city as a source of both local identity and visual amenity when selecting specific routes for pedestrians. The prime example of this was the proposed link between the city's Cathedral Precinct in Leicester's historic core (sometimes referred to as Leicester's Old Town) to Victoria Park on the southern edge of Inner Leicester. This route included a pre-existing tree-lined pedestrian way from the Georgian period, called New Walk, which ran for three quarters of a mile. The route boasted some fine examples of Georgian architecture, as well as squares and small parks from the same period, but the area had been run down. A renewal scheme was proposed to enhance these features and to provide a relaxing alternative to the busier pedestrian routes. The scheme included replacement of worn-out street furniture, renovation of adjoining properties, and additional tree-planting.

Such robust conservationist measures were a striking counterpoint to the modernist interventions that were proposed elsewhere in the centre. Smigielski saw no contradiction between his modernist and conservationist proposals; he wanted Leicester to move with the times, whilst retaining the best of its architectural heritage. Indeed, the New Walk scheme also included the introduction of some modernist elements, discussed in Chapter Five, which explores the relationship between traffic planning and the historic urban fabric. As the chapter will also note, Smigielski's desire to conserve the historic fabric of Leicester to facilitate the continuity of a sense of tradition had a

¹⁵ Smigielski, *Leicester Today and Tomorrow*, p. 60.

¹⁶ *Ibid.*, p. 55.

very wide influence over his traffic plans.

The planning of Central Milton Keynes (frequently referred to as CMK) was not attended by the same level of anxiety over the environmental effects of the motor car that was expressed in the *Leicester Traffic Plan*. The planners were, nevertheless, alert to the nuisance and danger associated with urban motoring. The last two transport goals listed in the Milton Keynes Master Plan were as follows: '[a] safe and environmentally attractive transport system, one which minimises nuisance from noise and pollution' and '[p]rovision for free and safe movement as a pedestrian'.¹⁷ After the creation of the Master Plan, these goals influenced the detailed planning of CMK, which was carried out in the early 1970s by the Corporation's City Centre Group. Yet the goals were overlaid with a confidence that the open site would allow not only for the planning of a safe and pleasant environment, but also for the free movement of motor vehicles. The man in charge of planning the centre, Chief Architect and Planning Officer for Milton Keynes, Derek Walker, noted that 'it was because of the green field situation that Central Milton Keynes could be designed to accept the motorcar without the problems facing existing centres.'¹⁸ This was a clear point of departure from Leicester's Traffic Plan, but the measures that the City Centre Group employed to protect the environment of CMK rested on the same basic principles as those used by the planners in Leicester.

The first of these principles, as promoted in *Traffic in Towns*, was that urban motor traffic required a hierarchy of roads. The hierarchy selected had four levels, starting with the encircling grid roads that were to eliminate most of the through-traffic. The subsidiary roads would then allow traffic destined for the centre to be dispersed evenly and effectively. The principle of allowing for ease of pedestrian movement was also adopted, with plans for a network of pedestrian ways similar in extent to those proposed for Inner Leicester. This was to be largely separate from the road system, but pedestrian ways were frequently to run parallel to roads if the character of the road allowed. The main route of pedestrian circulation was to be sited in a central ground-level shopping complex, which would provide both horizontal segregation from motor vehicles and protection from the weather. The arrangement relied, therefore, on a simple set of

¹⁷ MKDC, *The Plan for Milton Keynes (Volume One)* (Milton Keynes, 1970), p. 14.

¹⁸ CBS, D-MKDC/157/1, Milton Keynes Development Corporation and Department of the Environment minutes.

measures, without the technological innovations included in the plans for Inner Leicester. However, the basic aim was the same as that of the Traffic Plan, as the following quotation from the outline plan for CMK suggests: '[g]reat emphasis would be placed on the quality of the road system and tree planting ... [and] the movement of people and traffic in superb surroundings'.¹⁹

A closer examination of the evolution of the plan for CMK, or the Central Area Plan as it was titled, reveals further parallels to that of Inner Leicester. These reached beyond the utilitarian aim of facilitating safe and efficient pedestrian circulation, as the goals set out in the final plan suggest. Not only was an efficient and economically successful centre sought, but also one that replicated the complex social functions of the best traditional centres. The goals were: 'diversity, viability, flexibility, *identity*, accessibility, safety and *interaction*' [italics mine].²⁰ This desire for diversity and interaction appeared to date back as far as the outline plan for CMK in the Master Plan. The writers, Terence Bendixson and John Platt, in their account of the planning of Milton Keynes, described it as 'a rambling place arranged around pedestrian squares and malls' with parking pushed to the margins. They also noted that the design had a 'strong resemblance' to that for the centre of Hook, the proposed Hampshire New Town that was never built, which featured plans for pedestrian movement on multiple levels.²¹ This original rough plan was, therefore, a similar mixture of the modern (multi-level malls) and the traditional (rambling arrangements of public open spaces) that was promised for Leicester. Although development on multiple levels was not pursued by the City Centre Group, it retained provision for open spaces in the Central Area Plan. These took the form of wide boulevards and squares, as well as a public park adjacent to the built-up portion of CMK.

In a further parallel to Leicester, the pedestrian network of CMK was designed to help CMK to appear as a single entity to the visitor by making it navigable on foot. As noted above, a ground-level system of pedestrian circulation was chosen for CMK. The Central Area Plan explained that the pedestrian ways would, therefore, 'link all parts of the Centre to all other points without steps'.²² The decision to avoid the need for steps

¹⁹ CBS, D187/2 Extracts from board minutes, 1969-74.

²⁰ Ibid.

²¹ T. Bendixson and J. Platt, *Milton Keynes: Image and Reality* (Cambridge, 1992), pp. 129-30.

²² CBS, D187/2 Extracts from board minutes, 1969-74.

reflected a concern, shared with Leicester, with making movement on foot as easy as possible. An early report illustrates the depth of this concern very well, by stating that a key aim was to ‘minimise walking and carrying distances ... to provide attractive, direct and continuous lines of movement’ and to provide ease of movement for all, especially ‘the aged, handicapped, infirm, and mothers with prams’.²³ Walker recalled that walking distances became an obsession during the design phase of CMK.²⁴

Yet the decision to restrict pedestrian circulation to one level represented a contrast between the plans for Inner Leicester and CMK. Whereas Smigielski promoted walkways and pedestrian conveyor belts on multiple levels, Derek Walker and his colleagues shied away from such innovations. This preference for keeping people on ground level extended to the interior of the main shopping complex, which was the dominant architectural feature of the plans for CMK. Within this complex, there would be a ground-level selling floor throughout. This appears to be indicative of a difference in outlook between the planners of Leicester and Milton Keynes. It was said in the Central Area Plan that the pedestrian network of CMK would ‘not [be] requiring the user to learn new or strange urban skills’ as a consequence of being on one level, suggesting that its creators thought that a more complex system on multiple levels might be confusing and off-putting to users.

The decision to avoid the introduction of bold architectural or technological features to aid pedestrian movement in CMK certainly sat well with the guiding principle of the Milton Keynes Master Plan: to attempt to plan according to people’s preferences rather than to impose things that they, the planners, hoped would be popular. The City Centre Group was no doubt also aware that there was a general crisis of confidence in the architectural and planning professions in the late 1960s and the 1970s. The view that post-war planning would improve people’s lives had been replaced in many observers’ eyes with the notion that planning had made a negative impact. Most notable amongst the perceived planning failures were the slum clearances, which were often criticised for disrupting communal ties and transferring residents to new housing estates with no consultation and little or no attempt to establish their preferences.²⁵

²³ CBS, D-MKDC/287/3, City Centre Group interim reports: 1, 3, 6 and 7.

²⁴ D. Walker, *The Architecture and Planning of Milton Keynes* (Ann Arbor, 1982), p. 58.

²⁵ G. E. Cherry, *Cities and Plans: The Shaping of Urban Britain in the Nineteenth and Twentieth Centuries* (London, 1988), pp. 153-5.

The plan for CMK was certainly not a retreat from planning or modernism, however, but rather the application of a modest modernism that replicated the arcades, high streets and boulevards of established urban centres. The road system of CMK was designed to facilitate that arrangement by eliminating through-traffic and distributing the remaining traffic efficiently to avoid congestion and canalise the busiest traffic away from pedestrians. This was to be achieved with a minimum of ‘grade separation’, which was the term used for aligning roads or pathways at junctions at different heights (or ‘grades’) to avoid the disruption and danger of crossing streams of traffic. The use of this method was restricted within the centre to raising the main distributive roads above ground and the creation of underpasses for pedestrians at a limited number of busy junctions. The third tier of the CMK road hierarchy was represented by boulevards running east to west, which were designed to fulfil the same commercial function as the traditional high street, whilst being freed from the responsibility of carrying heavy traffic. They were designed both to allow for relatively light and slow traffic and to have a continuous shopping frontage running along their sides at the points where they passed through the shopping core of CMK.²⁶

Ample space was also proposed for the pedestrian, including a wide central reservation on the boulevards intended to be a ‘promenade for strolling’. Plans for generous tree-planting along the roads were also proposed to help create the desired ambience.²⁷ The low-rise character of the proposals for CMK was maintained in the form of surface car parking, offering a further contrast to Leicester’s Traffic Plan, which proposed numerous multi-storey car parks in and around Inner Leicester. Provision for parking included proposals for spaces between the shop fronts and the boulevards just below street level, prompting Bendixson and Platt to describe them as ‘classic city streets expanded to provide room for the age of the Ford Sierra’.²⁸ It appears that, although the design of CMK had evolved from the ‘rambling’ centre of the Master Plan, the desire to create a place where pedestrians could linger and interact in a way reminiscent of the best existing city centres remained. Reflecting on the resulting development of CMK, Derek Walker considered it to represent a return to the ‘the urban tradition’ of pride in

²⁶ CBS, D187/2 Extracts from board minutes, 1969-74.

²⁷ Ibid.

²⁸ Bendixson and Platt, *Milton Keynes: Image and Reality*, p. 131.

its 'squares, arcades, parks and boulevards'.²⁹ In planning for this outcome, Walker and his colleagues demonstrated a strong affinity with the Leicester planners, even though there were many differences in terms of methods. Although Smigielski's embrace of multi-level circulation and new technology contrasted sharply with the simple, low-rise character of CMK, the desired result was the same: to create a city centre that performed all the traditional functions and was fit for the motor age.

The alignment and design of major urban roads

The city centre plans for Milton Keynes and Leicester both relied on a hierarchical system of roads as an important means of protecting the urban environment. The succeeding sections show that this principle was also applied in the city-wide plans. However, the planners of Milton Keynes and Leicester were both well aware that the design and siting of the roads at the top of this hierarchy had major social and environmental implications of their own. They were not alone, as this was a significant concern amongst British planners in the 1960s. Although the balance of opinion in the profession held that the construction of new primary roads (usually in the form of urban motorways) was necessary, it was understood that such roads could be visually intrusive and create lines of severance. These drawbacks were rarely acknowledged in the late 1950s, when new road construction was being promoted as a way to accommodate growing car use, but environmental concerns were increasingly aired at the planning conferences, discussed in Chapter Two, in the following decade. In a parallel development, the later 1960s witnessed a large number of local campaigns against specific road schemes. New roads were opposed both on environmental grounds and also on the grounds that construction was attended by noise, disturbance, and the demolition of houses and other properties.

The heightened awareness of the problems associated with urban road building was reflected, in different ways, in the transport planning of Leicester and Milton Keynes. In Leicester, the Traffic Plan provided the basis of traffic planning for the city and a proposed network of new primary roads. The plan was produced in 1964, at a time when anxiety over the effects of urban road building was relatively low, and included

²⁹ Walker, *The Architecture and Planning of Milton Keynes*, p. 17.

the multi-lane Inner Motorway loop and a series of radial urban motorways, all of which ran through densely packed areas of the city. Nevertheless, the Traffic Plan displayed a sensitivity towards the impact of new urban roads that was absent from the 1952 Development Plan that preceded it. As a result of his review of the Development Plan, Smigielski blocked any further construction of the half-completed inner ring road from the 1952 Plan, stating that it 'ploughs through the living fabric of the city'.³⁰

In the short interval between the publication of the Traffic Plan and the designation of Milton Keynes in 1967, attitudes to urban road building had begun to change amongst planners and the public. By the late 1960s, the urban motorway was no longer simply a concept in Britain: concrete examples, such as the Chiswick Flyover, existed and were often criticised by the press and public for their negative environmental impact.³¹ This reaction made many planners, including those of Milton Keynes, anxious about the design and siting of urban roads. At an early stage of Milton Keynes' planning, it was noted of urban motorways that '[t]he insertion of such megastructures into an existing urban fabric has already resulted in major social and visual problems'.³² Public anxiety and opposition to new roads continued to grow in the late 1960s and 1970s, leading to the abandonment of major road schemes, most notably the urban motorway network proposed in the Greater London Development Plan.³³ Planners found themselves at odds with the balance of public opinion, including Smigielski, whose road plans were successfully opposed by the city's residents, as will be discussed below.

Looking at Leicester's road-building plans in more detail reveals much about the nature of Smigielski's concern over the impact of new roads. He rejected full motorisation in Leicester partly on the basis that it necessitated a level of road building that would have been intrusive and necessitate too much demolition. Beside this, his decision to cancel construction of the southern section of the city's inner ring road - one of his first acts as City Planning Officer - was done partly on the basis that the route would destroy historic buildings, and partly on the basis that it would sever the centre of the city from its immediate surroundings. He defended his decision to officers from the MOT, by

³⁰ Smigielski, *Leicester traffic plan*, p. 2.

³¹ Starkie, *The Motorway Age*, p. 73.

³² CBS, D-MKDC/223/7, Papers on new town design.

³³ P. Hall, *Great Planning Disasters* (London, 1980), pp. 56-86; see also Starkie, *The Motorway Age*, pp. 70-82.

asserting that it would sever the city centre from the planned civic centre.

Smigielski also modified the design of the western section of the inner ring, which he criticised as dividing the centre into ‘inorganic parts’ and cutting it off from the River Soar. The modified design included measures to reduce severance by providing underpasses for pedestrians, the removal of large roundabouts featured in the original scheme, and placing part of the new road underground.³⁴ In his criticism of the inner ring, Smigielski demonstrated a level of environmental sensitivity greater than the road’s designer, Leicester’s City Engineer and creator of the 1952 Plan, John Beckett, who defended the road against the City Planning Officer’s attacks on it. He also appeared to be ahead of some of his other contemporaries in the planning profession. His plan to canalise main traffic flows well away from Inner Leicester stood in contrast to Buchanan’s hypothetical traffic plan for Norwich, which included the siting of an urban motorway deep in the city’s historic core - only hundreds of yards from its Norman keep.³⁵ Underlining the forwardness of his thinking, not many of those outside Smigielski’s Department appeared to share his concerns regarding severance. Smigielski recalled having to fight ‘a long and bitter campaign’ with Council officials for the abandonment of the southern section of the inner ring.³⁶ Neither was support for abandonment immediately forthcoming from the MOT. One officer wrote: ‘I rather suspect there is nothing fundamentally “wrong” with the inner ring road’.³⁷

Severance was Smigielski’s main concern. His objection to the inner ring was its route, which he considered disruptive to the commercial, administrative and industrial functions of Inner Leicester, especially to the operation of its many inter-dependent factories and workshops, rather than any visual or aural impact that it might have. Indeed, the urban motorways proposed in the Traffic Plan were wider than the inner ring and had elevated sections, promising a greater visual impact. John Gold referred to such interventions, as laid out in the Buchanan Report, as having ‘fitted the thinking of the time – including the curious obliviousness to the resulting environmental conditions.’³⁸ The motorway system in the Traffic Plan was never built, but the

³⁴ Smigielski, *Leicester traffic plan*, pp. 1-2.

³⁵ Buchanan, *Traffic in Towns*, p. 120.

³⁶ Smigielski, ‘Leicester’, p. 147.

³⁷ TNA, MT 107/49, Development Plans – Leicester County Borough Council: initial proposals.

³⁸ Gold, *The Practice of Modernism*, p. 107.

environmental results of the re-modelled western section of the inner ring attracted criticism similar to that expressed by Gold. Writing in the early 1970s, local historian Jack Simmons spoke of the unwelcoming aspect of the gyratory system created at its northern end, St Nicholas's Circle. He wrote that the scheme had created an isolated island of development that could only be reached on foot via walkways that were 'ingeniously hidden'. He complained, overall, that '[t]he whole of this development has been dictated by the motor-car; and in the course of realising it the pedestrian ... has been at some points forgotten'.³⁹ However, reaction to certain elements of the road scheme was not entirely negative, demonstrating that there was at least some early enthusiasm for Leicester's experiments in modernism. The *Leicester Mercury* greeted the opening in 1968 of the system of pedestrian underpasses at the Newarke positively, stating that '[i]t guarantees freedom from traffic ... At the same time it provides an attractively bright and airy walk-under'.⁴⁰

In the following decade, Leicester residents began to express rather more negative views of road building. This reflected the national trend towards opposing such schemes described above. In Leicester, the major target of opposition was the proposed section of the city's motorway ring running from Belgrave Gate to London Road, also referred to as the Eastern Motorway. Approved by the Council in October 1969, this was the first phase in the building of the new road network based on that proposed in the Traffic Plan, which would have necessitated the clearing of existing development outside Inner Leicester on a large scale, if constructed in its entirety. The environmental impact of the road and the threat of demolition aroused local disquiet, which grew into organised opposition, in the form of the St Matthew's Community Association, which was supported by Leicester North West MP, Sir Barnett Janner. It was joined in active opposition by a local priest, whose church, St James the Greater, lay in the path of the prospective new road. The Council pressed ahead with preparations regardless, compulsorily purchasing 169 properties along the proposed route.

In the face of the Council's intransigence, opponents of the scheme turned to central government in a bid to win a public inquiry. In 1970, Vivian Page, a headmaster of a junior school in the city was amongst the first to make an appeal for Westminster to

³⁹ J. Simmons, *Leicester Past and Present Vol. 2: Modern City, 1860-1974* (London, 1974), p. 88.

⁴⁰ 'Safely across by under-pass', *Leicester Mercury*, 4 December 1968.

intervene. He wrote to the Junior Minister of Transport, Michael Heseltine, of his concerns over the disruptive effect of the Eastern Motorway, asking the Minister why such roads could not be routed around existing development.⁴¹ Heseltine's reply suggested that a gap had opened between official views and those of the public. He expressed similar disquiet, but took the standard planning line that the local environmental effect depended ultimately on how the road was 'fitted into the urban scene'. Page had the support of Janner, who suggested to the Minister that house building should be the priority in Leicester, rather than roads, given that 11,000 families were on the waiting list for Council houses in the city.⁴²

In 1972, a petition opposing the scheme attracted 28,000 signatures. The criticism prompted the Council to admit that the road as planned would harm the local environment.⁴³ In approving the alignment of the road it conceded that it had 'not take[n] account of the consequential effects of constructing the motorway by way of detriment to the adjoining properties and by way of the disruption of the street pattern'.⁴⁴ As was often the case in other British cities, once Leicester's urban motorway system was poised to move from the drawing board, and into the real world, it promised to be more intrusive than the planners had appeared to appreciate. In 1973, the national government agreed to hold an official enquiry as the road's opponents had demanded, but the Council lost heart and cancelled the scheme the following year ahead of the enquiry's opening.⁴⁵

Like the Leicester planners, and many in other British cities, the planners of Milton Keynes were committed to the construction of an extensive system of major roads. However, the largely open site of the designated area meant that they had a somewhat easier task than their Leicester counterparts, in terms of minimising the effects of road building on existing development. It was not a problem that they could avoid completely, however, because the area contained the town of Bletchley, which had a substantial population of 27,000. In addition, the planners were anxious to fit the grid roads into the landscape sympathetically. The latter consideration was their main

⁴¹ TNA, MT 107/49, Development Plans – Leicester County Borough Council: initial proposals.

⁴² Ibid.

⁴³ B. Beazley, *Postwar Leicester* (Stroud, 2006), pp. 65-6.

⁴⁴ ROLLR, DE 3277/24, Minutes of Council meetings, 21 May 1970 – 27 April 1971.

⁴⁵ Beazley, *Postwar Leicester*, pp. 65-6.

concern and, although they acknowledged the environmental problems associated with urban road building, they were confident that they could achieve it through good design. In this sense, they had a similar attitude to both the Leicester planners and the delegates of the conferences on transport planning discussed in Chapter Two, which was to accept that new urban roads were potentially problematic environmentally, but that this presented a design problem to be overcome. The Milton Keynes planners stated that, in a new city, urban motorways 'if well designed' would 'open up exciting new possibilities and visual experiences for drivers and for the aesthetic qualities of the urban form'.⁴⁶

The topography of the designated area was the first thing considered in the alignment of the grid roads. Once the grid network was decided upon, this was superimposed on the site of the new city and 'bent' to fit its contours. The roads were designed to weave gracefully through the landscape of Milton Keynes, bypassing any important topographical features. The Master Plan stated that the alignment of roads was influenced by 'various landscape criteria' and the desire to avoid 'unnecessary fragmentation of major open space'. It also stated that the alignment of roads would also take advantage of existing features, such as 'woods, parks, farmsteads, hedgerows, [and] trees' in order to give 'variety to the roadside scene'.⁴⁷ In their approach to the grid roads, the planners were following a modernist's sensibility towards the design of rural roads in Britain, which conceded that new roads themselves were acceptable, even beautiful, if well designed and furnished with tidy and standard signage.⁴⁸ They were confident, therefore, that little negative visual impact would derive from the roads. They were no doubt encouraged in this belief by the fact that the roads were designed to be restricted largely to ground level and to a maximum of four lanes.

The minimisation of the negative impact of traffic noise from the grid roads, by contrast, was seen as a thornier design problem. In an early paper, it was suggested that it could be reduced with the appropriate design of adjacent buildings and the introduction of cuttings, walls and earth banks. Reservations at the roadsides of at least a hundred feet were also recommended. Doubts were expressed over the effectiveness

⁴⁶ CBS, D-MKDC/223/7, Papers on new town design.

⁴⁷ MKDC, *The Plan for Milton Keynes (Volume Two)* (Milton Keynes, 1970), pp. 301-2.

⁴⁸ D. Matless, *Landscape and Englishness* (London, 1998), pp. 54-61.

of planting trees and shrubs as a noise screen. However, the author of the paper went on to note that some research had indicated that planting might help reduce noise through the psychological effect on the hearer of screening the cars visually.⁴⁹ The use of these measures was suggested in the Master Plan, although it set no ‘absolute standards’ for noise control and left their precise use to designers in each area.⁵⁰

In the detailed design phase of the new city the question of the environmental effects of the grid roads was revisited. In the detailed planning stages, as Derek Walker recalled, a greater concern emerged over the potential for these roads, or rather the heavy and fast-moving traffic streams that they were expected to carry, to be visually intrusive. It was argued that drivers would spend far more time out of their cars and at home than in them, which switched the focus of attention away from the views *from* the roads towards the views *of* the roads. Roadside planting of trees, interspersed with smaller shrubs to create a dense green barrier between the road and nearby development, became a standard part of the landscaping of the grid roads as a result. Not only were the roads to be adapted to the landscape, but also the landscape would be adapted to the roads.⁵¹ Thus, in Milton Keynes, as in Leicester, the environmental considerations of road building increased in importance, as roads came closer to construction.

The town of Bletchley presented the planners of Milton Keynes with a different set of problems in terms of routing the grid roads. The town’s existing radial road system was deemed to be inefficient, but imposing the grid system on the town would have meant routing major roads through built-up areas. The smaller towns of Stony Stratford and Wolverton also lay within the designated area, but their road systems were not considered to require major modification, due to their smaller traffic-generating potential. In a special study of Bletchley, completed in 1969, Llewelyn-Davies *et al* concluded that the insertion of the grid system was not practicable, because so much of Bletchley was of ‘recent construction’.⁵² It was not explained why recent buildings should be spared demolition to make way for new roads, but it is a fair assumption that they were deemed of more practical and economic value than older properties. With this

⁴⁹ CBS, D-MKDC/223/7, Papers on new town design.

⁵⁰ MKDC, *The Plan for Milton Keynes (Volume Two)*, p. 303.

⁵¹ Walker, *The Architecture and Planning of Milton Keynes*, p. 20; MKDC, *The Plan for Milton Keynes (Volume Two)*, pp. 301-3.

⁵² CBS, D-MKDC/819/15, Special study of Bletchley.

in mind, it is worth noting that, whilst the Milton Keynes planners were reluctant to demolish new buildings, the Leicester planners were prepared to route motorways through densely packed areas of nineteenth-century housing, which was often considered by planners to have little economic or architectural value.

Llewelyn-Davies *et al* produced a follow-up study in 1970, entitled ‘Bletchley Interim Report’, which expanded on the broad recommendations of the special study.⁵³ It confirmed that the application of a grid system, or even the connection of the existing radial system to the grid, was ‘strongly constrained by Bletchley’s existing fabric’. Furthermore, forcing the grid roads into the town was ruled out by the consultants, on the grounds that to do so would be ‘socially and physically disruptive’ and too costly, reflecting growing public anxiety over the detrimental effects of urban road building. Instead, it was proposed that the radial system of Bletchley be merged with the grid system in a transitional area of new development. This approach was adopted to allow traffic originating in the town to merge with the city traffic as smoothly as possible.

The planning of new development

Beside the alignment and design of new roads, the question of how to safeguard the environment of areas outside the centre of the two cities required an answer. The adaptation of existing development was a thorny problem, whereas areas of open land offered the opportunity to plan developments to high environmental standards at the same time as providing good accessibility for motor vehicles with relative ease. This section examines how the latter challenge was met; the former is discussed in the next section. In both sections it is argued that the question of environmental protection was attended to in both cities, and considerable intellectual resources were given to answer it. The answers provided were as different as those given in the cases of CMK and Inner Leicester. In the older city, a high degree of pedestrian-vehicle segregation and multi-level circulation was proposed, whilst in Milton Keynes this approach was rejected in favour of a simple two-level road hierarchy. In doing so, the planners of the new city displayed their intellectual independence and provoked controversy with officers of the MOT and MHLG. The siting of shops and amenities near major roads was a particular

⁵³ CBS, D-MKDC/819/17, Bletchley Interim Report and Local Plans.

bone of contention, which demonstrated that satisfying all environmental demands was difficult even in a new development.

The designated area of Milton Keynes consisted mostly of open land, giving much greater scope to plan almost from scratch. Thanks to its planned grid pattern of primary roads, the new city would be divided neatly into a series of roughly square portions of land. Since each square was bounded on all sides by major roads, it could be treated as an environmental area where heavy traffic was excluded, in accordance with the principles laid out in the Buchanan Report. As noted in Chapter Two, the environmental area was a key concept of Buchanan's. It was envisaged that through-traffic would be excluded in these areas and measures put in place to ensure that traffic within would be of a volume and nature appropriate to the desired environmental conditions. The planners of the new city felt that the grid system would canalise the heaviest traffic flows and would eliminate through-traffic from the grid squares. In other words, the grid system provided the highest level of a hierarchy of roads. In the Master Plan, it was stated that the squares should be serviced internally by another set of roads, which would occupy a lower level of the road hierarchy. These were not the 'secondary distributors' suggested in the Buchanan Report. They were described, instead, as roads of an 'estate' or access character, which were equivalent to the tertiary level of roads described in *Traffic in Towns*. Llewelyn-Davies *et al* justified their decision to adopt a two-level hierarchy by stating that intermediate roads were relatively unsafe. Citing investigations carried out by the Building Research Station, they stated in the Master Plan that 'the intermediate road is ambiguous', thus inviting less caution on the part of drivers and pedestrians, and concluded that 'this is where the majority of accidents occur'.⁵⁴

This rejection of a more graduated road hierarchy placed some theoretical distance between the planners of Milton Keynes and Buchanan. It also put them at odds with the MHLG which, although it pronounced itself satisfied with the Master Plan from an environmental point of view, rejected the notion that intermediate roads presented a particular danger. It stated that such a conclusion was 'not an entirely fair summary' of the research project that had been cited.⁵⁵ Such differences of opinion between the

⁵⁴ MKDC, *The Plan for Milton Keynes (Volume One)*, pp. 22-3.

⁵⁵ TNA, HLG 116/519, MKDC: Master Plan Interim Report.

planners of Milton Keynes and other British planners were quite common, reflecting the intellectual independence of the former. The main consultants had stated this independence very early on by casting a critical eye over some of the popular environmental ‘fixes’ in the planning of the 1960s. In particular, they noted that total pedestrian-vehicle segregation ‘may not be desirable’ and described residential developments of the Radburn type, which featured total segregation, as ‘doctrinaire’ and not entirely successful in practice.⁵⁶ The Radburn concept originated in the United States in the 1920s, but was more often applied in Britain. As well as featuring separate pedestrian ways, it also provided private off-street parking for residents and was seen by many planners in the 1960s as a model for future development. Buchanan, for example, identified the Radburn layout as coming nearest to satisfying the requirements of a motorised society.⁵⁷

There was a further divergence of opinion between the MHLG and the planners of Milton Keynes over the location of activity centres. This was the term given to clusters of shops and amenities in the Master Plan, which stated that such centres would be sited alongside the grid roads. The planners did not want to follow the practice, usual in older New Towns, of having a single cluster of amenities for each locality. Instead, they wanted multiple activity centres on the peripheries of the grid squares in order to give their occupants greater choice in terms of the services they used. They rejected the notion that a grid square should represent a rigidly defined neighbourhood or community, and wanted to prevent the grid roads from becoming psychological barriers between grid squares. As was noted in the preceding chapter, this desire to encourage movement and activity between squares was tied up with a desire to promote freedom choice and freedom of association. Thus it was stated in the Master Plan that the activity centres would break down the appearance of the squares as isolated blocks and that each centre would, in addition, be a ‘place of transition’ from locality to city.⁵⁸ Unfortunately for the planners, the desire to minimise severance clashed with the desire to minimise pedestrian-vehicle conflicts by encouraging people to cross the grid roads. The planners were confident that this basic clash could be resolved, but neither the MHLG nor the MOT was convinced. It was felt by the two ministries that such centres ‘could

⁵⁶ CBS, D-MKDC/223/7, Papers on new town design.

⁵⁷ Buchanan, *Traffic in Towns*, p. 47; see also Bendixson and Platt, *Milton Keynes: Image and Reality*, pp. 93-5.

⁵⁸ MKDC, *The Plan for Milton Keynes (Volume Two)*, p. 305.

reproduce the hazards and inefficiencies of the older highways we sought to replace'.⁵⁹

This disagreement generated some friction between the MOT and the planners, but the consultants put considerable effort into attempting to allay safety fears. They confirmed that the grid roads would offer no frontage access and that safe pedestrian crossings would be provided in the form of attractive underpasses. Furthermore, they stated that vehicle access to the activity centres would be from local roads, rather than the grid roads, and that associated bus stops would be fenced to prevent pedestrians from crossing grid roads from those points. The MOT was not entirely convinced that the measures provided for an environmentally satisfactory situation, asserting that pedestrians would be tempted to cross over the grid roads despite underpasses (due to the extra distance involved in using them) and that drivers would be tempted to use bus lay-bys to pick up and set down passengers. The consultants were forced to concede the first point, feeling that pedestrians were likely to give in occasionally to the temptation of using a shorter route to cross. J. D. Jones of the MHLG also observed that providing underpasses for pedestrians could make crossing physically exerting, writing that 'thought should be given to the pedestrian to whom ramps and steps are a deterrent'. Thus the grid roads were likely to remain barriers, although surmountable ones. Despite this, Llewelyn-Davies *et al* were able to allay most of the fears expressed by the ministries. The MOT concluded that '[t]he planners' concept of pedestrian/vehicle conflict appears to be as safe as can be designed for'.⁶⁰

The consultants had once again followed their own path. Their approach was not in accord with the views of the MHLG and MOT, but had won their approval nevertheless. Thus, a compromise in the Master Plan, between the interests of safety and minimising severance, was accepted. As in the decision to merge the radial system of Bletchley with the grid roads, the compromise was a slightly awkward one that did not fully satisfy all planning aims. This awkwardness of placing activity centres next to grid roads was noticed by the officers who planned development in the grid squares in detail. Bill Berrett was one of those officers. He reflected that the activity centres were 'contradictory', because they were meant to provide a link between squares that would

⁵⁹ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

⁶⁰ Ibid.

itself be divided by a busy road.⁶¹ Ironically, very few planners working on the grid squares encountered problems overcoming this contradiction. Most were given a single square to plan, and simply placed a single activity centre in the middle of their allotted square.

Within the built-up areas of Leicester, there were fewer opportunities to create completely new developments. However, there were a number of open spaces within its city boundary, most notably on its north-western edge, which were developed in response to the demand for new housing. The overall approach of the city's planners was rather different from that of Milton Keynes, particularly in the attachment to pedestrian-vehicle segregation. The aim was to exploit new types of architecture and road patterns to accommodate the car, whilst keeping it as far from pedestrians as possible. This approach was adopted in an undeveloped 20-acre site in the east of the city known as Rowlatts Hill, which was turned into a housing estate. The development of the site, completed in 1963, was based on the principle of total pedestrian-vehicle segregation and had a peripheral access road from which spurs lead into the centre. In this way, through-traffic was to be eliminated. The scheme, as originally conceived, also featured an element of multi-level development in the form of an underground garage with a landscaped roof, which was designed to link a group of tower blocks.⁶²

Immediately to the city's north-west lay a much larger site, known as Beaumont Leys, which the City Council decided to develop as a largely self-contained settlement of 40,000 people. In a sense, this was Leicester's New Town and the closest opportunity it had to match that of Milton Keynes. The outline plan for the development, approved by the Council in 1967, contained many of the transport planning ideas associated with the period, such as a four-level road hierarchy and a separate system of pedestrian ways.⁶³ It was planned with the same confidence as Milton Keynes that motor traffic could be satisfactorily accommodated. A brochure was produced by the Council in 1971, highlighting the plan, which stated that '[f]ull motorization with one or more cars to each family ... is envisaged'. In contrast to Milton Keynes, however, Beaumont Leys was planned for total segregation. The Brochure announced proudly that '[a] child

⁶¹ CBS, D187/77/5, Bill Berrett, 'Where is Milton Keynes?', paper delivered at the Open University, 1982.

⁶² Smigielski, *Leicester Today and Tomorrow*, p. 82.

⁶³ City of Leicester, *Beaumont Leys Development, Leicester* (Leicester, 1971).

walking to school need never meet a car'.⁶⁴ The car was welcome in Beaumont Leys, but only in its proper place. Beaumont Leys was also planned to encourage forms of transport other than the car. This is discussed in more detail in Chapter Six, but it is worth noting here the way alternative transport was approached. The backbone of the development, which was designed in a linear pattern, was a pedestrian promenade around which a series of public open spaces were arranged. A cycle track and monorail track were also envisaged to run alongside the promenade. In this way, in contrast to Milton Keynes, the motor car was pushed to the margins, both physically and symbolically.

The adaptation of existing built-up areas

The planners of both Leicester and Milton Keynes were also faced with the question of how to adapt existing built-up areas to make them acceptable environmentally in the motor age. This was a large task in Leicester, since it was an established city, but the designated area of the new city contained fourteen villages, the towns of Stony Stratford, Wolverton, and New Bradwell in the north, as well as the railway town of Bletchley in the south-east. Much of the existing development in each city consisted of terraced houses of nineteenth-century origin, which were built for the local working-class population and arranged along grid networks of narrow streets. These areas were ill-adapted to accommodating motor traffic and the two groups of planners identified the same environmental problems to be prevalent in these areas: noise and fumes from excessive traffic, the danger from fast-moving vehicles, and the obstruction and visual intrusion of parked cars and delivery vehicles.

The remedies adopted were also similar: provision of off-street parking, the creation of pedestrianised open spaces and the closure of certain streets to through-traffic. Overall, both sets of planners largely avoided proposing sweeping changes and they sought to conserve the existing urban fabric as far as practicable. The reason for this was partly to avoid the expense and upheaval that would have attended bigger changes, but also sprang from an appreciation for the historical, architectural and economic value of the existing urban fabric. The planners' approach to conservation will be discussed in more

⁶⁴ Ibid.

detail in the next chapter, but it is worth noting here that it was in accordance with a wider trend in planning circles towards a greater (though still somewhat limited) regard for Britain's nineteenth-century architectural heritage. Furthermore, in the case of Leicester's scheme of improvements in Clarendon Park, a national trend towards greater public consultation was mirrored.

Leicester's Traffic Plan did not address the question of how to protect the environment of areas outside Inner Leicester from the effects of motor traffic in detail. Instead, the precise nature of environmental measures was determined when specific localities were redeveloped. The city's programme of slum clearance provided some opportunities for such redevelopment. This resulted in a radical reworking of the cleared sites to produce developments along modernist lines, such as the St Matthew's Estate. The estate featured blocks of flats on a zigzag pattern along its fringes. The pattern of the blocks created a series of open spaces that were closed to traffic. Off-street parking was included in the plans. Another plan, much modified later, for cleared land in the Highfields area of the city featured multi-storey towers linked by elevated walkways.⁶⁵ However, such opportunities for complete redevelopment were limited. Only a relatively small proportion of Leicester's housing stock was earmarked for demolition. Furthermore, many of the areas selected for clearance were saved from demolition, because the renovation of worn-out properties became seen increasingly as a cheaper and less disruptive alternative.⁶⁶

This situation left the question open of how to adapt existing parts of the city. It also meant that the adaptation of areas of Victorian housing to the motor age would be tied to more general improvements to such areas, which were often considered to be below modern standards. In particular, older houses often lacked modern facilities, such as hot running water and indoor bathrooms. This was the case in the Victorian suburb of Clarendon Park, where a scheme of improvements was undertaken. The area was designated one of the city's first General Improvement Areas, under the 1969 Housing Act, which offered grants from central government for improvements to old properties and their surroundings. The outline plan of improvements was prepared jointly (and published in 1971) by the Housing and City Planning Departments, reflecting its dual

⁶⁵ Smigielski, *Leicester Today and Tomorrow*, pp. 98-101.

⁶⁶ *Ibid.*, p. 86; Beazley, *Postwar Leicester*, pp. 41-58.

purpose of improving the housing stock and improving the area more generally, which was deemed to be drab and lacking in amenities.⁶⁷ It was noted that one of the most pressing problems was ‘[t]he danger, congestion and annoyance caused by traffic, both parked and moving, much of which has no business in the area’. It was also stated that the streets of terraced houses suffered from a shortage of parking space away from the roadside. Changes to the road system were proposed, therefore, which were unremarkable in their apparent adherence to basic Buchanan principles. Most of the area, bounded by busy roads, was to form an environmental area, whilst the parts in the south and east were to form two more. A three-level hierarchy of roads was also proposed.

Other changes were proposed in addition, which gave the overall plan a similar character to the plans for Inner Leicester. This included the provision of open spaces, to allow people to socialise outside their homes, and measures to improve the appearance of the historic townscape. The plan was sensitive to the historic character of the area and, as in the city centre, aimed to create a setting where this could be enjoyed. The scheme involved the removal of the more objectionable industrial sites to provide open spaces and safe play areas for children. The closures of some streets allowed for small landscaped and planted areas with park benches. Roadside tree-planting (often in paved areas projecting into the carriageway) was also proposed as a means both to improve the appearance of the area and to screen parked cars partially from view. In this way, it was acknowledged that improving the amenities and the appearance of streets in Clarendon Park was ‘[c]losely tied to the regulation of traffic.’⁶⁸ The existing road system was to be retained with the only major modifications to come in the form of closing some streets to through-traffic and a partial one-way system. The scheme was essentially conservationist in character, which will be explored further in Chapter Five.

⁶⁷ City of Leicester Housing Committee, *Clarendon Park General Improvement Area* (Leicester, 1971).

⁶⁸ *Ibid.*, p. 10.

Figure 4.3: *A map showing major areas of slum clearance in Leicester.* (The Rowlatts Hill and Beaumont Leys developments are also shown - in white with orange borders.)

Source: W. K. Smigielski, *Leicester Today and Tomorrow* (London, 2nd edition, 1971), p. 40.

The Clarendon Park scheme was the first in the city to include an extensive process of consultation and proved to be an educative experience for the officers involved. It also made a positive counterpoint to the Eastern Motorway scheme, over which the Council had failed to consult the public, and whose failure would later serve as a hard lesson in the value of public consultation. In the 1960s, the seemingly growing gap between the planning profession's approaches to urban planning and the public's wishes, led to calls for greater public involvement in decision making. Such views were given powerful expression in the Skeffington Report of 1969, which recommend that local authorities

be obliged to consult the public when making major planning decisions. Although Smigielski had frequently spoken against such involvement at professional gatherings as a ‘duplication of the democratic process’, his opposition did not last.⁶⁹ His Department duly made its first experiment in consultation in Clarendon Park. Initially the residents were suspicious and the Council found it difficult to present their case or to get useful feedback at fractious public meetings. It was soon discovered that smaller focus groups (called ‘street groups’) chaired by residents themselves were a much more appropriate forum. In these more relaxed and intimate gatherings, residents were more forthcoming about their hopes and anxieties, and their views could be more readily transmitted to the planners. Smigielski admitted that, not only had the consultation process led him to conclude that consultation was ‘absolutely necessary’, but also that it had led to substantial improvements to the original plan.⁷⁰

In common with the Leicester planners, the planners in Milton Keynes deemed the new city’s existing development to be poorly suited to motor traffic. Whilst Leicester’s planners described Clarendon Park as ‘unsuited in many ways to modern needs’, Bletchley was deemed by Llewelyn-Davies *et al* to possess an ‘inefficient urban structure’ that hampered mobility.⁷¹ Yet, in a further parallel to Leicester, only relatively minor modifications to the urban fabric were advocated. An ‘Interim Statement’ on the existing towns was produced alongside the Master Plan, which set the tone for more detailed proposals. The statement suggested such changes as: ‘street closures, tree planting, rationalisation of car parking and garaging’. No major changes to the road systems were envisaged. Instead, the ‘general intention’ was to ‘re-orientate traffic onto the new city’s main roads’.⁷² Further reports followed, including the Interim Report on Bletchley, which made broadly similar recommendations. It suggested, for example, that the main shopping street of Queensway be closed to through-traffic and have improved car parking facilities and rear servicing. Meanwhile, a case study of the residential area of Whaddon Way advocated ‘new planting, paving and general

⁶⁹ East Midlands Oral History Archive [hereafter EMOHA], RL1687, Planning and the Public [radio broadcast], (Radio Leicester, 1971).

⁷⁰ Ibid.

⁷¹ City of Leicester Housing Committee, *Clarendon Park General Improvement Area*, p. 6; CBS, D-MKDC/819/17, Bletchley Interim Report and Local Plans, p. 19.

⁷² LWFB, ‘Milton Keynes: The Existing Towns: Interim Statement’, in LWFB, *Milton Keynes: Interim Report*, p. 16.

landscaping'.⁷³

This light-touch approach was also applied to the villages in Milton Keynes, which received close attention as the development of the grid squares were examined during the detailed planning stage. The rural ambience and historic character of the villages were seen as especially vulnerable to city traffic, and measures were suggested to protect them. One of the first village plans to be completed was that prepared for the village of Milton Keynes. The plan stated that its first aim was to 'conserve and enhance the special character of Milton Keynes' which, it was stated, could easily be overwhelmed by increased through-traffic. This would be prevented by '[k]eeping the traffic at a level which is appropriate to the scale of the existing roads'. Naturally, this involved the discouragement of through-traffic and also included the conversion of an important road to a cul-de-sac and the retention of existing street widths. In terms of overall development, new housing was planned in the grid square at a respectable distance from the village, to be reached via new roads, but development within the village was to be kept to a minimum.⁷⁴ A parallel can thus be drawn with the improvement scheme for Leicester's Clarendon Park, where traffic management and conservationist aims also crossed over.

Conclusion

Although their methods often differed considerably, the planners of both Leicester and Milton Keynes made concerted attempts to reconcile accessibility with environmental protection. They understood that reconciling these two things would be difficult, but in the spirit of the Buchanan Report, they were confident that they had found a suitable engineering solution to the problem. Both sets of planners found their confidence tested in the face of criticism from central government and, in the case of Leicester, by public protest against the Eastern Motorway. The protest was a sign of the gap that existed between the Leicester planners and the people, which also existed in Milton Keynes. In each of the two cities, despite the rhetoric of approaching planning through careful research into patterns of urban living, the planners were still attempting to plan *for* the people rather than *with* the people. This was true at the level of the Master Plan and the

⁷³ CBS, D-MKDC/819/17, Bletchley Interim Report and Local Plans, p. 53.

⁷⁴ CBS, D-MKDC/231/4, Plans for Milton Keynes village.

Traffic Plan, but public participation in the Clarendon Park scheme showed that there were clear signs of change. The Clarendon Park experiment stood in contrast to the overall plans for the two cities that were based on inferences about the way that people would want to live in the near future. Going hand-in-hand with this was an attempt, particularly in evidence in Leicester, to mould peoples' behaviour and to foster social interaction and a sense of civic identity.

The methods employed in achieving a suitable reconciliation of accessibility and environmental protection differed widely between the two cities. In Milton Keynes, the planners put their trust in a hierarchical road system and, in the centre, a parallel system of ground-level pedestrian circulation. Leicester's approach was dependent on traffic restriction in the city centre, emerging transport technology, pedestrian-vehicle segregation, and multi-level infrastructure. The approaches not only differed from each other, but also represented radical departures from traditional urban forms in Britain, reflecting the magnitude of the planning challenge. Looking beyond the differences of approach reveals that the two sets of planners had a similar idea of what protecting the urban environment meant, and why it was important. The aim was to create safe, quiet and visually pleasing surroundings that would promote civic pride and social interaction. The time and effort they put into planning for environmental protection, and the importance they attached to it, sits at odds with Stephen Ward's assertion that the environmental protection was not pursued with the same vigour as road building in British cities. Both he and John Gold asserted that Buchanan's principles tended to be partially applied, at the expense of environmental areas.⁷⁵

The cases of Leicester and Milton Keynes do not, however, present a challenge to this overall assessment of British planning practice. They should be seen rather as evidence that there were some incidences where Ward's assessment did not apply. Indeed, Milton Keynes was unusual in being a new city that offered an opportunity to satisfy the demands for a pleasant environment and freedom of movement for cars more easily. The New Town of Cumbernauld, Milton Keynes' near contemporary, was another case in point. Leicester, meanwhile, had a City Planning Officer who was particularly anxious to take steps to prevent car use from damaging the urban environment. Beside

⁷⁵ Gold, *The Practice of Modernism*, p. 107; Ward, *Planning the Twentieth-Century City*, pp. 239-41.

this point, road building was ultimately pursued with more vigour than environmental protection in Leicester: only the road proposals in Leicester's Traffic Plan won financial backing from central government (in pared-down form), as discussed in Chapter Two, thus putting the environmental proposals for Inner Leicester in doubt. Simon Gunn's assertion that the roads agenda ultimately won-out, when attempts to apply Buchanan principles were made, is surely pertinent in this case.⁷⁶

The confidence of the planners in Leicester and Milton Keynes was tested at various moments. The public campaign against the Eastern Motorway was a particularly hard lesson for the Leicester planners, which demonstrated that they had underestimated the social and environmental effects of urban road building. The review of the plan and its eventual abandonment mirrored the situation nationally, as described by David Starkie, in which completed road schemes often provoked local anger and prospective roads faced frequently successful public campaigns to stop them.⁷⁷ On a less dramatic level, both groups of planners had to deal with the scepticism about the practicality of their plans from the MHLG, MOT and JUPG. In Milton Keynes, one such problem was the arrangement of the activity centres, which was an awkward compromise between the aims of minimising severance and ensuring the safety of pedestrians. This awkwardness was a good demonstration of the difficulties inherent in detailed traffic planning. Often it was in the implementation of plans and in the latter stages of planning that lessons were learned, as the example of the detailed design of the grid roads also demonstrated. The fears of disruption that led to the planners' reluctance to build major new roads in Bletchley also suggested that they were drawing from recent experiences in other British cities. Overall, the planners in both cities were learning practical lessons, supporting Starkie's view that attitudes to road building in the 1960s changed greatly in the light of experience.

Leicester's difficulties over the Eastern Motorway and its earlier experiments in consultation in Clarendon Park reveal much about the evolving relationship between planners and the public in the 1960s and 1970s. Despite the planners' making great play of their use of social science in Leicester and Milton Keynes, the two cases lend support

⁷⁶ S. Gunn, 'The Buchanan Report, Environment and the Problem of Traffic in 1960s Britain', *Twentieth Century British History*, 22, no. 4 (2011), p. 540.

⁷⁷ Starkie, *The Motorway Age*, pp. 71-81.

to John Gold's and Helen Mellor's view that physical planners were remote from the populations for whom they were planning.⁷⁸ The sociological techniques employed were used simply to make educated guesses about broad patterns of mobility and consumption. Indeed, the very fact that both sets of planners were able to construct overarching plans on quantitative projections of travel patterns, and on inferences relating to people's preferences in such areas as housing and leisure, without canvassing local opinion only underlines this remoteness. Only later in Leicester did Smigielski attempt any form of direct public consultation after overcoming his initial scepticism.

The example of Leicester is a good reflection of what happened nationally in the 1960s, where public acquiescence to - or enthusiasm for - modernist redevelopment gave way to active opposition. It lends support to Gold's view that popular reactions against modernism occurred in the light of bad experiences, such as the partial collapse in 1968 of Ronan Point, a modernist tower block in East London.⁷⁹ The positive press that Smigielski's vision enjoyed in earlier years stood in contrast to the negative reaction to the Eastern Motorway, whilst on a smaller scale, modernist creations like the St Nicholas's Circle development attracted criticism. Lionel Esher, meanwhile, wrote of a 'moral revolution' against top-down planning, which was seen as serving the needs of a privileged few at the expense of the many, which might also be applied in Leicester's case.⁸⁰ Organised opposition was also provoked in 1971 by the redevelopment plans for Loseby Lane to accommodate a multi-storey car park, office block and supermarket, from which private developers appeared to be the main beneficiaries. The objectors' main complaint stood on conservationist grounds, which was an increasingly common stimulus for public action as will be explored further in Chapter Five. In Milton Keynes, Jock Campbell, Chair of the MKDC, said that the new city should be 'a city for people – for individual men, women and children – to live and work in', but the rhetoric employed cannot obscure the fact that the planners were following a preconceived notion of how people would want to live. The plan for the city was based largely on the assumption that lifestyles in it would mirror those in Californian cities. As Mark Clapson noted, Webber's confidence that communities based on free association would rise outside the United States, based as they were on broad forecasts, were 'cogent, but

⁷⁸ Gold, *The Practice of Modernism*, pp. 12 & 107; H. Meller, *Towns, Plans and Society in Modern Britain* (Cambridge, 1997), pp. 69 & 87.

⁷⁹ Gold, *The Practice of Modernism*, pp. 270-88.

⁸⁰ L. Esher, *A Broken Wave: the Rebuilding of England 1940-1980* (London, 1981), pp. 72-88.

conjectural'.⁸¹

Despite the problems, a blanket charge of remoteness should not be applied to either planning regime. The Clarendon Park scheme was the obvious example of a growing desire to involve the public in planning decisions in Leicester, especially when it is considered that the planners persevered with consultation in the face of initial problems. Smigielski's initial resistance to the idea, his later acceptance, and his eventual embrace, were demonstrations of how British town planning was evolving in response to the complex challenges it faced. In Milton Keynes, there was further evidence of an attempt to bridge the gap between planners and planned. In particular, the planners wanted to avoid the paternalism that they felt had shaped the planning of the first new towns, hence their attempts to draw - no matter how superficially - on the expertise of social scientists in an attempt to gain a better understanding of urban-dwellers' preferences. Similarly, the interviews of local residents carried out as part of Leicester's land-use/transportation survey, whilst not an exercise in direct consultation, represented a serious attempt to gather empirical data on people's habits and to plan accordingly.

The planners of Milton Keynes also appeared to be sensitive to the growing public dissatisfaction with modernism, choosing to avoid instituting major architectural and technological innovations. There was a reluctance to emulate the boldest designs, such as Cumbernauld's town centre, which was a single multi-level structure (or 'megastructure' in the terminology of the time).⁸² An early paper on CMK by Llewelyn-Davies *et al* advised against relying on a single piece of architecture as the planners of Cumbernauld had done. The rationale behind this advice was not articulated, but it is a reasonable supposition that they were not convinced of its acceptability to the public. Instead, the paper recommended a mix of uses, styles and building types, with a view to replicating the conditions in old cities, without the traffic problems. Such a centre, the paper continued might include: tree-lined boulevards, 'slow' streets, pedestrian arcades, squares, and climate controlled galleries, which could allow for motorists to 'to pull off and park in a tree-planted square flanked by shops'.⁸³ A particular reluctance to create an unfamiliar environment appeared to underpin this preference, especially one that was

⁸¹ M. Clapson, *A Social History of Milton Keynes: Middle England/Edge City* (London, 2004), p. 30.

⁸² For a discussion of Cumbernauld and megastructures, see Gold, *The Practice of Modernism*, pp.157 & 259-61.

⁸³ CBS, D-MKDC/287/3, City Centre Group interim reports: 1, 3, 6 and 7.

difficult to navigate, hence the remark about not obliging residents to learn ‘strange’ new urban skills.

Overall, taking evidence from this chapter and Chapter Three, the planners were attempting to make Leicester and Milton Keynes amenable to the consumer capitalist subject discussed in Chapter Two. It was expected that the residents of both cities would be part of an affluent and motorised society: both regimes aimed to facilitate an expansion of retail, entertainment and other commercial activities, as well as catering for drivers. In addition, they were also attempting to create good urban citizens who mixed with each other, possessed a strong sense of local identity, and promenaded along tree-lined thoroughfares. We should note the language employed in Milton Keynes of ‘identity’, ‘interaction’, ‘urban tradition’ and the ‘special character’ of the new city as embodied in the villages. Such things were deemed to be threatened if the car was not properly controlled. This thinking was particularly in evidence in Leicester, where Smigielski was keen to foster a sense of identity – such as his desire to preserve the Clock Tower in the city’s ‘spiritual heart’ – and to promote a café culture by providing open spaces for people to linger. This, he said, would make Leicester more like a Continental city where people lived, worked and enjoyed themselves in the city centres ‘puffing politics, gossip and garlic at each other in cafés, wine cellars, at fountains or just sitting anywhere on the piazzas and indulging in *dolce far niente*, an important function.’⁸⁴

Beyond this, each regime’s notion of environmental protection appeared to be intimately tied to the planning concept of ‘amenity’, which was used to describe the quality of surroundings that appealed to the senses. This amenity might also have been pursued as a way to promote good urban citizenship. In his recently completed PhD thesis, James Greenhalgh has argued that the local governments of post-war Hull and Manchester saw the provision of amenity in exactly these terms: good surroundings help to make good citizens.⁸⁵ Architecture played an important part of this concept of amenity, especially in Leicester, where particular attention was paid to the settings of symbolically and practically important buildings. Such efforts recall those of city

⁸⁴ Smigielski, ‘Urban Form in the Motor Age’, pp. 327.

⁸⁵ J. Greenhalgh, ‘Building the Peace: Modernity, Space and the City in Britain, 1939 -1957’, Ph.D. thesis (University of Manchester, 2013).

authorities in the previous century, as described by Patrick Joyce, whereby a sense of civic identity and liberal values were promoted and expressed through the architecture of town halls, libraries and other public buildings.⁸⁶ In a significant change of emphasis, however, more attention was paid in Leicester and Milton Keynes to the design and setting of sites of leisure and consumption, reflecting the priorities of twentieth-century consumer capitalism.

⁸⁶ P. Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London, 2003), p. 52.

Chapter Five

Urban Transport Planning and Conservation

I argued in the previous chapter that the planners of Leicester and Milton Keynes understood that reconciling accessibility for motor vehicles with the protection of the urban environment was a considerable challenge. In this chapter, I look at how they resolved another potential conflict: the desire for accessibility with the protection of the historic fabric of the two cities. Such an exploration is particularly relevant to the history of urban planning: historians, such as Alan Dobby and Roger Kain, have noted that the 1960s and 1970s were an important phase in the evolution of conservation and transport planning, which changed in response to each other and to the pressures of post-war modernity, in the form of demand for modern housing and more commercial and industrial floor space.⁸⁷ In addition to this, the chapter explores how policies of traffic planning and building conservation were related in ways other than the resolution of a simple conflict. It looks, for example, at the points where these areas of policy intersect with each other in the areas of urban amenity, pedestrianisation, and public participation in planning.

As will be discussed in more detail below, Dobby, Kain and John Pendlebury have each noted that discussions of how to accommodate full motorisation, together with concrete traffic plans, added a further stimulus to a growing debate over the value of the historic environment, which in turn put traffic planning on the defensive as conservationist arguments were increasingly deployed in opposition to urban road building.⁸⁸ Such a reaction was disruptive to the belief, often held by planners, that there was no conflict between accommodating mass car use and conservation. In this chapter, I argue that the transport planning and conservation of Leicester and Milton Keynes in 1960s and 1970s were inter-related in a way that parallels the historiography of transport planning and conservation in post-war Britain as a whole.⁸⁹ In particular, I note that, in attempting to

⁸⁷ A. Dobby, *Conservation and Planning* (London, 1978); R. Kain, *Planning for Conservation* (London, 1981).

⁸⁸ Ibid.; J. Pendlebury, *Conservation in the Age of Consensus* (London, 2009).

⁸⁹ In addition to the works cited immediately above, see: J. Pendlebury, 'Alas Smith and Burns? Conservation in Newcastle upon Tyne City Centre 1959-68', *Planning Perspectives*, 16, no. 2 (2001), pp. 115-41; B. Cullingworth and V. Nadin, *Town and Country Planning in the UK* (London, 14th ed., 2006); P. Larkham, 'The Place of Urban Conservation in the UK Reconstruction Plans of 1942-1952', *Planning Perspectives*, 18, no. 3 (2003), pp. 295-324.

plan a highly motorised form for the two cities, the planners of Leicester and Milton Keynes came to the realisation that there was a conflict between motorisation and conservation, and that efforts to resolve this conflict brought the issue of conservation into sharper focus.

This chapter is divided into six sections. The first section explores the historiography of conservation planning in the post-war period with particular reference to traffic planning, which will highlight some of the themes that the following sections engage with. The second section looks at the broad approach to conservation shown in the early city plans for Leicester and Milton Keynes (the Interim Plan and the Master Plan for Milton Keynes, and the *Leicester Traffic Plan*) to provide the context for the sections that explore the intersections of conservation planning with traffic planning in detail. The third section concentrates on the plans for Inner Leicester, Clarendon Park, and the existing towns situated in the designated area of Milton Keynes. The fourth section looks at the plans for the villages located in the Milton Keynes designated area, which is followed by a fifth section on public involvement in the planning of the two cities. Finally, the closing arguments of the chapter are contained in a concluding section.

A historiographical overview of conservation and urban planning in Britain, 1940-1978

The dramatic rise in the importance of building conservation in urban planning in post-war Britain has attracted the attention of a number of historians and other commentators. Writing in the late 1970s and early 1980s respectively, Alan Dobby and Roger Kain noted the speed with which conservation went from a relatively minor consideration in the early 1960s to a significant part of urban planning activity in the 1970s. This change coincided with architectural modernism's fall in popularity, a loss of faith in urban planning and redevelopment, and the rise of public participation in planning. The rise of conservation has been seen, therefore, as one aspect of a broader change in the conduct of post-war urban planning. As such, it continued to attract the attention of historians, like John Pendlebury. He wrote that the redevelopment of the 1960s was 'the high watermark of modernist planning'.⁹⁰ Using the example of modernist planning in Newcastle-upon-Tyne, he argued that it was 'first lauded, then criticised and ultimately vilified, paralleling a national and international loss of faith in

⁹⁰ J. Pendlebury, 'Alas Smith and Burns?', pp. 115.

the ability of the “expert planner”’, before also noting that ‘[u]nhappiness at the loss of the old went hand-in-hand with dissatisfaction with the form and quality of the new.’⁹¹

Alan Dobby, writing in 1978, noted that conservation was still on the margins of urban planning in the early 1960s, recalling that it was ‘covered in less than a page’ in the 1964 edition of Lewis Keeble’s *Principles and Practice of Town and Country Planning*, which was a widely respected reference guide to the discipline at the time. Dobby contrasted this state of affairs with the situation in the late 1970s, by which time conservation was ‘no longer peripheral’ and the notion that demolition was cheaper than refurbishment ‘had been reversed as a generalisation’.⁹² John Pendlebury tracked this change in attitudes in more detail, noting that ‘some sensibility about the importance of historic cities and conservation developed during the 1940s, 1950s and 1960s ... albeit in what might now be regarded a very rudimentary form’.⁹³ He identified the wartime and immediate post-war plans of planners like Patrick Abercrombie and Thomas Sharp as ‘a body of planning documents that specifically recognised the significance of the historic city as a whole’ for the first time.⁹⁴ He pointed to certain trends that were discernible thereafter, such as a growing desire to conserve groups of historic buildings, rather than to pick out individual buildings for preservation, which had been the practice previously. This new appreciation of ‘group values’ was reflected in the passing of the Civic Amenities Act (1967), which granted local authorities powers to protect and enhance the character of areas deemed to be of special architectural or historic interest. The Act allowed such areas to be designated as conservation areas, which placed a new emphasis on conservation as a positive process of renovation and renewal as opposed to preservation, which normally implied a negative step of preventing destruction.⁹⁵ Despite these developments, Pendlebury concluded that amongst planners ‘there was a broad consensus that conservation should take its place in the wider activity of rational and comprehensive town planning.’⁹⁶

The existence of such a consensus was not surprising, given that the types of buildings deemed ‘historic’ or worthy of preservation expanded slowly from a narrow base, which was dominated by medieval buildings. Peter Larkham noted, for example, that in the

⁹¹ Ibid., p. 137.

⁹² Dobby, *Conservation and Planning*, p. 15.

⁹³ Pendlebury, *Conservation in the Age of Consensus*, p. 61.

⁹⁴ Ibid., pp. 47-8.

⁹⁵ Cullingworth and Nadin, *Town and Country Planning in the UK*, pp. 298-9.

⁹⁶ Pendlebury, *Conservation in the Age of Consensus*, p. 61.

1940s ‘Georgian was only just becoming respectable, while the conservation of Victorian and industrial heritage was virtually unheard of.’⁹⁷ Nevertheless, Roger Kain asserted that the growing appreciation of more recent architecture was a significant development, observing that the post-war period saw ‘the proliferation of pressure groups taking on specific concerns or particular areas’.⁹⁸ A Georgian Group was formed in 1937, for example, followed by the Victorian Society in 1958. As the losses of old buildings to redevelopment began to accumulate in the 1960s and 1970s, public disquiet began to grow and (as Pendlebury observed) led to public campaigns to prevent redevelopment in places such as Woburn Square in Bloomsbury and Covent Garden. This ‘popular challenge’, Pendlebury concluded, combined with financial restraints and a loss of faith in experts and modernism to put the ‘fundamental construct’ of comprehensive town planning under ‘sustained pressure’ in the 1970s.⁹⁹ Dobby also commented on this sea change, noting that growing public interest in conservation was tied to worries over economic decline, disappointment with the post-war political settlement, and dissatisfaction with the physical environment.¹⁰⁰ In the late 1960s and 1970s, therefore, planning was entering a new phase in which the public demanded more say in decisions in reaction to the perceived short-comings of top-down planning and the destructive nature of speculative property development. Pendlebury observed that ‘some planners began to embrace this new environment, both in terms of support for greater public participation in the planning process and of a sympathetic view towards conservation’.¹⁰¹

Historians have also acknowledged that the rise of conservation as a planning concern was related to developments in traffic planning. Pendlebury noted that in the 1940s planners like Patrick Abercrombie and Thomas Sharpe considered change to be inevitable in the urban fabric due to technological and economic development, including greater use of motor vehicles. Pendlebury identified the planners’ basic problem as ‘the need to reconcile functional modernity with the historic qualities of place’. He went on to observe that, although the destructive impact of new roads was acknowledged, ‘it was automatically assumed that cars should be provided for’.¹⁰²

⁹⁷ Larkham, ‘The place of urban conservation’, p. 304.

⁹⁸ Kain, *Planning for Conservation*, p. 7.

⁹⁹ Pendlebury, *Conservation in the Age of Consensus*, p. 61.

¹⁰⁰ Dobby, *Conservation and Planning*, p. 16.

¹⁰¹ Pendlebury, *Conservation in the Age of Consensus*, p. 67.

¹⁰² *Ibid.*, pp. 45-7.

Later, as the tide was turning against comprehensive redevelopment in the late 1960s and 1970s, he noted that anti-road campaigners in Newcastle, York and Bath deployed conservationist arguments as part of their rhetoric. Writers like Kain also acknowledged the importance of intensifying motor culture to the rise of conservationism: '[p]art of the reason for the growing number of environmental groups lies in the increasing pressures which the twentieth century has brought on all fragile environments ... [including] the twin assaults of the motor car and the property speculator'.¹⁰³ Meanwhile, Dobby also noted that the publication of *Traffic in Towns* served to raise awareness of the threat posed to the historic features of towns and cities by road building. He wrote that the Council for British Archaeology published the pamphlet *The Buchanan Report and Historic Towns* in response the following year, which warned that statutory powers of preservation were designed in an era "before the full effect of the motor car, through Buchanan, became apparent" and called for greater protection to be afforded to historic centres and street patterns.¹⁰⁴ The planners were often slow to respond to such concerns. Dobby noted that Buchanan complained of an "excessive concern for conservation" and a lack of respect for modern architecture in an address to the Royal Town Planning Institute in 1975.¹⁰⁵ Indeed, it was not always acknowledged that redevelopment and conservation were in any way in conflict. Sometimes the reverse was argued, as in the case of Newcastle-upon-Tyne's 1961 Development Plan, where the city's proposed ring of urban motorways around its Georgian core were justified partly on the basis that the area would be protected from the damaging effects of excessive traffic.¹⁰⁶

Pendlebury's study of planning in Newcastle, from which the observation above is drawn, is instructive. Firstly, it lends support to his assertion that conservation planning was developing before conservation became a serious concern amongst a wider public. For example, there was an early shift away from total redevelopment of the city centre, as proposed in the Newcastle's wartime plan, in its Development Plan of 1954. This was followed by the designation of four preservation areas in another Development Plan of 1963, which were seen as areas where policies of enhancement and restoration would operate. Secondly, it showed that a concern for conservation could go hand-in-hand

¹⁰³ Kain, *Planning for Conservation*, p. 7.

¹⁰⁴ Dobby, *Conservation and Planning*, p. 54.

¹⁰⁵ *Ibid.*, p. 29.

¹⁰⁶ Pendlebury, 'Alas Smith and Burns?', p. 122.

with an attachment to modernist town planning. Pendlebury wrote that Newcastle's planners had an 'evangelical zeal' for the latter, as encapsulated in the phrase 'Brasilia of the North', which T. Dan Smith, the leader of the Council, used to describe the planners' vision for the city.¹⁰⁷ On the other hand, its creation of preservation areas put Newcastle at the forefront of British conservation planning and drew a favourable comparison with Leicester from Pendlebury. He noted that Leicester was 'a city associated in this period with a strongly conservation-minded City Planning Officer', but where 'specific areas for protection were not designated until after the 1967 Civic Amenities Act had created the national system of conservation areas.'¹⁰⁸ The aims of preservation and modernisation were not deemed to be in conflict by the planners in Newcastle.

Leicester and Milton Keynes: approaches to conservation and town planning

An analysis of the relationship between traffic planning and conservation in Leicester and Milton Keynes would be incomplete without an understanding of each of these elements within the overall approach to town planning in the two cities. In the case of Leicester's approach to conservation (a discussion of the situation in Milton Keynes follows) such an analysis is particularly fruitful, because Smigielski made several direct statements of his views on conservation and its relationship to post-war modernity and traffic planning. He also had much to say on the historic qualities of Leicester. In an interview on local radio, Smigielski recalled his arrival at the city. He confessed that he thought it was ugly at first, but then he noticed New Walk: 'what a city: they have a promenade ... what a wonderful city.'¹⁰⁹ Such a response from a city planner in the early 1960s to Leicester's predominantly nineteenth-century core should not come as a surprise to historians of town planning; neither should his picking out of one Leicester's Georgian features for praise. Indeed, in another interview, Smigielski asserted that there was 'very little of historic character left in Leicester' in architectural terms.¹¹⁰ He also wrote the following about the city: 'on the evidence of the scant remains of historic environment it can hardly be called an "historic" city in the same sense as Oxford,

¹⁰⁷ Ibid., p. 115.

¹⁰⁸ Ibid., pp. 135-6.

¹⁰⁹ BL, C900/09006 C1, Helen Hampson, interview with Konrad Smigielski [sound recording], Smigielski, Conrad, 1908 Apr. 13- (speaker, male; Retired Town Planner) (Radio Leicester, 1998).

¹¹⁰ EMOHA, RL1659, Sun Alliance Building [radio broadcast] (Radio Leicester, 1971).

Cambridge and York.’¹¹¹ As we have seen in the previous two chapters, this apparently limited regard for Leicester’s built heritage went hand-in-hand with Smigielski’s plans for substantial modernisation of the city’s core and beyond. He insisted that ‘[w]e must build Leicester of the technological age ... These changes are inevitable ... [but should] follow a logical plan’.¹¹² Furthermore, in common with the planners of Newcastle, he did not see any contradiction between preservation and modernisation. ‘It is not a dilemma – old and new – we want both’, Smigielski announced.¹¹³

Smigielski’s enthusiasm for modernisation and his limited regard for the architectural qualities of Leicester as an essentially nineteenth-century industrial city should not, however, obscure his very real feeling for the importance of conservation. He explained in an article that, although historic buildings might be functionally obsolete or structurally inferior to modern buildings, they ‘must be maintained for all time – if we are a civilized society – for the sake of their historic, architectural or even sentimental value and for the sake of the continuity of tradition.’¹¹⁴ During his time in office, Smigielski demonstrated that he was prepared to act in accordance with this pronouncement by preventing developers from altering the Victorian façade of the Marshall and Snelgrove Building in the Market Place, and by preventing the demolition of the Victorian Sun Alliance Building in Town Hall Square. His decision to appeal to central government to have the latter listed, without the Council’s knowledge or consent, was a particularly strong example of his desire to protect buildings that he thought deserved retention. Smigielski’s employers supported the redevelopment of the building and responded to his actions by suspending him on full pay for the last year of his contract, effectively bringing to a premature end his period in office as City Planning Officer.

Looking back at the dispute, Smigielski remained confident that he had made the correct planning choice: ‘any planner worth his salt would have done the same ... Why should I spend ten years of my life doing my best for the city and then dirty my hands at the last?’¹¹⁵ It is particularly interesting to note that a strong sense of the value of

¹¹¹ W. K. Smigielski, ‘Leicester’, in J. Holliday (ed.), *City Centre Redevelopment* (London, 1973), pp. 144-5.

¹¹² BL, C900/09006 C1, Helen Hampson, interview with Konrad Smigielski.

¹¹³ EMOHA, RL1659, Sun Alliance Building.

¹¹⁴ Smigielski, ‘Leicester’, p. 166.

¹¹⁵ H. Martin, ‘Konrad Smigielski: My Tempestuous Love Affair with Leicester’, *Architecture East Midlands*, no. 54, (1974), p. 14.

buildings in groups lay behind Smigielski's actions. He stated that he did not think that the Sun Alliance Building or its Victorian neighbours were of great architectural value, but felt that the proposed new building was not suited to the 'quality' of the Town Hall Square, which he thought had a quiet 'unity of style'.¹¹⁶

Although Smigielski was able to reconcile his attachment to modernism with a commitment to building conservation, he believed that such an accommodation could not be achieved without careful planning. He thought that this was particularly the case when it came to traffic planning, as the following quotation from the previous chapter indicates: '[t]he challenge of our time is the replanning of our cities to the requirements of motor traffic without destroying their scale and their historic and architectural qualities'.¹¹⁷ Smigielski wrote this passage in 1960, giving an early indication of his anxiety over the destructive potential of motorisation towards the urban fabric and environment. As we have seen in the previous chapter, the rejection of the proposed ring-and-radial road network that formed part of the city's 1952 Development Plan was amongst his first acts as Leicester's CPO. This was done largely on the grounds that the inner ring road would be intrusive and damaging to the environment of Inner Leicester, but it was also stated that it was rejected because the inner ring threatened to destroy some 'historic buildings', most notably Leicester's Georgian crescent on King Street. The road was also criticised, because the western section separated the city's Castle Gardens group of historic buildings and the ruins of the Roman forum from the rest of the city centre.¹¹⁸

As a result of the perceived deficiencies of the road provisions of the 1952 Development Plan, a decision was made to begin work on the 1964 Traffic Plan. The plan's opening statements convey the concern felt within the city's Planning Department over the implications of post-war development and economic growth for Leicester's architectural heritage: '[w]ith the present commercial pressures and great opportunities for change, the historic values of Leicester are in danger and the local character of the City could easily be swamped'.¹¹⁹ The implication that Leicester's character was worthy of protection is interesting, since it widened the scope of

¹¹⁶ EMOHA, RL1659, Sun Alliance Building.

¹¹⁷ W. K. Smigielski, 'Review of Roads and their Traffic, Ernest Davies (ed.) (London, 1960)', *The Town Planning Review*, 32, no.2 (1961), p. 166.

¹¹⁸ W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), pp. 1-2.

¹¹⁹ *Ibid.*, p.17.

preservation to any buildings or groups of buildings where the need to preserve character could be invoked. Moving on specifically to traffic planning, the Traffic Plan stated that it ‘must be preceded by a careful and detailed analysis of the townscape’.¹²⁰ In this regard, the Planning Department proved as good as its word by commissioning a detailed report on the city’s townscape from the architectural critic, Ian Nairn and the architect and illustrator, Kenneth Browne, entitled *Townscape of Leicester*. Nairn was an interesting choice, since he was outspoken in his criticism of much of post-war urban development in Britain. Like Smigielski, both Brown and Nairn were interested in the group values of historic buildings and in ‘townscape’ features. The notion of a townscape, which gained currency in the 1960s through the writing of Nairn and Gordon Cullen, held that towns and cities were more than the sum of their parts architecturally.¹²¹ The concept was both modernist and conservationist, like Smigielski, and celebrated the psychological and aesthetic effect of pleasing juxtapositions of buildings, including the ancient with the modern.

Nairn and Browne’s study of Leicester stated that any plan would only succeed in human terms “if it is based on a sympathetic knowledge of what exists now” and that the group values should be considered, since “towns are more than individual buildings”.¹²² As I have argued, full motorisation was rejected in favour of the Integrated Transport System, because the former was considered to be far too destructive and intrusive. The recommended solution was identified as fulfilling six conditions, including the preservation of ‘historic values and local identity’.¹²³ The key environmental provision of this plan was the protection of the city centre as the ‘spiritual heart of the city’, which was identified as such partly on the basis that it contained the most important historic buildings.¹²⁴ Thus conservation was acknowledged as a key part of Smigielski’s approach to traffic planning even though his opinion of Leicester’s historic urban fabric was generally low in purely architectural terms.

The planners of Milton Keynes had rather less to say publicly on the subject of conservation. Naturally, they had more open space in which to fit the buildings and

¹²⁰ Ibid.

¹²¹ See G. Cullen, *Townscape* (London, 1961).

¹²² Nairn and Browne quoted in Smigielski, *Leicester traffic plan*, p. 17.

¹²³ Ibid., p. 65.

¹²⁴ Ibid., p. 59.

infrastructure of the new city, thus avoiding the potential conflicts associated with the redevelopment of areas of an established city. However, conservation was far from ignored, because there was much existing development to be considered. As discussed in the previous chapter, the designated area contained four towns and fourteen villages, together with various archaeological sites. The architecture of these settlements ranged from that of the Middle Ages to the post-war period, with the nineteenth-century being particularly dominant in the towns, which were largely products of industrialisation. Perhaps with one eye on the sensibilities of the existing inhabitants, the Milton Keynes Development Corporation inserted some remarks relating to conservation in their original design brief to the planners. It included instructions to incorporate the towns into the new city but in a way that retained a sense of individual identity and to fit the existing villages and hamlets into the development, ‘not sweep them away’.¹²⁵

Figure 5.1: *The towns and villages in and around the designated area of Milton Keynes.*

Source: Milton Keynes Development Corporation, *The Plan for Milton Keynes* (Milton Keynes, 1970), loose insert.

¹²⁵ CBS, D187/1, Extracts from board meetings and press cuttings, 1963-69.

The planners responded with a series of robust statements in their Interim Report that touched upon the relationship between conservation, on the one hand, and amenity and local identity on the other. Special importance was attached to the role of the villages, for example, as ‘areas of unique character and high amenity’.¹²⁶ In a reflection of the climate of the late 1960s, a number of conservation measures were suggested, including the renovation of some buildings and the creation of ten conservation areas.

Conservation of housing in the towns and villages, it was hinted, was to serve both practical and preservationist aims. The document said that a ‘vigorous programme of conservation in existing towns and villages is needed’ and that a policy would follow of improving derelict housing of sufficient architectural quality even in instances where improvement came at a greater cost than redevelopment.¹²⁷

The Milton Keynes planners’ position on conservation was developed to some extent in the subsequent Master Plan. Although very little extra detail was provided, the document set out an overall approach that was sensitive to the pre-existing elements of the designated area. Existing features to be integrated into the new city included trees, wildlife and woodland (including rare species of elm and butterfly) as well as various historic and archaeological sites. The stated desire to conserve important buildings was underlined by the decision to commission a report by the architectural historian and conservationist, Professor Sir Nikolaus Pevsner, on the architectural heritage of the area. A number of buildings and their qualities were listed in the report, which was dominated by pre-Victorian examples from the villages. The nineteenth-century architecture of the towns attracted less praise and attention from Pevsner, reflecting the fact that building styles from the Victorian period were still unfashionable in the 1960s in many quarters, and were compared unfavourably to those of earlier periods.¹²⁸ The planners of the new city also appeared to make similar comparisons in their judgements of architectural merit in the designated area. At the opening of a public consultation before the Master Plan’s publication, Walter Bor said: ‘most of [the villages] ... are of considerable architectural and historic value. They too represent a major asset for the new city. Their identity will be respected and their environment enhanced by careful

¹²⁶ LWFB, *Milton Keynes: Interim Report* (Milton Keynes, 1969), p. 52.

¹²⁷ *Ibid.*, p. 35.

¹²⁸ CBS, D-MKDC/803/8, Master Plan: Technical Supplement Number 8: Preservanda and Conservanda in Milton Keynes.

conservation.’¹²⁹ Stony Stratford alone of the towns was praised in the Master Plan as ‘well worthy of conservation’, whilst Wolverton and New Bradwell were considered to have a ‘severe appearance’ that required environmental management, which contrasted with the ‘rich variety’ of the villages.¹³⁰ However, despite this rather unflattering initial assessment of the towns, all the existing settlements were deemed to require more detailed study as part of the planning of the new city. Furthermore, what little acknowledgement there was for the towns stood in contrast to the opinion volunteered by a visiting journalist in 1964. George Cyriax of the *Financial Times* described Bletchley and Wolverton as ‘extremely unattractive’ and wrote with disdain of their ‘Gothic railway architecture, red brick and belching chimneys’.¹³¹

Overall, conservation was certainly more than a passing concern for the planners of Milton Keynes, even if they placed relatively little value on much of the designated area, and proposed conservation partly on the basis of maintaining the housing stock. In common with Smigielski in Leicester, they were interested in the visual amenity value of the historic environment as well as the value that the inhabitants might be expected to place on the historic urban fabric. The latter consideration had a particular importance for the planning of Milton Keynes, because conservation was seen as one possible means of allowing the various settlements to retain a sense of identity and history. In other words, a wide purpose was identified for conservation that went beyond historic preservation. This outlook was set against a background of a growing appreciation for the amenity value of buildings in groups and a willingness to consider the value of more recent architecture. The next two sections explore how these ideas were applied in relation to detailed traffic planning.

Milton Keynes town plans and the plans for Clarendon Park and Inner Leicester

As discussed in the previous chapter, the planners in the two cities wanted to protect the environment of Inner Leicester and the Milton Keynes towns from excessive or intrusive motor traffic. The central proposal was to eliminate through-traffic, which was allied to proposals for pedestrianisation of some areas. Such measures were related to a desire to improve the urban environment more generally, which was explicitly related to

¹²⁹ CBS, D187/26, Press reports on Milton Keynes.

¹³⁰ MKDC, *The Plan for Milton Keynes (Volume Two)* (Milton Keynes, 1970), pp. 329-332.

¹³¹ George Cyriax, ‘The £400m Bletchley New City – Buchanan into practice?’, *Financial Times*, 3 April 1964.

the renewal of historic buildings in the case of Leicester. In the Milton Keynes towns, meanwhile, a direct link between traffic planning and conservation was never clearly articulated. However, the damaging effects of motor traffic on the historic fabric were acknowledged. In Fenny Stratford, the oldest part of Bletchley, it was suggested that a decline in the quality of some historic buildings on its main street had been caused in part by the vibration and pollution from passing motor vehicles. The decline was considered serious enough to warrant demolition: it was noted with regret that '[u]nfortunately the deterioration of building condition has gone too far for restoration or rehabilitation to be practicable in many cases.'¹³² There were, of course, other planning issues that created pressure for change to the urban fabric that had implications for conservation and planning more generally. It was acknowledged in both cities that there was pressure for more office and retail space, and for housing equal to modern standards, which drew various responses from a conservation and traffic planning point of view.

As has been noted, Smigielski thought that architectural quality only existed in Inner Leicester in isolated areas, although he also said that other collections of buildings in the centre had group value. This allowed for the planning of retail developments like the Haymarket Centre, which led to the demolition of an entire block of existing buildings, including the historic Bell Hotel. Several multi-storey office developments were also permitted, which replaced existing buildings. In *Leicester Today and Tomorrow*, the buildings around the Clock Tower (which included the original Haymarket group) were described as 'of poor architectural quality' as part of the justification for the redevelopment of the area into a pedestrian square surrounded by large-scale retail and office development. Thus redevelopment in response to commercial pressures was linked with plans for pedestrianisation. In the document, the only structure envisaged to remain (although several blocks in fact survived) was the city's landmark Victorian Clock Tower for 'the continuity of tradition rather than its artistic merit'.¹³³

In Milton Keynes, the townscape and architecture of the towns were not examined in detail until a series of special planning studies were undertaken between 1970 and 1975. Llewelyn-Davies *et al* were commissioned to carry out a series of studies of Bletchley,

¹³² CBS, D-MKDC/819/26, Bletchley Interim Report: Technical Supplement Number 9: Fenny Stratford and Linear Park Local Plans, p. 13.

¹³³ W. K. Smigielski, *Leicester Today and Tomorrow* (London, 2nd edition, 1971), p. 60.

whilst the MKDC produced its own collective plan for the northern towns of Wolverton, Stony Stratford, and New Bradwell. In the latter document, the aesthetic qualities of the three northern towns were not viewed particularly positively. Although it was acknowledged that Stony Stratford's High Street was 'picturesque', Wolverton was described as 'industrial and uncompromising'.¹³⁴ It was also noted that the towns contained areas of nineteenth-century by-law housing that were 'monotonous in their layout'. However, the more nuanced aspects of the analysis led the planners to reject the kind of sweeping changes in response to economic pressures evident in Inner Leicester.

In terms of character, in particular, the assessment of the northern towns was more positive. Wolverton, for example, was described as 'colourful busy and bustling'. The plan for the northern towns went on to state that the retention of character was important: '[m]ore than anything else the Plan is about preserving the special character and identity of the Northern Towns but in a way which allows them to play an important part in the life of the new city'.¹³⁵ In a study of Bletchley, meanwhile, it was noted that a strong sense of community existed in many parts of the town's centre and that this would be 'valuable in providing stability and a sense of "roots" in the rapidly growing new city'.¹³⁶ With these concerns in mind, it was recommended that local character be protected through a 'range of complementary policies, which are concerned not only with the protection of historic buildings, trees, open areas and so on but with the entire fabric of the towns, their setting, scale, local colour and atmosphere'.¹³⁷ Development control was deemed necessary as part of this so that the appearance of new buildings 'should not be intrusive in established areas' and would be of appropriate scale and materials.¹³⁸ In addition, office growth in the northern towns was resisted and only limited retail expansion envisaged.¹³⁹ Therefore, the rather restrictive nature of planning in the Milton Keynes towns, in terms of the permitted style of new development, stood in contrast to that of Inner Leicester where new styles were positively welcomed. It could also be contrasted, incidentally, with the planning proposals for central Bletchley put forward in 1967 by Buckinghamshire County Council. The proposals included multi-level modernist developments and a monorail

¹³⁴ CBS, D-MKDC/779/25, Northern Towns District Plan: Draft for consultation.

¹³⁵ Ibid.

¹³⁶ CBS, D-MKDC/758/3, Bletchley Central Area Plan.

¹³⁷ CBS, D-MKDC/779/25, Northern Towns District Plan.

¹³⁸ CBS, D-MKDC/758/3, Bletchley Central Area Plan.

¹³⁹ CBS, D-MKDC/779/25, Northern Towns District Plan.

station on the main street, Queensway.¹⁴⁰

In both Inner Leicester and the Milton Keynes towns, the planners tended to overlook residential buildings as suitable for conservation. The list of historically important buildings noted in Fenny Stratford, for example, was restricted to the Old Town Hall, the Magistrates Court, St Martin's Church, two coaching inns and a chapel.¹⁴¹ Existing housing in Milton Keynes was often appraised for its architectural quality, but this appeared to be mostly to assess its value as housing stock rather than as a way to aid decisions about conservation. Much of the housing stock was deemed to be of poor or fair quality in structural terms, but amenable to improvement and useful as a source of cheap accommodation.¹⁴² Such areas of housing were often identified as sites of redevelopment when the houses had reached the 'end of their useful life', which was usually placed about ten or fifteen years in the future.¹⁴³ In Leicester, meanwhile, these sorts of assessments had similar implications for the retention of older houses, due to the demand for modern standards in housing provision. The planners had inherited a policy of slum clearance from the late 1940s, which had identified 19,558 homes across the city as sub-standard, many of which were located in the central parts of the city.¹⁴⁴ It was structural soundness and amenability to modernisation, rather than architectural quality, which tended to direct planning policy in respect of housing. Leicester later adopted a policy of creating General Improvement Areas for the renewal of areas of housing deemed structurally sound. The Clarendon Park project, which commenced in the early 1970s, was the pilot for this policy and is discussed below.¹⁴⁵ This prioritising of the improvement of housing standards over conservation in residential areas allowed further scope for redevelopment, particularly in the Milton Keynes towns, where major office and retail development had been ruled out.

Clearly, the value placed on the existing built fabric could influence the scale and nature of road building in the two cities. It has been noted earlier in this chapter that a re-assessment of Leicester's existing townscape led to the abandonment of its partially completed inner ring, which was a legacy of its 1952 plan. Smigielski had successfully

¹⁴⁰ CBS, D187/1, Extracts from board meetings.

¹⁴¹ CBS, D-MKDC/819/26, Bletchley Interim Report: Technical Supplement Number 9.

¹⁴² Ibid.; See also: D-MKDC/819/15, Special study of Bletchley.

¹⁴³ CBS, D-MKDC/819/25, Bletchley Interim Report: Technical Supplement Number 8: Queensway Local Plan; See also: D-MKDC/819/17, Bletchley Interim Report and Local Plans.

¹⁴⁴ B. Beazley, *Postwar Leicester* (Stroud, 2006), p. 41.

¹⁴⁵ Smigielski, *Leicester Today and Tomorrow*, pp. 39-40.

fought a 'long and bitter campaign' against its completion, partly on environmental grounds as argued in the previous chapter, but also on conservation grounds. Justifying the abandonment of the southern section, he wrote: '[t]he southern route would plough through the conservation areas destroying some important historic buildings (the Georgian Crescent) and cutting through New Walk'.¹⁴⁶ Smigielski's action was strongly suggestive of the growth of a conservationist sensibility in the period. This sense is underlined by the acknowledgement in the 1952 plan that the inner ring's route threatened the existence of several (then) Grade III 'listed' buildings, but nevertheless concluded that – with some exceptions – '[n]one are of sufficient interest to justify retention'.¹⁴⁷ However, the proposed route of Smigielski's inner motorway took it through some areas of nineteenth-century housing that had not been identified as slums. This was the type of housing that was later selected for conservation schemes. Clearly Smigielski's conservationism had limits when it came to the successful accommodation of motor traffic. In Milton Keynes, meanwhile, it was decided that the city's grid system of major roads could not be 'brought in' to the towns.¹⁴⁸ This decision was made despite Bletchley being identified as having an 'inefficient urban structure'.¹⁴⁹ It was not made primarily on conservation grounds, but rather on the assumption that the insertion of grid roads would simply be too costly and disruptive. Indeed, one of the reasons insertion was not considered to be practicable was that much of Bletchley was of 'recent construction'.¹⁵⁰

Although the planners of Milton Keynes were reluctant to force major roads through the existing fabric of the new city, they had no objection to the insertion of minor roads in the Milton Keynes towns. For example, they proposed to widen and extend roads to the rear of Bletchley's main shopping street, Queensway, to provide service access to the shops. Queensway was also earmarked for partial pedestrianisation, necessitating a new bypass road to the north. These measures required the removal of a number of residential properties, but this was considered acceptable due to their state of repair, age and appearance. The widening of the rear lanes for servicing was possible due to 'the

¹⁴⁶ Smigielski, 'Leicester', p. 147.

¹⁴⁷ J. L. Beckett and R. Langlands, *City Development Plan 1952: Written Analysis* (Leicester, 1952), p. 41.

¹⁴⁸ LWFB, 'Milton Keynes: The Existing Towns: Interim Statement' in LWFB, *Milton Keynes: Interim Report*; CBS, D-MKDC/819/17, Bletchley Interim Report and Local Plans.

¹⁴⁹ CBS, D-MKDC/819/17, Bletchley Interim Report and Local Plans.

¹⁵⁰ CBS, D-MKDC/819/15, Special study of Bletchley.

age and condition of the housing areas adjoining these lanes'.¹⁵¹ The whole area around Queensway, which was identified as consisting mainly of pre-1918 housing, was considered to offer wider opportunities for redevelopment on the same grounds. The housing and the setting were described as 'generally drab and monotonous, particularly on the northern side where the street spaces are narrower and are not planted with trees'.¹⁵² Redevelopment was, however, envisaged with an eye on the existing character of the area. For example, the commercial buildings on Queensway itself were to be 'retained and improved', and the character of any new buildings were to be 'sympathetic and contribute to that of existing ones'.¹⁵³ In the central part of Bletchley as a whole, an expansion of office space was proposed, but with development largely restricted to four storeys to conform to the existing townscape.¹⁵⁴

The proposals for Fenny Stratford also included this form of selective redevelopment, which attempted to take the existing townscape into account. In the interests of good traffic planning, the planners proposed to remove existing structures in two areas. The first proposal was a simple one of widening and improving the junction of High Street with Aylesbury Street and Simpson Road, which carried with it the possible necessity of demolishing property at its north-west corner.¹⁵⁵ The other was a more complex scheme involving the widening of a portion of Aylesbury Street and the inclusion of a service road running parallel to the main road in front of a parade of shops on the western side. The two roads were to be separated by a landscaped area. The scheme required the redevelopment of the road's eastern side opposite the parade, possibly with a terrace of four-storey maisonettes. The style of development proposed was not justified on any particular grounds, but its general scale and character suggested a desire to have it fit in with its surroundings. Indeed, it was admitted that townscape considerations were important. For example, the demolition and replacement of the little-used Spurgeon Baptist Church was mooted should it fall into disuse, though retention for alternative use was expressed as 'desirable' due to its 'contribution to the townscape'.¹⁵⁶

Very little redevelopment to allow for road building or widening was envisaged for Inner Leicester. As discussed in Chapter Three, the inner motorway was intended to

¹⁵¹ CBS, D-MKDC/819/25, Bletchley Interim Report: Technical Supplement Number 8

¹⁵² Ibid.

¹⁵³ Ibid.

¹⁵⁴ CBS, D-MKDC/758/3, Bletchley Central Area Plan.

¹⁵⁵ CBS, D-MKDC/819/26, Bletchley Interim Report: Technical Supplement Number 9.

¹⁵⁶ Ibid.

relieve the traffic-carrying burden for the area's existing streets. In a further contrast to the towns of Milton Keynes, rather more dramatic departures from the existing styles of architecture were encouraged in the centre of Leicester. This could lead to unusual juxtapositions, such as the Council's scheme to replace the 1930s roof of the city's covered market with a boldly modernist one, which sat rather starkly (if not necessarily unsuccessfully) in contrast with the surrounding Victorian buildings, which Smigielski had worked to preserve. The aim of the changes and the conservationist measures was to improve the site's amenity value and attractiveness as a place of commerce. In addition, the measures were made in support of the Market Place's role as one of the nodes of Smigielski's proposed pedestrian network discussed in the previous chapter.

Figure 5.2: *A model of the proposed redevelopment of Leicester's Market Place, juxtaposing a modernist roof for the market stalls with the city's historic Corn Exchange.*

Source: W. K. Smigielski, *Leicester Market Area: Report of the City Planning Officer* (Leicester, 1963), p.13.

The Clock Tower area represented the centre of this pedestrian network and, as such, was expected to be converted into a pedestrian square, which would have necessitated major redevelopment of the existing buildings. However, the pendulum also swung in

the opposite direction from the Clock Tower scheme towards positive conservation. New Walk, which Smigielski praised as a 'fine example of a Georgian pedestrian promenade', was one of the best examples of Leicester's conservation effort in the period.¹⁵⁷ It was also intended to be a major part of the pedestrian network outlined in *Leicester Today and Tomorrow*. The first steps of the plan were designed to correct the environmental neglect that the area had suffered and what Smigielski identified as shabby and stylistically unsympathetic street furniture. The short-term elements of the renewal scheme included co-ordination of colour schemes for the adjacent properties, removal of the 'clutter' of unnecessary street furniture, surface repair, tree-planting, landscaping, and the installation of street furniture sympathetic to the character of the area. The intention was to create an overall effect in line with the notion of group value, which the following description of New Walk draws upon: '[t]here is a consistent continuity of scale and although the buildings have no outstanding architectural merit the environment as a whole is attractive and unique.'¹⁵⁸ The long-term proposals (which were never carried out) struck a more modernist note. They included a car park under the surface of De Montfort Square, which lay adjacent to New Walk, and the construction of a series of pedestrian underpasses along New Walk where it crossed roads.

The two-fold nature of the plans for New Walk - the enhancement of the historical group value of the New Walk buildings and their setting, together with the addition of some modernist touches - was also apparent in the Clarendon Park scheme, which was examined in the previous chapter. The Council wanted to take advantage of grants offered under the Civic Amenities Act (1967) to renew 'structurally sound' housing and their surroundings.¹⁵⁹ The Victorian suburb was chosen as the site of a pilot scheme and was designated under the Act as the city's first General Improvement Area and, thus, an exercise in positive conservation. This was part of a change of direction in the city's housing policy, which was moving away from slum clearance. This was partly because renovation of old buildings that were structurally sound was increasingly seen as a more cost effective measure. It was also due to the fact that there were fewer buildings left to clear, leaving the planners more time to consider what to do with old housing that was

¹⁵⁷ Smigielski, *Leicester Today and Tomorrow*, p. 77.

¹⁵⁸ Ibid.

¹⁵⁹ City of Leicester Housing Committee, *Clarendon Park General Improvement Area* (Leicester, 1971), p. 1.

never earmarked for demolition.

In addition to renovating the housing, one of the key aims was to reduce the environmental impact of increased motor traffic and parked vehicles. Naturally, these measures also related to the conservation effort in various ways. It was hoped that the reduction of through-traffic and parked vehicles, tree planting (designed to make parked cars ‘less untidy and less conspicuous’) and the creation of pedestrianised areas would provide a better setting for the late-Victorian architecture.¹⁶⁰ In its appraisal of the area, the Council noted the ‘drabness’ of many streets and a ‘general lack of greenery and variety’.¹⁶¹ The general accent was on improving an area of modest architectural value in the interests of good husbandry of resources. However, it was noted that the area possessed several positive features, including the attractiveness of Orlando Road, the ‘views towards the University’, and the ‘vitality and convenience’ of Queens Road as an area for shopping.¹⁶²

Milton Keynes village plans

The need to integrate fourteen villages and hamlets into Milton Keynes raised the question of their conservation. The MKDC attached sufficient importance to the question to give the planners a specific instruction to protect the identity of the villages. The MKDC was itself later given similar injunctions by the MHLG in 1966, and by the Department of the Environment in 1971, reflecting the growing interest in conservation in central government.¹⁶³ This interest found its most clear expression in the Civic Amenities Act, which obliged a planning authority to ‘determine which parts of their area are areas of special architectural or historic interest, the character of which it is desirable to preserve or enhance’.¹⁶⁴ In the case of Milton Keynes, a statement on behalf of the Minister of Housing and Local Government concluded that an aim of the MKDC should be ‘the sensitive integration of buildings and groups of buildings of value into the development – not their destruction.’¹⁶⁵

On their part, the planners of Milton Keynes were willing to abide by both specific

¹⁶⁰ Ibid., p. 10.

¹⁶¹ Ibid., p. 6.

¹⁶² Ibid.

¹⁶³ TNA, HLG 115/942, Milton Keynes Development Corporation: Milton Keynes: the existing villages.

¹⁶⁴ Cullingworth and Nadin, *Town and Country Planning in the UK*, pp. 298-9.

¹⁶⁵ CBS, D-MKDC/757/36, Report of the inquiry into the draft of the North Buckinghamshire New Town (Designation) Order 196: addenda, p.4

ministerial instructions to protect the character of the villages and the relevant provisions of the Civic Amenities Act. They expressed this not only by acknowledging the need for a programme of conservation in the villages, but also by fitting the grid roads around them. Such actions provided a contrast to the plan for North Bucks New City that was produced earlier in the period, in which only some of the villages were to remain as identifiable entities. The Comprehensive Development Area written statement for the city, submitted to the MHLG, said that the villages of Little Woolstone, Shenley Church End, and Upper Weald were to be ‘incorporated’ into townships ‘so far as practicable’, and Loughton in the centre would be redeveloped, whilst one other might form the ‘nucleus’ of an educational centre.¹⁶⁶ Walter Bor reflected disapprovingly that the plan ‘rode roughshod’ over the existing villages.¹⁶⁷

The Master Plan produced by Llewelyn-Davies *et al* largely left the task of integrating the villages into the new city to the detailed planning stage. In the months following its publication, a series of outline plans were duly produced for each village by the MKDC’s Villages Design Team. One of the first was the plan for the village of Milton Keynes.¹⁶⁸ True to one of the key aims attached to conservation in the planning of the new city, the published plan stated that the first aim was to ‘[t]o conserve and enhance the special character of Milton Keynes [village]’. There followed an appraisal of the village’s architecture and layout, which picked out its ‘fine Georgian rectory’ and medieval church, but also noted its Victorian red brick terraces. The plan concluded that: ‘[i]t is the scattered disposition, varied site and separateness of buildings that gives Milton Keynes its distinctive character’. It was also this aspect of the village that was identified as particularly in danger from unbalanced development, which could result in its being turned into a ‘taut and compressed commuter village’.

The other main danger to the village’s distinctiveness was identified as increased through-traffic. As well as strict development control, therefore, various aspects of traffic planning were put forward as key parts of the conservation effort. For example, various methods of keeping traffic at a level ‘appropriate to the scale of the existing roads’ were suggested, including the avoidance of street widening and increased

¹⁶⁶ CBS, D187/77/1, Buckinghamshire County Council, North Bucks New City CDA and Designation, 1: written statement.

¹⁶⁷ M. Clapson, M. Dobbin and P. Waterman (eds.), *The Best Laid Plans: Milton Keynes Since 1967* (Luton, 1998), p. 9.

¹⁶⁸ CBS, D-MKDC/231/4, Plans for Milton Keynes village.

‘visibility splays’ (areas of open land at the end of minor roads at junctions with larger roads that are designed to improve the sight lines of drivers emerging from the minor roads). The planners aimed to retain various other aspects of the village’s road pattern and roadside with a view to preserving the townscape. It was suggested, for example, that the introduction of traffic signs, kerbs, and elements that would make the village roads similar in appearance to busy urban roads, should be prevented. In addition, the grass verges were to remain and no substantial changes to the road pattern were to be made. Access to new housing elsewhere in the village’s grid square was to be provided via new roads. Suggestions for the maintenance of the character of the village and its roads even extended to placing street lighting and signs on walls wherever possible to lessen their intrusiveness.

The plans of the other villages followed the same basic pattern of strong development control in the villages with sensitive development around and within them. Roads were to keep their village character and be maintained in a way that discouraged excessive traffic. These basic policies extended to villages like Old Bradwell, which was described unenthusiastically as having the inter-related characteristics of ‘a workaday somewhat decayed village’ and ‘a resort with unsophisticated mingling of cream limestone and grass’.¹⁶⁹ Its existing walls and verges were to be retained, and the planting of trees and hedges encouraged. An ‘Improvement Scheme’ was suggested, incorporating a colour scheme and the co-ordination of planting and streetscape details. Aside from this the roads were to ‘remain as they are’ and not be up-dated.¹⁷⁰ These measures reflected a concern with the roads as important vantage points from which the villages could be viewed. This notion was made explicit in the assertion that planting and the repairing of walls around Old Bradwell’s bus stop was ‘essential’ due to its being the entry point to the village by road. Meanwhile, in the Milton Keynes village plan, it was stated that: ‘[t]he retention of as many views through and out of the village is regarded as an important aspect of retaining the quality of Milton Keynes.’¹⁷¹

Conservation and public involvement in the planning process

As historians of planning have noted, the growth in dissatisfaction with urban planning in the latter half of the 1960s, most notably related to anxieties about the consequences

¹⁶⁹ CBS, D-MKDC/886, Proposals for villages within the City of Milton Keynes.

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

for the urban environment and historic fabric, led both to greater public engagement with planning matters (normally in the form of protest) and to calls for formal public involvement in the planning process. Rising anxieties over the future of historic buildings was an important force behind this trend, evident in both Leicester and Milton Keynes. In the latter, the MKDC and the consultants were keen to display sensitivity to local opinion from the beginning. Jock Campbell's opening remarks at the first MKDC board meeting included an insistence that they must build 'a city for people, with people', rather than plan a city 'from a great height'.¹⁷²

In the area of conservation policy, the views of the residents of the designated area had made an equally early contribution. In the official inquiry into the original designation of the new city, several residents and residents' groups had made formal objections on the grounds that it threatened historic buildings and their surroundings. A resident of Great Linford, for example, wanted the village to be excluded from the new city's designated area, because it was 'a delightful village with many listed buildings grouped in a particularly pleasant setting'.¹⁷³ The Calverton Residents Association also wanted their village to be excluded due to its having 'real amenity value' and its 'particular historic interest'.¹⁷⁴ Although only certain villages (including Calverton) were excluded from the designated area after the inspector, Mr G. C. Godber, reduced its size, he also insisted that 'churches, village centres, particular groupings such as the typical pub, green and tree, should be capable of incorporation' in the design for the new city.¹⁷⁵ Such was the context in which the planning of Milton Keynes proceeded. By the time that the detailed planning stages of the new city were reached in the early 1970s, the views and suggestions of residents in publicity documents were actively sought by the MKDC.

It is clear from the public consultation experiment in Clarendon Park presented in Chapter Four that planning in Leicester was also affected by the trend towards greater public involvement. It is also clear from the previous chapter that fears over the destruction to homes and disruption to communities lay at the heart of local opposition to road building. In addition to such fears, there was growing public anxiety over the

¹⁷² CBS, D187/1, Extracts from board meetings and press cuttings, 1963-69.

¹⁷³ CBS, D-MKDC/757/35, Report of the inquiry into the draft of the North Buckinghamshire New Town (Designation) Order 196, p. 17.

¹⁷⁴ *Ibid.*, p. 18.

¹⁷⁵ *Ibid.*, p. 26.

threat to the city's built heritage from road building and other development schemes, which led to more active involvement on the part of the public in planning and added to pressure from below for planning that was more responsive to public opinion. Konrad Smigielski acknowledged, rather condescendingly, that he received letters of complaint from 'elderly ladies' about the demolition of old buildings in the city. He also noted that some British people were anxious about the effects of post-war development and disliked modernist architecture: '[w]hy we are [sic] losing any desire for excitement, for new things, unfamiliar things? It is a trend for conformity ... losing faith in our technological age.'¹⁷⁶ Some of this anxiety related directly to road building as indicated by the following remarks of local historian, Jack Simmons, on the inner ring in the mid-1970s: 'the Old Town of Leicester has been almost entirely destroyed ... not merely the streets but their very names ... In their place we have a huge swathe of concrete, taking the traffic through the city north and south, with windy and desolate stretches, of concrete again, on either side of it.'¹⁷⁷

Despite such anxieties, there was also evidence of genuine enthusiasm for modernisation in the early 1960s. The *Leicester Mercury*, for example, wrote optimistically in 1963 of the city's future: '[s]tage by stage Leicester will be given a new and stronger pulse. In reshaping Leicester there will be snags galore but the planners have a wonderful opportunity ... modernisation has begun, in 27 years' time [in the year 2000] Leicester could and should be a greater and, architecturally, more pleasing city'.¹⁷⁸ In the early years of his tenure as CPO, Smigielski felt the necessity of reminding the Leicester public of the value of the city's historic buildings. He recalled making 'scathing remarks' over the neglect of New Walk 'to make them angry and to provoke them into action'.¹⁷⁹ The argument that Smigielski needed to stimulate local interest had lost its force by the late 1960s and early 1970s, however, as redevelopment in Leicester began to attract criticism. Some schemes, such as the Eastern Motorway, provoked organised opposition (described in the previous chapter). The public also found its voice in favour of conservation when opposing the redevelopment of the Loseby Lane area of the Old Town.

¹⁷⁶ EMOHA, RL 1711, Konrad Smigielski [radio broadcast] (Radio Leicester, either 1971 or 1972).

¹⁷⁷ J. Simmons, *Leicester Past and Present Vol. 2: Modern City, 1860-1974* (London, 1974), p. 86.

¹⁷⁸ 'Leicester in 1990', *Leicester Mercury*, 1 May 1963.

¹⁷⁹ Smigielski, 'Leicester', pp. 171-2; see also: 'Leicester: the shabby city', *Leicester Illustrated Chronicle*, 3 November 1967.

The Loseby Lane area had been earmarked for redevelopment by Leicester's planning department as part of a 1963 plan for the area around the Market Place.¹⁸⁰ After an interval of eight years, in April 1971, the Council prepared to acquire a block of properties adjacent to Loseby Lane via a Compulsory Purchase Order. At around the same time, an unnamed private developer approached the Council with an outline plan for redevelopment. The plan included a multi-story car park, a ground-level supermarket and an office block, and necessitated the widening of Loseby Lane and the demolition of the existing properties on either side. This was a common occurrence in the redevelopment of city centres in the post-war decades. Much of the impetus for development came from the private sector, which had access to the necessary capital. In addition, as Lionel Esher observed, private developers had a knack of staying 'a jump ahead of the planning context' by identifying and purchasing commercially promising, but run-down, sites in the city centres before local authorities made detailed plans.¹⁸¹

Unfortunately for the developer in this case, members of the public reacted with hostility to the Council's efforts to acquire the properties on the site, interpreting this action as a sign of its intention to demolish them. The *Leicester Mercury* received letters expressing opposition to demolition, including one calling for the re-formation of the Leicester's Civic Society in order to provide organised opposition. The Civic Society was duly re-established within weeks, by which time the Council had become ill-disposed towards the scheme in the light of the public attitude. In July 1971, it gave support in principle to an alternative outline scheme prepared by the City Planning Department that retained the buildings on Loseby Lane. The scheme also allowed for the pedestrianisation of Loseby Lane and nearby Carts Lane.¹⁸²

The Civic Society continued its activities in support of conservation in Leicester, encouraging efforts to preserve the Sun Alliance Building, for example, and scoring a number of other victories besides. This marked a new phase in the relationship between the public and the planners in the city in respect of conservation, whereby the former became more actively critical and the latter became more sensitive to public opinion. The Council's plans for a car park on Loseby Lane provided the spark that lit the flame of public anger towards the destruction of Leicester's historic buildings. This altered

¹⁸⁰ W. K. Smigielski, *Leicester Market Area: Report of the City Planning Officer* (Leicester, 1963).

¹⁸¹ L. Esher, *A Broken Wave: the Rebuilding of England 1940-1980* (London, 1981), p. 54.

¹⁸² ROLLR, DE 3277/218-19, Town Planning Committee Minutes 4 June 1969 – 3 May 1972; see also Smigielski, 'Leicester', pp. 158-60.

relationship was thus a direct consequence of the city's attempts to accommodate the car, which provided much of the impetus for redevelopment. Stuart Bailey, the chair of the steering committee that would oversee the creation of the Civic Society was in no doubt about this. He asked rhetorically, in reference to the Loseby Lane development, whether the planners were not 'over-planning' and whether they were 'not, in fact, planning with the motor car, and the needs of the motor car, principally in mind?'¹⁸³

Conclusion

The development of conservation in Milton Keynes and Leicester bears a strong resemblance to that described for the 1960s and 1970s in the historiography of British planning. There were strong signs that planning in the two cities, particularly in Leicester, was evolving in a way that reflected changing attitudes to the existing built environment. There was a growing appreciation of the importance of building preservation, which extended towards an embrace of positive conservation and of the architectural value of groups of buildings. Furthermore, there was a readiness to consider the protection and revitalisation of Victorian architecture, which was frequently the object of disdain and disparagement. In terms of planning policy, this set of attitudes manifested themselves in positive responses to the initiatives of central government, such as the use of provisions of the Civic Amenities Act to renew older residential areas, and also in the routing of new urban roads in ways that were more sensitive to the historic environment. Compare, for example, the plans for the villages in North Bucks New City with those produced by the MKDC, or note Smigielski's abandonment of Leicester's inner ring. There was also a greater responsiveness to public opinion and a readiness to involve the public in decision making. In Leicester, there was an almost complete change in the CPO's attitude to public involvement from opposition to positive enthusiasm as a result of his experience of the Clarendon Park scheme. This change was mirrored and perhaps influenced by a willingness amongst the local public to fight plans to demolish historic buildings, like the Sun Alliance Building and those in the Loseby Lane area.

As was the case in Britain as a whole, the growth of motor traffic raised questions of conservation in Milton Keynes and Leicester. As noted above, Smigielski warned of the threat posed by motor culture to the historic environment in 1960, and rejected

¹⁸³ RL1672 Changing Leicester [radio broadcast] (Radio Leicester, 1971).

Leicester's inner ring in 1964 partly on conservationist grounds. In Milton Keynes, meanwhile, coping with the conservation problems associated with excessive traffic was a recurring theme. It was felt in particular that heavy traffic simply did not sit well with historic buildings, thereby detracting from their amenity value. Pendlebury observed that the existence of a conflict between planning for the car and for conservation was often denied by planners. Smigielski, whilst asserting that there was certainly potential for conflict, was ultimately one of the deniers. He maintained that change in the urban fabric was inevitable in the face of commercial and residential development, and rising car use. The execution of Smigielski's Traffic Plan would have involved the destruction of swathes of Victorian Leicester, whilst further redevelopment in the city centre would have attended the pedestrianisation of the Clock Tower area.

The apparent contradiction between Smigielski's redevelopment plans and his dire warnings about the destructiveness of car culture on the city finds its resolution in Smigielski's identification of the city with the historic metropolitan core. This was the area that he felt should be kept free both of destructive new roads and intrusive through-traffic. It was also Smigielski's view of the city centre as a meeting place that led him to seek to conserve historic parts of Leicester's centre and to redevelop other parts. In other words, parts of historic Leicester were to serve as settings for public interaction and pedestrian circulation, whilst others were to be sacrificed to the same end, as in the case of the Clock Tower area. Smigielski's anxiety about the threat posed to historic urban settings by the car and its associated infrastructure grew more acute in the late 1960s and early 1970s. This threw the need for careful planning in places like Clarendon Park into sharp relief.

The planners of Milton Keynes did not directly address the question of whether or not planning for the car and conservation were fundamentally at odds. The largely undeveloped space of the designated area allowed them to avoid facing such questions head on. Nevertheless, they were careful to avoid such conflicts by aligning the grid roads away from existing settlements. In the case of the villages, this decision bore the stamp of a wider conservationist agenda, but the decision to avoid bringing grid roads into the towns was made largely for environmental and practical reasons. As in Leicester, the planners of the new city had a relatively low regard for nineteenth-century architecture, which allowed them to consider the insertion of new bypasses and service

roads in the towns. Nevertheless, the re-planning of the towns and the sensitive incorporation of the villages into the overall scheme for the new city sits at odds with the popular image of Milton Keynes as a British Los Angeles or, especially, as a purely modernist experiment that left no room for historic buildings in its pursuit of automobility and novelty.

Perhaps the most interesting aspect of the planning of Milton Keynes at the point of intersection between the needs of conservation and traffic planning was its broad affinity with that of Leicester and many other cities. The desire to create an environmentally satisfactory city led the planners of the new city to consider the existing townscape for its amenity value and its importance as a signifier of local identity. This in turn led to plans for positive conservation, which - due to the changes felt necessary in the face of rising car use - was characterised by a mixing of old and new elements. For example, the buildings on Queensway were to be renewed at the same time as the thoroughfare was pedestrianised and a new bypass was created, necessitating the demolition of buildings considered less important. In Leicester, the New Walk scheme was designed to facilitate pedestrian movement and to be a mixture of positive conservation and modernist adaptation in the form of underground car parks and pedestrian underpasses. In short, the perceived need to adapt the two cities to the car - both in terms of vehicular circulation and environmental protection - not only put the needs of conservation into sharper focus, but also acted as an extra spur to changes to the existing urban fabric.

Chapter Six

Alternative Modes of Transport

This chapter looks at how planning for transport modes other than the car was carried out in Leicester, Milton Keynes, and its forerunner, North Bucks New City. This was an important aspect of urban traffic planning in the 1960s and 1970s, as planners sought to cater for those who did not drive, whilst some explored ways to achieve a transfer from private to public transport as a means to alleviate traffic congestion and its associated problems. This exploration frequently involved an examination of emerging transport technology, such as monorails, light railways, automated taxis and moving walkways. The planning of Leicester and Milton Keynes has particular relevance to this aspect of planning in these decades. The *Leicester Traffic Plan* and the plans for North Bucks New City both had a significant transfer in use from private to public transport as a key aim, particularly for daily journeys to and from workplaces and similarly routine trips. A transfer also persisted as a subsidiary aim in the early period of Milton Keynes' planning. To achieve this, the planners looked towards new transport technology and its potential either to transport large numbers of people quickly and cheaply across cities or to compete with the car in terms of quality of service. In all three planning cases, the aim was never realised.

In this chapter, I argue that interest amongst urban planners in effecting a transfer from the private car to alternative modes arose from a practical desire to accommodate the car successfully (by, for example, discouraging its use at peak periods or on busy routes) rather than to limit car ownership or to challenge car culture. In the examples used in this chapter, such attempts failed, because they did not receive the necessary financial and political support from key decision-makers in local and national government. I argue that this failure can ultimately be traced back to a relatively weak interest amongst these decision-makers in alternative methods of transport or in challenging the dominance of the car, which was insufficient to overcome their doubts over the practicality and costs of the alternative transport schemes that were proposed.

Guy Ortolano has written about the plan for North Bucks New City, concluding that its failure was *not* due to a flat refusal on the part of the Government to support schemes

that aimed to secure a major transfer to public transport.¹ This chapter endorses this view and applies it to the *Leicester Traffic Plan*. It notes, furthermore, that interest in finding new ways to allow public transport to play an important role in urban transport, alongside the car, extended beyond Buckinghamshire and Leicester to include central government. In common with Chapter Two, this chapter shows that explorations in this area frequently involved new technology, but also shows that walking - a less technologically mediated form of alternative transport – was given consideration.

The chapter is divided into three sections, which identify three phases in the planning of Leicester and the new city in North Buckinghamshire. The first section looks at the *Leicester Traffic Plan* and the plan for North Bucks New City, the second section looks at the development of the Milton Keynes Master Plan and the plans for Leicester's own 'new town' of Beaumont Leys, and the third section examines the measures employed to put the Master Plan and the Traffic plan into effect.

North Bucks New City and the Leicester Traffic Plan

The plans for North Bucks New City were approved by Buckinghamshire County Council in 1964, the same year as the publication of the *Leicester Traffic Plan*. The plans had many more things in common besides this, most notably in their embrace of alternative transport modes in an attempt to adapt urban life to the era of mass motorisation. As has been noted in Chapter Three, Konrad Smigielski, Leicester's City Planning Officer from 1962 to 1972, had great anxieties about the effect of the motor car on urban life, referring to the car as fast becoming a 'tyrant' and stating that there were 'signs of the decline of the urban civilization' in the United States as a result of unrestricted car use.² Fred Pooley, Buckinghamshire's chief architect and planner and the man who headed the planning of North Bucks New City, shared some of Smigielski's anxieties about the motor car. Pooley was described by Terence Bendixson and John Platt in *Milton Keynes: image and reality* as 'far from being a car-hater', but

¹ G. Ortolano, 'Planning the Urban Future in 1960s Britain', *The Historical Journal*, 54, no. 2 (2011), p. 498.

² W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), p. 57; W. K. Smigielski, 'Leicester Traffic Plan', *The Journal of the Town Planning Institute*, 51, no. 2 (1965), p. 71.

he thought that its use was frequently problematic in an urban setting.³ In the plan for North Bucks New City, it was suggested that widespread car use in large urban areas generated levels of congestion that undermined the economic functions of those settlements. It was asserted, therefore, that allowing heavy use of the car in new settlements would ‘economically limit town size below that which provides the desired choice in housing, work and leisure’.⁴ Pooley acknowledged that the car was ‘here to stay’ in towns and cities, but thought that its presence meant that first-class public transport was needed to secure a sizable voluntary transfer from private transport.⁵

Neither was Smigielski totally against cars, despite rather grandly stating that the Traffic Plan was the first urban plan to ‘say NO to the motor car’.⁶ The Traffic Plan listed the car’s attractions and included generous road provision outside the centre of Leicester. Putting his own feelings aside, Smigielski acknowledged that the car had become embedded in British society. He wrote that ‘[t]he people like their car; it is their social status symbol and they want to use it’ and he referred to the car as a sort of domestic animal, which was subjected to a weekly ‘ritual of washing’ in which ‘the whole family frequently participates’.⁷ As a consequence, he concluded that restrictive measures would be very unpopular with car-owning members of the public.

Furthermore, he pointed to the importance of motor manufacture to the national economy, writing that Britain was one of the largest exporters of cars in the world. Like Pooley, he saw public transport as playing a key role in overcoming the problem of successfully accommodating the car in the city. Although the importance of public transport was widely acknowledged in planning circles, Smigielski felt that it was not being given a large enough role in Britain. He had praise for the ‘New Approach’ to traffic planning that the Buchanan Report embodied, but complained that the report had dealt with public transport in a ‘general and rather superficial way’.⁸ He wrote that Britain had been overtaken by the rest of Europe in this area, noting that Stockholm’s planners aimed to have three quarters of the city’s commuters travelling by public

³ T. Bendixson and J. Platt, *Milton Keynes: Image and Reality* (Cambridge, 1992), p. 52.

⁴ CBS, D187/77/1, Buckinghamshire County Council, North Bucks New City: CDA and Description, 2: report, p.1 of appendix.

⁵ CBS, D187/1, Extracts from board minutes and press cuttings, 1963-69.

⁶ W. K. Smigielski, *Leicester Today and Tomorrow* (London, 2nd edition, 1971), p. 47.

⁷ Smigielski, *Leicester Traffic Plan*, p. 23.

⁸ Smigielski, ‘Leicester Traffic Plan’ [article], p. 66.

transport. In short, both Smigielski and Pooley were anxious about the car, rather than anti-car, and they approached the encouragement of a significant transfer from private to public transport as a means to accommodate the car more successfully in urban areas.

Although the two planners had similar attitudes to public transport, their plans were very different, reflecting the very different situations facing them. Smigielski was planning for an existing and densely developed city with an established land-use pattern. North Bucks New City, meanwhile, was planned on an almost clear site, allowing Pooley a freer hand to plan transport infrastructure, land uses and housing densities as he wished. This allowed him to arrange development around a monorail system that would be free to use and funded through local taxation.

Figure 6.1: *North Bucks New City with development strung along monorail loops.*

Source: CBS, D187/77/1, Buckinghamshire County Council, North Bucks New City CDA and
Designation: written statement, appendix.

A series of ‘townships’ were planned along four monorail loops like beads on a string with two industrial zones on the periphery of the settlement and a central commercial zone sitting in the middle of the monorail network. The development in each township

was to be arranged so that no resident would live more than seven minutes' walk from a monorail station. The overall pattern of development was a radical departure from the traditional urban form, embracing both high-density development in the townships and wide open spaces between townships and within the monorail loops.⁹

The *Leicester Traffic Plan*, meanwhile, anticipated a pattern of land use largely unaltered from that which already existed. It was stated that its success would rely on the 'balanced interplay' of three elements: high capacity roads, public transport and the interchange car parks. The public transport elements of the plan differed from those of North Bucks New City in reflecting a wider embrace of new technology. As well as a monorail service, running along a north-south axis through the city, moving pedestrian walkways and electrically powered taxis were proposed in Inner Leicester. Buses were to be the mainstay of the city's public transport system, however, including large buses for cross-town trips, smaller buses for intermediate journeys, and 'crush buses' for short trips in the centre with space for standing passengers only.¹⁰

It was explained in Chapter Three that all but an 'essential minimum' of private motor traffic would be excluded from Inner Leicester to protect its environment, hence the various forms of alternative transport, which were selected both to minimise noise and pollution and to facilitate movement. Walking was a key element in this respect: an elevated moving walkway was proposed along Leicester's High Street to aid pedestrian movement, and a wide network of pedestrian-only routes designed to link all the major shopping streets and open spaces in the centre, as well as the London Road railway station on its edge.¹¹ Such futuristic elements as the moving walkway and the monorail were, it was stated, included in the Traffic Plan as tentative proposals, whereas the bus service and the interchange car parks were crucial elements. The latter were designed to allow private car users to switch to buses for part of their journeys, and were planned to be either on the periphery of Inner Leicester or at nodal points on the roads approaching it, thus allowing for restrictions on traffic entering the city centre and cutting the amount of traffic overall. In addition, a major transport interchange linking all modes of

⁹ CBS, D187/77/2, Buckinghamshire County Council, North Bucks New City: CDA and Description, 1: Written Statement.

¹⁰ Smigielski, *Leicester Traffic Plan*, pp. 66-71.

¹¹ *Ibid.*, pp. 71 & 76-8.

transport, including helicopters, was tentatively proposed on the site of the London Road railway station.¹²

Smigielski's and Pooley's plans to secure a transfer to public transport were bold and imaginative. They were also potentially controversial: the Traffic Plan proposed to use active restriction of car use in Inner Leicester to achieve such a transfer, whilst the North Bucks New City plan involved obliging its population to pay fully for public transport through taxation rather than at the point of use. Neither of these approaches was presented as anti-car or anti-motorist, however, but rather as a sensible compromise. The Traffic Plan was promoted as the traffic solution that maximised access for all modes at the minimum cost. Smigielski saw it as a mid-way point between granting full access to cars, which was costly and environmentally unacceptable, and granting accommodation for public transport only. He noted that the second option was 'theoretically possible', and possibly the most economical solution, but also that it was 'least attractive to the motorized society'.¹³

The reference to cost was important, since both approaches would require huge capital investment, much of which was expected by their promoters to come from central government. Pooley also promoted his plan as economical. He maintained that the running costs of the monorail and a modest road network were lower than the costs of building and maintaining the type of road system that would be necessary without the monorail. Although the capital cost of a combined investment in a monorail and roads was calculated to be higher than a more extensive system of roads (at £46 million as opposed to £38 million) the annual costs, factoring in loan repayments for the initial capital outlay, were predicted to be considerably lower (at £3,745,856 against £5,306,720).¹⁴ Pooley maintained, furthermore, that the plan allowed access to the car, but would result in fewer trips due to a voluntary transfer from the private car to the monorail: '[s]uch a system would not only be a satisfactory alternative to the motor car, but would also lead to substantial savings and a decrease in the cost of living of the citizens'.¹⁵ The plans also contained further parallels in terms of their patterns of land

¹² Ibid., pp. 61-2 & 66.

¹³ Ibid., p. 58.

¹⁴ CBS, D-MKDC/757/30, Buckinghamshire County Council, The Case for a Free Public Transport System in a New City (April, 1965).

¹⁵ Ibid.

use. In both cities the densities of the built-up areas were high relative to those that would be proposed for Milton Keynes, whilst the commercial and industrial land uses were concentrated in a small number of areas. In the Traffic Plan, Inner Leicester's traditional role as the main site of industrial and commercial activity was maintained, whilst North Bucks New City was to have a central commercial zone and two peripheral industrial areas. One again, this contrasted with the diffuse pattern of land use proposed in the Milton Keynes Master Plan.

One final parallel is also worth noting: a consideration of walking as a transport mode was integral to both plans. This thinking went beyond ensuring a safe and pleasant environment for pedestrians, although this was an important consideration as well. North Bucks New City, for example, was promoted as having 'a ground pattern and structure which does not cut the town into pieces and make pedestrian traffic dangerous'.¹⁶ More importantly, travellers on the proposed new city's monorail would be obliged to walk to and from stops meaning that minimising walking distances between destinations and monorail stops was a key aim. In Leicester, facilitating pedestrian movement within Inner Leicester was of similar importance, due to the decision to restrict motor traffic within such a large area. Some consideration was also given to walking as an alternative to the car, therefore, even though this was restricted to certain times and places.

The *Leicester Traffic Plan* and the plan for North Bucks New City ran into problems when they were presented to the MHLG. The Ministry's criticisms were discussed in Chapter Three, but further analysis is relevant to the themes explored in this chapter. Many of them related to the lack of consideration given to the decentralisation of land uses, but there were also objections to the monorail proposals and to the interchange car parks. In the case of North Bucks New City, as Ortolano wrote, officers of the MHLG attacked the monorail as inflexible and costly, and suggested that a diminished role for public transport in future cities was acceptable.¹⁷ They also expressed doubts that the system could be built in stages economically or that it could cope with the heavy demand placed upon it by users, particularly commuters. In addition, they voiced fears

¹⁶ Ibid.

¹⁷ Ortolano, 'Planning the Urban Future', p. 499.

that people would not be willing to use public transport when the car was available.¹⁸ Quite apart from these objections, Ortolano also observed that the MHLG was reluctant to finance a local project, over which it would have less control: 'the Ministry valued new towns because they were centralized projects, not local initiatives.'¹⁹ The MHLG refused to give financial backing, without which Buckinghamshire County Council felt unable to pursue their plan for a new city.

The *Leicester Traffic Plan* hardly fared much better at the hands of the MHLG, the MOT and the JUPG. Overall, the Leicester planners were accused of letting their 'fancy roam' in their embrace of new transport concepts and technology.²⁰ A report by the JUPG stated, for example, that the Traffic Plan had underplayed the 'shortcomings' of monorails, which included: 'inflexibility, considerable distance between stops and visual intrusion'.²¹ The report also suggested that the 'multiplicity' of taxi and bus types would lead to higher costs and lower flexibility. The pedestrian conveyors, meanwhile, were judged to be expensive and of 'doubtful' justification. The negative criticism extended to the interchange car parks, which was more damaging for the plan, because they were integral to it rather than tentative inclusions. It was suggested that their heavy use by commuters would mean that public transport would have to run intensely at peak periods and be underused at other times. It was also concluded that it would be hard to fill and empty the parks of cars quickly and efficiently during the peaks.

Finally, some of the most serious doubts were about the high cost of the plan, which the ministries concluded were based on a gross over-estimate of capital likely to be forthcoming from central government, especially at a time when Britain's stuttering economic performance was putting pressure on public finances. This consideration was a major factor in the Traffic Plan's rejection: the ministries not only declined to offer funds to support the more contentious elements of the plan, but also declined to fund the level of road building proposed. Cheaper and simpler ways of managing traffic were put to Leicester City Council, such as the decentralisation of land uses (which were discussed in more detail in Chapter Two).

¹⁸ CBS, AR178/1981/NC/8, Ministry of Housing and Local Government.

¹⁹ Ortolano, 'Planning the Urban Future', p. 499.

²⁰ TNA, HLG 136/200, Leicester traffic survey.

²¹ Ibid.

In short, the rejection of the Traffic Plan by the ministries and the JUPG rested on a refusal to stake Leicester's future on a system of transport that they believed was too costly and relied on several untried concepts, rather than on opposition to the idea of a transfer to public transport. Indeed, many of the officers in the JUPG and MOT were amongst those working in urban transport who viewed such a transfer favourably, if it promised to be cost-effective. A short paper on Leicester observed, for example, that the number of buses could be doubled and fares abolished in Leicester for the cost of implementing the Traffic Plan in full, which might save 'a slice of the massive road works proposed'.²² Elsewhere, the level of investment required to improve buses in the city was compared favourably with that requested by Leicester for roads: £1.1 million per year against an estimated £10.6 million. It was suggested that giving buses 'decisive priorities' in city centres had advantages, and it was maintained that a bus system would be 'cheaper for the community as a whole than a lot of private cars', echoing a key argument in favour of the monorail proposals for North Bucks New City.²³

In addition, worries were expressed that giving preference to the motor car carried the risk of excluding the old, young, disabled, and 'the plain nervous' from full participation in the life of cities, which it was noted, 'cannot ... be regarded as a truly civilised state of affairs.'²⁴ It is worth pointing out in relation to this remark that writing about securing a 'transfer' from private transport in the mid-1960s is somewhat misleading, because a majority of urban households were still without cars.²⁵ Indeed, this was noted by the MOT, which suggested that the challenge was to persuade a sizeable proportion of people to stay on the buses they already used. Hence the suggestion that positive incentives be deployed to keep bus passengers in their seats, instead of employing active restriction and new transport concepts of doubtful practicality.

The MOT and JUPG duly put the suggestion to Leicester that a comparative analysis be carried out of the costs and benefits of a free public transport system, a subsidised system, and a self-financing one. Giving subsidies to buses, it was suggested, could

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ S. Gunn, 'People and the Car: The Expansion of Automobility in Urban Britain, c.1955–70', *Social History*, 38, no. 2 (2013), pp. 228–30.

involve giving priorities to buses on busy routes, thus combining traffic management with subtle forms of restriction on car use. This was preferred to the restrictions on car parking and access featured in the Traffic Plan, which the JUPG warned might ‘detract from the viability of Leicester for business purposes.’ Although it was not stated directly, it appeared that the JUPG and the relevant ministries, were ill-disposed towards schemes that might provoke a backlash from motorists or that might not live up to people’s expectations of free access for cars. Such an attitude recalls the remarks of planners and others discussed in Chapter Two, which suggested a widespread reluctance to stand directly in the way of car culture’s seemingly inexorable rise.

Milton Keynes and Beaumont Leys

When the newly formed Milton Keynes Development Corporation appointed planning consultants Llewelyn-Davies Weeks Forestier-Walker and Bor to formulate the Master Plan for Milton Keynes, the traffic policy of the new city was set on a divergent path to that of Leicester. Whilst the planners of Leicester continued to see the promotion of public transport as a means to limit car use, the planners of Milton Keynes created a plan for the new city that fully embraced the opportunities for personal mobility offered by the motor car. In a contrast to Fred Pooley’s approach, the main consultants saw an opportunity in the open spaces of the designated area that was denied to planners in established British cities: to plan for complete freedom of movement for the motor car. Together with transport planning consultants Peat, Marwick, Kates and Company, they built on their experience of planning Washington New Town and their experience of planning in the United States to create a Master Plan that promised to allow for this via a grid system of primary roads and a diffused pattern of land uses.

Both the practical thinking behind the plan and the underlying social philosophy were discussed in detail in Chapter Three, but put briefly the design of the new city was set out to allow for easy access for cars via the grid roads, whilst land uses were distributed to promote an even spread of traffic across the road network and to avoid heavy concentrations along certain routes that plagued existing cities. The design belonged to a strand of thought that was based on observations of car culture in American cities, associated with the sociologist Melvin Webber, which embraced private motoring as a positive social phenomenon. Meanwhile, in the year preceding the designation of

Milton Keynes, Leicester's planners started work on the planning of the self-contained settlement of Beaumont Leys on vacant land on the edge of the city. The overall design of the settlement was consistent with the vision of the Traffic Plan in that it represented an attempt to find an acceptable compromise between 'full motorisation' and complete restriction.

Situated on an open site, Beaumont Leys allowed Leicester's planners an opportunity similar to that presented to the planners in North Buckinghamshire, although on a smaller scale. The plan for the town was finalised in January 1967 and was an attempt to come to terms with the coming era of mass car ownership without resorting to active restriction. As such it had much in common not only with the plans for North Bucks New City, but also the design of the New Town of Cumbernauld in central Scotland and the unrealised plans for the New Town of Hook in Hampshire. All the settlements featured the classic Buchanan compromise that sought to satisfy both motorist and pedestrian, whilst protecting the local environment, through segregation, pedestrianisation, and the liberal provision of road space.

The measures designed to reduce the car's environmental impact in Beaumont Leys, were examined in more detail in Chapter Four. In addition, the settlement was designed to encourage the use of alternatives to the car, particularly public transport. In promotional literature, the town plan was described as having a backbone formed of a 'linear system of public open spaces along which a main pedestrian promenade, a cycle track and an elevated monorail are designed'.²⁶ The promenade was designed as part of an independent system of pedestrian ways that would link users to all the local schools and shopping centres. Pedestrian movement, therefore, remained an important consideration beyond the boundaries of Inner Leicester. The inclusion of a cycle track is more difficult to interpret: it might demonstrate a desire to facilitate day-to-day journeys by bicycle that was not in evidence in the Traffic Plan or, more likely, was intended primarily for recreational journeys. The system of pedestrian ways and the planned disposition of development were central to the scheme: they were arranged to allow walkers to reach a public transport stop within five minutes from anywhere in the town. Relating housing densities to public transport nodes in this way made the plans for

²⁶ City of Leicester, *Beaumont Leys Development, Leicester* (Leicester, 1971), p. 10.

Beaumont Leys reminiscent not only of those for the townships of North Bucks New City, but also those of Cumbernauld and Hook.

The planning of Milton Keynes was very different from that of either North Bucks New City or Beaumont Leys. Although public transport remained an important consideration, it did not retain the level of importance it enjoyed in the planning of its predecessor. The main consultants were clear from the outset that they did not want to give priority to public transport. They identified the giving of such priorities as an obsolete feature of older New Towns that had been planned at a time when a rise in car ownership had not been anticipated. In a statement written to the MKDC board in July 1967, they asserted that the car and other forms of new communications technology were widening people's social and cultural horizons. Taking note of this trend, the consultants said that they wanted to plan according to an 'informed prediction' of the patterns of living likely to predominate in the years following the new city's planning.²⁷

In subsequent discussions with the MKDC board the consultants made it clear that they were particularly against any planning arrangement or investment that favoured public at the expense of private transport, such as the subsidised monorail of North Buck New City. In a reflection of the views of motor lobbyists and various other commentators represented in Chapter Two, they concluded that it interfered with the popular wish to use cars to the full. By contrast, the MKDC board showed more interest in the potential of new forms of public transport to limit car use by instructing the consultants to assess the 'advantages and economics of various levels of use of public transport' in relation to the 'cost and convenience of an all-purpose road network'.²⁸ This interest came from three people in particular, the first of whom was Fred Pooley, who had been appointed as a special adviser. In addition, two board members from Buckinghamshire County Council, Margaret Durbridge and Ralph Verney, were supporters of Pooley's monorail concept. Verney sang its praises to the local press in the hope that it might form part of the new plan for Milton Keynes, stating that "[w]e spent a lot of time at County Council

²⁷ CBS, D187/77/3, Milton Keynes: statement to the board by Llewelyn-Davies, Weeks, Forestier-Walker and Bor, 17 July 1967.

²⁸ CBS, D187/1, Extracts from board minutes and press cuttings, 1963-69.

on this [monorail idea] and worked the cost out at two shillings a week a home, with each home only minutes away from the service”.²⁹

In a series of seminars in late 1967 and early 1968, the consultants discussed the planning of the new city with the Board, with the help of visiting speakers, in the context of rapid social and technological change.³⁰ Although the consultants spoke positively about the potential of ‘radically new forms of transport’ in their statement to the Board, and of the possibility of making the new city a proving ground for them with help from the Government, they displayed a lot of scepticism in the seminars about the applicability of such systems to Milton Keynes. The consultants were anxious to appear open-minded about adopting new forms of public transport, but thought it important ‘not to get too carried away looking at movement hardware’ and wondered aloud whether ‘single purpose hardware’ like monorails and conventional trains were relevant to future cities in the light of growing demand for private motor travel.

The consultants also voiced concern that monorail and other fixed track systems were difficult to finance, since much of the infrastructure was required ‘in advance of demand’. Given the constraints placed on public and private capital in the late 1960s, this was a particular concern. It was thought, however, that a public transit demonstration project might attract funding from the MOT, which had shown an active interest in proposals for a monorail in Manchester and a public demonstration of the ‘Minitram’ system in Sheffield.³¹ However, the consultants warned that in attempting such an experiment ‘one would need to load the dice undemocratically in favour of public transport’. In other words, they felt that attracting a sufficiently large ridership to a monorail or similar system, and away from the car, would require some financial incentive to ride or restrictions on private motoring. They found support in one of their invited speakers, J. D. Jones, the Deputy Secretary of the MOT. He noted that growing numbers of people were choosing private transport, demand for which was ‘increasing very, very rapidly’ and would become ‘the dominant factor in the development of urban areas’. He did not favour an arrangement like North Bucks New City, stating that

²⁹ CBS, D187/26, Press reports on Milton Keynes.

³⁰ CBS, D-MKDC/223/7, Papers on New Town design and reports on requirements and characteristics of designated area and D187/1, Extracts from board minutes and press cuttings, 1963-69. NB: All quotations in this section are taken from D-MKDC/223/7 except where stated.

³¹ TNA, MT 107/270, Public transport studies and experiments: Rapid Transit Study in Manchester; MT 147/266, Research and development: Research Studies: rapid transit railways.

compelling travellers to use public transport was inappropriate. He was, in fact, repeating some the criticisms of North Bucks New City's monorail that he had made in a meeting with officers of Buckinghamshire County Council whilst holding a senior post in the MHLG. Jones also warned that there was little money available from the Government to experiment with alternative systems.³²

As well as inviting Melvin Webber and others to speak in favour of maximising accessibility for the car, the consultants insisted in the seminars that 'a far higher level of autonomous movement' was possible in new cities and such freedom for private motoring might be an attraction to newcomers. When asked about the appropriate balance between public and private transport, the consultants noted that there would be a core of non-drivers that would need to be catered for. If the car could be accommodated without any practical or environmental difficulty, as the consultants were suggesting, this seemed to be all that would be required. They added that there was no reason why a public transport system might not be planned to be attractive to drivers as well, provided it was not given any special priority over the car.

They suggested that the car could also serve as a feeder for public transport via the use of transport interchanges, although their preference was for a public transport system 'somewhere between a rapid line haul system [a monorail or similar system] and a self-routing car' that would deliver a similar level of service as private motoring. The overall message that the consultants and their invited speakers conveyed was well received by some members of the Board. The Chair of the Board, Jock Campbell, noted happily that the papers offered 'no surprises, no space age stuff, but they did set about defining sensible and attainable goals'. He also endorsed the consultants' view that offering freedom for the car and some sort of equivalent service via public transport was the best way to proceed. Fixed rail, he thought, 'should not be ruled out', but should not dictate and inhibit the 'form of the city for all time'.

At subsequent Board meetings, however, the monorail supporters and other Board members expressed misgivings over the consultants' approach to transport. Durbridge,

³² CBS, D187/1, Extracts from board minutes and press cuttings, 1963-69; CBS, AR178/1981/NC/8, Ministry of Housing and Local Government; see also G. Ortolano, 'Planning the Urban Future in 1960s Britain', p. 499.

for example, noted that the consultants' plan for an extensive road network and maximum automobility meant that there would be difficulty in inserting fixed public transport infrastructure later. Similarly, Ray Belchambers, a member of the Board who had not declared an attachment to the monorail concept, thought that roads could inhibit the shape of the city just as surely as fixed rail could.³³ The consultants, meanwhile, worked on the transport plans for Milton Keynes over the spring and summer of 1968. What emerged was consistent with the consultants' stated intention to plan the land uses first and then the transport system 'in a generalised way'.³⁴ The dispersal of land uses and a grid pattern of roads quickly became a firm part of their plan, whilst the type (or types) of public transport to use became subject to a drawn-out process of selection.

This sequence of decision making was the reverse of the order that applied in the case of North Bucks New City: the public transport system had been decided upon first in the monorail city and the land uses second, which were arranged to allow the monorail to operate effectively. The grid road and pattern of land uses planned for Milton Keynes were selected to facilitate frequent car use. This reflected the main consultants' priorities and was not necessarily conducive to public transport, which benefitted from simpler arrangements of land use that encouraged travel along a smaller number of predictable routes. Worse still for the monorail concept, Llewellyn-Davies and his colleagues successfully argued for low housing densities in the new city, which made it difficult to guarantee short walking distances to public transport stops. In an early paper on land use, they conjectured that rising incomes (which they predicted would double or treble in thirty years) would fuel demand for detached housing and gardens. In this coming era of high car ownership and higher consumption, public transport was talked about primarily in terms of serving those who, through age or infirmity, represented a captive ridership.

Despite seeing public transport in this way as secondary to the main task of catering for the needs of car drivers, the main consultants did not neglect it as a consideration. First of all, they insisted that users should have a system that 'compares favourably' with the

³³ CBS, D187/1, Extracts from board minutes and press cuttings, 1963-69.

³⁴ Ibid.

private car.³⁵ Secondly, the consultants cast their net wide in the search for a suitable system of public transport, as demonstrated by the 46 different systems examined in another paper, which compared their costs and carrying capacities. Nevertheless, despite identifying having a good public transport from the beginning of the city's development as a goal in a further paper, the consultants were unwilling to make any special effort to secure a transfer to public transport. They were especially hostile to any arrangement that would be to the detriment of the car. In the same paper, which identified a set of goals for transport in the new city, they hinted at this by making 'maximum freedom of choice' between public and private transport one of those goals.

The consultants were confident that the road system and dispersed pattern of land uses that they proposed would allow high car use to be accommodated satisfactorily in the new city, so the inclusion of a high capacity public transport system became an optional feature, rather than an integral part of the plan for Milton Keynes. In September 1968, the month following the writing of the paper identifying transport goals, the consultants presented their general transport objectives alongside two alternative outline transport plans to the Board.³⁶ Both plans had a grid pattern of roads with 'Plan A' also having a high capacity public transport system (i.e. a monorail or similar system) running along a limited series of routes connecting areas of higher density. This plan was presented as workable, but with the warning that it might lead to concentrations of poorer residents in the areas of high density, and thus to social segregation. 'Plan B' featured a more diffuse pattern of low-density land use, with minibuses to serve as public transport.

In the meeting at which the plans were presented, Jock Campbell voiced his concern that there could be a 'pronounced conflict of views' in the Board over densities and the type of transport system, given that the strong attachment some members had to a subsidised system of public transport was not shared by the consultants. He suggested that a discussion take place immediately and that a firm decision should be made at the following meeting. He also noted that such a decision needed to be reached quickly in order to complete the Interim Report on the planning of the city on time.

Unsurprisingly, the monorail supporters expressed misgivings, led by Pooley, who said

³⁵ CBS, D-MKDC/757/21, LWFB, 'Formulating Hypothetical Land-use/Transportation Diagrams', 4 July 1968.

³⁶ The report can be found in CBS, D187/6, Extracts from Board minutes – goals for Milton Keynes. Quotations and other material from the subsequent discussions comes from D187/1.

that he was 'not happy' with Plan B. Verney questioned the aim of providing for a maximum of only 50 per cent public transport use, which was explained by Brian Helm of Peat, Marwick, Kates and Company as the highest ridership possible without altering densities radically. Durbridge, however, acknowledged the practicality of having a flexible plan and of leaving questions of additional transport hardware to future developers to answer. Most of all, she expressed the desire to have a firm plan for a workable transport system in place quickly. Meanwhile, Pooley conceded that there would be difficulties in introducing a monorail system into the existing towns in the designated area, which had not been included in the site earmarked for the construction of North Bucks New City.

Not all of the board members shared the consultants' preference for Plan B, but their reluctance to pursue it had been greatly softened by the consultants' arguments and by the suggestion that a new public transport system could be introduced later. Pooley stood out as the main critic of this approach, but withdrew his objections after discussing them with the consultants. The consultants presented a set of recommendations based on Plan B at the next board meeting, which included provisions to allow for the insertion of a new form of public transport 'if desired in the future'. The consultants' preference for minibuses was given some justification as the mode with the lowest capital and running costs, and the highest quality of service. The 'dial-a-bus' was also identified as a possible form of public transport for the future. This 'demand responsive' system of minibuses worked like a conventional bus by picking-up and setting-down passengers along its route. Its route was not pre-determined, however, but varied according to the requests of the users. Travellers were able to pre-book regular trips or make requests for one-off trips by phone to a control centre that relayed them to the appropriate driver. The system attracted the consultants, because the multiplicity of pick-up points (typically the home or workplace) and destinations gave the system something approaching the door-to-door flexibility of the car. This overall approach was backed by Pooley and won the support of the Board, which agreed to proceed with Plan B as the basis of the transport system to be presented in the Interim Report.

The transport elements of the Interim Report, published in February 1969, duly followed the consultants' overall vision of a city designed to take full advantage of the

mobility offered by the car.³⁷ The report set out the goals for transport previously identified by the consultants and stated that discouragement of private motoring in favour of public transport was ‘inconsistent with the objectives the Corporation have adopted’.³⁸ A service based on small buses was presented as the best option for public transport due to its flexibility, relatively low cost, high service quality, and ability to be implemented immediately. A dial-a-bus service was also mentioned as a possible premium service. The option of introducing a monorail or other system with its own right of way was retained. The report also contained proposals for pedestrian routes, which would pass the same places as the roads, including all the ‘important places’, and would allow people to ‘come directly to their destination’.³⁹ This was a somewhat unexpected inclusion, given both the long distances involved in navigating the city on foot and the consultants’ embrace of car culture. It was consistent, however, with the objective of allowing freedom of choice in travel modes, as well as allowing for short hops between grid squares that pedestrians were expected to make in order to reach nearby shops and amenities.

The publication of the Master Plan followed the Interim Plan in March 1970.⁴⁰ It stated that the concepts of the Interim Report had been ‘developed and subjected to testing’ and had been found to be sound.⁴¹ Further justification was given for the choice of buses as the main mode of public transport. It was asserted that such a system would have shorter journey times than in other cities, due to Milton Keynes’ superior road network and diffused land use. Such a situation would also mean, it was suggested, that more services than in other cities could be run at the same total cost. It was also stated that working parties had been established with the local authorities to look into the implementation of the transport elements of the plan. In terms of public transport, it was noted that dial-a-bus was being ‘actively considered’ as an additional premium service alongside conventional buses.

Thus, the consultants had succeeded in winning the approval of the MKDC board for a Master Plan that allowed for widespread use of cars, whilst apparently giving public

³⁷ LWFB, *Milton Keynes: Interim Report* (Milton Keynes, 1969).

³⁸ *Ibid.*, p. 151.

³⁹ *Ibid.*, p. 13.

⁴⁰ MKDC, *The Plan for Milton Keynes (Volume One)* (Milton Keynes, 1970); MKDC, *The Plan for Milton Keynes (Volume Two)* (Milton Keynes, 1970).

⁴¹ MKDC, *The Plan for Milton Keynes (Volume One)*, p. 23.

transport a fair chance of attracting passengers from amongst those who could choose to drive or not. In the view of the consultants, the success of the new city's public transport would depend on its merits, rather than being given an unfair advantage. No doubt with this in mind, it was stated that the Master Plan was 'not based on any fixed conception of how people ought to live', nor was it a 'plan for a "space-age" super-city, based on technological determinism.'⁴² Critics could argue, on the other hand, that the disposition of land uses proposed encouraged car use, a determinism of its own, and was disadvantageous to other modes. The consultants could counter that they had simply planned according to a choice that society in general had already made in favour of the car.

During the formulation of the transport plans for the new city, the consultants were in regular contact with the MOT and MHLG. In the course of these interactions, it emerged that the ministries were concerned that the consultants had tipped the scales too far in preference to the car. In the weeks leading up to the Interim Report's publication, for example, a number of officers at the MOT voiced concerns about the plan and its implications for public transport.⁴³ It was duly noted in particular that the low density of development and diffusion of land uses made the city unsuited to mass transportation systems and that the plan was weighted in private transport's favour. So much so, that one officer wrote that a significant diversion from private car use would require a standard of public transport that was 'costly and unlikely to be self-financing'. Another officer agreed, writing that full accessibility for the car and high quality public transport were not compatible aims, because the former would mean that there would be little incentive for drivers to transfer from the car.

Although an endorsement for the plan was forthcoming from its Deputy Secretary, J. D. Jones, the MOT communicated its basic concern to the MHLG over the 'conflict of objectives' on accessibility and good public transport. The MOT was in favour of tipping the scales towards the latter objective and, to this end, suggested that the consultants explore changes to the pattern and density of land uses. The MHLG was of a similar mind. One officer wrote that he was anxious that the consultants engage in

⁴² Ibid.

⁴³ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

‘further thinking’ on alternative transport systems ‘based on priority for public transport’, but warned his colleagues against launching a ‘frontal assault’ on the plan. The MLHG wrote to the MKDC in March 1969, raising the concerns of both ministries, but tempering criticism with some guarded praise. Allowing for an increase in car ownership seemed ‘clearly right’ and dispersal was ‘broadly desirable’, but the letter warned that the distribution of densities had ‘obvious implications for the viability of public transport’ and suggested that alternative distributions should ‘be tested with that aspect particularly in mind’. The consultants did as they were asked, and reported that alternative land-use patterns designed to help public transport were possible, for example, by having restricted parking and higher employment in the centre. They rejected this idea, however, on the grounds that it conflicted with the aim of freedom of choice between transport modes.⁴⁴

Neither the MOT nor MHLG was entirely satisfied with this answer, which led back to the basic difference of opinion between them and the consultants: the former wanted to see the scales tipped in favour of public transport, whilst the latter refused to accept any arrangement that would restrict or actively discourage car use. Furthermore, the ministries were concerned that public transport would be disadvantaged in the new city and, by extension, could lead to poorer residents and other social groups being marginalised. Hinting at this, one officer wrote that ‘[a] criticism might be that the proposals are closely derived from an extrapolation of current social trends as viewed by prosperous Anglo-American professionals.’⁴⁵ However, the consultants were in a fairly strong position: with the planning of the new city so well advanced, both they and the ministries knew that it would be problematic to embark on a major review of the Master Plan. In the final analysis, neither ministry appeared to find its doubts over the public transport provisions for the new city sufficiently great to justify insisting on a new approach. Having scrutinised the Master Plan, the MHLG said that the criticisms they made were minor, and that a high-class public transport system and free access for the car were ‘highly desirable’ aims, but continued to insist that they ‘may prove to be less easily reconcilable’ in practice.⁴⁶

⁴⁴ Ibid.

⁴⁵ TNA, HLG116/519, MKDC: Master Plan Interim Report.

⁴⁶ TNA, HLG115/758, Plan for Milton Keynes: inspector’s report and decision letter.

Later developments in Leicester and Milton Keynes

In the years following the publication of the Traffic Plan in Leicester and the Master Plan in Milton Keynes, the planners in each city applied themselves to working out how in detail the public transport elements of the two plans would be put into effect. Despite the lack of support from central government, the Leicester planners persevered with the interchange car park concept by experimenting with a park-and-ride scheme. Local political interest in the concept was limited, however, and progress fizzled out. In Milton Keynes, experiments with dial-a-bus were more sustained, but did not lead to its permanent adoption. Work also proceeded on formulating transport policy for the centre of Milton Keynes, in which many of the concepts and controversies relating to public transport in the planning of the city as a whole were revisited.

Starting with Leicester, the Traffic Plan as a whole had received a blow by the lack of financial support from central government, and by the attacks on its intellectual underpinnings by the JUPG. The Leicester planners were not to be put off, however, presumably hoping to win investment for the interchange car parks by demonstrating the soundness of the idea. They duly arranged to experiment with temporary park-and-ride schemes as a preparatory step towards the creation of permanent interchanges. The park-and-ride concept was itself relatively untried in Britain and had met with mixed results on the few occasions that it had been put into operation. It originated in the United States and was tried as an experimental service in Leeds in 1965 as part of a wider transport experiment with elements of the Buchanan Report.⁴⁷ A ‘special partnership’ had been established in the city between Leeds City Council, the MOT and MHLG to oversee the investigations, and involved parallel investment in roads and bus services. The MOT expressed particular interest in the city’s park-and-ride proposals, which were described as ‘an important component of the city’s plans for the future’.⁴⁸ This demonstrated that, despite the doubts expressed by the JUPG over the practicality of the interchange car parks, the MOT was not opposed to encouraging drivers to switch modes in the course of making journeys. For their part, the Leicester planners chose to conduct their experiment in the two-and-a-half weeks before Christmas 1966. They calculated that this would make the scheme more attractive to travellers, because road

⁴⁷ TNA, MT97/843, Urban traffic experiment at Leeds.

⁴⁸ Ibid.

and parking space would be at a premium at that time of year. Despite the service showing an operating loss, the Leicester Traffic Committee reported that the experiment had been a success due to the high level of patronage and the good will that had apparently been generated. The report argued, furthermore, that it confirmed a willingness amongst drivers to change mode, which was the ‘most valuable result’ in the light of the interchange proposals of the Traffic Plan.

The park-and-ride experiment might have been deemed a success by the Leicester Traffic Committee, but this positive step towards the implementation of the broader vision of the Traffic Plan was unusual. Generally, the direction of the city’s public transport policy in the second half of the 1960s led away from the pursuit of grand transport schemes or radically new transport modes. This was not due to a conscious rejection of the Traffic Plan or of new technology, but rather the product of many decisions made under the force of a set of circumstances that were more favourable both to the improvement of existing forms of public transport and to the pursuit of more modest means of promoting public transport use.

First of all, the Traffic Plan would have taken many years to be fully realised, leaving the field open in the interim to policies that were capable of being implemented more quickly. The report of the Traffic Committee on roads and traffic policy published in 1966, acknowledged that large scale changes to the transport infrastructure of the city were likely to take time and that better management of the existing transport network was necessary.⁴⁹ The committee published a further report on transport policy as a whole, in 1969, which brought the first ‘up to date’ and matched it with ‘interrelated recommendations’ on public transport and parking. Like the Traffic Plan, but unlike the planners of Milton Keynes, the report proposed some restrictions on cars in the form of parking control and the elimination of through-traffic on certain roads. The report stated in justification that a ‘free for all’ on the roads was unfair to public transport users.⁵⁰ The report also suggested some short-term improvements to public transport to encourage its use. Some improvements in the design of inter-urban buses were sought and it was proposed that only one body be responsible for public transport in Greater

⁴⁹ ROLLR, City of Leicester, *The Road Programme and Traffic Policy: Report of the Traffic Committee presented to and approved by the City Council on the 29th November 1966.*

⁵⁰ ROLLR, City of Leicester, *Traffic and Transport Policy: Report of the Traffic Committee presented to and approved by the City Council on the 25th November 1969.*

Leicester to create economies of scale and to reduce the overlapping of services. In addition, the creation of bus lanes and bus-only streets was considered. This type of approach, which aimed to improve existing forms of public transport, had support in many quarters, not least amongst bus and train operators. They had made the case for the value such improvements at the 1968 ICE conference, discussed in Chapter Two. In the Leicester context, an independent study (also referred to in the second chapter) had made similar recommendations to those of Leicester's Traffic Committee, as well as advocating a greater role for suburban train services.⁵¹

Although the Traffic Committee did not consciously depart from the Traffic Plan in making their short-term recommendations, they were showing an alternative way of conducting traffic policy that relied on smaller and more easily practicable measures. Such an approach stood in contrast to the Traffic Plan, which relied on substantial investment in new infrastructure for its success. This difficulty was quietly acknowledged in the 1969 report, which proposed further experiments with park-and-ride schemes, but conceded that a wide expansion of the practice would require the construction of interchange car parks to attract users by allowing them to switch modes under cover.

The implementation of the Traffic Plan was also hampered by lack of money and by local scepticism over the practicality of some of its elements. Kenneth Bowder, Chair of Leicester's Town Planning Committee, recalled that parts of the Traffic Plan 'at first seemed abhorrent' to the public of Leicester, which only demonstrated a 'preparedness to accept some aspects' of it. Bowder, himself, accepted 'the need for some pedestrianisation and traffic-free precincts', but thought the monorail was 'one of the laugh lines' of the plan.⁵² Such scepticism was understandable, given that so many elements were relatively untried. Whilst in his post as City Planning Officer, Smigielski appeared to concede that parts of the plan were ahead of their time: he complained in a radio interview that public transport technology was not developing fast enough to

⁵¹ ICE, *Transportation Engineering Conference: Proceedings of the Conference Organized by the Institution of Civil Engineers, London, 23-26 April, 1968* (London, 1968), pp. 84-91 & 95-97; C. Sharpe, *Problems of Urban Passenger Transport* (Leicester, 1967), pp. 99-110.

⁵² H. Martin, 'Konrad Smigielski: My Tempestuous Love Affair with Leicester', *Architecture East Midlands*, no. 54, (1974), p. 16.

make its introduction practicable.⁵³ He later reflected that transport managers ‘look with suspicion at the new and untried forms of public transport’. He concluded that the time was ‘not politically ripe’ for new transport modes.⁵⁴

In Milton Keynes, meanwhile, the MKDC worked towards the establishment of a public transport system according to the recommendations of the Master Plan. In 1971, a draft plan for the city’s conventional bus system suggested that a 41-seat single desk bus would be most suitable.⁵⁵ The report departed from the Master Plan by abandoning any ambition to capture riders from private transport, which the consultants had earlier conceded ‘does not make practical sense’ in a city designed for free movement of the car in their exchanges with the MOT and MHLG.⁵⁶ In a report from 1973, meanwhile, the city’s Public Transport Working Party confirmed that the dial-a-bus concept would be the basis of the city’s premium public transport service.

As recommended by the report, a dial-a-bus service was instituted in the Woughton area of the city in 1975 as a two-year experiment. The service was operated by the MKDC, with the support of the DoE and in partnership with the National Bus Company, which also ran similar services in Abingdon, Harrogate, Carterton, and Harlow.⁵⁷ An interim report from 1976 noted that the number passengers per head of population had fallen, and that the cost of the heavily subsidised service was higher than anticipated. This had led to a higher than expected annual deficit of £71,104 as opposed to an estimated £52,587.⁵⁸ The service was eventually stopped after a full review of public transport for the city in 1977 recommended its discontinuation.⁵⁹ Bendixson and Platt described the service as ‘a valuable learning experience’ for the planners, but noted that ‘[l]ong deviations to reach front doors led to scenic and convoluted routes which inconvenienced other passengers’.⁶⁰

⁵³ BL, C900/09006 C1, Helen Hampson, interview with Konrad Smigielski [sound recording], Smigielski, Conrad, 1908 Apr. 13- (speaker, male; Retired Town Planner) (Radio Leicester, 1998).

⁵⁴ Smigielski, ‘Leicester’, p. 144.

⁵⁵ CBS, D-MKDC/907/10, Draft plan for Milton Keynes bus system.

⁵⁶ TNA, MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

⁵⁷ CBS, D-MKDC/782/16, Dial-a-bus material.

⁵⁸ CBS, D-MKDC/801/10, Woughton Dial-a-Bus experiment: Interim Technical Report.

⁵⁹ Bendixson and Platt, *Milton Keynes: Image and Reality*, p. 162.

⁶⁰ Ibid.

At the same time, the MKDC was working on the detailed planning of Central Milton Keynes, which naturally involved planning for the movement of pedestrians and vehicles. In the early phase of this process, which was marked by a series of interim reports from 1971 and 1972, the MKDC stated that it would place ‘a great emphasis’ on access to the centre on ‘foot, car, rail and public transport’.⁶¹ When the proposals for the central area were finalised in the Milton Keynes Central Area Plan, produced in late 1972, they included plans for generous road and parking provision.⁶² This was, of course, consistent with the aim of freedom of access for the motor car, but the need both to facilitate pedestrian movement within CMK and to allow for access for public transport was not neglected. On the understanding that once their cars were parked inside CMK, drivers would need to find alternative ways of navigating the centre, the plan incorporated a system of pedestrian routes designed to link ‘all parts of the Centre to all other parts’.

The plan also proposed a dedicated bus service for CMK that would run along a circular route. The plan was presented to the Board, which approved it, but not before Verney had questioned whether cars would be the dominant mode of transport by the time that the development of CMK was completed. However, he recognised that anticipating the car’s demise in the plans would be foolhardy, noting that access for the car would be essential to ensure that retailers would have sufficient confidence in the attractiveness of the development to rent floor space. The plan was also presented by Derek Walker to the DoE when its officers met those of the MKDC. One DoE officer expressed disappointment that so much emphasis had been placed on access for the car and that the availability of an open site had not been exploited to introduce an innovative public transport system. Walker was recorded as having replied that it was ‘because of the green field situation that Central Milton Keynes could be designed to accept the motor car without the problems facing existing centres’.⁶³

The MKDC remained receptive, however, to the idea of employing alternative forms of public transport in CMK. A study was carried out in 1973 on their behalf by transport consultants, Peat, Marwick and Kates, which explored the potential of a range of high-

⁶¹ CBS, D-MKDC/287/3, City Centre Group interim reports: 1, 3, 6 and 7.

⁶² CBS, D187/2, Extracts from board minutes, 1969-1974.

⁶³ CBS, D-MKDC/157/1, MKDC and Department of the Environment minutes.

volume fixed-track systems.⁶⁴ The expectation of high demand for public transport in the centre, coupled with the speed and novelty of a high-tech service, meant that the designs examined were considered worthy of further investigation. However, the study also associated such systems with inflexibility and high capital costs, repeating the criticisms made against them when they had earlier been considered for the city as a whole. In a further study, which also looked at moving pavements and buses, fixed-track systems were judged largely negatively.⁶⁵ Only buses were given a positive assessment overall, due to their ability to be phased-in easily, low visual intrusion, high flexibility, and the high likelihood of consumer acceptance. Thus, the bus triumphed over the alternatives in CMK as it had in the city as a whole. In both cases, a genuine interest in the potential of new technology was not sufficient to overcome the doubts over the applicability of alternative transport systems.

However, confidence in the overall approach to transport in Milton Keynes received a jolt with the Oil Crisis of 1973. The rising oil prices associated with the crisis delivered a blow not only to the assumption that private motoring would remain widely affordable, but also that Britain's economy would continue to grow quickly and without interruption over the coming decades. The MKDC was aware that the planning of Milton Keynes had rested partly on these two assumptions and was sufficiently concerned about the implications of the shifting economic climate to commission a joint study by the main consultants and the Open University's Energy Research Unit. The study resulted in a number of recommendations being made in the Plan for Milton Keynes Flexibility, produced in 1975.⁶⁶ In the plan, it was admitted that the economic changes had been unforeseen and recommended increasing housing density, altering land uses to allow for less travelling, and making improvements to public transport. Fixed-track transport systems were also re-examined, but rejected in favour of buses once more. The changes suggested were modest, but the crisis had led the study to recommend an approach that was a small step closer to that which produced Pooley's plan for a monorail city.

⁶⁴ CBS, D-MKDC/234/5, Report of study of public transport in Milton Keynes.

⁶⁵ CBS, D-MKDC/288/3, Minutes of Central Milton Keynes Steering Committee.

⁶⁶ CBS, D-MKDC/821/57, LWFB and Open University, The Plan for Milton Keynes Flexibility 1975.

Conclusion

The story of transport planning in North Buckinghamshire and Leicester in the 1960s and early 1970s was one of two contrasting visions of how the car should work alongside other modes of transport. The planners of Milton Keynes, on the one hand, wanted to take full advantage of all that the car had to offer in terms of mobility and free association for its users; on the other hand, stood the planners of North Bucks New City and Leicester, who produced plans that were based on achieving a transfer of users from the car to other modes of transport. The former vision triumphed over the latter, but Ortolano was correct in stating that there was nothing inevitable about this. Planning to encourage such a transfer was attractive in planning circles, not least amongst some officers of the MOT, because it held out the possibility of easing the difficult task of integrating mass car ownership into Britain's cities. Indeed, the planning consultants of Milton Keynes had to work hard to overcome doubts, both in the MKDC and central government, over the practicality of their plan that were generated by a perception that it favoured access for the car at the expense of public transport. Neither did the planners of Milton Keynes ignore the possibilities offered by securing a transfer, despite their obvious attachment to the car.

The reasons for the failure of plans to secure a transfer in North Buckinghamshire and Leicester are not to be found in simple opposition to the concept, but in the circumstances surrounding their creation. Ortolano noted, for example, that the promoters of North Bucks New City lacked the important political connections that the planners of Milton Keynes enjoyed. Similarly, Smigielski and his colleagues also lacked any direct connections with people of influence in national government. More importantly, this research indicates that neither group of planners was able to overcome the doubts of the MOT or MHLG over the costs and practicability of the transport innovations that were proposed, thus cutting each plan from the most likely source of financial support. Failure to gain government support was not down to its lack of interest in new technology. Its active support of technological innovation in transport, as presented briefly in this chapter and in more detail in Chapter Two, refutes this. Indeed, the examinations of alternative forms of transport in Leicester and in all the phases of the planning of the new city in North Buckinghamshire reflected a widespread interest in the potential of new technology to help in the creation of better British cities. Even

the car enthusiasts of Milton Keynes instituted a full-scale trial of the dial-a-bus concept, demonstrating that they were not content simply to make do with conventional buses. Nevertheless, for all the enthusiasm, caution reigned when it came to the final analysis, much of it apparently justified since much of the technology was relatively new and untried.

Local circumstances also played a part in the failure of plans to secure a transfer. In Milton Keynes, the determination of the consultants not to allow public transport to be granted any special privileges ahead of the car was particularly important. Their boardroom manoeuvrings to secure the selection of 'Plan B' by the MKDC put public transport at a disadvantage and subordinated the pursuit of a transfer to access for the motor car. This did not signal the end of hopes for a transfer: despite their obvious enthusiasm for the car, the consultants also explored using large-capacity transport systems to encourage drivers to switch to public transport, but concluded that such systems were too costly, inflexible, and of doubtful attraction to users. In Leicester, meanwhile, local support for the Traffic Plan was too limited to prevent the interchange car parks and the monorail from being pushed off the political agenda by short-term considerations and in the absence of financial backing. Ironically, if one can talk in terms of a single event that finally killed off the interchange car parks, it was the successful public campaign against Leicester's Eastern Motorway discussed in Chapter Four. This left the road provisions of the Traffic Plan in tatters and all that went with them.

Chapter Seven

Conclusion

In the opening chapter of this thesis, it was explained that an attempt would be made to find answers to four questions relating to the response of British urban planning to the rise of the motor car. First of all, I wanted to establish what the theoretical and practical response of planners was to the prospect of mass car ownership. The second question was: ‘what, apart from easing urban congestion and countering its damaging effects, did planners seek to achieve as part of this response?’ Thirdly, the question of the influence of wider economic and political forces on the conduct of urban transport planning was posed, alongside the question of how far planning was used to facilitate the car. The fourth and final question was: ‘how did the approach of urban planners to the question of congestion affect the conduct of transport planning within the wider scope of urban planning, especially in terms of consultation, public transport and the urban environment?’ In the following sections, each of the four questions will be addressed in turn, followed by a brief conclusion.

I have attempted to answer these questions by looking at key planning documents and events of the 1950s, 1960s and early 1970s, as well as the conduct of urban planning in the cities of Leicester and Milton Keynes. These three areas of research have proven to be rich in detail and yielded many insights. The cases of Leicester and Milton Keynes were by no means typical: Leicester took an independent decision to embark on a radical overhaul of its road-building plans, rather than being prompted to do so by central government in the wake of the Buchanan Report’s publication, whilst Milton Keynes was unique in being a British city that was essentially purpose-built for the car. They were, nevertheless, very much part of a wider effort to come to terms with the motor age and bear the hallmarks of being so in their attitudes to urban planning and private motoring. The marked differences between the two cities have helped to broaden the analysis, showing how planners responded to contrasting situations, whilst bringing out the commonalities in their approaches. This being the case, the research as a whole has provided meaningful answers to the important questions relating to urban planning and the car in early motor-age Britain.

Responding to the prospect of mass car ownership

Dealing with the prospect of mass motorisation was one of the major urban planning issues of the 1950s and 1960s. An understanding quickly emerged that keeping the much higher traffic volumes that this implied flowing, whilst protecting the urban environment, was a huge challenge. By the mid-1960s, the nature of that challenge had been established as necessitating either severe restriction, extensive redevelopment or some combination of restrictive measures and changes to the urban fabric. For various reasons, that will be explored in more detail below, the planners and all those with a direct interest in the conduct of urban planning shied away from severe restriction. On the evidence presented in Chapter Two, there was little desire to impose such restrictions and, in most cases, a positive desire to embrace the car as a useful invention and as a symbol of affluence and consumer choice.

The planners of Milton Keynes, of course, belonged to the latter category, whilst Smigielski's anxieties about the car's effect on the urban environment, fabric and lifestyle prompted him to choose what he considered to be a mid-way point between restriction and redevelopment. The compromise at the heart of the *Leicester Traffic Plan* reflected Konrad Smigielski's ambivalence towards the car, which he saw as both potentially destructive and socially convenient and desirable. He was ultimately well aware that it had already put down deep roots into British society and the nation's economy. Ultimately, whatever his personal views, he was well aware that it would be politically difficult for a city planner to oppose the car's expansion, noting that complete restriction would be the 'least attractive' political option to a motorised society.¹ Given the preference for private transport that he thought was emerging, Smigielski calculated that it would have taken a politically brave City Planning Officer to stand squarely in the way of advancing car culture.

Based on sociological investigations of Californian cities, the planners of Milton Keynes also saw the car system as a natural and socially positive outgrowth of advanced capitalism. For various reasons, therefore, both sets of planners judged severe restriction as a barrier to the achievement of the urban planner's ultimate aim: to produce city plans that would allow cities to function in the context of late twentieth-century

¹ W. K. Smigielski, *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964), p. 58.

capitalism, which featured high levels of employment and consumption, and expectations of higher mobility, lower working hours and better housing. The car system, although only just emerging as such in Western Europe, was a major pillar of this edifice. In consequence, what emerged in Britain, of which Leicester and Milton Keynes were examples, was a new system for coping with the car system in the urban realm in such a way as to allow it to play a role in supporting consumer capitalism.

In other words, traffic planning emerged as a key area of twentieth-century urban governance, in a similar way to the various forms of liberal governmentality described by Patrick Joyce in the nineteenth-century city that operated through material things and processes, such as markets, sewers, and roads, which he referred to as ‘technosocial solutions to political questions’.² The new road systems and their supporting infrastructure were intended to allow the movement of goods and people – in the role of worker and consumer – free from congestion. Despite the rhetoric of freedom of choice, driving was to be made subject to obvious forms of regulation, such as one-way systems and interchange car parks in Leicester, as well as more subtle forms such as the operation of a hierarchical system of roads in Milton Keynes. Put another way, urban drivers were expected to learn new skills and practises similar to those required of users of Britain’s new inter-urban motorways that Merriman observed.³

To help them to achieve this level of control over drivers, the planners in each city and elsewhere in Britain turned to sociological forms of enquiry, because they came to the realisation that car use was a complex social phenomenon. Thus, the desire to solve the congestion problem was an important factor in the growing use of social science as a way to understand and ultimately influence the conduct of urban life. Such techniques formed an integral part of the new framework for approaching questions of urban transport, which collectively the planners had constructed. Despite their very different solutions to the congestion problem, the planners in Leicester and Milton Keynes worked within this intellectual framework. Indeed, Ortolano’s statement that the North

² P. Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London, 2003), p. 7.

³ P. Merriman, *Driving Spaces: A Cultural-Historical Geography of England’s M1 Motorway* (Oxford, 2007), pp. 141-159.

Bucks New City concept was ‘by no means otherworldly or especially eccentric’ could equally be applied to Leicester’s Traffic Plan.⁴

Neither the Traffic Plan nor Fred Pooley’s plan for a monorail city were put into effect, of course, but they were nevertheless an important aspect of the wider history of urban transport planning when private motoring was going through a period of great expansion in Britain, during which time the parameters of a new urban transport debate were set out. In this respect, Starkie was correct in asserting that pre-Buchanan there was an intellectual vacuum to fill.⁵ It was in these years that planners worked out the nature of the various compromises between accessibility and environment, private and public transport, and mobility and restriction. Unlike in many other cities, the planners in Milton Keynes and Leicester produced plans that gave due consideration to the needs of the environment. In common with their contemporaries, however, they attempted to avoid the worst of this dilemma through the creation of a new transport infrastructure; such was the faith placed in the power of new technology at the time. Although this faith was to be shaken later, the framework for producing urban transport policy proved to be very durable.

The objectives of urban planning in Motor Age Britain

The congestion problem not only confronted the planners of Milton Keynes, Leicester and elsewhere with the practical question of how to keep cities functioning in the motor age. It also obliged them to think deeply about the types of urban lifestyles that they wanted to support, because any solution was likely to have a profound effect on the way that urban life was led. Despite their obvious differences, the planners of both cities came to similar conclusions. They welcomed both the mobility offered by the car (or alternative new transport technology) and the prospect of growth in consumption and leisure time, and sought to support these trends.

The planners were aware that the phenomena of economic growth and greater leisure time were underpinned by technological development and, like many people in the 1960s, appeared to embrace this underlying trend as a driver of further material improvement. The transport infrastructure that they planned to create was itself a

⁴ G. Ortolano, ‘Planning the Urban Future in 1960s Britain’, *The Historical Journal*, 54, no. 2 (2011), p. 490.

⁵ D. Starkie, *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982), p. 37.

technological solution to a social and material problem in the form of traffic congestion. For these reasons, the experience of Leicester and Milton Keynes (and elsewhere) is consistent with John Gold's assertion that the post-war social consensus 'heavily backed the principle of progress through technology'.⁶ It was also part of a longer term process of rolling out various new forms of urban infrastructure identified by Graham and Marvin, which they also saw as being underpinned by a belief in the power of science and technology to improve society, which had deeper roots than post-war optimism.⁷

Indeed, the actions of the planners in Leicester and Milton Keynes recall those of their nineteenth-century counterparts, as described by Patrick Joyce in *Rule of Freedom*. Just as the urban authorities of the nineteenth century sought to regulate traffic and to provide wide, clean, well-drained, and well-lit streets to allow for freedom of movement and freedom of association, planners in the following century sought to provide the material conditions to support post-war consumerism and to allow for the free movement of private motorists.⁸ The level at which the planners of Milton Keynes and Leicester thought self-consciously of their work as being part of such a wider social project is debatable, but it is reasonable to suggest that their actions were part of one. The planners of the new city spoke positively about a national trend towards a narrowing of income inequality and of wider access to the fruits of economic growth, not least the car, and the planners in both cities aimed to facilitate widespread mobility as a material boon.

In more precise terms, the planners in Milton Keynes were more enthusiastic than their Leicester counterparts about the social trends towards greater consumption and those most closely associated with the car. They thought, for example, that higher incomes would fuel demand for detached low-density housing with large private gardens and disparaged the concept of the neighbourhood unit. The centre piece for Central Milton Keynes, meanwhile, was to be an extensive shopping complex. They were also keen to align the new city with the apparent trend towards 'community without propinquity'. Such an arrangement, partly inspired by Californian experience, brings to mind Cotten Seiler's description of the 'new individualism' that was a feature of American

⁶ J. R. Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007), p.12.

⁷ S. Graham and S. Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (Abingdon, 2001), pp. 10 & 40-73.

⁸ Joyce, *The Rule of Freedom*.

capitalism in the twentieth century. He described it as being propped up by ‘commodified leisure and consumption’ and as having private motoring as its ‘cardinal practice’.⁹

Smigielski’s approach was rather different and might be seen as part of the mainstream of post-war British planning, whereby planners sought to perform what Lionel Esher called ‘heroic surgery’ on the city by sweeping away slums and providing new transport links and modern housing.¹⁰ He also belonged to a strand of British urban planning identified by David Matless that disliked urban sprawl and suburbanisation, preferring instead to renew the city from the inside outwards.¹¹ Smigielski also wanted to foster social interaction and a sense of civic pride. Taking inspiration from Continental cities, he sought to use the provision of open space and a pleasant urban environment to make Leicester more amenable to sociability. Pride in the city was to be encouraged through the improvement of civic spaces and the conservation of local landmarks. Similar aims were pursued in Milton Keynes, although with apparently less zeal, with similar methods in mind. The context was late twentieth-century capitalism, but these methods recall those of nineteenth-century urban liberal elites described by Patrick Joyce, which were used to encourage independence and self-discipline. Just as these elites were interested in planning according to the habits of a certain type of urban citizen, so too did the planners of Leicester and Milton Keynes. Whilst Smigielski wanted to encourage sociability and a café culture, the planners of the new city were happier to allow for a lifestyle that was more individualistic and related to the private home. Whatever the broader social aims, however, they were intimately bound to transport policy in both cities.

Facilitating private motoring? The influence of wider economic and political forces

Urban planners were put under considerable pressure to accommodate the car from a wide range of forces, and it is reasonable to conclude that they bowed to that pressure in the cases of Milton Keynes and Leicester. Of these forces, the one most readily identified in the historiography was the motor lobby. Historians have noted that motor interests, both in Britain and the United States, had highly organised and vocal lobbying

⁹ C. Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago, 2008), pp. 12-13.

¹⁰ L. Esher, *A Broken Wave: the Rebuilding of England 1940-1980* (London, 1981), pp. 59-63.

¹¹ D. Matless, *Landscape and Englishness* (London, 1998), pp. 32-42.

organisations. Peter Norton suggested that America's motor lobby had been instrumental in facilitating planning efforts to accommodate the car in urban areas. William Plowden, by contrast, asserted that the influence of the British equivalent was 'variable and uncertain.'¹² Plowden made a very good case for dismissing the suggestion that the motor lobby's influence was decisive in opening the way for mass motorisation in Britain, or that the lobby had influenced national policy to a high and consistent degree. However, the evidence from Chapter Two supports David Starkie's assessment that its influence was important as part of a wider lobbying effort that included organisations representing the interests of capital and labour.¹³ Furthermore, the motor lobby played a key role in bringing together all the various parties with an interest in the conduct of traffic planning in a series of conferences, and giving a platform for those wishing to speak in favour of remodelling cities to accommodate the car. What made their efforts particularly effective was that none of the attendees were inclined to speak against redevelopment, and only a minority expressed deep anxieties about it.

The broad support for urban road building points towards the influence of rising car ownership itself. Many observers pointed to the economic benefits and political advisability of catering for the car, with reference to the motor industry's large and growing importance to the British economy, and the apparently widespread public desire to own a car. Any attempt to obstruct the rise of the car as the primary mode of transport was presented as damaging to an important sector of the economy and an obstruction to consumer choice. Such rhetoric was most often employed by those most likely to gain from rising car ownership, but it formed a powerful and persuasive discourse that fitted neatly with visions of post-war affluence. This vision not only included expectations of greater consumption and leisure time, but also a general remodelling of the built fabric of cities to provide a growing population with modern housing and public amenities, and to create more spaces for entertainment and consumption (amongst other things). In other words, the motor lobby was knocking on an open door: the car's rise appeared to important decision-makers to be hard to resist and also to be broadly welcome. Although it was widely acknowledged that

¹² W. Plowden, *The Motor Car and Politics: 1896-1970* (London, 1971), p. 389.

¹³ Starkie, *The Motorway Age*, pp. 4-5.

accommodating mass car ownership was a considerable challenge, it was believed that the expertise and financial resources necessary to do so existed.

In short, the motor lobby was just one element in a wider range of forces responsible for local and national policies that facilitated further rises in car use and ownership. Indeed, the evidence presented in this thesis supports John Urry's observation that the car in western Europe and North America was part of a physical and institutional system, the elements of which worked in combination to 'generate and reproduce' the car's dominance.¹⁴ At the local level, in urban Britain, redevelopment in favour of the car was patchy and incomplete, but nevertheless increased parking and road space, whilst published transport plans contributed to public expectations that a motor age was approaching. The changes made to towns and cities and the building of the inter-urban motorway network by the national government did not represent a decisive shift to a motorised society, but they were a step along the road to greater car dependence. As Urry noted, the car's triumph was not inevitable. Instead, it relied on a number of historical developments that had facilitated its rise, such as the establishment of Fordist methods of mass production, and the hard surfacing of roads by governments in the United States and Northern Europe.¹⁵

The developments described in this thesis were another link in this causal chain. It is worth noting that, as Simon Gunn has observed, the 1960s did not witness a clean break from a pre-car-owning society in Britain to a motorised one. In urban areas, carless households were still the majority in 1970; the stimulus to action by planners was the expectation of mass motorisation, not its actuality.¹⁶ Therefore, the planners reacted to a phenomenon that was only just gathering strength and where a window of opportunity to resist it was open. The urban planners were aware of this and explored alternative possibilities, but chose not to stand in the car's way. In their explorations, they understood that there were good reasons not to facilitate car use, but thought none were sufficiently compelling to resist a trend that appeared to be so strong. Ortolano observed that key decisions over urban transport planning were made in a decisive moment before the Oil Crisis and before the environmental backlash of the 1970s.¹⁷ Thus cheap

¹⁴ J. Urry, *Mobilities* (Cambridge, 2007), p. 115.

¹⁵ *Ibid.*, pp. 114-5.

¹⁶ S. Gunn, 'People and the Car: The Expansion of Automobility in Urban Britain, c.1955-70', *Social History*, 38, no. 2 (2013), pp. 236-7.

¹⁷ Ortolano, 'Planning the Urban Future', p. 498.

oil and false expectations of uninterrupted economic growth made the trend towards car ownership seem particularly hard to resist.

This is not to suggest that the planners were merely reacting to rising car ownership. William Plowden saw national policy largely in this light, stating that the political history of the motor car was ‘a story of choices not made, nor even defined, by government – and consequently made by default’.¹⁸ In a similar vein, Joe Moran noted that road building continued to be justified in the decades following the Oil Crisis ‘by insisting that progress is inexorable ... that we must pay blind obeisance to traffic predictions.’¹⁹ I do not dispute these findings, but in the context of urban planning, a positive choice was made to facilitate the car that contributed to its continued rise in importance. Although this choice was partly a reactive one, it was also usually made with a positive view of the car and its possibilities.

The evolution of urban planning in the Motor Age

Lionel Esher and John Gold argued that the attempt to remodel Britain’s towns and cities along modernist lines was backed by a consensus that viewed it as supporting social and material progress. Each author quite rightly saw the accommodation of the car as being a part of this wider project. They went on to write that this project was only partially completed and subject to a popular backlash.²⁰ Esher referred to the patchy and incomplete process of urban modernisation as a ‘broken wave’ that had its energy sapped by the opposing force of the ‘moral revolution’ of the late 1960s and 1970s. Drawing inspiration from 1960s radicalism, organised opposition to various redevelopment projects grew, based on the notion that redevelopment disrupted communities and resulted in architecturally sub-standard and soulless environments and, in addition, was a product of top-down planning that did not adequately take the needs and views of ordinary people into account. John Pendlebury noted, in addition, that dissatisfaction with redevelopment and loss of faith in architects and planners went ‘hand-in-hand’ with unhappiness with the loss of existing buildings.²¹ Joe Moran also touched on the subject of popular opposition to the character of redevelopment, citing opposition to road building in particular as a source of discontent and organised

¹⁸ Plowden, *The Motor Car and Politics*, p. 415.

¹⁹ J. Moran, *On Roads: A Hidden History* (London, 2009), pp. 237-9.

²⁰ Gold, *The Practice of Modernism*; Esher, *A Broken Wave*.

²¹ J. Pendlebury, ‘Alas Smith and Burns? Conservation in Newcastle upon Tyne City Centre 1959-68’, *Planning Perspectives*, 16, no. 2 (2001), p. 137.

protest.²² The experience of transport planning in Leicester, particularly the Eastern Motorway and the Loseby Lane controversies sit very well within this general narrative, both in terms of the nature of the opposition and in terms of the ability of protesters to prevent redevelopment or influence its character.

The examples of Leicester and Milton Keynes also demonstrate that the nature of the challenge confronting planners in accommodating the car exerted its own influence on the conduct of planning and conservation. In attempting to plan the routes of new urban roads, for example, the planners in Milton Keynes and, especially, Leicester were presented with existing townscapes that contained areas of historic and architectural interest, important emblems of local identity, and sites of social interaction. Given the scale of the infrastructure required to accommodate the car, this situation pressed upon both groups of planners the needs of conservation and environmental protection. It was often in the moment of realising various elements of the plans that important lessons were learnt. Leicester's experiment in public consultation in Clarendon Park, for example, convinced Smigielski of the value of consultation and yielded information about the appropriate methodology. In Milton Keynes, meanwhile, the detailed planning of the grid roads concentrated the minds of the planners on the need to provide adequate auditory and visual screens between the roads and the adjacent residential areas.

As well as helping to accommodate the car, therefore, the process of analysing the congestion problem, proposing remedies, and making physical changes, not only helped to create an urban environment more conducive to private motoring, but also left a planning legacy in intellectual and political terms. First of all, they helped to foster a greater appreciation for conservation, consultation and the urban environment. Secondly, they also helped to generate powerful critiques of urban road building and the wider car system. Joe Moran wrote that anti-road protests of the 1970s, 1980s and 1990s had their origins in the reactions to urban road plans of the 1960s and early 1970s, noting that this was the moment when 'people began to protest about roads themselves rather than specific routes.'²³

²² Moran, *On Roads*, pp. 197-230.

²³ *Ibid.*, p. 200.

Conclusions

To summarise, the evidence of this research points towards four broad conclusions. Firstly, the rapid rise of car ownership in the 1950s and 1960s forced planners to broach the difficult question of how to accommodate the prospective mass motorisation in towns and cities. By the mid-1960s, a framework for approaching the problem had been established in which more detailed questions of restriction and public transport use could be addressed. In doing so, despite expressing anxieties about the effect of private motoring on urban life, the planners failed to question seriously the advisability of making extensive use of the car. Ultimately, fitting the car into the urban scene was deemed to be a matter of physical planning.

Secondly, the prospect of mass car ownership raised fresh questions about the types of urban lifestyles that planning should be employed to support. Broadly, the planners elected to facilitate the continued rise of post-war affluence, characterised by high mobility, high consumption of material goods, and access to a wide selection of entertainment and leisure activities. In addition, certain other aspects of urban life were deemed to warrant special protection or encouragement in the motor age: social interaction, architectural heritage, walking and civic pride.

Thirdly, in deciding to facilitate widespread use of the car, urban planners had been influenced by a powerful set of forces arranged in the car's favour. Not only was there a highly organised and vocal motor lobby, but there also existed pressure to accommodate the car from property developers, central government, elected local councillors, even trade union officials, together with the phenomenon of rising car ownership itself.

Fourthly and finally, the decision to facilitate the car had various practical consequences for the urban environment and for the future conduct of urban planning and its relationship with the public. The extent to which plans for new urban road networks (and their supporting infrastructure) were applied varied widely, depending on local circumstances. The planners' attempts to accommodate the car threw the destructive and disruptive potential of car culture and, particularly, new roads into sharp relief. This led to a public backlash against urban road building, which mirrored a wider disillusionment with the nature of post-war urban redevelopment. As a consequence urban planners gained a greater appreciation of the need for building conservation,

public consultation, and of the potential of sweeping redevelopment to disrupt urban life and to damage the local environment.

Bibliography

Archival material

British Library

C900/09006 C1, Helen Hampson, interview with Konrad Smigielski [sound recording], *Smigielski, Conrad, 1908 Apr. 13- (speaker, male; Retired Town Planner)* (Radio Leicester, 1998).

Centre for Buckinghamshire Studies

AR178/1981/NC/8, Ministry of Housing and Local Government.

D-MKDC/157/1, MKDC and Department of the Environment minutes.

D-MKDC/165/4, Correspondence with various ministries.

D-MKDC/223/7, Papers on new town design.

D-MKDC/231/4, Plans for Milton Keynes village.

D-MKDC/234/5, Report of study of public transport in Milton Keynes.

D-MKDC/287/3, City Centre Group interim reports: 1, 3, 6 and 7.

D-MKDC/288/3, Minutes of Central Milton Keynes Steering Committee.

D-MKDC/757/21, Llewelyn-Davies, Weeks, Forestier-Walker and Bor, 'Formulating Hypothetical Land-use/Transportation Diagrams', 4 July 1968.

D-MKDC/757/30, Buckinghamshire County Council, The Case for a Free Public Transport System in a New City (April, 1965).

D-MKDC/757/35, Report of the inquiry into the draft of the North Buckinghamshire New Town (Designation) Order 196.

D-MKDC/757/36, Report of the inquiry into the draft of the North Buckinghamshire New Town (Designation) Order 196: addenda.

D-MKDC/758/3, Bletchley Central Area Plan.

D-MKDC/779/25, Northern Towns District Plan: draft for consultation.

D-MKDC/782/16, Dial-a-bus material.

D-MKDC/801/10, Woughton Dial-a-Bus experiment: Interim Technical Report.

D-MKDC/803/8, Master Plan: Technical Supplement No.8: Preservanda and Conservanda in Milton Keynes.

D-MKDC/819/15, Special study of Bletchley.

D-MKDC/819/17, Bletchley Interim Report and Local Plans.

D-MKDC/819/25, Bletchley Interim Report: Technical Supplement Number 8: Queensway Local Plan.

D-MKDC/819/26, Bletchley Interim Report: Technical Supplement Number 9: Fenny Stratford and Linear Park Local Plans.

D-MKDC/821/57, Llewelyn-Davies, Weeks, Forestier-Walker and Bor and Open University, The Plan for Milton Keynes Flexibility 1975.

D-MKDC/886, Proposals for villages within the City of Milton Keynes.

D-MKDC/907/10, Draft plan for Milton Keynes bus system.

D187/1, Extracts from board meetings and press cuttings, 1963-69.

D187/2, Extracts from board minutes, 1969-74.

D187/6, Extracts from board minutes, 1967-70.

D187/26, Press reports on Milton Keynes.

D187/77/1 & 2, Buckinghamshire County Council, North Bucks New City CDA and Designation.

D187/77/3, Milton Keynes: statement to the board by Llewelyn-Davies, Weeks, Forestier-Walker and Bor, 17 July 1967.

D187/77/5, Bill Berrett, 'Where is Milton Keynes?', paper delivered at the Open University, 1982.

East Midlands Oral History Archive

RL1659, Sun Alliance Building [radio broadcast] (Radio Leicester, 1971).

RL1672 Changing Leicester [radio broadcast] (Radio Leicester, 1971).

RL1687, Planning and the Public [radio broadcast] (Radio Leicester, 1971).

RL 1711, Konrad Smigielski [radio broadcast] (Radio Leicester, either 1971 or 1972).

Institution of Civil Engineers library

Brunner, C. T., 'The Place of a Modern Road System on the National Economy', Second Rees Jeffries Triennial Lecture, Town Planning Institute, 1952.

Gibberd, F., 'The Impact of Motorways on the Urban Environment', paper given at a joint meeting of the ICE and the RIBA, 15 March 1960.

Jellicoe, G. A., 'Motorways - Their Landscaping, Design and Appearance', Fourth Rees Jeffries Triennial Lecture, Town Planning Institute, 1958.

Nicholas, R., 'The Impact of Motorways on Cities', paper given at a joint meeting of the ICE and the RIBA, 15 March 1960.

Whittaker, G. B., 'The Design, Location and Construction of a Motorway' in *Contractors Record and Municipal Engineering*, November 21, 1956, pp.11-23.

Records Office for Leicester, Leicestershire and Rutland

City of Leicester, The Road Programme and Traffic Policy: Report of the Traffic Committee presented to and approved by the City Council on 29th November, 1966.

City of Leicester, Traffic and Transport Policy: Report of the Traffic Committee presented to and approved by the City Council on the 25th November 1969.

DE 3277, City of Leicester Town Planning Committee minutes.

DE 3277, Minutes of [full] Council meetings.

DE 6435/111/1, The papers of W. Konrad Smigielski.

The National Archives

HLG 115/730, MKDC: Submission of the Master Plan.

HLG 115/756, MKDC: The Plan for Milton Keynes - consultations with government departments.

HLG 115/757, MKDC: The Plan for Milton Keynes - consultations with other branches of MHLG.

HLG 115/758, Plan for Milton Keynes: Inspector's report and decision letter.

HLG 115/942, Milton Keynes Development Corporation: Milton Keynes: the existing villages.

HLG 116/519, MKDC: Master Plan Interim Report.

HLG 118/441, New Towns Act, 1965 - proposed New Town in North Buckingham.

HLG 136/200, Leicester traffic survey.

MT 97/843, Urban traffic experiment at Leeds.

MT 107/49, Development Plans – Leicester County Borough Council: initial proposals.

MT 107/270, Public transport studies and experiments: Rapid Transit Study in Manchester.

MT 107/345, New Towns and town expansion: Buckinghamshire County Council: Milton Keynes.

MT 147/266, Research and development: research studies: rapid transit railways.

MT, 149/40, Transport economics: joint Ministry of Transport and Road Research Laboratory research into electric cars and other vehicles: cost-benefit assessment.

MT 149/107, Road transport (passenger) urban transport: bus planning (provincial): Stevenage Optimal Bus System Study.

MT 164/1, Joint Transport Research Committee: minutes and papers of first meeting, February 1969.

MT 164/2, Joint Transport Research Committee: minutes and papers of second meeting, March 1969.

Newspapers and periodicals

Chartered Civil Engineer

Chronicle and Echo [Buckinghamshire]

The Economist

Financial Times

The Journal of the Town Planning Institute

Leicester Illustrated Chronicle

Leicester Mercury

Manchester Guardian

The Observer

Roads and Road Construction

The Times

Urban Studies

Contemporary published material

Anon, 'The Leicester Traffic Plan', *The Journal of the Town Planning Institute*, 50, no. 10 (1964), pp. 454-5.

Bor, W., 'Milton Keynes: the First Stage of the Planning Process', *The Journal of the Town Planning Institute*, 54, no. 5 (1968), pp. 203-13.

Beckett, J. L. and Langlands, R., *City Development Plan 1952: Written Analysis* (Leicester, 1952)

British Road Federation, *People and Cities: Report of the 1963 London Conference* (London, 1964).

British Road Federation, *Urban Motorways: Report of the London Conference Organised by the British Road Federation, 1956* (London, 1957).

Buchanan, C., *Mixed Blessing: The Motor in Britain* (London, 1958).

Buchanan, C., *Traffic in Towns: A Study of the Long Term Problems of Traffic in Urban Areas* (London, 1963).

City of Leicester, *Beaumont Leys Development, Leicester* (Leicester, 1971).

City of Leicester Housing Committee, *Clarendon Park General Improvement Area* (Leicester, 1971).

Cullen, G., *Townscape* (London, 1961).

Danforth, P. M., *Transport Control: A Technology on the Move* (London, 1970).

Department of the Environment, *Better use of Town Roads: The Report of a Study of the Means of Restraint of Traffic on Urban Roads* (London, 1967).

Drew, D. R., *Traffic Flow Theory and Control* (New York, 1968).

Dunne, M. C. and Potts, R. B., 'Algorithm for Traffic Control', *Operations Research*, 12, no. 6 (1964).

Hall, P., 'Leicester Traffic Plan/Traffic in a New Zealand City', *Urban Studies*, 3 (1966), pp. 167-9.

Institution of Civil Engineers, *Conference on the Highway Needs of Great Britain: At the Institution 13-15 November, 1957: Proceedings* (London, 1958).

Institution of Civil Engineers, *Transportation Engineering Conference: Proceedings of the Conference Organized by the Institution of Civil Engineers, London, 23-26 April, 1968* (London, 1968).

Leicester City Transport, *Park 'N' Ride - Reporting an Experiment* (Leicester, 1967).

Llewelyn-Davies, Weeks, Forestier-Walker and Bor, *Milton Keynes: Interim Report* (Milton Keynes, 1969).

Martin, H., 'Konrad Smigielski: My Tempestuous Love Affair with Leicester', *Architecture East Midlands*, no. 54, (1974).

Milton Keynes Development Corporation, *The Plan for Milton Keynes (Volume One)* (Milton Keynes, 1970).

Milton Keynes Development Corporation, *The Plan for Milton Keynes (Volume Two)* (Milton Keynes, 1970).

Ministry of Transport, *Cars for Cities: A study of Trends in the Design of Vehicles with Particular Reference to their Use in Towns. Reports of the Steering Group and Working Group Appointed by the Minister of Transport* (London, 1967).

Ministry of Transport, *Road Pricing: The Economic and Technical Possibilities. Report of a Panel set up by the Minister of Transport* (London, 1964).

Miller, A. J., *A Computer Control System for Traffic Networks: Paper to be read at the Second International Symposium on the Theory of Road Traffic Flow. London, June 25th-27th, 1963* (Birmingham, 1963).

Morgan, J. T. and Little, J. D. C., 'Synchronizing Traffic Signals for Maximal Bandwidth', *Operations Research*, 12, no. 6 (1964).

Sharpe, C., *Problems of Urban Passenger Transport* (Leicester, 1967).

Simmons, J., *Leicester Past and Present Vol. 2: Modern City, 1860-1974* (London, 1974).

Smigielski, W. K., 'The Buchanan Report: what next?', *The Journal of the Town Planning Institute*, 50, no. 2 (1964), pp. 65-71.

Smigielski, W. K., 'Leicester', in J. Holliday (ed.), *City Centre Redevelopment* (London, 1973), pp. 135-74.

Smigielski, W. K., *Leicester Today and Tomorrow* (London, 2nd edition, 1971).

Smigielski, W. K., 'Leicester Traffic Plan', *The Journal of the Town Planning Institute*, 51, no. 2 (1965), pp. 65-71.

Smigielski, W. K., *Leicester Traffic Plan: Report on Traffic and Urban Policy* (Leicester, 1964).

Smigielski, W. K., *Leicester Market Area: Report of the City Planning Officer* (Leicester, 1963).

Smigielski, W. K., 'Review of Roads and their Traffic, Ernest Davies (ed.) (London, 1960)', *The Town Planning Review*, 32, no. 2 (1961), pp.165-6.

Smigielski, W. K., *Self-supporting Co-operative Village at Stanford Hall, Nottinghamshire* (Coalville, 1978).

Smigielski, W. K., 'Urban Form in the Motor Age', *Proceedings of the Town Planning Institute Newcastle upon Tyne Conference* (London, 1968), pp. 323–30.

Woolcock, M., *Traffic Signal Control in Glasgow by Computer* (Crowthorne, 1969).

Secondary Published material

Adeney, M., *The Motor Makers: The Turbulent History of Britain's Car Industry* (London, 1988).

Baldwin, P. and Baldwin, R. (eds.), *The Motorway Achievement, Volume 1: The British Motorway System: Visualisation, Policy and Administration* (London, 2004).

Baumann, Z., *Consuming Life* (Cambridge, 2007).

Beazley, B., *Postwar Leicester* (Stroud, 2006).

Bendixson, T. and Platt, J., *Milton Keynes: Image and Reality* (Cambridge, 1992).

Bennett, T. and Joyce, P. (eds.), *Material Powers: Cultural Studies, History and the Material Turn* (Oxford, 2010).

Bottles, S. L., *Los Angeles and the Automobile: The Making of the Modern City* (Berkeley, 1987).

Bridle, R. and Porter J., (eds.), *The Motorway Achievement, Volume 2: Frontiers of Knowledge and Practice* (London, 2002).

British Road Federation, *Basic Road Statistics* (London, 1971).

Charlesworth, G., *A History of British Motorways* (London, 1984).

Cherry, G. E., *Cities and Plans: The shaping of Urban Britain in the Nineteenth and Twentieth Centuries* (London, 1988).

Clapson, M., *A Social History of Milton Keynes: Middle England/Edge City* (London, 2004).

Clapson, M., Dobbin, M. and Waterman, P. (eds.), *The Best Laid Plans: Milton Keynes Since 1967* (Luton, 1998).

Clark, P. (ed.), *The European City and Green Space: London, Stockholm, Helsinki and St Petersburg, 1850-2000* (Aldershot and Burlington, 2006).

- Clark, P., Niemi, M. and Niemelä, J. (eds.), *Sport, Recreation and Green Space in the European City* (Helsinki, 2009).
- Cronon, W., *Nature's Metropolis: Chicago and the Great West* (London, 1992).
- Cullingworth, B. and Nadin, V., *Town and Country Planning in the UK* (London, 14th ed., 2006).
- Delafons, J., *Politics and Preservation: A Policy History of the Built Heritage, 1882-1996* (London, 1997).
- Dennis, K and Urry, J., *After the Car* (Cambridge, 2009).
- Diski, J., *The Sixties* (London, 2009).
- Dobby, A., *Conservation and Planning* (London, 1978).
- Edgerton, D., *The Warfare State: Britain, 1920-1970* (Cambridge, 2006).
- Ellis, C., 'Lewis Mumford and Norman Bel Geddes: The Highway, the City and the Future', *Planning Perspectives*, 20 (2005), pp. 51–68.
- Esher, L., *A Broken Wave: the Rebuilding of England 1940-1980* (London, 1981).
- Ewen, S., 'Policing, Planning and the Regulation of Traffic in Post-War Leicester', *Midland History*, 28, no. 1 (2003), pp. 120-136.
- Flinn, C., "'The City of our Dreams'? The Political and Economic Realities of Rebuilding Britain's Blitzed Cities, 1945–54', *Twentieth Century British History*, 23, no. 2 (2012), pp. 221–245.
- Gold, J. R., *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (Oxford, 2007).
- Government Statistical Service, *Transport Statistics Great Britain 1964-1974* (London, 1976).
- Graham, S. and Marvin S., *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (Abingdon, 2001).
- Gunn, S., 'The Buchanan Report, Environment and the Problem of Traffic in 1960s Britain', *Twentieth Century British History*, 22, no. 4 (2011), pp. 521-542.
- Gunn, S., 'Hegemony to Governmentality: Changing Conceptions of Power in Social History', *Journal of Social History*, 39, no. 3 (2006), pp. 705-720.
- Gunn, S., 'People and the Car: The Expansion of Automobility in Urban Britain, c.1955–70', *Social History*, 38, no. 2 (2013), pp. 220–237.

- Hall, P., *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford, 2002).
- Hall, P. et al (eds.), *The Containment of Urban England Vol. 1: Urban and Metropolitan Growth Processes, or Megalopolis Denied* (London, 1973).
- Hall, P. et al (eds.), *The Containment of Urban England Vol. 2: The Planning System: Objectives, Operations, Impacts* (London, 1973).
- Hall, P., *Great Planning Disasters* (London, 1980).
- Hall, P., *Urban and Regional Planning* (West Vancouver, 1975).
- Hamer, M., *Wheels Within Wheels: A Study of the Road Lobby* (London, 1987).
- Harvey, D., *Consciousness and the Urban Experience* (Oxford, 1985).
- Harvey, D., *Justice, Nature and the Geography of Difference* (Oxford, 1996).
- Healey, P. and Shaw, T., 'Changing Meanings of "Environment" in the British Planning System', *Transactions of the Institute of British Geographers*, 19, no. 4 (1994), pp. 425-438.
- Joyce, P., *The Rule of Freedom: Liberalism and the Modern City* (London, 2003).
- Ladd, B., *Autophobia: Love and Hate in the Automotive Age* (London, 2008).
- Ladd, B., 'Cities on Wheels: Cars and Public Space', in G. Bridge and S. Watson (eds.), *The New Blackwell Companion to the City* (Chichester, 2011), pp. 265-74.
- Kaika, M., *City of Flows: Modernity, Nature and the City* (New York, 2005).
- Kain, R., *Planning for Conservation* (London, 1981).
- Larkham, P., 'The Place of Urban Conservation in the UK Reconstruction Plans of 1942–1952', *Planning Perspectives*, 18, no. 3 (2003), pp. 295–324.
- Larsen, S., 'Whose City is it Anyway? Jane Jacobs vs. Robert Moses and Contemporary Redevelopment Politics in New York City', *Berkeley Planning Journal*, 22 (2009), pp. 33-56.
- Matless, D., *Landscape and Englishness* (London, 1998).
- Meller, H., *Towns, Plans and Society in Modern Britain* (Cambridge, 1997).
- Merriman, P., *Driving Spaces: A Cultural-Historical Geography of England's M1 Motorway* (Oxford, 2007).
- Moran, J., *On Roads: A Hidden History* (London, 2009).
- Mumford, L., *The Highway and the City* (London, 1964).

- Norton, P. D., *Fighting Traffic: The Dawn of the Motor Age in the American City* (Cambridge, Mass., 2008).
- Nash, D. and Reeder D. (eds.), *Leicester in the Twentieth Century* (Stroud, 1993).
- Ortolano, G., 'Planning the Urban Future in 1960s Britain', *The Historical Journal*, 54, no. 2 (2011), pp. 477–507.
- Ortolano, G., *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge, 2009).
- Osborne, F. J. and Whittick, A., *New Towns: Their Origins, Achievements and Progress* (London and Boston, 1977).
- Otter, C., *Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago, 2008).
- Otter, C., 'The Vital City: Public Analysis, Dairies and Slaughterhouses in Nineteenth-Century Britain', *Cultural Geographies*, 13 (2006), pp. 517-37.
- Pendlebury, J., 'Alas Smith and Burns? Conservation in Newcastle upon Tyne City Centre 1959-68', *Planning Perspectives*, 16, no. 2 (2001), pp. 115-41.
- Pendlebury, J., *Conservation in the Age of Consensus* (London, 2009).
- Plowden, W., *The Motor Car and Politics: 1896-1970* (London, 1971).
- Pooley, C. G., 'Coping with Congestion: Responses to Urban Traffic Problems in British Cities c.1920–1960', *Journal of Historical Geography*, 31 (2005), pp. 78–93.
- Pooley, C. G., 'Landscapes without the Car: A Counterfactual Historical Geography of Twentieth-Century Britain', *Journal of Historical Geography*, 36, no. 3 (2010), pp. 266-275.
- Rodger, R., 'The Built Environment' in Nash, D. and Reeder, D. (eds.), *Leicester in the Twentieth Century* (Stroud, 1993), pp.1-48.
- Robinson, D., 'Modernism at a Crossroad: The Spadina Expressway Controversy in Toronto, Ontario Ca. 1960–1971', *The Canadian Historical Review*, 92, no. 2 (2011), pp. 295-322.
- Rooney, D., 'The Political Economy of Congestion: Road Pricing and the Neoliberal Project, 1952–2003', *Twentieth Century British History*, 25, no. 4 (2014), pp. 628–650.
- Sandbrook, D., *White Heat: A History of Britain in the Swinging Sixties* (London, 2006).
- Savage, M., *Identities and Social Change in Britain since 1940: The Politics of Method* (Oxford, 2010).

Schmucki, B., 'Cities as Traffic Machines: Urban Transport Planning in East and West Germany,' in C. Divall and W. Bond (eds.), *Suburbanizing the Masses: Public Transport and Urban Development in Historical Perspective* (Aldershot, 2003), pp. 149–70.

Seiler, C., *Republic of Drivers: A Cultural History of Automobility in America* (Chicago, 2008).

Spray, J., *The History of the Pedestrians Association: A Seventy Five Year Campaign for Living Streets* (London, 2004).

Starkie, D., *The Motorway Age: Road and Traffic Policies in Post-war Britain* (Oxford, 1982).

Todd, S., 'Affluence, Class and Crown Street: Reinvestigating the Post-War Working Class', *Contemporary British History*, 22, no. 4, (2008), pp. 501–518.

Tomlinson, J., 'Inventing "Decline": The Falling Behind of the British Economy in the Postwar Years', *Economic History Review*, 49, no. 4 (1996), pp. 731–757.

Townsend, S., 'The "Miracle" of car Ownership in Japan's "Era of High Growth", 1955–1973', *Business History*, 55, 3 (2013).

Urry, J., *Mobilities* (Cambridge, 2007).

Walker, D., *The Architecture and Planning of Milton Keynes* (Ann Arbor, 1982).

Ward, S. V., 'Cross-national Learning in the Formation of British Planning Policies 1940–99: A Comparison of the Barlow, Buchanan and Rogers Reports', *Town Planning Review*, 78, no. 3 (2007), pp. 369–400.

Ward, S. V., *Planning the Twentieth-Century City: The Advanced Capitalist World* (Chichester, 2002).

Wright, P., *On Living in an Old Country: the National Past in Contemporary Britain* (Oxford, 2009).

Unpublished theses

Greenhalgh, J., 'Building the Peace: Modernity, Space and the City in Britain, 1939 - 1957' (University of Manchester, 2013).

Harrison, R. L., 'Facilitating Walking as a Means of Urban Transport' (University of Lancaster, 2009).

Hulme, T., 'Civic Culture and Citizenship: the Nature of Urban Governance in Interwar Manchester and Chicago' (University of Leicester, 2013).

Conference Papers

Hine, J., 'Planning for the Pedestrian in the City of Edinburgh 1930-1990: A Transport Planning History', T2M conference paper, 2011.

Websites

Donnelly, T., 'Durie, Sir Alexander Charles (1915–2001)', *Oxford Dictionary of National Biography* (January 2005), www.oxforddnb.com [accessed 9 October 2015].

Dutton, D. J., 'Marples, (Alfred) Ernest, Baron Marples (1907–1978)', *Oxford Dictionary of National Biography* (May 2006), www.oxforddnb.com [accessed 8 Oct 2014].

Hall, P., 'Buchanan, Sir Colin Douglas (1907–2001)', *Oxford Dictionary of National Biography* (May 2006), www.oxforddnb.com [accessed 8 October 2015].

Harrison, B., 'Pevsner, Sir Nikolaus Bernhard Leon (1902–1983)', *Oxford Dictionary of National Biography* (2004), www.oxforddnb.com [accessed 4 March 2015].

Moggridge, H., 'Jellicoe, Sir Geoffrey Alan (1900–1996)', *Oxford Dictionary of National Biography* (May 2005), www.oxforddnb.com [accessed 14 October 2015].

Richards, J. M., 'Gibberd, Sir Frederick Ernest (1908–1984)', *Oxford Dictionary of National Biography* (January 2005), www.oxforddnb.com [accessed 12 Feb 2015].