

Town planning is an increasingly important part of national life; there can be very few people who have not at some time been affected – beneficially or otherwise – by town planning action. Yet generally there is a lack of understanding of what town planning is trying or ought to be trying to achieve.

This book will serve as a stimulating introduction to the subject as a whole. Every aspect of town planning is put into perspective with the principles and methods involved explained in a clear and concise manner. Drawing from a total of over forty years' experience in town planning, the author deals with the subject mainly in the context of British physical, social, economic and political conditions, but also makes frequent comparisons with the substantially different conditions that are to be found in Australia, where he lived and taught for eleven years.

Students taking professional examinations in town planning, land economics, estate management, architecture and surveying will find this book to be of great value, as will practising town planners and others whose work or interests touch on the subject of town planning.

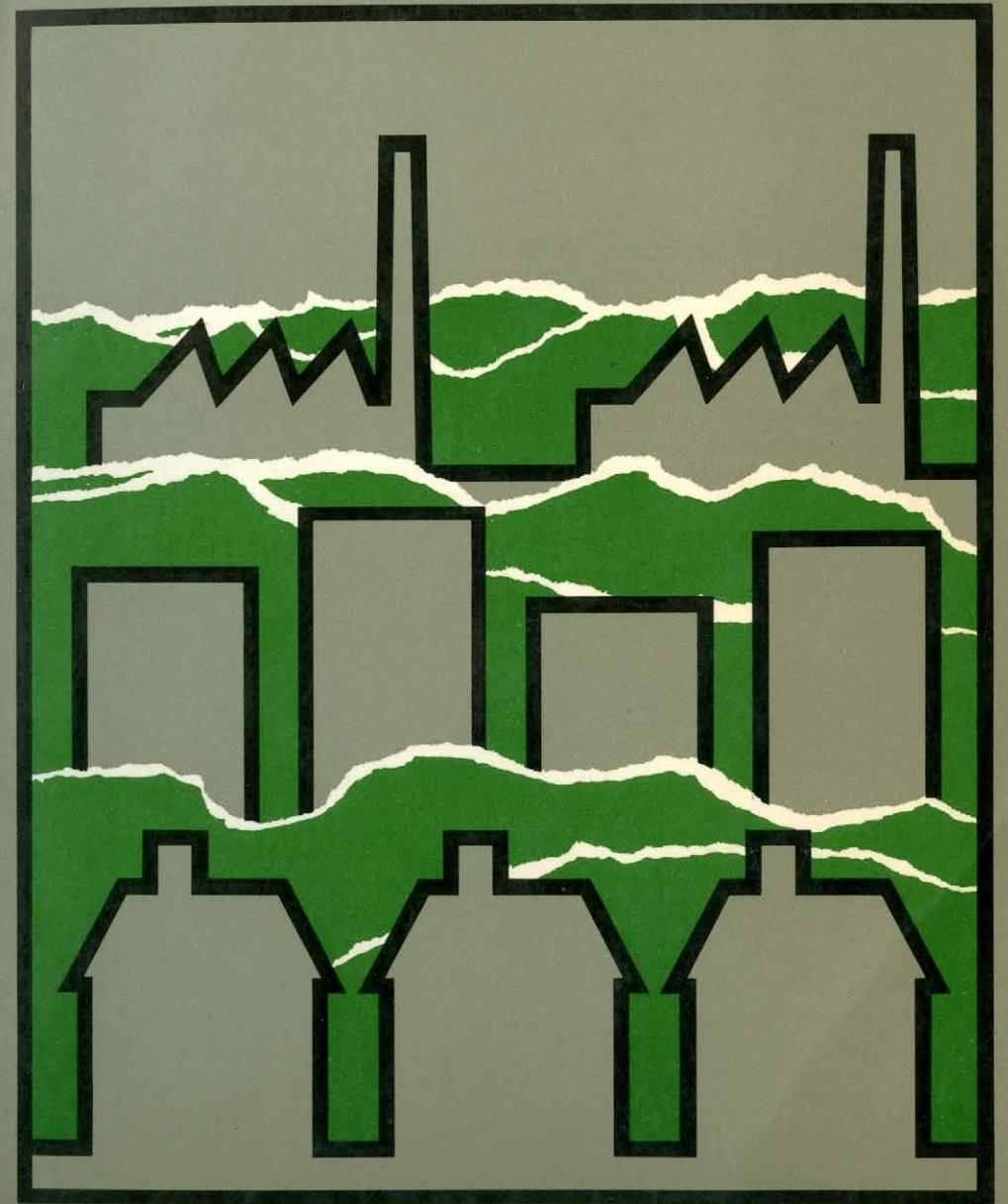
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TOWN PLANNING MADE PLAIN

Lewis Keeble



TOWN PLANNING MADE PLAIN
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Town planning made plain

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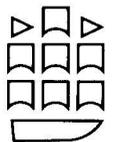
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*To my wife
Betty Trevena, MDesSt, DipTP, FRTPI, FRAPI,
who also drew nearly all the illustrations*

List of illustrations

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Introduction

Town planning is now a very important part of our national life. One hardly ever reads through a newspaper without coming across some reference to it and seldom meets anyone who has not at some time been affected directly in his personal life by town planning action, whether beneficially or otherwise. Yet it is a very little understood and a much misunderstood activity. Very few people, even intelligent and well-informed people, understand what town planning is trying or ought to be trying to achieve and how. This is surprising because, although any full understanding of town planning necessitates acquiring some technical knowledge, only quite a little is needed for a broad understanding of it, less than is needed to understand, for example, roughly how an internal combustion engine works, which most intelligent people understand.

This lack of understanding is most unfortunate; it prevents the development of a powerful mass of informed public opinion on the subject which could exert pressure on central and local government to carry out better town planning and could encourage town planners to perform better. I think the reason is, mainly, that there has seldom been any clear-cut distinction made by public authorities or the media between town planning and 'planning' as a generalised activity covering everything from preparing school building programmes to working out duty rosters. (Some town planners themselves, in recent years, have encouraged this by trying to arrogate to themselves activities which are outside their expertise.)

This book tries to fill the gap. It is written out of more than forty years' experience in town planning, and I have laboured to make it as clear and simple as I can for the benefit of students, who, particularly near the beginning of their courses, often find it difficult to see how individual subject courses relate to town planning as a whole. I hope it will also have some appeal to the interested laymen and to my colleagues and friends the town planners, some of whom may like to see whether it helps them to stand back a little from their daily activities and see the trees forming themselves again into a wood.

I have concentrated on principles and methods of town planning which have general and permanent validity, rather than on local, temporary fashions; never-

theless, all town planning has to be done in the context of specific physical, social, economic and political conditions, so I have written in the context of British conditions, with fairly frequent side-glances at the very different conditions in Australia, where I lived and taught for eleven years.

Fundamental considerations and design

Planning, in the broadest sense, is making up one's mind what to do before doing it. Town planning is, ideally, deciding what a town should be like before it is built, though it is fortunate and exceptional for this to be possible; it is, more often, deciding in what ways a town should be kept as it is and in what ways it ought to be altered.

For the purpose both of discussion and action the breadth of this definition has to be compressed and some exceptions made. For example, *where* a town ought to be placed and how many people it should contain is a matter of regional rather than of town planning. At the other end of the scale, the actual design of individual buildings and layout of playing pitches and the provision of planting fall within the expertise of architects and landscape architects. To say this is not to try to set up inter-professional demarcation lines nor to deny the continuity and overlapping of these activities.

It is necessary to go a little further into what constitutes town planning and what does not. This involves both scale and quality. No one, presumably, would suggest that the design of a neighbourhood to house several thousand people and its ancillary day to day facilities, such as schools, shops and playing fields, was not a matter of town planning, even though only a part of a town is involved. Nor, presumably, would anyone deny that a large housing estate, also accommodating several thousand people, built by a private developer over a few years, was also in some sense a town planning operation: the trouble is that it is likely to have been very badly planned. In talking about town planning we usually assume that we are talking about *competent* planning ('good' and 'bad' planning are expressions which draw in different and more difficult criteria).

A distinction has to be made between designing new towns and redesigning old ones. The former has been going on ever since humans first ceased to be entirely nomadic, but the second has only in any intellectually serious and comprehensive way been going on since after the Second World War. It is important to remember this. There simply has not been time for a settled, mature, discipline and profession to be established. Though impatience with inadequate performance is natural and though it often seems that unless more effective town planning is very quickly established it will be too late so far as Britain is concerned, from another viewpoint the progress has been remarkably rapid. The

concepts embodied in John Burns's Housing and Town Planning Act of 1909 and those of the Town and Country Planning Act of 1947 are almost as far apart as ox-cart and Rolls-Royce. Though the two kinds of legislation and the two vehicles both still coexist, the time intervals between the invention of the members of each pair are enormously different. For town planning concepts to have advanced so far in less than forty years is almost unprecedentedly fast in the area of social legislation; compared with advances in education and penology and towards sexual equality the pace is very rapid.

We are concerned in town planning with:

1. Human territoriality.
2. The promotion of accessibility.
3. Good appearance.
4. Allocation of sufficient space for all urban needs.
5. Allowance for the effects of topography on urban form.
6. The separation of incompatible uses.
7. The promotion of true economy in urban development.

Human territoriality

This is still a rather vague area of study in terms of the practical dimensions and measurements one would like to have. Territoriality involves, in briefest terms, recognition that for us to live, work and travel comfortably certain psychological requirements have to be met, irrational though some may seem to be. (How do you feel about a stranger parking his car outside your house, even if it causes you no definite disadvantage?) But no one has yet described these very real phenomena with the kind of precision needed if town planners are to incorporate the findings of investigators in terms of privacy distances. Statements about critical distances within which lions will charge intruders abound, but statements such as 'Windows of habitable rooms should not face each other across a distance of less than X metres or you will feel uncomfortable and hostile; the joint back fence between house-gardens should not be less than Y metres from the rear elevation of either house or you will feel similarly uncomfortable unless the fence extends above eye-level' do not seem to have been made yet. That is the kind of statement town planners need if they are to act on the underlying ideas sensibly and effectively.

Accessibility

This is important at all scales: international, regional, urban and local. In its general sense it is easily enough understood. In relation to town planning it has to be subdivided into the aspects of distance (costs of track, fuel consumption, etc.), time (which may be very different: 1 kilometre at 60 miles an hour = 1 minute, 1 kilometre at 4 miles an hour = 15 minutes) and safety (apprehension or experience of danger, injury or death may greatly outweigh considerations of time or distance).

Appearance

The most obvious part of the aesthetic experience of a town is its appearance, but what we hear and smell may contribute as much to our enjoyment or dislike of an environment as what we see. The extent to which these things can or should be the subject of public control is arguable and will be discussed later.

Space standards

How many persons per house and houses to the hectare to allow for? How many soccer pitches per 1000 people? How much land for schools, shops, clubs, etc. per 1000 people? How many vehicles per hour will a simple road junction comfortably absorb and how many houses will produce that amount of traffic?

Space standards need to have been the subject of very thorough consideration and experiment before decisions are reached. They are especially important and difficult because although, up to a point, the greater the space devoted to a particular use – a school, a house and garden or a factory – the easier and pleasanter will be conditions for users, nevertheless the more liberal the standards the less good will accessibility be in terms of distances between points of origin and destination. It is therefore very important, in designing a town plan, to ensure that while the space standards used are as liberal as is necessary for comfortable and efficient use, uses are spatially related to each other so as to maximise accessibility. It is necessary to go further than this and to ensure as far as possible that no more land than is really needed is allocated to a use and that every piece of land in a town is used or allocated for a specific purpose or purposes. The amount of unused or underused land in almost any town is surprisingly large, and every underused or unused hectare reduces accessibility by a little.

The effects of topography and other physical constraints

Steep slopes, liability to flood and subsidence, poor load-bearing capacity of soil and so forth fall under this heading, as do various economic and ecological factors: high agricultural productivity, fine scenery, plant habitats of special importance, etc. All these have or should have strong effects upon the form of a town. Some, such as high agricultural productivity, may properly preclude the use of land for any urban purpose. Others, such as liability to flood, will preclude use for building purposes but not for uses such as playing fields. Conversely, steep land is quite unsuitable for playing fields, but, if not very steep, may be suitable for other urban purposes. In many cases the net effect of all these factors will be to dictate a very different shape and form for a town than would otherwise be chosen. Paradoxically, this may make the design process considerably easier by limiting the number of feasible alternatives from which to choose.

It is worth stressing, too, that these influences make it difficult to suggest forms of town design which will have universal applicability; the particular

influences which apply and their relative strengths vary so much from case to case. It is nevertheless important to work out forms which are optimal if there is no very strong distorting influence, so that, with these as starting-points, the reasons for departing from them in particular cases can be seen, understood and justified, and the different forms consequently adopted similarly justified.

The separation of incompatible uses

Often, town planning attempts little beyond this, and it is an important if not particularly exciting part of town planning. Obviously enough, those land uses which by their nature produce large amounts of noise, smell, smoke or mess ought to be separated from other uses which they may adversely affect, especially where these other uses contain a captive audience, as in the case of housing. Physical separation need not necessarily be very great, nor is it always essential. It may be possible to impose and enforce conditions which result in offensive manifestations being confined to the sites on which they are produced, and this, where practicable, is preferable because physical separation will often operate against the principle of accessibility in its aspect of compactness. The relative overall costs and benefits of separation and of containment need to be calculated.

The principle of separation is applicable not only to gross examples such as tanneries and abattoirs but also, in detail, to quite small uses. Local pubs are a good example. Many people would like to have one of these just up the road, but few would want one immediately next door. Intelligent detailed siting can often ensure that a pub is not right next door to any house, but is pleasantly close to many.

Economy

In all town planning design it is essential to produce given results by use of the smallest practicable amount of resources. To do otherwise is wasteful and may well prevent the design being carried out. In practice it may often be necessary to approach the matter from the other end; to design so as to produce the best practicable results from a given, usually inadequate, outlay of resources. This is so fundamental that it should be part of the essence of a planning designer's thoughts and methods, not something to be thought about now and again as a separate subject. As we shall see, plan evaluation or testing ought to be an especially important specific activity in which acceptable expenditure as well as adequate performance should be considered. The capital expenditure involved in implementing a plan, e.g. on roads, and recurrent expenditure (their maintenance and the cost of running buses along them) both need to be compared; the smallest capital expenditure may not by any means entail the lowest running costs. This complicates calculation a good deal.

If town planning is considered as an art, and town planners as artists, which in some ways is reasonable, one needs to consider the handicaps under which

a town planner operates as compared with, say, a painter. He is often like a painter who has been commissioned to paint a picture by a group of patrons, of whom several are not sure whether they really want a picture painted at all, and others differ considerably as to the kind of picture they want. The instructions they give to the painter are therefore reduced to generalities.

The materials to be used, land, buildings and roads, are inordinately expensive, not just brushes, pigments and canvas. Moreover, the artist is not allowed to buy a complete canvas, but has to buy bits of it from different people, and can only hire other bits. He is not even allowed to paint the whole picture himself; for some parts he has to use the services of apprentices of dubious competence. Even for the parts he is allowed to paint himself the whim of his patrons limits him to using only brown and green. At any time during the progress of the work the patrons are entitled to come along and say that some important part of the picture must be dealt with quite differently. Obviously, no painting produced in conditions like that could be a masterpiece, and it would be surprising if anything of merit were produced.

Fortunately you can destroy bad pictures if necessary, but you cannot destroy badly planned towns. Naturally, the town planner cannot possibly have, and ought not to have, the kind of freedom which the painter has as of right, for the town planner's activities involve the expenditure of too much wealth and affect the happiness and economic welfare of too many people for it to be right to allow him to exercise his own independent judgement all the time. But he certainly needs a rather freer hand than he usually gets, at least to the extent of being able to be sure that the raw material of land can be made available for the purpose for which it is assigned in his plan.

Before looking at suitable basic methods for the design of a town and of the elements which comprise it and demonstrating their application in cases free from powerful constraints or distorting factors, it is necessary to say something about the allied subject of regional planning.

Regional planning

No two people seem to agree about what this really is or even what a region is, while confusing terms such as 'city region' and 'regional shopping centre' are used. Moreover, clear distinctions are not always made between regional physical planning, regional economic planning, regional development and regional organisation of public affairs and facilities. It can be thought of as a great inter-linked web of activities in which all of these are involved in coordinated fashion to produce harmony and efficiency in public policy and action of all kinds, or on the other hand, as little more than a rather desperate attempt to get the various ministries concerned with physical development to sit down together and talk about matters of common concern.

I do not want to get involved at length with regional planning here. In the aspects of it with which physical planners are concerned it does not seem to me

to have reached a stage of coherence or completeness sufficiently advanced to make it possible to discuss desirable principles very meaningfully except in the abstract. Even the locations and sizes of British New Towns do not appear to have been governed by discernible, consistent principles.

This is a sad conclusion at which to arrive. It is literally impossible to talk sensibly for long about town planning without considering regional planning, taking the latter, in rock-bottom terms, to mean making decisions about the location of strips, e.g. motorways, each too long to be the sole concern of a single local authority; institutions with clienteles going beyond the population of a single local authority; and areas, e.g. regional parks, used extensively by people from outside the area of the local authority in which each is located. A rural area containing twenty villages can only support so many primary schools and so many secondary schools – far less than twenty of each. It is difficult to imagine how the necessary location decisions could be left to the inhabitants of the individual villages. Each village would want to have a primary school and a secondary school if it could.

Most regional planning matters are of this nature, though more complicated, and the argument for making proper regional planning arrangements is that it is better for the necessary decisions to be made in the light of comprehensively conceived criteria than as the resultant of naked political argument and power plays. It follows that before preparing a town plan seriously intended to be implemented, not just a basis for argument, it is essential for those who prepare it to be told as specifically as possible what assumptions they are to make about those factors which relate to the regional level, such as:

- size of population
- amount and kind of employment
- number and kinds of regional or national institutions to be provided
- provision if any for regional parks, etc.
- routes of any regional or national roads

Figure 1.1 shows the kind of thing that is needed. In this country the county structure plans go some way to meeting these needs, however imperfectly. In many others little progress has been made.

City regions

Up to some indefinitely large size, a town has fairly specific characteristics and a certain unity. It has a centre, industrial areas, extensive residential areas and a number of sub-centres. But very large towns are different and can easily be perceived to be different.

When, within an area of continuous urban development, a large proportion of the population is forced to use mechanised transport to visit the main centre, to become commuters in fact, the town has become something more than a town. A good test is to consider who, in the event of neither public transport nor cars being available, could, for a week or more, daily manage to get to work and home again. They would not be commuters. When, within a town, there

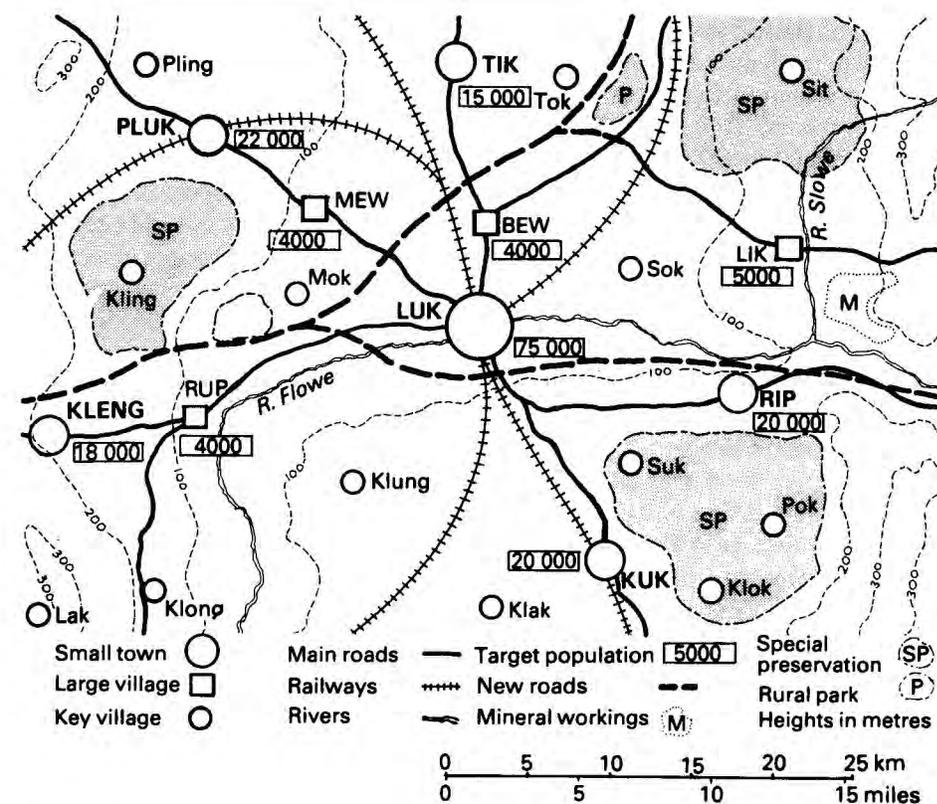


Fig. 1.1 An outline regional plan.

are subsidiary centres, each of the size of and offering services and facilities normal for a main town centre, there is a similar transition. Such a town is commonly called a city region by town planners and others. This is a convenient term for it denotes that the planning needed has some of the characteristics of regional planning as well as of town planning; especially the need to make decisions about where to locate certain quite large and important items, of which there cannot be one in each of the large subcentres.

Conurbations was a word coined by Patrick Geddes to describe areas in which, during the course of the Industrial Revolution, growth had caused a collection of previously separate towns to run together to form a recognisable, if hazily bounded, whole. Obviously these are very similar to, if not identical with, city regions, but they now have official and legislative definitions and connotations with which we are not concerned.

City regions came into being accidentally and in unfavourably chaotic circumstances. I know of none which can in any sense be regarded as planned. At best some are beginning to have planning applied to them. The hierarchy customary in western Europe and, with modifications, in many other parts of the

world seems for many reasons much more sensible. This hierarchy might be described as 'large city surrounded by medium-sized towns, surrounded by large villages surrounded by small villages'.

City regions and conurbations are often described as areas of 'continuous urban development'. This is a description to which some difficulty attaches. Not all urban development consists of built-up areas. It includes playing fields, parks and institutions of various kinds with large grounds, so one is not talking about continuous built-up areas. On the other hand, some of these items are commonly located on the edges of towns where, visually, they partially merge with the countryside. Occasional slight discontinuities also occur when, often for rather mysterious reasons, a small stretch of agricultural land remains between large built-up areas and forms an interruption which no one would regard as constituting a break sufficiently great to justify thinking of the built-up areas on each side as separate towns.

Even after local authority reorganisation there are plenty of cases where social, economic and visual boundaries do not at all closely correspond to political boundaries. It is therefore hard to be sure in conversation, even between town planners, that everyone means the same thing when he says 'Darlington', 'Norwich' or 'Tunbridge Wells', and even harder when entities such as 'London', 'Sydney' or 'New York' are mentioned. Though insistence on close definition is a terrible conversation-killer, it is essential with this subject, for without it great misunderstanding soon occurs. Yet close or accurate definition almost defies achievement for, unhappily, apart from administrative artificialities, we inevitably sometimes use the same name for different entities. We may refer to Guildford as a specific physical entity, but often when we say 'he lives at Guildford' we may have vaguely in mind an area much larger than that entity.

'Brisbane' is a particularly awkward word. It might mean the Brisbane City Council area or something much smaller. Someone living at Brighton, about 20 kilometres from Brisbane GPO, would certainly not, for many or most purposes, think of himself as being in Brisbane even though he is within the Brisbane City Council area and the population of that area is still under 1 million. On the other hand, Ipswich, some 30 kilometres from Brisbane GPO to the west, is quite certainly part of Brisbane, regarded as a small or nascent city region. Less certainly, but probably, the Gold Coast, stretching as far as 100 kilometres to the south of Brisbane, should also be regarded as part of the city region.

At the town scale, the problem is not quite so bad, though bad enough. There, as a very rough guiding principle, we can say that if in a gap between built-up areas one can fairly easily find points surrounded by agricultural land from which neither area is visible, the two built-up areas can, for town planning purposes, be regarded as separate towns or villages.

What is a town for the purposes of this book? It is something smaller than a city region and larger and more complex than a village. What then is a village? A place with a population of at most a couple of thousand with a structure so simple that it is not readily divisible into localities or 'zones'. At the most the

shops may be grouped and the larger houses and gardens may be set a little apart from the smaller. This too may sound a very crude distinction but it is in fact rather reliable; there are not very many places about which one is left in doubt whether they are towns or villages.

Chapter 2

Preparing a town plan

Now we are ready to discuss how to prepare a town plan in the light of the seven aspects described on previous pages. These, it may be remembered, are:

1. Territoriality.
2. Accessibility.
3. Appearance.
4. Space standards.
5. Topography.
6. Separation of incompatible uses.
7. Economy.

There can be no successful attempt to isolate consideration of these from each other during the process of design, for a large part of the skill involved in design is that they all have to be kept in mind all the time or, at least, nearly all of them nearly all the time. We might best proceed in the order that follows, though some items which are more or less independent of each other can, at least in the earlier stages, be considered concurrently:

- (a) study the regional brief for the town;
- (b) obtain suitable base maps and carry out necessary surveys;
- (c) establish space standards and privacy and other performance standards;
- (d) decide on urban 'texture' or 'grain';
- (e) decide on road design policy;
- (f) prepare one or more plans;
- (g) evaluate alternative plans.

(a) The regional brief for the town

We shall assume that a new town is being designed, dealing with the additional problems of existing towns in Chapter 3, and shall consider only the planning design aspects of the job. In order to be able to exemplify design principles in the most general possible way, it is assumed that the new town concerned is on an even, virgin site which forms part of a featureless plain, well away from the influence of any other town; that communications between it and any such other

town are of equal importance in all directions and that there is to be substantial employment including industrial employment of varied kinds. The population to be planned for is 60 000.

In almost any real-life case, of course, we should hope to know something about the special characteristics of the people likely to come to live in the town; we should probably know at least from what part of the country most of them would come, and there would certainly be some specific kinds of industrial and office employment expected to play a predominant part in the employment scene. There would also be regional transportation considerations which would exert some directional influence on the design of the town, including, almost certainly, an existing or planned motorway. There would probably also be nearby sites, such as regional parks, upon which we could not infringe and which we ought to bear in mind from the accessibility point of view in doing our design.

(b) Maps

A good map of the area must be obtained as early as possible, which shows, especially, watercourses and contours in some detail. In Britain the Ordnance Survey will no doubt do a fine job for us; it will provide us with maps at whatever scales we need and supplement these with aerial photographs at various scales which can be used stereoscopically.

(c) Space standards

What uses of land need to be allocated sites in the town? For many of these there will be well-tried and established standards; the whole job does not have to be done *de novo* for each town. Unfortunately, established standards are not always well-tried standards, and a cool hard look is never out of place. Any standard, even if traditionally revered, needs to have its continuing validity tested from time to time.

The main land-consuming urban uses which need to be distinguished and considered for town planning purposes are *housing, business, industry, schools and other public and private institutions and open space*.

Decisions about space standards involve a two-stage consideration. For example, in the case of schools, we should determine how many school places are likely to be needed for the town as a whole, and then how much land ought to be allocated for each school place. It ought not to be very difficult to determine the former within acceptable limits of accuracy, though the ebb and flow of birth-rate inevitably make limits rather wide, but the determination of amounts of land may be very complicated and depend in large part on political decisions entirely out of the control of the town planner. Changing public opinion about acceptable building heights, the school-leaving age and the relative importance to be given to the provision of sports fields, are only three of the most important among a large number of matters which change school space needs from time

to time, yet which can hardly be allowed for in advance when making a plan. (If a sports-mad government decided that the provision of playing fields needed to be three times what had previously been customary, it would be both futile and unfair to blame 'the Planners' for failing to anticipate such a decision, though they would be blamed! Such difficulties are bound to arise in respect of other uses.)

A third stage may often be involved. The physical aggregation or separation of the units into which a use is divided will make an appreciable difference to the total amounts of land needed, since aggregation lends itself to some savings of land, and the relative degree of aggregation or separation has obvious implications for accessibility standards. These implications relate both to time and to distance, for excessive aggregation will often cause traffic congestion. This matter overlaps (d), urban texture or grain.

The calculation of space needs for industry, shops, offices and places of assembly (conveniently described as 'central area uses'), public open space, schools and, most important of all, in many ways, housing, all obviously have their complications, made the greater by changing needs resulting from new inventions, changing technology and marketing methods and even changing fashions. Town planning is an inevitably inexact process and is liable to substantial error unless the services of a reliable prophetic clairvoyant can be enlisted. Nevertheless, it is certain that sensible and strenuous attempts to plan for reasonable and probable futures will produce more satisfactory results than not trying to do so.

Housing

Since the establishment of space standards for housing is more difficult as well as more important than for most uses, involving as it does consideration of privacy standards, we shall examine that first. Unfortunately this must be dealt with in some detail. Readers who find the detail involved disruptive to their understanding of this chapter as a whole may prefer to move on at once to p. 19 and return to the following passage later.

The key phrase to describe what is being sought is *performance standards*. Techniques to produce and test these are not well advanced in the field of town planning and 'uses within uses', for example parking areas within housing, often complicate statements of standards, especially where, as in the case of local open space, it may often be doubtful whether land should be reckoned as part of a surrounding area of housing, or as a separate land use.

The home is where most of us spend more of our time than in all other places put together, and so is of special importance for our happiness. Physically it may take many very different forms, not only from one country to another, but even within a single town. The mean amount of land to be allocated to each home is probably the most important decision to be taken in the course of determining space standards for a town, followed by decisions about how much variation from the mean is to be allowed for on either side of it and the extent to which different types of dwellings are to be mixed or separated.

One very special difficulty is that while most calculations about town planning are made in terms of people, we can only design and control buildings and the use of land; people will be born, marry, divorce, die and move house without consideration for the wishes of town planners. Statements about people per hectare can never therefore be more than forecasts, though it may often be possible for them to be quite accurate forecasts.

In considering the amounts of land to be allocated for housing we have to try to match desires with costs. To discover desires with enough accuracy to feel justified in acting upon them is always difficult, but particularly difficult in the case of a new town, where it will seldom be possible to know who will occupy the houses built on the land allocated for them, what these people's wishes are or even where they will come from. Even if we knew only the last, it would provide some sort of guide to desires. We have to decide what distinctly different types of homes to provide for (since different types necessitate quite widely differing amounts of land per home), in what relative numbers to provide for each type and how much associated outdoor space per home should be allocated. In order to do the last we must decide how much of this space shall be communal and how much exclusive to each family. It must be very strongly emphasised that desires do not mean very much unless they are related to ability and willingness to pay for them, and that this is related closely to government subsidies and loan policies.

To anticipate the very possible reader reaction that surely it is neither feasible nor necessary to go into such detail about one element of a town before preparing even a general plan of it, I reply categorically that it is both feasible and absolutely essential, because no sensible plan can be made until you know roughly how much land to allocate to each principal element, and you cannot know that until the decisions discussed above have been made. But I emphasise that you can only know *roughly* and only need to know roughly; numerous detailed alterations can be made, and will have to be made, during the carrying out of the plan. This will do no harm so long as the total amount of land available for housing is about right; if it is not, the whole plan may collapse, with great distress to people who live in the town. The housing areas of a town often amount to about one-half of the entire urban area, and housing is subject to very much wider variation in the amount of land allocated to it than any other urban use because of the widely different density policies which may reasonably be adopted.

How does one decide specifically how much land is needed for each home? There are four distinct elements involved: the land the building actually stands on; the land used for immediate outdoor activities such as growing food, hanging out washing, standing for cars, etc.; the land used as means of access to the home (roads and footpaths), and the land which has the function of separating the home from nearby other homes or other buildings to ensure adequate supplies of light, air and privacy. Of course some of the land which performs the second and third of these functions may also help to perform the last. The extent to which such combinations can work will often depend a good deal upon the

skill with which a housing area is designed.

Let us now state some fundamentals: as the height and number of floors of buildings increase, so does the amount of land covered by a given amount of floor space decrease. (Compare the amount of land covered by sixty bungalows and the amount covered by a tower block of flats which includes an amount of floor space similar to the sixty bungalows.) (See Fig. 2.1)

But, as the height of buildings increases, the separation between them which

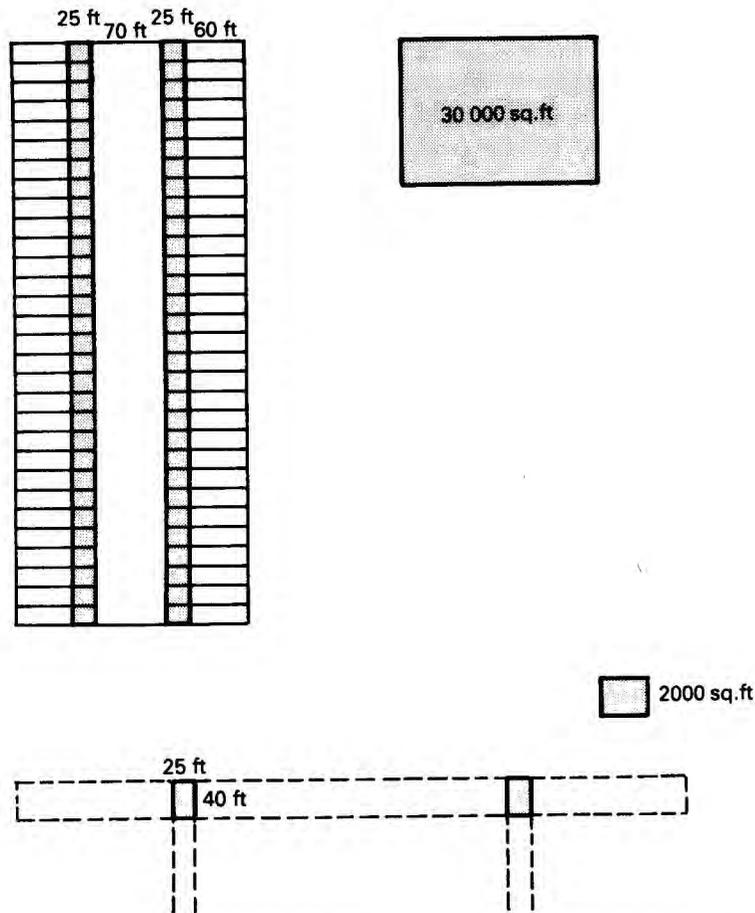


Fig. 2.1 Sixty dwellings and the land they cover; above in the form of bungalows, below in the form of 15-storey blocks of flats. With the bungalows spaced to provide sizeable gardens, the density of the flats, spaced to provide sufficient daylighting, is just over five times as great. If the bungalows were spaced more closely to the limit sufficient for daylighting and privacy, the difference in density between flats and bungalows would come down to about 4 to 1. Building high does not save as much land as is commonly supposed. Imperial units of measurement are used here and in Fig. 2.2 because the argument that went on about this subject was conducted in these terms.

is needed to secure sufficient daylighting increases too. Building high blocks of flats does not therefore save as much land as might be supposed.

A flat may be physically joined to other flats above, below and on either side, thus increasing the potential for tiresome noise. Except in the special, not very common, case of a flat being placed on top of a house, a house can only be physically joined to other houses on either side, so reducing probable noise, but the reverse applies to warmth.

Houses may be joined to other houses on both sides (terraces), one side (semi-detached) or on neither side (detached), with similar advantages and disadvantages. Houses almost always have direct access to the outside world at ground level, flats, except ground-floor flats, do not. It is easy and usual to arrange for each house to have some exclusive outside land adjoining it. This is not possible for most flats.

There is a useful role somewhere for almost every kind of home one can think of, if it meets not only the obvious needs for access, light and so on, but the needs for privacy shortly to be discussed, and also if every household has a reasonable chance of getting into a home of the kind it wants and needs, and is not forced into a kind quite unsuitable for it. Each household has at least slightly different needs from every other, but some kinds of home fit the needs of a very large number of households closely enough to be acceptable, while conversely, many households are adaptable enough to live happily in any of quite a wide variety of homes. Most households, it should be added, are subject to changes in numbers, age, composition and habits, over a generation, great enough for one or more changes of home to be sensible.

Ethology. About this there is a large and growing literature, including Robert Ardrey's fascinating trilogy: *African Genesis*, *The Territorial Imperative* and *The Social Contract*; Robert Sommer's *Personal Space* and E. T. Hall's *The Silent Language* and *The Hidden Dimension*. These and many more contain highly suggestive material, the thinking behind which ought surely to be capable of being readily directed towards establishing acceptable space standards for town planning, and most especially housing layout standards.

Experiments have shown alarming similarities between the behaviour of overcrowded rats and overcrowded metropolitan human beings. Some findings have been challenged, but there is indication that a very overcrowded physical environment induces bad behaviour which would not otherwise occur. Though human beings are even more ingenious than rats and invent and erect all kinds of devices to mitigate overcrowding, the similarity remains. Sticklebacks, and many kinds of birds and mammals, stake out territories for courtship and breeding purposes which other males of the same species are not allowed to enter without encountering resistance. This is linked with the idea of there being certain critical distances. E. T. Hall, for example, says that in the case of lions there is a distance beyond which a lion will ignore a human being. If the human gets a little closer, the lion will retreat, and this may continue until the lion cannot retreat further. When that happens, and if the human approaches yet further

until he passes another critical distance, the lion will attack. Hall says that lion-taming acts in circuses are based on these facts.

We have to distinguish between two different if closely linked aspects. *Personal space* is carried around, while *territory* is relatively stationary. An animal or man marks the boundaries of his territory so that they are visible to others (or, if not visible, scented), while the boundaries of personal space are invisible. Personal space has the body as its centre, while territory does not. Often the centre of a territory is the home of the animal or man, and while animals will usually fight to maintain control over their territory, they will withdraw if others intrude into their personal space, provided that, as in the case of the lion just mentioned, the intrusion is not *too* close. The personal space is also sometimes considered as a 'bubble' which may be compressed but must not be pierced. While a good deal of work has been done and a good deal is known about human bubbles in terms of the way people space themselves at bus stops and waiting rooms, very little indeed seems to be known about human territorial feelings in relation to housing.

The Essex County Council's *A Design Guide for Residential Areas* has some interesting but rather tantalising things to say on this subject on pp. 25–32. It puts forward performance criteria. These propose that on the public, i.e. street, side of a house where ground-floor living rooms have windows only on the public side, any 'large' windows should be screened from the public footpath, by 'above eye-level walls, structures or landscaping' set at an adequate distance from the windows. As regards the private garden side, it is suggested that an 'eye to eye' distance of 115 ft (35 m) will give adequate privacy by separation, but that if privacy is to be achieved by design, any distance to meet minimum garden area and daylight and sunlight needs will suffice. The design methods indicated are a screen of height greater than eye-level along the common back boundary and windows with sills above eye-level in back upper-floor windows.

It is pointed out that, with houses less than 18 ft (5.5 m) wide, gardens will have to be at least 60 ft (18.3 m) long to achieve the 1080 sq. ft (100 sq. m) minimum garden recommended for all houses except those with walled patios or with substantial common open space. These standards accord closely with ideas I long ago formed myself. But unfortunately no reasons are given for the particular dimensions and areas chosen, so the search for ethological bases for performance standards has to continue.

Using my slightly simpler criteria, we can suggest specific maximum densities for single-family housing. The assumptions are as follows:

Minimum width of house plot 18 ft (5.5 m), add 20 per cent for inevitable wastage over any extensive area of housing: about 22 ft (6.7 m) effective frontage.

Minimum distance between fronts and backs of houses 70 ft (21.3 m).

Minimum length of back garden, unless high-level windows are used with screens across common boundary, 60 ft (18.3 m).

Assumed depth of house 25 ft (7.6 m).

We then get,

With 120 ft between backs of houses and 70 ft between fronts:

43 560

$22 \text{ ft} \times (35 \text{ ft} + 60 \text{ ft} + 25 \text{ ft})$

$$= \frac{43\,560}{22 \times 120 \text{ ft}} = 16.5 \text{ houses per acre (40.75 houses per ha)}$$

Figure 2.2 illustrates some of the facts and standards which have just been discussed.

The *Essex Design Guide* has this to say about residential density (pp. 10 and 11):

There shall be diversity in density of development, in the form of buildings, and in the size and type of dwellings in all neighbourhoods. (1.0 (iii))

In the expansion of towns in Outer Essex, the net density shall ordinarily be within the range of 5 to 30 dwellings to the acre [12 to 72 per ha], with an average in new neighbourhoods of between 13 and 15 to the acre [32 to 36 per ha]. In partly developed residential areas, the density shall be as high as is compatible with the surrounding developments and the general character of the area (1.0.vi)

In the redevelopment of the inner areas of towns in Outer Essex, higher net densities shall ordinarily be adopted, up to a maximum of 35 dwellings per acre [86 per ha], where the following four conditions apply:

- (a) There is adequate public open space nearby;
- (b) The site is within or adjoining the central area of the town;
- (c) Effective means are provided for the separation of pedestrians from main road traffic; and
- (d) There is good public transport to the site.

This, again, is fine as far as it goes, but gives us no idea of what sort of mean density to cater for. To do that we have to try to estimate the effective demand for different kinds of homes and for different sizes of gardens, and to do that really well we ought also to try to estimate not only what people actually want, but what they would prefer if they had the chance to choose between a wide range of housing types and had enough experience of different types to choose knowledgeably between them. Once more to anticipate possible reader resistance, it needs to be emphasised that it is not possible to consult in advance future residents whose identity is unknown, so that the best that can be done is to make the most intelligent assumptions possible about what they would like if they could be consulted, and be prepared to change policy as soon as possible if you turn out to be wrong. Also, it will be well to remind the reader that what we are working towards in this discussion is not merely homes, but persons per hectare, so we have to estimate the mean family or household size.

It is a measure of the extent to which the need for fundamental town planning calculations have not been met that I find nothing better than material produced nearly thirty years ago by Ruth Glass and others upon which to base some estimate of the numbers of dwellings per acre and the number of people per acre likely to be suitable for adoption as a means in order to know how much land to allocate for housing. My estimate is to be found on pp. 256 *et seq.* of my *Principles and Practice of Town and Country Planning* (4th edn, 1969). It comes

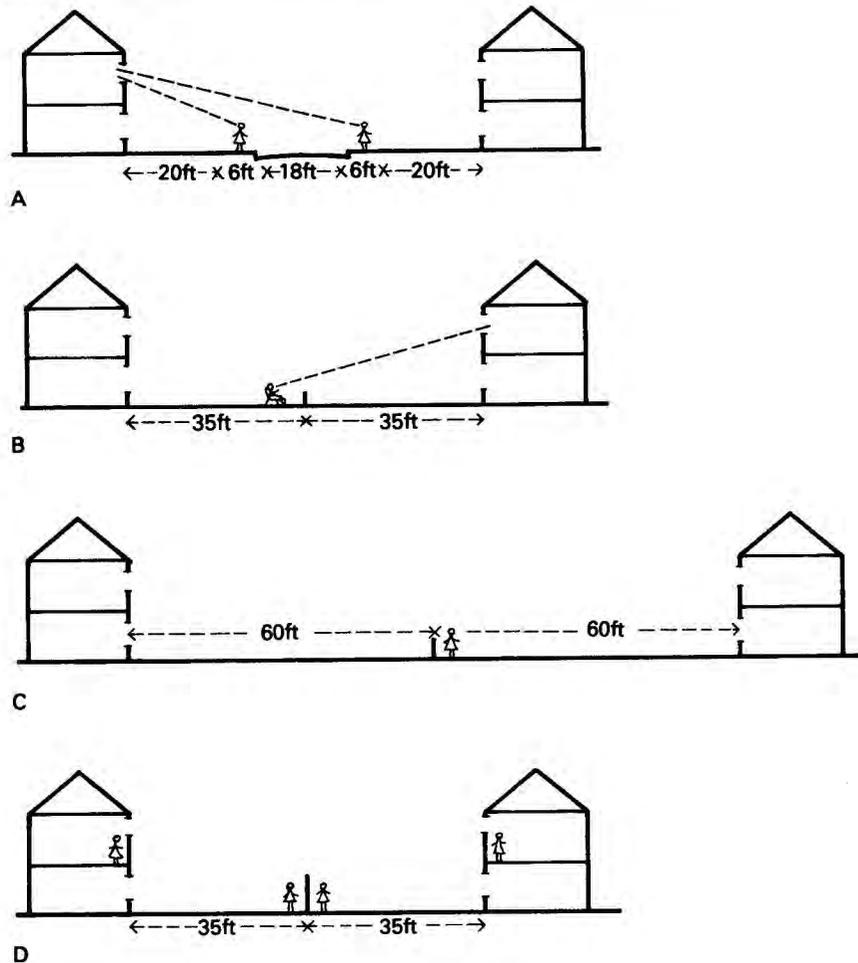


Fig. 2.2 Privacy distances: A. About 70 ft, 1 chain, a cricket pitch length, is an acceptable minimum window-to-window privacy distance. On the street, or public, side it is also acceptable, since passers-by on the same side of the street will only get fleeting, oblique views into upper windows, and those on the opposite side, though they will have a more direct view, are at least 44 ft away. (Feet rather than metres are referred to here because of the familiar traditional dimensions involved.) B. On the garden, or private side, it is a different matter. There is no 'neutral' roadway and resident voyeurs can settle in only 35 ft away. C. Therefore, where space permits, a distance of about 22 metres (60 ft in this case) is desirable between back fence and windows. D. Where space is short, design can partially replace distance. Cills of windows of rooms on the upper floors are placed above standing eye-level and back fences or walls extend to above this level. (Voyeurs then have to stand on chairs.) These devices do little to cope with interference by sound or smell, so they are not as effective as adequate spacing.

to 50 rooms, 14.5 dwellings, 40 persons per acre (about 100 persons per ha). The Glass figures assume that households with young children will all live in houses, but that a proportion of other households, calculated in a rather complicated way, will live in flats. My figures assume that houses will be supplied at very varied densities from 4 to 12 houses to the acre, (9.5–29 per ha) far more of them at the higher than at the lower densities, and that flats will be built at a density of 120 habitable rooms to the acre (288 per ha) the maximum practicable for 3-storey flats. Sixty per cent of dwellings are assumed to be in the form of houses, and 40 per cent in the form of flats. Only the smaller households are assumed to live in flats, so they are occupied by only about 25 per cent of the population. Even that may well be considerably above the figure which would be produced by catering for genuine demand in conditions of adequate supply, but that is a matter for argument not appropriate here and considerable change in the proportion of dwelling types is possible without altering mean density.

The maximum for flats is stated as 120 habitable rooms per acre (288 per ha) because higher flats are so expensive. In view of the very large numbers built in our bigger cities in the last twenty years and the not very satisfactory results they have produced, it seems rather unlikely that many more will be built in the future.

All the calculations I have made from time to time over the last thirty-five years, making approaches from several different directions, and from several different bases, suggest that changing conditions, demands and needs tend to cancel each other out and that 40 persons per acre (100 persons per ha) remains a sensible figure upon which to base space needs for housing. For example, average household size falls as fledgelings tend to leave the nest earlier and form separate households of shifting composition. This means that a given amount of housing will then hold fewer people than previously. But, conversely, the proportion of households consisting of Mum, Dad and kids also falls, and they are the households who are likely to want houses with spacious gardens, so the effective demand for these falls. This means that the total amount of land needed for housing remains about the same.

There can be no definiteness or finality about the calculation of land needs for housing, only a pendulum swing each side of a norm.

Central area uses

Unless there is some abnormal degree of attraction to people from outside the town, about 1 acre per 1000 of the town's population has been found adequate; for a town of 60 000 people, 60 acres (roughly 25 ha). To this needs to be added something of the order of another 1 acre per 1000 for subsidiary centres, 120 acres (48.5 ha) in all. This is such a small amount that it is a quite insignificant proportion of the whole urban area, though for purposes of detailed design, the space needs of the town centre need to be worked out as accurately as possible, since it may often need to be surrounded by a dual carriageway road, and, if the area enclosed by this road proves insufficient, extensions to the central area

have either to be pushed across and over it, or the road itself has to be moved, both inordinately costly operations.

Manufacturing industry

There is a fair measure of agreement that land of the order of 1 acre for every 30 workers or 1 ha for 75 is needed. With increasing automation, fewer workers are needed for a given volume of production, but that production will need about as much land as before to cope with the manufacturing processes themselves and the temporary storage of raw materials before processing and of finished goods afterwards. To balance this, it is also becoming more and more clear that offices which do not need to have much contact with the public can be better sited in industrial areas than in town centres, and to such an extent that it may be better to call these employment areas. Office workers can be accommodated at higher densities than industrial workers, so that the net result may well be that about the same amount of land will be needed for employment areas as previously.

It has always been recognised that the amount of land allocated to industry needs to be well on the high side because of all the uncertainties associated with changing employment patterns and manufacturing techniques. Also, there needs to be space for shops and some recreational open space in large industrial areas. Six and a half acres (2.5 ha) per 1000 of the town's population has therefore been adopted for our purposes.

Schools

The land to be allocated for publicly provided schools is determined by Department of Education and Science regulations, with which we may agree or disagree, but about which we cannot, as town planners, do much. Changing education policy obviously affects somewhat the numbers, kinds and sizes of schools needed for a given population, but the standards we use here should suit ordinary cases. They are, for primary schools, 1.3 acres per 1000 of the town's population, total 78 acres (31.5 ha), and for secondary schools 2 acres (0.8 ha) per 1000, total 120 acres (48.5 ha), about 200 acres (81 ha) for all publicly provided schools.

Large establishments

In any town there will be a demand for private schools, hospitals, convalescent homes and the like, all needing fairly large sites, mostly not very intensively built up, therefore fairly describable as private open space, and contributing visually to the open part of the town's texture. It is impossible to forecast accurately what this demand may be, but in planning a new town we need to set aside suitable sites in suitable positions of *about* the right amount. I do not know of any serious investigation which has been carried out on this subject (clearly the demand varies enormously in different towns and in different parts of the country: some towns seem to consist principally of private schools!). My

own very tentative investigation suggests 2 acres (say 1 ha) per 1000 people as being of the right order of magnitude.

Public open space

Here is a prize example of conventional wisdom running round in circles. As long ago as 1927 the National Playing Fields Association estimated that there ought to be 6 acres of public playing fields for every 1000 people (2.5 ha) and 1 acre per 1000 (0.42 ha) of other kinds of public open space. It based these estimates on what must then have been extremely optimistic assumptions about the demand for games pitches. Since then, nearly all calculations of public open space needs have been stated as 7 acres (nearly 3 ha) per 1000 people, some of them *appearing* to be based on independent estimates.

The strange thing is that this magic figure may well be about right. David Winterbottom wrote an article in the *Town Planning Institute Journal* of April, 1967, called 'How much open space do we need?' In this he described some surveys of open space use carried out in Essex. He concluded that 2.5 acres per 1000 was enough for playing fields and that to that should be added 0.5 acre per 1000 for a central park and another 0.5 acre per 1000 for children's play areas: 3.5 acres (about 1.5 ha) per 1000 in all.

He went on to suggest that though that might meet the physical need, 'the aesthetic and peripheral need is for more, probably as much as 10 acres (4 ha) per 1000 population in all *most of which may well be outside the built-up area of the town as such*' (my emphasis). Admirably sensible though this is, it blurs the answer to the question of how much strictly *urban* open space should be provided. In the end, like everyone else, I settle for 7 acres (say 3 ha) per 1000.

Space standards have been dealt with briefly (except those for housing) partly because this is not intended as a technical book and their assessment is very much a technical matter, but partly too, as will have been apparent, because little research has been done on them, and hardly any research which could be called authoritative. Manifestly, in other countries, very different space standards might be appropriate for all or most of the uses discussed.

(d) Urban texture

Some uses have to be sited in specific, discrete units. A primary school is one of these; you cannot, just because only sites of limited size are available, put half a school here and the other half there. Nor could it be a good education policy to have a smaller school than that needed for a particular area because available sites were small. One is rightly constrained by the structure of the public education system in how one allocates school sites. On the other hand, if a particular area can support forty shops it may be possible to put them all together or split them into as many as six or eight groups without any very great relative advantages or disadvantages being obvious. Equally, a dozen games pitches might sometimes with advantage be put together, but sometimes would be better

split into several groups with three or four pitches in each. Also, there may sometimes be doubt whether, for a particular use, a centrally located site with the advantages of good accessibility is to be preferred to a less central location; use of the latter might enable the more central land to be used for housing, thereby giving more people good accessibility to some other centrally located facility such as shops. Secondary schools often give rise to this problem, which is demonstrated in Fig. 2.8 (see p. 33).

The decisions which are made about matters of this kind determine what kind of town will eventuate in terms of appearance and accessibility patterns and hence, often indirectly, the kinds of activities and groupings which will most readily come into being.

Let us look at some alternative possibilities. We shall deal with the simplest possible case. Perhaps a little startlingly, we shall initially ignore roads and other communication routes. In each of the cases considered, roughly the same total amounts of land are allocated for each use, but the number of units into which each use is split up, and the ways in which these units are spatially distributed, vary widely.

In accordance with the standards just discussed the amounts of land needed for a town of 60 000 are as in Table 2.1.

We begin with examples of a square town form which is graphically convenient and simple, divided into grids of small squares. Logically it should be enlightening to begin with a completely unplanned form – anyone can build anything anywhere. This is shown in Fig. 2.3(A). Each of the little squares is about 10 acres (4 ha) in area, and it must be understood of course that in an unplanned situation there might be mixtures of uses within some of them, too finely divided to be shown. The distribution is random. But there is really no such thing as a totally unplanned town. The motives for the planning, its comprehensiveness and competence, may differ greatly in different cases, but *some-*

Table 2.1

	Acres	Ha
Housing	1500	610
Business*	120	50
Industry†	400	160
Schools	200	80
Large establishments‡	120	50
Open space	420	170
Total	2760	1120

Note: Acres and hectares do not match exactly because of the rounding off which is appropriate for quantities as approximate as these.

* That is, town centre and minor centres. All uses likely to be found in these are included, not just business uses.

† Or employment areas outside centres.

‡ That is, institutions other than publicly provided schools which need substantial amounts of land.

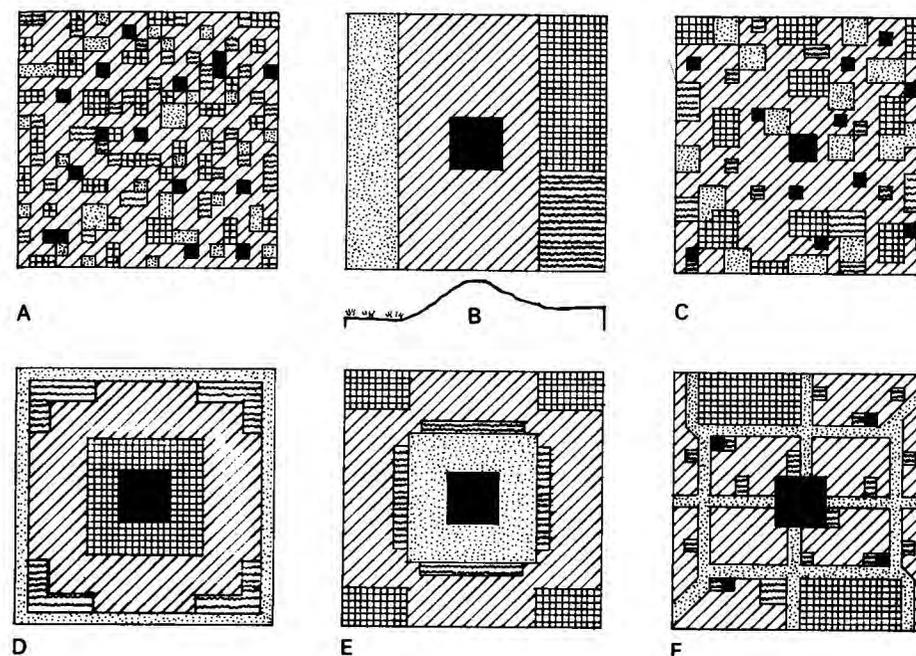


Fig. 2.3 Urban textures. A. Random B. Segregated C. Dispersed D. Buildings centripetal E. Buildings centrifugal F. Modified dispersed. As explained in the list of illustrations at the beginning of the book, the notations used in this illustration are used in all the following illustrations where they are applicable.

one takes *some* prior decisions when embarking on the building of a town, or even any substantial part of a town. At the very least a site has to be chosen and there has to be some vehicular access to it, however primitive. That vehicular access will itself act as a magnet and draw many kinds of development towards itself. In most real cases which approach the situation described, the town straggles along lines of communication and does not assume a form at all resembling a square.

Next we take the opposite extreme and assume the limit of what Thomas Sharp has called ‘segregative zoning’. Each of the main land uses is concentrated into a single lump (Fig. 2.3(B)). It is difficult to see why anyone should want to do this, for accessibility is minimised. The closer one lives to open space the further one must live from school or industrial employment and so on, though there are a few favoured families to the right of the town centre who, provided they do not mind not having accessibility to open space, are very well off: they have industrial work, schools and town-centre facilities all close at hand. This makes an important point; arrangements like this are very good for a few, poor for most and very bad indeed for some. In the absence of some quite specific political policy to do otherwise, the town planner must surely assume that he should design for optimum accessibility, which will automatically mean very

good accessibility for some, good accessibility for all and poor accessibility for none.

However, here the factor of topography can usefully be introduced. A plan not wholly unlike this might well be adopted if the site was like that in the section shown in 2.3(B): marshland to the left, steep land in the middle rising to a plateau where the town centre is, and flat but dry land to the right. Both industry and schools need flat land but are unsuited to flood land. A town centre needs flat land if possible, though this is not absolutely essential. Open space for playing fields must have flat land, while flooding, if not too frequent, is a disadvantage for them but not a fatal one. Housing is obviously ill-suited to land that floods or has very steep slopes, but is very adaptable.

If we were forced to use a plan like this, we ought certainly to try to modify it in detail by introducing *some* primary schools on any reasonably flat land within the housing area, some industry on similar sites and some housing on any parts of the land allocated to open space which were less subject to flood than the rest. By doing these things we should at least slightly improve general accessibility levels and also introduce some visual variety into what would otherwise be a very curious urban scene: 2 km by 4 km of solid housing, interrupted only by the even solid town centre. 2 km by 1 km of solid factories and large office blocks, and a similar area occupied entirely by schools and school playing fields, 4 km by 1 km of playing fields and parks. The housing itself, in that quantity, however much varied as to height, colour, texture and layout pattern, would inevitably be very boring.

In Fig. 2.3(C) we see something very different. Sites are located to achieve the maximum dispersal and so there is maximum accessibility consistent with functional efficiency. The town centre is reduced in size to the minimum which will contain the absolutely essential central services. Other services are located in quite a large number of sub-centres, some of them a good deal larger than would be necessary for purely local use. Industry is distributed between ten sites. Schools are located strictly in accordance with operational needs. Open space is divided into sixteen units, also located for optimum accessibility.

Here there would be no visual difficulty. Each of the units for each use would be numerous enough and large enough to be designed as substantial and interesting urban elements. There would be no 'sea of houses', in fact there might be some difficulty in designing uninterrupted housing areas big enough to give full scope to a gifted designer. There might, too, be some doubt about the financial viability of some of the minor centres.

Fig. 2.3(D) shows the maximum possible concentration of building uses towards the centre and Fig. 2.3(E) the exact opposite, subject only to the need to have a geographically central town centre. The disadvantages of each of these are too gross and obvious to need description. They are, however, extremes which are implied by writers from time to time as desirable.

Figure 2.3(F) is not very different from Fig. 2.3(C) but has a clearer pattern. It has a rather larger town centre, only two industrial areas, a ring and radial pattern of open space and an even distribution of school sites. At once this looks

sensible. It is good in terms of accessibility and gives full opportunity for retail and public services to operate efficiently. There are no unrelieved masses of a single use to make good visual treatment difficult and there is a simple, logical pattern easily recognised and appreciated.

A town is experienced four-dimensionally, the fourth dimension being time. What one sees at a particular moment is related, if not consciously, subconsciously, to what one has seen a little earlier and what one expects to see a little later. Manifestly, a logical, orderly plan form for a town gives a referential framework which enables this fused experience to be richer than it would otherwise be.

Kevin Lynch in *The Image of the City* and Jim McCluskey in *Road Form and Townscape* have a great deal to say about this subject. So does Kendrick in *The English Suburb*. He says that 'The suburb is where you see the town at one end and the country at the other.' A clear pattern also aids understanding and memory by giving visual promptings which make it easier to find one's way around a town. This is not of course to urge artificial symmetry or factitious order.

The most conspicuous item in Fig. 2.3(F) is the open space system, and this is the place to discuss this in some detail. If we are going to do effective town planning, we have to behave logically and scientifically, decide how much of each use is needed for a given population and provide for that amount. In order to do this we must be quite clear what purposes each land use serves; if topographical or other site restraints make it difficult or impossible to provide the prescribed amounts of each use, we should be quite frank about it, say so, and say how we have met the problem, perhaps by designing for an unusually intensive utilisation of some area or some other ingenious device. What we should not do is to make a virtue of necessity and if, for example, we cannot find enough land suitable for playing fields in the light of previously determined standards for them, declare that games are bad for the heart anyway, a disreputable stratagem of a kind of which town planners are sometimes guilty.

It is important to distinguish between public and entirely private open space. House gardens have many uses: growing flowers, shrubs and vegetables; eating alfresco meals; keeping animals as pets or for food; playing children's games; just sitting, standing, strolling and thinking.

Some of these activities are so intimately linked with the house adjoining the garden and so personal to a particular family that they can only be carried on to the fullest advantage in a private enclosed space adjacent to a house. But there are some activities which, except in low-density housing for the prosperous, can often be better provided for groups of families. Tennis courts and playgrounds for small children with equipment like sandpits and swings are obvious examples. One of each of these might readily serve twenty or so families, with maintenance work shared between them. Land used for such purposes is not open space (nor are statutory allotments). Both are simply land which it is thought appropriate to allocate for the joint use of a group of houses rather than splitting it between individual gardens. Anyone who calls it public open space is committing a kind of arithmetical fraud. If it is counted as public open space

the housing density calculations must be revised upwards accordingly. Real public open space is land which anybody can walk on to and use without feeling that he is intruding.

There is an appropriate hierarchy for public open spaces, just as there is for shopping centres and schools, but not so obviously because of the opportunities for multiple utilisation of open space. Let us first try to distinguish sensible steps in the hierarchy of open space and then suggest how the members of each class might be related to each other.

- (a) A large town park for the use of the whole town or the whole of a district of a large city, including bandstands, boating lakes, pitch and putt courses, playing fields.
- (b) Smaller but similar areas, each serving a locality with population of the order of 10 000.
- (c) Local open spaces, mainly for children's games and exercising dogs, with perhaps a few tennis courts and ornamental planted areas, catering for a population of the order of 2000.
- (d) Minor open space for sitting in and exercising small children, placed wherever one is needed to ensure there will be some public open space within about $\frac{1}{2}$ km of every home.

An area within each of the grades in the hierarchy can of course serve the purposes of all the grades below it for people who live close by. The distribution and relative sizes of open spaces are also greatly influenced by topography and the shape of the urban area concerned, so that such a hierarchy can only be a broad general concept.

Figure 2.4 illustrates how a spatial sequence of open uses of different kinds could form a continuous open strip from town centre to town periphery.

There are many different ways of distributing open space within a town, all with some merit. Figure 2.5 illustrates some ideas for the appropriate location of open space which have been advocated, set in context with the town plan form discussed later in this chapter.

If we did *all* the things suggested in Fig. 2.5 in the same town we should inevitably find that we had provided very much more open space than the amount needed because even if the open space were mostly in the form of strips, most of the strips for most of their length would have to be fairly wide to be useful and not merely ornamental. In fact, at least for preliminary design purposes it is a good idea to adopt about 80 yards or metres as a rough guide to minimum width – the width of a football pitch with a little extra at the sides, in order to ensure that one is not left with areas of such a shape that they cannot be laid out satisfactorily in detail. The initial adoption of such guidelines does not prevent or inhibit later subtle, detailed design. I do not think there can be much doubt that alternative (D) is usually the best to adopt, as likely to combine accessibility, continuity, visual attractiveness and functional efficiency better than others. If the characteristics of (B) can be incorporated, so much the better.

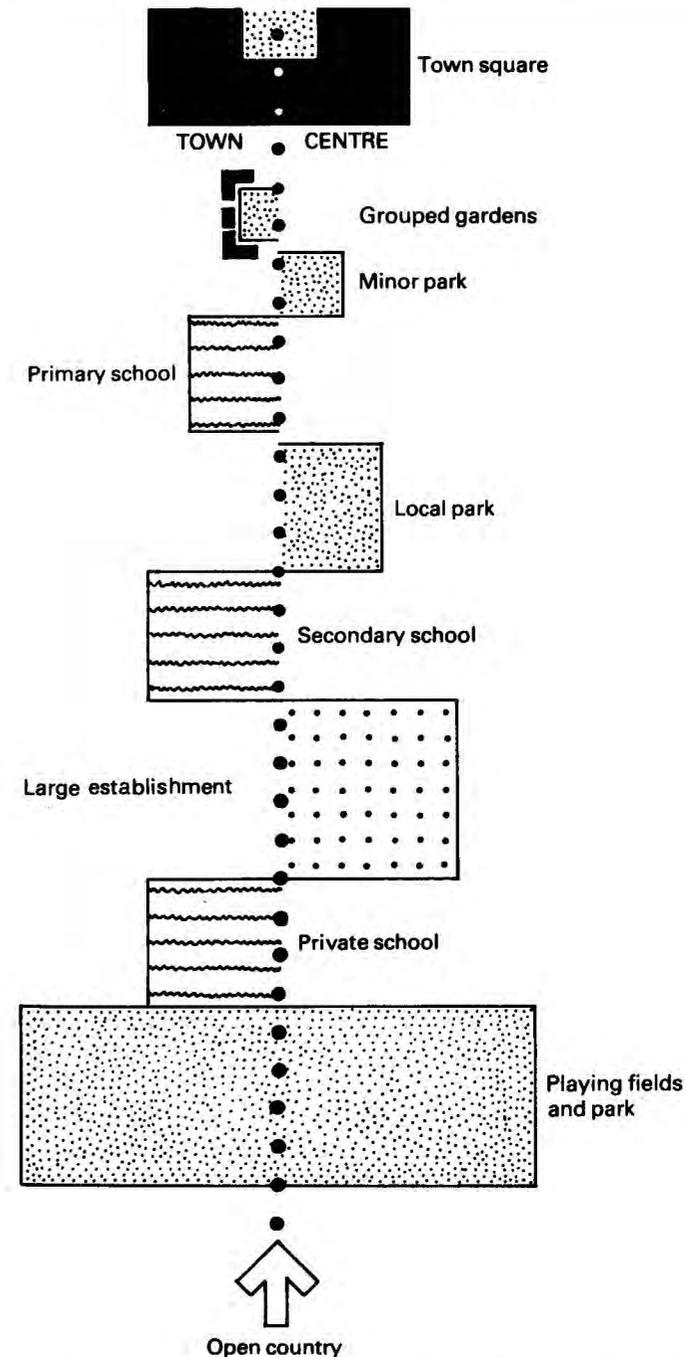


Fig. 2.4 Sequence of urban open land from town centre to periphery.

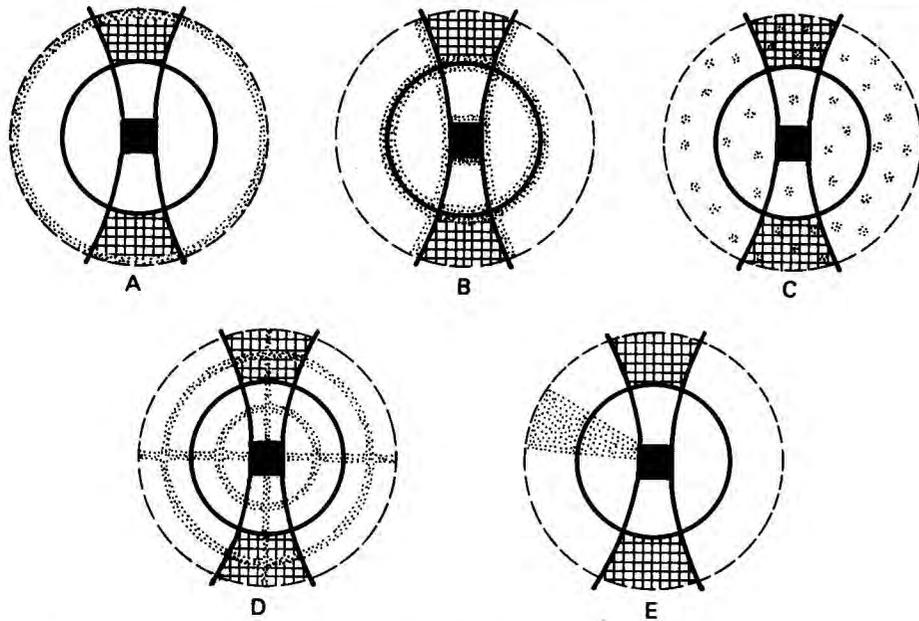


Fig. 2.5 Alternative policies for location of urban open space.

- A. Put it all around the edge of the town, so condensing the built-up part of the town and establishing a definite edge to it.
- B. Put it adjacent to main roads and industrial areas, to act as a horizontal 'buffer' against noise, smell and ugliness.
- C. Provide small open spaces throughout the town, so that wherever you are there is an open space nearby.
- D. Put it in strips in a ring and radial pattern so as to provide a coherent continuous system associated with walking and bicycle and horse-riding tracks, separate from, and as comprehensive as, the road system.
- E. Provide one, or a very few, really large worthwhile lumps of open space which make a strong visual impact, are economical to maintain and are big enough to give a convincing illusion of *rus in urbe*. Especially, say some, is it desirable to locate such space near the town centre.

The role of open areas which cannot appropriately be used or walked through by the general public, but which can very appropriately be looked at with pleasure as they are passed, and the provision which should be made for private open space and institutional uses which need sizeable areas of open land as part of their functional requirements now need to be considered. We are talking about land uses which cannot be categorised with precision. Any area open to view by passers-by which is planted or otherwise treated attractively enough to give pleasure falls into this class. But we need to discriminate more closely than that. School sites, once more, provide a good example. Local education authority schools are publicly owned, but the public does not have an unfettered right to wander around them. But they may look very nice and large parts of many of them are open to view from adjoining roads or footpaths. So with hospitals,

private schools and so on. Their grounds can all be made part of the urban open land pattern.

Tall buildings. As an element in creating the texture of the town these pose much the same kind of problem as the distribution of open space. We will confine ourselves here to consideration of tall blocks of flats. There is certainly a case for not using any of these at all, but if they are to be used, there will only be a limited number if a sensible and humane housing policy is in operation; they will be provided to cater only for those who positively prefer to live in a flat rather than a house, and from among these those who have no dislike for living high. Let us suppose that we have decided that in our new town for

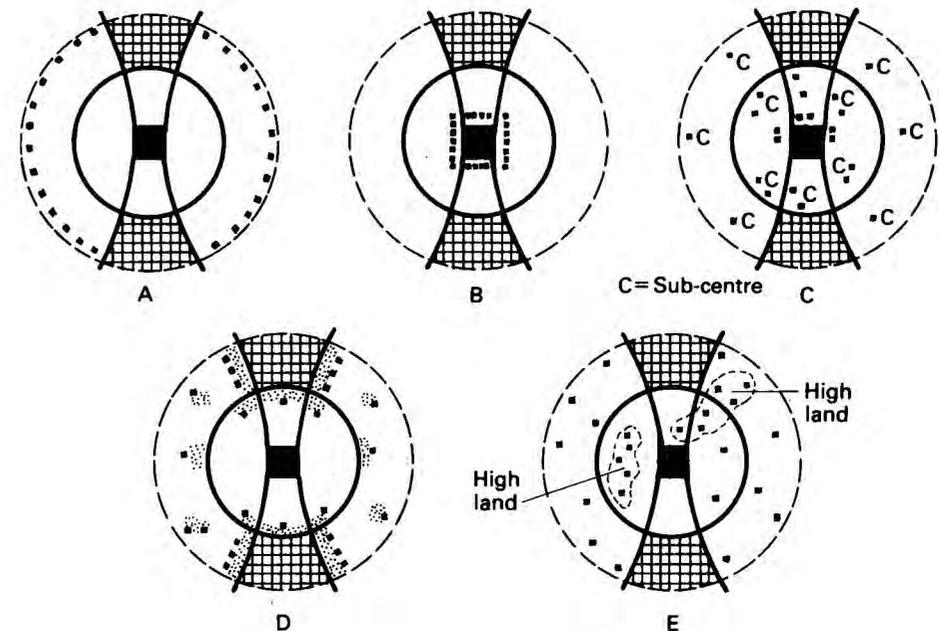


Fig. 2.6 Alternative policies for location of tall blocks of flats.

- A. Around the edge of the town in order to mark strongly the boundary between town and country and, conversely, to afford marvellous landscape views to the occupants.
- B. Around the town centre in order to mark the core of the town very strongly and to arrange for the largest practicable proportion of the population to live very close to town centre services.
- C. At the town centre and sub-centres in order to give visual emphasis to the latter as well as to the centre and to act as 'flags' to show their location.
- D. Adjacent to open spaces in order to give strong visual contrasts between horizontal and vertical elements, to give good views to residents, and to enable some land to be saved by using for daylight and privacy purposes land which would not anyway be built on.
- E. At numerous points, especially on prominent sites and where there seems danger of monotony occurring because of large quantities of unrelieved low buildings.

60 000 people there will be a demand for about 25 such blocks. Twenty-five 10-storey blocks with 4 flats to a floor would house 1000 families, about 5 per cent of the town's population. As for open space, several different policies have been advocated for the location of high blocks of flats, as shown in Fig. 2.6. With only twenty-five units to be disposed, it would be physically impossible to give effect to all these policies.

Functional and visual considerations are both important in deciding upon urban texture. But interesting visual treatment is always possible for any texture decided upon for sensible reasons (see Fig. 2.7) so that to prejudice functional needs for the sake of possible visual brilliance is truly to put things back to front.

Most of the problems lie in deciding how far to subdivide and disperse units in respect of which a substantial range of choice of this kind is possible. As we have already seen, there is virtually no choice in the case of schools, but there is wide choice as regards shops. The number and sizes of groupings affect traffic, affect the prosperity of the shops concerned and affect any unfavourable impact they may have on surrounding people, but tremendous variation is possible without disaster. There is a tricky question here which involves the tiresome old 'greatest good for the greatest number' issue. A shop may, because of traffic, smell, rubbish or appearance, slightly reduce the enjoyment of perhaps four adjoining households. Is it better to have 100 individual separate shops which will slightly affect 400 households or 4 groups of 25 shops which, in all, will probably only affect about 80 households, because the perimeter or frontier

between shops and houses will, in total, be smaller, but will almost certainly affect some of them more badly than in the previous case? Or 100 shops all in one group which may still only affect about 100 houses, but may affect many of them very badly? Who can really say? This begs the question of the extent to which very skilful design may mitigate adverse effects; the mitigation cannot be complete and the difficulty is a genuine one.

The more a service is dispersed the more people there can be living conveniently close to it. But the service may not be able to sustain itself at a high or varied enough level to give satisfaction if it is greatly dispersed. It may be delightful to live close to an isolated food shop, but this does not console you much when you want a hardware shop and have to travel 4 kilometres to reach one if a better distribution of shops might have enabled you to find a hardware shop within 1 km, even though you could not then have had a food shop right on your doorstep. On the whole, unexciting though this may seem as a conclusion, the best resolution seems to lie with avoidance of extremes.

Distribution involves resolution of at least three hierarchies: schools, open space and retail goods. With the last, naturally and inevitably, go the provision of many other services publicly or privately given or sold, from cashing a cheque to buying a drink or a meal, from consulting a doctor to seeing a film. Locations which are suitable for one of these are, broadly, suitable for all though, when it comes to detailed design, numerous subtle linkages and separations can improve matters.

The school and open space hierarchy have already been discussed. For shops and associated uses, I believe that only a twofold hierarchy is necessary for a town of 60 000 people: a town centre and a sub-centre for every 5000 people or so. For rather larger towns, or where topography or other constraints impose unusual shapes or densities, a threefold hierarchy may be preferable.

I think that, usually, if a location is suitable for one shop it is suitable for a group of half a dozen, though retailing patterns have changed so much in the last few years that the word 'shop' is now rather misleading. Quite small shops grandiloquently call themselves supermarkets, and are to some extent justified in doing so because they sell a range of goods which would previously have been divided between half a dozen smaller, more specialised shops. This is not a serious problem; it is not difficult to calculate the retail spending power of a community and to translate this into the amount of retail selling space which it can profitably sustain. This is what matters for town planning purposes, not the number of shops into which the selling space is split. A catchment area for local shopping of 5000 people is chosen partly because it also approximates to the catchment area of a primary school.

Now we have to consider what accessibility standards to use at the kind of density we have adopted. This can be discussed just as well in quite homely terms as in complicated technical language. At 3 miles an hour one walks a quarter of a mile or half a kilometre in about 5 minutes, and half a mile or 1 km in about 10 minutes. Any reasonably healthy person can walk a quarter of a mile and back easily, and most can manage half a mile. Experience shows that it is

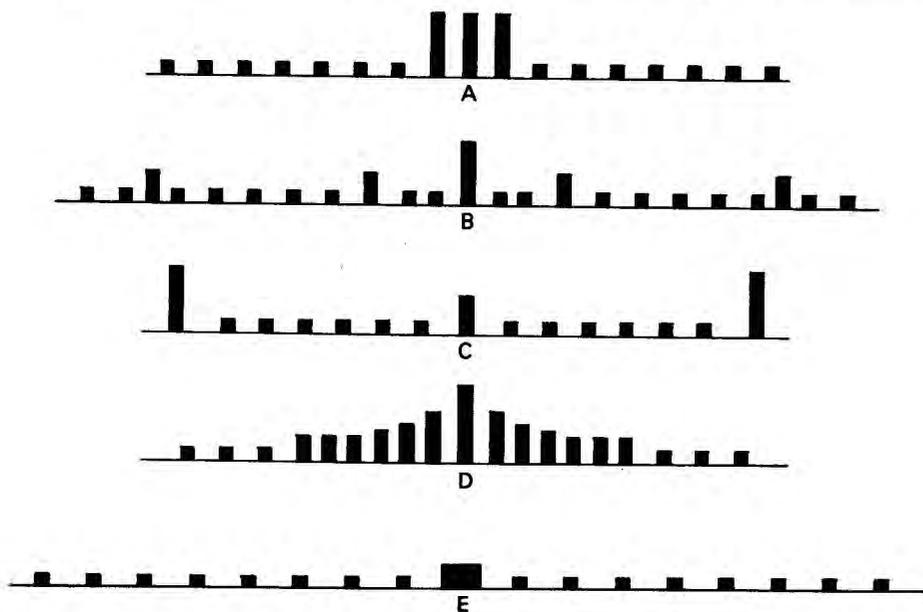


Fig. 2.7 Urban silhouettes. (These have some relationship with the various alternative urban textures shown in Fig. 2.3.) A. Drama in the centre B. Major and minor emphases C. City wall D. Leading to a climax E. Even height and density.

not difficult to ensure that, consistently with suitable planning design, there are some shops and open space within a 5-minute walk of most homes and a primary school within a 10-minute walk, given a density of 40 persons per acre (100 persons per ha). So children from 5 years old onwards may have to take a 10-minute walk to school but toddlers need not toddle for more than 5 minutes with their parents to open space or local shops.

I have never been able to see that it is necessary to take the matter much further than this. Of course, in areas of irregular topography it would probably be nice to arrange for shops, primary schools and open space to be located on the higher land so that you walked uphill when fresh and unladen, and walked back downhill when tired and laden, and it might sometimes be possible to arrange something of that kind; but not often.

Secondary schools have much bigger catchment areas than primary schools, and pupils may not necessarily go to the secondary school nearest their homes, so no simple pattern of accessibility or very high level of accessibility will be possible for secondary schools.

A high level of accessibility entails something more than placing each facility at the geographical centre of its catchment area, for if the facility is itself physically large, like a school or a group of playing fields, placing it there will militate against maximum accessibility to shops. It is therefore necessary to do some pushing and pulling, a gravity effect, and displace such facilities a little outwards from the geographical centres of their catchments. This applies both in relation to the town centre and local centres. Local shopping centres need to be a little out from the town centre in order to be able to compete more effectively with the latter, while if there is a reasonable choice that can be made, a secondary school should not only be a little away from the centre of its catchment, so as not to dilute the accessibility of the relevant local centre, but should be towards the edge of the catchment remote from the town centre in order not to dilute the latter's effectiveness by reducing the number of people living comparatively close to it. Housing, too, should have a density gradient produced by putting more low-density houses towards the edge of the town than towards the centre, thereby maximising the number of people living within a given distance of the centre. This density gradient may, however, be more effective in a subtler form in which, though there is a general diminution of density moving outwards, there are increases around local centres. Figure 2.8 shows this idea. It is hardly necessary to add that irregular topography or other constraints may make this a very complicated problem which, indeed, it may not be possible to solve entirely satisfactorily.

As yet we have not discussed the part that industrial areas play in urban texture. Large quantities of raw materials have to be brought to them, are processed there and then taken away again in altered form. Large numbers of people move to and from industrial areas. They use a lot of power and water and discharge a correspondingly large amount of sewage, some of it very foul. They may also emit smoke, fumes, smell and noise; some factory sites will inevitably look ugly and disorderly.

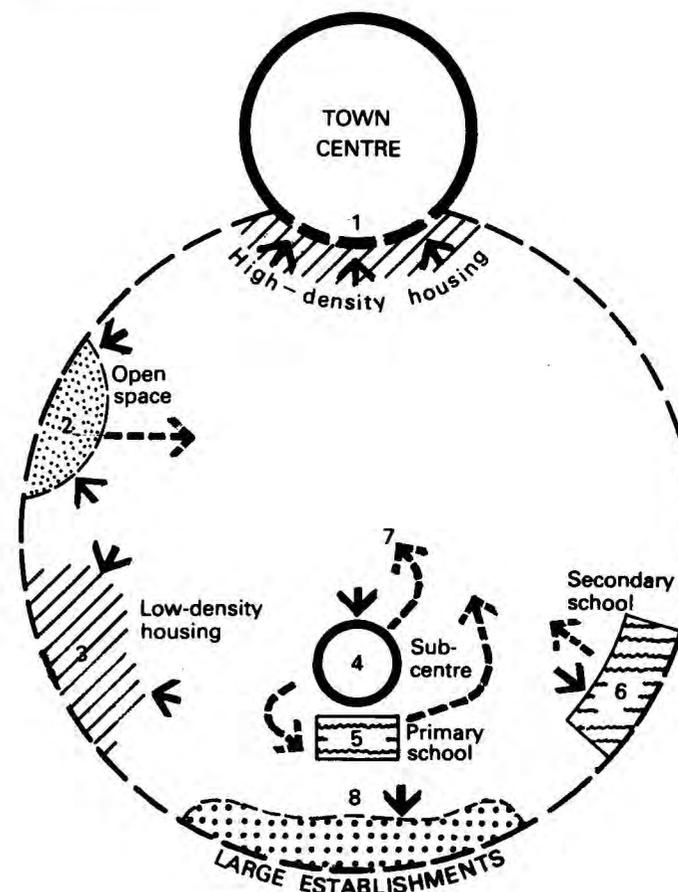


Fig. 2.8 The gravity effect on local elements. 1. High-density housing. Drawn towards town centre to maximise people living close to town centre and supporting its services 2. Open space. Pushed away from both town centre and sub-centre to avoid reduction in numbers living close to each. 3. Low-density housing. Pushed away from town centre and sub-centre to avoid reduction in numbers living close to them. Acceptable to all because more central location would mean heavy land costs. 4. Sub-centre. Since the town centre also serves as a sub-centre for the housing close to it, the best accessibility to shops will be produced by pushing the sub-centre outwards. 5. Primary school. This occupies an area which could accommodate sixty or seventy houses, so it must not be at the centre of its catchment, where it would badly reduce the number of people who live close to the town centre or the sub-centre. 6. Secondary school. Similar considerations apply. The secondary school site is so large that it cannot properly be placed near the local centre. Logically, it has to go to the periphery. Its users are more mobile than primary school children and its catchment area will very likely be larger than that of the primary school, so the location shown may in fact be close to the geographical centre of its catchment area. 7. The geographical centre of the residential area shown. 8. Large establishments. The same considerations apply as for low-density housing. NB Unbroken arrows represent effective directions of pressure. Broken arrows represent directions of pressure not strong enough to prevail.

So, inescapably, industry needs to be grouped in large units, for the sake of economical provision of transport routes and of piped and wired services. But it also needs to be close to large numbers of homes in order to reduce the economic and social waste of long journeys to and from work, yet, because of the probable effects on surrounding areas, to be set somewhat apart. This conflict is not easy to resolve. Theoretically, it might be resolved by requiring every industrial enterprise to take measures entirely to contain its own nuisance; indeed a great deal is done by industrial legislation and the imposition of conditions on planning permission to help in this way. Perhaps a good deal more needs to be done, but it is difficult to imagine a large industrial complex so completely tamed that people could live immediately next to it without disadvantage. Here is a genuine dilemma which needs real effort for its resolution. Before suggesting some possibilities, it is necessary to mention some complicating factors.

There is much to be said for concentrating the whole of a town's industry in one very large mass. Economies of the kinds already mentioned can be fully secured thereby and the periphery of mess is minimised. (A square of 1 sq. km area has a perimeter of 4 km. Four squares, each with sides of 0.5 km, have the same area but a total perimeter of 8 km.) But traffic problems are maximised, because with this arrangement the concentration of traffic is likely to be so great that road intersections of reasonable cost cannot cope with it.

(e) Roads

I have deliberately separated consideration of land allocation from the design of road systems in order to simplify discussion. The relationships between the two are strong and obvious. Roads exert a very great influence on the shapes and textures of towns. Quite often some were there long before the town became a town, and then they will often have actually determined its shape. In fact, road systems are so influential that they tend to push discussion of land-use disposition into the background. This is unfortunate, for land-use distribution is very important. This is why I have reversed the process.

We need to start by being clear about two rather obvious things which are frequently not understood. The pattern formed by the major roads of a town is often quite different from, and even independent of, the patterns formed by its minor roads; and the exact geometrical form of an urban main road system does not matter at all.

We must start with fundamentals. A road (including specialised versions, such as railways, tramways and canals) is a strip specially prepared and/or reserved for the passage of people and goods. We shall confine ourselves here to discussion of ordinary roads.

Wherever roads join or cross each other there is danger of delay and collisions, so such points need special attention. The faster that vehicles can travel along a road, the greater is the chance of there being collisions, and the more serious in terms of life and property are the collisions likely to be; so the greater

the probable speeds along a road the wider it needs to be and the greater the likelihood that methods of separating pedestrians from vehicles, and separating motor vehicles travelling in opposite directions, will be justified despite the cost.

Roads are always costly to construct and maintain, so we should make do with as short a total length as we can and not make them wider than necessary. In economic and social terms, time spent travelling is a dead loss, so we should also try to reduce journey times as much as we can.

If we wish to design a road system so as to reduce length both of roads and of journey times as far as practicable we find ourselves up against the travelling salesman problem. Haggett in *Locational Analysis in Human Geography* writes entertainingly and clearly about this. He mentions that there are 479 002 000 ways of connecting 13 cities in the western United States, only one of which is optimal. This is shown in Fig. 2.9. Haggett does not say so, but no doubt there are several million solutions which only exceed the optimal by a very small amount. This should cheer us all up.

What we should be trying to do is to devise a system which will minimise average distances between points without increasing total road length beyond reasonable limits. The optimum solution from the point of view of the user of the system, who wants to minimise the distances he has to travel, may be very different from the optimum from the point of view of the builder, who wants to minimise the total length of road built and hence, other things being equal, the labour and materials used. In illustration of this, Haggett gives a simple example (after Bunge) showing different ways of connecting five centres (Fig. 2.9).

In Fig. 2.9, A is good if one thinks just of starting at one point and visiting all the others as quickly as possible, but entails a wearisomely long journey for those who return from the far end to the starting-point. This is remedied in B by closing the loop, at the cost of quite a lot more road. In C, no consideration is given to anything except connecting one particular centre directly with each

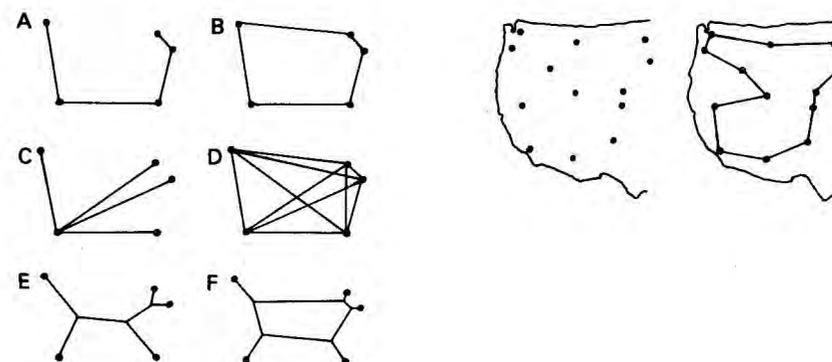


Fig. 2.9 The travelling salesman problem. (Left) Different ways of linking five centres. (Right) Shortest route connecting thirteen centres in the United States (after W. Bunge. *Lund Studies in Geography*, CWK Gleerup, Sweden, 1962).

of the others. In D, at the other extreme, every centre is connected directly with every other centre; ideal for the user but impracticably expensive for the builder. E is the shortest set of lines connecting all five points, and, according to Haggett, can be found analytically or by the use of mechanical or soap-bubble analogues.

In terms of selecting a practical road layout to meet this situation, there are only two competitors in any normal circumstances: E and F, all others being ruled out on ground of inconvenience or cost. F is about 15 per cent more costly on road length than E, but average journey lengths are a little shorter. But E requires the construction of only 3 junctions, F the construction of 5, so, on balance we should probably prefer E, unless the probable volume and distribution of traffic meant that, with F, we could have 5 cheap junctions instead of 3 very expensive ones for E; not at all an unlikely situation if traffic will be heavy.

So far we have been talking of 'points' and 'centres' as if they were true geometrical points which have 'position but no magnitude'. This is misleading when one is trying to design a road system for a town because every 'point' from and to which road traffic flows may actually be an area of the order of 1 km² or more. Since main roads have to be taken *around* these areas, their sizes and their shapes greatly affect the main road pattern adopted, and the interesting fundamental data just discussed inevitably recede a little though they should not be forgotten.

When one comes also to introduce considerations of topography and the effects it has upon cost, convenience, safety and appearance, it is little surprise to find that there is no definite way of working out the most satisfactory road system in a given set of circumstances. Traffic surveys, computer programs and models help a great deal in solving specific detailed problems and in choosing between a limited number of alternatives, but they do not so far seem to help very much in establishing optimum general frameworks.

Therefore, in designing a new town road framework the designer needs to start by thinking out clearly what he wants to do, preparing some general designs of promising arrangements and checking their relevant advantages and disadvantages by any mathematical means that seem helpful; then, perhaps, he does well to work out two or three of the most promising in greater detail and check them by correspondingly more refined means. The comparatively primitive state of the art is brought out well by Lichfield, Kettle and Whitbread in their *Evaluation in the Planning Process*.

Good road system design is affected by how traffic behaves and what kinds of roads it needs to allow it to move briskly and safely. Think of a straight road, one lane wide, unimpeded by junctions or crossings. The maximum number of vehicles which can pass a point on that road in a given time depends on the speed at which they are travelling and the distances between vehicles, and also, to a very small extent, on the different lengths of the vehicles concerned. The faster they go, the further apart they have to be in order to ensure that there is enough space to allow for the reaction time and braking distance needed to avoid nose-to-tail collisions if vehicles ahead slow down or stop; these distances increase more than proportionately as speed increases because of the greater

distance covered during reaction time. The maximum number of vehicles which, driven safely, can pass a given point, is determined by the optimum combination of speed and safe interval; it is (a surprisingly low speed) little more than 30 miles (48 km) an hour, at which speed the safe distance between the front ends of vehicles is about 30 yards or metres. This assumes the 25 yards stopping distance given in the Highway Code, and an average vehicle length of 5 yards, greater than the length of the average private car but less than the length of many commercial vehicles, and gives a figure of 1760 vehicles per hour. Some say that 2000 vehicles per hour is practicable but where a carriageway is two or more lanes wide the frictional loss of capacity produced by overtaking is considerable. A variety of conflicting estimates has been made, but 1500 vehicles per hour per lane seems close to the maximum. It is widely thought that carriageways more than three lanes wide in one direction are confusing to drivers, are therefore dangerous and may also produce frictional loss because of weaving between lanes. So 4500 vehicles an hour may be reasonably regarded as the practical maximum capacity for each direction for any road.

All roads eventually have to join or cross others, and at these points, which we shall call intersections, there will either be some reductions in speed, producing some reduction in capacity, or very costly road construction. Note, however, that the reduction in speed at, say, a well-designed roundabout will not decrease capacity very much and that a roundabout on one level (commonly called 'at grade') is not enormously expensive. The larger such a roundabout is, the greater its capacity, but at diminishing returns. Ten thousand vehicles an hour seems to be near the practicable limit, which is well below the 18 000 vehicles an hour which the entry carriageways of four three-lane dual carriageway roads, each loaded to capacity at 4500 vehicles an hour, would produce. To cope with that amount, we should need a costly, elaborate, multi-level intersection – the concrete spaghetti of popular parlance.

Readers may well object that, as a matter of common sense, life is not really like this, that they habitually drive many miles along motorways at 70 miles an hour, (about 112 k.p.h.), some of them happily, if illegally, even faster, and at far closer intervals than the 105 yards (114 metres) suggested for that speed in the Highway Code. But if it were possible to calculate accurately the delays to traffic caused by minor head-to-tail collisions resulting from failure to observe recommended intervals and to add them in to traffic flow calculations, it is quite likely that this would reduce traffic capacities to about the theoretical maximum possible if observance of such intervals were observed.

We need to establish criteria to suggest optimal spacing of main roads in an urban network, for, in simplest terms, it is essential to have such roads at intervals close enough to prevent them being overloaded and to be reasonably convenient of access yet not of so great a total length as to be unreasonably expensive to construct. The closer the road network the greater the total length of roads and thus their construction costs, but the less elaborate and expensive need each intersection be, because traffic is spread between more intersections and each of these has to carry less traffic. Some balance therefore has to be

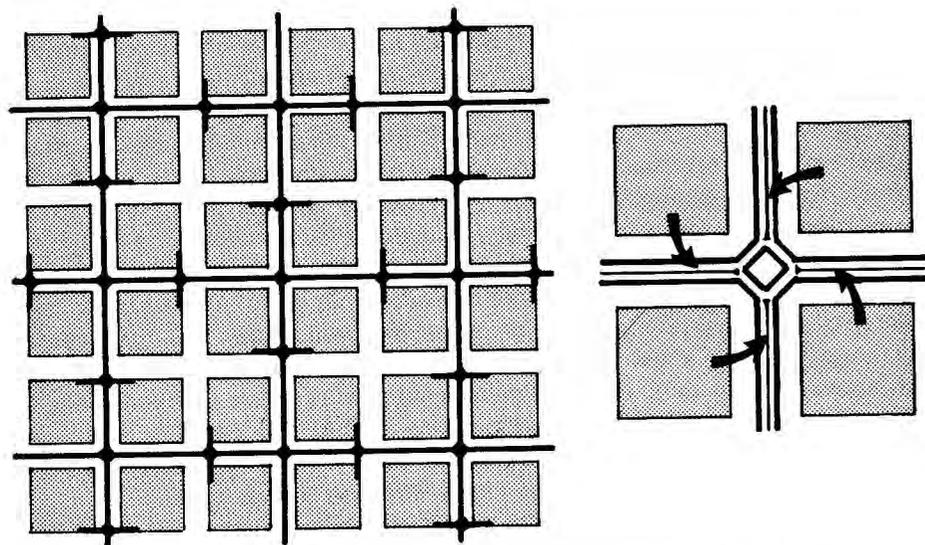


Fig. 2.10 Spacing of major roads. (Right) Four groups of 5000 people discharge vehicles on to a roundabout served by dual carriageway roads. (Left) A different arrangement to avoid the use of overloaded T-junctions.

struck to optimise road and intersection costs combined.

In housing areas of about 40 persons or 14.5 households per acre (36 per ha) we might, as an extreme, consider the possibility of each household having one car on the road at peak hours. If they all emerge on to the road at regular intervals during one hour, 4500 households or about 12 500 people will produce an intensity of 4500 vehicles an hour: enough traffic to fill one three-lane one-way road. But this is an extreme; in practice it has not been found that car use as high as this occurs. It is much more likely that about 20 000 people will produce such an amount of traffic. So let us assume that there are four units of about 5000 people each, using 1125 vehicles an hour at peak times, with each group having access to a dual three-lane carriageway road. This situation is shown on the right of Fig. 2.10.

The four groups of 5000 people served by a roundabout will each discharge 1125 vehicles into it, a total of 4500 vehicles. In the absence of any other traffic, this will load a 10 000 vehicle capacity roundabout half-full and a three-lane carriageway approaching it a quarter full; so we could double the population and vehicles without swamping the roundabout and still leave the road only used to half-capacity. But if this were done, simple, inexpensive T-junctions could not accommodate the joining traffic of 2250 vehicles an hour which would now be discharged from each group; further, smaller roundabouts would be needed. This is quite acceptable, and is shown on the left of Fig. 2.10.

Each group of 5000 people will, at the space standards discussed earlier, need an area of the order of a square kilometre. We might therefore continue by con-

sidering a basic main road pattern with intersections at intervals of the order of 1 mile or 2 km, 4 groups of 5000 people in each square.

This arrangement might be used as a basic grid for a large town. How far this could be extended without the need to use costly multi-level intersections depends very much upon how even or uneven the flow of traffic is in different directions, which in turn depends upon the number, sizes and locations of such strong traffic-attracting items as the town centre and industrial areas. It is far from certain that these will all be even approximately the same size as the residential units, while both town centre and industrial areas will each attract far more traffic than a single residential unit.

Although a rectangular grid is useful for demonstrating a variety of planning principles and problems, and although it has been used in countless towns for thousands of years, it is far from being an ideal form: most trips involve traversing two sides of a triangle. Everything falls amazingly well into place when we abandon it and use a circle instead of a square for a 60 000 town (see Fig. 2.11). Fifteen units, each of appropriate size, nest happily, with residential densities graduated nicely in accordance with the ideas expressed earlier. The total length of the main roads is not excessive, and, as regards accessibility, no one is more than half a mile (about 1 km) from a main road, as the crow flies, while experiment shows that neither roads nor at-grade intersections will be strained.

Now we must consider exactly what we mean by main roads and minor roads and a hierarchy of roads. The concepts are simple enough, but tend to get blurred by over-refined distinctions of nomenclature.

Main roads. A main road is one used by large quantities of traffic, and needs to be designed so that traffic can safely move quite fast. This means that there

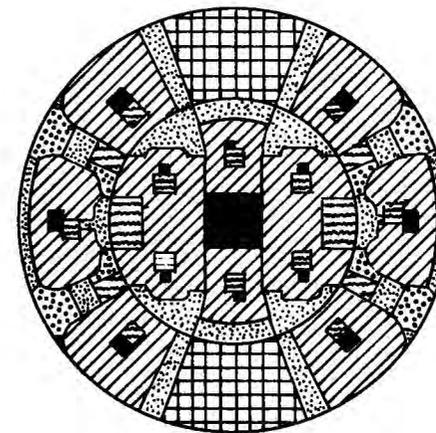


Fig. 2.11 A round town form which overcomes the disadvantages inherent in rectangular forms. The basic form of this plan has already been used as a background to Figs. 2.5 and 2.6 and is shown in more detail in Fig. 2.17.

must be no properties with direct vehicular access to such roads, that intersections and junctions with other roads are infrequent and properly designed, and that the carriageway is divided physically so that vehicles travelling in opposite directions cannot, or are very unlikely to collide.

Minor roads. These have almost opposite requirements. They need to form a close network and so they join each other very frequently. They exist to provide access to properties; they are necessarily used by pedestrians and are adjoined by buildings or forecourts from which people, especially children, may emerge suddenly and dangerously. (It is an illusion to think that motor traffic and pedestrians can be completely separated within a local communications system.) Everything practicable should therefore be done to reduce speed on minor roads. This can be achieved by a combination of three methods:

1. By making carriageways as narrow as is compatible with free passage. The smaller the space between vehicles passing each other the slower they will go. Minor 'scrape' collisions may be more frequent, but serious accidents are few. At slow speeds the distance covered between perceiving an impending collision and taking avoiding action – reaction time – is short, and so is the braking distance, the distance between taking action and bringing the vehicle to a halt or to a speed conformable with a vehicle ahead. If a collision does occur, the more slowly the vehicle or vehicles involved are travelling, the less the damage and injury. In this country, the carriageway width of minor roads, after many experimental changes over half a century, settled down to 18 ft (less than 6 m), and this works well: any two vehicles can pass each other and so can two small ones where a third is parked, while if two vehicles park opposite each other there is room for a car to go between them. In practice such roads seldom get blocked; drivers, in their own interests have learned to park sufficiently considerately to prevent it.
2. By arranging that junctions or right-angled bends are as frequent as is practicable, preferably so that every vehicle has to make a right-angled turn every 200 metres or so. If this is done it is not possible for vehicles to be accelerated up to insane speeds without almost literally insane risks being taken. It is not possible to design road systems which are safe even when used by insane drivers.
3. Where, for any reason, (2) cannot be effectively applied, by introducing irregularities such as speed bumps into the carriageway to reduce speed. Physical constraints are far more successful than speed limits and fines.

A minor road system of this kind is very flexible. It can be designed to cover an area of almost any shape or topography.

Collector roads. A third kind of road has to be used. There is a limit to the amount of traffic which a minor road system fulfilling the requirements mentioned above can carry, and, to prevent local congestion, it is necessary to pro-

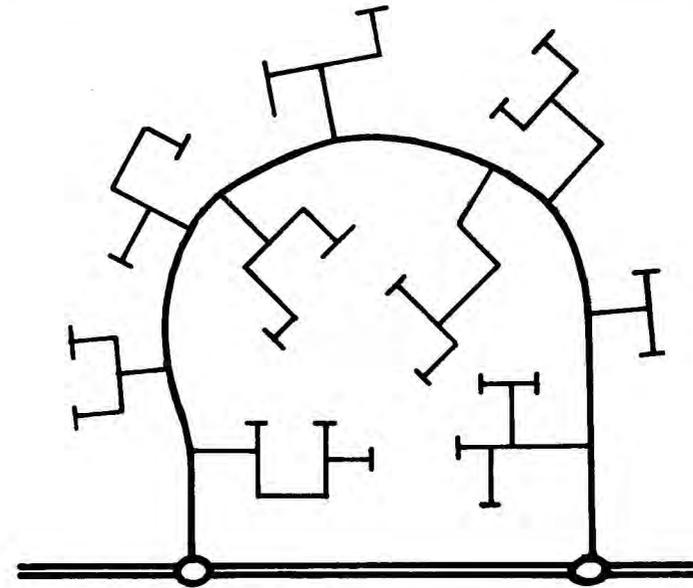


Fig. 2.12 Connection of groups of minor roads to a collector road.

vide many more points of entrance and exits than would be compatible with satisfactory main road design, if all were made direct to a main road. Some connections have to be made to what we will call a 'collector road', each of which joins a main road (see Fig. 2.12).

These collector roads are tricky things; they themselves have limited capacity, especially because of the limited amount of traffic which can be passed through simple T-junctions connected with them. They have to be kept free of frontage access if they are to be safe, and so are very expensive, since they provide no financial return from developable frontage. They therefore need to be as few and short as possible. But they are essential if we are to have the safest practicable road system. Unfortunately, because they are so costly and because it is possible to design moderately safe and satisfactory road systems without them, it is very tempting not to construct them. Figure 2.13 makes the point.

The capacity of minor roads and their junctions is best seen in relation to two sets of data which, rather surprisingly, are not usually brought together.

Traffic in Towns (Appendix I, pp. 203, etc.) discusses what it calls the environmental capacity of streets and tries to define 'the acceptable level of risk for the act of crossing the road', 'the road' being expressed to be 'the kind of street which lies within an environmental area and where in consequence the general premise must be that the pedestrian has . . . the freedom to cross the road whenever and wherever he pleases'. Calculations are made about the average delays which pedestrians suffer at various traffic densities and for various widths of carriageways. The delay suffered is assumed to depend upon the volume of traffic (the greater the volume the greater the delay) and the width of the

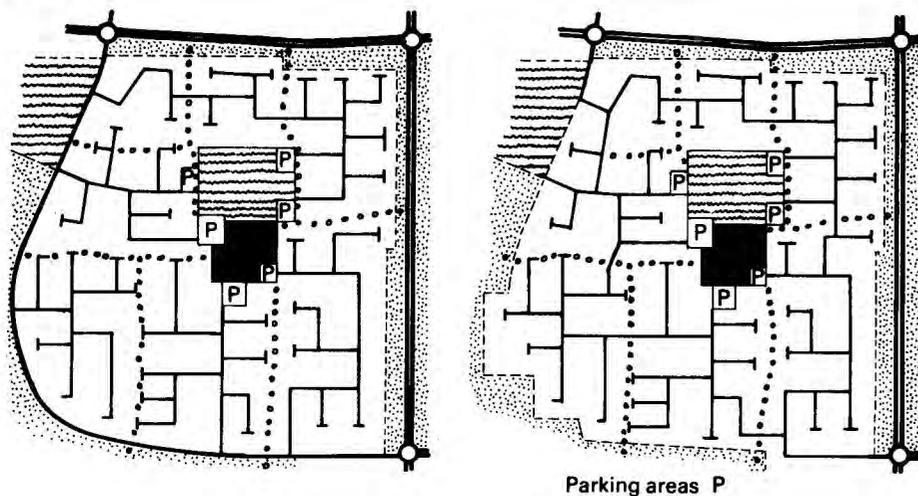


Fig. 2.13 A neighbourhood with and without a collector road. Omitting the collector road (right) necessitates no more than slight adjustments to the minor road system and the addition of a few short lengths of connecting road. The result is inferior, in terms of safety, to the arrangement shown on the left, but it would be interesting to know how many readers live in an area safer or even as safe as the layout shown on the right.

carriageway (the wider the carriageway the longer it takes to cross it and the longer the gap between vehicles which is needed in order to cross safely). An average delay of two seconds is regarded as just acceptable and on this basis, for an 18 ft carriageway, the tolerable limit of traffic is just over 300 vehicles an hour. To enable this to be visualised, consider that if these were travelling at 32 km an hour there would be more than 100 metres between vehicles on average and more than 200 metres between vehicles travelling in the same direction (surely better than just acceptable?).

If we accept this figure (it is hard to think of a better basis for calculation, rather frail though it may be), we ought to design so that no part of the minor road system is likely to carry more than about 300 vehicles an hour and this, assuming a maximum of one car per house, means that there should be a connection to a collector road for each set of minor roads serving 300 houses (1500 m of minor road if there are house plots on average 10 m wide on both sides of the road).

Roads in Urban Areas sets out on p. 52 calculated capacities of simple T-junctions in graphic form. Paring away certain complications, what this tells us is that, with variations, according to what proportion of traffic goes straight through the horizontal top of the T and what enters it from the upright, a simple T-junction can deal with a volume of traffic of the order of 1300 vehicles an hour. We could on that basis feed between four and five sets of minor roads into a collector road, even if at peak hours all the traffic would be flowing in the same direction.

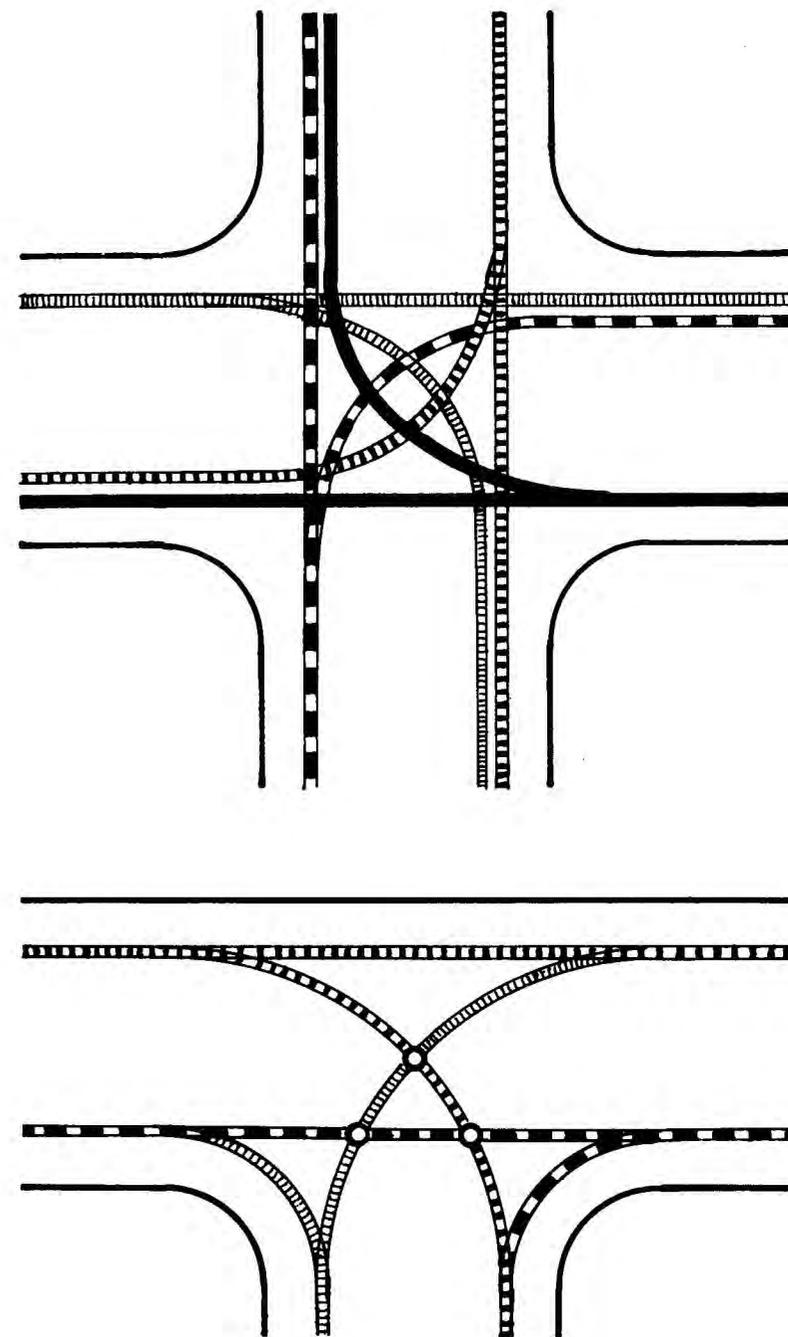


Fig. 2.14 (Top) The conflict points at which collisions are liable to recur at a conventional, uncontrolled crossroads and (bottom) the much safer situation at a T-junction.

If we base our town design on primary school catchment areas, we therefore need to think of units of about 5000 people which might each produce vehicle flows of 1125 vehicles an hour, though it is very unlikely that all these would flow along the collector road in one direction. They would only be likely to do so in fact if the collector road were a cul-de-sac, i.e. a road which can only be entered or left at one point. This is not a frequent design solution for collector roads. They are far more likely to provide for traffic to enter two outlets to a main road at opposite ends of the collector and in roughly equal proportions. So we can be confident that, with the safety margins incorporated in the above calculations, safe and efficient minor road systems can easily be designed.

In the sense that any vehicle using them can do anything it likes T-junctions are uncontrolled, subject to the general principle of keeping to the left of the road and proceeding cautiously. This means that vehicles leaving or approaching through the horizontal arm of the T will have to slow down to walking pace and will therefore be able to stop within a very short distance indeed, if they have to wait for vehicles crossing their paths. What is more, at a T-junction, there are only three ways to have a collision, whereas at an uncontrolled direct cross-roads there are twenty or more different ways (see Fig. 2.14).

Attempts to speed traffic through a T-junction are evidence of misunderstanding of what it is for. For example, in Australia, bizarre, costly and dangerous things are done in order to enable traffic to do exactly what one does not wish it to do (see Fig. 2.15). However many times one uses the wretched things, there is a momentary dangerous doubt about which channel one is supposed to

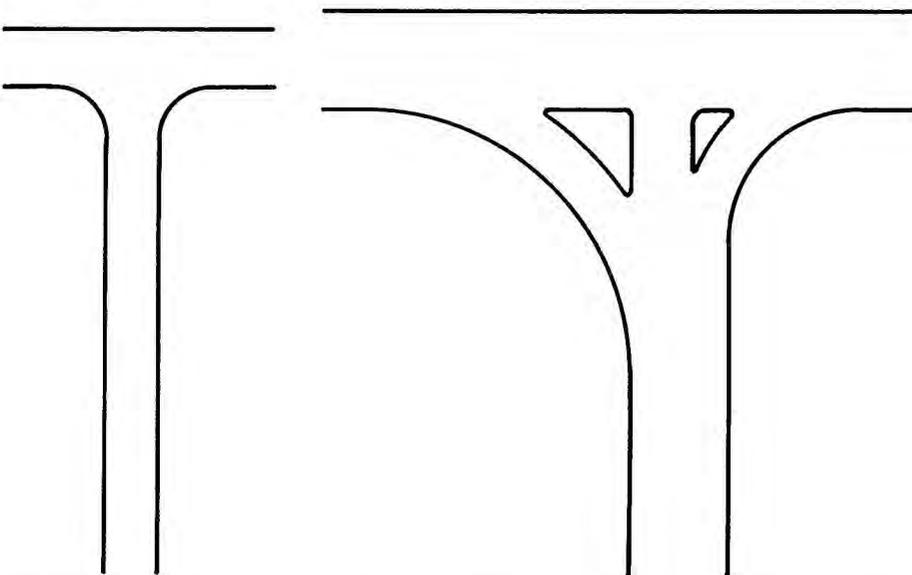


Fig. 2.15 (Left) An ordinary T-junction. (Right) T-junction as frequently constructed in Australia, destroying the safety factors in the ordinary T.

use in negotiating the junction and a wholly undesirable encouragement to anyone turning left to keep going without slowing down.

To sum up, in designing a New Town for a population of the order of 60 000 people, a threefold road hierarchy is needed: main roads, collector roads and minor roads, and a twofold hierarchy of junctions: at-grade roundabouts and simple T-junctions. Provided good sense and simple statistically derived limits are observed, there should be no real difficulty.

(f) Preparing the plan

All the ideas and data that we need have now been paraded. How do we go about expressing them in a design? Probably the first thing is to discard the word 'we'. One travels for a time alone.

Psychologists say that the human mind cannot hold and coordinate more than three ideas at the same time. However true this may be, in preparing a town plan more than three ideas have to flit through the mind in very rapid succession, even if not more than three can be entertained simultaneously:

- size (e.g. sketching areas for each main use of about the right area)
- topography (e.g. not siting inappropriate uses on steep land or flood land)
- shape (e.g. maintenance of accessibility)
- texture (e.g. not putting large 'holes' near the town centre)
- economy (e.g. not too many main roads)
- visual seamliness

However generalised the plan may be, as finally presented and/or published, it is essential to have validated it by previously carrying out designs, however rough, to fill in provisionally the details of each part of it. Unless this is done there can be no confidence that the plan which has been produced is the optimum. This can be thought of as part of a pendulum movement; throughout the planning process, the relationships of what you are doing to what has previously been done need to be constantly reviewed, as well as relationships with what will be done at the next more detailed stage. Failure to understand this has been at the root of much misapplied and failed planning work.

(g) Plan evaluation

This is still in its infancy, but needs to be developed rapidly and efficiently. (There is a complete, interesting book about it, *Evaluation in the Planning Process* by Lichfield, Kettle and Whitbread.) A process of evaluation is very important. The adoption and carrying out of a town plan will have numerous effects on the happiness and prosperity of all who live in the town and, in indirect ways, on many other people as well. It is a project of great importance, and its adoption has many consequences, for if the plan is found to be seriously defective, not merely will persistence with it reduce happiness but so will its amendment to something better: processes will be interrupted and extra expenditure will be

incurred in many ways. So, although the possibility of amendment is a very useful safety net, it is very much better for all concerned if the plan initially adopted hits the target near enough to the centre for numerous or important alterations not to be needed afterwards. Despite much talk about the accelerating rate of change, the march of technology and so on, I think it ought usually to be possible to prepare a town plan which in all essentials will remain sound during its period of implementation. The best way of ensuring this is to have up to half a dozen alternative plans carefully prepared, preferably by different people, with a common brief based on a common mass of information. In comparison with almost any activity of similar importance, the cost of doing this would be trivial; nevertheless, the number of hastily and carelessly drawn town plans which seem to have been adopted almost without debate, is astonishing.

All the plans produced might possibly be fairly similar, in which case, after giving thanks, attention could be concentrated on their points of difference. In the more likely event of there being important differences between them, a system of comparison and evaluation would obviously be necessary. How, realistically, should it be carried out? We can probably ignore any possibility of feeding the whole problem into a computer. The computer cannot yet even deal well with a comparatively simple travelling salesman-type problem; the full evaluation of alternative town plans would pose problems many times more complicated. Nevertheless, the computer may, later on in the process, be able to help.

First, we have to distinguish between qualitative and quantitative issues and, further, between those quantitative issues which do and do not have substantial qualitative implications. For example, if we have to choose between a town plan which will produce a silhouette like that shown in Fig. 2.7(B) and one which will produce a silhouette like that shown in Fig. 2.7(E), the choice may be capable of being confined to aesthetic preference, because cost and social factors may be shown to vary little between the two. But if we had to choose between Fig. 2.7(D) and Fig. 2.7(E) the cost and social factors might well be so different and complex as to dwarf the aesthetic considerations.

It is important to note how vital it is in the course of such evaluation to make the various considerations distinct. If, for example, having worked out how much more one alternative will cost to construct than another, we must make up our minds whether we think the aesthetic advantages will be so great as to justify spending the extra money. It is no good mixing up that discussion with discussion about whether the social disadvantages of one are so great as to rule it out; they may be, but that is independent of the aesthetic aspect and needs to be considered separately. In fact we need to draw up some sort of balance sheet.

The Planning Balance Sheet

Lichfield, the first-named of the three authors of *Evaluation in the Planning Process* mentioned above, coined the expression 'Planning Balance Sheet' during the 1960s. It is the main theme of his book *Economics of Planned Development*,

and is discussed extensively in *Evaluation in the Planning Process*, in which it is made clear that the authors favour it as the best method currently available. I think so too.

What the Planning Balance Sheet technique does is to take clear-cut alternative plans and cost them. Some of the processes involved are quite simple: it is easy to compare fairly accurately the cost of building 2 miles of new road against that of building 1 mile, and to balance the difference against the development value of the greater amount of land made immediately developable by using the first alternative rather than the second. It may even be possible by sophisticated valuation methods to introduce as a further balancing factor the possible greater loss of tourist trade resulting from the wrecking of a greater amount of landscape beauty of building 2 miles of road rather than 1 mile of road, though that is very difficult. Beyond this, even more difficult, though not quite unquantifiable, balancings of costs and benefits loom.

There should also be taken into account the following:

1. The different ways in which the adoption of different alternatives will affect various different 'pockets', national, local (split between upper tier and lower tier) and private. Some of the various private pockets, moreover, may be affected quite differently from each other, and who can say which of the conflicting and competing interests should prevail and on what grounds?
2. The subtly different and interweaving effects of capital costs and recurring annual or maintenance costs, which is further complicated by the different ways in which grant systems of different kinds and bearing different interest rates operate.

This is almost impossible to do for any planning problem of a complicated kind within the strange socio-political mixture of capitalist and socialist assumptions and practices through which we are currently wandering. If something that makes the best of sense in terms of the expenditure of resources does not make sense in terms of current public financial arrangements, the latter are at fault, not the former.

Lichfield once carried out an interesting exemplification of the Planning Balance Sheet on my behalf in connection with a town centre plan I had prepared. There were two, and two only, suitable kinds of plan. It was not possible, by simple common sense, to work out which was financially preferable, both being on other grounds equally acceptable. Lichfield's calculations filled a number of pages and took some following. Yet in one sense it was a simple problem: whether to develop the town centre to the north of a railway line and redevelop for other purposes the existing parts of it to the south of the railway, with only a small amount of new road to be constructed, or to develop entirely to the south of the railway, with more road construction but less redevelopment needed. The difficulty of applying that technique to all the problems of a large town, when an optimum solution to one problem may well preclude adoption of the optimum for one or more others and in trying to determine the optimum mix, is formidable, yet the Planning

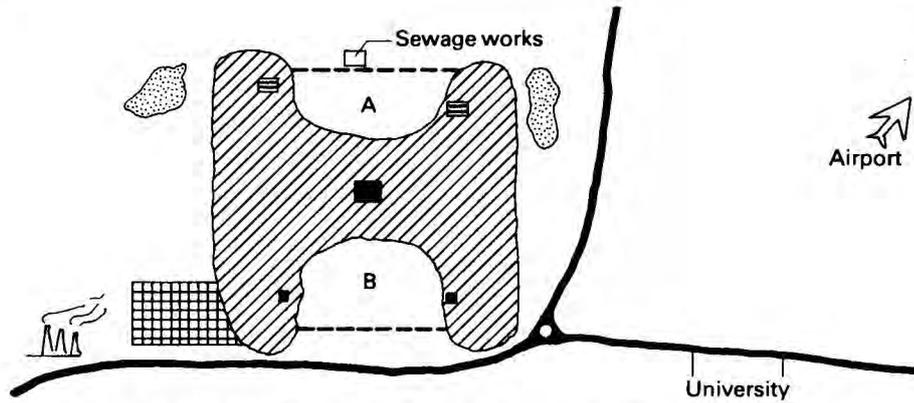


Fig. 2.16 An imaginary Planning Balance Sheet example. The town shown (north upwards) is to be considerably extended; the question is whether it should be extended on the northern side or the southern side, a mixture being assumed to be impracticable. The following factors affect the decision.

A. (200 ha)

1. Broken land
2. Low agricultural value
3. Low scenic value
4. Served by existing trunk sewer
5. 1 mile of new main road needed
6. Surplus capacity in nearby schools
7. Whole site in one ownership
8. No nearby local shopping
9. Ample existing public open space nearby
10. Easily connected to local road system
11. No house views affected
12. No existing buildings on site
13. Pleasant walk along public FP
14. Some smell and flies from sewage works
15. Airport noise
16. Accessible to Town Centre
17. Inhospitable aspects predominate
18. Site of ancient battlefield
19. Av. journey of 3 miles to industrial employment

B. (200 ha)

- Flat land
- High agricultural value
- High scenic value
- New trunk sewer and pumping needed
- Can be served by existing main road
- New schools needed for whole population
- Land in numerous ownership
- Existing local shopping nearby
- No existing public open space nearby
- Connection with local roads involves demolishing 20 houses
- View from 200 houses destroyed
- Twenty buildings on site would have to be demolished
- No public access to land
- Some smoke effect from cement works
- Accessible to university
- Accessible to Town Centre
- Favourable aspects predominate
- Vestiges of medieval field system
- Av. journey of 1 mile to industrial employment

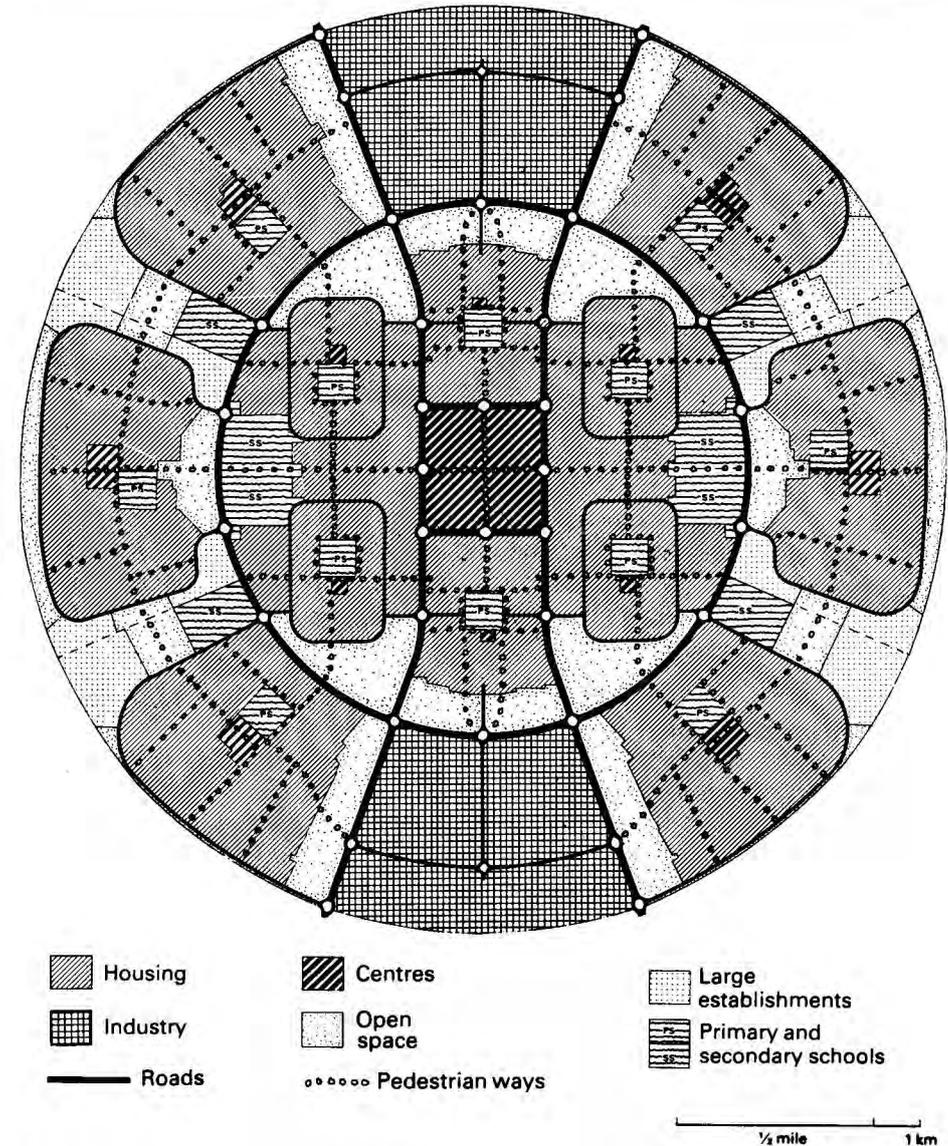


Fig. 2.17 The plan, in greater detail, for the new town for about 60 000 people shown in Fig. 2.11. It is to be built on a flat, featureless site, in accordance with the space standards and principles discussed in this book. The town is divided into a town centre, 2 industrial areas and 12 residential neighbourhoods, at average housing densities ranging from about 57 to 32 persons per acre, roughly 20 to 10 dwellings per acre. (140 to 79 persons and 49 to 25 dwellings per ha).

Balance Sheet is the simplest of any evaluation method worth serious consideration.

3. Figure 2.16 shows an imaginary situation to illustrate the advantages and difficulties of the Planning Balance Sheet method. Note:
 - (a) that nobody could, as a matter of common-sense estimation, decide whether the weight of advantage lay with developing the northern site or the southern site.
 - (b) the extreme difficulty of attaching specific monetary value to the costs and benefits attaching to some of the more subtle factors, e.g. mineral working noise and smell versus airport noise, and the absolute impossibility of doing so for the most subtle and remote factors.
 - (c) the possible conflicts of interest between different parties affected by the decision whether to develop the northern land or the southern land.

Fortunately there will not always be nearly as many difficult decisions to be taken as are shown in Fig. 2.16. Frequently there will only be one, e.g. do we go east, incur the cost of pumping sewage, but spare good agricultural land, or do we go west and obtain the opposite benefit but incur the opposite cost? Careful financial calculation will provide a rational basis for discussion, though emotional and political considerations may often actually determine the result.

Sometimes the matter is even simpler and can legitimately be confined to deciding between no more than two or three otherwise equally satisfactory plans by costing the lengths of new roadwork and road improvement work which each entails and the number and cost of new road intersections needed, all easily calculable in money terms. Here lies the weight of capital expenditure needed to implement most town plans, and it is where alternative plans are likely to show the greatest cost differences. Minor road systems, by contrast, will cost just about as much per head, per family or per acre whatever town plan is chosen.

Figure 2.17 exemplifies many of the principles and arguments discussed in this chapter.

Extra problems in planning existing towns

The reader is again reminded that, with some necessary meanderings, we have been discussing the simplest of town planning problems: designing a new town to be built on a clear site. Although nothing conceptually very complicated has been involved, many readers may yet have found some of the technical material that had to be included a little daunting though I have been concerned to introduce the bare minimum necessary. When it comes to adapting existing towns so that they shall work efficiently, perhaps with a rather greater population and performing rather different functions than previously, complications pile up.

In terms of the numbers of people affected, this kind of planning is enormously more important than designing new towns; the whole process becomes more difficult and complex, yet it is essential that basic principles, however ingeniously they may need to be adapted, should never be lost sight of. 'What are we really trying to do?' should be posted up in every planning office. I believe that it is failure to ask and to answer this question often enough which has been most responsible for town planning in this country having rather lost its way.

Hardly any contemporary town which has not been subjected to competent and comprehensive planning action works really well. All, in varying degrees, have suffered from the demands of increasing motor traffic, both in the ways those demands have been met (e.g. road widenings) and because of failure to meet them (e.g. increasing noise, congestion, fumes and danger). Nearly all have suffered before planning control existed because of the inability of the market's individual decisions to produce a coherent totality. In many parts of many towns accessibility standards are absurdly bad compared with what could have been secured with even the roughest common-sense control. This has been complicated and compounded by the absence of adequate measures to reserve for the public unearned increment in land values, and the consequent inability of public bodies to buy the most suitable sites for essential public uses, such as schools, which make no profits.

Since the Industrial Revolution the replacement of slow growth and change by rapid, uncontrolled processes employing advanced technology has led to confusion and inefficiency in the urban structure which would never be tolerated in any field of human endeavour subject to integrated organisation. No one

would contemplate trying to operate in a house, a factory or an office so chaotically arranged as is the ordinary town.

In planning an existing town we should start by deciding

1. which existing features of the town are of such special merit that they must be preserved, even if preservation conflicts with other planning requirements;
2. which existing features are so awful that they must somehow be got rid of;
3. which bad features are unfortunately impossible to get rid of and so have to be incorporated into the plan with as little disadvantage as possible.

An especially important aspect of the second question is old housing in bad condition. Is it so bad that one should plan for its redevelopment 'in the foreseeable future'? If so, should it be redeveloped as housing or be put to some other use or uses for which it is well located? If it is to be redeveloped for housing purposes, should the new housing be at a lower or higher density than that of the existing?

The answers to some questions are very likely to be given on political rather than technical grounds, and it is no use moaning about that; but at least town planners can supply politicians with full and accurate technical information, upon which they ought largely to base their decisions, whether they actually do so or not; and politicians should certainly be made aware that many town plans will only make sense and be capable of implementation if the redevelopment assumptions embodied in them are accepted and acted upon.

The tangled problems of redevelopment, rehabilitation and preservation will be discussed later, especially in Chapter 8. Here we must concentrate upon the density aspect. This can be expressed quite simply. If we want to ensure that everybody can live within easy reach of shops, schools and local open space, we have to ensure that there will be enough people living near these facilities to support them but also that there will not be so many people that the facilities become swamped, with further provision having to be made and located relatively unfavourably. This means that the number of people who live or will live within a defined area dependent upon a particular set of local facilities must be determined. It has been explained earlier in Chapter 2, that this can only be done indirectly by controlling the amount of building erected in a given area and estimating the probable intensity of occupation.

Failure to do this has been a major weakness in British town planning. It was, in my opinion, quite an important factor in leading the members of the Planning Advisory Group astray and causing them to prescribe ineffective remedies for non-existent or misunderstood ills. The work of the Planning Advisory Group (Pag) is discussed extensively later on.

A town map is used to show the residential areas of a town divided into parts called 'cartogram areas' in each of which was a cartogram or rectangle with a number showing its area, the population it was intended to house and (dividing the second of these by the first) the average population density intended, in persons per acre for the whole area. Most cartogram areas included land for public open space, schools and shops as well as for housing, so, in order to get

the actual housing density intended, it was necessary to deduct the sum of these non-housing uses from the total area. This gave housing density in persons per acre. But since buildings, not people, are built, it was necessary to translate this into habitable rooms per acre assuming an occupancy rate (persons or proportion of a person per habitable room).

This often produced disagreement between developers and the local planning authority. Developers usually want to get as much building on to a site as they can, while local planning authorities, though by no means always for good or even explicable reasons, often want to keep the amount built down to the lowest they can successfully insist on. So developers, in making the translation from people to rooms, would assume a low occupancy rate and local planning authorities would assume a high occupancy rate. This could make a big difference. For example, 30 persons per acre (74 per ha) means 30 rooms per acre at an occupancy rate of one person per room, but 42.86 rooms per acre at an occupancy rate of 0.7 of a person per room. (Local planning authorities often adopted the former figure as a probable intensity of occupation; developers, relying on facts rather than aspirations, used the latter.) Often this was only the beginning of needless dispute.

To state an average density for an area of several hundred acres is perfectly sensible as the basis for planning, but it does not constitute a plan. No local planning authority would want to see several hundred acres of housing built at a uniform density; indeed this deplorable inter-war habit has been universally condemned. Developers were never slow to discover reasons why a particular piece of land ought to be developed at a higher density than the average prescribed. It might be close to shops, overlooking open space or in some other location regarded as especially suitable for flats. The local planning authority might often be sympathetic and agreeable, at least in the early stages of development and/or redevelopment of an area, but would eventually realise that, while there were plenty of people eager and willing to develop at above the average density, there were none willing to develop at below the average. But the authority would have to insist upon this happening, or the population of the area would, when it was fully developed, be very substantially higher than that planned for, with consequent overstraining of local facilities, particularly primary schools. If that happened, an additional school or schools would have to be built in a position with comparatively poor accessibility. The planning of the area, in fact, would have broken down, and a hand-to-mouth situation, exactly what planning is supposed to prevent, would have arrived. In practice, local planning authorities often found that they could not save the situation; the Ministry, as appeal tribunal, could seldom be persuaded that if it was reasonable to allow some people a density higher than the average, it was equally reasonable to make others accept a density lower than the average.

The simple, satisfactory solution would have been for local planning authorities to prepare supplementary town maps or comprehensive development area maps (apart from some legal and procedural niceties they were identical) quite soon after the preparation of the town map to show detailed densities in building

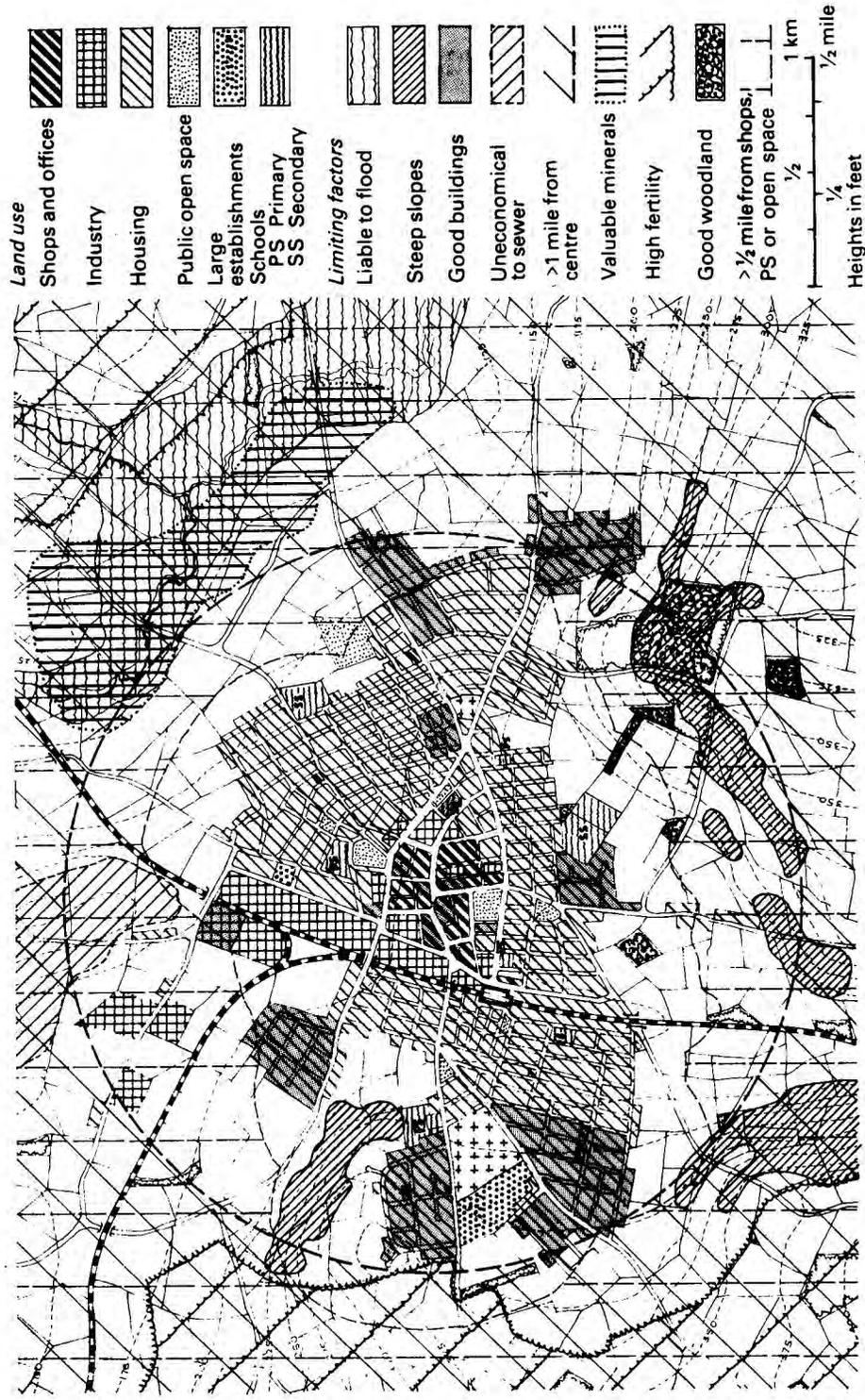


Fig. 3.1 The town as existing and the various factors affecting the choice of land for future development.

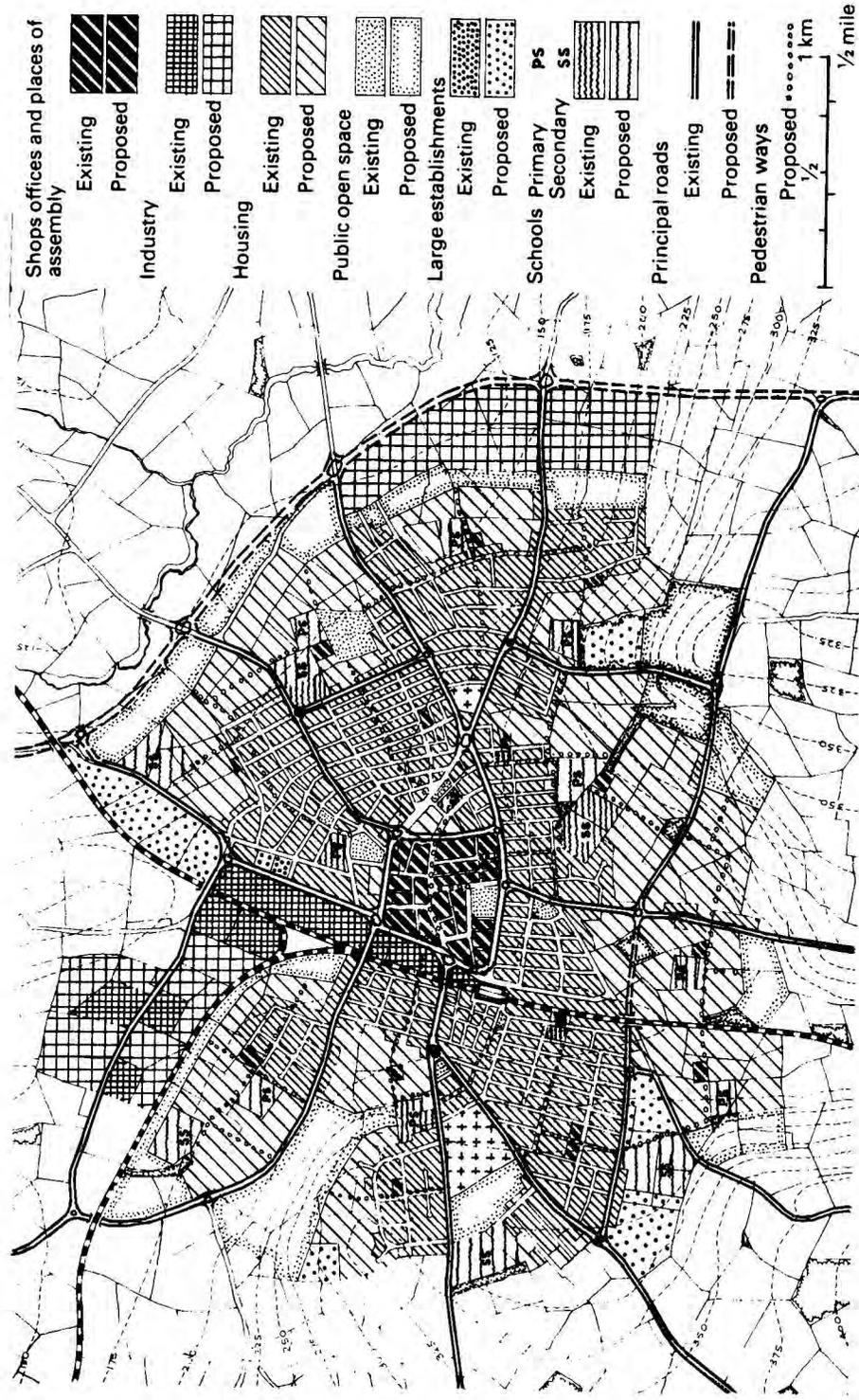


Fig. 3.2 The plan prepared in the light of the brief and surveys.

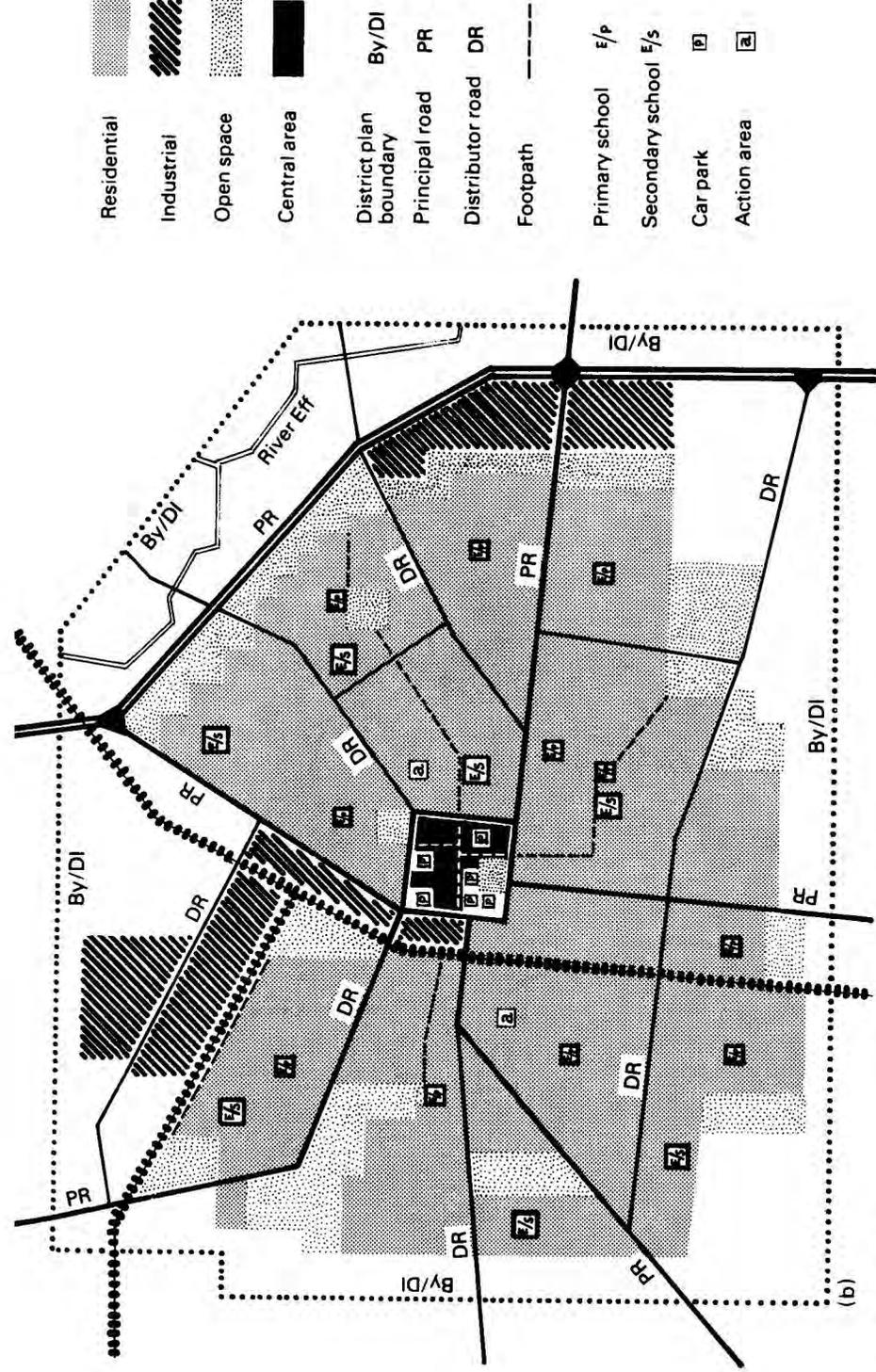
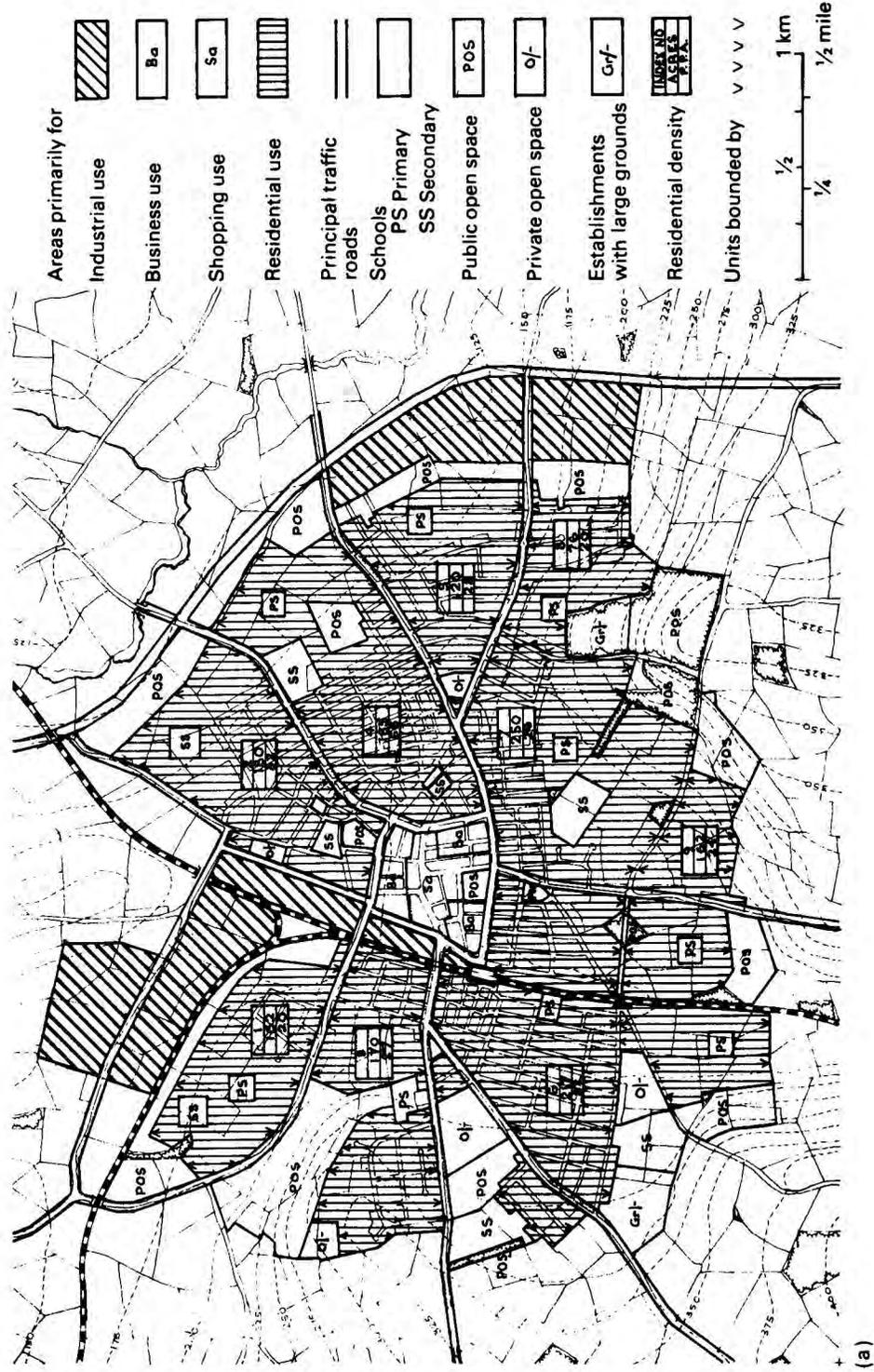


Fig. 3.3 The plan somewhat as it would appear if presented in accordance (a) with standard 1947 Act notations and conventions, (b) with the *Development Plan Manual* suggestions for a district plan diagram. In neither case, because of different scale, monochrome rather than colour notations and other technical reasons, is it possible in this book to give an exactly correct impression.

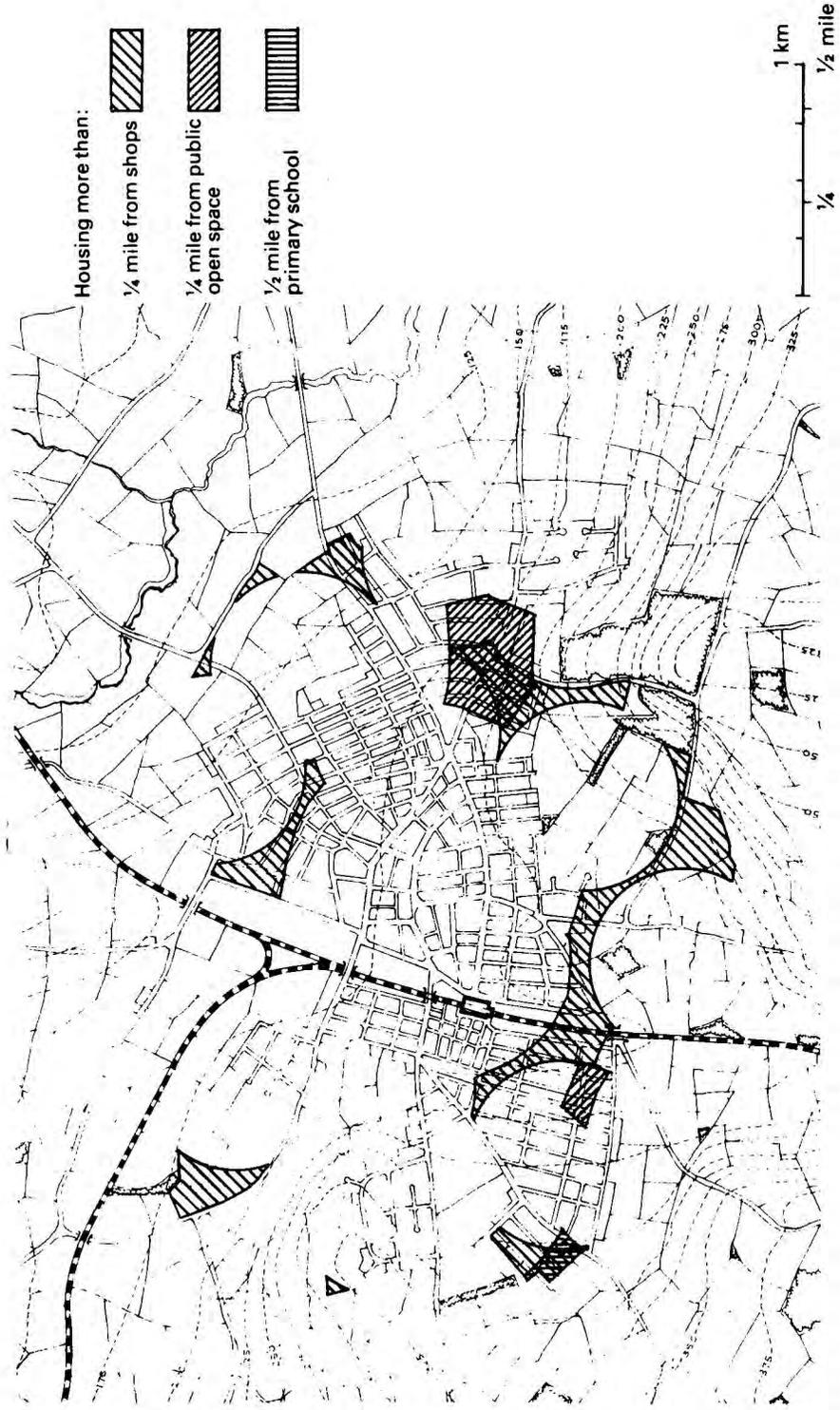


Fig. 3.4 The internal accessibility standards achieved by the plan. The amount of housing not enjoying the highest standards of accessibility is quite small.

rather than population terms, thus indicating to developers exactly what would be permitted on any particular piece of housing land. A method of doing this was shown as early as 1951 in Circular 92 of the Ministry of Town and Country Planning (Appendix II, Sheet 4). Unfortunately the method which has been adopted since 1968 goes in the opposite direction. It abandons density control in any precise terms.

Figures 3.1–3.4 show the essential information which needs to be mapped before preparing a plan for an existing town and the plan produced on the basis of this and other information. Proposals are shown not only as I believe they ought to be shown, but as they would have been shown in a 1947 Act Development Plan and also as they might be shown in accordance with *Development Plans*, 1969. Space standards, principles and methods of design are as exemplified in Fig. 2.17, though numerous adjustments have, of course, to be made because of natural features and the distribution of existing development.

Chapter 4

Residential neighbourhoods and town centres

These are parts of the town which need very special detailed planning. The idea of the residential neighbourhood and the idea of the pedestrian town centre are crucial to modern town planning methods.

Residential neighbourhoods

Discussion follows naturally from the discussion of housing density just concluded.

The 'cartogram areas' referred to were perhaps rather vaguely intended to correspond with 'neighbourhood units'. These embody important and yet widely misunderstood concepts. Ever since 'neighbourhood' became a generally used planning term in this country, just after the Second World War, it has suffered from the confusion produced by its two rather different connotations: the social and the physical. The former is the context in which the word had generally been used previously and this therefore tended to leak into the second context, with unfortunate results.

There is a kind of yearning on the part of many town planners for their activities not to be stigmatised as 'mere physical planning', though why so important and difficult an activity should be regarded as 'mere' I find hard to understand. They want 'social' planning to be comprehended within it. If by 'social planning' one means the whole apparatus of the Welfare State, then much of it has no more connection with the operation of town planning than has the art of naval gunnery, and there is no more reason to include it, or expertise in it, in town planning activities than there is to include naval gunnery. I am thinking of such things as pension schemes, scholarships, university grants, health care, rent tribunals, teaching methods and so on. But many social services do have physical expression in terms of land and buildings: schools, hospitals, clinics, central and local government offices, prisons, remand homes, etc., etc. The selection of sites for these, in order to weave them into a pattern suitable for their own purposes and congruent with the urban pattern as a whole, is very much a town planning matter. But I want to put very forcibly that it is not for town planners to argue the wisdom or otherwise of the policies adopted by a

public authority in relation to its own activities, only as regards the impact on land use.

To use schools once more as an example, if in designing a New Town the education authority announced that it was going to have primary schools with 2000 pupils each, it would certainly be within the competence of the town planner concerned to say that this would make it impossible for all pupils to have a school within easy walking distance of their homes, as would indeed probably be the case, but it would be no concern of his, as a town planner, to say that such a policy was educational lunacy, as no doubt it is. The issues are separate, and one should not be argued in terms of the other. (However, once the town planner got home, he could with vigour and propriety, as a citizen and as a parent, argue the lunacy of the policy on both counts: the accessibility aspect as an expert and as a citizen, the educational policy aspect as a citizen only.)

In the physical context, a residential neighbourhood is simply a local arrangement of land uses, roads and services designed to produce good accessibility and safety in ways which are consistent with space and traffic needs and the separation of incompatible uses. In fact, to meet these requirements fully, something very much like a series of neighbourhoods as commonly conceived by town planners, is inevitable. To make the catchment areas of various local services fall within the main road network (and if that is not done safety or accessibility or both will be much reduced) we automatically create a series of physically fairly distinct units and if, to increase accessibility, we tend to concentrate the housing around the shops and primary school and push the open space towards the edges, this physical distinctness is accentuated. Figure 4.1 shows a neighbourhood design for part of the town dealt with in Figs. 3.1-3.4.

If we did not arrange for catchment areas to fall within the main road network, we should be faced with three possible situations, all unsatisfactory. The number of people crossing main roads to get to local services would obviously be much greater than otherwise, with considerable danger of traffic accidents and perhaps traffic delay: the familiar situation in unplanned towns. If, to try to meet this, we fenced all the main roads to prevent pedestrians crossing them freely and, by blocking junctions, limited the number of intersections of main roads with minor roads to what is appropriate for main roads, accessibility to local services would obviously be much reduced. If, to overcome that difficulty, we provided numerous pedestrian bridges and tunnels across the main road and numerous two-level intersections of main roads by minor roads, safety and accessibility would be improved, but expense would be greatly increased. The logical extreme of this policy, of course, would be to put all main roads in tunnels or on viaducts, according to topography, so that they could be freely crossed anywhere. The cost of doing that would be so enormous that it could only even be contemplated in quite exceptional circumstances.

So it is sensible to plan so as to keep catchment areas within the mesh of main road networks. There may be some incidental social advantages. The physical distinctness may intensify feelings of social cohesion and encourage beneficial communal activity. Or it may not. For the reasons already given, the method

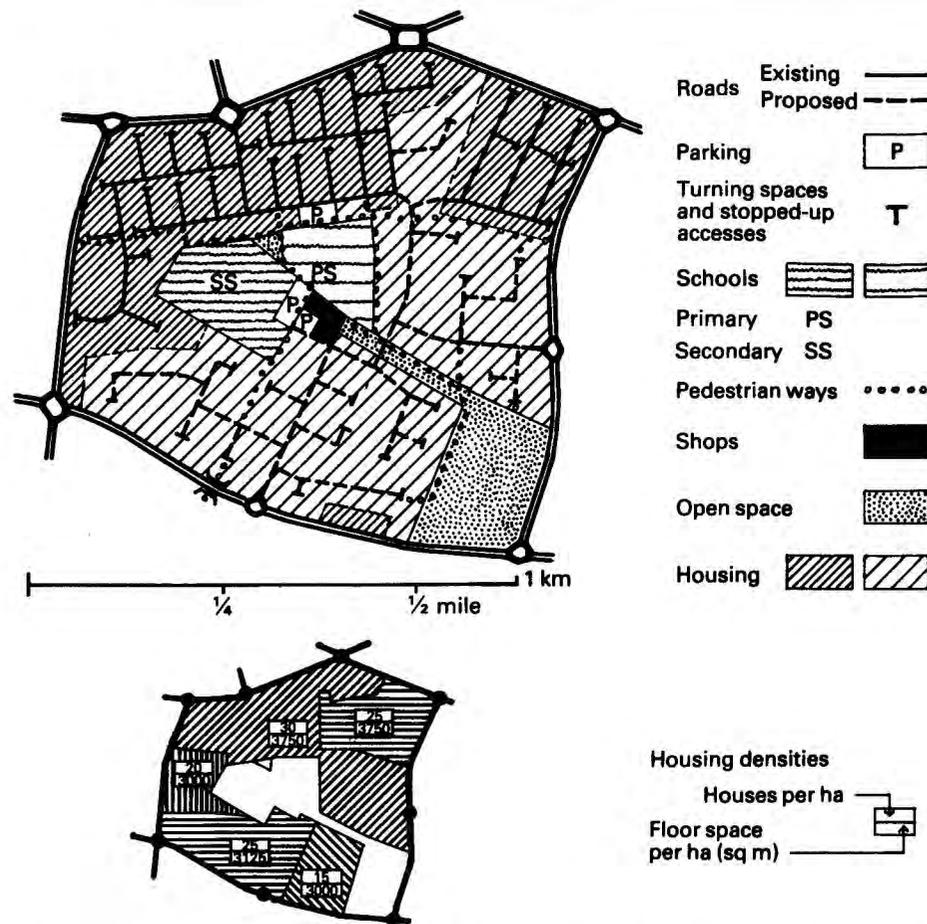


Fig. 4.1 A 'neighbourhood' plan for part of the same town. The information shown is similar to what used to be shown on a supplementary town map, though in a very different form and at a much smaller scale. The extent to which planning principles can practicably be applied to an area already partly developed is necessarily limited, at least in the short run (cf. Fig. 2.13). Here, there is an existing secondary school in too central a position, and some very awkward minor road layouts. An attempt is made to deal with these problems as well as is consistent with the need to avoid premature compulsory purchase and costly redevelopment. Note that, since the area is surrounded by main roads and collector roads, there is no need for internal limited access roads.

is fully justified on physical grounds alone. Are there any social disadvantages attaching to it which might outweigh the strong physical and faint social advantages it has? I can find none.

Nevertheless, it has to be realised that a very special issue is involved here. In many respects, town planning needs only to coordinate so as to bring about forms and locations of development not essentially very different from what would have been chosen by developers in the absence of control, but this is not

so for the location of shops and associated uses near main roads. It is necessary in the interests of optimum accessibility and safety to locate these where they would not have chosen to go. They should be placed as near as feasible to the centres of their catchment areas; but the attraction of the 'quick buck' will always incline developers to seek sites along main roads, where the income to be derived from passing trade is likely to outweigh the disadvantages of reduced local accessibility and safety. I do not think that there is any workable compromise here. Either the public interest or the private interest has to prevail.

One further problem is that catchment populations change with changes in public policy and changes in birth-rates. A given amount of housing may produce enough children in 1980 to fill a primary school comfortably, yet by 1990 the same housing may either provide only enough children for two-thirds of a school population or may, alternatively, overcrowd it. Education policy too may change, so that in one decade primary schools for 750 children may be favoured, while in the next schools with 500 are preferred. In Canberra, apparently, the swing of ideas was from 750 down to 500 in the mid 1960s, and back to 800 in the late 1970s.

It is impossible for the essentially long-term processes of town planning to keep closely in step with such rapidly changing patterns. But if pedestrian systems are properly planned, a main road will constitute a firm but not an excessively hard edge to a neighbourhood. Some people will always cross the road to use the services in the next neighbourhood rather than those in their own. To do so they will have to walk a little further, and this extra distance may be increased by having to diverge from a straight route in order to use a pedestrian bridge or underpass. But this only means just a little inconvenience, for less than would, in the normal run of things, be entailed in an unplanned town in order to secure a preferred service. In the case of schools, the use of temporary buildings during periods of peak child population can do much to mitigate difficulties.

Redevelopment

To go back to 'social planning' in a quite different context, there are frequent problems in answering 'Which existing features must be preserved?' when matters of redevelopment arise. These often involve matters of neighbourhood design. Thirty-five years ago it might fairly be said that there was a crusade in favour of redevelopment in this country. Large quantities of war-damaged housing and old housing in bad condition, built at excessive density, were pulled down and replaced with new housing of varied quality, some of it very good. Anyone opposing this process at that time would have been considered a reactionary villain. But today the climate of liberal opinion points in almost the opposite direction: preservation and conservation are in favour.

There are several reasons for this. First, a very large proportion of the worst housing is now gone, as the result of massive redevelopment efforts. It is hardly imaginable that sensible, liberal opinion would have wished to preserve most of

it. Second, more recently redevelopment has been associated with actions widely regarded as villainous: conversion of houses to shops as part of private enterprise central area redevelopment for profit, and the building of urban motorways (surrender to the polluting motor vehicle). Third, there is the undesirability of breaking up settled communities, especially those of an unusual or fragile kind, by physically destroying their abodes. This issue is often, in argument, mixed up with one or both of the first two. The difficulties, and an indication that the merits may not always fall on one side, can perhaps be appropriately illustrated by means of a fable which I invented some time ago.

The route of a projected motorway is found to sever a thriving and long-established community of Poresods (the sturdy and independent natives of the small European country of Poresodia who migrated in such large numbers during the 1950s). There they are, with their picturesque native dress, their close-knit, colourful, if rather noisy, social life, their interesting craft products, such as hand-knitted cucumber coolers, and their peculiar religious rites. And this motorway is going to knock down half their buildings and separate half the population from the other half. Loud and reverberating cries of 'Shame!'

And very possibly quite right too. The route chosen for the motorway may be a bad one on grounds which have nothing to do with the Poresods, for it is seldom, in terms of social costs and good town planning, as distinct from mere construction and acquisition costs, that running a motorway through the middle of a closely developed residential area can be justified. 'Round not through' is one of the soundest and most widely applicable of planning maxims for new roads. But 'seldom' is different from 'never'. There are several circumstances in which such a route might be justified:

1. Perhaps any other possible route would cost at least £4 m. more than the one selected. Is it, with all the other calls on the public purse, really justifiable to spend £4 m. to prevent the Poresods' community from being broken up? There can be no absolute, objective answer to such a question: it must in the end be a political decision. The most that town planners can do is to expose the problem and provide government with as much relevant information as possible.
2. Maybe the Poresods are breaking up anyway. The younger and more prosperous are moving out to the suburbs and a good many of the young men prefer the luscious local girls to the sturdy but very solid Poresod girls.
3. The Poresods are a lawless lot. Maybe the Poresodian enclave ought, on social grounds, to be dispersed rather than conserved. Again, a political decision is necessary.

A decision is likely to be easier to reach if there is a compensation system which genuinely tries to compensate fully everybody disturbed by the road for all loss suffered. However, the motorway should have been shown as integral part of the town plan, years before, and the plan as a whole should have been the subject of exhaustive public debate and formal inquiry at which the cultural problems of the Poresods, *inter alia*, were thoroughly explored.

All buildings eventually wear out so completely that they have to be replaced, despite changing shades of opinion about redevelopment, and this entails, unavoidably, at least the partial dispersal of existing social groupings. It is a great pity if, as often happens, this inevitable redevelopment takes place piecemeal without opportunity being taken to change imperfect patterns of land use, road patterns and pedestrian ways. However slow redevelopment seems likely to be in a given area, therefore, it is very important to ensure that when it does take place it does so in accordance with a predetermined plan.

Quite apart from opposition to redevelopment, ideas about acceptable housing densities have changed considerably over the last decade or so. For various reasons, which include inflation and limiting the supply of building land without controlling its price, new housing has been built at densities previously regarded as unacceptably high, and, most significantly, much old high-density housing has not merely resisted demolition but has become positively fashionable. The results cut both ways. Some areas of pleasant appearance which might have been expected to disappear have remained in being. There has been greater containment of urban spread than would otherwise have been possible. People, perhaps beneficially in some ways, have had to learn to adapt themselves to less ample privacy standards. It is doubtful, however, whether valued social groupings have been preserved to any appreciable extent. The comparatively well-to-do, rather, have moved into areas previously occupied by the comparatively poor, who have been driven out by price, and the money costs of rehabilitation must often have been substantially greater than those of redevelopment. Inferior street layouts have been perpetuated. Perhaps on balance the good outweighs the bad. But it is to be hoped that gentrification and mummification will not continue on a large scale much longer. Despite an improved standard of living generally, a very large number of quite well-paid people are now housed considerably less well than their parents were at the same age.

Town centres

If there is one aspect of town planning which can be said to have achieved success in many parts of the world, it is the redesign of town centres so as to remove motor vehicles from shopping areas partially or completely, part of the time or all the time. The essence of the matter is that the natural behaviour of shoppers is entirely incompatible with that appropriate to people in the immediate vicinity of moving motor vehicles. Shoppers, from the point of view of a motor car driver, move about erratically and unpredictably, have their eye on shop windows when they should be watching for traffic and may even dart straight across the traffic stream towards an enticing shop display.

This may seem rather a trivial basis for an operation as substantial as the redesign of an entire town centre, but it is not. The shopping role of town centres is, in many towns, of predominant importance, and the safety and comfort of shoppers is correspondingly important. The proportion of land devoted

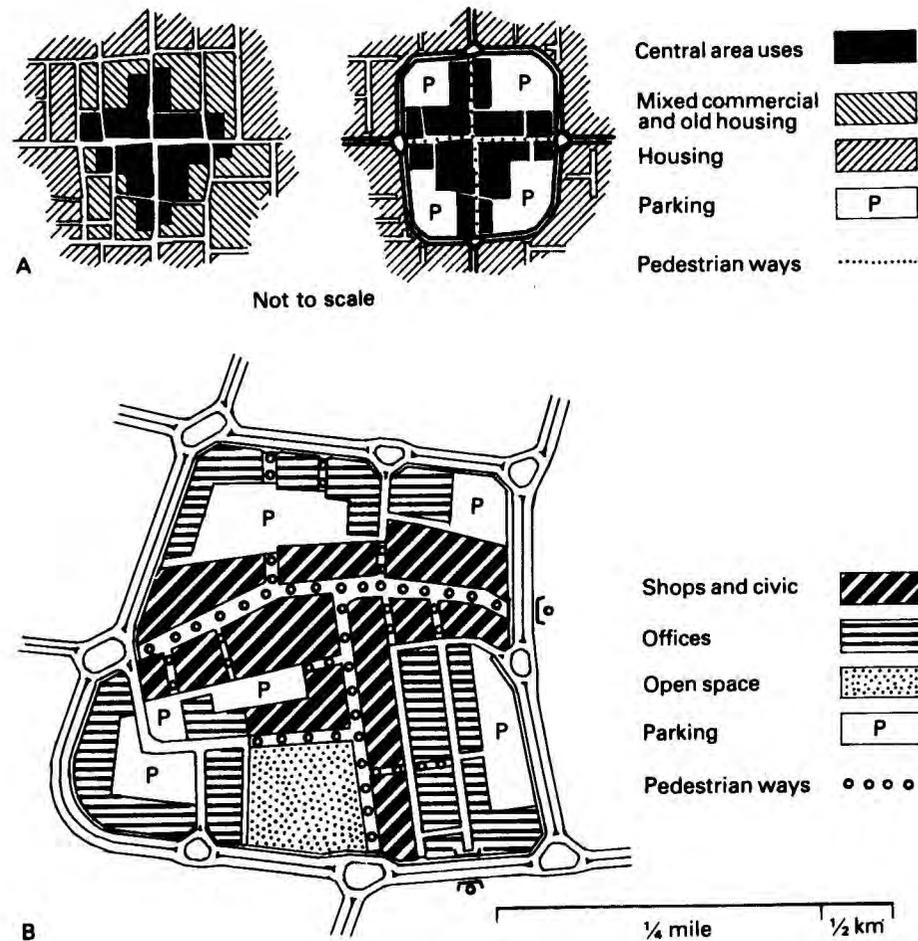


Fig. 4.2 (A) A typical town centre and, schematically, how it can be adapted to modern conditions. This adaptation may take place in several stages, e.g., first, provision of car parks, second, exclusion of traffic except for loading and unloading, third, provision of ring road and finally, complete pedestrianisation. (B) A plan for the centre of the town shown in Figs 3.1–3.4.

to shopping in town centres is also high and the shops may be dispersed through the whole centre, so that redesign of the shopping affects the whole centre. We have therefore reached a situation in which treating the shopping street almost exactly as if it were a residential street is clearly anachronistic. We have needed to revert to an older tradition: the precinct. This can be done surprisingly easily in very many cases. Figure 4.2 demonstrates how.

While we may reasonably lament that more work of this kind has not been done in this country, and that the principle of pedestrianisation has not been sufficiently thoroughly applied even to the centres of New Towns, the quantum

of achievement is nevertheless very considerable. The need for pedestrianisation has been obvious, and the benefits when it has been done have been equally obvious and striking. Unfortunately not many of the benefits of good town planning are so direct and striking or achievable so quickly; nor do many of them affect so large a proportion of the population as does the pedestrianisation of shopping streets.

Pedestrianisation may be complete or partial in terms of layout. It may also be complete or partial in terms of regulation. Fairly often, temporarily or permanently, it may simply not be feasible to exclude all traffic from a shopping street because, without far more massive redevelopment than is economically possible, there is no way of providing rear vehicular access to some or all of the premises. In these circumstances there is nothing for it but to allow delivery vehicles, at least, to use the street, either all the time or between certain hours in the early morning and the evening. In some towns this is extended to allow buses and/or taxis also to enter. But this is a dubious expedient. A little traffic is better than a lot of traffic, but the presence of any traffic, during shopping hours, destroys that freedom of movement for shoppers which is necessary.

Too often, instead of pedestrianisation, resort is had in town centres to one-way systems. These certainly make traffic flow more freely, but in other ways are a disadvantage rather than an advantage. If there are shops on both sides of a one-way street the need for shoppers to move erratically remains and the speedier flow of traffic makes these movements even more dangerous than in a good old-fashioned clogged High Street. Moreover the confusion caused to strangers by town centre one-way systems is grave. It would not be difficult to draw up a fairly long list of British towns into whose centres it is better not to penetrate by car if one wishes to preserve equanimity (the absence of which is itself a traffic danger). When multi-storey car parks are added to one-way systems (especially when signposting to their entrances is inefficient) one has to consider seriously whether such town planning thought as has been spent on them has not been ill-spent. It often seems that acceptance of congestion, pending the opportunity for carrying out more thorough and simpler changes, would have been preferable.

The desirability of simplicity needs stressing. As has been discussed earlier, in Chapter 2, residents of a town may quickly and easily master intricacies of layout; occasional visitors cannot. Town centre layout needs to be designed with their needs in mind as well as those of residents.

A final word should be said about 'zoning' in town centres. There are two schools of thought. One says that town centres contain, traditionally, a rich mixture of uses, in most cases incapable of being disentangled and that, in any event, there is no point in trying to do so: uses will not locate in town centres unless they need to be there and those that do need to be there will, in the long term, find the locations best suited to their needs and those of their customers. There is a good deal in this.

The second school says that the traffic attraction of different central area uses (both vehicular and pedestrian traffic) varies a great deal and so does the appro-

priateness of a bustling or a quiet ambience: the immediate surroundings suitable for a barrister's chambers are very different from those suitable for a supermarket. Selective zoning within a town centre therefore promotes good neighbourliness between uses and permits effective and economical planning of roads, intersections and parking provision. There is also great merit in this argument. All one can say is that each case should be considered impartially and *skilfully* on its merits. A plan with careful separation of uses which might be good and feasible for a run-down central area in a northern industrial town, with few if any existing buildings of interest or merit, might be quite inappropriate for an ancient country town replete with glorious architecture.

A summary of British town planning

Origins and development

The planning process begins with the desire on the part of some person, organisation or government to carry out town planning. Usually, nowadays, it is a government which is concerned, because both the legal powers and the resources needed are so great. The first thing, obviously, that a government has to do is to pass appropriate legislation. In most countries which do town planning, the powers given by this legislation are exercised in part by central government and in part by local government. In this country, the Government, broadly, entrusts plan making and development control to local authorities, and itself, for the most part, exercises a supervisory role in the approval of plans and in adjudicating between parties in the event of disputes. One important exception to this is the building of New Towns, which is carried out by government-created agencies called Development Corporations.

Towns plans are implemented by the carrying out of development, public or private, approved as being in accordance with the plan, and preventing development which is not. For private development the essential steps in the process are: first, a decision to carry out development; second, an application for permission to do so to the planning authority; third, receiving approval; and fourth, carrying out the work. This is very obvious, but it is surprising how many people, judging from what they say, seem to have some hazy belief that, once a plan has been approved, it somehow implements itself.

Conceptions

I want now to try to distinguish different kinds of planning thought and planning work. *Theory*, *technique* and *practice* are three words which are used a great deal in connection with town planning. Unfortunately, and confusingly, people attach very different meanings to them.

Theory

Theory, in my terminology, is what goes on in the head, what can be thought about, formulated and discussed without necessarily committing much to paper.

It includes finding answers to questions such as: What ought we to try to do? Is it better to plan or not to plan? What kind of planning should be tried? What degree of fineness of control ought we to try to exercise? What assumptions should we use to work out and validate our plans? What kind of public participation in the planning process, if any, should we provide for? What hierarchies of roads and service centres should we adopt as the most suitable? What urban grain is preferable? What general policies regarding control of the appearance of urban areas should be followed? Is it desirable, in the urban scene, to incline more towards homogeneity or towards heterogeneity? What kind of residential density policy should be followed?

These are all things to be thought out and argued out, if possible, before a line is ever drawn on a plan.

Technique

Technique refers to the methods used to make plans accord with the theoretical desiderata previously determined. They include survey methods, methods of graphic presentation, the working out of space standards and of performance standards, such as daylight and sunlight controls and parking standards. They also relate to forms of legislation; for example, whether legislation shall be related to methods which include zoning tables or if reliance, instead, is to be placed upon devices such as General Development Orders and Use Classes Orders. This can be taken further to include the actual drafting of detailed legislation (mostly, in British terms, delegated legislation).

Practice

Practice is the way in which you use theories and technique to ensure that what goes on the ground shall give effect to them as fully as possible. It includes the whole process of development control, the preparation of reports and the conduct of meetings, the processing of applications for planning permission and the conduct of public inquiries and of appeals.

For 'theory' 'techniques' and 'practice' one might well substitute *head, paper, ground*.

Legislation

In order to arrive at a clear understanding of the state of the art in this country at present it is necessary to look at the subject historically. Ideas and methods in town planning have changed so much and so quickly that it is hardly possible to understand any facet of the present planning situation without considering how it came to be as it is. There are many very good accounts of the development of British town planning. What follows attempts to do no more than pick out the main features in what must appear a very odd totality to those previously unacquainted with it.

In one sense, British town planning starts with the Public Health Act of 1875. This brought about the universal provision in urban areas of mains water, main

drainage and properly paved streets, together with the assurance of minimum acceptable supplies of air and daylight. It may be difficult, or even impossible, to separate these effects from the effects of improved medical technology, but there can be no doubt of their importance. The great reduction of fire hazards and of the dangers of sheer physical collapse of buildings have also played a beneficial part.

The Act provided a sane and ordered basis upon which town planning could be started. It did nothing itself to ensure that incompatible uses were kept apart or to provide or even reserve sites for necessary uses such as schools and open space. Nor did it do anything to ensure that the street layouts of adjoining developments knitted together. These things had to wait another thirty-four years to be attended to. The Housing and Town Planning Act of 1909 attended to them in a very tentative way. Far from the use of its planning provisions being mandatory, as had been the provisions of the Public Health Act, local authorities had to seek permission from the President of the Local Government Board to prepare a scheme. The use of the planning powers under this Act was scanty and tardy.

Its provisions were extended, varied, improved, though at times even diminished, by subsequent Acts, which reached their final flowering in the Town and Country Planning Act of 1932. This may well be the best example of the full working out of planning under what may be described as the 'old' planning system. It was essentially what it has become fashionable to call a 'legalistic' system. This connotes the precise expression of powers, duties and obligations and precise expression of the ways in which they are to be carried out. This may be excellent in many fields of social legislation, for it enables public authorities readily to be called to account for errors committed either from excess of zeal or lack of zeal. But it does not work for town planning. Town planning is both complicated and subtle. The grain of even the best legislative language is too coarse to accommodate the needs.

A town planning scheme of the old kind set out on a map the primary uses for every piece of land in the planned area. These would usually be residential, business, industry and open space. It would also show the routes for new roads and widenings of existing roads, the latter being indicated, ostensibly quite precisely, by red strips which filled out narrow roads to a standard width and generally straightened crooked lines. Some even went so far as to show future permissible building lines alongside new and widened roads, thus providing a detailed picture, at 1/2500 scale, of the whole road system of a town or even a rural district as it might be expected to be after all contemplated development had been carried out.

In other ways detail went nearly as far. Business areas would be divided into several categories, in each of which the uses to be permitted as of right would vary very slightly from the others, while the residential areas would be divided into a number of different density zones, expressed in houses per acre. Typically, there would be residential zones for which the maximum density prescribed was 1, 2, 4, 6, 8, 10 or 12 houses to the acre.

All this was shown on the maps but the written material went much further. For each local authority the planning restrictions were set out, much in the way in which an Art of Parliament is expressed. A 'table of zones' formed an important part of these. Against each named zone, there was a three-column table. In the first column were 'as of right' uses which set out uses, sometimes only the primary use, but sometimes a few other allied ones, which could be started in the zone without specific planning permission being given. In the British version 'as of right' meant simply that no permission was needed to start such a use as a use, but all details regarding density, etc., were still subject to planning approval. In other versions, including some Australian ones, the 'as of right' category grants much more. It exempts development falling within the category from all obligation to get planning approval. All that is needed is what we should call by-law consent.

In the third column were forbidden uses. For example, noxious industry was understandably excluded from most use zones except the noxious industry zone, while, conversely, residential might be excluded from the noxious industry zone.

In the second column were set the uses which, in each zone, might or might not be permitted at the discretion of the planning authority, subject to a right of appeal.

In residential areas, therefore, in these schemes, despite the extraordinary amount of detail, schools, shops and many other uses might as a matter of discretion be permitted. Very wide departures from an ostensibly minutely pre-ordained future were allowable. The extreme rigidity of a permissible maximum of so many houses per acre was relaxed by allowing averaging of density over limited areas. In each density zone there would be a different minimum plot size below which, despite averaging, it was not possible to go. There would be a minimum plot frontage for each density and a maximum permitted number of attached houses, which allowed only detached houses in the lowest density zones, allowed detached and semi-detached in the medium density zones and permitted also terrace houses of prescribed maximum number for each terrace in the highest density zones. There were also provisions, varying for each zone, about the maximum permitted height of buildings and the maximum proportion of site to be covered.

Ingeniously worked out though all these were, they did not and could not possibly cover every likely variation and eventuality. They did not necessarily prevent bad development, while they might well forbid what in particular circumstances would have been good development.

It is unfortunately impossible within the confines of a book page, to give any adequate feeling of what a 1932 Act planning scheme looked like, but Fig. 5.1 gives a general indication. What this also shows is the way in which town planners under the 1932 Act system were troubled by the spectre of compensation for injurious affection. Its menace caused vastly greater areas to be zoned for development than could ever conceivably be needed.

What was all this density zoning about? Who was trying to provide what

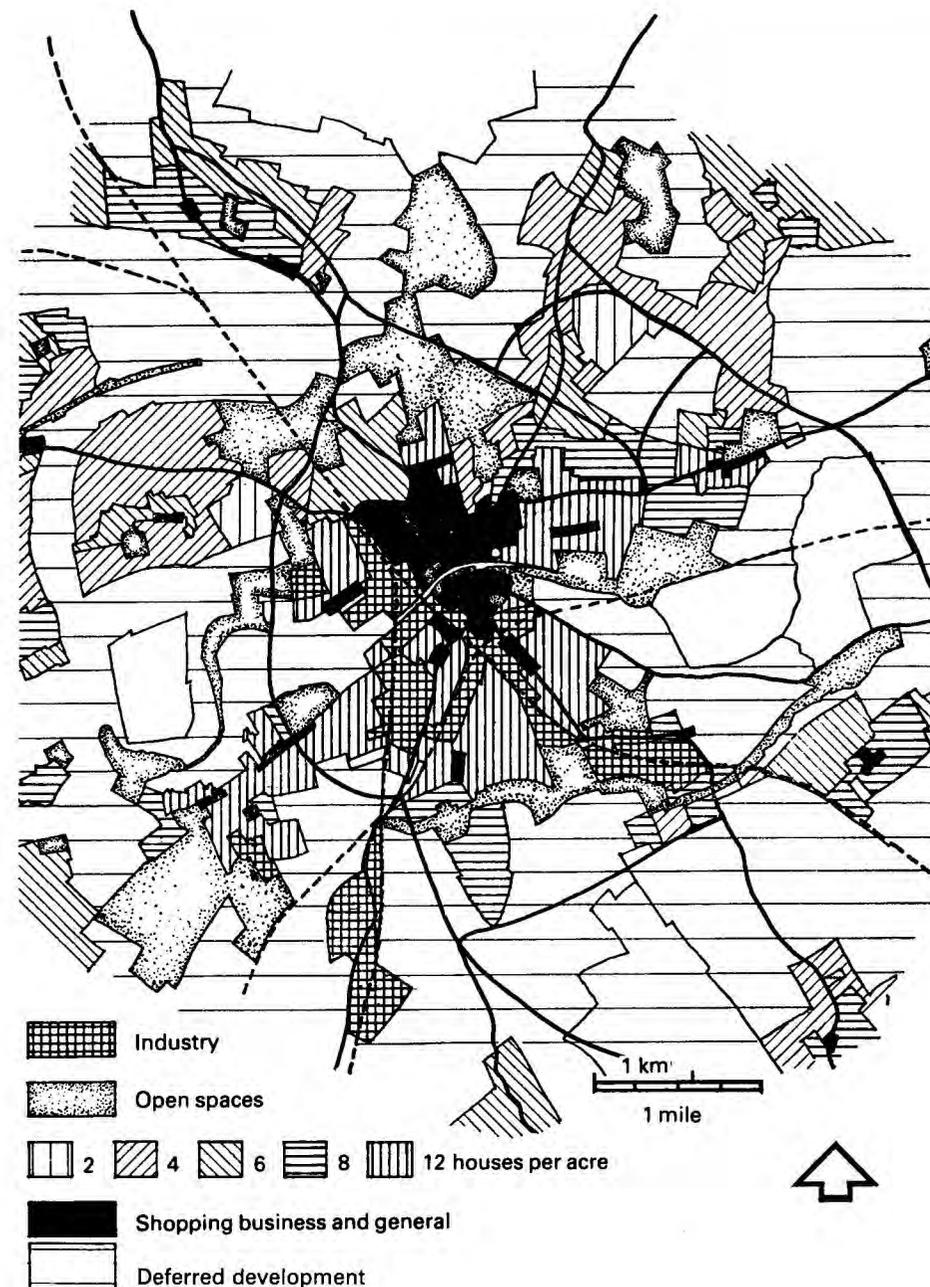


Fig. 5.1 Impression of a 1932 Act planning scheme.

benefits for whom? And protect whom from what? Thomas Sharp aptly described it as 'snob zoning'. What it really amounts to, and this is hardly caricature, is:

The gentry live in detached houses with large gardens. The respectable live in small detached houses or semi-detached houses with medium-sized gardens. The poor can only afford, or have provided for them, terrace houses with tiny gardens, and must be carefully segregated from the gentry and the respectable. However, since the gentry and the respectable do have from time to time to pass through working-class streets, we had better ensure that these streets are as reasonably pleasant to pass through as can be devised.

This strange mode of planning is still common, with variations, to much of the English-speaking world. In the United States, in fact, snob zoning combined with racially discriminatory zoning is still familiar. In Australia these elements are happily absent, but systems there are crude compared even with the British 1932 Act system. Density zoning hardly exists except that outside the more central parts of towns and cities (where systems of great confusion and complexity are used) a minimum plot requirement of remarkably large size is applied in blanket fashion.

In Australia broad and ostensibly liberal rights to compensation for injurious affection exist; but they are in fact so trammelled that most potential claims are excluded by exceptions, though few are likely to want to claim because the zoning is customarily so liberal that probably nobody who owns land with substantial unrealised development rights has ever been denied realisation. The tacit assumption is that in the absence of some very strong reason to the contrary, all land is to be regarded as developable for building purposes albeit, in the absence of main water and sewerage, perhaps at very low densities. It was more or less thus in England in the 1930s.

Modern ideas of planning reverse this image. They assert that in the absence of specific reasons to the contrary, all land should be regarded as undevelopable: the onus of proof is upon the person wishing to develop, not upon the authority wishing to deny development.

The Second World War produced in Britain a unique reappraisal of town planning needs and policies. The way in which this came about, and the ways in which effect was given to them are very far from dead social history. The details have been well documented and publicised and, so far as earlier events are concerned, I wish only to summarise with extreme brevity.

Just before, during and just after the war some reports and consequential legislation were produced which transformed the British town planning scene. They created a town planning organisation which led and still in many ways leads the world, despite what I regard as backslidings. The Barlow Report, ostensibly about the location of industry, but in fact taking in issues much wider than that, advocated the establishment of a national planning authority. The Committee on the Utilisation of Land in Rural Areas proved remarkably influential. It said, in effect, that food-growing land was an immensely important national resource which had been grossly squandered and that in future no land ought to be allowed to be lost to food production unless clear and convincing

evidence could be produced to show the necessity for this to happen. It led, also, to policies of village development and conservation which have alike improved the lives of their inhabitants and sustained a priceless tourist attraction. The Uthwatt Commission on Compensation and Betterment provided an authoritative basis for the best solution of an intractable problem which has been devised in the capitalist world. The Dower Report set out the case for National Parks. This very voluminous report, succeeded by equally voluminous legislation, led to substantial results.

Three brief and very quickly produced reports led to the passing of the New Towns Act of 1946 and the creation of more than thirty or more New Towns; they are the objects of admiration by town planners throughout the world, even though they are somewhat undervalued in this country.

In 1943, almost a year before D-Day, occurred a most important event. The Town and Country Planning Interim Development Act was passed. This said that henceforth all land in England and Wales was subject to planning control by local authorities. The whole paraphernalia of councils passing resolutions to prepare schemes and getting ministerial consent to do so was swept away. It was a stroke of blindingly obvious genius seldom followed elsewhere. Why not? If powers to control the use of land are appropriate anywhere they are appropriate everywhere. If in a particular place nothing is happening or is likely to happen which requires control of that kind, nothing is lost, no work has had to be done. The powers are there waiting to be used immediately when the necessity arises. There is everything to be said for the availability of such power and nothing to be said against it.

On the same date an equally short Act was passed which created a Minister and Ministry of Town and Country Planning. We may regret that this position has since been changed in various ways and think that the changes have on the whole been harmful rather than beneficial, but it was a statement of intent of an important kind.

The Town and Country Planning Act of 1944 together with certain incidental provisions, pegged compensation for compulsory purchase to pre-war prices, in order to avoid post-war profiteering in land. This too is now of no more than historic interest, but was a valuable statement of intent.

These Acts, passed by the Coalition Government before the sweeping Labour electoral victory of 1945, were entirely in accord with the intentions of the Labour Government then returned, and played their part in the creation of the Welfare State. The Beveridge Report was enthusiastically implemented. Coal, steel and transport were nationalised. The Coalition Education Act of 1944 was implemented. A National Health Service was inaugurated. Housing was temporarily largely transferred to the public field. It was a bloodless revolution of the most extraordinary and far-reaching kind.

The Town and Country Planning Act of 1947 established the new planning system. Long though it was, it was a mere skeleton. It left a very great deal to be filled in by means of Statutory Rules and Orders, capable of being varied from time to time far more easily and quickly than can principal legislation. The

Minister was thereby entrusted, subject to general Parliamentary scrutiny, with the preparation and promulgation of many detailed legal provisions. Here there is a distinct difference in principle from old-style planning in which the local planning authorities, in a sense, created law because the written content of their planning schemes had locally the full force of law and they had drafted it themselves. In new-style planning, the Ministry does the whole of the drafting, and local authorities operate their policies within its framework; they cannot themselves legislate (except in quite minor and exceptional ways and circumstances). But the Minister cannot dictate to them what policies they should follow in day to day planning activities. He can only disapprove their development plans if he does not like them and turn down their decisions in disputed cases which go to him on appeal.

The Act rearranged the responsibility for the performance of planning functions. Hitherto, the lower-tier local authorities had been the planning authorities in England's two-tier structure of local government. The county councils had had only vestigial or indirect planning powers. The 1947 Act changed all this. The all-purpose county borough councils naturally retained their planning powers, but elsewhere the county councils became the planning authorities. They were charged with the preparation of development plans, as the new plans were called, replacing the expression 'planning scheme'. So far as other planning functions were concerned, principally development control, the county council was also the responsible authority but could, with the consent of the Minister, make agreements with the district councils to give the latter some power of development control. It is hard to generalise, since no two counties seem to have made absolutely identical arrangements with their district councils, but, usually, agreements were made by which county councils retained for their own decision the most important decisions, on matters which might be said to affect county planning policy generally; district councils were left to determine at their own unfettered discretion the most minor planning issues such as the layout of small groups of houses, while, in between, the planning issues of moderate importance could be determined by the district councils so long as their decisions were not repugnant to the views of the county council. This last category caused great friction and difficulty. District councils customarily accused the county council of 'bureaucracy' and 'autocracy', but to unprejudiced observers it often seemed that in counties where the district councils were given the greatest say in the management of development control the results were the least impressive.

Plans no longer constituted local law. They were to be no more than expressions of policy, but to be approved by the Minister and therefore properly to be expected to be upheld by him in his role as resolver of disputes.

Expression of policy was in the form of maps and written statements, but the latter consisted mostly of statements of intentions and desiderate; the by-law or ordinance mode of expression was no longer relevant and was entirely abandoned. Maps too were indicative, not prescriptive. A 1947 Act development plan said in effect: 'This is what we are likely to approve and this is what we are likely to object to. You can apply for permission to do anything anywhere; we shall

respond with the development plan in mind; we do not necessarily have to follow slavishly what it says; in any event, if you do not like our decision, you can appeal to the Minister.'

The 1947 Act system, partly in principal legislation and partly in delegated legislation, provided for the preparation, submission and approval of development plans by stages in three senses.

1. All the parts of a development plan were to be subject to quinquennial reconsideration, revision, resubmission and approval, whereas the 1932 Act system had hardly seemed to take into account the possibility that plans, when once approved, would not be right for all eternity.
2. The plans were to be prepared sequentially for different spatial levels. Except in the special cases of the county boroughs, the first step was to be a county map which would show broad intentions and would be the equivalent of a regional plan to the extent to which county boundaries then existing could be said to correspond to regional boundaries. The county map was to be succeeded by town maps, but the need for some town plans might be so urgent that they needed to be submitted at the same time as the county plan, and this could be done.

The county maps were normally to be at a scale of 1 in to 1 mile (1/63360) and the town maps at 6 in to 1 mile (1/10560). The town maps, while very much less detailed than the old scheme maps, were to be fairly specific. The future form of the town was to be shown, both as regards extent of urban land and division into uses, together with broad indications of residential density, the location of local services and facilities and improvements of the road system.

A further step in plan making was to follow: the preparation of what were called comprehensive development area maps and supplementary town maps. The difference between these was purely legal and formal. Such maps were to be at a scale of 1/2500, and would, as was appropriate at such a scale, go into much greater detail than the town map. Specific densities in terms of building bulk per acre rather than persons per acre were to be stated, sites for uses such as schools and open space were to be allocated to specific pieces of land rather than being shown as approximately located symbols, and the future road system was to be shown in much greater detail than on the town map.

No specific official pronouncement to this effect was ever made but it was certainly my understanding, and I think that of most town planners active at the time, that comprehensive development area maps or supplementary town maps would in due course be prepared for every part of every town likely to be developed or redeveloped to any substantial extent in the near future. A great disappointment was in store.

3. All plans were to be accompanied by programme maps which indicated the order in which development and redevelopment were expected or would be

made to take place, and also, rather rashly, the number of years within which it was expected that these events would occur.

Compensation and betterment

Having digested the contents of the Uthwatt Report, the Government included in the 1947 Act the best scheme ever devised for a solution of the compensation and betterment problem. Nothing could have been more comprehensive or, in essence, simpler. Lewis Silkin, its political sponsor, rightly said in response to Opposition complaints about its complexity, that anybody capable of filling in a Football Pools coupon correctly could easily understand it. This masterpiece of legislation has subsequently suffered mutilation, emasculation and grafts.

The scheme was based upon the simple proposition that the value of a particular piece of land may be divided into two parts: its value for the purpose to which it is currently being put, and additional value, usually called development value, attributable to the probability of its being able to be put to some more profitable use in the future. In some cases, of course, the development value may be nil, either because, as with much land in urban central areas, it is already being put to the most profitable use possible or because it is so remotely situated that there is no prospect whatever of putting it to a more profitable use. But agricultural land near a town, which may be worth quite a small amount as such, may be worth very many times as much because of the probability that it can be used for building purposes, the increase being known as betterment.

The allocation of land in a town plan for a use which allows it to be developed profitably, greatly increases its market value without its owner having done or spent anything to bring this about. Indeed, normally the increase has at least partly been brought about by public effort: building a road or laying a sewer. Conversely, its exclusion from such allocation prevents the owner from reaping its development value without his having done anything to deserve that fate; but town planning necessarily involves preventing the realisation of development value of some land. Moreover, for the implementation of town planning proposals some privately owned land has to be purchased for public purposes.

If planning restrictions prevent the fullest and most profitable use of their land which would otherwise be possible, or people have land compulsorily taken from them, democratic societies generally agree that they should be compensated for their loss. The great difficulty is to determine how much constitutes fair compensation. Most people who have studied the matter intelligently and fairly think that compensation should not include increases in value which have occurred because of the conferment of monopoly or quasi-monopoly value by the selective inclusion of land in an area allocated for profitable use in a town plan, or increases in value resulting from public enterprise such as the building of a road or the laying of a sewer which has made hitherto comparatively remote land more accessible or easier to develop.

Moreover, if the cost of compensation for loss of development value resulting

from planning restrictions has to be borne by the particular local authority in whose area the land lies, it will often be that the land to which the most stringent planning restrictions need to be applied is also the land which will attract the highest compensation. In practice this frequently means that the local authority finds itself unable to bear the cost of compensation and has to abandon its planning proposals in favour of some others which are less satisfactory but cheaper. The preservation of Green Belts around large towns provides a simple and obvious example.

In order to avoid this situation, the 1947 Act transferred the burden of planning compensation to central government and, to avoid bureaucratic complications and disputes in the future, provided for a once and for all payment of £300 m. to be distributed to owners of land who could make good a claim that appreciable development value resided in their land. In effect, the development value in land was nationalised, but the existing use value was left with its owners. The owners would, all and once for all, be compensated for their loss of development value out of the £300 m. Planning restrictions would therefore thenceforth not attract the payment of compensation, while compulsory purchase would be compensated for by paying the owner for loss of the part of the value of the land which he still retained, namely the existing use value. Those who obtained permission to develop land would pay to the owner its existing use value and to the Government its development value, called a 'Development Charge', thus over the years, reimbursing the public for the £300 m. it had paid to owners as compensation for deprivation of development value.

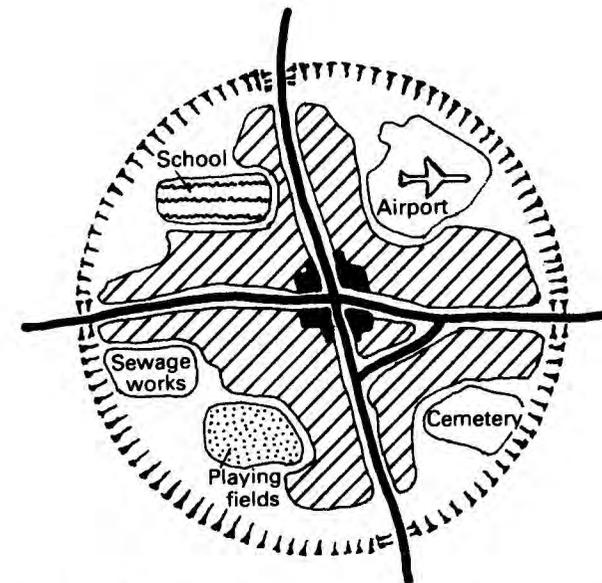


Fig. 5.2 A 'cliff' town. This special case shows vividly the inequity of necessary public acquisitions successively raising the level of compensation having to be paid.

Naturally, all kinds of detailed reservations and exceptions had to be made in the arrangements for payment of compensation, and equally naturally some bureaucratic errors were made. None of these were more than minor, and the sedulously propagated propaganda that the 1947 Act financial scheme 'did not work' was simply a political lie.

Figure 5.2 shows how, in the absence of rational schemes for the payment of compensation and the collection of betterment, the very actions of a local authority which are aimed at improving the welfare of their electors may progressively cost them more and more to carry out in terms of land acquisition by reducing the limited supply of developable land without reducing private demand for it. In real life, instead of land ceasing abruptly to be available for development at the edge of a cliff, its suitability and value for development usually fall gradually away as distance from the centre increases. This makes accurate valuation very difficult indeed: the imposition of planning control makes the value of land allocated for development much more definite but multiplies dispute and uncertainty as to the proper amount of compensation to be paid just outside the area allocated for development.

Development control

Perhaps the most important change brought about by the Act was the institution of a fundamentally different method of development control. Planning control having become universal in Britain in 1943 and plans having ceased after 1947 to be local law, a different structure and procedure from what had previously obtained had to be created to bring these new features of town planning into line with each other. This was done by stating in the 1947 Act the obligation to obtain permission for development, by defining development in some detail and by introducing the idea of General Development Orders and Use Classes Orders, which the Minister was authorised to make under the Act.

These orders are now an essential part of development control in this country. They respectively list activities which are unquestionably development or changes of use under the Act, but which the Minister determines nevertheless do not require planning permission. Formally, he gives the necessary permission himself for all such activities. Ministers can and have varied the terms of these orders quite considerably from time to time.

The Act defined development in what has now become classic wording: '... the carrying out of building, engineering, mining or other operations in, on, over or under land or the making of any material change in the use of any buildings or other land'. But six kinds of operation are listed which are deemed not to involve development and so do not need permission. They include works of maintenance or alteration to a building, subject to some exceptions, road maintenance and improvement, work on sewers, mains and cables and the use of buildings or land within the curtilage of a dwelling house for any purpose incidental to the enjoyment of the house as such. Also the use of any land for agriculture or forestry.

But the conversion of a house into flats, the deposit of refuse or waste material and the display of advertisements on any external part of a building not normally used for this purpose do constitute development.

The General Development Order. This lists twenty-three kinds of operation for which it gives blanket permission without the need for application. They include alterations and enlargements of dwelling houses up to specified maxima and the erection of things like garden sheds, gates, fences and walls, up to specified maximum heights, painting the exterior of a building and the erection of agricultural buildings other than dwellings on agricultural land subject to specific but complicated maxima.

The Use Classes Order. This performs the same function for minor changes of use which do not necessitate construction work of a kind which needs planning permission. It provides for example for change from one kind of shop, office or industry to another kind to be carried out without the need for planning permission to be sought. What it does *not* do or try to do (this has been the subject of some confusion) is to list all uses which might be regarded as distinct uses for town planning purposes.

To go further would involve a very lengthy description if one were not to risk being misleading. Provisions such as these can never be free of doubt in borderline cases, and there is provision for seeking a local planning authority's opinion as to whether permission is necessary in a particular case and for appealing to the Minister against an unfavourable opinion.

It cannot be too strongly emphasised what an excellent system this is. Most citizens are likely to come into contact with the development control system at some time during their lives and can usually find out clearly what their rights and obligations are without much difficulty. By contrast, in Australia, for example, there is often a miasma of confusion regarding such rights and obligations, no clear definition of development, no clear exemptions from the obligation to obtain permission; and, on paper at least, fairly stringent penalties for failure to meet one's obligations and hence far too great opportunities for officious and incompetent local authorities and their employees to exploit and harass people. In this country, it will be well to add, the carrying out of development without permission is not in itself an offence. It only becomes an offence if a notice to stop unauthorised work is ignored, or if after it has been determined, on appeal, not only that development needing permission has taken place but that permission ought not to be given for it, the decision is ignored. Even then, time is given for the work done to be undone before penalties can be exacted.

In the years after 1948 planning achievements were very considerable. After a slow start, New Towns were built rapidly and National Parks instituted. Progress was made in the preparation and approval of development plans and the process of development control was established on the new basis and gradually refined; but in both these activities slowness became and continues to be a serious fault. Local planning authorities were very slow to prepare and to adopt

development plans, and even when this had been done, the process of ministerial public inquiry and consideration lasted years rather than months. As for development control, local planning authorities are statutorily given two months in which to determine ordinary applications, after which, in the absence of agreement by the applicant to wait longer, an appeal lies to the Minister against failure to determine the application.

Many applications of a simple kind require no more than a few minutes' professional scrutiny and a committee's endorsement of the planning officer's recommendation for permission, yet, in many cases and in many places, an applicant who received his permission in much less than two months would regard himself as a fortunate rarity. Many local authority planning committees sit only monthly and 'missing a meeting' therefore automatically adds a month to the time taken for a decision to be promulgated. The statutorily obligatory or traditionally hallowed consultations between planning offices and other agencies, even in cases where there can be no possible doubt about the response from other agencies, have always further greatly increased the length of time taken to deal with applications.

It is easy enough to say that all this is deplorable and should not be allowed, but more difficult to do anything effective about it. Exhortations to local authorities to streamline their procedures are made often enough and with little effect; it seems to me that a promising move would be to impose a stiff fine on local authorities for their failure to determine any application within the specified period unless they could give convincing reasons for delay.

Further and serious delays are common in the determination of appeals. From the time he receives a refusal of planning permission or a permission with onerous conditions attached to it against which he wishes to appeal, an applicant may well have to wait three or four months for consideration of his appeal. When appeals are determined by means of a public inquiry, the inquiries themselves have always been conducted with exemplary expeditiousness, seldom lasting more than a day in simple cases. But after the hearing, the time taken for the decision to be promulgated has often been several months. It has not been uncommon for a person applying for permission for a comparatively small and straightforward development, say twenty houses, to be asked to give and to have given agreement to postponement of the issue of a decision by the local planning authority for three months or more beyond the statutory two months, nevertheless then to be refused permission, then to wait three months or more for the hearing of his appeal and another four months after the hearing before he gets the decision: a year or more in all.

If all parties, including the Minister, are agreed, appeals can be determined by means of written representations by the parties. About 80 per cent of appeals are now being dealt with in this way. It certainly achieves some saving of time and of cost to appellants because less of the time of their professional advisers is taken up. But the time saved is not dramatically great. In 1981 the median interval between an appeal being made and being determined was 17 weeks for those determined by an inspector under the written representations procedure,

compared with 26 weeks for those determined by an inspector after a public inquiry. More important cases, determined by the Secretary of State, took a good deal longer, median figures for these being 32 weeks for those dealt with by written representations and 44 weeks where there was a public inquiry.

Delays in the preparation and approval of development plans and slowness in the operation of development control reacted against each other tiresomely. Outside New Towns and areas of specially rapid growth or change, the operation of town planning is very gradual and its success capable of being measured only over decades rather than years. The success is achieved by as large a proportion as possible of decisions on applications for permission being the right decisions (and it must also be said that a large part of success lies in the badness of what is prevented rather than the goodness of what is permitted). For this gradual process to be effective, decisions have to be given in accordance with a plan. Until there is a plan, development control is to a large extent fumbling in the dark. One still sees examples of applications being refused on grounds of 'prematurity' because detailed plans for the areas in which they lie have not yet been prepared. This is an extraordinary confession of failure and inertia, nearly thirty-five years after the coming into operation of the 1947 Act.

Development plans

Large and important parts of the country were covered by outline advisory plans quite soon after the end of the war, some even before the war had finished. The counties of Cheshire and Gloucestershire, the city of Manchester and Greater London are examples, plans for them having been prepared astonishingly quickly, and though in some they were 'outline' plans, they went into a good deal of detail. The Greater London Plan is the most famous and perhaps the most meritorious. For an area much greater than that of the present Greater London Council it set out planning proposals in about as much detail as could be expressed on the 1/25 000 maps used. With a few exceptions, such as the sites for the New Towns proposed, it set out proposals in the form of actual, areas on the map, not mere symbols. In the new jargon it was 'site specific'. It was not always specific about the various uses to which areas shown as open space were to be put, and residential densities were somewhat generalised, but it went into much greater detail than any present structure plans or most local plans. (We shall come to the meanings of these terms in due course.) In fact the Greater London Plan proposals were put into effect to a remarkable extent considering the speed with which they had been prepared, the small number of people available to prepare them and the inevitable non-realisation of some of the predictions upon which they were based. Looking at current development plans for Greater London and parts of it, one is a little shocked by the comparative lack of detailed proposals included in them.

What has gone wrong? To answer this we have to go right back to the preparation and submission of the very first development plans after 1948. Local planning authorities were given three years to submit them, and the first sub-

missions had to consist at least of a town map at 6 in to the mile (1/10560) in the case of the county boroughs or a county map at 1 in to 1 mile (1/63360) in the case of the county councils. As explained earlier, in the latter case encouragement was given also to submit some town maps at the same time, and the assumption was that, after the initial submissions, further town maps and more detailed maps (Comprehensive Development Area Maps and Supplementary Town Maps), both for the county boroughs and the county councils, would follow in a growing stream. This did not happen. A large number of planning authorities early on asked for and obtained agreement for a longer period than three years for the submission of their initial plans. There was not much the Minister could do but agree, for the only alternative would have been for him to exercise his default powers and take over preparation of the plans by the Ministry. Neither on political grounds, nor in terms of the availability of manpower at the Ministry was this really feasible.

But why should local planning authorities have sought this delay? Three years is a long time. The chief planning officers were faced with a new and difficult job, and in many cases inevitably had not really had enough experience of the appropriate kind. It is greatly to their credit that they did as well as they did; it was no mean achievement. But they were timid, and their timidity was probably intensified by the somewhat niggling requirements of the Ministry as expressed in development plan regulations and advisory circulars and by the attitudes of Ministry officers during consultations.

Also, and this was the only real disadvantage of the 1947 development plan system, there was insufficient incentive for local planning authorities to hasten with the preparation and submission of plans. What did they stand to gain thereby? They had full powers to control development and flexible though a plan might be, having no plan was even more flexible. What has been called 'a state of eternal interim development control' has always been rather popular with planning authorities. The need to have a good and inspiring plan in order to marshal public support behind it and to provide a powerful weapon for fighting appeals does not seem to have counted enough in the minds of local planning authorities; nor even the need to give developers a fair idea of what they would or would not be allowed to do. Comparatively few supplementary town maps and comprehensive development area maps were ever submitted. The areas covered by them were a small fraction of those needing to be covered.

A further reason for delay in the preparation of development plans is that, inevitably, the determination of quite a large proportion of minor applications for permission does not depend upon the provisions of a plan. Applications to convert houses into flats, to change an ordinary shop into one of the kinds which need special permission such as a hot food shop, the conversion of large houses into private hotels or nursing homes or schools, and a host of other things cannot possibly be foreseen or catered for in a development plan, however detailed it may be, because the quantum of demand for them varies from time to time and can hardly be estimated, while the choice of sites by applicants fre-

quently depends upon what property happens to be on the market.

So the contemplated 1947 Act development plan system mostly stopped short at the town map stage. Apart from all the reasons for delay already discussed, there was not much incentive for a local planning authority to prepare and submit detailed plans before approval of the town map, for much of the work on, say, a plan for a town centre would have been wasted if, in the end, the Minister modified the town map in such a way as to conflict with the town centre plan. But town maps were quite inadequate documents upon which to base development control. We have already seen that in relation to residential density they were almost useless.

Another source of embarrassment brought the system to its knees. Plans were submitted late and approval of them took a long time, so it is not surprising that quinquennial reviews were submitted late. Sometimes the public inquiry into the review of a county map was taking place just after some of the original town maps within the county had been approved. It would be pretty difficult in these circumstances to suggest changes in the county map which would involve substantial changes to town maps just approved. Everybody would look rather silly, including the Minister, who is always concerned to avoid looking silly. Moreover, the areas allocated for future development on many town maps were so conservatively drawn that sometimes development beyond the limits shown had already had to be allowed before the town map was approved by the Minister.

Much of this ought to have been avoidable, for there was really no excuse for the Ministry taking quite as long as it did to deal with development plans. As the plans were not legally binding documents, the niggling changes frequently made by the Ministry were not therefore essential, even if desirable. Most plans should have been adjudicated upon within a few months of the end of the public inquiry.

It was inevitable that the public inquiries themselves should take quite a long time, even though they were unnecessarily prolonged. There were many objections of barely recognisable relevance, upon which objectors and their representatives were allowed to expatiate at unlimited length, but the amount of genuine and legitimate disagreement also provided scope for much argument. It is hardly conceivable, in fact, that the kind of timing contemplated in the Act could have been kept to if all the plans needed had been submitted. In the case of an ordinary county there would have needed to be a county map, probably 20 town maps, and within each of the town map areas, four or more supplementary town maps: about 100 separate plans, each likely to attract objections and a public inquiry, not just once, but every five years! No one seems to have foreseen this, and I freely confess that I did not myself, though in retrospect it seems obvious enough that the system was not logistically viable.

The Ministry tackled the development plan crisis in two stages, separated by several years. In 1962 it produced the first of a series of planning bulletins entitled *Town Centres: Approach to Renewal*. The key statement in this pam-

phlet, which in many ways is admirable, is to be found in paragraph 33 on p. 4, which reads as follows:

What is needed is a means by which the local authority, in conjunction with the local planning authority, can make a broad and relatively quick assessment of the problems and possibilities of the town centre, and which can be developed into a sound basis for more detailed decisions. The aim should be to systematise and simplify the work and discussion which goes into planning for renewal.

Paragraph 34 is procedurally even more important, and reads as follows:

For this purpose what is wanted is not a plan suitable for statutory submission to the Minister but a map which reflects the processes of survey, analysis and policy formation which lie behind any planning decision or formal proposal for amendment of the development plan. *If such a map is prepared and is used as the basis of planning in the central area and is available for public examination and discussion, the Minister will take full account of it in any matter which comes to him for decision.* (My emphasis)

This was simply a device for bypassing the development plan system. It would have been franker, and probably more acceptable to public opinion, to have said so. In fact some local planning authorities had already for some time had what were called 'informal' or 'bottom drawer' town centre plans as the basis for development control and had freely produced them at appeals. There is no reason to suppose that the Minister ever failed to 'take full account' of them. It is curious that the Ministry never suggested the adoption of a similar procedure for residential areas, though the need for it was as great.

One disadvantage of the 'informal' procedure of course is that the local planning authority cannot, at appeals, pray in aid ministerial approval, and at every such appeal appellants could very properly insist upon discussing the merits and demerits of the plan *de novo*, but this was simply an interim device. In 1965 a report was published which had the most far-reaching and, I suggest, disastrous results. It is *The Future of Development Plans: A Report by the Planning Advisory Group*. We must examine this in some detail.

The Planning Advisory Group

This was set up by the then Minister of Housing and Local Government in May, 1964, 'to assist the departments concerned in a general review of the planning system'. For brevity I shall henceforward refer to both the group and its report as 'Pag'. Pag virtually confined itself to considering the development plan system rather than dealing with the planning system as a whole. It could hardly have foreseen the exact form which would be taken by the reorganisation of local government enacted by the Local Government Act of 1972, which came into effect in 1974, and it is only fair to say that had it been able to do so it would probably have made rather different recommendations, because plan-making functions as well as development control functions have, as a result, been split between upper-tier and lower-tier authorities.

The Pag recommendations were expressed legislatively in the Town and

Country Planning Act of 1968 and were re-enacted with modifications in the Town and Country Planning Act of 1971.

Pag was strangely composed. It had 21 members, of whom only 8 were chartered town planners, and of these 2 were consultants of a rather specialised kind. There were 5 administrators, 3 lawyers, 3 treasurers and 2 engineers, all from the Civil Service or local government, while of the 8 chartered town planners, 2 were Civil Servants, another had recently been, and a fourth had a close professional connection with the Ministry of Housing and Local Government. Only one county planning officer was included in the group, and only two private persons, of whom one had until recently been a Civil Servant and the other had a professional connection with the Ministry. The chairman was an administrative Civil Servant. This perhaps explains the strangely complacent tone of the Report as regards the operation of the Ministry of Housing and Local Government. Reading it, one would, if one did not know better, think that nearly all the defects in the development plan system lay with local planning authorities, not with central government. Few members of Pag could be regarded as very expert on the subject of development plans. Far more could properly be regarded as consumers in one sense or another. I venture to refer readers who have a special technical interest in the subject to Chapter 4 of my *Principles and Practice of Town and Country Planning*, 4th edn. This gives far more detail than would be appropriate here. Pag recommended what it described as drastic changes in the development plan system, in the belief that they would greatly improve and speed up the planning process. It thought that plans should be divided into two categories: *structure plans* and *local plans*. Only the former would normally be submitted to and approved by the Minister; they would be county maps for the counties and urban structure maps for towns of more than about 50 000 population. Local plans would be divided into *district plans* and *action area plans*, the latter dealing in considerable detail with comparatively small areas where urgent action was necessary. They are clearly descendants from *Town Centres: Approach to Renewal*.

Another dominant theme in Pag was to play down the importance of maps and other drawings compared with written material and to use the device of making maps as vague as possible, often by leaving out underlying detail which would facilitate precise identification of location. Here it takes no great effort to discern the minds of lawyers and administrators at work. Statements made on maps are definite; they show spatial relationships which can be embarrassing to officials when changes of official mind occur. By contrast, words, if carefully framed, can be made very indefinite, and even statements which appear definite may include quiet saving clauses which it is not difficult to use for saving face if necessary.

Pag was confused about the degree of detail shown on maps. It seemed obsessed by what it regarded as the excessive detail shown on town maps, though it admitted: '1:21 . . . the plans are most precise when they reflect the pattern of existing use and far less clear in depicting future changes.' Surveys of existing land use showed a great deal of detail, especially in central areas of

towns, and this detail was often transferred as 'proposals' to the town map if no changes to existing uses were being suggested. This was not useful, but did little or no harm, whereas the lack of precision about future intentions did a great deal of harm. In this very important matter the emphasis of Pag should clearly have been the opposite of what it was.

A further conceptual error in Pag is that it constantly confuses defects in development plans which spring from bad application of the system (and often in fact bad application carried out on the insistence of the Ministry!) with inherent defects. Consider the following:

4:9. CDA [comprehensive development area] maps are generally prepared only as a means of obtaining the related powers of compulsory acquisition. They are therefore usually limited more or less tightly to the area proposed for acquisition, and do not attempt to show its relation to neighbouring development or its context within the district. The CDA map itself is seldom very descriptive or informative about the form of proposed development or redevelopment. It is usually limited to a few broad use zones and some indication of the road framework. But a complex commercial development, for example, may appear on the CDA map as a single commercial use zoning. It is seldom possible to show the proposals in any detail on the statutory map and the standard notation makes it almost impossible to depict multi-level development in which many different uses may be combined. Nor is the Ministry anxious to encourage authorities to go into a great deal of detail – because it may well commit the Authority to premature proposals which are not of critical importance to the principle of the scheme.

4:10. The Supplementary Town Map suffers from much the same defects as an instrument of detailed planning and the Ministry have generally discouraged the submission of these maps because of the already heavy load on the Departmental machine and the danger of delaying more urgent development plan submissions, including CDA's. Finally, neither the CDA nor the STM [supplementary town map] is apt as a means of planning areas that are to be comprehensively improved, as distinct from developed or redeveloped.

(It should be noted that Supplementary Town Maps were in fact abolished in 1965 by the Ministry by means of a change of regulations.)

Much of this is nonsense. The words 'generally', 'usually', 'seldom' are a key to the loose thinking in this passage. The whole of it is a criticism of what actually happened, rather than what should and could happen. The maps in question did not have to be 'limited more or less tightly to the area proposed for acquisition', but could perfectly well have shown its relation to neighbouring development and its context within the district, if indeed the town map itself had not, as it should have done. Nor was there any need for the maps to be limited to 'a few broad use zones' or merely 'some indication of the road framework'. They could perfectly well have shown detailed land use and road proposals and in fact they did. After all, 1/2500 is quite a big scale! It may have been difficult to show proposals in detail on maps which employed the standard notation, but there was in fact no obligation on a local planning authority to use the standard notation. There were many ways in which multi-level development combining many uses could have been shown.

It may seem hard to criticise so heavily a report which was after all produced

by perfectly decent people with the best of intentions, but it did a great deal of harm. It was very influential; subsequent legislation was closely based upon it. The harm done may not be able to be fully undone for many years.

The Town and Country Planning Act of 1968 incorporated many of Pag's suggestions. It was re-enacted with amendments in the Town and Country Planning Act of 1971. Section 2A of the latter took account of the Local Government Act of 1972 which, with effect from 1974, radically changed the structure of local government in the country. To have fewer and larger authorities at both levels could be seen to be logical. The upper-tier authorities were made responsible for structure plans and the lower-tier for local plans. Most development control passed to the lower-tier authorities.

Implementation of the Pag proposals under the 1968 and 1971 Acts has not been very impressive, partly because of the inevitable delay and confusion engendered by gradually switching over to a new development plan system, and then to a new local government system. But there ought by now to have been time for many more plans, going to much greater detail, to have been produced than has been the case.

The excellent manual on the form and content of development plans, *Development Plans*, was prepared by the Ministry of Housing and Local Government and the Welsh Office, and published by HMSO in 1970. It must be one of the most careful, thorough and competent pieces of work ever carried out upon mainly false premisses. It is illustrated with samples of most of the kinds of plans contemplated by Pag. It really breaks little fresh ground despite all the *brouhaha* about doing things in a completely new way which was contained in Pag and subsequent government statements. In fact I detect only two entirely new ideas. The first is bad, the second good. The first is that most of the maps are drawn in simplified straight-line style. That is to say, for example, that rivers have no curves, a phenomenon seldom encountered in real life. The same thing happens with boundaries of land allocations in urban areas; almost without exception all are straight and most meet each other at right angles, in total disregard of the subtle ways in which the European landscape adapts its hedges, fences and roads to contours.

The second new feature is that reference numbers are printed on the maps and relate the proposals in their vicinity to the written material which forms part of the plan. This is an obvious thing to do, but no one had previously thought of doing it; it greatly assists understanding of the proposals.

Unfortunately in paragraph 2:8 of the manual the suggestion is made that these references to the written statement are the main purpose of the drawings: a map, the main appropriate vehicle for planning ideas, regarded as a mere source of reference to words! Other false assumptions of Pag are carried through in the manual. Paragraph 1:6 says that the new development plan system will be concerned not only with the use of land but also with many other matters vital to the proper planning of an area, in particular the full integration of land use and transport planning. Paragraph 1:7 says that the plan will also reflect the main lines of housing policy for an area for the balance between conservation,

improvement, redevelopment and new development, and that the new system, 'with its more positive approach' will facilitate the creation of a good environment, in contrast with previous post-war development plans, criticised for acting mainly as a basis for negative control. This is rubbish. There was nothing in the old development plan system which was likely to inhibit the desirable results mentioned that is not equally implicit in the new system. These inhibitions stem mainly from the stodginess and inactivity of the Department of the Environment, the government body now responsible for town planning and, to a smaller extent, of the local authorities.

Paragraph 2:3 says that 'a development plan must be sufficiently flexible to deal with all matters that are subject to planning control and influence', and that 'the plan will be concerned with subjects as different as transportation and conservation', but nothing in the 1971 Act goes beyond the matters which have customarily been the concern of town planners. There has recently been a movement, to be referred to later, which rather vaguely seeks to extend the scope of town planning a good deal beyond what has hitherto been thought appropriate. One senses, in the words just referred to in the manual, something of the thinking which led to this movement.

As regards coverage, Pag said in paragraph 5:16, 'eventually a mosaic of local plans can be built up for the town as a whole, setting the action areas in a wider context and relating one action area to another. Local plans of this character will provide a more detailed basis for development control than the urban plan. . . .' That clearly contemplates a system which would eventually cover the country with proposals sufficiently detailed to form a proper basis for development control. But the manual, on p. 91, paragraph 11, says, 'there is no specific obligation in the Act to work for a complete coverage of the planning authority's area with local plans'. This is dreadfully weak. It is especially weak because both Pag and the manual, oddly, speak as if very little planning has been done until Pag pronounced its wisdom, though there had been an increasing, if limited, number of people working very hard on planning of a modern kind ever since about 1944. It seems incredible that by 1964, when Pag was set up, there should not have been in existence, in one form or another, enough detailed plans virtually to cover the country. If all the 'bottom drawer' plans in the country had been pulled out of their drawers I think that this would have been seen to be so. No doubt many of them would have needed revision and updating and some would have been found to be downright bad, but the picture would have been seen to be very different indeed from that painted in Pag and the manual.

As we have already seen, Pag complained that the old comprehensive development area maps did not attempt to show the relation of a comprehensive development area to neighbouring development or its context within the district. But Fig. 2C of the manual, which is the central area inset to the district plan for the mythical town of Harley, dramatically illustrates this weakness. The central area is shown in isolation. In Fig. 2B, which is the proposals map for Harley as a whole, the central area is not related to anything else, being surrounded by areas for which there are no proposals, while in Fig. 2A, which is the diagram

for Harley as a whole, it is barely possible to locate the town centre at all, let alone see how it relates to the structure of the town as a whole. The clock has turned full circle. After all the work of Pag, the passage of the 1968 Act as amended by the 1971 Act and the careful and painstaking preparation of the manual, we end up with an illustrative drawing which has exactly the defects which Pag itself criticised.

Since the passage of the Town and Country Planning Act, 1968, and more than a decade since the publication of the *Development Plan Manual*, dramatic improvements in development plans, both in terms of quality and of quantity, should surely now be apparent. They are hard to find. Pag, and post-Pag planning, have emphasised the importance of written statements as against drawings. No inspiration is to be found there either. The written parts of the new plans abound in 'motherhood' statements. They are, it is true, much more voluminous than the written content of the previous plans (which was usually so trivial and formal that it has not seemed necessary to discuss it here), but they contain little that really helps to secure more effective planning.

Although the manual constitutes a kind of bible or pattern book for official town planners, the plans actually prepared since 1968 fall far short, both in content and range, of what it suggests. If one thinks of the manual as good thick soup, albeit with a rather curious flavour, the real-life plans are more like consommé, with little flavour at all.

Despite Pag's yearnings to extend the scope of development plans to include matters other than the merely physical, except for public participation and for some motherhood statements about the integration of land-use planning and transport planning, Pag and the manual have virtually nothing to say about the collection of disparate matters which we shall now discuss.

Recent digressions

Oddly, these really started with the publication of *Traffic in Towns* in 1963. This is a study of the long-term problems of traffic in urban areas by a group headed by Professor Sir Colin Buchanan, as he now is.

With the dawn of the 1960s, everybody was getting frantic about traffic. This included Ernest Marples, the colourful and lively Minister of Transport of the time. Inspired, so the story goes, by Buchanan's very interesting book *The Mixed Blessing* about motor cars and motor traffic, Marples plucked him back from the equivalent of banishment to Siberia (sent to be a Ministry of Housing and Local Government inspector) and commissioned him, with an able supporting group, backed by a distinguished steering group, to get us all on to the right lines.

Traffic in Towns was launched with an intensive and efficient publicity campaign. It was lavishly produced. Its impact was momentarily terrific. Despite one's genuine admiration for it, it had little new to say, but what it did say was

well said and dramatically illustrated. One draws from it two especially important statements. The first comes from the last paragraph of the Introduction:

Of one point, however, we became more and more certain as we progressed. There could be no question of a 'simple solution' to the traffic problem. Indeed we found it desirable to avoid the term 'solution' altogether, for the traffic problem is not so much a problem waiting for a solution, as a social situation requiring to be dealt with by policies patiently applied over a period and revised from time to time in the light of events. There is no straightforward or 'best' solution.

Second, right at the end of the Report, paragraph 480 suggests that much further research is needed, that studies are needed into urban form, networks, environment, comprehensive development, cost benefit analysis, movement systems.

Everything in the body of the report supports this rather agonisedly earnest view. Nothing is easy, nearly everything is very difficult, and some things are impossible. Formidable 'desire line' diagrams illustrate the impossible urges of people in a motorised urban environment. Other complicated diagrams deal with the horrific difficulties of devising an appropriate primary network of roads. The small town of Newbury in Berkshire then with a population of about 30 000, is subjected to very detailed examination. It is said to have been selected for investigation because it was a small town 'where the issues would not be too complicated', but by the time the Report is finished with Newbury, we are all bathed in sweat, and Newbury has been provided with a relief road to the east of its centre, which one feels any competent town planner might have picked out after only quite brief cogitation as the best practicable cure for its traffic ills.

When we move on to the second study, of Leeds, the mind begins to boggle at the problems and complications involved. One is not much cheered by the third study, of Norwich, and is thrown into despair by the fourth study, which is of the part of London bounded by Euston Road, Tottenham Court Road, Oxford Street and Portland Place.

Certainly, after the publication of *Traffic in Towns*, nothing was ever quite the same again. Heaven alone knows what fortunes may have been effortlessly made by opposing barristers at planning inquiries, by quoting artfully chosen extracts from it at witnesses. And henceforth every official document about planning had to include a motherhood statement about the integration of land use and traffic needs.

This is to jest a little. But, more seriously, this introduction into the British planning scene of sensible, if somewhat pietistic, statements about the seriousness of traffic problems, attracted consideration of a variety of other ideas and matters purportedly lending themselves to methodical and complex analysis.

As well as elaborating the investigative process, Buchanan had emphasised that, frequently, resources would not allow the adoption of anything like an 'ideal' solution to traffic problems, that something much more like 'make do and mend' devices would have to be adopted. We have been cursed with this ever since to a quite unnecessary extent. Of course, in essence, it is the best of common sense, but it does not relieve responsible local planning authorities from

the need also to make plans which will reserve land for eventual adequate solutions. Make do and mend devices in the nature of traffic management schemes, involving traffic lights, road stoppages, one-way roads and so on, are helpful, but it is changes in the distribution of land uses, combined with fundamental solutions to traffic problems with which long-term planning should, but on the whole has failed to, concern itself.

If, on the basis of *Traffic in Towns* town planning is to be thought of as much more difficult than hitherto supposed, perhaps every decision leading to development of one kind or another is fraught with much greater possible consequences, for ill as well as for good, than had hitherto been supposed. But if local planning authorities are only prepared to support proposals that are quite certainly the best proposals that can be devised by the mind of man, few proposals will actually be put forward. Human behaviour is very adaptable. One of the main objects of good town planning is to strain this adaptability as little as possible. It is far from disastrous if we strain it a little more than the perfect plan would strain it. Any sensible plan will strain it much less than will an environment created by non-planned development. Those who hold to the 'conflict' view of human relations might even suggest that the strain should only be reduced to a tolerable level, so as not to make the situation too bland!

Following *Traffic in Towns* we found ourselves in the age of the transportation survey.

Transportation Surveys

Every self-respecting planning authority almost anywhere, felt that it must commission, receive and pay heed to some kind of transportation study and plan. Not many of these, in my opinion, served much useful purpose. Either their conclusions (unlike those of Buchanan) paid scant regard to the resources available for highway construction in the area upon which they were reporting, or, very oddly, they made assumptions about future growth and change as if there were no such thing as control of development under town planning powers. Predictions of population and industrial growth, extrapolations of traffic volumes and so forth frequently gave rise to proposals bearing little relation to either the desirable or the practicable. I recall the proposals by a firm of American traffic consultants for a small town in Ireland. These involved the construction of large two-level intersections. All that could be seen to be necessary there at the time (the late 1960s) was a modest tidying up of road intersections, including the introduction of two quite small at-grade roundabouts. It is exceedingly improbable that more will ever be needed.

The measures for traffic amelioration which it is appropriate to take if it is assumed that there will be no effective public control over the distribution of land use are quite different from what is appropriate if such control exists and is assumed to continue. On that assumption there is still a place for remedial traffic management measures, but no place for grandiose long-term construction schemes based upon the uninhibited operation of the market in relation to land

use. In this context, the fate of Brisbane, the capital of Queensland, in Australia, is of interest. Here, a city of less than a million population built a central area freeway system of a scale appropriate to a metropolitan complex several times larger. The money spent could certainly have been used to much greater effect in effecting modest improvements not only to the road system adjacent to the central area but along radial roads in all directions from the centre.

Models and Systems

Here is a complex of ideas and activities which is difficult to describe and evaluate. There are three books which I believe to be particularly valuable: *Models in Planning* by Colin Lee, *A Systems View of Planning* by George Chadwick and *Urban and Regional Planning: A Systems Approach* by J. Brian McLoughlin. All these are works of high calibre. Lee's book is the most specific and narrow in scope of the three; he is very frank in admitting the limitations for use in contemporary town planning of the material he writes about.

What we are talking about is the construction and use of models, not in the sense of three-dimensional physical representations, but as symbolic descriptions of present or contemplated urban areas in their social and economic as well as in their physical aspects, and the idea of urban areas as very complex entities composed of a multitude of sub-systems, each item in each of which is linked with every other item, via cause and effect, each system being similarly, but at a higher level of activity and complexity, linked with every other.

There are, according to Lee, three kinds of models relevant to planning: descriptive models, predictive models and planning models. The first of these replicates the relevant features of an existing urban environment or of an already observed process of urban change. The second aims to simulate future rather than current situations, but as I understand it, this is in the light of past events and fluctuations rather than of decisions about the future. These, however, are taken into account by the third kind, the planning models, which are intended to tell not only what is likely to happen as a result of certain assumptions, but what range of performance is possible in relation to defined objectives. As Lee puts it, 'The output of this kind of model is very much a reflection of what the planner thinks is desirable rather than a simple projection of natural forces'. But he goes on to say that at the time of writing there were very severe technical limitations to the use of these models, not so much in terms of mathematical techniques of solution but of the determination of objective methods for determining the standards, costs, attitudes and behavioural patterns which need to be included in the model.

Any but the simplest models, it goes without saying, have to be worked out with the aid of computer programs. Some models are too complex even for the computer to handle, while others are capable of being handled, but only at great expense. A great difficulty is that, as Lee points out in several places, a model can only work as well as the quality of the data fed into it will allow (garbage in: garbage out). There is great danger of overgeneralising and of using data

which provide information which is generally relevant to what the town planner wants to know about, but do not provide it in the form or in relation to the exact material about which he needs information.

I think this is in fact a very great danger. I once listened to an explanation of a model intended to help design a main urban road framework which dealt only with bus routes and frequencies, and a large part of the conclusions of which appeared to depend upon financial valuation of the time of housewives waiting at bus-stops. The basis was clearly much too fragile. The authors defended its use on the grounds that there was no other basis available, but it is obviously pointless to conduct an investigation on an invalid basis, for your results then have no value at all. Even informed guessing is better than that!

Among planning models, optimisation models seem to offer more immediate and definite advantages for town planners than most. Lee is very interesting about these. He gives an example of a simple kind which is very valuable, although the particular problem, to which he offers an elegant solution, is not perhaps one which in real life ought to be tackled in the terms he states. These assume that a local authority has an area of 50 acres (20 ha) of land which is to be developed for housing, and only two kinds of housing can be used: Type A at ten houses to the acre density, and type B at five houses to the acre. Type A houses cost £2000 each, type B £6000 each. Type A will have a rateable value of £109 each and type B £470. Not more than £1.2 m. in all can be spent on the houses. The problem is to determine the mixture of house types which will give the maximum rateable value to the local authority.

This is not a problem which could readily be solved by sitting down with a pencil and paper and doing arithmetic. By trial and error one might, after an hour or two's labour, get very close to the answer, but Lee provides a method to get the *exact* answer quickly. He does it graphically, using a method which there is no space to describe here. It would not be a very responsible local authority which directed its housing mainly towards maximisation of rateable value, and a rather unusual and perhaps rather unimaginative one which was willing to develop 50 acres of housing with only two types of housing. In other words, the problem is much more simplified than most real-life problems. Lee freely acknowledges this and points out that the graphical approach to the solution of such problems, while it can cope easily with two variables and a number of constraints, can only just about deal with three variables by the use of three-dimensional diagrams, and that when many variables and constraints are involved, graphical methods are not capable of providing a solution; mathematical methods must be used. He points out that though the methods of computation necessary can become 'very heavy' with large numbers of constraints and variables, the process is perfectly straightforward, and can be easily handled with ordinary computer programs. More difficult, he suggests, are the restrictive assumptions which programming formulation entails, and the difficulty of defining an objective function (in layman's language: 'deciding exactly what we are going to try to find out') which is realistic for planning purposes. He quotes, from Parry Lewis's *Misused Techniques in Planning: Linear Programming*:

The Choice of Aim is itself subjective: but even if we have chosen to minimise the journey to work, we must ask how to measure it? Do we do it in time, distance, cost, some mixture of these, or what? Do we take mean time along a route, or modal time? Do we pay more attention to time spent by certain kinds of workers? Do we value time saved on a 5-minute journey as much as on a 20-minute journey? It is possible to go on listing more questions of this type. What we have to realise is that whether we ask them or not, we do in fact imply answers to all of them by our very choice of objective function. We simplify away the question, but not the answer. And as long as any one of the implied questions remains incapable of being answered objectively, so the so-called 'objective function' is objective only in the sense that it states an objective – not in the sense that it has been objectively chosen. Furthermore, even if and when all of these questions can be answered objectively, that we have chosen to consider journey to work rather than, say, rateable value, is itself probably a subjective decision.

We are here in territory of great and so far unresolved uncertainty. Evidently we should use all the mathematical and modelling devices that can really help us, but be careful all the time to make sure that we really know what we are asking, that the questions we ask are the right questions, and that we are getting the answers to those questions rather than to some questions which are similar but not identical and to which the answers may be fairly markedly different, and so misleading.

One persuasively direct kind of model which has been used in varying forms and with a good deal of sophistication is known as the 'gravity' model. A gravity model is based directly upon Newtonian ideas. Just as one object is attracted to another in direct proportion to their masses and in inverse proportion to the distance between them, so human settlements are assumed to exert pulls towards each other in terms of the trade and consumption of services that they attract. The bigger the population of a place, the more services it is likely to provide, both quantitatively and qualitatively, and the greater the distance from which it will attract people to take advantage of them, but the further away from such a place other settlements or individual dwellings are, the less strong will be the pull. There can be no doubt about the general validity of this assumption, upon which indeed well-supported theories of the hierarchy of service centres, such as those of Christaller, are based. What is in doubt is, once more, the extent to which uncontrolled tendencies based upon present conditions should be assumed or permitted to determine future events.

Of McLoughlin's and Chadwick's books one can say that if McLoughlin has the more earthy approach, Chadwick at times reaches poetry in his exposition. Both of them add to our understanding of reality. They see the town as a kind of spider's web, but much more complex than the web of any spider, in which systems of many different kinds: physical, administrative, social and economic, each overlap with others of the same kind and, even more complicatedly, with systems of different kinds. In this view, planning permission for and introduction of, say, a petrol filling station causes twitchings, stretchings, contractions and agitation in many strands of the web, leading to all kinds of far-reaching effects, very difficult to predict. Among these effects will be changes in traffic

patterns, perhaps extending miles beyond the filling station in question, changes in the relative attractiveness of housing in the vicinity, changes, however small, in employment patterns, and much else.

The difficulty is to see how, even in a world doing its best to foresee all likely consequences of decisions, *all* the consequences of giving or refusing permission for the erection and operation of a petrol filling station could be worked out and evaluated within a practicably short time and with the employment of practicably small resources. Such a decision has to be given within a few weeks, and in one town alone dozens of such decisions may have to be made every month. Could it be done? And even if it could be done, would the input to the calculations necessary to do it be sufficiently complete and reliable for one to place full reliance upon the answers given by any utilisation of a computer program? Might not the errors in input be at least as great as those resulting from the exercise of experienced professional common sense? The authors of these books would, I think, give an answer different from mine. In no way, of course, does this detract from the splendid technical and imaginative achievements of these books. All town planners must be the better for reading them.

Miscellaneous techniques

We now turn to developments of a less far-reaching kind, some of them well conceived and useful, yet tending towards unnecessary complication and therefore to confusion about intentions:

- Thresholds
- Potential Surface Analysis
- Environmental Impact Studies (or Statements)
- Planning Games

All gained some prominence from the mid 1960s onwards.

Thresholds

The concept of thresholds, developed by Polish planners, was really not much more than a systematisation of means of working out the appropriate stages of the release of land for development ('programming', in terms of 1947 Act development plans). The idea is that the development of a town can proceed satisfactorily and economically up to a certain point. When that point is reached (a threshold), further development can only be satisfactorily and economically undertaken after the provision of one or more projects involving substantial capital expenditure: a new sewage works, a by-pass or suchlike. There may be some choice available between the order in which these are undertaken, and this choice may properly depend upon the relationship between the capital costs involved for each and the quantity of new population which the completion of each enables to be satisfactorily served.

There is no reason to make a meal of this, or to invent a special vocabulary

to describe the process, which is essentially a normal part of the planning process, though, as I have said, a sensibly systematised way of doing it. But for several years, thresholds were treated by town planners as if they were a startling new discovery, and as if their determination and use was about the most important thing in planning design. This was not very sensible. It was yet another example of the unfortunate tendency among town planners to be unduly fashion conscious.

Potential surface analysis

Much the same can be said of this. Briefly, the idea of this is that a planning area is minutely subdivided into squares and, in the light of various criteria such as accessibility, soil fertility, slope and so on, often very closely analysed, each square is given a value of suitability or unsuitability for development. Further analysis can be made to give scores for different kinds of development: a particular piece of land may be much more suitable for residential development than for industrial development, and vice versa.

These analyses are complex and voluminous enough to require the use of a computer. Moreover, the whole analysis needs to be repeated each time a land-use decision of any importance is made. For example, once it is decided to build a length of road, the accessibility scores of all land within reach of it will change; they will change every time a decision is made to build a school on a particular site. The technique is perfectly sound and rational and, apart from its cumbersome nature, has only one real weakness: the old enemy, 'garbage in, garbage out'. Some of the criteria used in potential surface analyses seem always to have a 'subjective' quality which must make the results produced less than fully reliable, especially the relative weighting attached to different factors. It seems at least doubtful whether potential surface analysis is really likely to produce sounder results than the much simpler and much more readily intelligible methods of planning survey hitherto used, methods such as are exemplified in Fig. 3.1 (p. 54). Intelligibility is certainly important in this connection. If you are going to have to justify your proposals to a public meeting or a tribunal, it is likely to be much easier to explain them intelligibly by the use of such a sieve map than by potential surface analysis.

Environmental impact studies or statements

These may fairly be described as a good idea gone wrong. It is obviously a good idea, before undertaking any development which might have severely unfavourable environment effects: which might cause pollution of various kinds or unnecessarily waste or damage resources which could otherwise be exploited, to weigh up its effects. Having weighed them up, a rational decision can then be made about whether any environmental loss is likely to be sustained, and if so, whether it can be justified in the light of the benefits to be obtained. But it is one of the essential purposes of planning to do this in advance for all reasonably foreseeable developments. The purpose of planning survey is to weigh up the pros and cons of using or not using particular areas of land for various

purposes *before* preparing the plan. If it proves subsequently necessary to carry out such a study in respect of the suitability of a particular piece of urban land for some general purpose such as industry, the planning survey undertaken must have been inadequate.

Naturally, there are some important developments which cannot be foreseen when a plan is being undertaken. Nuclear power stations and international airports are examples which come to mind. When this happens, a special survey is certainly needed, but there seems no need to give it a special name. Such a name, I think, would be better reserved for studies undertaken when the general suitability of a site for a proposed general purpose, such as industry, is not in doubt, but the particular risks attached to a particular kind of industry may be serious and are not of a kind readily accessible by ordinary planning survey methods. Once more, it is a pity to introduce mystique where it is unnecessary. Environmental impact studies are no satisfactory substitute for proper planning survey but a desirable addition to it in special circumstances.

Planning games

These are something quite different. (They have nothing to do with the theory of games, that abstruse aspect of probability theory needed to be used in advanced statistical work of various kinds.) They are games in which a planning situation is set up, perhaps a proposal to redevelop part of a central area for a commercial complex, and people play the roles of the various parties who would take part in negotiations and decisions: planning officers, councillors, developers, financiers, etc. The object of such games, which have been developed to a high degree of complexity and which can be bought, is presumably to sharpen the wits and develop persuasive techniques in those who may be expected to play comparable roles in real life. They have been irreverently described as a special version of the game 'Monopoly'. Given the recent emergence of astonishingly complicated board games related to war situations, games related to town planning are perhaps to be welcomed, but it seems to me at least doubtful whether they are likely in the end to raise the standard of development. Perhaps they may sharpen the wits and improve the techniques of socially irresponsible developers as much as they do those of the guardians!

So much for these rather special items. We must now look at something more important which has some connection with them.

Alternative plans

Something has already been said about the production and evaluation of alternative plans. The method of doing this and the way in which they have been presented has often not been satisfactory. There was a very neat and effective display of alternative forms for the future growth of Washington DC and Copenhagen. *Traffic in Towns*, p. 187, Fig. 45, shows alternatives for Washington set forth in *The Nation's Capital. A Plan for the Year 2000*.

There are often several different ways in which urban, especially large-city, growth might reasonably be planned. Among the considerations which affect these alternatives are: the amount of growth to be encouraged or permitted, assumptions about such matters as residential density, the relative importance to be given to public and private means of transportation and the practicability of improving and increasing the former, and the degree of separation or contiguity deemed desirable as between the major constituent parts of a city.

Informed and impartial presentation of estimates of the relative costs and effects on lifestyles of the adoption of each alternative may be an admirable, and the most practicable, means of attracting informed, sensible and helpful expressions of public opinion about which kind of plan to adopt. Unfortunately one cannot say that the exercise has usually been carried out with due regard to the qualifying adjectives I have used. There have usually been two defects, each of them frequently fatal to the usefulness of the exercise. First, a failure, in evaluating the different alternatives, to be sufficiently discriminating in the selection of criteria; second, the tendency to present the alternatives, for the first and only time, with strong emphasis upon a 'preferred alternative', no genuine invitation being extended to the public to choose one of the others.

When these two defects are combined, as they generally are, the whole operation has a hollow ring. At best, it is very difficult to select and reliably weight, relatively, the most important factors, some of them inevitably outside the full control of the planning authority concerned. It is even more difficult to present such information clearly, briefly and interestingly enough to attract public response of the kind needed.

Goals and objectives

These two words have perhaps done more to confuse and frustrate intelligent conversation about town planning during the last ten years than anything else. There was no need whatever for this to happen. The whole thing is merely a semantic confusion. The worst difficulty is that even those who are fondest of using these words tend to confuse one with the other, and it is therefore not surprising that they are unable to impart their thoughts clearly to others. What it is all about is the felt need to distinguish between, yet suitably meld, long-term policies and short-term policies, and, in the minds of at least some discussants, to reconcile town planning policies with other kinds of public policy. There is no reason to suppose that 'intentions' does not adequately cover both.

The hottest yet least helpful dispute in town planning over the last decade has been an attack upon town planning from the Left. Time works extraordinary changes, and that town planning, traditionally one of the causes of the Left, should come under massive attack from the Left, is one of the most extraordinary. Yet perhaps it is not wholly surprising. In this country, planning has become institutionalised and respectable in both Left and Right circles. In the United States it has, though fragmentary, been fairly powerful in serving the

Right rather than the Left in terms of aiding and perpetuating social and racial discrimination, while in Australia it has often been little more than trivial and irritating. There has been a feeling in many places that because of vague compensation law, unintelligently and partially administered, town planning activities which involve the acquisition of land weigh very heavily on the poor. Intertwined in all this is the strongly felt belief that decisions should be made at the grass roots. How such a view can be reconciled with the evident need (a need vociferously expressed at other times and on other issues by the Left itself) to have widely coordinated public policy both spatially and as regards subject-matter, is something of a mystery. Regional plans are not produced from the deliberations of thousands of street committees.

We certainly shall not do well in town planning if what we do is in conflict with the opinions and desires of a majority of those for whom we plan. The word conflict is apposite, for *Citizens in Conflict*, by James Simmie is an able expression of Left views about town planning. The factual basis for some of Mr Simmie's argument is not very well founded. He swallows whole the factual errors of the Pag report and then erects false conclusions upon them. It is rather about his views on roles that I wish to speak.

To do anything effectively, particularly town planning, there has to be some fundamental agreement about who should do what, and under what constraints, and it is here that I have difficulty in finding common ground with Mr Simmie. On p. 48 of his book he suggests that '... sensitive public servants might wonder at the morality of engineering policies according to the purposes of those groups who have acquired the most political power in society'. I cannot understand this at all. Whom can a public servant properly serve except those who were elected to be his masters? Mr Simmie seems to me to be complaining about one of the foundations of Western democracy, a system which, it has been repeatedly pointed out, is the worst political system yet devised except for all the others. I find it a strange idea that those who have expertise ought, if they have properly sensitive social consciences, somehow, to thwart their less enlightened masters. Moreover, one feels entitled to ask Mr Simmie whether what is sauce for the goose is not also sauce for the gander. If he objects to the expression of opinion by leftish planning officers being trammelled by rightish councils, how would he feel about the untrammelled expression of opinion by rightish officers in defiance of the views of leftish bodies which employ them?

In other parts of his book Mr Simmie seems to adopt an opposite and inconsistent stance. He speaks as if many planners habitually make decisions. But they do not; apart from decisions made by inspectors on the appeal cases transferred to them for decision, numerous but individually not of the first importance, and the limited extent to which local authorities delegate development control decisions to their officers, British town planners make no decisions; everything they recommend has to be endorsed by a committee. The only further exception one can make to this is the very rare case of a professionally qualified town planner getting so high in government service that he fills an

administrative rather than technical role and so does, subject to government policy, make decisions.

Mr Simmie makes a great deal of play with the idea that British town planning, under Conservative influence, has been to a great extent 'regressive', by which he means that, on the whole, town planning intentions and achievements have been for the benefit of the rich and to the disadvantage of the poor. But I think this is false to a far greater extent than it is true. The arresting of urban sprawl and associated preservation of the countryside has been achieved very much at the expense of the rich. Successive legislation, partial repeal and re-enactments in relation to compensation for planning restrictions on the development of open country have pursued an erratic and discouraging course, and it is perfectly true that Conservative Governments have sought to ensure that the rich suffer as little as possible by them; they have even been prepared to sacrifice benefits if to obtain them would bear hardly on the rich. But, overall, a very large amount of open country has been preserved permanently at an astonishingly low cost, more cheaply and effectively than in any country with which comparison can reasonably be drawn.

Mr Simmie is not too sure about the benefits of this. He seems to think that containment of urban sprawl gives more pleasure to the rich than to the poor. This may be so. More of the rich, perhaps, cruise more extensively in their motor cars through preserved countryside than do the poor, but this does not mean that the poor do not also benefit. One of Mr Simmie's barbs is especially ill-aimed, for he deplors that, as the result of the institution of Green Belt policies, the poor, or poorish, are driven to live out beyond the Green Belt and have to cross it to get to work, thus imposing upon them costs in time and money which they would not have had to bear if peripheral metropolitan growth had been permitted to continue. This is true in a limited way, but it is evidence not of a wrong policy but of a right policy insufficiently thoroughly applied. If more jobs as well as houses had been made to jump the Green Belt, as should have happened, the argument would fall.

Again, the building of a new road, as Mr Simmie mentions, may perhaps more often benefit the rich than it does the poor because more of them drive along it in motor cars than do the poor, with the advantages of greater speed and greater safety than have hitherto been available to them. But the poor use it too, even if to a greater extent in buses, and thereby enjoy similar benefits. Also, a point that Mr Simmie does not make, the building of a new road may, and often does, directly reduce danger, congestion and noise in adjacent existing urban street systems because through traffic is greatly reduced, if not eliminated, by the availability of the new road.

That there is in many places much dissatisfaction with town planning there can be no doubt: a strong urge to dissent and resist; the disruption of public inquiries; in some countries lying down in front of bulldozers; the advocacy of local, or even sub-local, street committee autonomy for local government purposes; the popularity of do-it-yourself plans. All these are, in a sense, extremely healthy evidence of public grass-roots interest in town planning. But how can

you produce composite sense out of hundreds of tiny plans? For town planning to make sense, there have to be: a regional plan to determine in general terms how much of what goes where; town plans to fit in with the regional plans, to say how much of what goes just where, and in what form; and detailed plans to show how the allocated areas on the town plans will be laid out in detail.

Only at that last level can purely local opinion reasonably count, as distinct from local opinion covering the whole planned area. Even then it should count only so far as is consistent with the establishment of a sensible wider framework. If you need to close a street or make a new road, in the interests of traffic flow and safety, for a whole town, why should anyone listen to those especially affected by the route of the road unless they can suggest an alternative just as good on traffic and town planning grounds and which will not just shift the disadvantage entailed by the inevitable disruption of construction to another group of people? I have here strayed into matters which belong in Chapter 8.

Corporate planning

This is an insidious danger to which effective town planning has been subjected in this country in recent years. It is evident that, for successful town planning to be carried out, town planners have to ascertain and interpret the intentions of many other agencies of public policy, including other departments of the local authority concerned. In doing this they are likely to see widespread evidence of hesitation and incompetence a great deal worse than their own, and so to wonder whether it would not be better if the town planning department took over the whole affairs of the local authority. In arriving at this conclusion they may well ask themselves why, traditionally, the chief officer of every local authority should have been a lawyer. What have lawyers got that town planners have not got? This is a fair question and the answer may often be 'nothing'. But it is a different question, leading in my view to a different answer, if one asks whether town planners are uniquely fitted, or even specially fitted, to assume the role of *primus inter pares* or, to put it less tactfully, chief among chiefs. My answer is in the negative.

In some places, no doubt, the chief town planner is the ablest local authority officer, with the widest and most balanced view, while some town planners, irrespective of where they currently work, may well be outstanding among local authority officers generally. In short, I am all for the hegemony of lawyers as chief officers being broken, as indeed it has now been broken in some places, and I am in favour of people who happen to be town planners being appointed to such positions if they can demonstrate that they are the most suitable candidates available, but I do not think that they will necessarily often be. The great danger has been that able and ambitious town planners, seeking to become chief among chiefs, have, by a strange distortion of logic, seemed to suggest either that skill in town planning embraces all the activities of the local authority or that skill and experience in town planning guarantee skill in all kinds of planning. Neither of these follows. The line of thought is exceedingly dangerous,

and can, if pursued, do nothing but harm to town planning. It needs to be clearly recognised that a chief town planning officer who becomes the chief officer of his authority does not then just greatly increase the range of his work as a town planning officer, but goes to a quite different job, vacates his position as chief town planning officer and therefore leaves a vacancy which needs to be filled by another chief town planning officer. Put thus the argument no doubt sounds childish, but the confusion of thought which I have tried to lay bare seems to have been very prevalent.

Even more dangerous, if anything, is the reverse side of the coin which goes much further than saying that a good town planner can plan anything, but says instead that all planning is much the same and is really just decision making, so planners should be trained in the art of decision making rather than in town planning design. One asks who should do the town planning design and how they should be trained.

Conclusion

I want to restate several points with a great deal of emphasis. The great dangers of the various ideas and movements which I have talked about are:

1. To make town planning seem impossibly difficult, and thus to condone delay and obfuscate issues.
2. To fragment town planning as a subject, to paint a picture of a vast range of activities and skills much too great for any single mind to comprehend, and thus to break it up into unrelated splinters. The difficulty of reconciling extensive public consultation and participation with elaborate statistical and computer methods is an obvious example.
3. To lower the quality of town planning work by discouraging the cultivation of technical expertise specifically directed towards the achievement of competent town planning design.

To end on an optimistic note, it seems that the pendulum is now swinging back towards specificity and simplicity. Recent Royal Town Planning Institute presidential addresses have stressed the need for the successful three-dimensional realisation of specific physical plans, rather than the pursuit of wide and diffused intentions.

Development control

Development control goes on everywhere all the time, for the most part in happy disregard of the deep and important matters discussed in the last chapter. This is a pity because planning proposals are practically useless except to the extent to which they are translated into work of various kinds on the ground, so if planning theory and development control practice do not match there is something wrong with one of them or both.

Development control takes up a great deal of time, money and thought. Many quite senior town planners spend nearly all their time on it. This, too, is a pity because it is very difficult to work for long exclusively on development control without beginning to forget that its main object (not its exclusive object) is the fulfilment of a plan. (Conversely it is difficult to remain a good town planner for very long without doing *any* development control because one starts to forget the difference between the desirable and practicable and the desirable but impracticable.)

There is something very Parkinsonian about development control. It inexorably fills the time available for its performance. Much of this time is not spent on professional inspection, measurement, thought and writing but on consultations and formalities. But it is upon professional thought that we shall concentrate here.

The scope of development control is extraordinarily wide. It covers everything for which planning permission is needed, and this extends from creating an international airport to getting permission to cut down and replant a tree which is the subject of a tree preservation order. It is something of an achievement that, despite inevitable imperfections, the essentially simple procedure for applying for and obtaining permission covers the whole lot fairly adequately. The official forms for application for planning permission demand little more than an essential minimum of information and leave the applicant free to add to this as he thinks best.

In view of the great importance of development control, it is surprising that comparatively little has been written about its technical aspects. There is plenty to be found about its legal aspects, not only in legislation and ministerial pronouncements of various kinds but in the admirable digest of planning decisions in Sweet and Maxwell's *Encyclopaedia of Planning Law and Practice*. But even

this says very little about the planning merits of the decisions it discusses. It deals almost entirely with law, procedure and general ministerial policy. The management study on development control published by HMSO in 1967, concerned itself almost entirely with the cost, manpower and time involved in development control; it had hardly a thing to say about how to improve the quality of the decisions produced.

General criteria

A town planning officer ought to ask himself certain questions about every application for planning permission which he looks at and inquire whether they apply to the one under consideration and if so, what the answer is. These questions are:

1. Can the use of the land in question properly be changed at all?
2. If so, is the use now proposed suitable for that land?
3. If so, is there nevertheless some other land more suitable for the purpose to which it might be worth trying to divert the proposal?
4. If not, are the disposition of any roads, buildings and open spaces proposed and the building density proposed satisfactory?
5. If so, are the details and design of the buildings and any planting proposals satisfactory?
6. If the application is refused, what public interest or private interest entitled to be protected by means of planning powers will be protected?

This last question can be put appropriately in several different forms with slight differences of emphasis. For example, one might say alternatively 'If permission is given, what possible harm could it do?' or 'If this application is refused, how shall I answer the question "Who is supposed to be protecting whom against what?"' It is very important to do this because every recommendation to a planning committee about development control applications may very properly be challenged by alert committee members, somewhat in the terms of the questions set out above, while, if the decision given is anything except an unqualified permission, someone, usually the planning officer who wrote the recommendation, will probably have to answer them in the course of contesting an appeal.

Development control has often been described as 'negative' by people who should know better. It is only negative to the extent that it inevitably prevents some people from doing things they would like to do and which, but for town planning, they would be able to do. Otherwise it is very positive and is the only means, in addition to public development, of translating a paper plan on to the ground. Too often the approach of a planning authority to an application for permission for substantial development has been to say (or at least to think): 'Oh God! We may not be able to stop this.' That is altogether wrong. The approach ought to be either wholehearted welcome, with insistence upon modi-

fications if there are some aspects of the proposal which do not fit in with the plan or, if the proposals specifically contravene the plan, determination to prevent them being carried out.

Unfortunately the vagueness of many development plans prevents as definite approach as this. Too often it is hard to say whether some quite massive development proposal accords with, contravenes or is neutral in relation to the plan. This is a criticism of the plan, not of the proposed development. Naturally, applications sometimes turn up, very important ones, which could not have been foreseen at the time the plan was prepared, because circumstances have changed either nationally or locally or both, to create hitherto unforeseen need or demand. In such circumstances, the planning authority's attitude should not be defensive but rather inquiring. Have circumstances changed so much that a radical reappraisal of the plan is justified in order to see whether it can be changed so as to accommodate the embarrassing proposals? Or is this simply someone trying to do something without having taken the trouble to find a truly suitable and acceptable site for it? In the latter case, strong resistance is appropriate; in the former, rapid redrafting of the plan.

But some applications for permission reflect unforeseen and unforeseeable demand for fairly minor activities which cannot be provided for specifically in the plan. In a mixed economy, private schools, nursing homes, riding schools, builders' yards, plant nurseries or garden centres, even remand homes and various other kinds of premises used for official care, are all things for which the demand and the supply come and go. In a society in which all land was publicly owned and in which all, or nearly all, such activities were publicly undertaken and run, it might just be possible to foresee and quantify demand and to make appropriate provision by reserving appropriate sites in the plan for all purposes. But this is not so with us, and such enterprises (most of them using appreciable areas of land) have to find sites which they can afford (many of them not being able to afford sites which accord in centrality with the importance of their activities) and where they can operate reasonably satisfactorily and get planning permission.

The other aspect of development control which has to be dealt with *ad hoc* relates to details: the design of minor road systems, the spacing of buildings, landscape treatment, parking provision and external appearance. No development plan, however detailed, can lay down requirements for such matters in such detail that any application can be seen either to comply or not to comply with the plan. But if a plan is very vague – e.g. only shows for an area of several hundred acres that it is proposed to be a residential neighbourhood – then almost anything which may be proposed to be put within it becomes a matter for development control decision, even the location of a shopping area. There may well be two, three or even more sites almost equally suitable for a shopping centre in a housing area of several hundred acres. In that case there is everything to be said for definitely choosing the one believed on the best evidence available to be, however narrowly, the best among the competitors and for giving permission for shopping development there and not elsewhere. Failure to do this

entails the risk of having three barely viable shopping centres too close to each other, instead of one good one.

In the absence of a detailed plan, nearly every planning application has to become an exercise in detailed development plan preparation. During my years as a planning consultant, a good half of the appeal cases which I undertook, ostensibly exercises in development control, were really about whether an *ad hoc* detailed plan to demonstrate that my clients' proposals were in accordance with the good planning of the area, was sound or if the local planning authority's resistance was justified, the authority often having prepared no relevant plan. In this chapter I am confining myself to matters which are legitimately the subject of development control and shall not deal with detailed plan drafting. I reiterate that there is everything to be said for a plan entering into as much detail as falls within the limit of reasonable predictability. The man who said that Pag really stood for Planning Appeals Galore, was not joking.

Our planning system, as has been said earlier, is one of control, not of controls. Permission is needed for almost everything, but refusal is not absolutely certain for anything. The applicant whose proposals are not clearly and specifically in accordance with the plan must be prepared to justify them, and if he can justify them, the planning authority must be prepared to modify their plan as drastically as may be necessary to accommodate them. Major disputes about the suitability of land for particular purposes should be fought out at the stage of public inquiry into the plan, not as a development control dispute.

Performance standards

As we have seen in Chapter 2, the criteria by which performance standards are set tend to be rather crude, but, however crude, they need to be specific. Requirements to have 'due regard for the privacy of neighbouring properties', unaccompanied by statements of minimum distances, cast upon the applicant the burden of demonstrating that he has met them, but do not tell him how the authority would like him to meet them.

One of the simplest examples of a performance standard is to require a minimum distance of 70 ft (21.3 m) between the front and rear elevations of homes which face or back on to each other, in the interests of protecting privacy. With such a standard, however, it would be perfectly reasonable to allow any portions of such elevations which did not contain windows with cill levels below standing eye-level to approach closer than this to an opposite building, while, in some circumstances, the erection of an unusually high boundary wall or fence, might be as satisfactory as horizontal separation.

It is essential to retain flexibility, for at the end of the day nearly everything depends upon the quality of town planning officers and the advisers of developers, so it is well to make fruitful collaboration between them as easy as possible. A very detailed specification of performance standards makes it difficult.

However, there are other performance standards to which this does not quite

apply. The Daylight Code combines definiteness with flexibility in a remarkable way. Its application ensures not only that buildings erected on a site will themselves receive adequate daylight, but that they will not deprive existing or future buildings on adjacent sites of a reasonable supply of daylight. They are so ingeniously contrived that on a fairly large site of reasonable proportions it is possible to comply with them by building a large low building or a tall building of small plan area (a tower) or by a combination of these. They are, of course, like all such standards, not part of the law, no more than guidelines which local planning authorities use in testing applications for planning permission, but they are pretty definite. In most cases a proposed building either definitely complies with them or does not comply. Nevertheless it is still sometimes possible to arrange a building on the site so that, although it nominally violates the Daylight Code, it still receives adequate daylight and does not deprive its neighbours of daylight. Local planning authorities ought to welcome this, but too often seem to regard themselves as having been outsmarted!

There are other, even less flexible performance standards, especially those relating to the provision of car parking space. Many planning authorities use these, based upon generally accepted, though I fear insufficiently investigated, standards. A developer's proposals either comply or do not comply, and there is not very much more to say about it, except that if he is lucky enough to be able to provide or pay for the provision of the balance of parking on some nearby site, this may be accepted as a substitute.

I am sure there is scope for the development of performance standards in relation to more subjects and in more subtle forms than have hitherto been customary. One of the valid criticisms of our development control system is that it does not tell a developer clearly enough what he can expect to be allowed to do on a site.

Procedures

The procedure for making applications for planning permission is, as already mentioned, remarkably simple. Anyone who wants permission for something gets the relevant form from the local authority, fills it in and then sends it back to the local authority, who are obliged to send a notice of receipt which includes a statement of the applicant's rights if they do not do as he wants them to do. Since 1 April 1981 a fee has had to be paid for making an application for planning permission. This innovation, deplored by nearly all, is likely to disappear with a change of government.

In due course a notification is sent that the application has been given unconditional permission; or a conditional permission, in which case the conditions imposed have to be stated and the reasons for imposing them; or a refusal, in which case the reasons or grounds for refusal have to be given. If there is anything except an unconditional permission the applicant can appeal to the Secretary of State, Department of the Environment (hereafter 'SOS' and 'DOE')

against conditions he does not like or against refusal. This is done quite simply by getting a form from the DOE, filling it in and returning it to them. The form asks for details of the reasons for appealing, but since it is advisable to get the appeal in as quickly as possible, and the applicant may not have worked out the details of his case, he may decide simply to give a formal reason, such as 'the decision is altogether undesirable and contrary to the principles of good planning'.

The applicant may ask or be invited to have his appeal settled by written representations. For it to be done this way, he, the local authority and the DOE must all be agreeable. Unless it is settled by written representation the appeal will be heard by an inspector of the DOE at a public inquiry. As already noted, there may be a considerable delay before this takes place. Whichever way the appeal is dealt with, the applicant, or appellant as he has then become, can either do the whole job himself or entrust it wholly or partly to a representative, who may be anybody he chooses; barrister, solicitor, town planner, surveyor, etc.

If the appellant opts for having the matter dealt with by written representation, after the DOE has initiated the matter he will write to them, with a copy to the local authority, stating his reasons for objecting to the decision given. The local authority will then respond in similar fashion. The appellant may then respond once more to their response, and in fact the whole thing may drag on by way of responses to responses to responses until everyone is exhausted. Obviously the more letters that are written the longer the whole thing takes, but it is very difficult for either party to resist the opportunity to rebut something which the other party has said and which he thinks is vulnerable to rebuttal. After the correspondence has ceased, the appellant will be invited to attend a site meeting with an inspector of the DOE and a representative of the local authority, unless the proposed development is so located that the inspector can view the site without entering private property. At the site, no discussion of merits is allowed, only the pointing out of relevant physical features. The arrangements for this may take some time and therefore cause more delay. The decision on the appeal is usually notified within about four weeks of the site inspection.

If the appellant decides to have a public inquiry, he has to arrange for notices which announce it to be put on the site. The local authority also informs owners of neighbouring land. Although it is nominally at the discretion of the inspector to whom, apart from the principal parties, he will listen, in practice the way is opened for the participation of almost any third party who wants to have his say. Inquiries are conducted very much like court hearings, though with less formality and less lengthily.

It is a necessary accompaniment of the development control system that there should be powers to enforce decisions. If a person does something which needs planning permission but does not first obtain that permission the local planning authority, if they disapprove of it, may serve an enforcement notice on him. Theoretically they can do so even if they do not disapprove of what has been done, but they are not very likely to. It is then necessary either to remove any

building work that has been done or discontinue any new activity begun, or appeal. Appeals against enforcement notices follow almost exactly the same course as appeals against refusal of planning permission, and it will be decided whether permission was needed for what was done and if so whether permission should be given.

If the local planning authority detects someone in the course of doing something of which it disapproves, and which in its opinion needs planning permission, it can serve a 'Stop' notice on him, in which case he indeed has to stop.

Until an appeal has been determined or an enforcement notice confirmed, no legal offence has been committed by carrying out development without permission. This is different from the situation in some other countries, and much more satisfactory, because it is a definite deterrent to local authorities who might like to try to harass people. Obviously, people dare not embark on costly development before getting permission and would be well advised not to embark on any development before having it, but if a local authority is dilatory or unhelpful and the development is of a minor kind and there is urgency for it, one might well decide to risk it, particularly if confident that if, in the end, permission has to be sought it will be obtained either from the local authority or, on appeal, from the DOE or an inspector. The DOE is clearly under an obligation to determine such cases on their merits and not to be prejudiced by development having been carried out without permission having been previously obtained.

In the case of conditional permissions, if the conditions imposed are not observed, for example, that work shall not be done on the premises except between specified hours or the number of children at a nursery school shall not exceed a specified number, the local planning authority may again serve an enforcement notice which has to be complied with unless an appeal is made successfully.

In practice, most local authorities are fairly reasonable and tolerant and do not go out of their way to look for trivial breaches of conditions, but nosy and malicious neighbours are often much more alert and it is difficult for a local authority to ignore complaints if they are factually well founded.

The above is the bare bones. Naturally, especially with important development, the process may be much more elaborate and prolonged. There may be conferences between the intending developer and officers of the local authority, perhaps even meetings with the planning committee. A developer may be invited to withdraw his application and resubmit it in amended form in order to meet the wishes of the local authority. Such consultations may be very productive if both parties enter into them with goodwill and determination to reach agreement, but they do give the opportunity for a local authority which is reluctant to commit itself to avoid doing so for a long time; developers often find that they have to weigh the delay and uncertainty of the result of an appeal against the delay and uncertainty of negotiating with the local authority.

The device of the outline application enables an intending developer who is uncertain whether he will get permission or be turned down on a matter of plan-

ning principle to save time and money by submitting a mere general indication of what he wants to do, leaving details to be drawn up later and approved separately.

Although the system works too slowly, it is essentially sound and is better than any other I have seen in operation. It would certainly work much better if it were confined to matters which genuinely relate to development control, instead of including those which properly belong to the domain of the development plan. Where no important matters of planning principle are involved there is a good chance of a developer getting a straightforward permission for straightforward development, though inevitably some local authorities and their officers have curious quirks and prejudices. If these necessitate an appeal being made, they may well be smoothed out by the inspector who deals with the appeal. But where any sacred cow of planning beloved by the DOE is involved, an appellant has little chance.

This applies even when a sacred cow has been manifestly misapplied. Green Belts have been such sacred, sacred cows that development which intruded on them has been disallowed at appeal even when the land concerned has only been included in the Green Belt because of a manifest drafting error. Similarly, opposition to conversion of dwellings to office use is sometimes conducted with what amounts to fanaticism.

Scope and examples

Let us now look at the kinds of matters which ought properly to be dealt with by means of development control: the minor development which falls through the sieve of the land-use pattern shown on the development plan map. Examples are: *Private schools, nursing homes, convalescent homes, remand homes, petrol filling stations, isolated country houses, caravans and those minor changes of use which are not excluded from control by the Use Classes Order (such as the change of use of a shop from an ordinary shop to one for the sale of hot food or pet animals and birds).*

Many of these cause difficulty because the effect they are likely to have cannot easily be assessed accurately. It is also often difficult to draw a definite line between what occupants of adjoining land are and are not entitled to be protected from. This is a very important consideration. Before the introduction of planning control, the only protection which an occupier of land had from development or use of a kind which he might dislike on nearby land was either to buy such land and create a *cordon sanitaire* around himself or to invoke the law of nuisance. Both have always been very costly, the former often impracticable and the latter very uncertain of success. One of the obvious advantages of planning control is so to use it as to protect occupiers of land from annoyance caused by the activities of unsuitable neighbouring uses. But an important distinction has to be made. People are certainly entitled to expect that planning will protect them from uses which clearly ought not to be placed near them, for

example, noxious industry in the midst of housing, but they cannot reasonably expect planning to protect them from the abnormal operation of a use which would be in a reasonable place if reasonably carried on.

To draw the line in the right place it is necessary for a local planning authority to consider imaginatively how a use is likely to be operated by ordinary, reasonable decent people (not angels on the one hand or villains on the other). It has to be expected that people will be a bit noisy, a bit untidy, a bit lazy and a bit inconsiderate. If they display any of these characteristics to an abnormal degree, they can in the last resort be dealt with by means of the law of nuisance, which planning has not replaced. Any houses *may* be used in such a way as to be a nuisance to neighbours; if that were regarded as a valid objection no houses could be given planning permission anywhere! If an activity is not likely to cause annoyance to neighbours, if it is carried on in an ordinary way, it should be permitted. In the end, we have to fall back on common sense, aided where possible by objective measurement.

An inner urban area which I know well provides many examples of the kinds of problems which may arise. In a terrace of some two dozen modest 3-storey houses dating from about the middle of the nineteenth century, each occupies a site, including half-width of road, of about one twenty-fifth of an acre (0.017 ha). There is, from the middle of this terrace, only 100 metres away to the left, a double row of shops which incorporates or is adjoined by three pubs, a petrol filling station and repair garage, an excellent public library, a community centre and an 'alternative education project'. Opposite is a large local authority flat estate, predominantly of 3 storeys but with a 15-storey tower block about 100 metres away. Within 200 metres are two primary schools and an adult education institute, within which a nursery school, a day centre and a large variety of clubs also operate. Behind is what no doubt used to be a row of similar houses, now redeveloped by the local authority as a terrace of 3-storey dwellings, each consisting of a 2-storey house and a single storey of flats above. In the terrace just mentioned, many houses have been converted to flats, some have been restored, acquired and let by the local authority. One house has been turned into a half-way house, i.e. an establishment in which released prisoners adjust to life outside.

As part of the local authority housing estate opposite, there is a double row of lock-up garages, just across the road. It runs up to the shopping centre, and some of the garages are used for various business activities, including storage of tyres and the arrangement and storage of 'floral tributes'. To complete the picture, vast quantities of rubbish drift down the street from the shopping area, which is for parts of most days used as a street market. There is a good deal of decoration from spray guns all around, the street is frequently full of parked vehicles of all kinds, including large lorries, and some people seem to carry out quite extensive vehicle repair businesses at the kerbside. Dog excreta is present in abundance. There are a lot of old people and children.

Quite a large proportion of the population clearly originates from the West Indies or the Indian sub-continent. The area is pleasant and friendly, and

because of the rearrangement of the street pattern consequent on redevelopment, and the frequent closure of the shopping street when the market is in operation, there is practically no through traffic; what there is is slowed down to a crawl at all times because of the large number of parked vehicles on both sides of a fairly narrow road.

To what extent could the operation of development control under town planning powers influence or have influenced the state of this area and what would be the likely reaction if some of its features were now sought to be introduced via applications for planning permission?

First, rubbish from the shops. Some shops have probably been there as long as the houses, long before the days of planning control. But even if they had been established under planning powers, it is hard to think of any conditions which might have been attached to a permission which would have done much good; a modern type of layout with rear access might have mitigated the problem so far as the shops are concerned, but not the market. The remedy here can only lie with action under other powers on the part of the council.

Similarly, the dog excreta problem could only be dealt with by enforcement of anti-fouling by-laws, which has nothing to do with town planning. What has to do with it in this connection is that, very interestingly, the density, dwelling types, garden sizes and distribution of minor open space are not consistent with high dog ownership. No one is going to alter housing policy just to make it easier to keep more dogs with less mess, but it is certainly one item which ought to be considered when framing housing policy.

There is no town planning action which could have been taken to deal with spray guns.

The rather excessive parking in the street could have been mitigated by providing a parking area adjacent to the shops at some stage in the extensive redevelopment which has been done.

The kerbside car repairs are not much nuisance, though they are messy and occasionally a bit noisy. They might have been catered for by the provision of small council-owned workshops, of which there are some a few hundred yards away, but the people who conduct these operations are probably neither willing nor able to pay even a small rent for such premises.

The presence of the West Indians and Asians is a delight, but it is quite important to note that no town planning action could properly be taken either to encourage or discourage their presence. That has nothing to do with town planning in an open society. Business uses in the lock-up garages are unsightly. They are probably in breach of letting conditions, and in any case probably constitute a material change of use and so should have been the subject of an application for planning permission which no doubt would have been refused.

The row of redeveloped houses-cum-flats at the back involved no change of use or, probably, of building density, but if they were originally single-family dwellings they probably now contain more people than they previously did. It is doubtful whether the local authority took this into account in relation to a

residential density policy, though they should have done. The only real town planning issue involved is their appearance, which to my eyes is very good.

The conversion of single-family houses into flats might have been resisted by the local authority and, if the matter had come to appeal, by nearby residents, appearing as third-party objectors. The objections they would have been likely to make include:

- Increased traffic and parking.
- Lowering the tone of the area.
- Increased noise and activity, especially late at night.
- Increased population, liable to overstrain local services and facilities.

In fact, in this area, except for knowing who lives where and the presence of multiple bells by front doors, one would not know which were flats and which were single-family houses. The increased strain on local facilities because of increased population, though certainly small, is something to take into account.

Introduction of a half-way house into a respectable residential street would be to some a villainous deed. In fact it means that there are rather more quiet, sad, middle-aged to elderly men walking along the street than there would otherwise be. Imagine the *brouhaha* such a proposal causes almost anywhere, and contrast it with the actual consequences.

The flat development opposite would certainly attract fierce objection. Horrors! A mass of 3-storey factory-assembled or prefabricated 3-storey buildings of almost uniform design and fenestration, made of identical materials. In fact they no doubt replaced a row of houses of uniform design and appearance placed rather nearer than the flats to the front windows opposite. They are well designed, and it can only be a matter of taste whether they look better or worse than their predecessors. The visual effect is not now that of a street, but privacy is almost certainly better than before redevelopment.

The tower block about 100 metres away to the right front certainly occupies quite a large lump of what would otherwise be seen as sky, but its grey concrete is often just about the same colour and intensity as the adjoining grey sky. At night it creates a romantic and rather beautiful pattern of lights. From time to time figures can dimly be discerned in its windows. From the houses one is not conscious of being loomed over, or overlooked, or in any way affected by this building. But the wrath, indignation and opposition which the introduction of such buildings has attracted in many places over a number of years is immense, not because of valid arguments that they are poor places to live in, but because of their alleged visual intrusiveness.

In the shopping street up the road there are three shops which sell cooked food and a shop for the sale of pet animals and birds. The change of use from an ordinary shop to either of these kinds of shops requires planning permission; probably these shops have received it. Why should they need permission? If they are legitimate in some shopping groups, which unquestionably they are, why should they not be legitimate in any shopping group? Perhaps they may by their nature be liable to emit a little more smell than some other kinds of shops,

though these do not. And most of their kind so not, in my experience. If such shops really stink, there must be health regulations which can be invoked to bring them into line. This control must exist for snob reasons (such shops might be 'alright in working-class shopping areas, but not among the well-to-do').

All this leads to two conclusions. First, the horrors which inflamed imaginations and snobbish attitudes attach to contemplated development: tower blocks, fish and chip shops, council flats. It is the evident duty of local authorities and their advisers to discount such wild imaginings and to give decisions in accordance with probabilities. Second, local authorities should take no notice of immediate local opinion about applications for planning permission. They do not have to do so (their only obligation is to advertise applications for some special and curious uses, which are mostly activities promoted by public bodies themselves). Out of the whole population of the world, none are less capable of giving a reliable and unbiased opinion about a proposed development than those people who live in the immediate vicinity. This is, of course, a view which is in conflict with received wisdom. 'Local views are important' is a very popular statement, but it is often a silly statement.

I find it salutary to ask myself what I might have tried to do if I had been the town planning officer responsible for the area which I have been discussing, from the time that considerable changes and redevelopment began. I should have tried to provide an off-street parking area for shopping and have stimulated other departments to make arrangements to prevent rubbish blowing down from the market. I think I should have tried to provide for a larger area for small workshops. I am sure I should have examined more closely the density implications and layout possibilities of redevelopment, both public and private, and have tried to produce a wider range of house types and densities. I might well have failed in any or all of these. But I think that on the whole development control in the area concerned has been nearly as successful as could be hoped within the prevailing political, economic and social constraints and assumptions.

Miscellaneous uses

In respect of activities like nursing homes, convalescent homes, nursery schools, small private schools and so on, usually sited within housing areas, it is appropriate to use a check-list to try to decide whether a particular site which one of them seeks to occupy is acceptable or unacceptable in the light of:

- Probable traffic increase
- Probable increase of pedestrians
- Probable amount of:
 - noise
 - smell
 - rubbish
- Overlooking
- Reduction of daylight or sunlight
- General distress to be expected

It should not be very difficult to estimate in the light of experience whether increases in vehicular traffic produced by workers or visitors is likely to produce a build-up of traffic greater than that acceptable for minor roads and uncontrolled T-junctions. In terms simply of traffic, it would be very difficult to find justification for a refusal on traffic grounds if the existing road system could not be shown to be likely to be overloaded as a result of the development.

Of course traffic produces noise as well as using roads. Engines roar, car doors slam, horns sound and people shout farewells. This happens wherever there are roads and cars. But if the total traffic is not going to be greater than can be absorbed by a minor road system, it would be hard to maintain that traffic noise will be greater than that inseparable from and tolerated within any normal road system; unless, of course, the nature of the use is such that there will be unusual amounts of traffic during the night. That has to be investigated and evaluated. In doing so, consideration has to be given to the closely allied matter of similar disturbance caused by pedestrians.

Noise does not only emanate from vehicles and pedestrians. It emanates also from children at play, new-born babies in a maternity home, machinery and other things. The effect on neighbours depends upon the kinds of activities, the number of people involved in them, the distance from the boundaries of the site or from the source of noise to those likely to be adversely affected. Not only distance is involved; levels and screening, either existing or as altered or created as a condition of permission, have to be taken into account. Experiments using sound meters should be carried out to determine whether or not permission would be reasonable. It is certainly no use imposing conditions saying that new-born babies must not be allowed to cry or dogs in kennels to bark. In fact conditions which try to control behaviour are not only futile, but contrary to the spirit of town planning legislation.

The problems of emission of smell and creation of rubbish are ones for which I can suggest no method of measurement, though ingenuity might suggest some. Ingenuity can overcome many problems. I may be the first person who ever simulated with a tape recorder the amount of noise likely to be emitted from a small maternity home.

The most difficult item on this list is the distress which may be caused by the mere vicinity of some uses. Few people would really like to live next door to an undertaker's establishment. Most people would rather not be subjected to the frequent presence of the conspicuously mutilated, feeble-minded or insane, though if the location of an establishment housing such people is on all other planning grounds acceptable, those of us who cannot put up with it had better go and live elsewhere. There is no reason why such poor souls should be deprived of the best possible conditions because some of us do not like the look of them.

Prisons and borstals are different and particularly difficult. No one can reasonably be criticised for disliking the close presence of one of these. What escapers may do needs no explanation. These uses have to be carried on somewhere; the valid test of their acceptability is whether the site chosen is, on all

counts, including security, the best practicable. Once more, particular opinions of local residents who are certain not to like it, are of no special importance. Of course they should be entitled, at any public inquiry which may be held, to say why they think the site chosen is a bad one, but their objections should only prevail if they can point out better sites, not just sites which are further from their own homes.

There are some other uses which raise special and intractable difficulties. Boarding kennels, residential caravans, petrol filling stations and isolated country houses, are examples of uses which cause perplexity. Where do you put a boarding kennels so that it shall be conveniently located for those who wish to use it yet does not impinge unduly on the comfort of neighbours, nor on the other hand constitute yet another of the innumerable objects which tend to create urban sprawl, littering the countryside with an unseemly and unsightly scurf around the periphery of towns? Sites can be found to meet these requirements but they are not very numerous and are mostly to be found in areas in transition. This is one use, therefore, for which it may be appropriate to give temporary permission.

Residential caravans are houses which are, or may have once been, on wheels. There is a demand for them. This demand comes from people who cannot afford ordinary houses, or whose condition, prospects or patterns of life make caravans the only feasible form of dwelling. Applications may come for groups of them or for individual caravans. I sympathise with any local planning authority which has to deal with this problem. So far as groups of residential caravans are concerned, I can see no sensible alternative but to treat them as houses and to give permission for them on any site where you would permit houses, provided that their appearance can be regarded as satisfactory. This obviously entails observation of reasonable privacy distances, adequate road access and parking, and at least a seemly visual effect, which implies, I think, placing them in groups on their own rather than interspersed with ordinary houses. There is certainly no excuse for sticking them out of town on some site where they will not offend the eyes of the urban residents.

Holiday caravans are an entirely different matter. They are a rural problem, and so I feel no obligation to try and deal with them in this book, or with isolated country houses or mineral workings. Individual residential caravans are something else again. I think the best thing is to treat them exactly as you would treat an application for a single ordinary house.

There are at least three distinct kinds of location where petrol filling stations are useful and harmless: in town centres, in neighbourhood centres and on the approaches/exits to towns. It is possible (brewers successfully perform a very similar exercise) to work out how many filling stations are needed in a particular town if they are to be profitable and yet able to serve customers without delay. Unhappily we have ostensibly rival petrol companies who want to operate in apparent competition with each other, so the filling stations in any town are likely to exceed the number which the motorist needs. Moreover, because of the

difficulties, in the absence of proper compensation/betterment legislation, of creating monopoly values on sites, local planning authorities have not followed the obviously sensible practice of working out and reserving in each town an appropriate number of suitably located sites. Consequently, over the years, they have been bombarded with applications to use sites for filling station purposes against which, in most cases, there is not much to be said, but not much to be said in favour.

It is hard indeed to assess what proportion of applications for planning permission are wrongly determined simply because of confusion, bias or sheer silliness on the part of the people who advise upon and decide them, rather than because a carefully considered judgement has been, on balance, wrong. The proportion is probably not very high, but each such case subjects the planning authority concerned and its officers to a great lowering in the esteem of all who hear about it. And not only is their esteem damaged, respect for the whole process of town planning suffers similarly. It is in the interests of all town planners to do everything they can to prevent occurrences of this kind.

It is also very much in the interests of town planning officers to do all that they can, not only as a direct duty to the public they serve, but in order to advance the cause of good town planning, to expedite decisions, ensure that they are made in terms of justice, common sense and clarity and to cultivate helpfulness and promptitude in all their dealings with the public, not only by themselves behaving promptly, helpfully and courteously, but by ensuring that telephonists, typists and clerks do so also. This is not a matter peculiar to town planning; it runs through all public life (and many private offices offend in this way much more than most public offices) so there is no need to expand upon it. On a light note, I reproduce without comment a letter issued by the Brisbane City Council.

Whilst it is not denied that the Council Registration Board purported to rescind the approval which it earlier purported to give in respect of your clients' application, it would not seem in point, however, to question that action of the Board later in point of time in view of the fact that, as the course the subject application took with your clients' approval would ultimately have led to an opening of road, the Board had, at the relevant time, by virtue of Section 20(1) of the City of Brisbane Town Planning Act 1964-1976, no power to determine the application without proper advertisement of the proposal of the application. In such circumstances it is suggested that that Section 20D referred to by you in your letter has no relevance.

The same body at about the same time wrote a shorter, but if anything even more mysterious, letter:

Whilst it is not denied that the consent of the Council has not to date been endorsed on the plan of survey referred to in your letter, viz. plan no. . . ., it is suggested that the strictures of the Council's Ordinances, in particular ordinance 1 of Division 2 of Part 4 of Chapter 8, would prevent the Council from being convinced that in the circumstances the Council is empowered or that it is proper for the Council to do so.

The control of external appearance

This relates to all those activities which have an effect upon the appearance of the urban scene. In Utopian or near-Utopian conditions, such control would not be needed. Given a fully detailed plan for, say, a residential neighbourhood, there is no reason why the different bodies and persons involved in creating its shopping centre, school or schools, public playing fields, various housing areas and roads, should not be put in touch with each other by the local planning authority and their professional advisers be instructed to liaise with each other to ensure that each individual development shall not only be excellent in itself but be congruent with adjoining developments.

To some extent this happens in this country. With varying success New Town corporations try quite hard to achieve it, and the best of their efforts are good. Local authorities also try to do it, and some of the larger authorities meet with some success, though generally less than in the New Towns. The New Town corporations have the great advantage of owning the land on which nearly all the development will take place and of being responsible for carrying out a wide range of development. The local authorities are not so well placed. Half or more of the housing carried out in their areas may be done by private developers on their own land.

There are two aspects: liaison and cooperation between the professional advisers of adjoining developers in order to secure congruence between their designs, and the level of aesthetic quality of each piece of development or object in itself, irrespective of neighbouring objects. It is not very easy to keep these distinct, but the problems involved in one are somewhat different from those in the other. It is arguable that the latter should not be attempted by means of public control, though personally I think it should be. That the former should be attempted could only be denied by the wildest advocate of non-intervention by government.

Let us see what kinds of control are or can be attempted.

- The design of all buildings, so far as their size, height, design and external appearance is concerned.
- Any planting, whether of trees, shrubs, flowers or grass for which proposals may be made as part of an application for planning permission or in respect of which conditions may be imposed in giving permission.
- Paving, walls, fences or other means of enclosure. The General Development Order exempts these things from control if they are erected in accordance with certain limits respecting size, position and height, either on their own or in connection with existing development which has been carried out without specific conditions about these matters having been imposed. But, when a planning application is made, e.g. to erect houses, conditions can be imposed which require compliance with conditions which may go right outside the General Development Order. Local authorities can, for special areas such as Conservation Areas also, with the consent of the Minister, make what

is called an 'Article 4 direction' which reinstates control there of one or more kinds of development exempted from control by the General Development Order.

It is also within the powers of a local planning authority to impose requirements about earth shaping in respect of any activities which come before them for planning permission. The erection of acoustic barriers between housing and main roads, the making of mounds or depressions to hide unsightly buildings, the creation of attractive earth shapes to meld the edges of open spaces with housing, for example, are all things that they can require, though they may often think it not worth while or, because of the opposition they may encounter, too difficult to try to do so.

Jim McCluskey, in his *Road Form and Townscape*, has much good sense to say about things of this kind and gives good technical advice. How far such precepts and advice can be imposed upon a horse conscientiously opposed to drinking water will be discussed a little later in this Chapter and in Chapter 8.

Outdoor advertising

The number, size and position of outdoor advertisements can be controlled. Here, unfortunately, the British planning system has failed to drag itself free of the old-style planning; which advertisements are subject to control and which are not can only be determined by expert and detailed scrutiny of a set of regulations, delegated legislation, which is more voluminous than many Acts of Parliament and as difficult to interpret as some. For all that, the unanimity of opinion of foreigners about the great efficacy of this control is remarkable.

Individual trees, groups of trees and areas of woodland

These can all be preserved by town planning action through the making of Preservation Orders. In Conservation Areas all trees with a diameter of more than 75 mm at 1.5 m above ground level are protected without the need for an Order. No one can fell protected trees without rendering himself liable to legal action and penalties, and anyone who succeeds in an application to fell such trees will be subject to a condition to replant.

Pylons and power lines

These are a fruitful source of dispute, though mainly in rural areas. Here the power of the local planning authority is defective, but, one way or another, proposals to erect such things are usually the subject of a public inquiry to inform the mind of the relevant Minister(s). These inquiries give the opportunity of parading familiar arguments: amenity on the one hand, cost of under-grounding on the other.

Building preservation

Orders can be made to preserve particular buildings against demolition or alteration on the grounds that they are of architectural or special historical interest.

Conservation Areas

Local planning authorities can designate Conservation Areas under Section 277 of the Town and Country Planning Act of 1971. In such areas demolition of all buildings is brought under control (normally, the demolition of buildings is not a matter which requires planning permission). The statutory definition of Conservation Areas is 'areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance'. They may be large or small, whole town centres, squares or quite small groups of buildings.

Justification

What is this all about? Clearly, it would be out of place here to embark upon the exposition of a theory of aesthetics. Obviously there are some objects and arrangements of objects which give more pleasure than others. The pleasure can be of different kinds, caused by quite different and indeed opposite things. Restfulness and liveliness, harmony and contrast, conspicuousness and unobtrusiveness, variety and uniformity, are all qualities that give pleasure, but some are incompatible with each other at the same time and in the same place. If some designers employed by developers are striving to produce one quality and others close by are, perhaps for equally good reasons, striving for the opposite, mere discord will be the result. Some kind of agreement about what is being attempted in a particular area is therefore necessary. Whatever we may strive to do, however strong and startling the contrasts we may strive for, we shall certainly seek some kind of congruity between the elements concerned, for meaningless discord is pointless. Yet that is exactly what has been produced in many parts of many towns in modern times. Many a modern urban scene has that as its dominant characteristic. How is it then that it is seen so little in surviving old urban areas? As enemies of town planning never tire of pointing out, most of the finest urban scenes in the world were created without the use of any town planning powers at all. This criticism fails to take into account three things: the hand of time; the fact that many old developments were carried out as single enterprises, not by a number of developers; and the very small range of building materials available until comparatively recently.

Each of these is worth looking at in more detail. The hand of time does extraordinary and benevolent things to human settlements. The ordinary English village green, for example, may have been grazed, played and worked upon, and manured in various ways for many hundreds of years. It acquires a special appearance of maturity. The trees and other vegetation are fully grown, and over the centuries some sort of locally special ecology has established itself. Such a village green is completely different from even its closest equivalent in the New World.

Over a shorter span of time the effect on buildings is also remarkable. Wind, wind-borne dust and debris, and even some accidental collisions with larger objects, all soften the outlines of buildings in a subtle but pleasing way. The passage of feet wears paving stones into contours more pleasing than the original

dead flat surface, and with some materials different amounts of wear of this kind create differences in texture and even colour. Moss and lichens play their part. It was widely said during the 1930s, when asbestos roofing tiles were introduced, that they would never weather. Look at them today; they sustain masses of lowly vegetable life which completely mask their original colour and texture.

If development is carried out by or under the control of a single designer or organisation, even if the control is no more than the imposition of restrictive covenants relating to design, the results are much more likely to have some harmony than otherwise. A very large proportion of the old urban development which we see and admire was produced under such conditions. Before the Industrial Revolution only a small range of building materials was available, and they came from nearby. This made visual congruity easy to achieve, in fact difficult to avoid. Not only was the range of materials small, thereby ensuring that violent clashes of colour and texture would be unlikely, but in a much more subtle way, the shapes, textures and colours of the building materials used, sprang directly from and, in only slightly changed form, echoed the vegetation and geology of the site. *Design with Nature* indeed, to quote the title of McHarg's splendid book.

Everything is now changed. Building materials may not originate from the same country, let alone the same region or district as that in which they are used. They are extraordinarily diverse in colour and texture, and many of them are so changed in the course of manufacture that they do not evoke even a faint echo of the mineral or vegetable matter of which they are composed. This is in no way to regret or deplore their use, but it does argue unassailably the need for them to be used in a skilled way and in accordance with some predetermined policy.

It is impossible for the hand of time to do much to improve the effect of an area consisting of scores of buildings each designed by a different person, many or most of whom are wholly unversed in aesthetics and who operate in total disregard or even ignorance of each other's intentions, and use a welter of materials, from ceramic tiles to asbestos to bare concrete. If we did not try to do something about this by the use of town planning powers, despite all the difficulties, we should be resigning ourselves to surroundings in which, apart from some happy accidents and some preserved antiquities, all was visual chaos. It has been estimated that, during the next 100 years, more new building will take place in the world than in the whole of its previous history. This is not a pleasant prospect unless some visual order is introduced.

It is not difficult to draw up an hierarchical list of the factors which affect the appearance of an urban area, in descending order of spatial magnitude:

1. The positions of buildings, and their plans, sizes, heights and shapes.
2. The arrangement and proportions of solids and voids, i.e. walls, windows and doors, which constitute the elevations of the buildings.
3. The materials from which the buildings are constructed.
4. The details of the buildings: window frames, porches, etc.

5. The surroundings of the buildings: roads, footpaths, planting and earth shaping, taking into account not only their forms and elevational effect but the shapes, colours and textures of components.

This list is not strictly in order of importance, since minor errors in some of the earlier items can sometimes be redeemed by particular excellence in some of the later ones, but it is roughly in descending order of alterability. Once the positions, plan forms and elevations of buildings have been fixed and they have been constructed, only total demolition or the costliest of alterations can make any change in them, but unseemly porches, for example, could be changed fairly easily and cheaply. Similarly, although it is difficult and costly to redesign a road, alterations to footpaths and planting may be easy to make.

Although, as explained a little earlier, English town planning law allows for control of all these items when new development takes place, in practice, and rightly, not all are controlled. Local authorities do not, in giving permission for a housing estate, prescribe how the house gardens shall be laid out, though perhaps they could. Some do go so far as to insist upon tree surveys of housing sites and put Preservation Orders upon the more important trees, so that the housing layout subsequently has to take account of these and not obliterate them with a house or a road. I for one think that often this is taking control too far. It is but one of many examples of the difficulty and delicacy of control of this kind: the tightrope which local planning authorities walk between concern for the urban scene and undue interference with people's freedom of action. On the other hand I do not think there can be any reasonable objection to control of the positioning, shapes and heights of buildings. They will long be there for everybody to see, and in one sense the occupants of the buildings are the people who see least of them. When you are inside a building, you obviously cannot see its outside, but everybody who passes by can.

When we come to the disposition of solids and voids in a building, we are on more difficult ground. Once more we have to distinguish between the appearance of a building, considered as an object by itself, and its relations with other buildings. As to the first, architects know the principles of architectural composition. If a building is designed by an architect, I believe that, to the extent that it can be considered as an object on its own, any architect's opinion about the disposition of solids and voids, and indeed all other aesthetic aspects of it and its surroundings, should be regarded as just as good as those of any other architect. I simply do not see how, in a legal or quasi-legal context, any reliable judgement can be made about whether an architect is a 'good' architect, or a 'bad' architect. If a building has not been designed by an architect, I do not think that the designer has any standing and believe that the developer should be obliged to submit to such alterations as may be imposed by a local authority which is advised by an architect with planning qualifications.

This may seem rather crude discrimination, but what else is to be done? I am neither an architect nor a great admirer of architects as a species, but they are the only people who are trained to design buildings. In order to avoid dis-

putes which it is almost impossible to resolve satisfactorily, I think it is sensible to insist that all buildings should be designed by architects, a policy adopted by some countries.

To insist that new development shall be congruent with adjoining existing development is in some ways simpler, but in others even more difficult. I do not think many architects, either as designers or critics, would have great difficulty in deciding whether the size, shape, colour and texture of a new building were in reasonable harmony with existing neighbours. The difficulty is in deciding whether it is right to insist on harmony. In a rough and ready way one could suggest that where there is existing development of the highest quality, such as the Bath terraces and crescents, nothing ought to be allowed to clash with them or detract from their enjoyment. Bath as a planning authority has, I think very successfully, followed this policy. You can use any materials you like in Bath, so long as they are Bath stone. But what about existing buildings of very modest merit? Why should a talented architect have to employ building materials and fenestration which accord with those used by his elderly, unqualified uncle forty years ago for a row of houses on the opposite side of the street? Somewhere it ought to be possible to strike a balance.

One can easily be in a hornets' nest of disagreement about relative levels of merit and the extent to which one design ought to have claims to predominance over another. It is at least certain that no respect ought to be given to the character of a locality which has no claims at all to architectural merit. The typical inter-war speculative housing estate is an obvious example. Here, insisting upon the new harmonising with the old, can serve only to perpetuate inferiority. If the new development of 1983 is made to respect and harmonise with the development of 1933, it must itself inevitably be inferior, or at best jejune. In due course redevelopment of the by then outworn 1930s houses might, by the same logic, be made to harmonise with the inferior development of the 1980s and so on *ad infinitum*.

But is insistence upon the employment of a designer with recognised qualifications in effect censorship of art? I do not think so; architecture is quite different from, say, painting, in at least two important ways. To be able to put building components together so that they will not only stand up, but constitute a functionally usable whole and be aesthetically acceptable implies a body of training and knowledge very different from that undergone by a painter. A building once built is likely to be there for 100 years, and probably much more, while a bad picture can if necessary be destroyed without the loss, in material terms, of more than the canvas and pigments of which it is composed. I therefore feel that society is justified in demanding that those who design buildings should be properly accredited.

Very probably there will never be complete agreement about the propriety of controlling external appearance or the extent to which control should be exercised. Fineness of control is in the long run determined by, on the one hand, the resources which it is deemed worth while to devote to carrying it out and, on the other, by the extent to which public opinion will tolerate it. I mentioned

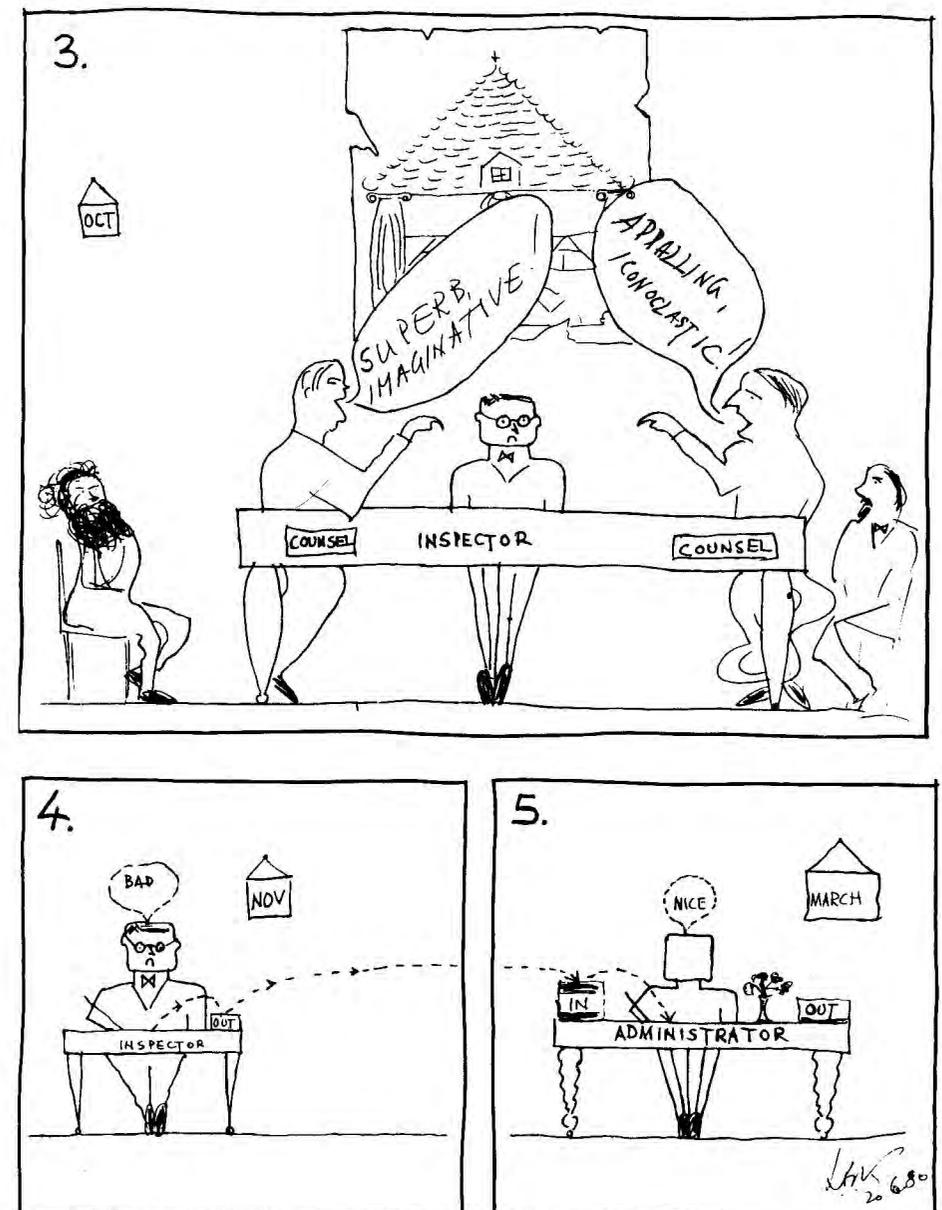
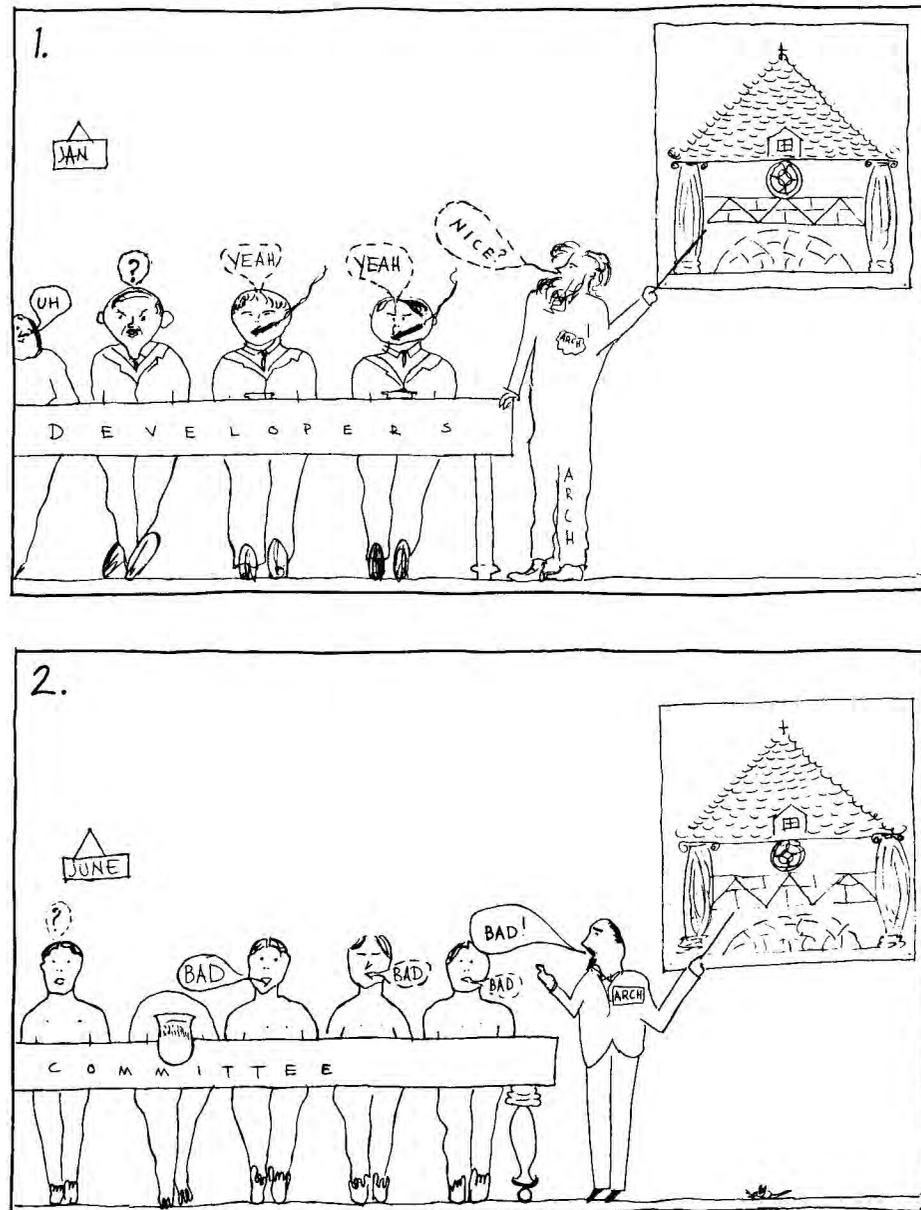


Fig. 6.1 Illogicality carried to its extremes in a dispute involving the external appearance of a building.

earlier the practice of placing Preservation Orders on individual trees in the gardens of new housing estates, and I should be very surprised if that lasted long. The more niggling restrictive covenants imposed by ground landlords gradually fall into decay.

Method of control

I want now to consider the actual ways in which we now carry out control of external appearance. It tends sometimes to be rather absurd. Let us look at what happens in a dispute about the external appearance of a building. Assuming that

an architect has been employed, he designs the building and submits an application for planning permission, having obviously first ascertained that his clients are satisfied with it. An architect (one hopes) employed by the local planning authority then looks at it, decides that it is unsatisfactory for one or more reasons and so reports to his committee. The committee, laymen, endorse their architect's recommendation and a refusal of permission is issued. The private architect, on behalf of his clients, lodges an appeal and in due course a hearing takes place. The inspector will no doubt be an architect, and will of course be able to look at drawings of the design himself and to hear explanations of its merits from the architect who designed it, and of its faults from the local authority's architect. Unfortunately, these are likely to be strained, as it were, through the processes of examination, cross-examination and re-examination conducted by barristers. The merit of an architectural design really is not a matter which can be suitably discussed in this way. Then the inspector goes away and, unless it happens to be an appeal of a kind where he gives the decision himself, reports his conclusions to an administrator, another layman. A decision is then given (see Fig. 6.1). The only useful opinions have been given by three architects, and unless an administrator happens to overrule the inspector, which in a matter of this kind is probably not very likely, the final decision is determined by a two-to-one majority of architects. Three lots of laymen have also taken part (four if you count the barristers).

The clients have had some effect, obviously, even if only by telling their architect in general terms what kind of building they want. If they are bad clients, they may have had a bad effect on the design of the building by influencing their architect in wrong directions. The planning committee may ignorantly have tampered with their architect's recommendation by modifying it or overruling it (though if he had recommended permission and they insisted on refusal they must either be very wicked employers or he a very weak architect if he gives evidence in their support). The barristers may have done little useful work and the opinion of the administrator in the DOE who will have the final say, is valueless. It is surprising that, on the whole, the results we get are as good as they are.

Reservations and speculations

An awkward thought obtrudes itself. Having in the previous paragraph cast scorn upon the value of laymen's opinions about the external appearance of the building, I must in honesty ask whether, if only architects' opinions were to prevail, we should be conducting the whole process simply for the benefit of architects and a few non-architects with refined architectural perception. I think not. On the whole people enjoy the good and are made uncomfortable by the bad, whether they know it or not.

It would be difficult to demonstrate this, but that does not mean it is not true. Interesting work has been done in this field. Zipf, in *Human Behaviour and the Principle of Least Effort*, Hambidge in *Dynamic Symmetry*, Schillinger in *Math-*

ematical Basis of the Arts, Weyl in *Symmetry* and D'Arcy Wentworth Thompson *On Growth and Form* all give numerous and fascinating examples of the connections between mathematics and aesthetic design. The golden section and the $\sqrt{2}$ section both figure prominently in most of these. Lyall Watson, in *Supernature*, also gives many examples of the effects on living beings of rhythms of various kinds: lunar, daily and annual, as well as more complex ones. Effects produced by the rhythmic increase and decrease of solar flares and sunspots is an example with some special interest for town planners, since it appears to be associated with rises and falls comparable with the incidence of road accidents. Other rhythmic phenomena appear to be capable of causing distress, illness and even unconsciousness to people subjected to them, though these people may be quite unaware of what is causing their distress. Watson gives examples of motor accidents caused by the alternations of light and shadow along a tree-lined road, which at certain speeds set up a rhythm which causes unconsciousness. Another example was of a man who became so ill and distressed at his office that he very nearly gave up his job. At the last moment he discovered that his office was vibrating because of an air conditioning plant on the roof of a nearby building, his office being the right shape and the right distance from it to resonate in sympathy with it.

I think it is conceivable that, ultimately, aesthetics may be found to merge into mathematics, by means of which it will be possible to discover what visual, auditory and other feelings of pleasure or distaste are associated with particular proportions, colour relationships and rhythms. Unfortunately, notwithstanding the fascinating and valuable work contained in the volumes mentioned earlier, we have not yet reached the stage at which it is possible to give evidence to a tribunal which will convince it that there is scientific evidence to demonstrate whether a building is beautiful or ugly. For all that, there are principles of design. I very strongly recommend two small books by Trystan Edwards, *Good and Bad Manners in Architecture* and *Style and Composition in Architecture*. They, in fairly homely terms, do more to help you know why you like some buildings and dislike others than many much more pretentious works. It is, however, quite unlikely that they would enable a speculative builder, even if he came across them, to design good buildings.

At this point I mention again Jim McCluskey's admirable book *Road Form and Townscape* which explains and exemplifies innumerable ways of making pleasant everything from the pattern of paving materials to the sweep of a motorway across a landscape. He goes into details which few have explored before. But once more, though reading him will help you to appreciate better what you see and, if you are a designer, will help you to design better, it will hardly turn you into a designer.

The preservation of buildings of architectural and/or special historic interest attracts a great deal of attention and effort. By and large I think it is well done, though the apparatus is a bit confusing. There have been provisional lists and definitive lists, some drawn up by the DOE, some by local authorities, in which buildings are graded in various ways. Buildings are specifically safeguarded by

the making of Building Preservation Orders by the local planning authority. In Conservation Areas there are what amount to blanket Preservation Orders; no building can be demolished without planning permission having been obtained. Conservation Areas probably now cover nearly all areas in which buildings of real merit, either in groups or scattered, occur in considerable numbers. One doubts whether there is now much risk of a building of high merit disappearing without previous exhaustive discussion and strenuous opposition. My concern lies more in the opposite direction. Many thousands of buildings which no one could convincingly claim have any exceptional merit are now protected. I once contested a Preservation Order made by a London borough in respect of a group of buildings of which, it was admitted, tens of thousands of similar examples existed, where the urban scene locally had already been greatly changed by the introduction of large and not very sympathetic buildings and where the only historic interest which could be adduced by those defending the Order was that at some time in the past a fairly well-known admiral (not in the Nelson class) and a rather distinguished surgeon had lived there.

Opinion sways from time to time and from place to place. In 1968 I left England not very enthusiastic about building preservation because I thought it went too far here. In 1979 I returned to England an ardent advocate of building preservation because in Australia, which inevitably possesses very few buildings combining architectural merit and historic interest, there is little attempt to preserve those few rather precious ones which exist. The Government of Queensland, a few years ago, went so far as to demolish some by stealth in order to avoid the physical resistance to demolition which would have been encountered had it not been carried out in the middle of the night. Back here, I swing a little the other way again.

Buildings wear out physically to such an extent that their maintenance becomes so costly as to raise the question whether the money could not be better spent in other ways. Of course there are many old buildings which are so beautiful and interesting that nobody in his right mind would dream of destroying them or allowing them to be destroyed. No one is going to advocate the removal of the Royal Crescent, Bath, but the partial demolition of some Nash terraces in Regent's Park in the 1960s was a borderline case which could be argued either way with conviction and good sense.

In practice it is also quite difficult to separate the aspects of historic and architectural interest and merit, for they often go together. I suggest that, where there is no question of great architectural merit, the historical interest has to be rather exceptional to justify preservation. I think it ought to be confined to buildings associated with household names, and even so confined to buildings which the household names have occupied for a considerable time. I do not think that the fact that Charles Dickens spent some months in a house justifies its preservation if it has no architectural merit.

But quite often areas combine a fairly high level of architectural merit and a fair amount of historic interest with a third element: interesting and pleasing

layout. However, if all three elements are present to a marked extent, preservation may well be justified.

There is of course the associated question of the moral and financial difficulties which arise when buildings are compulsorily preserved if no one is prepared to use them because of their structural condition, inconvenient arrangement or costliness of heating and maintenance. In such circumstances it must be up to the planning authority to decide that they are so good that it is prepared to acquire them and turn them virtually into museums.

The preservation of trees involves rather similar considerations and brings in some additional ones. Trees, as well as often being objects of beauty, are also valuable crops. If not reaped when ripe, they gradually age, decay and fall down. There are many circumstances in which they should not be allowed to be reaped, but it might be asked more often than it is whether it may not be better to allow a tree to be felled when still healthy and a replacement planted immediately rather than to let the poor thing drag on into senility.

One of the difficulties is that, although commercial value and beauty often march together, there is no necessary relation between the two. When they do march together good forestry practice and the objects of preservation ought not to be very difficult to reconcile. With only small modifications to the timber industry's needs, it should be possible to keep the silhouette of a mass of timber trees permanently more or less the same by means of a proper programme of felling and replanting, modified by preservation beyond their normal life as crops of some particularly prominent trees, especially those forming the edge of a wooded area.

Then there are individual trees and small groups of trees the beauty of whose effect may depend almost entirely upon their positioning rather than their intrinsic arboreal beauty. Here preservation is certainly justified up to the limits mentioned a little earlier. In other cases, the character of a landscape may depend upon a combination of hedgerows, hedgerow trees, isolated trees and clumps of trees. None of them may have appreciable timber value or individual arboreal beauty. They just happen to add up to, say, a Constable landscape. For the farmer they may have value as providing shade, windbreaks and bases for predators. Or they may hinder efficient farming of the area. It would be a crime to allow such a landscape to be destroyed. Perhaps this is a case where some compensation to the farmer (compensation being excluded from tree preservation, as it mostly is from the preservation of buildings) might be justified if a sensible basis for measuring it could be found.

As with buildings, tree preservation has been carried out too enthusiastically by some planning authorities. They do not always work out what they are really trying to do. I remember at least two cases in which Preservation Orders which could not have been conceivably justified were placed on woods. In one case the wood did form part of a massed wooded horizon seen from several miles away, but it was clearly demonstrated at appeal that houses in the desired numbers could be placed in the wooded area without destruction of any worthwhile

trees being involved and without the skyline effect from afar being affected at all. In the other case no one seemed to know what the idea behind preservation was, since the wood contained no fine trees, was trivial in shape and extent, did not form part of any broad view and did not frame or provide a background or foreground to any interesting local grouping of buildings. Nevertheless in both cases the orders were used to try to prevent house building.

The first case also provided a good example of an extraordinary gap. Nowhere in planning legislation is a tree defined! Common-sense ideas of what a tree is will not do. There are too many borderline cases. Is a gooseberry bush a tree? Is an oak seedling 10 cm high a tree? These are not frivolous questions. When a Preservation Order is applied to an area it is an offence to cut down or destroy any tree within it without first securing permission and subsequently replanting. In an area in which there are perhaps 100 well-grown forest trees, 500 trees 5 m high, 2000 saplings 2 m high, and half a million seedlings ranging from 1 m high to 5 cm high, the most law-abiding owner would be hard put to it to say what he could do without breaking the law. If the seedlings count, he could hardly walk through the area without doing so!

Over-zealousness in the preservation of buildings and trees is preferable to neglect. But, as with so many other things in town planning, over-zealousness produces irritation which leads to influential demand for relaxation of control.

The control of outdoor advertising

In this, nationally, we have had remarkable success. Compare the freedom of the British countryside from offensive signs with conditions in most other capitalist countries, and the difference is seen to be remarkable. Unfortunately, town planning does not get the praise which it should have for these efforts, because we have now grown used to a sign-free countryside and tend only to exclaim with horror at what we are exposed to when we go abroad, not to applaud when we are at home.

Within towns the difference is not so great, and one might even say that the signs in an English town do not usually compare in interest, liveliness and humour with those in, for example, Paris. For all that, the general level of seemliness is quite high. The trouble is that, ever since 1947, Ministry policy has been based on what I regard as false premisses in at least two respects. First, there is a dual standard. Local planning authorities can, with the consent of the Minister, prescribe areas of special control for the display of advertisements in which the standards of control are especially strict. Broadly, in such areas, no advertisements at all can be displayed except those that relate to the premises on which they are displayed, and even there, the heights, sizes and size of lettering on signs are limited more severely than elsewhere. The policy has been to apply this control to areas of special beauty. While, in a sense, this is admirable, in my opinion it is the meanest, scruffiest areas which suffer most from outdoor advertising and which could be most advantageously affected by ruthless control.

I can think of no good reason for refraining from applying the severer form of control everywhere, since it allows everyone who has something to sell or a service to offer to make its presence known where it is available, and this seems to me the only justifiable reason for having outdoor advertising at all. If you permit this to be done, and keep sizes down to the minimum necessary for legibility from a reasonable distance, you achieve two things at the same time. You prevent advertising signs dominating the scene and reinforce this by preventing competition between traders to have bigger signs than their neighbours.

The Advertisement Regulations, which can be likened to the General Development Order, inasmuch as they exempt certain kinds of advertisement from the necessity to get permission, are so framed as to afford the one remaining example of adherence in the British town planning system to the outworn method of planning by by-laws. The current regulations are the Town and Country Planning (Control of Advertisement) Regulations, 1969. Though amended in small ways over the years, they are substantially the same as the original regulations in 1948. They apply a subtly graded strictness of control to different kinds of advertisements in different places. They exempt some from the obligation to obtain permission, but not from liability to subsequent challenge by the planning authority, and they provide for implied as well as explicit conditions to be imposed. 'Advertisement' is very broadly defined as 'any word, letter, model, sign, placard, board, notice, device or representation, whether illuminated or not, in the nature of and employed wholly or partly for the purposes of advertisement, announcement or direction (excluding any such thing employed wholly as a memorial or as a railway signal) and . . . includes any hoarding or similar structure used or adapted for use, for the display of advertisements . . .'. Planning control of advertisements is limited to control in the interests of amenity and public safety and control of the subject matter of advertising material is specifically excluded.

All advertisements are subject to two standard conditions which require them to be safe and reasonably clean and tidy. Advertisements for which consent is deemed to be given, which we shall come to later, must also, to qualify for that exemption, be not such as to endanger traffic in any way, for example by resembling or conflicting with a traffic sign.

Advertisements which are not subject to deemed consent, require express consent for their display, and this consent must be for a definite period not exceeding five years. After the period has expired no further application for consent needs to be made, but the local planning authority may challenge an advertisement at any time, while, in giving express consent, it may require an advertisement to be removed at the expiry of that consent.

There are five classes which, subject to limitations about number, height, overall size and size of lettering, can be displayed without express consent. As already explained, the stringency of these limitations varies according to whether the advertisement is to be in an area of special control or elsewhere.

Beyond all this the SOS has power to direct that in certain areas or circumstances express consent must be applied for even though an advertisement falls

within one of the specified classes, and a local planning authority can challenge such an advertisement itself if it does not like it. In areas of special control virtually no advertisements except those of the specified classes are allowed (the local planning authority cannot give permission for them even if it wishes to).

Election posters, notices statutorily required to be displayed and traffic signs do not require express consent. As well as complying with the standard conditions, election posters must be removed within fourteen days after the election to which they relate: posters advertising travelling circuses and fairs can be given consent in bulk for posting on unspecified sites provided that they observe the standard conditions and certain provisions as to size and position of display.

In areas of ordinary control, the top of a sign can extend to 4.6 m above ground level without consent being needed on account of height, while in areas of special control it may not be higher than 3.6 m. *Cui bono?* Lettering 0.75 m high can be used in areas of ordinary control without consent being obtained. This contrasts with a maximum of 0.3 m permitted in areas of special control. Letters 0.75 m high are enormous.

The whole system is untidy; the results are in many ways admirable, but the means taken to achieve them are unnecessarily painful and complicated. No doubt some of the special detailed provisions about elections and travelling circuses are necessary, and for legal reasons have to be put in rather complicated form, but, for the most part, there ought, I think, to be a simple obligation to obtain consent for everything which does not fall within the specified classes, as defined for areas of special control, and consent ought to be given only in respect of advertisements relating to the premises on which they are displayed, except where there is a real need to put them elsewhere so that people can be helped to find their way to the goods or services offered.

In 1965 HMSO published a very interesting booklet entitled *Planning Control of Signs and Posters*. It describes, with illustrations, a number of advertisements refused by local planning authorities, in respect of which appeals were made, and it gives the Minister's decisions. It is indeed an interesting publication. If you study the illustrations and descriptions, but do not look at the decisions before making up your mind what *your* decision would have been, you are in for some surprises when you turn to the answers. No clear or consistent policy can be deduced from them.

Summary

Many intelligent people take a quite different view from that expressed during the last few pages. They do not think the tedious, fiddling work and the irritation caused to so many people can possibly be justified by the results. Indeed some say that 'ghastly good taste' is the best that can be expected from control of external appearance; that stridency, visual clashes and vulgarity are much preferable to this, and that, if, indeed, these were to dominate the uncontrolled scene so much as to suggest the existence of a decadent society, so be it: better let it be known than cover it up. One is bound to respect such views, but for the reasons I have given, I do not agree.

Town planning graphics

Here I discuss methods of presenting planning proposals which depend mainly on media other than the written or spoken word. It is, of course, just possible to describe almost anything in words, given a sufficiently patient and pertinacious reader. Indeed, it used to be obligatory in legal documents to describe boundaries verbally, e.g. 'From Wat Tyler's oak north-eastwards, following the line of the hedge to the south-east corner of Mother Shipton's farmhouse, thence a hundred yards south-south eastwards to Roland's Beech. . . .' This sort of thing can be made precise, but it is hardly easy, enthralling or necessary reading. It is the purpose of maps to do such jobs more quickly and easily. In town planning, a host of subtle spatial relationships have to be shown; they can be adumbrated, but cannot possibly be fully described, in words.

Town planning proposals do have to be accompanied by some written material, of which it can be said that the briefer and simpler it is, the less jargon is used, and the plainer the English, the better it will be. Some technical expressions have to be used to avoid lengthy and tedious repetitions; so long as these are kept as few as possible and given precise meanings, no harm is done. Every professional and technical activity gives rise to words and expressions for things which cannot adequately be dealt with by everyday vocabulary.

The media and materials now available for town planning graphics are amazingly diverse. Forty years ago, town planners relied almost entirely on water colours, coloured inks, ruling pens and 'mapping' pens, and wrote most of the necessary lettering on maps free-hand, perhaps aided by rather crude stencils. The time consumed was enormous. Nowadays, coloured and black and white transparent adhesive sheets, printed in a vast array of tones and patterns and including innumerable different styles and sizes of lettering; felt pens and fibre-glass pens; rolls of tape in various widths and colours for use in representing roads and boundaries make the task easier and the products more satisfactory.

There are two interesting minor disadvantages. Transparent adhesive tints, tape, etc., make it possible for almost anyone with good eyesight, neat fingers and patience to do a competent job on a planning map, but they cannot easily be used to do the quick, rough, sketchy job which is often necessary. On the other hand, felt pens enable a rough, visually attractive 'sloshy' plan to be done with great speed, but this makes it tempting to produce attractive and super-

ficially convincing work which may mask serious errors which would not have occurred if the job had been done at a more sedate speed.

The methods of display have similarly proliferated and grown more sophisticated. In earlier days, public scrutiny of planning drawings was catered for, at best, by making large-scale simplified 'cartoons' which could be hung on a wall and read from a distance by a considerable number of people. Three-dimensional models were also used fairly widely, though the number of people who can simultaneously view a model is limited. Occasionally there were 'hand-outs': duplicated written material, sometimes illustrated by very simple line drawings. We can now quite easily use films, colour slides, epidiascopes and overhead projectors, and with the introduction of very efficient daylight screens, do not have to plunge audiences into darkness. Numerous copies of models can be made in light plastic materials (though this is rather expensive) and time-lapse films can demonstrate intensities and changes in traffic flow by compressing twelve hours' movement into a few minutes. We can use periscopes to look at models from the point of view of a spectator of Lilliputian size standing within the model, and view the simulated scene depicted by the model from as many positions and looking in as many directions as we like. We can even attach a movie camera to the periscope and show a film of a walk or drive through the area portrayed by the model, though this is also very expensive.

If we do not want to go to the expense of making models, we can create a similar effect quite easily by the use of anaglyphs. Axonometric drawings of, for example, a group of buildings, are prepared, one in blue, one in red, on the same piece of paper, set apart from each other by a certain distance and at a certain angle, and then, putting blue and red screens in front of the eyes, a startling vivid three-dimensional effect is obtained. The possibilities are endless. To take things a bit further, it is now possible, by means of computer-graphics, to demonstrate what a building, group of buildings or landscape, looks or would look like from a variety of viewpoints, and to do so with accuracy, instead of depending on the 'artist's impressions' which can so readily be used deliberately or accidentally to mislead the beholder. I have not yet heard of holograms being used for town planning purposes, but, presumably, this is feasible.

We ought not to allow ourselves to be dazzled by all this. Many of these techniques involve the use of very expensive apparatus which is very costly to operate. But one of the most effective models of a housing site I ever saw was made very quickly and cheaply out of ground-up cinders bound with cement in a small local authority engineer's office. Even sketches on a blackboard, if skillfully done, can be nearly as good as much more complicated methods. For all that, the more elaborate devices are very useful. They enable a realistic, dynamic impression to be produced of something which does not yet physically exist, in a way which can be understood and appreciated by people who simply cannot fully understand maps or architects' drawings. In fact, I think we tend to overestimate the extent to which even educated laymen do understand maps.

The reason for the graphic presentation of any town planning proposal is to show as clearly as possible the relevant facts, the proposals drawn up in the

lights of those facts and the connections between the facts and the proposals, as well as some sort of demonstration that the proposals adopted approach the optimum. The modes of presentation most suitable for town planners themselves to work on and discuss are likely to be rather different from those most suitable for laymen. For example, the drawings which the town planner himself works with need to show only what he needs to see. But the public need to be able to relate what they see on a drawing to the actual land portrayed. As many familiar place-names and familiar shapes as possible should be included, and shown in as naturalistic a way as possible. (As we have already said in relation to Pag, rivers do not run in straight lines, and are not easily recognised by laymen as such if so portrayed.)

There are five problems of graphic presentation which are likely to confront almost any town planning organisation from time to time.

1. How much detail to show? The less detail that is shown, the easier the map is to understand, but obviously the less full will be the information it conveys. Skilful experimentation enables one to enjoy the best of both worlds. It is usually possible to devise a map notation which will show general information very boldly and detailed information in a more subdued way. If this is done well, you can have an effect rather like that of a film camera panning in on a scene. From a distance only the general picture is seen; as one approaches, more and more details become legible, the smallest only appearing when one is very close. This is simply a matter of technical ingenuity.
2. How many different drawings to produce? To go to either extreme is fatal. To put everything on one drawing may destroy all possibility of proper comprehension, while many drawings, each showing only one aspect of a subject, produce both physical and mental confusion. To see inspectors and lawyers at planning inquiries struggling with a multiplicity of drawings on a limited table area inspires feelings of pity and grief. Technically, this 'explosion' method also tends to be ineffective. The more you divorce different aspects of a matter on to separate drawings, the less chance there is of understanding the relationships of the different items to the whole.
3. Is it better to show the planned area as it will be when the plan has been fully implemented: a 'vision of the future', or to distinguish what exists from what is proposed to happen? The latter method may prevent full appreciation of the improvements to be obtained; the former may prevent understanding of how much change is entailed, which may be a crucial matter in assessing the desirability and practicability of the plan. I think one should do both; neither method by itself can be sufficient, though if it is impossible to do both the latter is preferable.
4. One of the most difficult problems in graphic presentation for planning purposes is to decide whether to go in for colour or to confine oneself to black and white notations. If one goes in simply for black and white, then, despite the use of aids such as transparent adhesive tints, the preparation of the

master copy is very timeconsuming, but copies can be made in small or large numbers very easily and cheaply. Colour enables a greater range of information to be presented clearly and is more attractive. (Attractiveness is important, for more people will become interested in what they see, and their interest will be sustained longer than with black and white.) Moreover, the production of the master copy is usually much quicker. Covering an area of the most intricate shape with a brush dipped in water colour takes a fraction of the time taken to cut out the same shape from an adhesive sheet. On the other hand, copies of coloured drawings are much more costly than copies of black and white drawings. To produce more than a dozen or so copies by hand is ludicrously time-consuming, while to produce fewer than 500 or 1000 by lithographic or other mechanical means is terribly costly in cash. A partial exception to this is possible by using a machine called a Fordigraph; it is possible to produce up to about 100 copies of simple coloured drawings quite cheaply by hand; the machine can be operated by anyone after half an hour's practice or so, can be kept in the office, and can produce quite sophisticated-looking coloured drawings quite quickly. The only drawback is that they are rather pallid.

5. A drawing which is suitable for working on or for hanging on a wall is not necessarily good when produced and reproduced in a book or pamphlet. Fine detail which is perfectly legible at a scale of 1/10 000 may be almost or quite illegible when reduced photographically to 1/50 000. The answer is nearly always to redraw such maps if they need to be drastically reduced for publication. The cost in time may be substantial but one will finish with an attractive, legible drawing rather than a mess. The history of town planning is full of examples of failure to do this, and, in fact, of failing to think out ahead a logical programme for the production of drawings.

If you are embarking on a large and important planning project it ought not to be difficult to decide quite early whether or not you are going to publish the drawings (publish in this sense including any reproduction in large numbers). If you decide that you will, it may be possible to devise a style and notation which will look good on the wall as well as in the book: only a little compromise may be necessary. It is certainly futile to lavish huge sums of money in reproducing in quantity elaborate drawings at a scale so small that they cannot be read.

Drawings are often amended from time to time, the differences between successive versions being visually minor but perhaps quite important in content. If each successive version has the date of its completion written on it, no confusion between different versions can arise. In practice this is often neglected, and different people refer to different versions without knowing they are different, with horrible results.

Every map needs a north point. It is usually obvious where north is, but sometimes where a map relates to a small part of a planning area, the omission of a north point (easy enough to insert) can lead to the waste of remarkable

amounts of time in trying to orient the drawing correctly.

Even more serious is the failure to state the scale to which a map is drawn. While it is practically always possible eventually to establish what the scale is by comparing the map before one with other maps which include the same territory and are drawn to a known scale, the waste of time and irritation entailed is considerable. Even worse is to state the scale of a map in figures, e.g. 1/2500, and then to enlarge or reduce the map, thereby not merely withholding information but giving false information. If the degree of enlargement or reduction is not great, the error may not be noticed until wrong and irrevocable decisions have been taken, based upon the false information.

Sceptical lay readers are assured that disasters of these kinds really happen. But we are fortunate in this country that town planning maps are informative, not directive, so that minor mistakes in the drawing of boundaries of areas allocated to different uses do not have serious results.

I now offer two examples from personal experience, to give some indication of the quite exciting results which can follow from experiments in graphic presentation. The first of these cost no more than an 8 mm film and a dozen hours of patient work by a research assistant. The idea was to show the proposals in a town plan being implemented in the order intended by the plan. The mode of operation was extremely simple. We pinned to a board a map showing the town as it was at the start of the plan period, colouring in housing, open space, schools, shops and industry in the conventional manner; filmed it in that state for perhaps half a minute; coloured in the first piece of development intended to take place and filmed again for a few seconds; moved on to the second piece of development and filmed that, and so on, gradually unrolling, also, strips of tape to show the building of new roads stage by stage. This very clearly showed the spatial and temporal relationships between house building and the provision of shops, schools and main roads.

Neither of us had had any previous experience in using cinema film, so we made some false starts and wasted some time. In the hands of experienced operators it could have been improved a good deal. It is a technique which lends itself to elaboration. It would be laborious, but not difficult, to show the same process three-dimensionally with perspective or axonometric drawings, buildings progressively disappearing and being replaced by others, trees and shrubs being planted and growing. My colleague and friend Ron Brown, who took part in the next experiment to be described, was, when last heard from, determined to carry out work on this kind of thing, and I hope he does. I think a film of this kind ought to be done for every town plan and major piece of development and redevelopment. It demonstrates what is being striven for far more dramatically than any static treatment could achieve.

At this point it is worth emphasising that, for laymen, models, even rough models, are more effective than even the best maps. Many laymen do not really understand what contour lines are, or, even if they do, can not really picture the shapes on the ground which the contour lines portray. Paint a town plan on to a contoured map model, using conventional colours for different areas of

land use, and the reasons for many of the land allocations immediately become clear.

The second experiment was to demonstrate to a group of Australian local authority engineers and elected members the thinking that ought to go into the preparation of a town plan. We reckoned that an ounce of demonstration would be worth more than 10 000 words or 100 slides. Ron Brown had prepared a series of transparencies of a town: one showed existing street patterns, land contours and important physical features such as rivers; a second, to the same scale, showed existing distribution of land use, and a third showed important factors limiting development, such as steep slopes and land liable to flood. One could project these singly, side by side, or any two or all three could be superimposed on each other and projected. Sometimes we projected the images on to sheets of drawing paper, sometimes on to a blackboard. Images projected on to a blackboard, we discovered, show up with surprising strength and clarity. The blackboard has the advantage that what one draws on it can easily be erased if one makes a mistake or has a change of mind, but the drawing paper is also advantageous because a casual sweep of the arm does not unintentionally erase material.

We carried out this experiment on several occasions, varying the technique a little each time, but we always started with a very quick slide display to explain the essentials of the process. Then, using the transparencies, we would start to draw a town plan, putting on a show of argument, with Ron doing the actual drawing because he was much better at it than I was. We would finish with a mock quarrel, embroidered with lurid Australian oaths, walk off and invite the audience to get on with it themselves.

We had thought beforehand that this might be a complete failure and that the audience would be much too inhibited to do any drawing themselves. But, in fact, after a brief initial period of inhibition, they went to it with a will, sometimes two or three at a time, crossly jostling each other out of the way and rubbing out each other's work (this was the advantage of using the blackboard). In the end I think they had a much better idea of what town planning is about and how to do it, and also (healthy from the point of view of town planners) a greater respect for the difficulties of the process than previously.

The Development Plan Manual Maps

The manual sets the tone and style for current town planning maps. Local authorities do not, as a matter of law, have to use the kinds of map illustrated in the manual, but with variations, most do.

Let me emphasise the very high skill of all concerned in producing the drawings in the manual. Although the premisses upon which they worked were erroneous, the choice of styles and sizes of symbols, lettering and colours and the actual application of these were all excellent.

For the purpose of this chapter I shall take, as examples typical of what is contained in the manual, maps 2A, 2B and 2C, which together constitute the

drawn part of a district plan for the fictitious 'Harley Town' in 'Planshire'. It has already been discussed from a different point of view in Chapter 5. Harley is supposed to be a town of about 18 000 population to be expanded to accommodate about 30 000 people and, during that time, a motorway is to be built. I shall concentrate upon the ways in which the drawings, as the source of town planning information, fall short of the desirable, and I shall approach the matter from the viewpoint of intelligent laymen, or their advisers, who want to know generally, whether the plan is a good one, and/or, as owners or occupiers of land or buildings, how the plan affects them.

We consider first 2A, called in development plan language a 'diagram'. (Figure 3.3(b) (p. 57) in this book is drawn in a similar style.) There is no north point and, deliberately, no scale. It depicts the town as it is expected to be on completion of the planning proposals presently contemplated, i.e. in about twenty years' time.

Everything, including boundaries of land-use allocations, is drawn in straight lines, and these, except where they abut roads, railways or waterways, rather astonishingly always seem to run straight up and down or straight across the diagram (i.e. presumably north-south or east-west). Since this never happens in British towns it is obvious that there is a considerable degree of distortion.

We are given no contours; there is no base map to show existing physical features and there are no street names. There is no distinction made on the diagram between existing uses to be retained and allocations for proposed new uses and major changes of use. All we can really tell is that the town will be bypassed on the south by a motorway; that the general shape and form of the future town looks reasonably compact; that a wedge of open land labelled 'riverside recreation' runs across the town to the north of the town centre; that industry is distributed between three large sites; and that there will be principal roads to the south and east of the town centre, with, one guesses, district distributor roads to its north and west. There are to be mineral workings to the south-west and east of the town and a recreation centre in the riverside recreation area. Primary and secondary schools seem to be more or less appropriately distributed so far as one can tell. There is nothing in the diagram which suggests that it is a very bad plan, but no sufficient evidence to suggest that it is a good one, or how it could be made better.

Map 2B, the 'proposals map', is at first glance much more helpful. It is printed on a light-grey Ordnance map base and we can see some contour lines. It shows, in the language of the manual, 'those firm intentions which can be related to specific sites and areas on the Ordnance Survey base'. We can see at once some areas allocated for mineral working, for industry, for housing, for schools and for open space. We see the central area left blank, but note that there is an inset map dealing with it. We also see that there is to be limitation of frontage access along some of the roads, which one guesses to be the more important roads. Most prominent of all, right at the bottom of the plan, is the route of the proposed new trunk motorway.

It can at least now be seen quite clearly whether any change for particular

pieces of land is intended in the near future. Many owners of land will heave a sigh of relief if they find that no change is intended for their own land or land nearby. On the other hand, those who aspire to change may be aggrieved that their land is not shown as, for example, future housing land. Especially will this be so if they guess from the general shape of the diagram (2A) that the land is a housing area.

Very soon after looking at the proposals map, therefore, in real life, attempts would be made to compare what the diagram says with what the proposals map says. This would be difficult; the two are at different scales and the only definitely identifiable feature common to each is the boundary of the plan area. Items like the trunk road, the bend in the river, the railway and others, do not meet the same part of this boundary on both drawings. Measurement reveals that the straight lines making up the boundary of the planned area are not in the same proportions on the two drawings, so they also meet at different angles. The diagram is grossly distorted (see Fig. 7.1.).

This is absurd. There is no point in subjecting a plan to public evaluation and criticism unless these can be based upon accurate and complete information. The information in the diagram is far from accurate, and the information on the proposals map far from complete. Because the diagram is distorted, it is literally impossible to put the two drawings together to form a complete picture and impossible even to compare the relative amounts of land allocated to different uses in the diagram. Planning authorities are our servants, and this method does not give good service. If the planning authority wanted us to evaluate its proposals reliably it would have done a very poor job in this notional case. It would

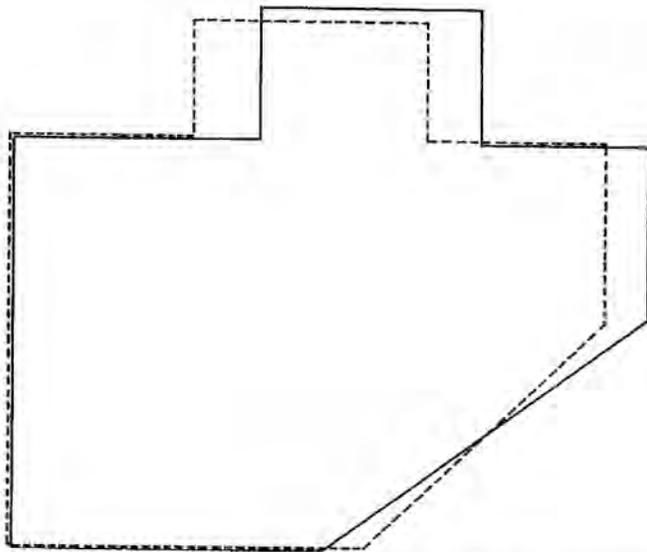


Fig. 7.1 Comparison of the shapes of the same area as portrayed in the *Development Plan Manual*, Fig. 2A and Fig. 2B.

be hard to imagine, on the evidence of the drawings, that it really wanted us to.

Map 2C, the inset map for the central area of the town, is drawn to a scale of 1/2500, and can therefore show a lot of detail. We see that there is a pedestrian priority policy for the main street, and we are shown, in a peculiar way, the road proposals already referred to here in connection with the preceding maps. The boundary of the inset map is drawn along the edges of the surrounding roads, but it excludes the road which bounds the area on the south. One very strongly suspects that this road is very interesting visually and very unsuitable for heavy traffic, that it ought to be pedestrianised and a traffic route to replace it be put elsewhere, but there is no way of telling for sure. The whole thing as an example of how to promote public understanding, participation and informed criticism, is unsuccessful.

Town planning and politics

I am here using politics in the widest sense, to include everything which affects the choice of policy, at national and local levels, for town planning and closely related matters.

Alternative planning systems

There is a very wide range of possibilities: whether to have any town planning at all, but if so, what mix to choose out of the following possible systems:

Organisation	Centralised Multi-tier Local only
Scope	All aspects of public planning included Only physical aspects of planning included Some point between these extremes
Degree of detail	Planning done by broad zoning only Planning done in detail, except for control of external appearance All details, including control of external appearance, included
Legal basis	'Ordinance' method of planning adopted Flexible 'guide' method used Some system between these extremes
Implementation	Determination of relative amounts of public and private development Control or otherwise of land prices; limitation or otherwise of compensation and collection or otherwise of betterment

Agencies

Implementation by experts or politicians or a mixture
Disputes determined by Minister, courts or *ad hoc* tribunals
Planning authority also the developing agency, or not, or various kinds of mixture

What factors determine the choice between all these alternatives? The answers depend on the constitutional and administrative traditions of the country concerned and the existence of special or particularly acute needs. For example, Holland has a very limited land mass, menaced by the sea, and suffered severe war damage, while in this country there was a combination of accumulated housing deficit and war destruction, and, as with Holland, a very high population density.

Another factor which affects very much what it is practicable to do at a given time is current political climate. Given the physical circumstances in this country in 1945, and the political victory of the Left in the same year, it was possible to introduce planning legislation of a more comprehensive and radical kind than had ever before been attempted. But the mood soon changed. As early as 1951, the Labour Government itself was 'liberalising' the General Development Order in order to reduce at least one source of irritation with 'petty officialdom and controls'. Today, public feeling exerts influence against comprehensive redevelopment, against motorways and against 'pollution' generally.

It seems sadly true that unless a country *has* to plan physically to avoid grievous and obvious disasters visible in the short term, it will not do so. Large land masses and low population densities make it easy to think that no great physical planning problems exist. In neither Australia nor the United States can town planning really be said to have been undertaken in a serious way.

Our system can be viewed as based on broad political policies expressed in legislation, filled out by delegated legislation in the form of development orders, etc. and mainly implemented by local government. Ministerial decisions on Structure Plans and appeals are of great importance, the courts being only peripherally involved and concerning themselves only with interpretations of such aspects of planning law as come before them as points of law, never with planning merits; the ombudsman exerts a probably increasing influence on the behaviour of local authorities.

The local authorities themselves frame policies to a substantial extent, within the general constraints of ministerial influence. Such of these as are not manifestly foolish or internally inconsistent are well supported by the DOE on appeal.

Upon both central and local government, public opinion exerts steady pressure, which, though it may not find immediate fulfilment, does so in the long run. But public opinion in relation to town planning is unfortunately by no means always enlightened; it is often based upon objection to immediate and obvious personal inconvenience resulting from the application of a policy, in disregard or ignorance of longer-term benefits.

There is a steady, if not regular, political swing in relation to town planning. The Left tends to be in favour of town planning and the Right to be rather against it, but there are some inconsistencies. The markedly Right Duncan Sandys will always be remembered for his encouragement for the institution and maintenance of Green Belts, while the Labour LCC in a fashion not villainous but falling short of the highest political ideals of the Left, was responsible for some of the biggest threats to the London Green Belt. (But if the Conservative Government of 1951–64 had pursued a more vigorous decentralisation policy, these threats would probably not have been made.)

Control and freedom

The most teasing political problem for town planning in democratic societies is the always apparent and sometimes real conflict between the ideal of maximum practicable personal freedom of action and the need to regulate the development and use of land in the interests of the greatest practicable collective benefit and freedom. Freedom is not, overall, increased if its exercise reduces someone else's freedom. I believe that, within a good town planning system, properly operated, the immense increase in collective benefit, and hence of one kind of freedom, enormously outweighs the inevitable constraints on individual freedom of action. These, I think, are usually quite slight.

It is important to distinguish between personal and political freedom on the one hand and economic freedom on the other. Freedom from arbitrary imprisonment, the knock on the door in the night, political victimisation, corruption and violence, starvation and medical neglect, are in a completely different category from lack of freedom to build a house in any field one likes, to pull down an ancient building, being bound to comply with density restrictions, or being prevented from putting factories among houses. In each of these cases, possession and exercise of the freedom withheld would interfere, often in large measure, with the freedom of others. Admittedly this is to oversimplify a little. If inability to do what you want on a particular piece of land also means that there is nowhere you will be allowed to do it, anywhere near where you want to do it, the interference with freedom is more serious. But this is generally the result of a defect in the operation of the planning system rather than in the system itself. There ought to be a place in any town plan for nearly all lawful activities.

Good planning makes it possible for more wealth to be created as a result of greater economy in the movement of goods and the avoidance of waste caused by having to pull down prematurely what has been put in the wrong place through lack of foresight. Greater wealth means greater freedom, though the benefit depends upon the way the wealth is distributed. Freedom from intrusive neighbouring uses and intrusions on privacy are very real freedoms, although often perhaps only fully valued when they have been lost.

Unfortunately, town planning is not always well done; it may be done so as to be niggling and obtrusive, even bullying. To mitigate this, there is certainly

some argument in favour of liberal, permissive General Development Orders and Use Classes Orders, not for the specious reason usually given that enterprise would be encouraged, but simply to reduce niggling. Similarly, there is some argument to be made against Stop Notices, which have introduced an element of legal compulsion where it did not previously exist. This, I think, was done for the best of reasons and motives, but has considerably modified the previous freedom to do what you liked in defiance of the local planning authority's wishes, if you were prepared to risk having eventually to undo it.

We have the benefit of clear definitions of what needs permission. The appeal system is quite good, apart from the disadvantage of delay; it need not cost you more than you are willing to spend, that is to say you can conduct your own case if you want to or are poor, and have the confidence to do so.

As with so many matters in connection with social legislation, victims of town planning action are often ignorant; the ignorant are almost always victims. By ignorance I do not mean inability or disinclination to read fine print, but a failure to know of, or comprehend, the fundamental characteristics and powers of public systems, in this case the town planning system. Other victims are the obsessed, who conduct campaigns and martyr themselves in pursuit of obscure causes, usually closely connected with self-interest, in ways which clearly indicate that, whether they themselves know it or not, they, in their minds, set themselves above the law. The exercise of town planning control provides numerous and convenient opportunities for the campaigns of the obsessed, but we can be certain that if town planning did not exist, they would still find causes suitable for their peculiar purposes.

The penalties of ignorance are greatly increased by petty tyranny. The appellant in the appeal reported in the then Ministry of Housing and Local Government's *Bulletin of Selected Appeal Decisions*, No. XIII/26, must I think have been rather ignorant to allow himself to be chivvied as he was, but he must also have run into some particularly nasty chivviers. He was a publisher, and had been refused permission to use a bedroom in his house as a study in which to correct proofs and keep accounts of his business. He did not intend to put up a business sign or other advertisement, to receive business callers or to conduct trading at his house. The local planning authority had advised him to apply for planning permission, and then refused permission because they thought that the proposal would harm the amenities of the attractive suburb in which the house stood. This poor chap was, at any rate, not too ignorant to appeal, and you will be glad, though not surprised, to know that he won his appeal. But this was blatant misuse of functions. Here was an activity of a kind which thousands of people carry on. Yet we are told that the local planning authority had 'advised' the publisher to apply for planning permission. We are not told how they first knew about his activity, but however it came about and however he came to seek their advice, it should have been very firm and definite: 'There is no need to obtain planning permission.'

An essential for political acceptability in the operation of town planning is that it should not create financial problems which will prevent people from

undertaking things that they would otherwise do. In this regard the introduction of charges for the making of applications for planning permission is very bad. This is the kind of thing that has traditionally been a local authority service to the public paid for out of rates, a service of a type which, since the introduction of town planning, has needed to be used by a much larger proportion of the public. A knowledgeable and determined person could, when faced by an uncooperative local authority, unwilling to discuss sensibly possible future uses for a piece of land, put in numerous alternative applications without cost to himself and so legitimately pester the local authority into cooperation. Each separate application involves clerical work; the simultaneous receipt of twenty separate applications for one piece of land may well stimulate a local authority into a complete change of heart: promise of prompt and friendly efforts to find a form of development or a change of use agreeable to the developer and acceptable to the authority, and consequent withdrawal by the applicant of the nineteen other applications. This may sound odd, but it was a ploy that could be used very effectively and work as a useful balance against undue delays and minor tyranny by a bad local authority. Apart from this, some people without means may now be deterred from doing minor things which need permission because they simply cannot afford the charge. Many more will simply ignore the need to get planning permission and will hope to escape detection and enforcement orders. That an applicant may not be a local ratepayer is no justification for introducing charges.

Political acceptability of planning activities depends upon the ready acceptance by an authority of the obligation to pay compensation when compensation is clearly owed and to settle promptly and generously. Perhaps we should not go back to the old principle of paying 10 per cent extra compensation for a forced sale, but a person whose land is taken against his wishes should certainly be entitled to very good treatment. In fact, in this regard, the situation here seems fairly good. One has not heard many complaints about obstruction, delay or niggardliness on the part of local authorities in paying compensation.

Interests to be protected

The crudest political question in connection with town planning, and one which certainly has in it the potentiality for much party strife, is who, by means of town planning action, is supposed to be protecting whom against what. Few would disagree that it is the proper job of town planning to protect the rural scene, to prevent the juxtaposition of incompatible uses, to reduce ugliness and promote beauty (however defined), to reduce the impact of danger, noise and smell, as discussed in Chapter 6. But there is plenty of room for political disagreement, not necessarily on party lines, about how to do these things. Most would agree, if it were put to them in stark terms, that it is no business of town planning to pander to the protection of class susceptibilities or religious prejudice.

Matters have certainly changed for the better in this regard. Thomas Sharp,

in a paper called *Segregation in town development*, which he read to the Town Planning Institute on 23 April 1937, said:

One reads of bitter protests from London suburbs when a policeman or a bus driver goes to live in a street occupied by bank clerks and their like: protests in which the suggestion is quite seriously made that the mere fact of a bus driver's coming home in his uniform may depreciate the value of a whole street to the tune of £50 or £100 a house. We all know of the opposition that is regularly raised to the building of municipal houses anywhere near estates of so-called 'better class property'.

But, in less extreme forms this kind of thing certainly continues. Alleged need for maintenance of the 'character' of a locality, advanced as a reason for the refusal of planning permission, often disguises a desire to ensure that the well-to-do continue to have only well-to-do neighbours. Many would unhesitatingly condemn such an attitude and insist that housing land ought to be used as intensively as is compatible with good living conditions; that the distance of one's windows from one's neighbours' windows may be important, but not, from the point of view of town planning, who the neighbours may be.

Religious prejudice expressed in town planning matters is always a very ugly thing. One of the cases which I determined in Belfast in the 1960s as an 'Independent Person' appointed under the Northern Ireland Planning Act, related to the proposed establishment of a Catholic youth centre in a disused cinema which formed part of quite a well-grouped neighbourhood shopping centre. It was opposed, quite blatantly, on the grounds that it overlooked part of the route of a traditional Orangemen's March, and so constituted provocation. I determined in favour of the proposal. There was once an appeal in North London against the refusal of planning permission for the establishment of a synagogue. Third-party objectors, though not, I am glad to say, the local planning authority, said that its establishment would encourage more people 'of a particular type' to come into an area where there were already 'enough of them'. I am not saying that no one should, in any country, at any time, in any circumstances, be prevented from establishing an organisation in a locality where its establishment might give rise to provocation and violence. But it is no part of the town planning process to take part in such action. To do so is to mix categories dangerously and confusingly.

A much more difficult and genuinely contentious issue is the question of whether, and if so to what extent, town planning action should be used to protect people from competition. We may start by noting that 'unfair competition' is usually an expression which sits ill in the mouths of those who use it. But it is not as simple as that. Petrol filling stations, pubs and shops all pose difficulties which people with different political views might wish to solve in somewhat different ways.

Filling stations are particularly difficult. Not only do they sell petrol, but many of them also provide maintenance and repair services. They are rather noisy because they attract vehicles. They tend to be unsightly because even if

pumps and advertisements are firmly and skilfully controlled, there is still, unavoidably, a large bare concrete surface exposed. Some have to be on sites not related to the use of surrounding land: a petrol filling station 'zone' does not make sense. Moreover, there is, though decreasingly, the competition aspect. If several different concerns are selling, ostensibly in competition, ostensibly different products, they all need to be given, in the private enterprise ethos, a fair crack of the whip. The present tendency is for filling stations to close down rather than for permission for new ones to be sought, but it remains an interesting problem. For the convenience of motorists there need, as we have seen, to be filling stations and associated maintenance and repair facilities in various urban locations. But do we need, in the sacred interests of competitive private enterprise, to ensure that all the petrol companies shall be allowed to have a site on each of these different kinds of locations? From the point of view of untrammelled private enterprise, the answer must be 'yes'. From any other point of view, it must be 'no', for the consequences of doing this, in terms of visual damage and traffic congestion and danger, must be considerable.

Pubs are, if anything, even more difficult. They raise all the town planning issues that filling stations do, but in addition they attract moral reprobation of the most sickening and hypocritical kind; apart from getting planning permission they also have to jump the hurdle of the licensing justices. The brewers know how many pubs a given population within a given area will support and good planning officers know where a pub is likely to cause justified annoyance to reasonable neighbours. But neither brewers nor planning officers are permitted to work things out rationally. Throughout the process of considering an application they are beset by prejudice. It sometimes seems to the bemused eyes of Britons that almost the entire ground-floor area of French and Italian towns consists of places where one can buy booze. Curious, is it not, that these are places which attract rather than repel? The best way of cutting the Gordian knot would be to abolish licensing law and to amend the Use Classes Order so that a pub simply becomes a shop. An important consideration is that the closer together pubs are, the fewer the people who need to drive cars to visit them.

Shops pose a problem which is more difficult and complicated than that posed by filling stations or pubs. The pure private enterprise view (though one has never heard it expressed in terms so sensible) would be that shops should be permitted wherever and in whatever form they can be carried on without undue interference with neighbours. The widest availability of goods would thereby be secured, and stringent competition would reduce prices to the minimum. This is not quite good enough. If that policy were pursued we should have an inefficient retailing system. The difference between filling stations and pubs, on the one hand, and shops on the other, is that ordinary, small shops require very little capital, at the extreme no more than a counter and some shelves in the front room of a cottage. Little or no skill or experience is needed to be able to purvey cigarettes, sweets and toothpaste, or indeed any branded and ready-packaged goods. We should be likely to see a prodigious number of shops offering narrow ranges of goods, but no strong concentration anywhere of a wide variety

of goods and services. We might well be in for Los Angelisation. You would be able to get some things almost anywhere, some things hardly anywhere, but nowhere would you be able to purchase a wide range of goods and services within a small physical compass. Your time would be wasted, and your petrol consumption or expenditure on fares much increased.

There is an important town planning principle here. Permission for the location of a use should not depend only upon it being intrinsically harmless, but also upon whether its location on a particular site prevents desirable aggregation of similar uses elsewhere. Moreover, it may not be a good thing to encourage the multiplication of enterprises in such a way as to increase the probable number of bankruptcies.

During the central area redevelopment boom of the 1960s it became almost standard practice to produce central area plans which created highly concentrated and in many cases very efficient main retail centres (associated sometimes with somewhat disreputable deals). But in nearly every case rows of existing shops were left on the fringes of, but outside, the proposed new central area. No one seemed very interested in their fate. The left-out shopkeepers would either find themselves withering away for lack of custom because the attractions of the newly created centre, including ample provision of car parking, would be so strong, or they might continue to flourish because of the specially high quality of the goods and services they offered and, as a result, cause congestion and danger on the approach roads to the centre, because provision of parking for them was seldom or never included in the central area plans. All redevelopment should be comprehensive enough to take account of all probable consequences, not only for the land actually concerned directly, but for land indirectly affected, so far as those effects can be ascertained.

The practical effect of carrying out that principle in relation to redeveloped central areas would have been to buy up, on generous terms, non-conforming uses, principally shopping uses, previously associated with the central area but now falling outside it, and to offer reaccommodation within the new central area. I think that a good deal of the objection to comprehensive redevelopment stems from failure to observe this principle. Note that its observance is equally in accordance with the tenets of the Right and of the Left.

Decision-making

Who actually makes the decisions in the British town planning system? Nearly always they are made by laymen. Of course there is a certain amount of polite fiction. Many decisions made in the name of a Minister (The Secretary of State for the Environment in the case of town planning) have never been seen by him, but have been made by senior Civil Servants. Many decisions ostensibly made by local authority councils or committees are actually decisions by officers which are rubber-stamped. No doubt the same applies to many decisions made by New Town corporations, but in all these cases except the last, elected representatives of the people have direct responsibility, and, if something goes badly wrong,

can be brought to book. The decisions which are made formally by people who have not been elected are those by inspectors in the appeal cases transferred to them for decision and by local authority planning officers in cases delegated to them.

In many countries, notably in the United States, and also to some extent in Australia, there are arrangements for powers to be exercised by commissioners, who, for varying periods and subject to varying constraints, are empowered to make decisions rather than recommendations and hence operate to some extent outside the normal mechanism of democratic government. An example of this is the Commissioner of the National Capital Development Commission (NCDC) in Australia, who is responsible for the planning and development of Canberra. Australians are not talented drafters of legislation so that the true meaning of Australian legislation is often concealed more confusingly than it is in this country, but it seems that the NCDC Commissioner has power to make decisions about the planning and development of Canberra which are untrammelled, except that he can be overridden by the appropriate Minister. Up to the middle of 1979, an NCDC Commissioner had only once been overridden by the Minister. There is an advisory body called the National Capital Planning Committee and the Minister has available to him minutes of its meetings. It is therefore a sort of watchdog, but its bark is a long way from the Minister's office. In extremity he just might use his veto powers because it had expressed strong disapproval of a Commissioner's proposals. The current Commissioner is a quite exceptionally able person, but this is an example of how difficult it is to distinguish between the substance and the shadow; it is likely that in practice he is more subject to political pressure than many an English chief planning officer. He is also curiously, and in some ways rather embarrassingly, subject to the decisions of the National Capital Design and Siting Review Committee on minor matters of development control.

Canberra is a marvellous achievement. There can be few more enthusiastic admirers of it than I am, despite the mistakes incorporated in it, but I find it hard to approve wholeheartedly of the Commissioner possessing quite such wide powers. A perplexing complication is that Canberra has no local government. It has a body of an advisory kind called the Legislative Assembly which has no powers to legislate.

Power and influence

It is important to make a distinction which is often blurred: that between power and influence. It might be said that in the last few paragraphs I have been talking about power and neglecting the influence of influence; that is true. Good technical advisers ought to have great influence. If they abuse their roles, and if those whom they advise and influence are weak and silly, then influence imperceptibly shifts to the exercise of power, which is bad.

The effects of what is known as 'the old-boy network' are unquestionably great. Much goes on in smoke-filled rooms which is never reported. But it is impossible for old-boy networks to be extinguished. Even in the conditions of

Orwell's *1984*, they continued. It is a matter for vigilance and for the conscientious scrutiny of voters to prevent them flourishing unchallenged. We all need to vote for people who we think will best serve the interests which we believe to be right and important; and those of us who are prepared to devote some time and effort to public affairs should try to ensure that at any given election there is put forward a candidate in whom we can have some confidence to exercise the appropriate vigilance. This may seem corny and trite, but it is of the essence of democracy.

Public attitudes

Politically, the Left rather likes town planning and the Right rather dislikes it. The Left favours equality, public ownership and enterprise, is against the encouragement of speculation in land, is against giving inflated compensation, does not, in principle, mind fairly stringent public regulation of private activities in a good cause. By contrast, the Right is not exuberantly keen on equality (indeed it tends to assert that equality is an illusion); is enthusiastically in favour of private enterprise and ownership; is uneasy about the morality of speculation, especially about speculation in land (Winston Churchill was in his earlier days outspoken about the evils of monopoly inherent in the ownership of land); is keen on ample compensation; is against regulations that adversely affect the well-to-do.

Both Left and Right, except for the maddest fringe of the Right, now accept the need for land-use planning and accept the need for some continuity in legislation and general planning policy, except perhaps over compensation and betterment. The Right has often said that land prices are a worry, and that arrangements for the collection of betterment are necessary, but shrinks from effective application of such a policy.

Neither Left nor Right has ever put effective town planning high enough on the list of priorities for social legislation and improvement, except for the Left's initial burst of well-directed and enthusiastic activity between 1945 and 1948. Neither, unhappily, has been very fortunate in its choice of advisers about town planning or has learned enough about town planning.

Moving away from party views, there is no denying that the public generally is still pretty ignorant about town planning. It knows that it wants the countryside preserved. It knows that it wants safe and uncongested roads. It knows that it wants sufficient and well-located schools and public open spaces, good housing and the preservation of fine buildings; but it knows little about how these wants can be secured, what stands in the way of securing them, or, above all, what sacrifices are entailed in securing them. Almost every articulate member of the public is keen to stop anything likely to affect him adversely in his home surroundings, and is capable of displaying short-sighted bias in expressing this view. On the other hand, he is furious if he is stopped by a local planning authority from doing anything which he himself wants to do. He dislikes what he calls bureaucracy, red tape, delay, expense, 'planners' and officials generally,

but is usually agreeably impressed and surprised at the demeanour and the behaviour of inspectors and even of his adversaries when he actually takes part in a planning appeal.

The more prosperous members of the public unquestionably think that they have 'bought the view'. Anything proposed to take place which might affect the view from their houses or increase the traffic in the vicinity of their houses, is regarded as an outrage. But if *they* want to intensify the use of their land or subdivide it for development and are refused permission, they deem a bureaucratic outrage to have been committed. Today's objector is tomorrow's developer. There is a strong, though irrational, tendency on the part of those who own houses on what is currently the edge of an urban area to assume that it is an outrage if that urban area is allowed to extend further in that direction. They themselves, of course, were merely following the inevitable path of growth and progress in building their own houses, which blocked the views of those who, a little before, had occupied what was then the edge of the urban area.

There is need for more explanation of planning principles and methods than has previously been offered. Below a certain level of knowledge and comprehension, it is impossible for elected representatives to take sensible decisions on town planning matters.

I do not think that the remedy lies, as is often in a rather facile way suggested, in making town planning a school subject. There are enough pressures on the school curriculum without adding that. Talks at schools about town planning probably do a certain amount of good, but what is much more important is to create awareness of genuine town planning issues, not merely of trivial local immediacies, among members of local planning authorities, and indeed among Ministers concerned with the subject. Politicians are often charged with responsibility for town planning matters without being adequately acquainted with the matters for which they are responsible.

Roles

We now come to the difficult matter of the conceptual and working relationships between professional town planners, politicians and administrators in town planning. As discussed in the next chapter, the Schuster Committee Report of 1950 succeeded in confusing the relationships between design and administration so thoroughly that they have not successfully been sorted out to this day. Here I want to try to clarify who ought to give advice to whom about what, and who ought to take decisions.

An immediate difficulty is to distinguish between administration and management. No sharp separation can be made; one merges imperceptibly into the other. Pure administration is perhaps the formulation of policies without dirtying one's hands with carrying them out, while pure management is making a policy work smoothly without concerning oneself whether it is a good policy or not. But most matters do not fall near either end of this continuum. There are few policies which ought not, before they are put into operation, be subjected

to consideration of whether and how they can be made to work properly, and there certainly ought to be few managerial activities carried out without those responsible for them constantly asking themselves whether what they are doing makes sense.

All senior town planners, and many junior ones, have to be concerned with administration. They do not just draw lines on maps and colour areas in accordance with policies with which they have nothing to do; in fact it might be said that in practice too many senior town planners spend most of their time in formulating policy and not nearly enough in drawing lines, colouring areas or even thinking about such matters. All such people also have to spend a lot of their time in thinking how to make the system work and seeing that it does. These things, it seems to me, can be done better by those who know about town planning rather than by those who do not. But in the Civil Service, and even to some extent in local government, the myth of the administrator is pervasive. This myth pictures the administrator as a person of high education, great wisdom and long experience, adept at forming policy, or if prevented by determined politicians from actually forming it, at expressing and moulding it in accordance with traditional administrative norms and desiderata. This activity tends to be carried on in disregard of, or even in opposition to, the technical needs and constraints of the subject being dealt with, the experts in it being regarded as having minds congenitally inferior to those of the administrator.

If there is a predominant reason for British town planning being less good than it might have been, it is, I am convinced, the dominant role of the administrator in central government. The familiar answer to this assertion is that it is an ignorant one, that in fact the senior administrators of planning in central government have striven mightily over the years to overcome the prejudices and ignorance of politicians, in doing so have inevitably had to compromise, but have had substantial success; had it not been for their skilled negotiation, it is said, the planning system would by now be strewn around the floor as lumps of decomposing wreckage. There may be some truth in this, but the *Crossman Diaries* demonstrated dramatically the extent to which a planning Minister can be dominated by his senior administrators. The town planning profession is itself also much at fault in not having been united enough, strong enough, clear and forceful enough to make informed professional opinions prevail.

Planning Ministers would be wise to get full professional advice about the technical implications of policies which they wish to adopt on political grounds, and if that advice proved unpalatable, to get a second opinion before rejecting it. It is astonishing what errors can be committed. To take an example which belongs as much as or more to housing than to planning policy, the form and density of public housing as carried out in the big cities ever since 1945, have often been absurd, and have in large part been so because of ridiculous grant and loan rules, which encouraged the building of excessively high buildings at excessively high density. As long ago as 1952, the then Ministry of Housing and Local Government published a small manual called *The Density of Residential Areas*, much of which had been included in a paper read by Colin Buchanan and

D. H. Crompton at the Town Planning Institute some time earlier. The conclusions arrived at there make nonsense of government loan policy on housing. So does much of P. A. Stone's admirable work. Yet the system was continued.

All these people were readily available for consultation by Ministers. Why did none ever consult them or, if any did, why was no notice taken? The physical, financial and social consequences have been grave. Who were responsible for failing to change the financial arrangements? It can only have been the administrators. The unspecialised high-level administrator, though, I believe, dangerous everywhere, is perhaps especially dangerous in town planning, where cultured, articulate expression of ignorant 'common-sense' opinion can sound so convincing.

The extent to which central government should impose policy ideas upon local planning authorities is a matter of difficulty. As this is a country with a very high population density, land is a very scarce and valuable resource. So it is difficult to see how government can properly stand aloof from any proposal to use land improvidently. That means, among other things, that town plans ought to be closely scrutinised centrally and should not be approved unless, among other things, they propose reasonably full use of land. Nor should applications for planning permission which squander land be approved without government having a chance to intervene.

It is easy to advocate intervention by a 'benign' central government to foil the intentions of a 'wicked' local authority; but what about the situation in which there is a 'benign' local authority, and a 'wicked' central government? To what extent, in terms of political wisdom as distinct from party warfare, should central government interfere?

An interesting example is presented by those local planning authorities which have sought to impose, in relation to applications for houses, standards for room sizes in accordance with those in *Homes for Today and Tomorrow*. Control of minimum room sizes in the interest of health is of course a matter for by-law control, but what I am talking about goes beyond this and relates to the imposition of standards regarded as suitable minima for comfortable living in accordance with the recommendations of the Parker Morris Committee. Is this anything to do with town planning? It has little to do with density since neither the number of houses per acre nor the number of habitable rooms per acre is affected. Perhaps the size of rooms may marginally affect the number of persons per acre, since more people can comfortably occupy big rooms than can occupy small rooms, but the effect can only be quite small. It might be said that it is a matter which falls within control of the size, height, design and external appearance of buildings. It might be argued that, in seeking to apply these standards, a local planning authority is protecting the comparatively poor from exploitation by profit-seeking builders; that although houses with small rooms are sold for less than houses with larger rooms, the reduction in price is far less than the increase in profit to the builder. On the other hand it is said, and equally plausibly, that there is a demand for cheap houses with very small rooms, that they enable people to buy houses who could not buy them if they

were even a little more expensive, and that many people prefer a house, even if it has small rooms, to any flat, or to sharing accommodation with in-laws. I think this is an example of a matter in which policy might well vary from time to time, according to what political ideas dominate at different times, but that it is essentially a matter to be decided by central government for the whole country, rather than one to be fought out district by district and case by case.

Public consultation and participation

It is difficult to distinguish sharply between consultation and participation. Consultation connotes finding out from people what they would like, and participation must mean that the public actually help to prepare a plan. Consultation is clearly necessary and comparatively easily carried out, but participation is very difficult and there are telling arguments against it.

To concentrate first on participation, I remind the reader of my account of the Brown-Keeble 'How to do a town plan' programme. I suggested that it may have done a certain amount of good, but emphasise here that the possibilities of applying it to the preparation of a real town plan are very limited. It is physically impossible for more than a few people to participate in such an activity, and so, how, if one tried to do it in real life, would the participants be chosen?

It should be emphasised once more that in Western democracies, elected representatives are indeed representatives. They are elected to take decisions. It is right and proper for them to consult their constituents whenever they think they need to do so, and indeed whenever the constituents demonstrate a clear wish to be consulted on a particular issue. But that is quite different from abrogating responsibility for making decisions. The responsibility is firmly with the elected representatives. It is important for the future of democracy that this should be clearly realised. The myth of the so-called 'independent body', assumed to be able to give better and fairer decisions than 'politicians', constantly rears its ugly head, and not least often in connection with town planning. Assuming that lawfully elected local authorities continue to make decisions the responsibility for which is laid upon them by legislation, they still have to consider when and how public participation and consultation are to be arranged.

Consultation (and from now on the word is used to cover both consultation and participation) might take place before the preparation of a plan, during its preparation and after its preparation. Should it take place at all these stages, at only one stage, or at two of them?

So far as the 'before' stage is concerned, consultation has always been customary in the form of seeking answers to questionnaires about preferences of various kinds, such as for different house types and densities, amounts and location of shops and open spaces, and so on. This may not on the whole have been done as well or as thoroughly as it should have been, but could consultation of wider scope usefully take place at this stage? To take an extreme, would it be useful to call a town meeting, get up on a platform and invite the audience

to participate in terms such as: 'Well now, we have to prepare a town plan. What sort of a town plan would you like? We have the whole evening before us, let us thrash it out thoroughly.' Would anyone go home in a state more enlightened than when he arrived at the meeting? It seems very doubtful. The members of the meeting might well feel and express indignation that those charged with the preparation of the town plan had not taken the trouble to prepare and present some possibilities to them.

So, in practical terms, the 'before' and 'during' stages must merge. I am sure that there is great scope for fruitful consultation in the course of the 'during' stage. It is essential that meetings held should be comparatively small ones if any genuine, fruitful debate is to take place. This must mean in practice that when a town plan is prepared, a meeting is held in every ward if not for smaller subdivisions. The burden of work on those mounting such meetings is immense.

In a good planning system, the preparation of a town plan is only the first step. More detailed plans for each part of the town should follow: discussion of these can properly be confined to meetings with those directly affected by each detailed plan. But it will be important to insist there that, nevertheless, the plan for each part of the town has an impact on other parts of the town, that it is the job of the planning authority to produce a coherent set of planning proposals for the whole town, and that, therefore, opinions expressed about the desirable planning of a particular locality cannot prevail if they would have adverse effects on other localities. If a local community were able to give effect to their views so that they could stop anything they did not like (a new road or a prison), such items would become like wandering Jews, eternally being moved on to somewhere else. It is important also to emphasise (a great difficulty with all public consultation in town planning) that there is no reason why the views of those who can speak most articulately or shout loudest should prevail over less articulate or forceful expressions. It is the job of the local planning authority to do the best job it can, not just to arbitrate between rival slogans.

Consultation after a plan has been prepared should merge with consultation regarding its revision. Are there to be public meetings for every revision of every part of a town plan? Perhaps, but the labour would be appalling. All the more so if we also retain public inquiries into structure plans and public hearings about local plans, as well as public inquiries into appeals against refusals of planning permission at which third-party objectors can appear and be heard. Apart from the sheer time and work involved, the more numerous these occasions are the more likely is it that the voice of the public will be that of the most articulate and noisy and of those with the most leisure.

It is important, if public views and preferences are canvassed by means of questionnaires, that they should be very well prepared. People's expressions of preference are almost valueless unless they are related to knowledge, experience and financial practicability. Well-framed questionnaires can avoid misleading results and elicit almost more valuable knowledge than the respondent knows he possesses, but it is useless to ask questions like: 'Would you prefer a Mercedes or a steam yacht?' It is also important to avoid bias in the way ques-

tions are put: 'Would you prefer a cramped, noisy flat or a lovely spacious house?'

Consultation must both be sincere and appear to be sincere or no one will trust it or trust those who conduct it. In Brisbane, provision was made for the lodging of objections to the Town Plan in its various reincarnations. At one time the City Council was not obliged to send objectors replies, and it was widely rumoured that thousands of objections were put into sacks unopened and burned. Later on the Council was obliged to reply, but, judging from the silly replies it made, it had had no experience of giving serious consideration to objections.

If alternative plans are put forward for public discussion it is clearly important that this should be done before the planning authority had made a firm choice between them, otherwise the consultation is a mockery. All should be drawn up to a similar degree of completeness and attractiveness. It is manifestly undesirable to force a card on the audience by putting forward a preferred alternative which looks much nicer than the rest. But it may not be possible to consult the public without some preference between alternatives having been arrived at beforehand, even if tentatively, by the planning authority. In that case, any statements of comparative advantages and disadvantages should be honestly and impartially expressed.

For attempts at consultation to elicit genuine responses there has to be a general belief among respondents that there is a real chance that their representations will have some effect. Decisions on appeals against refusal of planning permission for development in Green Belts were, especially during the 1960s, so universally unfavourable to the appellant that it became impossible to believe that the representations made at appeals were seriously considered. Even when the boundary of the Green Belt had been drawn so manifestly wrongly that one suspected that a flying bomb had exploded at the moment the draftsman was putting it on the map, thus causing his pen to jerk, the appeal would be disallowed. It would have been better if there had been a ministerial statement that, whatever the merits, no application for permission to erect houses in a Green Belt area would even be allowed. It would have been wrong to do this, but not so wrong as to maintain what had become, in that regard, a fictitious right of appeal.

For all that, sincerely conducted public consultation can produce quite surprisingly good results. I once prepared a plan for local authority for the redevelopment of the centre of a small town. It was in the days of supplementary town maps and it was to be so expressed. The local authority very sensibly decided to hold a town meeting to discuss the plan after I had prepared it. The hall was packed, the evening was a disaster. Vociferous objections were expressed, though one noticed that these were directed more towards the allegedly unpleasant appearance, habits and parentage of the councillors than to defects in the plan. In the event, when the plan was formally put on deposit and objections were invited, no objections whatever were received. One can feel sure there would have been plenty of objections if this apparently unsuccessful meet-

ing had not been held. Some magic was at work. Perhaps it was simply that the meeting, well chaired, gave the opportunity for everyone to express whatever hostility he felt towards the Council, and get rid of it, so that when the plan was officially presented later people were able to look at it impartially.

Planning inquiries of various kinds constitute both public consultation and public participation: consultation, because developers and third parties all have full opportunity to say what they think should and should not be done, and participation, especially at inquiries into development plans, because there is the opportunity not merely to suggest what should be done but how it ought to be done, by putting up alternative proposals. It is no doubt an imperfect method of consultation, but when it comes to deciding what really will or will not be done it may be a better one than holding meetings at which, almost inevitably, windy generalities will occupy a good deal of the time.

Planning appeals

The best way of making sure that a town planning issue will be fully discussed is for someone to make an application for planning permission which is refused and to appeal. A very large number of planning issues, between 15 000 and 20 000 a year, are fought out by means of appeals against refusal of planning permission. Very many of these are now determined by inspectors after consideration of written representations, some by inspectors after they have held public inquiries, the most important in the name of the responsible Minister after an inspector has reported and made recommendations. These certainly represent an important item of public participation in planning, though they are seldom regarded in this way. Everybody concerned, however remotely, has a chance to put forward his views.

The various methods used each have advantages and disadvantages. Written representations, as has been noted earlier, are cheap and a little quicker than inquiries, but do not afford the opportunity for exhaustive discussion. Inquiries, in the view of many, are rather too formal and inhibit expression of views by the timid and nervous. Decisions by inspectors may be taken from within too narrow an outlook, those by administrators in the name of the Minister may be from a technically ignorant standpoint and taken by people who, presumably, have seldom actually seen the ground, though they may have a broader appreciation of trends and relationships than is possible for individual inspectors.

There is a strong case for every appeal to include a hearing, however brief and informal, and for inspectors to conduct these in an inquisitorial way rather than relying on the time-honoured adversary method. The essential difference between these is that, in the former, the tribunal (in this case the inspector) takes the lead and concentrates on finding out what he believes he needs to know. In the latter, the tribunal metaphorically sits back and lets the contestants argue things out by means of speeches, evidence in chief, cross examination and re-examination. However good and safe this method may be for criminal trials

and some civil actions, its effectiveness for determining planning disputes is less certain.

My own small experience of the inquisitorial method is encouraging. As a member for several years of the three-person Design and Siting Review Committee, which determines minor development control disputes in Canberra, I found that it worked well. It had not been adopted in accordance with any theoretical basis, but as the natural way of doing things. Its speed of operation was remarkable; quite often four cases were determined in a single day, which started with site inspections, continued with hearings and concluded with the drafting, typing and signing of decisions. Whether it would have worked quite so well for more important cases (many of the matters we decided dealt with activities which would, in this country, have been permitted development) I am not sure, but I think it would be well worth trying.

One persistent difficulty for some developers has always been to find an appropriate forum. Many a would-be builder of a substantial number of houses on land not allocated for development in the town plan has been told both by the local authority and, after appeal, by the DOE, that the legitimacy of what he wants to do is something appropriately to be determined as part of a development plan review, not *ad hoc* on the occasion of an appeal. One understands the rationale of this, but the timing of development plan reviews has always been adrift, and now there is no specific obligation on a local authority to carry out a review at any particular time. Seldom has the supply of land allocated for development in a plan kept pace with the demand for it, so some change of policy or method is certainly needed.

Redevelopment and roads

The linked subjects of comprehensive redevelopment and motorway building have taken up much time and effort in many countries during the last few years. Too seldom have the promoters of these activities been clear enough in their own minds what they were trying to do to be able to explain it convincingly enough to objectors or potential objectors to subdue or modify their anger.

Motor vehicles cause danger; the less suitable the tracks upon which they have to run, the greater the danger, while all buildings eventually wear out. It would be a very good thing to ascertain from society how much value it places upon human life, and especially young human life, and so, what resources it is willing to devote to creating the safest practicable road system; similarly, how highly it values particular buildings. I think that much of the fervent opposition to road building and redevelopment would have disappeared if these issues and the fundamental underlying facts had been clearly presented.

It is widely believed that, especially in huge cities, greater efforts ought to be made to increase the proportion of travel by public transport as against private transport, but not so generally realised that, if people were obliged to use smaller vehicles with less capability for rapid acceleration, safety and traffic flow might be greatly improved. However, society has not yet moved effectively in

these directions, so the most that can be done is to grade roads into a hierarchy and take steps to ensure that large quantities of traffic can move fairly fast and safely along those in the highest category. This can sometimes best be done by building completely new roads, sometimes by improving existing roads. In the latter case it is not so much 'widening' which is likely to produce the best effects, as the reduction of the numbers of junctions and intersections with them. In any particular case, the balance of advantage between building a new road and improving an existing one can best be determined by preparing a Lichfield-type Planning Balance Sheet. The alternative chosen may well be affected by social considerations of the kind discussed in my fable of the Poresods, recounted earlier.

A wide view certainly needs to be taken in working out the necessary design and in calculating the costs entailed. For example, it is not good enough to ignore residents whose land is not actually taken and who have retained some sort of road access to their properties. Their reasonable convenience and freedom from noise also needs to be taken into account. To do this may often mean carrying out works extending a considerable distance on either side of the new or improved road.

Almost equally important work is needed to make roads suitable to take their place in the second and third categories in the hierarchy; it may attract greater opposition. For roads in the second category, the collector roads, widening may in certain cases be inevitable. A great reduction in the number of the intersections and junctions with other roads will certainly be necessary. This will mean that many people will have to travel further by car from home to collector roads than previously. They will not like it, but their loss of convenience has to be set against the loss of people's lives. Many purely local roads will need to be turned into culs-de-sac in order to produce an effective system of collector roads and to reduce speeds on the minor roads themselves. People do not like this either.

Public discussion of such matters is not always enlightened. During 1979 and the early part of 1980, a prolonged public inquiry took place into the Camden London Borough Council's proposals to turn certain roads in the Belsize Park area into culs-de-sac. Objectors included the fire brigade, who said that as a result of the Council's proposals, fire engines might well take longer to reach fires than had previously been the case, and that this might result not only in increased loss of property but in the loss of lives. How splendidly humane this sounded! What might not have sounded so good would have been the answers to questions about what the fire brigade had done to investigate ways of improving local street systems so as to decrease traffic danger without delaying the fire brigade. This is not exactly a new issue, and one might have expected that by 1979 a fire-fighting authority would have given it deep and prolonged thought and come up with satisfactory answers. In the last resort there can be no doubt that an unimproved minor road system will cost lives which might have been saved, but no more than a speculative possibility that delays to fire engines

caused by the improvements will cost lives.

As for comprehensive redevelopment, there comes a time when buildings built 100 years or more ago as 'low cost' buildings need great expenditure to keep them safe, habitable and comfortable. The work has to be done or the building has to be pulled down. In the hard financial terms of private enterprise economics, a building is ripe for redevelopment when the site on which it stands would be worth more if the building were not there. Where buildings are of high visual merit or historical interest or the social pattern of the area concerned is very special and valuable, uneconomic expenditure is justified to keep the physical fabric in being. That is a matter for political decision. Where, over substantial areas, the balance of advantage is seen to be with redevelopment rather than preservation, the redevelopment ought unquestionably to be as comprehensive as possible. It is folly to make a fine choice between rows of buildings to be demolished and redeveloped and rows to be preserved in such a way as to perpetuate what is very often a dreary, wasteful and dangerous minor road system, and equally foolish to restrict redevelopment in such a way as to preclude the optimum location of new schools, public open spaces and other publicly desirable land-consuming uses.

The inner-city area previously discussed in Chapter 6 is a fine exemplification of these points. To the west and the east lie unsafe and congested roads, carrying large quantities of traffic. Substantial redevelopment has taken place adjacent to them, but has not been comprehensive enough to reduce appreciably the number of roads joining and intersecting them, or to remove the ill-located shops which adjoin them. Indeed, in some cases, new shops have been built in the same places as ill-located old ones.

To the east of one row of houses there is a large local authority estate of flats, while the row of houses which back on to it on the west were acquired and pulled down by the local authority and replaced by 3-storey buildings. The row of houses is partly local authority owned and part in private ownership and occupation. The houses bought by the council have had large amounts of money poured into their improvement and, in some cases, their conversion into flats. Some or all of the houses which remain in private ownership have been the subject of improvement grants by the local authority. It is at the very least doubtful whether it would have cost more to pull them all down and rebuild them. They are a nice example of a Victorian terrace, but there remain, in London alone, at least 1000 terraces as good and hundreds better. No long-standing community was kept in being by preserving them. Their preservation has prevented fuller redevelopment, which could have produced a better, safer and more interesting road layout, a greater variety of dwelling types and better standards of privacy.

Large areas of redevelopment may well include some selected small items for preservation, which can add much to the richness and variety of the redeveloped area, but such preservation ought not to be allowed to distort necessary redevelopment.

but their work laid itself open to criticism, some of which was well merited. As recounted elsewhere in this book, their production of development plans was slow and a large proportion of these plans were not very sophisticated. The Town Planning Institute examination system before 1939 had not really tested conceptual breadth and knowledge, only fairly narrow professional expertise. Many of them, too, we should not forget, were tired; they had been exposed to physical danger from air raids, had suffered from constant anxiety about the fate of friends and relations in the armed forces, had for years absorbed an unexciting if just adequate diet, and had done much fire-watching or served in the Home Guard. It is small wonder that they were not always balls of fire.

Under the new system, with county councils and county boroughs as the planning authorities, there seemed to be little room for consultants. The assumption was that every local planning authority would equip itself with a staff adequate to fulfil its planning tasks. This was not wholly practicable because of the considerable amount of specialist work that had to be done, which yet did not, in quantum, justify the employment by all local planning authorities of all the specialists needed.

Envious architects who felt that they were being left out of an exciting new social adventure, for prominent participation in which they believed they were peculiarly well suited; frustrated consultants who saw lucrative fields of endeavour drying up before their eyes; geniuses without qualifications who were shocked at the reluctance of public authorities to accept them as sages produced sour comments upon the achievements of planning authorities or the lack of them. These comments found an increasingly attentive public ear, as restrictions, controls and 'bureaucracy' appeared to contribute more and more to the continuation of the material austerity which had been endured willingly enough during the war, but which it had been hoped would disappear (an unreasonable hope) as soon as the Germans surrendered on Lüneburg Heath.

This went on increasingly through the 1950s and early 1960s. In the 1960s, consultancy revived like desert flowers and complaint passed to the other side. Employment of consultants, whether directly by central government or by local government on the advice of central government, increased very much. Suddenly it seemed that not only were consultants beginning to get all the really interesting planning work, but that quite a lot of them had no visible planning qualifications or experience. The Ministry of Housing and Local Government was seen, rightly I believe, as curiously disloyal to the Town Planning Institute, which had, for all its faults, deficiencies and weaknesses, made town planning an effective force in Britain. By no means all consultants appointed to these lucrative and interesting planning jobs had Town Planning Institute qualifications, nor had a good many of those senior officers in the Ministry who occupied positions for which, any dispassionate observer might have felt, professional town planning qualification should have been mandatory. The Institute itself was driven increasingly to use a clause in its requirements for corporate membership which enabled it to elect, when they reached the age of fifty, people who had made significant contributions to town planning even if they had not

formally qualified as town planners. Not everybody was very happy about having to wait until he reached fifty, though people who were intelligent enough and energetic enough to attain some eminence in town planning might reasonably have been expected to take the trouble to qualify formally. If they had done so, they would have strengthened the Institute; by not doing so, they weakened it.

All this led up to a great perturbation in the Town Planning Institute in the mid 1960s. Some of those in control of the Institute thought that corporate membership via its own examinations or a course in a recognised school was no longer a feasible limitation, but that corporate membership should be thrown open much more widely, to include people who, belonging to some other profession, had 'contributed' ably to town planning work. The response to this by a large proportion of the membership was, first, that distinguished contribution to the town planning process was not necessarily evidence of ability to *do* town planning, and second, more crudely and perhaps a little selfishly, but not without a substantial element of sense, 'I had to take the examinations, why shouldn't he?'

One does not want to mull over old controversies; it is enough to say that the views of the membership, just summarised, prevailed: the gates were not thrown open. But the issue still exists, and year by year the pendulum of opinion oscillates between extremes. Bedevilled though it is by false assumptions and fallacious argument, it is a real issue, and not only in this country.

I believe that there is an identifiable field of professional activity which can appropriately be called 'town planning'. It is a broad field, and many if not most town planners will prefer and need to concentrate upon some parts of it rather than try to cover the whole. If, more or less permanently, they choose to concentrate upon a comparatively narrow part of the field, they can appropriately be regarded as specialists within town planning, but, just as with doctors, it would not have been possible for them to specialise efficiently if they had not previously received training and undergone experience of a wider kind.

There are also contributors to town planning: people who are expert and experienced in matters of special importance to town planning, such as agricultural economics. For these, some understanding of the objects and methods of town planning is very useful, but it is not necessary that they should be experienced or qualified in the whole range of town planning. Those who are so qualified and experienced, the town planners, will be able to brief them effectively in relation to the contributions they can make to town planning. Specialists *within* town planning and those who make specialist contribution *to* town planning are not, it is true, individually distinguishable at a glance, but this does not mean that they cannot appropriately be regarded as conceptually distinct. Much dispute springs from obliviousness of or inability to distinguish between the two types.

There is no doubt that town planners need to call on a very great deal of specialist information and advice from a variety of fields, and then to coordinate, compare and evaluate its importance. In order to do this it is essential that they themselves should know and understand the essential principles of each disci-

pline involved so far as it affects their own. Good town planners are able to do this, and they are helped to develop the ability to do so if they have been well and appropriately trained. A town planner gets a feel for what he needs to find out. In receiving and evaluating specialist advice, town planners do very much more than harmonise and coordinate it. They meld it with their own ideas and skills, to create a dynamic design, disciplined by the limitations imposed from other fields of knowledge.

Any properly modest town planner is bound to feel from time to time that the centre of his field of expertise, namely, designing a town plan, is not really very difficult. 'It's easy really, isn't it?' he must ruminates. 'There's nothing in it which any person of reasonable common sense couldn't have done for himself. Of course adequate amounts of land for each main use must be provided and these uses must be related spatially so as to avoid the juxtaposition of incompatible uses, and place together compatible and complementary uses. Of course, spatially, service centres should be distributed so as to provide maximum accessibility and vehicular and pedestrian networks designed so as to reinforce spatial accessibility with accessibility in terms of time.'

Well, take a group of twenty intelligent, hard-working town planning students, whether they be undergraduate or postgraduate; give them twenty lectures on how to design a town plan and then set them a studio programme which involves designing a town plan. Fifteen out of the twenty submissions will be to all intents and purposes hopeless, three will have some merit but be marred by defects obvious to any town planner, and two, with luck, will be quite good. It is not as easy as it seems, but there is no occasion for discouragement. Three years and five town plan exercises later, eighteen out of twenty will be submitting acceptable designs; it is not easy, but it is not horrifyingly difficult. All this applies equally of course to designs for town centres, residential neighbourhoods and industrial areas, but it is the design of town plans which is the heart and centre of the town planner's skills.

It is difficult to express verbally the difference between a really good town plan and a merely ordinary one, though the description given in Chapters 2 and 3 may help. The crux of it is to get nothing out of proportion with the rest, not to give excessive prominence to one factor to the detriment of others, to ensure on the other hand that nothing important is ignored and that everything is arranged with a certain grace. Functional efficiency endows visual design with logic and so is important not only in its own right but as an aid to enhance subsequent detailed design with strong visual content. Good development control cumulatively makes a great difference and requires skill and experience. A town in which, over a decade, 1000 arguable applications to develop had been decided the right way would be much better to live in than one in which they had all been decided the wrong way.

The question of what a town planner is and how he ought to be trained has been unnecessarily confused ever since 1948, when the Government of the day set up a Committee under the chairmanship of Sir George Schuster, charged 'to take account of the present and prospective scope of town and country plan-

ning and to consider and report what qualifications are necessary or desirable for persons engaged in it, and to make any recommendations affecting those persons which appear to the Committee to be relevant'. The Committee reported disastrously in 1950. It thought that town and country planning included two principal activities, synthesis and design, the second subsidiary to the first. It thought that design was 'setting out on a drawing board a pattern of physical features', and contrasted this with the creation of a synthesis, apparently unaware that the bringing about of a synthesis is inherent in any good town planning design on a drawing board.

Building upon this rather crass analysis, the Committee decided that synthesis was more an administrative than a design process and, from this highly suspect premiss, concluded that a chief planning officer need not be skilled in design but should be capable of appreciating good design. It was a feat falling only a little short of genius to succeed in so few words in totally confusing concepts as diverse as 'design', 'synthesis' and 'administration'. Most people now over the age of fifty who are connected with town planning must have read the Schuster Committee Report and been confused by it to a greater or lesser extent.

It seems desirable at this point to refer again to two other sources of confusion commented upon elsewhere in this book. First, the tendency to confuse the development process with the town planning process. This often arises in connection with the work of the NCDC in Canberra by whom virtually all urban development there is designed and carried out and which combines town planning and development functions, as indeed do British New Town corporations. The argument is made in Commission circles that town planning *is* development, town planners are therefore developers and should be trained and skilled as such; that there is no need for town planners as a distinct species. But only a minute proportion of land development is undertaken within such happy arrangements, and it seems highly optimistic to assume that in the foreseeable future that proportion will increase sufficiently to justify one in basing ideas about professional training and qualifications upon it.

Second, and very closely connected with the first, is the concept of corporate planning. The skills and knowledge needed to weld together the disparate development activities of half a dozen or more different local authority departments are not really much connected with those needed to prepare good town planning designs, and even when such coordination is undertaken, town planning design and implementation as a specific activity still needs to be carried on. The need for it does not disappear with the introduction of corporate planning.

We now turn to very brief consideration of the nature of professions and professional activities. What distinguishes a profession and a professional activity from others is that the professional sells skilled advice and, in some professions, designs. He draws his remuneration from the advice given, and this is not dependent upon the financial success or ill success of the clients who may act upon his advice.

The choice of a professional adviser is, with all professions, a difficult one.

How do you know whether your solicitor, dentist, doctor or accountant is really good? You may have chosen him by blind chance, or because he was the nearest member of his profession operating conveniently close to you. He may have been recommended to you by a friend who told you how well Smith had always looked after his teeth. You took his advice, and so far you have reason to be pleased: you've still got most of your teeth. And so it goes.

Professional success depends upon satisfying clients, who tell their friends, acquaintances and associates about their satisfaction. So, on the whole and in the long run, the competent flourish and the incompetent do not. But that is not quite enough. You also need some assurance that if you consult a solicitor he will not make off with the money you entrust to him or give you advice which is wrong in law. You have this assurance because you know that neither solicitors, doctors nor dentists can operate as such without having satisfied their respective professional bodies that they are competent to do so. There is the additional assurance that, if your professional adviser seriously misbehaves himself, his professional body, despite having previously satisfied itself about his competence, will throw him out and prevent him from continuing to practise his profession: a substantial deterrent and safeguard.

In order to reduce damaging competition between fellow professionals there has been a general prohibition against them advertising their services. This prohibition has varied from profession to profession in the stringency and means of its operation. This, as well as minimum fees, is now disappearing, and one doubts if anyone will be the worse off for its disappearance except that possibly it may act to the detriment of newly established firms who cannot afford to pay for advertisements.

Meanwhile, the professional institutions are still influential. To some extent they gain their influence by being either 'chartered' or 'registered'. For a body to be chartered means that it receives a royal charter, in effect a blessing from the monarch to say that they are good people, worthy of her recognition, and henceforward corporate members of that body can describe themselves as chartered, e.g. Chartered Town Planners. A charter is not lightly given, and entitlement to put the word 'chartered' in front of one's professional description is both useful to oneself and a fairly good guarantee to the public.

Registration is another matter, a legislative matter. In this country, architecture is a formally registered profession and no one can call himself an architect (though he can call himself an architectural consultant or an architectural adviser) unless he has satisfied the Registration Board that he is fit to do so. This means, in practice, passing the examination of the Royal Institute of British Architects (RIBA) or a course run by an architectural school recognised by the RIBA, plus a minimum amount of approved practice.

Registration is double-edged, because registration legislation usually admits to registration those already in practice, however ill-qualified they may be, as a matter of equity, and these people take an astonishingly long time to die off. A charter, for all its strange, archaic nature, seems to be a better and fairer safeguard.

A large proportion of town planners in this country are either Civil Servants or local government officers and so, very properly, have to speak guardedly in public. Yet in a profession in which there is inevitably more opinion than hard fact to be expressed, they have to express opinions in order to do their jobs. It is difficult to strike a balance, for it is inherently a difficult balance to strike. Some certainly are too timid. For example, by now it ought to be wellknown that many of the errors in public housing policy since the war are those of architects, not town planners, and that many town planners tried to oppose them, but 'the planners' are still blamed. Town planners have not, corporately or individually, sufficiently proclaimed or explained the authoritative knowledge which they possess. Too many have too happily gone along with silly gimmicks, among which I include 'urbanity', the marvellous urban quality of tall blocks of flats and bogus Radburn housing. Town planners have somehow never acquired the confidence to say to the gimmick merchants: 'You're wrong because. . . .' They ought long since to have sufficiently familiarised the intelligent public with socially important town planning matters such as the implications of adopting particular residential densities for it to be unusual for sheer nonsense to be talked about them.

Unfortunately, the senior or successful professional tends to be so busy that he finds it difficult to spare time to review and rethink his professional opinions and techniques, and too busy to engage in public controversy. Here there is justification, if any is needed, for the existence in town planning of academics who, if they are going to do their jobs properly, have to have spare time to think and, having thought, are frequently so stung by the strange opinions they hear or see expressed around them that they go into print or on the air.

An odd handicap is that town plans and other expressions of important town planning proposals do not lend themselves to effective public critical review. It takes so long fully to digest and appreciate them that serious criticism is impracticable as a regular published event; it may not take very long to write a couple of columns, even quite good columns, about a new building, but to write the same amount usefully about a new town plan is likely to take as many days of work as the criticism of the building took hours.

I return now to the training of town planners. Town planning education from the end of the Second World War has suffered from swings of fortune and swings of fashion. At one time, architectural thinking so dominated town planning that it was difficult to find a town planning school which did much else than turn out group student projects for the wholesale redevelopment of central areas, presented in the form of plans and models at a scale of 1/500. In recent years, on the other hand, it has seemed nearly as hard to find planning schools which turn out appreciable quantities of drawn designs at any scale. Just as the profession as a whole has done, town planning schools have tended to leap upon ephemeral bandwagons.

I believe that town planning schools should include a greater proportion of material which relates directly to town planning than many of them do. Many include a great deal that is not just on the fringe, but well beyond it. I should

like to see a situation in which every student prepared a town plan about once a term throughout his course, varying the kinds of towns tackled, the modes of expression of the plan, the degree of detail entered into and the assumed social, political and legal bases.

It is important for many reasons that town planning schools should not 'go local'. The fundamental principles of town planning are of world-wide applicability, so, ideally, what is taught, both as regards theory and practice, ought to be concerned with the best theory and the best practice that is known. The best town planning schools have been very international in flavour and have drawn their students from many countries.

One had some curious experiences in running a town planning school in Queensland, especially in relation to the teaching of law. There are at least nine different town planning systems in Australia, each rather similar to every other, but each different from every other in at least a few fairly important ways. By 'systems' I mean here the legal codes upon which town planning activities are based. There is one for every State except Queensland, which has two (one for Brisbane, one for the rest of the State); one for the National Capital Territory and one for the Northern Territory. *Australian Town Planning Law* by Dr. A. S. Fogg is a very able survey and summary of all the Australian town planning codes. It is also (intentionally) very funny, rare for a law book.

None of these systems, for comprehensiveness, clarity or good sense, approaches the English system. Yet from time to time, in Queensland, quite serious suggestions were made that our law teaching ought to be based mainly upon, if not exclusively devoted to, Queensland planning law. In support of this argument it was sometimes said that most of our students would be working in Queensland. This has not proved to be so, but even had it been, we should hardly have been making the best practicable contribution to the improvement of town planning in Queensland by informing our students wholly or mainly about Queensland town planning law. In a few ways it is, indeed, a bit better than most Australian planning law but in others a good deal worse.

There was also introduced into the argument a confusing inability to discriminate between law and practice. Some evidently thought that what the Queensland Department of Local Government was willing to approve in the way of planning schemes, or what Queensland local authorities habitually required of developers by way of conditions constituted law, not just bad habits.

The main thing about learning planning law is to learn the language of law, the kinds of planning law which do and do not work and, especially, how equitable they are. Knowledge of the local law in areas where one is working (and a consultant with an international practice may be working in a good many different areas simultaneously, each with its different legal code) is something which can easily be picked up in practice provided one has a good general understanding of law and its methods.

A great aid in teaching planning practice, by the way, is to set up a group planning project for a real-life problem, the students produce their proposals and one then puts them against each other by getting some to make simulated

applications for planning permission for development which would conflict with the plan, getting the others to draft grounds for refusal and then getting them all to fight the matter out at simulated appeals. This gives valuable experience, not only in fighting appeals, but in detecting how some town planning proposals which look good if not examined closely may be found to be full of holes.

It is a myth that town planning, year by year, keeps on getting more and more difficult, more and more complicated and wider and wider in scope. Valid principles alter very little from time to time and place to place. Technological change complicates the selection of sites for appropriate uses, but less than might be supposed. (It is interesting to see that the fine innovation of the Open University, which makes such wide use of television for its teaching, still needs quite a large area of land and quite a large quantity of buildings at Milton Keynes.) The scope of town planning really only gets wider when people get erroneous ideas about it.

To summarise the arguments of this chapter: in my view, no one who is not familiar with most of the material in this book (which of course entails knowledge of many other things) can properly be termed a town planner.

We have now come to the point when some speculations about the future which have implications for town planning will be useful.

The future and town planning

Town planning, as we have seen throughout this book, is often concerned with trying to rectify past errors. It is also always concerned with existing and emerging problems, and so has to try to foresee and cater for future conditions as far as this can be done, partly by reserving land and communication routes for future needs, partly by incorporating in town planning proposals an indication of the chronological order in which those needs can most conveniently and economically be met (what is known in town planning as programming) and, most difficult and important of all, by trying to forecast changes in the economic and social life of the area of a kind which will alter the needs for land use and communication routes as regards both quantity and location.

A great difficulty is that the innovations with important town planning implications may well be those which are least certain to be implemented. We should be foolish to change our planning methods drastically in order to make allowances for a change which may not happen at all; the waste would be great. We may therefore often have to play safe by designing town plans in such a form that they will work reasonably well whichever one of a variety of possible futures actually comes about. Unfortunately, this admirable prudence may produce a certain bleak neutrality in our proposals, but that is better than gambling large resources on a long-odds chance.

In this chapter I want to explore some of the possibilities which evidently exist, and how we might try to cope with them. I shall not try to imagine what town planning might be like in a post-apocalyptic period. If a full-blown nuclear Third World War happens, I do not think that, in the aftermath, conditions will exist in which any kind of rational town planning will be possible.

A question of prime importance is whether the world will persist with high technology or if the mounting problems of pollution of all kinds and the using up of non-renewable resources will force the adoption of low technology. By 'high technology' I mean the continued use and elaboration of very complex and sophisticated processes, of which the use of nuclear energy is the most dramatic and obvious example. Not only does it demand vast technological skill and invention and intricate collaboration, but the possible pollution dangers to which it gives rise are now familiar. But one of its great attractions is that it is not a great user of non-renewable resources. The large scale use of fossil fuels also

demands elaborate technology and organisation and involves alarming expenditure of non-renewable resources, to the extent that current world crises are ultimately mainly ascribable to competition for diminishing supplies. These fuels are also great polluters; steadily, inexorably, all the time, though not with the dramatic speed of nuclear pollution. The alarming growth of human population demands the production of increasing amounts of food, with corresponding development of technology, but this production itself, especially in connection with the use of pesticides, causes pollution.

I do not intend here to try to summarise all the conflicting and alarming prophecies recently made in relation to these frightening trends, nor the reassuring counter-arguments about the apparently unlimited capacity of human beings to solve problems which have also been put forward. It at least seems clear that, to avoid disaster, there will have to be either the development of even higher technology, devoted not merely to greater production but also to avoidance or counterbalancing of adverse effects, or a concentration upon methods of meeting the world's needs by the adoption of comparatively simple, but ingenious, methods of production to enable the species to feed, protect itself from the elements and move about without creating lethal pollution or running out of resources. Either solution depends upon limitation of the numbers of the species to some upper limit, however vaguely defined. If there is one fairly certain thing in this uncertain area it is that uncontrolled proliferation of the species will, one way or another, produce apocalypse. Whether that apocalypse be by way of universal starvation or poisoning, by gradual deterioration or by abrupt devastation by nuclear war (perhaps brought about by the strains involved in trying to avert other dooms) does not, in a sense, make very much difference.

If collapse is averted, it seems uncertain whether it will be by resort to higher and better technology or lower and better technology. Whichever path may be chosen, it will obviously have very important implications for the design of land-use arrangements and communication routes. It will also involve great changes in the organisations used to oversee these matters. High technology, it may be noted, inevitably entails elaborate organisational methods and very large organisational units, whereas low technology (e.g., at the extreme, the peasant farmer) lends itself much more readily to simple organisations and small units of organisation.

Unfortunately, here we have a paradox of a very nasty, tail-chasing kind. In order to pass, if that were the decision, from high technology to low technology, a great deal of decision-making organisation would be needed (the organisation needed to organise less elaborately). And organisation really is something which the human species is not very good at. I am here using 'organisation' in a very general sense, to include what you do with something when you have invented it. Innumerable observers, for example, have pointed out the extraordinary anomaly of having invented something as marvellous as television, and then devoting a good deal of the resources and organisation involved to showing infantile parlour games. Against that, of course, one must set the superb Open

University. Just how significant that is in comparison with the flood of parlour games, can hardly yet be seen.

Another great difficulty in converting from high technology to low technology would be the question of whether it is physically, and, even more importantly, psychologically possible to pick and choose, as it were, from among a flood of inventions so as to make use only of the useful and harmless. That it is physically possible to do so is quite likely, but psychologically it is a very different matter. Very efficient and firm decision-making would be needed.

From among a multitude of possible examples I think of medical technology. Hippy communes greatly value the natural and the simple: the home-grown food, the home-woven clothing, the self-produced entertainment and so on. I mention them because they are a convenient exemplar of a deliberate choice to use low rather than high technology. But even if one despises many of the products of contemporary civilisation as being noxious or at best frivolous, there are some which can hardly be so despised. One doubts whether a hippy commune confronted with a case of peritonitis, a broken limb or grave illness, would really want to dispense with the benefits of medical technology, especially as it relates to anaesthetics, sophisticated surgical instruments, radiography and even drugs. In a typhoid epidemic or after a disastrous fire in which many have been badly burned you would have to be very tough-minded (indeed I think callously minded) not to want to use the most advanced modern medical technology. But can we possess these in relative isolation? Can we have only the undeniably good and useful? Do we not have to have, in order to take advantage of such services, a technological nexus, comparable in size and scope with what exists at present, and so not capable of being closely controlled in what it tries to find out and what it produces? Are we not, in short, condemned to put up with computer games if we want antibiotics or even a supply of aspirin tablets?

It is quite possible that in the fairly near future we may, even if we are driven to it rather than specifically choose it, find ourselves returning to the use of sailing ships in substantial numbers, abandoning supersonic aircraft, turning to the use of solar energy and ocean wave energy, and erecting small buildings made from comparatively unsophisticated materials rather than erecting concrete skyscrapers. Obviously enough, the adoption of some of these devices would, in many parts of the world, not involve abandonment of, but rather a decision not to adopt, the more complex equivalents.

With some of these the same difficulty arises. No doubt bigger, better and faster sailing vessels could, with the application of modern technological knowledge, be produced fairly easily and without the use of vast material resources. But the use of wave power is a different matter. Simple, everlasting and non-polluting though it is, it involves the use of high technology to produce the devices needed. Once more we have to ask whether we can really use the simple without having at the same time in existence the complex and sophisticated, and, in that case, whether human determination can be sufficient to use the simple rather than lean contentedly upon what is sophisticated, but, in a sense, easy.

An example of potentially very great importance for town planning is the

development of the hovercraft or air cushion vehicle. Here we have a vehicle which is conceptually simple, though needing much skill in its detailed design and construction. Its development might transform and greatly simplify the design and provision of communication routes. It needs only a fairly smooth track of adequate width, no structural strength being needed. It has in fact been used to transport very heavy engineering components across bridges which, if conventional vehicles had been used, would have had to be strengthened and rebuilt at enormous expense. This is, therefore, a device which combines elements both of high and of low technology: rather high technology for the vehicle, very low technology for its track. The advantages are immense. If the hovercraft became a dominant vehicle, all we should need to do would be to clear tracks and smooth them out a bit to create as elaborate and comprehensive a trunk road network as we wanted. This is not with us yet; conceivably it never will be, because of inherent difficulties: it is at present hard to see how air cushion vehicles could operate extensively on land, especially in built-up areas, without the dust they spread being intolerable, but there is probably some neat solution to this just round the corner waiting to be discovered. It is of course this tendency for the apparently insoluble suddenly to be solved by means that have not previously been conceived that makes forecasting as difficult in town planning as it is anywhere else.

Another grave intrinsic difficulty is that, as Betty Trevena points out in her so far unpublished work 'Change and Physical Planning', '... trends which have been under way for a long time will not stop suddenly and change direction suddenly but ... short-term trends may alter course much more rapidly because effects have not yet filtered right through the social and economic systems'. She goes on to say that although many changes which have taken place since the Second World War are dramatic, many are the results of processes which started decades earlier. She says that though automation and computer technology are perhaps exceptions to this principle, their effects have really only just begun to affect society and are likely to be drastic and to extend for a long time into the future.

Perhaps we should try to put these things into three categories: those which are almost certain to happen, though we may not be sure exactly how they will come about; those which will perhaps happen, though their practicability and ultimate form are not yet definite enough for us to be able to make a prediction, and third, those which might just conceivably come about and if they did, would have profound effects.

As regards the first of these, so far as they affect town planning, appropriate action ought of course to be taken now, to the extent that we can be confident that what we do will be congruent with whatever particular form they take. As regards the second, whether or not town planning action is taken must depend upon the boldness and confidence of government and an attempt to weigh up what sort of odds are being dared. Even more obviously than in the first case, nothing should be done which would prove disastrous if the predicted development did not eventuate. As regards the third category, no one but a madman

would try to commit substantial resources in anticipation of them. Here are some examples of the three categories.

Trevena, in the work just referred to, suggests a number of continuing changes which she believes will persist for a long time. Among these are a reduction in family size, with corresponding increase in the number of households into which a given population is divided; a change in the roles of women; a continued reduction in the agricultural labour force; the growth of automation in factories, with corresponding decrease in the size of the industrial work force; changes resulting from the introduction of computer technology in tertiary industry. These will entail a rapid rise in unemployment; greater restrictions placed on motor vehicles, with increasing emphasis on public transport; the development of new kinds of buildings and the re-use of buildings for different purposes; an increase in leisure and the introduction of more sophisticated controls over development. It would be difficult to disagree with this list, or to suggest that its impact upon town planning policies will not be considerable.

In the second category, the 'perhaps' category, one may mention air cushion vehicles, already briefly discussed, and a possibility for setting up, with the use of suitable receiving instruments, a kind of hologram bounded by magnetic or other kinds of field (the science fiction writer's 'force field') to form a 'mould' into which materials can be poured. The suggestion is that, given the receiving apparatus and raw materials such as plastic or metal in liquid form, it would be possible, anywhere, to receive the design of a machine, pour the plastic or metal into it, which, when it was set and the force-field power turned off, would *be* the required machine. Evidently this could only be done for single continuous structures; separate parts and moving parts would have to be connected up by a separate process. The possibilities are breath-taking. It would mean that manufacturing industry of many kinds could be set up wherever there was a need for it just by installing receiving instruments, raw materials and a small, technically skilled work force. It seems absolutely fantastic, but it is not nearly as fantastic as ordinary holograms, colour television and stereo sound transmission would have seemed to our grandparents. This, air cushion vehicles and the volumetrically highly compressed computer equipment which already exists and is in operation, could, together, transform beneficially the possibilities for the spatial distribution of population and industry on national, regional and local scales.

I have not included moving roads in this 'perhaps' list because, although we already have them, running for short distances at low speeds, there seems little possibility of them being constructed on a scale and with performance standards which would enable them, say, to replace the motorways.

I list without comment some items with revolutionary implications for nearly everything, including land use, the possibilities for the eventuation of which are quite inassessable: the development of ESP to become a reliable method for communication; the creation of artificial satellites for occupation by a substantial proportion of the human species; the invention of an effective gravity screen; making contact with an extra-terrestrial civilisation. (Serious work has been

done on the first of these in both the United States and the USSR in connection with space travel.)

A fourth category should be mentioned briefly, though only to dismiss it; the creation of human habitations on an extensive scale on the surface of water and on the ocean bed, and the development of communities underground have been seriously, if not very sensibly mooted. To these should be added the building of a complete city in a single continuous building 2 miles high. I dismiss these because they involve energy problems or psychological problems so formidable as to seem insurmountable, are mere cries of despair, or are applicable only to very special cases. If considered as possibilities for general adoption, all, I believe, would fail because, for their adoption to make sense, one has to assume a human population so large that there would actually have been a population collapse resulting from some kind of stress long before any of them had been put into operation.

The continuing vastly increased use of computers represents one trend which, almost indisputably, will have great effects upon town planning policy, or at least ought to. Some of these effects are direct and some indirect. It seems clear that, increasingly, computers will take over a very large proportion of the work at present done by so-called white-collar workers. This will mean that comparatively little new office building ought henceforth to be justified, since, as a consequence of miniaturisation of various kinds, previous estimates that a computerised enterprise might take up as much floor space as a conventional one were obviously wrong. This means fewer people going to work in offices, a tremendous relief of the burden on the road system in and around city centres, and the rather attractive problem of finding a useful new purpose for the arrays of concrete filing cabinets with which city centres have become endowed. It may, with luck, also, incidentally, mean the elimination of a great deal of unnecessary office work and the irritation caused to those who are the recipients or consumers of its products.

I am neither starry-eyed about nor fearful of the consequences of computerisation. That computers are stupid cannot be denied, and that they will continue to make and persist in making stupid mistakes until put right by a human being is certain. I expect many people will continue to find themselves unable to cancel subscriptions which they wish to cancel, will continue to receive bills for things they have not received, but at least the job of putting right computer errors should be more interesting for humans than actually doing the work that the computer does. On the other hand, I do not think that there is the slightest danger of the computer 'taking over'. We should have to be a great deal more stupid as a species than I think we are for this to happen.

The people who used to do the work done by computers must become unemployed in large numbers, and, as a result of corresponding automation in manufacturing industry, will remain so (or at least not employed in any utilitarian sense). Of course there are dangers in this. Satan finds work for idle hands, and so forth. But we should be poor creatures if we really found that we had made the dream of leisure, so cherished by so many weary people over

millennia, turn out to be a nightmare! No doubt much thought and organisation needs to be devoted to ensuring that it does not become a nightmare, but that does not seem to me to be a difficult problem. There are very important implications in this for town planning.

Greater leisure means that people have more time for activity in and around their homes, and therefore can make good use of greater floor space and larger gardens. They also have time for more entertainment, play and instruction. If we think we are going in that direction, we ought now to start lowering housing densities, increasing amounts of urban open space, including playing fields, and at least consider where and how provision can be made for greatly increased amounts of accommodation for entertainment and instruction. Increased leisure, however, need not be confined to purely personal activities. The opportunities for carrying out ambitious and comprehensive landscape design and detailed landscaping work would obviously be much increased. I have long thought that this was one of the things which could only be brought about by greater leisure, and that it would be one of the greatest benefits of greater leisure. Once more I draw attention to Jim McCluskey's *Road Form and Townscape*. The things he suggests there provide scope for many hundreds of thousands of person hours of fruitful toil, but, I fear, are unlikely to be carried out comprehensively or fully until organised opportunities for doing them are created.

Greatly increased leisure is not a certainty. There are two conceivable, if improbable, policies which would prevent it. Either from altruistic motives or as a matter of enlightened self-interest, or a mixture of them, we might decide to maintain high technology, or even extend it, and go flat out for the greatest amount of production that that technology could allow, providing the poor countries of the world with the surplus. In that case, while other things would perhaps be much as they are now, there would be no shortage of work to be done. Redundant office workers could soon be found something useful to do.

Alternatively, we might conceivably decide to go the whole hog in the opposite direction, and, horrified by the problems of mounting pollution, decide to switch over to becoming a very low technology society. If we did that we should revert to being a labour-intensive society, and it is very doubtful whether collectively we should agree to do this.

Although such a future would be rather a hard future compared with the present life of the better-off in the prosperous countries, it would be wrong to think of it as necessarily a bleak or unhappy future. The exercise of ingenuity in promoting non-polluting labour-saving devices which did not consume non-renewable resources would provide much stimulating activity; and artistically, the stimulus might be very great; in the field of building, the grouping of mud huts gives at least as much scope for skilful design as the grouping of tower blocks.

Compromises between these extremes are more feasible. Assuming that we could overcome the difficulties of switching over discussed earlier in this chapter, and in particular those of making a selective switch-over, we might decide to go for a generally rather lower level of technology, but to retain those aspects

of high technology which could be seen to be worth while retaining in terms of the benefits secured as set against energy consumption and pollution production. In that event, we should go on making agricultural machinery, and even extend its use, for the benefits in greater production must enormously offset the energy consumed and pollution produced by making it, and socially, it eliminates vast quantities of dull, distressing and ageing toil. We might still decide to exploit the air cushion vehicle. No doubt the resources used and the pollution produced would be somewhat formidable, but might, when weighed in a properly contrived balance sheet, be found to be justified by the saving of resources through reduced need for construction and maintenance of roads, tracks and bridges.

I am sure that the number, and amount of use of personal mechanised vehicles would be greatly reduced in favour of public transport. Whether such personal vehicles as remained would be very efficient muscle-powered vehicles or air cushion vehicles it is hard to guess. There seems to be evidence to suggest that small air cushion vehicles are quite practicable. Whatever form they took, we surely should not repeat the mistake of making them capable of going too fast and with too great acceleration to be used safely on the tracks which it would be practicable to construct for them. Their number and use might be controlled by rationing of the purse or by less direct means, but since the practicable number, frequency of use and lengths of journey would probably be small, the promotion of optimum accessibility in towns so as to reduce the need for journeys and keep necessary ones as short as possible would be very important.

Two changes in buildings would be likely. Comparatively simple building materials like tree trunks and unbaked bricks would again become very important, because of all the resources and pollution involved in making more sophisticated materials, and this would mean the abandonment of tall buildings, a need reinforced by the cost of constructing and running lifts to serve them. In a country like this, do-it-yourself house building would probably not take place on a large scale, but the manufacture of standardised building components and even complete buildings in factories might become universal. This is a well-worn theme. In fact it seems incredible that it has not become a universal practice in all developed countries. Factory-produced buildings do not mean the creation of a stereotyped visual hell, but that all architectural design and all detailed town planning work would need to be carried out with the building group rather than the individual building as the unit.

Surprisingly, so far as I can see, intelligent application of the most firmly based town planning principles that we now have would cope satisfactorily with any of the alternative futures, or blends of them, which I have discussed. But it is remarkable how persistently one problem recurs: there is some conflict between housing land needs and accessibility needs. If we have a future in which there is a great deal of leisure, but movement is slow or costly, there may be some difficulty in resolving the need for greater personal space with the need for greater accessibility. This cannot be solved by ingenuity, only by a conscious decision about the relative importance of the two items and the adoption of a policy which reflects that decision.

Although town planning could proceed most confidently in the rather unlikely event of a firm, deliberate decision being made about what kind of future to have, there is a great deal which is common to most futures in terms of sensible town planning policy. For example, if we go on constructing roads for motor cars in their present form, exercising due parsimony, although we shall have spent much more than we should have spent on the tracks needed for air cushion vehicles, at least we shall have a system of tracks perfectly satisfactory for the latter if they eventually become dominant.

A track needs to be in the right place and reserved ahead of need whatever kind of vehicle we are using (one does not discount the possible future importance of continually improved bicycles of less and less weight, perhaps powered by engines of minimum power to see them up the worst hills). Propinquity is useful, however fast we can travel. Face-to-face meetings will surely always be better than meetings via a machine, however sophisticated. Space is psychologically valuable, and so are daylight and fresh air, however much we provide air conditioning to make good the lack of one, and animated wall displays of beautiful, rippling countryside to make up for the other. Grouping of uses for similar purposes will always produce convenience and economies, despite the plea of a Kensington resident that, in present conditions of terrorism, embassies ought to be spread around London rather than concentrated in Kensington. Simplicity of arrangement is a good thing in itself because it reduces the chances of confusion and error, and is, using the word in the widest sense, aesthetically pleasing.

In short, if as town planners we are able to persuade our employers to do the best that can be done in the light of present knowledge and available resources, it seems very unlikely that we shall do or fail to do anything which, had our powers of prediction been greater, would have been done very differently.

To enable the best knowledge and skills concerned with town planning to be fully used, there will unquestionably have to be substantial changes in the way in which town planning is organised and in the way in which town planners are regarded and regard themselves. The most obvious, and perhaps important, change needed is the establishment of a more rational relationship between the different levels of government: central government, upper-tier local authority and lower-tier local authority, so that the functions discharged by each are performed firmly and expeditiously, and so that the decisions of the upper or more general level are respected and wholeheartedly implemented at the more detailed level. Eternal bickering between district councils and county councils about the interpretation and implementation of structure plans will not produce good town planning. Once general principles and policies have been settled, they should prevail unless and until they are deliberately changed in the light of changed circumstances or experience, not as the result of dogfights on *ad hoc* issues.

It should go without saying that no authority exercising planning powers ought to be allowed to do so unless it employs sufficient staff. The planning staff must also be of the right kind, that is, properly trained and experienced town

planners. To this end, it is essential that the town planning profession should not only make sure of its competence within its professional field, but should define that field with some precision, adopting reasonably modest boundaries. We simply must not continue to foster the idea that 'planning' is a broad generic activity within which anyone who is skilled in one kind of planning is also to be deemed competent to do any other kind of planning.

Preparing plans quickly and in sufficient detail and taking decisions quickly are of the essence. There has been grave failure in this on the part both of central and local government, shared by elected representatives, administrators and town planners. If that were achieved, the problems of public participation and consultation might well be found to be much less severe than they currently appear to be. Lack of clarity, detail and speed seem to foster far more discontent and anger than the actual content of most town planning proposals. But firmness is essential, and it is no good any planning authority thinking that it can do town planning without tears. Some necessary proposals are bound to be displeasing to substantial sections of society.

I think that it is very easy to exaggerate the benefits to be secured by public participation, that its beneficial forms should be fostered, but that the forms in which it cannot in fact produce useful results should be frankly recognised and discarded.

The public inquiry, both into plans and appeals against refusal, seems on the whole the best method of both consultations and participation so far devised, and should be continued, though with great efforts being made to exclude the irrelevant and ensure consideration of everything that is relevant. Abandonment of the adversary method in conducting such inquiries might well produce very good results.

Town planners need to acquire a greater mastery of relevant theory and techniques than most at present possess, concentrating upon centrally relevant matters rather than fringe activities, and eschewing gimmicks and passing fashions. The town planning profession will never acquire the authoritative status which it needs and deserves if it is seen to be swayed by every bright idea conjured up by an amateur. This is not to say that the ideas of amateurs should be rejected, but that they should be weighed in the light of professional skill and experience, not agitatedly taken up for fear that one might otherwise be thought dull and square. In particular, a great deal more research needs to be done in the field of town planning, but not of a very *recherché* kind. There is plenty of plain bread and butter research yet to be done to enable full authoritativeness to be justly claimed. In particular, as I have frequently emphasised in this book, much more needs to be firmly established and systematically stated about the consequences and implications of adopting different levels of residential density, while painstaking research into those aspects of territoriality, and they are many, which relate to town planning, needs to be *begun*.

It would not be difficult to establish generally valid standards (and methods of estimating necessary departures from them) regarding the amounts of land needed for public open space and large establishments. Once some firm results

had been secured in these areas, much more confident and satisfying control of many details of development could be obtained.

There are many other items of mundane research which could and should be tackled. To mention only two, the amount of parking space which ought to be supplied in connection with given quantities of various different uses has not really been closely examined. Current parking standards may not be very far wrong, but they are extremely crude and difficult to validate in argument. The floor-space index method of measuring and controlling non-residential density was invented and an account of it published in *The Redevelopment of Central Areas* more than thirty years ago. It did not profess to be more than a tentative exploration of the subject. It is of great potential practical value for controlling sensibly the amount and intensity of development in central areas, yet virtually no further serious work has been done on it. These are matters the careful investigation of which would bring greater returns than some of the extraordinarily recondite matters now tackled by researchers.

A return to maps and physical models as the principal media for the communication of town planning policies and purposes is essential. Town planning is design, and design cannot be properly achieved verbally, it has to be done graphically.

A final message to all town planners and their employers: At least daily, and preferably more often, ask yourselves: 'What are we trying to do, and why?'

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