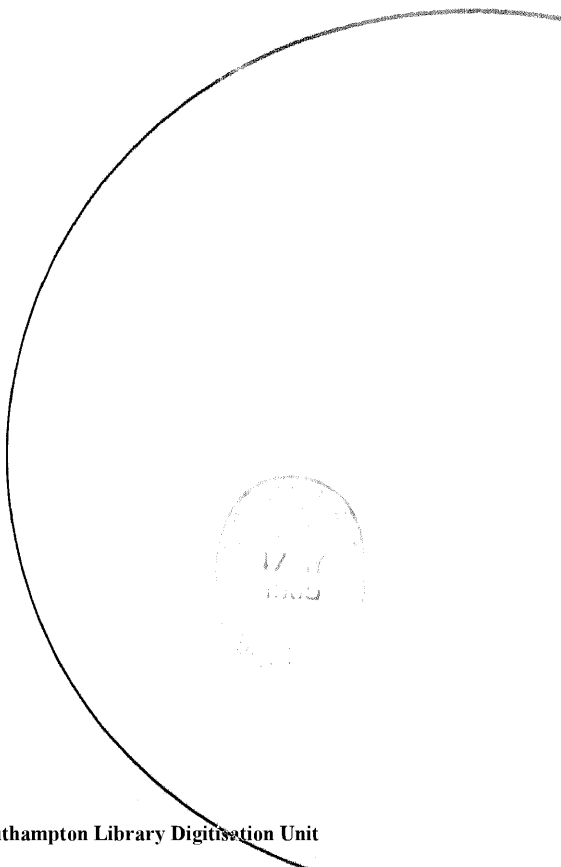
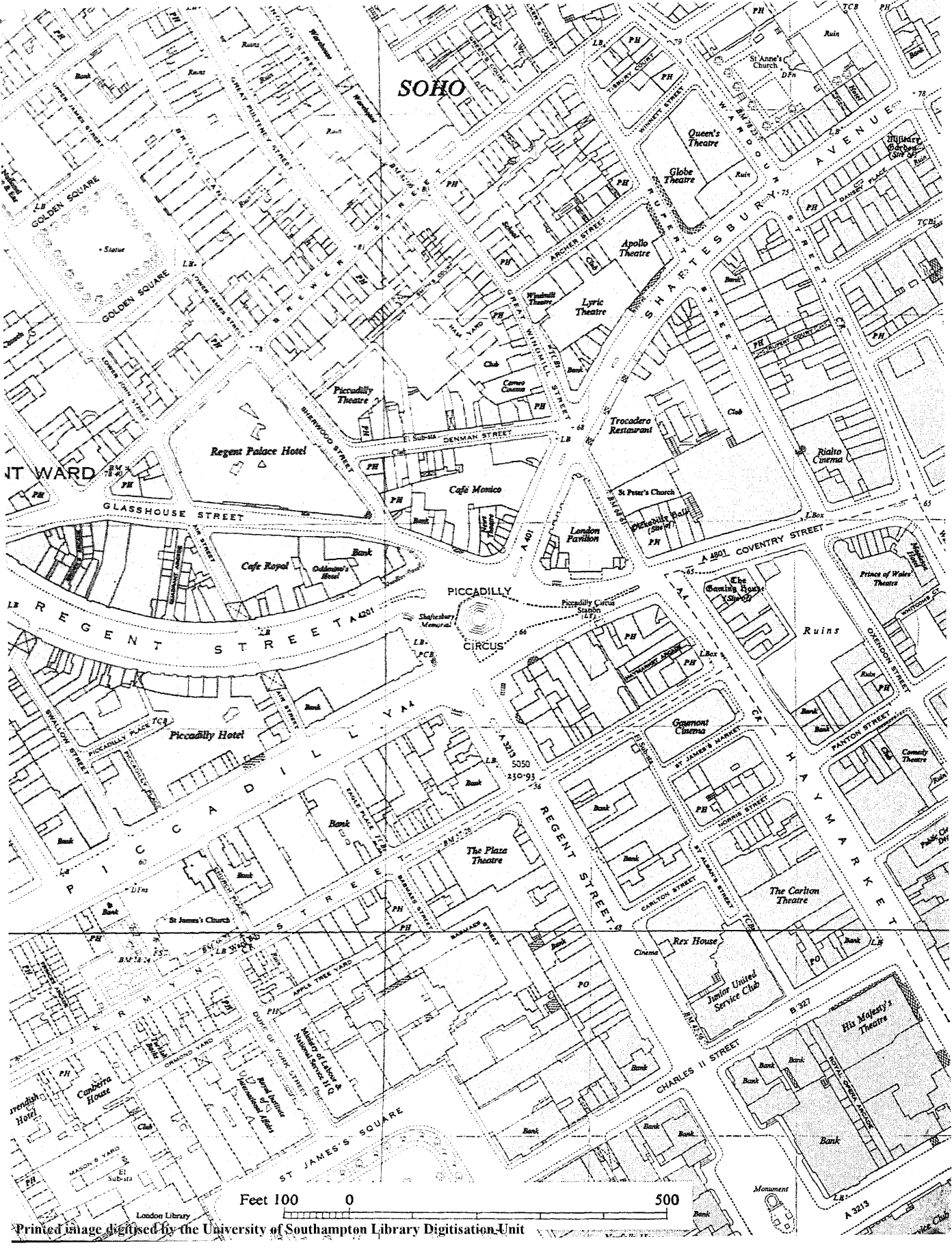
Piccadilly Circus




SOHO
GOLDEN SQUARE
Statue
GOLDEN SQUARE
Regent Palace Hotel
GLASSHOUSE STREET
Cafe Royal
Oddenino's Hotel
Bank
REGENT STREET A4201
PICCADILLY
CIRCUS
Shaftesbury Memorial
Piccadilly Circus Station (LT)
Piccadilly Hotel
PICCADILLY
The Plaza Theatre
REGENT STREET
St James's Church
ST JAMES'S SQUARE
Canberra House
Ritz Hotel
Mercury of Labour & National Service H.Q.
Royal Institute of Chartered Surveyors
Piccadilly Theatre
Cafe Monico
Lyric Theatre
Apollo Theatre
Windmill Theatre
Cameo Cinema
Trocadero Restaurant
Rialto Cinema
London Pavilion
St Peter's Church
Globe Theatre
Queen's Theatre
St Anne's Church
Ruins
Military Garden (Site of)
Gaumont Cinema
The Carlton Theatre
Rex House Cinema
Junior United Service Club
His Majesty's Theatre
Prince of Wales Theatre
The Gaming House (Site of)
Comedy Theatre
Monument
CHARLES II STREET
HAYMARKET
SHAFTESBURY AVENUE
COVENTRY STREET
DENMAN STREET
GREAT WINDMILL STREET
ARCHER STREET
HAM YARD
BROADWICK STREET
BERWICK STREET
WARDOUR STREET
SHERWOOD STREET
GREAT MARLBOROUGH STREET
GREAT PULTENEY STREET
LOWER JOHN STREET
UPPER JAMES STREET
LOWER JAMES STREET
GLASSHOUSE STREET
AIR STREET
SWALLOW STREET
PICCADILLY PLACE
EAGLE PLACE
BEAK STREET
BARNARD STREET
CARLTON STREET
ST ALBAN'S STREET
MORRIS STREET
PANTON STREET
OXENDON STREET
WHITCOMB ST
TABLEY COURT
WINNETT STREET
DANSEY PLACE
TRAFFORD COURT
APPLE TREE YARD
DUKE OF YORK STREET
ORMOND YARD
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Piccadilly Circus

Report of the working party

Ministry of Housing and
Local Government
Ministry of Transport

London
Her Majesty's Stationery Office
1965

Contents

Figures in the text

Membership

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Mr F. G. West, FRIBA, MTPI *London County Council*
Mr J. C. Craig, ARICS, MTPI *London County Council*
Mr P. F. Stott, MA, MICE *London County Council*
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Mr J. Delafons (Secretary) *Ministry of Housing and Local Government*

* The following changes occurred in the composition of the Working Party: Mr Kacirek was succeeded by Mr W. F. B. Lovett, BA., FRIBA., MTPI; Mr Rogerson by Mr W. A. Wood; Mr Shove by Mr W. R. Cotton; Mr Drake by Mr R. L. Cox. The following officers of the London County Council also assisted the Working Party: Mr A. J. H. Clayton, Mr R. M. Rookwood and Dr B. Schlaffenberg.

† Mr Collins joined the Working Party in December 1964 on his appointment as Director of Planning to the Greater London Council.

Summary

(1) Piccadilly Circus is still for many people the heart of London. Certainly it is the hub of the West End and probably the busiest place in London. It is a major traffic junction and a focal point for pedestrians.

(2) The problem in replanning the Circus is to reconcile its traffic and pedestrian functions. Our job as a Working Party has been to assess the future traffic demand in this part of London, what the load will be on the Circus itself and how it can be catered for.

(3) In approaching our task we have set ourselves the following objectives:

(i) to give full weight to environmental as well as traffic factors, not only in the Circus but in the approach roads and surrounding areas;

(ii) to set any short-term measures in a long-term context and to ensure that any such measures are compatible with long-term objectives;

(iii) to reach conclusions which will permit an early start to be made on the redevelopment of the Circus.

(4) The scheme prepared by Lord Holford in 1962 for the redevelopment of the Circus allowed for 20% more traffic than was using the Circus in 1960. But it would provide no greater traffic capacity than there is in the Circus at present as a result of the introduction of one-way working in 1961. Traffic surveys show that on the critical west side of the Circus traffic is now 16½% heavier than it was in 1960 before the introduction of one-way working, so that at this point the Circus is already carrying nearly as much traffic as the Holford scheme could accommodate.

(5) One vital factor, quite apart from traffic demand, has changed the situation at the Circus since the Holford scheme was prepared. This is the extent and pace of redevelopment that now appears possible in this area over the next ten to twenty years. In particular, the possibility of redeveloping Regent Street with a pedestrian shopping 'street' at a level above the traffic circulation is now being actively considered.

(6) In this situation we have sought a solution for the Circus which reconciles the demands of traffic and environment, but which does not impose an inflexible pattern on the future redevelopment of Regent Street, or of the other areas nearby. At this early stage in the replanning of London we must allow as much latitude as possible for future change.

(7) To get at the facts of the traffic problem at the Circus we commissioned a special survey of traffic using the Circus. The results of this survey show that the problem here is not one of commuters' cars causing congestion only at the rush hours. The picture is quite different. Traffic builds up early in the morning and remains at a high level throughout the day, reaching its peak around mid-day. Most of it is traffic generated by the intense business and commercial activity of the area, with a relatively small element of through traffic and a large proportion of buses and taxis.

(8) We have conducted a critical re-examination of the future trend of traffic demand in the Circus. We conclude that it would be quite unrealistic to assume that there will not be a large increase in traffic demand in this area over the next 10–20 years, or that 50% increased capacity on the approach routes and in the Circus would be in excess of future demand.

(9) We have reviewed the scope for regulating the potential demand by various means, but we conclude that while many of these methods of control may well be essential components of a comprehensive and effective traffic policy for central London, none of them is likely to have a substantial effect on the situation at the Circus, which will retain its characteristic and highly significant function as the traffic hub of the West End.

(10) We have also considered the effect on the Circus of long-term changes in the road system of central London, including the creation of a full-scale primary network within a motorway system of the type now being evolved by the Greater London Council. We conclude that while such a network would relieve the Circus of a large part of its present traffic, this reduction would probably be largely offset by additional traffic attracted into the West End by the existence of the network, unless restraints were successfully applied. In any event, it is clear that such a network would be so costly and would involve such extensive redevelopment and such a heavy rehousing liability that it is not a solution we can invoke as a basis for the early redevelopment of the Circus.

(11) We therefore looked for a means of taking some of the potential traffic load off the Circus by providing a local relief route. We conclude that by creating a new route on the line of Swallow Street it would be possible to provide the reserve capacity that would be needed to meet the traffic increase following on improvements to the approach routes.

(12) This would enable the Holford scheme to go ahead as planned by relieving the 'pinch point' on the west side of the Circus. But it would still result in a heavy increase in traffic using the Circus, and we seriously doubt whether such a heavy concentration of traffic in the Circus would be compatible with the maintenance

of good environmental conditions if the main pedestrian concourse and vehicular circulation were combined at ground level. Nor would it be compatible with Lord Holford's conception of the Circus as a place of pedestrian resort.

(13) Our concern is at least as much with the creation of a good environment for the pedestrian as with the efficient circulation of traffic. We have therefore thought it right to explore the possibility of a radically different approach to the redevelopment of the Circus by adopting the concept of 'vertical separation' – traffic at ground level and pedestrians above.

(14) This is a concept already inherent in Lord Holford's scheme and we believe that the redevelopment of the Circus in this form would be compatible with the basic principles of the Holford scheme, though it would clearly call for a different design solution in both architectural and engineering terms. The new factors that have emerged since that scheme was prepared – the information now available about the nature of traffic demand at the Circus, and the likelihood of radical change in this part of the West End as redevelopment gathers pace – reinforce the case for taking a new look at the Circus.

(15) We have had some feasibility studies carried out which have convinced us that 'double decking' could be a practical proposition for the redevelopment of the Circus and could form the basis for a comprehensive redevelopment of this part of the West End. The opportunity is there for a solution which effectively reconciles the traffic and pedestrian functions. It will call for design skills of the highest order. It is impossible to illustrate such a scheme until detailed design studies are carried out. That would be the next step if this conclusion were accepted.

(16) The feasibility studies have also shown that it is practical to devise a 'double deck' scheme for the Circus which can be extended in stages as redevelopment proceeds in and around the Circus, but which would also permit an easy transition to ground level as one moves away from the Circus into the quieter areas where traffic is less dominant and conditions are pleasanter for pedestrians on the ground.

(17) We are satisfied that a scheme of this kind could be put in hand promptly and completed within a reasonable time. The order of costs for both public works and property acquisition would be substantially similar to those required for the Holford scheme.

(18) We suggest that the Greater London Council and the Westminster City Council should now commission a consultants' design study on the basis of a planning brief setting out the type and quantity of uses to be provided, the traffic requirements and the general programme envisaged for redevelopment.

(19) A scheme on the lines proposed would provide substantially improved traffic capacity and would be a candidate for Government grant aid. It should find an early place in London's road programme.

(20) What happens in the redevelopment of the Circus will set the pace, the character and the quality for the redevelopment of the West End.

1 The Circus

The busiest place in London

1. Piccadilly Circus is still for many people the heart of London. Certainly it is the hub of the West End, the focal point for shopping and entertainment, and a highlight on the tourist map of London. It is also one of the most important traffic junctions in central London and a major interchange point for public transport. In short, it is probably the busiest place in London. The consequent conflict between its traffic and pedestrian functions make it the epitome of 'traffic in towns'.*

2. The Circus today hardly lives up to its reputation as a show place. Under the impact of traffic, and with the problems of its redevelopment unresolved, it has lost much of its character and attraction as a place of pedestrian resort. It is in real danger of rapid deterioration if nothing is done about it. The great aim in any scheme for rebuilding the Circus must be, as Lord Holford (then Sir William Holford) said in his report,† 'to make Piccadilly Circus as attractive in reality as it obviously is in the imaginations of people from every quarter of the English-speaking world.'

Redevelopment of the Circus 1886-1960

3. The redevelopment of the Circus has been a subject of public interest and controversy since 1886. In that year the construction of Shaftesbury Avenue by the Metropolitan Board of Works destroyed one of the segments of the symmetrical circus (then known as Regent Circus South) which John Nash had formed as part of his great architectural progression from Regent's Park to St. James's Park.

4. Since that date there have been many unsuccessful attempts to restore to the Circus a sense of architectural unity and distinction‡. In 1905 Norman Shaw prepared proposals for the redevelopment of the Circus as part of his plan for rebuilding the Regent Street Quadrant. Of this plan only the Piccadilly Hotel was realised. In 1910 John Murray, the Crown Surveyor, produced a scheme for

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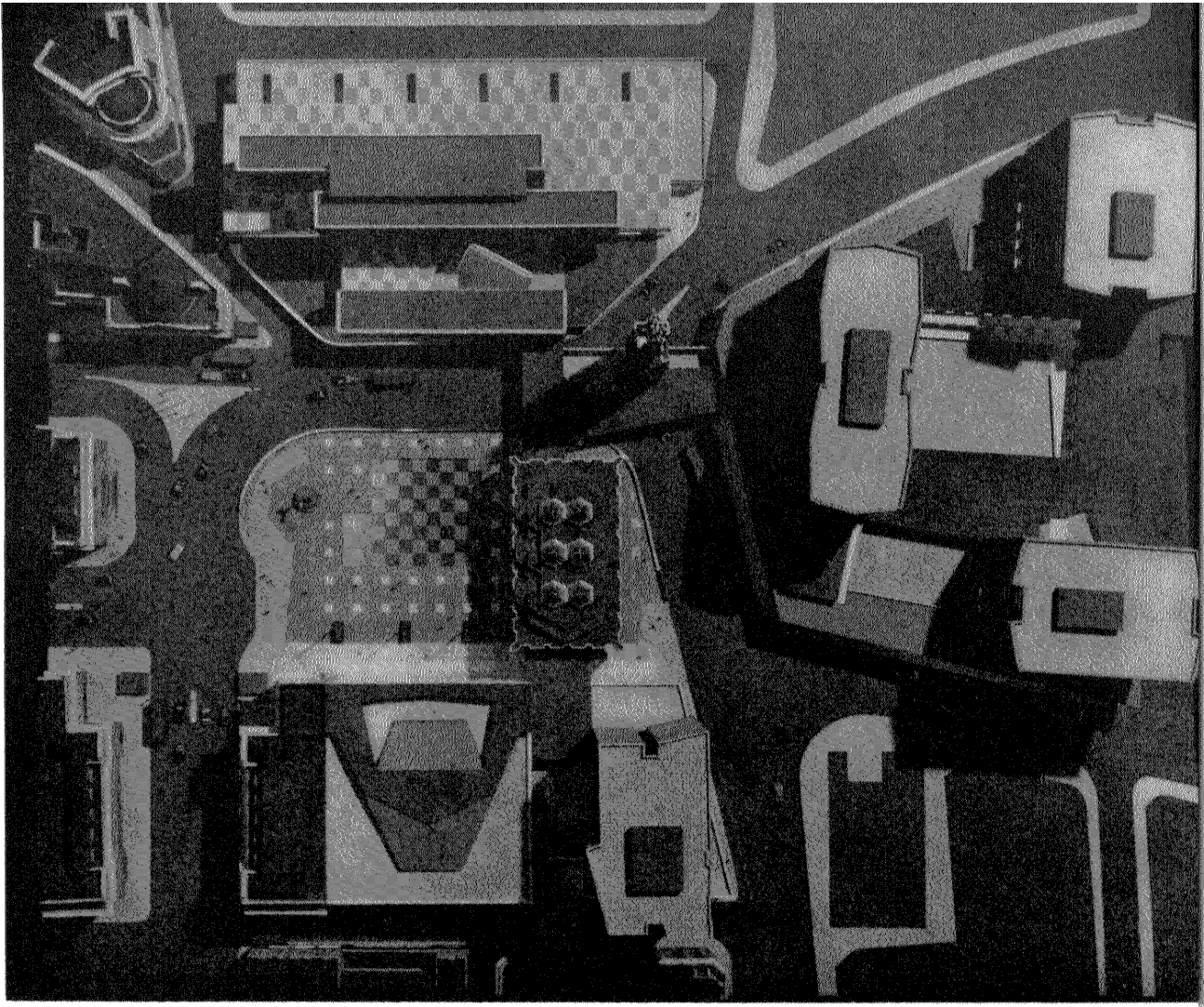
* *Traffic in Towns: A Study of the long-term problems of traffic in urban areas* ('the Buchanan Report') H.M.S.O. 1963.

† *Piccadilly Circus: Future Redevelopment.* March 1962, published by the London County Council.

‡ A full account of the history of the Circus is given in volume XXXI of the Survey of London, published by the L.C.C. in 1964. For a shorter account see The Journal of the London Society, No. 365, March 1964, *Piccadilly Circus and the Regent Street Quadrant from* 1886–1960 by F. H. W. Sheppard, the Editor of the Survey of London.



1 The Holford scheme – top view of model (paragraph 8)

reconstructing the Circus as a memorial to King Edward VII, with an equestrian statue of the monarch replacing Eros and a 'Shakespeare Memorial Theatre' on the Monico site. In 1917 Sir Reginald Blomfield's design for the Quadrant was accepted and the rebuilding of Nash's Regent Street in its present form began. Ten years later Blomfield produced his ideas for redeveloping the north east side of the Circus around Shaftesbury Avenue, thus getting rid of what he called 'the disorderly rabble of buildings which at present disgraces the most important "place" in London'. None of these schemes was carried out. In 1925 the construction of the new tube station was begun and the new underground concourse and escalators were opened in 1928. Meanwhile the only visible change in the Circus was the mounting battery of illuminated advertisements on the north side.

5. Over the next twenty years a number of planning reports were published, including the Bressey Highway Development Report in 1937, the Abercrombie County of London Plan in 1943 and the City of Westminster Plan in 1946, each of which contained recommendations for the improvement of Piccadilly Circus as a major traffic intersection in the road system of central London.

6. The present chapter in the history of the Circus began in 1958 when the L.C.C. resolved 'That the Council desires that the policy of the Town Planning Committee of retaining Piccadilly Circus as a cheerful centre of London's entertainment world should be continued and fostered by approving satisfactory architectural schemes which can incorporate illuminated signs in the design, so producing pleasing buildings by day and animation by night.' In 1959 the Council gave provisional approval to a scheme for redeveloping the Monico site with a building containing shops, restaurants, a bank, exhibition rooms and offices, including a tower 172 feet high with special provision for massive advertising display. In view of the importance of the site and the great public interest aroused, the Minister of Housing and Local Government directed that the application be referred to him and, following a public inquiry, refused planning permission for the scheme. In his decision letter of 19th May, 1960, the Minister proposed that a comprehensive plan should be prepared as a guide to the redevelopment of the Circus as a whole. The plan, in addition to giving general guidance on design, would deal with the traffic problem and 'the need to reconcile the function of the Circus as a traffic intersection with its function as a place thronged by pedestrians.'

The Holford Scheme

7. The L.C.C. commissioned Lord Holford to prepare such a plan. There were no formal terms of reference or detailed brief, but it is important to note that Lord Holford was in fact working within certain limitations and assumptions deriving largely from the work which the L.C.C. had already done on the various possibilities for the redevelopment of the Circus. In particular, he adopted the road

layout incorporated in an outline scheme prepared by the L.C.C. Architects' Department in 1958, which was subsequently modified following the introduction of one-way working in 1961. In addition, the area of potential redevelopment around the Circus was assumed to be relatively limited; the Regent Street Quadrant, Piccadilly and the west side of Lower Regent Street were all specifically excluded.

8. Lord Holford's final report was published in March 1962. The main feature of this very attractive scheme for the redevelopment of the Circus was the creation of a large pedestrian concourse or piazza at ground level, covering nearly an acre in the centre of the Circus (as shown in the view of the model, figure 1).

9. The scheme made provision for an increase of 20% over the 1960 traffic *volume,* but it would provide no greater traffic *capacity* than exists now in the Circus following the introduction of one-way working in 1961. In other words, the scheme would cater for 20% more traffic than was using the Circus in 1960, but it would be able to handle no more traffic than the Circus can cope with at present. As we shall see later, traffic in the Circus is already 16½% higher than in 1960 on the critical west side of the Circus.

10. Following discussions between the L.C.C. and the Ministry of Housing and Local Government and the Ministry of Transport, the Ministers made known their view, in a letter dated 2nd September, 1963, that these proposals were 'now seen to do too little to provide for the almost inevitable future traffic increase; and were bound to result in, and perpetuate, an inadequate traffic provision at a key junction in the centre of London.' The Ministers' view was that provision should be made for 50% increase in order to match the capacity of the approach routes feeding into the Circus, taking account of future improvements to those routes. The Council were asked to consult Lord Holford as to how the additional traffic capacity in the Circus could best be achieved.

11. In a letter to the Council dated 20th November, 1963, Lord Holford reported that 'Although I have explored several alternatives in an attempt to find a solution to the fundamental problem of securing increased traffic capacity and, at the same time, retaining the Circus as a place of attraction and resort, these further investigations have only served to confirm my earlier opinion, that it is not possible for me to do so in a manner which I believe would be acceptable.' He concluded that 'if Piccadilly Circus is to remain something more than a name on the Underground Map of London, other means should be found, probably outside the Circus itself, of regulating or relieving its motor traffic to some degree.' The L.C.C. agreed with their consultant that any further concession to traffic demands would endanger the satisfactory redevelopment of the Circus, and that in this redevelopment the interests of people should not be subordinated to those of motor traffic.

The Working Party

12. Following further discussions between the L.C.C. and the Ministries, agreement was reached on the setting up of the present Working Party. Our terms of reference and the composition of the Working Party are set out in the reply given by Sir Keith Joseph to a question in the House of Commons on 20th February, 1964, which is reproduced as Appendix I to this report.

13. In approaching our task we have set ourselves the following objectives:

(1) to give full weight to environmental as well as traffic factors, not only in the Circus but in the approach roads and surrounding areas;

(2) to set any short-term measures in a long-term context and to ensure that any such measures are compatible with long-term objectives;

(3) to reach conclusions which will permit an early start to be made on the redevelopment of the Circus.

The report

14. We begin by considering the Circus in the context of the West End and in relation to the environmental character of the areas surrounding the Circus, with special reference to Regent Street, and the probable course of future redevelopment. In the light of this we consider the relationship between traffic and environment in the area as a whole, and the problem of reconciling them in the process of redevelopment.

15. We then examine the traffic problems in detail. First, we consider the volume and composition of traffic in the Circus and approach routes, derived from the special traffic survey commissioned by the Working Party, and the likely increase in traffic demand in the future. We then consider the various methods of relieving the traffic load on the Circus: first by measures designed to restrict the amount of traffic entering the area, and secondly by transferring part of the load to other routes outside the Circus itself. We examine both the long-term possibilities of a motorway system and a primary distributory network serving central London, and a number of shorter-term measures designed to provide local relief within the vicinity of the Circus.

16. Finally, we consider the case for a different approach to the problems of the Circus by adopting the concept of vertical separation or 'double decking', with traffic circulation at ground level and the main pedestrian movement and piazza above.

17. We have been greatly assisted in our consideration of these matters by the generous co-operation and advice of Lord Holford, Professor Colin Buchanan and members of the Crown Estate Commissioners' Regent Street Committee.

2 The context

The area of significance

18. The Working Party's function has been not to deal with the traffic problems and redevelopment of the West End but to deal with the Circus in the context of the West End. Our terms of reference required us 'to determine the area which is of significance in relation to the traffic passing through Piccadilly Circus.' Initially we decided that for this purpose we should take the area of the West End cordon (i.e. an area defined by the Ministry of Transport for certain traffic survey purposes), together with the area down to the Embankment between Waterloo and Westminster bridges. As our work progressed, however, we found it necessary to go wider than this and to consider the Circus and the West End in relation to the road system of central London. On the other hand, we concentrated attention, in terms of development and environmental factors, on the area immediately adjoining the Circus – i.e. the approach roads (Piccadilly, Regent Street, Shaftesbury Avenue, Coventry Street, Haymarket, Lower Regent Street) and the areas that lie between them.

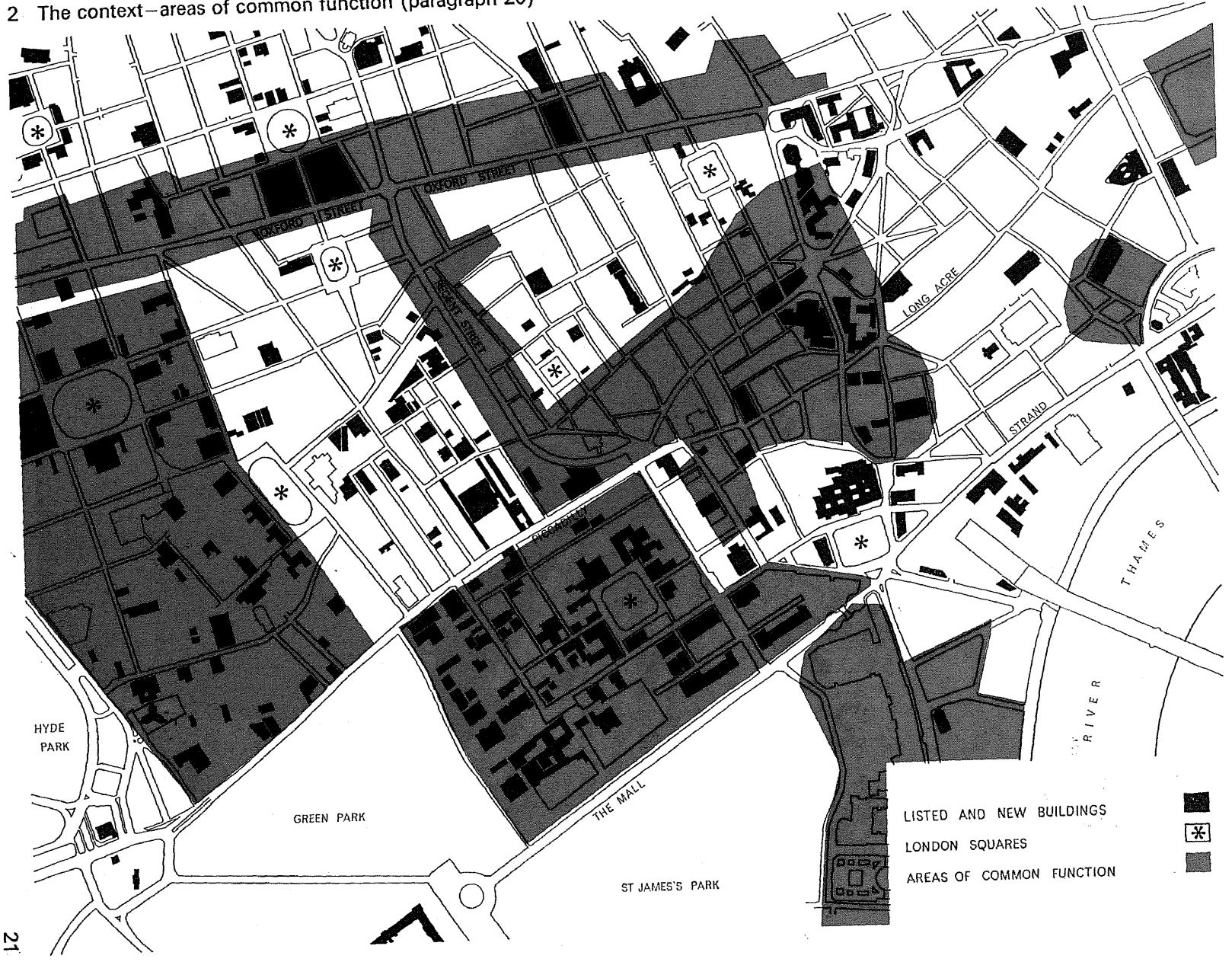
19. Piccadilly Circus is at the hub of a group of distinctive and relatively homogenous districts – Soho, Leicester Square, 'theatreland' in Shaftesbury Avenue, 'clubland' in Pall Mall and St. James's, the shopping centre of Regent Street. These are potential 'environmental areas', in the sense that they each have a cohesive character and distinctive function, and are areas in which environmental considerations should predominate over the interests of traffic.

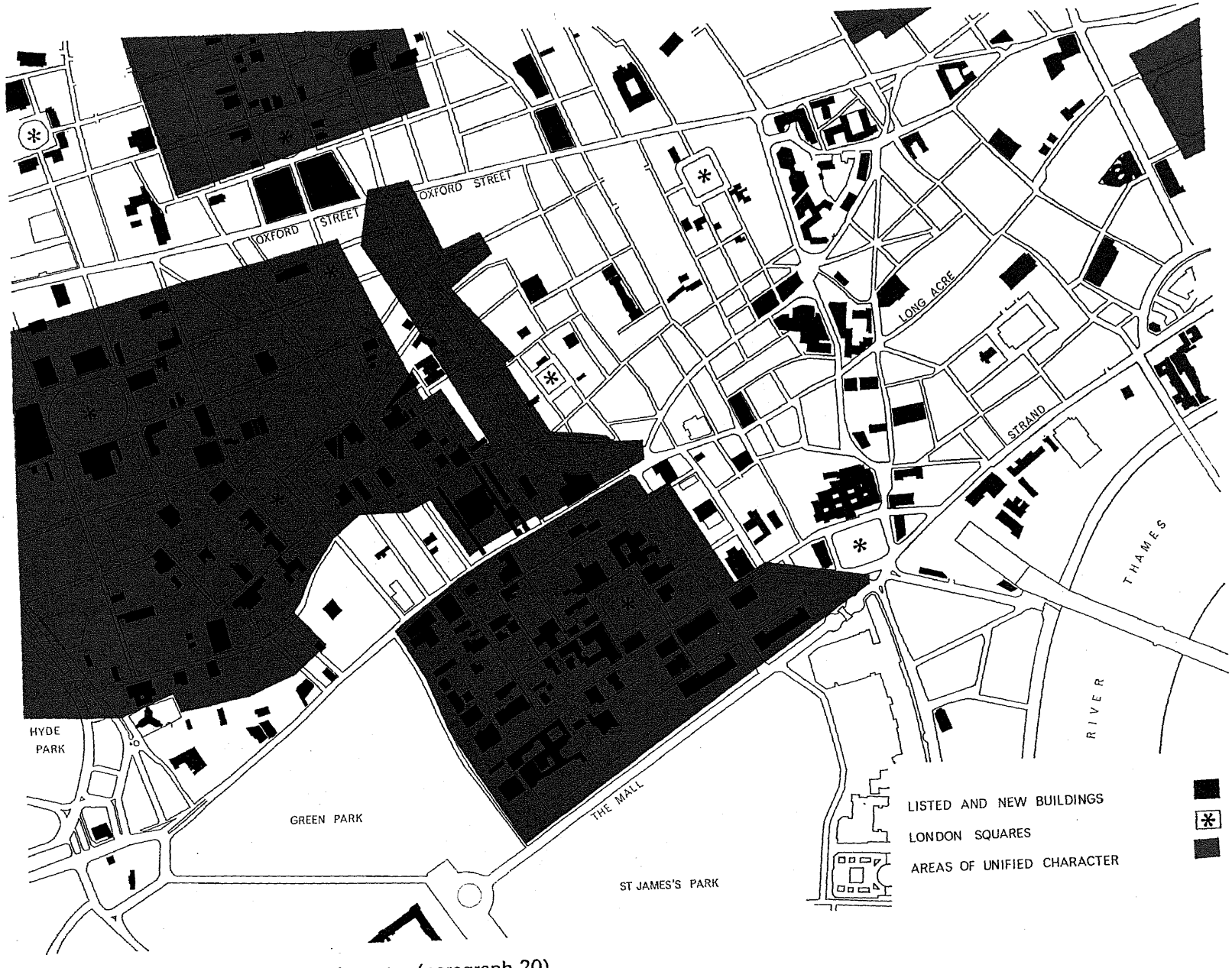
20. In order to delineate these areas more clearly and to study their interrelationship we had the following series of planning maps prepared:

(1) generalised land use survey
(2) frontage uses on approach routes, and means of service access
(3) areas of special character
(4) areas of common function
(5) areas of common architectural character
(6) listed buildings* and other buildings of special importance (theatres, etc.)
(7) buildings over 100 ft. in height and new buildings completed since 1947
(8) processional routes
(9) important pedestrian routes and pedestrian accident black spots

* i.e. buildings of special historic or architectural importance listed under section 32 of the Town and Country Planning Act 1962.

2 The context—areas of common function (paragraph 20)





3 The context—areas of unified character (paragraph 20)

(10) housing conditions (from Census data)
(11) rateable values per square foot (averaged by area)
(12) redevelopment potential – recent planning permissions, recent planning applications, vacant sites, other areas susceptible to early, mid-term and long-term redevelopment.

A summary of these planning factors is given in figures 2 and 3. These show the strategic location of the Circus as the focal point of the West End.

21. Some idea of the importance of the Circus as a focal point of the West End can be got from the surveys of pedestrian traffic carried out on winter weekdays in 1961, 1963 and 1964. These show that the number of pedestrians using the Circus is about 18,000 per hour in the morning peak period; 24,000 per hour in the early afternoon, and 36,000 per hour in the early evening (5–6 p.m.) when the home going rush overlaps with the crowds coming into the West End for the theatres, etc.* (See figure 4.)

22. This concentration of activities in and around the Circus is the main reason why the idea of 'moving the Circus somewhere else' – say to Leicester Square or north into Soho – is not a practical proposition. The Circus is the hub of the West End and the link between the main shopping area to the west and the entertainment centre to the east. The Circus could not be moved without at the same time changing the whole pattern of uses and the communication system in this part of the West End and, in effect, shifting its centre of gravity. Instead of solving the problem, it would produce the same problem in another place. And it would not be 'Piccadilly Circus'.

23. The planning studies also demonstrated the interdependence of the various environmental areas. They are all organic parts of the West End, which itself could be described as a major environmental area or grouping of environmental areas. Proposals in any one area concerning the road system, the character of the area or the pattern of redevelopment, may have major repercussions throughout the Piccadilly area. Professor Buchanan in his study of the Circus defined the problem as one in which 'the future of the Circus is seen to be dependent upon the decisions we take about the streets leading into the Circus.'†

Regent Street

24. We have found that the most critical of these relationships is that between Piccadilly Circus and Regent Street. Just as in the Circus a private developer's proposal to redevelop an individual site, the Monico block, forced a re-appraisal

* There is some double counting in these figures but they show the general volume of pedestrian traffic in the Circus.

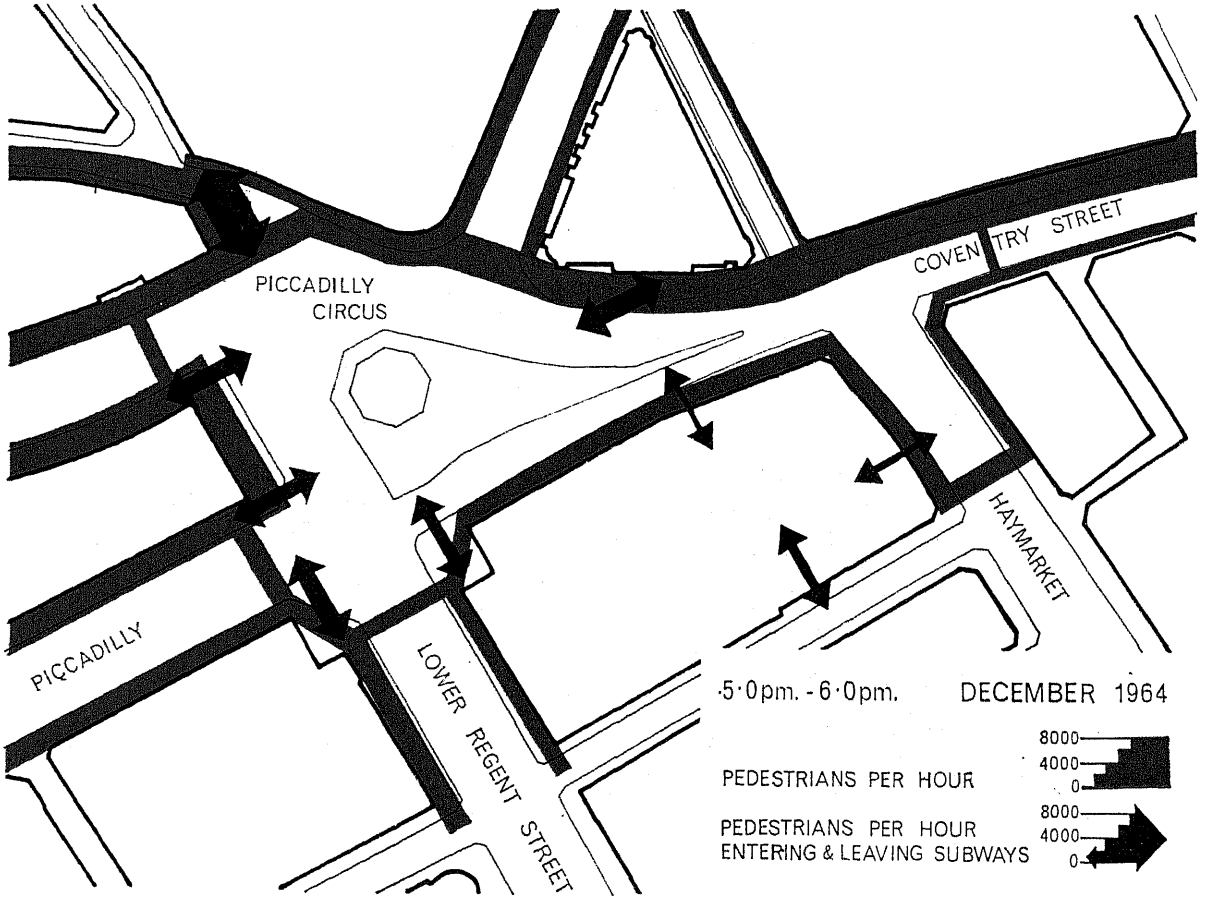
† *A visit to the Circus* by Professor Colin Buchanan, Journal of the Town Planning Institute, Vol. 50, No. 2, February 1964.

of the area as a whole, so in Regent Street a proposal to redevelop the site of Robinson and Cleaver's building led to the setting up by the Crown Estate Commissioners of a committee to advise them on the future of the whole of Regent Street. Our Working Party and the Regent Street Committee began work at about the same time and have kept closely in touch throughout.

25. We understand that on the advice of the Regent Street Committee the Crown Estate Commissioners are about to announce their intention to appoint consultants to investigate the feasibility and practical implications of redeveloping Regent Street in due course on the lines of a shopping street at a level above the traffic circulation, as being the most likely way of creating good conditions for shoppers and so of ensuring its survival as a great shopping street.

26. We recognise that any solution for the Circus must be compatible with the long-term objectives for Regent Street – both as regards its character as a shopping street and as regards its future redevelopment.

4 Pedestrian traffic flow in the Circus (paragraph 21)



27. Similarly, the redevelopment of the Circus is vitally affected by what is proposed for Regent Street. A 'double deck' solution for Regent Street would be difficult to reconcile with the Holford scheme for the Circus which, while it allowed for pedestrian circulation above and below ground level, envisaged the retention of the Regent Street frontages and provided for the main pedestrian concourse at ground level. This would obviously present design problems affecting the linkages at the various levels and, while a skilled designer could probably cope with these, there is little doubt that a double deck design for the Circus would offer far better prospects for successful integration with a double deck Regent Street.

28. In this situation it seems to us essential to find a solution to the Circus which will permit an early start on redevelopment but which does not impose an inflexible pattern on the future development of Regent Street (or on the other areas nearby) or prejudice the attainment of good environmental standards in a redeveloped Regent Street, whatever form that may take. What does seem to us very clear is that the early redevelopment of the Circus, and the creation there of a lively and attractive environment, is the best assurance for the future well being of Regent Street. If the Circus is allowed to decline still further, its deterioration could affect the prosperity not only of Regent Street but of much of this part of the West End.

The pace of change

29. The redevelopment of the Circus is already overdue. The redevelopment of Regent Street on comprehensive lines may not be realised until the existing Crown leases are nearing their end, which would not be for twenty or thirty years. But if conditions were right, or if new opportunities arose, redevelopment on a comprehensive basis might well start much sooner. In particular, the redevelopment of the Circus might well bring forward the redevelopment of the Regent Street Quadrant.

30. What is true of Regent Street is even more true of most other parts of the West End. Large scale proposals for the redevelopment of Shaftesbury Avenue, Charing Cross Road and parts of Soho are already under consideration. The Circus itself is only one element in a complex mosaic but it could establish a base line, and set the standard, for the renewal of the West End.

31. This emergent picture of rapid and widespread change is symptomatic of the intensely dynamic character of the area. As might be expected in the heart of the metropolis, the pattern and pace of change is rapid and complex but largely unpredictable. In planning for redevelopment it is essential, while establishing the basic principles on which redevelopment should proceed, to allow scope for future change and for changing conditions. We now consider what these basic principles should be.

Traffic and environment

32. Regent Street and the Circus demonstrate in an acute form that conflict between traffic function and pedestrian use which, as the Buchanan report so clearly showed, is destructive of the urban environment, is bound to get worse as traffic increases, and must be resolved so as to provide a satisfactory balance between traffic movement and the other needs of civilised urban life. At the same time, it must be recognised that efficient transport is vital to the economic life of the country and to the prosperity of London as the capital city. The growth in traffic demand in London is largely a reflection of the intense commercial and social life of the capital. The problem is to achieve a reasonable balance between traffic and environment by methods that are within our means.

33. The Buchanan report's approach to the problem of reconciling the conflicting demands of traffic and environment in towns was to establish a primary road network, on which traffic takes precedence, serving environmental areas where traffic is subordinate to other needs. To quote from the report (paragraph 101):

> 'There must be areas of good environment – urban rooms – where people can live, work, shop, look about, and move around on foot in reasonable freedom from the hazards of motor traffic, and there must be a complementary network of roads – urban corridors – for effecting the primary distribution of traffic to environmental areas. These areas are not free of traffic – they cannot be if they are to function – but the design would ensure that their traffic is related in character and volume to the environmental conditions being sought.'

34. We examine the feasibility of applying the network concept to central London in Part 4 of this report. We conclude that, while a theoretical network can be established, there are formidable and contentious implications in such a concept and the factors of cost and programming tell against its being realised in the foreseeable future. It is not a solution that we can invoke as a basis for the early redevelopment of the Circus.

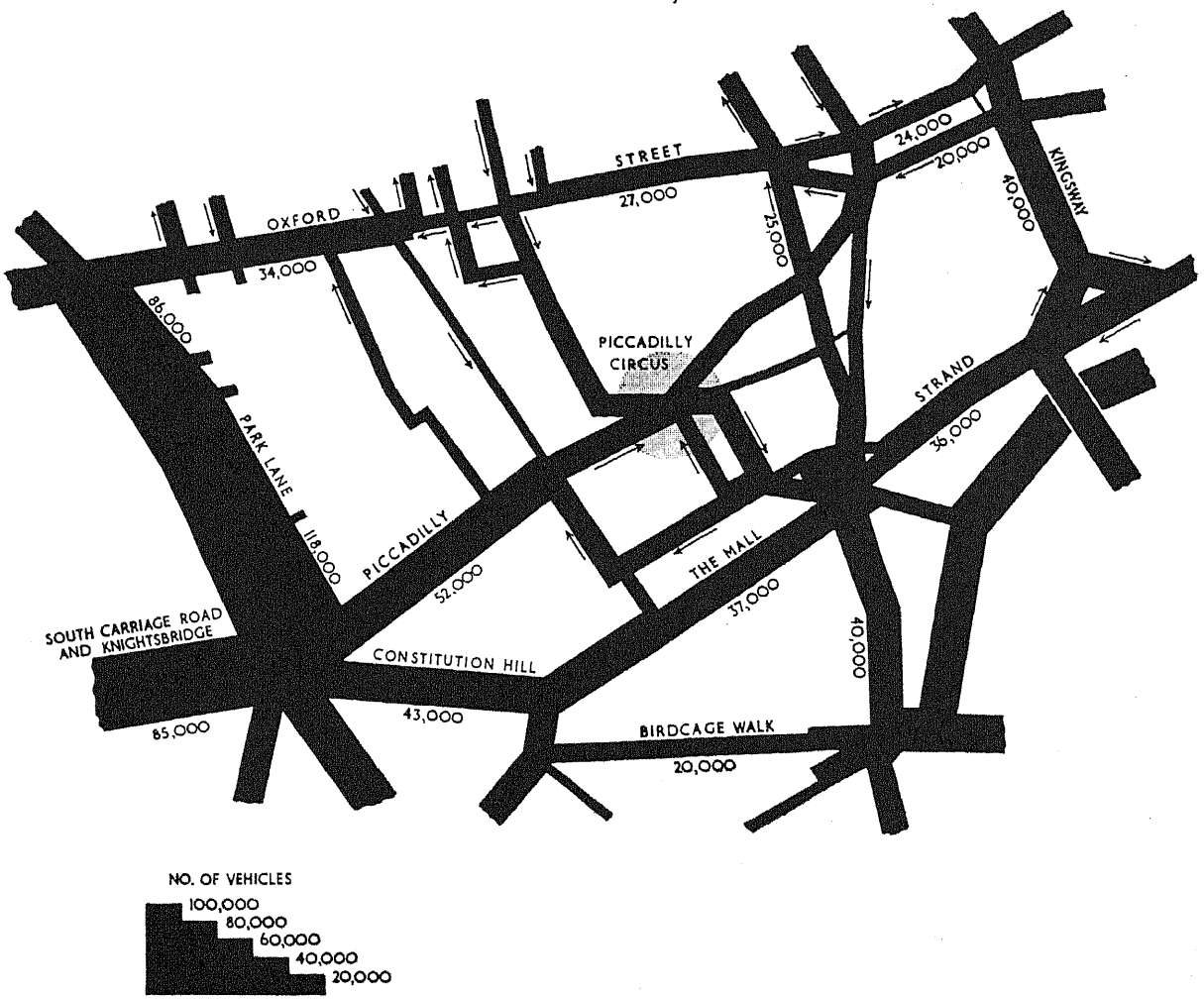
35. The application of the environmental area concept to the West End also presents difficulty, since several of the areas in which non-traffic functions should predominate are themselves major traffic routes and are likely to continue as such for many years. Regent Street and Shaftesbury Avenue are prime examples. In fact the proportion of through traffic on these roads is not predominant (see para. 45 below) but the total amount of traffic they carry is of course very heavy.

36. We have not found it possible to define with any measure of precision the level of traffic that might be compatible with the maintenance of good environmental standards in the Circus or on the major shopping streets in its vicinity. We endorse the need for research on this subject which was stressed in the Buchanan report, and the importance of establishing general performance

standards relating to noise, safety, and other aspects of the physical and visual impact of traffic. A useful start has been made but the feasibility of relating such standards to widely varying types of urban development has not yet been defined. The criteria to be applied to the heart of the metropolis, with its immense variety and intensity of traffic generating uses, are bound to differ from those appropriate to, say, the shopping centre of a small market town.

37. We believe, however, that the present traffic load on the Circus and on Regent Street, and no doubt on other streets in the area, is already in excess of what is reasonably compatible with the non-traffic functions of those streets in their present form. The Holford scheme allowed for a 20% increase over 1960 traffic volume (see para. 9 above), and it must be seriously doubted whether traffic on this scale, however routed within the Circus itself, would be com-

5 West End traffic—1964 weekday traffic volumes



patible with the creation of good and attractive conditions for pedestrians *at ground level.* We return to this in Part 5.

38. The fact that full realisation of the network system and environmental area concept lies far in the future does not mean that the traffic problem is insoluble. Professor Buchanan has himself stressed that, if the ideal solution of the primary network is unlikely to be achieved within the foreseeable future, then not only will there be a much lower limit on the amount of traffic that can be accommodated but other means of reconciling traffic and environment must be found.

39. One means of achieving at least a measure of reconciliation lies in the manner in which areas that are due for redevelopment are in fact redeveloped. The opportunities for urban renewal on a massive scale and on an entirely new pattern are only now beginning to emerge.

40. As redevelopment proceeds it should be possible to establish at least the rudiments of an 'embryo network', based largely on existing streets, and to attract to these improved routes traffic which at present filters through the potential environmental areas. Traffic management, coupled with limited road improvements, and the opportunities arising in conjunction with major redevelopment, should enable progress to be made with a positive policy of this kind over the next ten to twenty years.

41. It is not a case of a perfect solution or none at all. It is a case of the absolute necessity for a tolerable solution. It seems to us perfectly plausible that in the West End of London such alternative means of reconciling traffic and environment will have to be found. At the same time we cannot postulate a solution which allows no flexibility for the future. At this early stage in the replanning of London we must allow as much latitude as possible for future change.

3 Traffic survey

The Piccadilly Survey

42. A great deal of useful information about traffic in the West End was available to us from a traffic survey carried out in 1963 for the Ministry of Transport by Freeman, Fox, Wilbur Smith and Associates, who are also responsible for the London Traffic Survey. This West End cordon survey included total traffic volumes and hourly variations on the main streets, classification of traffic by vehicle type, journeys classified by origin and destination grouping, journey purpose and land-use served, and car journeys classified by number of car occupants. Most of this information, however, apart from traffic volumes and vehicle types, related to traffic entering the West End from outside and did not cover all traffic circulating within that area.

43. For the Working Party's purposes it was necessary to have a more detailed breakdown of traffic using the Circus, particularly in relation to journeys that had both their origin and destination *within* the West End cordon. It was clear that the traffic function of the Circus both now and in the future had to be considered not only in relation to traffic entering or passing through the West End, but also in relation to local traffic – i.e. the intense traffic activity generated within this densely developed part of London. We wanted detailed information about the make-up of this traffic, the pattern of journeys in the area, the purpose of those journeys (including the extent to which cars used for journey to work were used again on employers' business in the course of the day), and the proportional relationship of this local traffic to through traffic. We needed this information in order to assess the likelihood of future changes in the volume and pattern of traffic in the area, and the probable effects of restrictive traffic measures and various possible road improvements, both long-term and short-term.

44. We therefore commissioned Freeman, Fox, Wilbur Smith and Associates to carry out a special survey of traffic using the Circus and other roads in its vicinity. The survey was carried out, with police co-operation, in April 1964. Selected information from the survey is given in the technical appendix to our report (Appendix II).

45. The salient facts derived from the survey concerning the volume, composition and other characteristics of traffic using the Circus are these:*

(1) Through traffic† accounts for only 29% (25%) of traffic using the Circus; 15% (13%) is internal traffic, 47% (40%) external traffic and 9% (22%) bus traffic.

(2) There are no significant 'peak hours' causing congestion at certain times of day. Traffic builds up in the morning and remains at a high level throughout the day.

(3) The two highest hours are 12–1 p.m. and 5–6 p.m., when the volume of traffic is about 5,000 vehicles; exceptionally, traffic may rise to 5,500 vehicles per hour.

(4) The composition of traffic in the Circus varies significantly at different times of day: at the rush hours journeys by car to and from work predominate, but as soon as the rush hours are over other traffic flows in and there is no let-up of pressure on the Circus.

(5) Buses and taxis comprise 38% (46%) of traffic in the Circus; taxis account for 65% (61%) of internal traffic and 33% (31%) of external traffic.

(6) Throughout the period 7.0 a.m. to 5.0 p.m. car journeys on 'employer's business' constitute 19% (15%) of traffic in the Circus and 52% of all car traffic; about 50% of cars used for journey to work are used again in the course of the day for business purposes before the journey home.

(7) Comparison of car traffic at the Circus with total West End car traffic shows that a smaller proportion of car journeys at the Circus are journeys to work (24% against 33% for the West End as a whole), while cars used for employers' business in the course of the day account for 52% of car traffic in the Circus against 38% in the West End. Only about 3% of car journeys at the Circus are for shopping purposes, which is the same as in the West End generally.

46. The picture that emerges of traffic at the Circus is one of sustained pressure throughout the day, with a preponderance of local traffic and traffic generated or attracted by the business and other activities of the area, and little that could be readily identified as 'inessential'.

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* Throughout the report, where two sets of figures are given the first is in terms of motor vehicles (i.e. all vehicles other than pedal cycles) and the second (shown in brackets) is in terms of urban passenger car units ('p.c.u.'). In p.c.u. terms we have taken one bus=3 p.c.u., one medium or heavy vehicle=2 p.c.u., and one solo motor cycle=0.75 p.c.u. The purpose of translating vehicle numbers into p.c.u's is to express the proportion of road space occupied by different classes of vehicle, which in turn shows the real total load on the various sections of the road system. This is particularly relevant in the Circus where such a large proportion of the traffic load is represented by buses – 9% of vehicles but 22% of p.c.u's.

† For purposes of the survey an 'inner cell' was defined within the West End cordon: this was bounded roughly by Park Lane, Oxford Street, St. Martin's Lane and the Mall; vehicles with their origin and destination within this area are 'internal traffic'; vehicles with either their origin or destination within this area are 'external traffic'; and vehicles which pass through the area without stopping are 'through traffic'.

Traffic increase

47. In their letter of 2nd September, 1963, to the L.C.C. (see para. 10 above), the Ministers said that:

> 'All the evidence becoming available to the Minister of Transport from the Hall and other reports, makes it clear that an even bigger increase of traffic in central London than had been anticipated must be expected over the next two decades. Much of the information about the growing weight and significance of the urban traffic problem has, of course, become available since the Holford plan was prepared.
>
> 'In the Circus itself there is little doubt that the traffic flow will increase to a substantial extent. In 1960 – the year in which Sir William Holford was appointed to prepare his scheme – 56,359 vehicles passed through the Circus in the twelve daylight hours. In 1962 the comparable figure was 62,109; an increase of 10%. The road improvement scheme at the junction of Knightsbridge and Sloane Street, the widening of Knightsbridge, the eventual widening of Piccadilly by the Ritz Hotel, plus possible improvements to Charing Cross Road and other like schemes, will make additional traffic in the Circus inevitable, particularly through the critical north-west section.
>
> 'The traffic needs of the Circus should, it is suggested, be related to the recommendations of the Minister of Transport's Design Working Party. The Working Party proposed that the reserve capacity of any improvement in Inner London should either allow for a 60% increase on the volume of traffic at the date of completion, or the maximum foreseeable increase on the approach roads, whichever is smaller. In the case of Piccadilly Circus it is considered that the capacity of the approach roads – the decisive factor here – will be limited to about 50% above 1960 figures and that, therefore, this is the best criterion to apply. This would mean about 85,000 vehicles for the twelve-hour period.'

48. The Working Party has conducted a critical re-examination of the future trend of traffic demand in the Circus. There are three elements in this:

(i) actual traffic load 1960–64;
(ii) potential increased capacity on the approach routes;
(iii) future trend of traffic generation in the area.

(i) actual traffic load 1960-64

49. The only figures available for the whole of the period 1960–64 are the police censuses, which are taken every two years in July. These show the

following total vehicles* entering the Circus in the twelve daylight hours (8 a.m.–8 p.m.):

5th July, 1960	..	55,143 vehicles
17th July, 1962	..	60,778 „
28th July, 1964	..	53,573 „

50. The police census figures for these years do not, unfortunately, provide a satisfactory basis for assessing changes in the actual traffic load on the Circus over this period. A number of significant factors have affected the situation, of which the most important are these:

(1) In 1961 one-way traffic was introduced, making Piccadilly and Coventry Street one-way eastbound: traffic that used to enter the Circus from Coventry Street was diverted to Panton Street, and traffic westbound on Piccadilly was diverted to Pall Mall and Jermyn Street. Some of the eastbound traffic excluded from Pall Mall now enters the Circus from Piccadilly.

(2) The police counts for 1962 and 1964 include Panton Street traffic (as the equivalent of Coventry Street westbound traffic in 1960): this traffic does not enter the Circus itself but similarly some of the former Coventry Street westbound traffic entered Haymarket rather than the Circus.

(3) Since 1963 a one-way scheme has been introduced at Oxford Circus due to the Victoria Line engineering works.

(4) During the summer of 1964 (at the time when the police count was taken but after the Piccadilly Survey) Piccadilly was obstructed by Victoria Line works at Green Park Station.

(5) The 1964 police count was taken on 28th July, after the school holiday period had begun, whereas the 1960 and 1962 counts were taken before the main holiday season started.

51. Factors (4) and (5) above may also account for the substantial difference between the police census figure for July 1964 (48,264 vehicles, excluding Panton Street) and the figures obtained from Piccadilly Survey in April 1964 (53,700 vehicles in the same twelve-hour period†).

52. Despite the fact that the figures for the two dates are not strictly comparable, owing to the introduction of one-way working, the general conclusion

* The figures for 1960 and 1962 are equivalent to those quoted in the Ministers' letter of 2nd September, 1963 (see para. 47 above), excluding pedal cycles; the 1964 figure also excludes pedal cycles.

† This April figure should be increased by 2–3% seasonal adjustment to compare with the police counts taken in July. This gives a total for 1964 very similar to the 1960 police count.

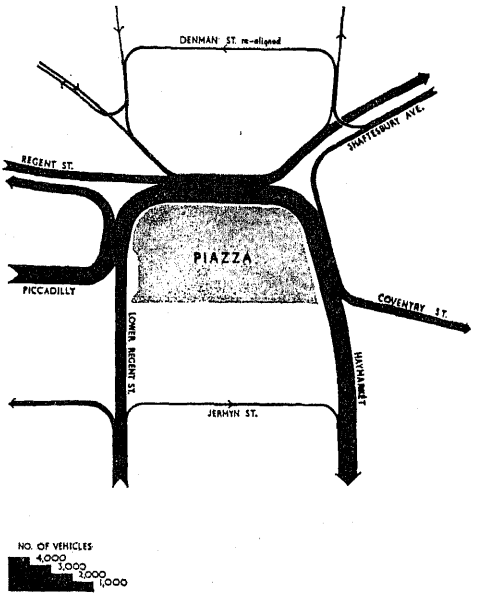
to be drawn from the available survey data is that the traffic load on the Circus area in 1964 had not increased since 1960, and may have marginally declined.

53. But for our present purpose, the total load on the Circus is far less significant than the load on the west side, where traffic from Piccadilly and Lower Regent Street converges. This is the critical point in the planning of the Circus, and the survey figures show that the introduction of one-way working has resulted in a heavy increase in traffic at this point as compared with the situation in 1960:

Vehicles entering the Circus	*1960*	*1964*
	(Police Count)	(Piccadilly Survey)
from Piccadilly	12,656	21,900
from Lower Regent Street	14,685	10,335
Total	27,341	32,235

The police count for 1964 shows only a small increase over 1960 for these streets (28,151 vehicles) but special factors appear to have affected this result (see para. 50 (4) and (5) above).

54. The Holford scheme proposed to channel more traffic into this west side of the Circus by closing the road on the south side, in front of the Criterion block, which at present takes about half of the eastbound traffic from Piccadilly and some from Lower Regent Street. To compensate for this, the scheme provided increased road capacity on the west side by cutting back the pavement in front of Swan and Edgar and opening a pedestrian way through the front of that building. This allowed for 20% increase over 1960 traffic volume (although it



6 Traffic in the Circus—1964 traffic flow during typical afternoon hour assigned to the layout of the Holford scheme (paragraph 54)

provided no greater traffic capacity than exists at present with one-way working – see para. 9 above). This is the maximum traffic increase that the Holford layout would accommodate on this critical side; and according to the Piccadilly Survey traffic at this point has already increased by 16½% over 1960 traffic volume (see figure 6).

55. This is the crux of the traffic problem in the Circus. We now consider the likelihood of traffic demand at the Circus increasing in the future.

(ii) approach routes

56. The most important factor affecting the future traffic load on the Circus is the capacity of the approach routes that lead into it and those that carry traffic leaving the Circus – i.e. the entry points and the exits.

57. The Circus itself is not at present a scene of constant traffic congestion because it is a light-controlled junction. The lights are timed so as to ensure that the junction has time to clear itself of one traffic flow before allowing the next flow to enter. But if the approach routes had capacity substantially in excess of the Circus, then traffic would build up on those routes because it could not clear the junction quickly enough. It is the familiar picture of the bottle neck, with traffic pouring in faster than it can get out.

58. At present the capacity of the Circus is reasonably in balance with that of the approach routes. We do not find a constant pile up of traffic in Regent Street, Shaftesbury Avenue, Lower Regent Street and Piccadilly. This is chiefly because the traffic flow in these roads is conditioned by other bottle necks further out from the Circus – Oxford Circus, Cambridge Circus, Trafalgar Square, and, for Piccadilly, no longer Hyde Park Corner but Knightsbridge and the Sloane Street/Knightsbridge intersection, together with the narrowing of Piccadilly itself at the Ritz. These are the 'pinch points' on the routes leading to the Circus. They act as valves limiting the amount of traffic reaching the Circus, but they are also the points at which congestion becomes steadily worse as traffic increases.

59. Against this background the L.C.C. and Ministry of Transport traffic engineers have reviewed the scope for securing a 50% increase in the capacity of the approach routes to the Circus, as referred to in the Ministers' letter of 2nd September, 1963 (see para. 47 above).

60. Two general methods of coping with the problem have been examined. Firstly, the maximum use of two-way traffic on improved main streets and secondly, maximum use of one-way traffic, consistent with present-day arrangements and local geography. Various combinations of methods are possible, including greater emphasis either on traffic management (one-way routings, etc.) or on road improvements, though both would be required. The essential

components would be major road improvements to overcome the 'pinch points' (not necessarily at the junctions themselves), together with the following measures at various points of the system:

(i) extension of linked traffic light system;
(ii) removal of parking meters to free more road space for traffic and to ease traffic flows;
(iii) strict enforcement of 'no waiting' restrictions;
(iv) resiting of bus stops clear of signal junctions;
(v) banning of right turns at signal junctions;
(vi) other traffic management measures, including extension of one-way working.

61. We are advised by the L.C.C. and Ministry of Transport traffic engineers, whose view is endorsed by our traffic consultants, that road improvements and other measures of the kind described could provide up to 50% increase in traffic capacity of these routes over 1960 actual traffic volume. Some of these improvements would be very expensive.

(iii) future trends

62. The general tendency in London is for any additional traffic capacity provided by road improvements or traffic management measures to be fully absorbed by additional traffic flow within a relatively short period – subject only to the limitations imposed by bottle necks elsewhere on the system.

63. This is the trend at present: suppressed demand rapidly absorbs any increase in traffic capacity. But obviously we are not catering for a static trend. Traffic in Inner London has been increasing over the past few years at about 4.3% a year, despite tighter parking restrictions. We discuss in Part 4 the possibility of restricting the entry of vehicles into central London, but there is no mistaking the upward trend of demand. The Piccadilly traffic survey showed that the problem at the Circus is not one of 'commuter peaks' causing acute congestion only at certain times of day. Traffic builds up in the morning and remains at a high level throughout the day: the composition of the traffic varies (commuters' cars predominate only at the morning and evening rush hours) but throughout the middle of the day the traffic consists almost entirely of buses, taxis, service vehicles (vans and lorries) and cars used in the course of business. In short, it is largely traffic generated by the intense commercial and business activity of the area.

64. The second stage of the London Traffic Survey (which will be published later this year) will include estimates of future traffic demand up to 1981 based on assumptions about various factors that will influence the increase in the number of journeys made into central London by all methods of transport (train, bus, car, etc.), including changes in population, car ownership, household

income, parking provision and road and rail improvements. They take account of the very extensive survey data collected including home interviews with people living in the survey area.

65. The estimates for 1981 indicate that:

(1) there would be an increase in car driver and motor-cycle driver trips to the central area of about 75–80% over the 1962 figures. The increase in trips to the 'inner cell' of the West End would be slightly greater, about 85–90% (over two-thirds of this increase would be in non-work trips);

(2) the number of bus trips to the central area would decline by about 10–15%;

(3) taxi trips would remain at about the 1962 level;

(4) light goods vehicle trips to the central area would double and heavy goods vehicle trips would increase by about 35%.

The combined effect of these estimates is that the 1981 traffic in the 'inner cell' would be about 50% greater than the 1962 traffic. Most of this increase would occur in passenger cars and light goods vehicles, so that in p.c.u. terms the increase would be about 41%.

66. The only point we are seeking to establish at this stage is that it would be quite unrealistic to assume that there will not be a large increase in traffic demand in this area over the next ten to twenty years, or that 50% increased capacity on the approach routes and in the Circus would be in excess of future demand. We now consider whether that demand could be held in check, and then to what extent it might be catered for other than in the Circus itself.

4 Traffic policy

The Policy Issues

67. It seems clear that the present, or suppressed, traffic demand in London and the probable growth in demand are so great that they will rapidly absorb any increased road capacity that may be made available. We have had to consider:

(1) whether it would be practicable or desirable to restrain this demand and to hold traffic to its present level, or if possible to reduce it;

(2) if it is not practicable or desirable to attempt this, to what extent the demand can be met both in the long-term and in the short-term.

68. These questions raise very wide issues of policy which we, as a Working Party, are not constituted to resolve. We have so far as possible confined our consideration of these issues to the effect which such measures would have on the amount of traffic using the Circus and the approach routes. But the Circus is such a nodal point in the traffic system of central London, and in the commercial and social life of the metropolis, that it is impossible to consider it in isolation from the wider aspects of London traffic, and it would be wrong to attempt to do so. We have, therefore, taken a very broad view of the situation. We deal first with the scope for restrictive measures; secondly, with the effect on the Circus of long-term developments in the road system of central London; and finally with the possibility of some form of 'local relief' which would enable the Holford scheme to go ahead as planned by providing increased traffic capacity in the immediate vicinity of the Circus.

Restriction

69. There are five principal methods by which the potential traffic increase at the Circus might be kept in check:

(i) by retaining the present 'pinch points' on the approach routes which limit the amount of traffic reaching the Circus;

(ii) by restricting the amount of parking space in the West End;

(iii) by more direct means of control – including administrative controls (e.g. banning certain types of vehicle from particular areas or at certain times of the day) and limitation by cost (charging for the use of road space by licences, meters, etc.);

(iv) by improving the attraction, convenience and availability of public transport;

(v) by restricting increases in traffic generating development.

(i) approach routes

70. The first of these possibilities would certainly have the effect (as it does at present) of limiting the traffic that is able to reach the Circus. It is perfectly clear that there is a limit to the amount of traffic that can be accommodated in central London, whatever road system is eventually developed. But there are at least three very strong arguments against relying on congestion itself as a means of restraining traffic demand.

71. First, it is an entirely indiscriminate form of control and a highly uneconomic one. Congestion imposes heavy costs on all road users through delay, higher labour and running costs, inefficient use of vehicles and loss of working time. But while all road users in congested areas suffer delay, the costs incurred by certain types of road user (e.g. heavy commercial vehicles) may be very much greater than those incurred by others (e.g. private car commuters). The effect of this is that some road users, by causing congestion and delay, impose far heavier costs on other road users than they incur themselves. Secondly, this method of restricting traffic means retaining, as a deliberate act of policy, points of congestion on the road system of central London which are capable of improvement. We consider that it would be wrong to recommend, at this stage in the planning of London, a policy which deliberately rejected such opportunities and which left no flexibility for the future. Thirdly, if an attempt is to be made to reduce traffic in the potential environmental areas (see para. 40 above), it will be necessary to provide increased capacity and better traffic conditions on roads forming part of the embryo network, even if no increase were permitted in traffic entering the central area.

72. For these reasons we must reject as unrealistic and uneconomic the proposition that the traffic problem of the Circus can be solved, or at least mitigated, by retaining the present points of congestion that limit the capacity of the approach routes.

(ii) parking policy

73. Parking policy is a critical factor in the management of central area traffic. In most towns it provides the readiest means of controlling traffic growth in the town centre. A coherent and comprehensive parking policy aimed at controlling the amount, location and availability (by time and cost controls) of parking space can make a major contribution to traffic management.

74. It is likely that in future the provision of parking space in private development in central London will be even more strictly limited to what is necessary for the servicing of the building plus some minor provision for business purposes. But it is not practicable or desirable to adopt a totally inflexible policy prohibiting any increase in private car parking facilities, nor would such a policy contribute much to the traffic problem at the Circus.

75. We are advised by our traffic consultants that even if all commuter car traffic were prevented from parking in the centre of the West End (i.e. the area bounded by Park Lane, Oxford Street, St. Martin's Lane and the Mall), it would effect a reduction of only 5% in traffic at present using the Circus throughout the day. If cars used on employers' business in the course of the day were exempt from this ban, the reduction in traffic would be only 2½%. If all car parking (on-street and off-street) in this area were banned it would effect a reduction in traffic of 21%, but this is clearly not a practical proposition.

76. We conclude that while the intelligent use of parking policy is an essential component in any overall strategy for regulating urban traffic, it is unlikely to have any material effect on the particular problem of traffic in the Circus.

(iii) traffic controls

77. Limitation of traffic by administrative measures involves the banning of all or some vehicles from entry to a particular area. For example, such measures could be designed to give preferential treatment to buses and commercial vehicles over private cars. But it would hardly be practicable to ban all private cars from central London, and once exceptions are made enforcement becomes difficult and the administration of the system extremely complex. But even if it were practicable to ban all commuters' private cars from central London, it would significantly affect the total Circus traffic only during the morning and evening rush hours, whereas the traffic load in the Circus remains at a high level throughout the day.

78. The exclusion of heavy goods traffic from the Circus area, on the lines of the restriction now operating in the City, would be practicable only if suitable alternative routes were available. In any event, heavy goods traffic on through journeys represents only 2½% (4%) of traffic using the Circus throughout the day.

79. Other possibilities in the field of administrative control include restricting the number of taxis (which make up 29% of the vehicles using the Circus), and the prohibition of service deliveries and collection during normal working hours. Both these types of control may become necessary if traffic continues to increase beyond the capacity of the road system, however improved. So far as taxis are concerned there is little doubt that the availability of this service reduces the amount of private car travel that would otherwise occur and is a useful alternative means of catering for this type of journey. The limitation of some types of service traffic to non-working hours may become essential if service traffic increases to the extent envisaged. If all goods vehicles were prevented from parking in the centre of the West End between 7.0 a.m. and 5.0 p.m. it would effect a reduction of 13% in traffic using the Circus during that period. Much of this traffic is associated with the day-time business of the premises served. Some of it (e.g. some wholesale deliveries) could no doubt be carried out – although at some inconvenience –

outside normal working hours. But some (e.g. deliveries of perishable goods and some retail deliveries) would hardly be possible outside normal hours. Once exceptions are made, difficulties of enforcement and administration become acute. The attempt may have to be made but it is not likely to offer a permanent solution to the problem of traffic in the Circus.

80. Limitation by pricing is potentially a more effective method of control than administrative edict. It is aimed at discouraging the use of congested road space by increasing its cost to the driver. The economic and technical possibilities of developing such a system have been studied by an expert committee chaired by Dr. Smeed for the Road Research Laboratory, whose report was published in 1964*. The Committee concluded that differential fuel taxes or licences were unlikely to be as effective as a system which ensured that the charge incurred by the driver was closely and directly related to the use made of congested roads. The committee concluded that such a system was technically feasible but that there remained many practical difficulties which would have to be overcome. The committee did not, in general, consider the social, administrative and political aspects of the subject. We have no means of knowing at this stage whether such a system would be acceptable. Moreover, such a policy, if it were adopted, is more likely to affect private car commuter traffic than the business and service traffic which, together with taxis and buses, make up by far the greater part of the traffic load on the Circus.

81. We conclude that, however necessary and effective such controls may be in controlling the total traffic flow in central London, their effect on the Circus is not likely to be a material factor in determining its required traffic capacity as part of the main distributory road system of the West End.

(iv) public transport

82. The ability of public transport (buses and underground trains in this case) to attract passengers who would otherwise travel by private car depends on the capacity, cost, and convenience of the services provided. Central London is already well served by public transport and the Circus itself is a major interchange point in the system. Major improvements to the system are being undertaken, including the new Victoria line now under construction and due to open in 1968, and improved bus and coach services being planned by the London Transport Board. These will certainly improve the coverage and convenience of public transport serving central London, but the increased capacity they will offer will be taken up by the increase in the working population of London and by the demands generated by the rapidly increasing population of the London region that looks to the West End as its principal shopping and entertainment centre. In addition, any road space released by the transfer of commuter journeys to the

* *Road Pricing: The Economic and Technical Possibilities,* H.M.S.O., 1964, price 4s. 0d.

public transport system will tend to be offset by the increase in other types of traffic.

83. Improvements to the public transport system will be essential to cope with increasing demand, and of course to improve conditions for the travelling public. But we conclude that they are unlikely to effect any overall reduction in traffic using the Circus.

(v) development control

84. If it were practicable to hold traffic at its prevent level, it would be even more important to take equally effective action to prevent any increase in traffic generating uses and in the demand for services in the West End: in effect to cancel all potential increase on redevelopment and to prevent any increase in the commercial activity of the area.

85. For the reasons already given we do not think it practicable to hold traffic at its present level, even if no increase in traffic generating development were permitted. Nor does it seem realistic to assume that such development could in fact be totally suppressed. But we would lay the greatest stress on the need to establish a workable relationship between traffic capacity and development potential in the planning of central London. Wherever practicable major traffic generators should be relocated in less congested areas, and the introduction of entirely new traffic generators should so far as possible be prevented. We regard this as of critical importance in the overall strategy for London planning, and it is particularly relevant to the amount and type of development that is permitted at the Circus itself. But it is unlikely that such a policy, however rigorously applied, could prevent a substantial increase in traffic using the Circus in the future.

Provision

86. None of the possible methods of restricting the growth of traffic demand in central London is likely to have a material effect on the total traffic using the Circus, and all the indications are that the potential traffic load on the Circus will increase. We now consider whether part of this demand could be diverted away from the Circus on to other routes. We consider first, whether any major long-term changes in the road system of Inner London would radically change the situation at the Circus; and second, in the absence of such major changes, the extent to which any future increase in traffic at the Circus could be accommodated by short-term local relief schemes in the vicinity of the Circus.

(i) the long term

87. In the long term, the traffic load on the Circus and its approach routes will depend on the relation of these routes to any major changes in the road system of Inner London. They are clearly major links in the existing road network. We have to consider whether any major restructuring of that network, or the intro-

duction of an entirely new primary network, is likely to be undertaken in the foreseeable future and to what extent such a network would divert traffic away from the Circus, leaving it as simply a link in a local distributory system for this part of the West End.

88. Our traffic consultants have carried out a series of traffic studies in which actual 1964 traffic flows through the Circus were assigned to the following notional road systems:

(a) a motorway system encircling Inner London;
(b) a motorway system as in (a) linked with a full primary distributory network serving Inner London;
(c) major new roads by-passing the Circus but not associated with (a) and (b) above.

We must stress that these studies are purely theoretical exercises designed to test various possible road systems. They are not based on any detailed surveys necessary to establish the practicability of individual routes, and are not to be taken as prejudging any future developments.

(*a*) *motorway system*

89. The motorway system used for this exercise was the same as that produced by the L.C.C. and Ministry of Transport for the second phase analysis of the London Traffic Survey. It is hoped to publish the results of this stage of the survey later this year and we illustrate the motorway system in diagrammatic form only (figure 7).

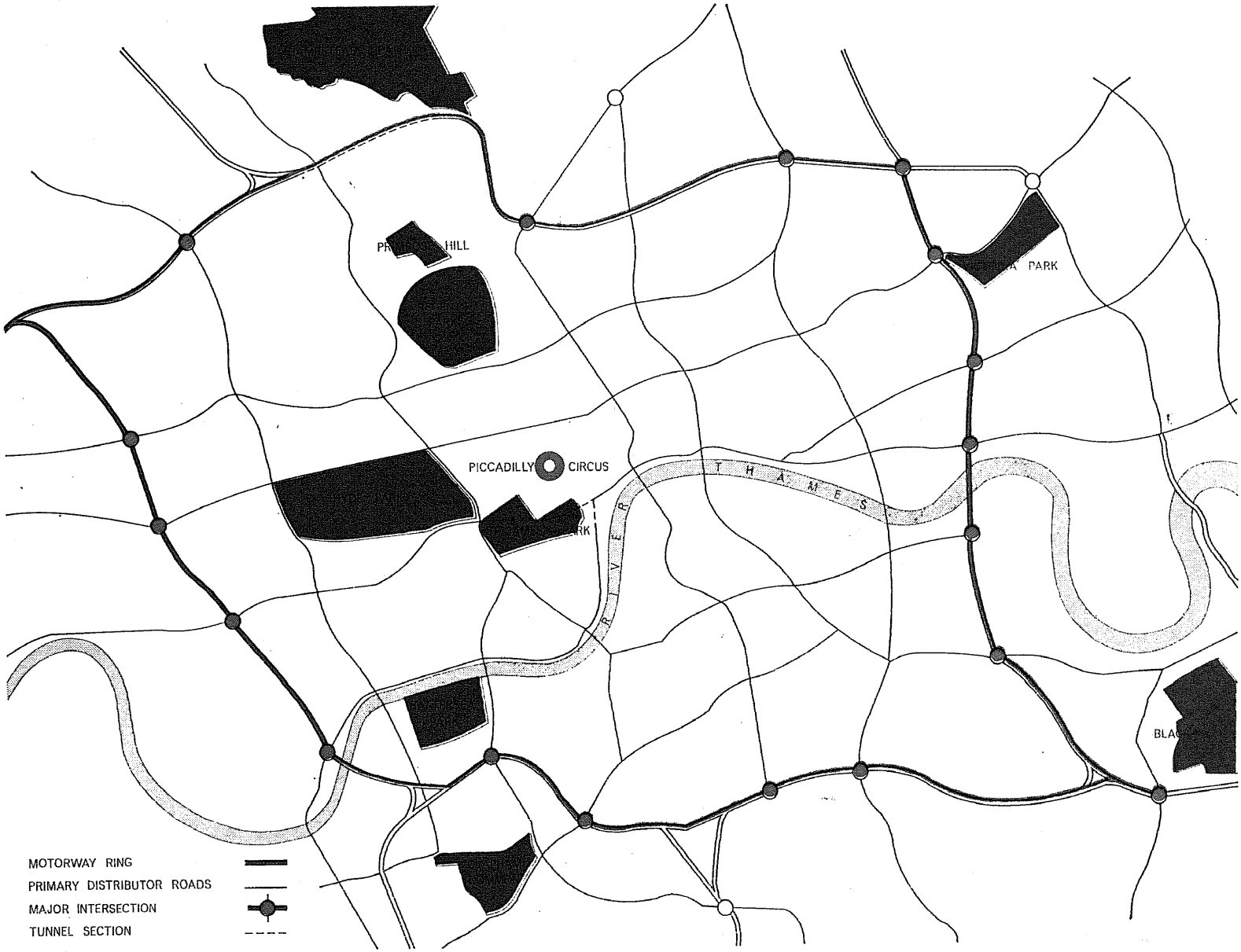
90. The motorway system is envisaged as the major distributor encircling Inner London and caters primarily for through traffic and journeys from one sector of Greater London to another. There is no doubt that an urban motorway of this character would have a vital part to play in catering for the traffic growth in London over the next forty years, and as such would be a major factor in the economic life of the capital. But it is not intended primarily to relieve specific points on the existing road system of the West End, since it is not designed to function as part of the local distributory road system.

91. The assignment of 1964 traffic to such a motorway shows that its effect on the Circus would be minimal – a reduction of less than 5% in the traffic using the Circus. The Circus, in effect, retains its characteristic and highly significant function as a key junction for West End traffic. This takes no account of any future increase in traffic at the Circus, nor of any additional traffic that may be attracted into the West End by the motorway itself.

(*b*) *primary network*

92. In order to test the effects on the Circus of establishing in London a full primary distributory network, such as the Buchanan report envisages, our traffic consultants in association with the L.C.C. have devised a theoretical network

7 Motorway system and primary network (paragraph 89)



linked to the motorway system (figure 7). This is a purely hypothetical concept developed for the purpose of this exercise. It does, however, take account of some of the major planning considerations which would influence the location of such a network, i.e. it is conceived as a true primary distributor providing the connectors to the motorway system, channelling traffic around the potential environmental areas and freeing them of extraneous through traffic.

93. The primary distributor roads in the network were assumed to be capable of carrying traffic at average speed of 20 to 25 miles per hour. Corresponding speeds on the motorway were 35 to 45 miles per hour and on the local distributor roads 10 to 15 miles per hour. It was assumed that traffic could enter or leave the motor way only via a primary distributor and journeys were routed in accordance with the minimum time path between zone pairs – i.e. vehicles were assigned to the quickest route between the start and finish of their journey.

94. It is important to recognise that the resulting traffic assignment for the West End represents a redistribution of 1964 weekday traffic flow based on the assumed road pattern and design speeds, and *not* estimates of the traffic volumes which would actually develop with a high capacity network of this type. What the assignment does is to indicate the amount of existing traffic in and near the Circus which would remain when the network was constructed.

95. The study showed that a primary network of this type would relieve the Circus of about 60–65% (50–55%) of existing traffic. It seems highly probable, however, that this reduction on existing traffic would be largely offset by future traffic increase generated in the area and by additional traffic attracted into the West End by the existence of the network, unless restraints were successfully applied.

96. But such a network is at best a very long-term concept. It involves the construction or improvement of some 60 miles of multi-lane traffic arteries with grade separated junctions and six new river crossings. The land required for the carriageway alone would be about 25 acres a mile, plus 5 acres (at least) for each intersection: and this would involve cutting through areas of dense development including some of the most expensive property in London.

97. The total cost of property acquisition for a network on this scale would be of the order of £1,000 million, and construction costs have been estimated at £500 million. The demolition work involved would give rise to a formidable rehousing liability estimated at some 90,000 persons or 30,000 dwellings. At present, expenditure on classified roads construction in Greater London is running at about £17 million a year and may rise to £30 million a year by the early 1970's.

98. In addition to the cost of the network itself, extensive redevelopment would

be needed to integrate the new routes satisfactorily into the physical structure of the area. This would cost at least as much as the network and would generate at least as great a rehousing liability.

99. In the long term it may be that a network of this character will be developed. London will certainly be undergoing great changes as redevelopment proceeds over the next forty years. The network might form part of the new pattern. Further studies will be needed to test the utility and practicability of applying this concept to the metropolis. Our concern as a Working Party has been with the time scale involved, and it is clear to us that this is not a solution that we can sensibly invoke as the answer to the problems of the Circus, in view of its imminent need for redevelopment.

(*c*) *major bypasses*

100. We have considered the possibility of devising major new roads which would have the effect of simply bypassing the Circus. But any scheme of this kind is likely to be extremely expensive and may have no relevance to a coherent road system of the future – it may simply bypass the problem at the Circus, at great expense, but create new problems elsewhere.

101. We have examined two schemes of this kind and our traffic consultants have made assignments of 1964 traffic to test their effect on traffic at the Circus:

(a) a tunnel under roughly the line of the Mall from Hyde Park Corner to the Victoria Embankment (in the vicinity of Charing Cross underground station); and

(b) an extension of Regent Street from its junction with Vigo Street southwards in an arc across Piccadilly to rejoin Lower Regent Street.

102. The first of these schemes, the Mall tunnel, is an adaption of one of the features of the notional primary network illustrated in figure 7. The traffic assignment shows that such a route would relieve the Circus of about 11% of its present traffic if there were no connection on it to the West End, or about 13% if there were a connection in the vicinity of Trafalgar Square. The relief to the Circus, therefore, would not be very substantial and the scheme could not be justified on those grounds alone. But its potential would not be limited to that purpose and further studies might show it to be a useful new link in London's road system.

103. The second scheme, the Regent Street extension, would reduce traffic in the Circus by about 50%. But it would be an extravagant scheme, not only on account of its cost (about £34 million) but because it would to a large extent duplicate existing routes (the Quadrant and the Circus) and, unlike the Mall tunnel, would serve no other useful function in relation to the future road system of the West End. Moreover, the environmental and aesthetic effects of forcing a

major new road through this area would be very serious and would completely disrupt the established pattern of environmental areas around the Circus.

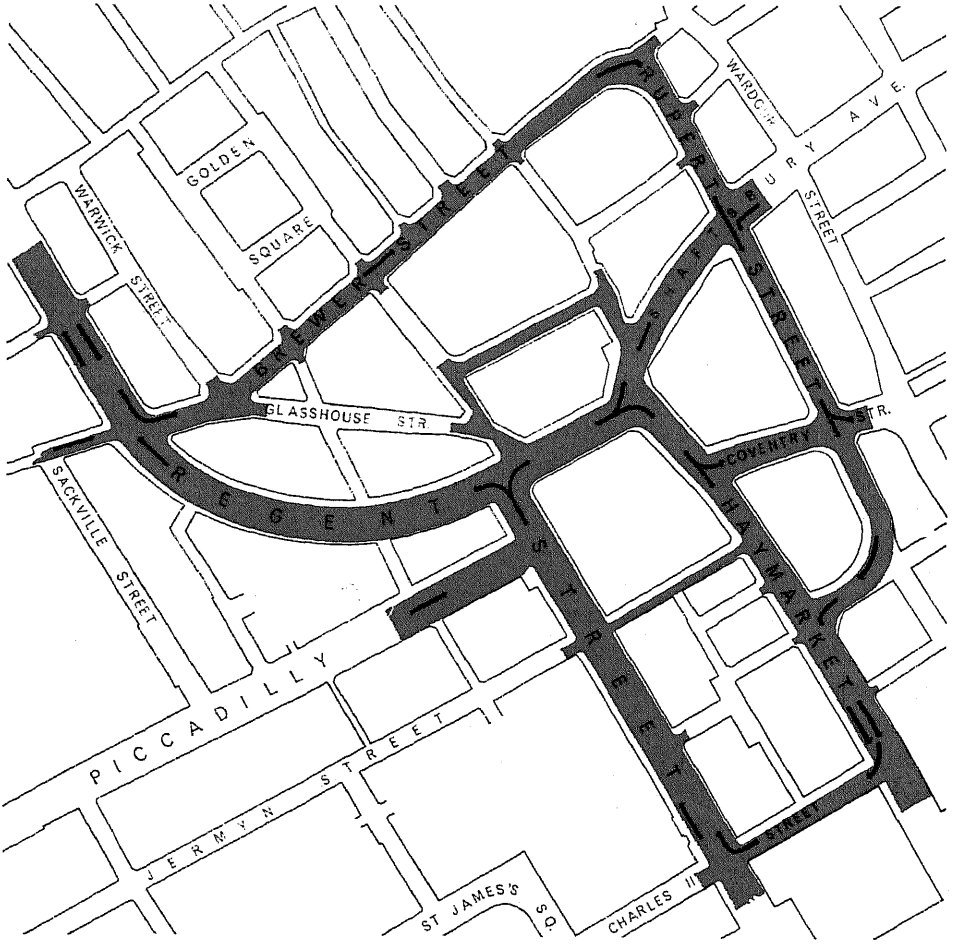
104. We conclude that neither of these schemes, but for different reasons in each case, is one which we could consider as an answer to the immediate problem of the Circus.

(ii) local relief

105. We have examined the possibility of providing some additional traffic capacity in the immediate vicinity of the Circus, which would enable the Holford scheme to go ahead as planned. The problem is to provide a 'safety valve' which could relieve pressure on the Circus if and when it built up to the extent anticipated as the approach routes were improved.

106. We have considered the possibility of meeting this potential demand by further traffic management measures. We understand, however, that the London

8 Brewer Street scheme (paragraph 106)



Traffic Unit of the Ministry of Transport have no proposals for further traffic management schemes that would relieve the Circus without at the same time requiring substantial road improvements. It seems very probable that, in the short term at least, most road improvements in central London will be designed in conjunction with traffic management schemes as the most economical means of increasing traffic capacity. We have examined several schemes of this character, of which the most effective and practical as relatively short term measures are:

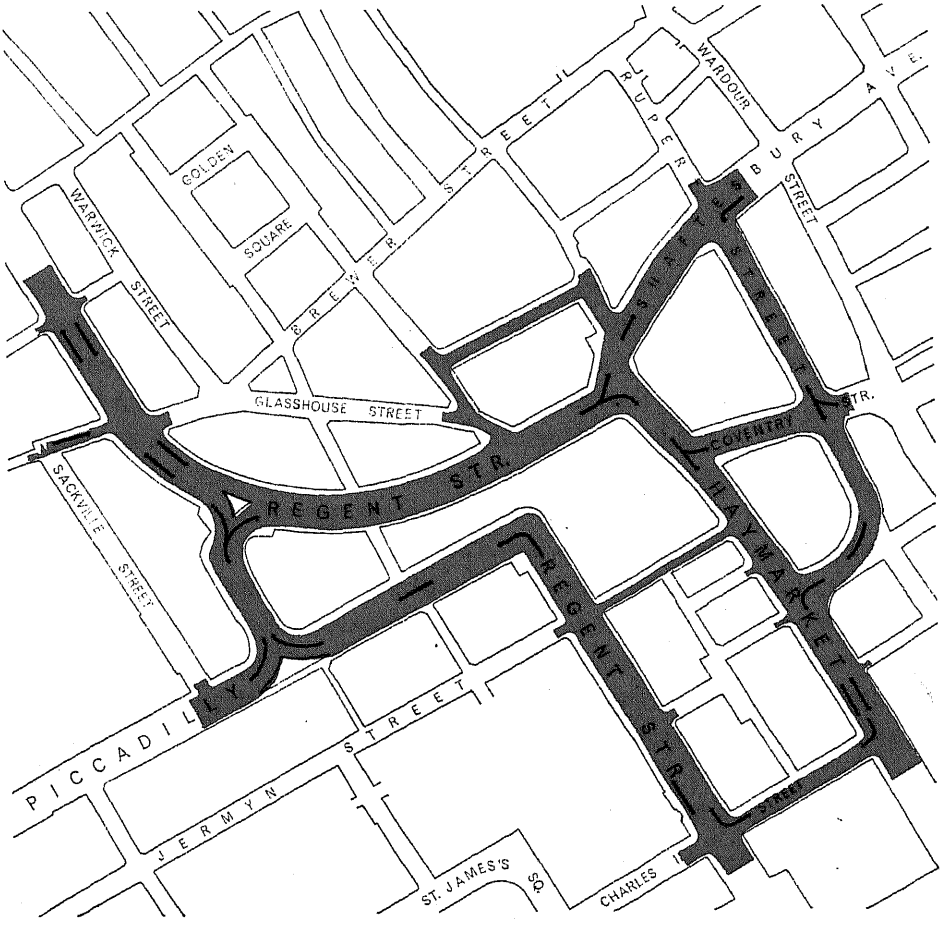
(a) Brewer Street and Rupert Street widened to take traffic south bound from Regent Street to Haymarket (see figure 8);

(b) Swallow Street widened to take Piccadilly east bound traffic and traffic from Lower Regent Street (see figure 9).

(a) Brewer Street scheme

107. The Brewer Street scheme in conjunction with the Holford scheme would provide for 50% increase over 1960 traffic. Its disadvantages as compared with

9 Swallow Street scheme (paragraph 106)



the Swallow Street scheme are that the property acquisition costs are higher (£15 million); it means cutting a major new road through the environmental area of Soho; and it does not permit any extension of the pedestrian piazza in the Circus. Neither scheme achieves any reduction in the traffic load on Regent Street, but the Brewer Street scheme opens up the possibility of introducing a new road east of Regent Street as a relief route. Such a scheme, together with the Brewer Street/Rupert Street improvement, would be extremely expensive (perhaps £50 million) and might be rendered virtually redundant if Regent Street itself were redeveloped on two levels.

(b) Swallow Street scheme

108. This scheme envisages the creation of a short new road roughly on the line of Swallow Street from Piccadilly to Regent Street. East bound traffic on Piccadilly would flow into the new road, turning either left in Regent Street going north, or right into the Quadrant and then into the Circus for Shaftesbury Avenue, Coventry Street or Haymarket. Traffic from Lower Regent Street would also be routed into the new road and follow the same alternative routes. The point in Piccadilly where the two flows met would be light-controlled to avoid congestion at the entrance to the new road. Regent Street would become one-way south bound below Swallow Street. We are advised that such a scheme would provide for 50% increase over 1960 traffic at the Circus. It provides, in effect, a 'safety valve' which would ensure the additional capacity that may be needed as and when traffic flows increase following improvements to the approach routes. It would therefore enable the Holford scheme to go ahead as planned.

109. The property costs for the new road would be about £6 million which, although less than half the cost of the Brewer Street scheme, is prodigiously expensive for the length of road involved. The scheme has a number of other disadvantages, of which the most obvious is the cut through into Regent Street, breaking the shopping frontage and disrupting the pedestrian flow at one of its busiest points. A pedestrian underpass would be required (and might be linked to the other side of Regent Street). The architectural effect on Regent Street has been studied and is perhaps less damaging than might at first appear. The new road would involve the loss of three of the shop fronts on the south side of the Quadrant, but the curved sweep of Sir Reginald Blomfield's façade would be continued above the mezzanine level (the height of the breakthrough would be similar to that of the present archways at Swallow Street and Air Street). More disturbing to the unity of architectural effect might be the strong turning movements of traffic entering Regent Street from Swallow Street and the ancillary road signs and other 'street furniture'.

110. The new road, in short, would do nothing to improve conditions in Regent Street, pending redevelopment. It would, however, be possible to remove traffic

entirely from the west side of the Circus and would enable the pedestrian piazza, which is the main feature of the Holford scheme, to be extended to the pavements of Piccadilly north side and Regent Street south side. It would thus permit the Swallow Street block to be redeveloped as part of the Circus and would enhance the freedom of pedestrian movement in and around the Circus. Whether this would be a practicable or desirable development would depend primarily on the form in which Regent Street is ultimately redeveloped.

111. We conclude that the Swallow Street proposal offers the most practical, effective and economical means of providing the reserve traffic capacity that would be needed if the Holford scheme were to go ahead. It would not, however, reduce the total amount of traffic using the Circus, except for traffic from Piccadilly turning north into Regent Street, which represents only 5% of existing traffic. The road, in fact, is designed not to reduce the amount of traffic using the Circus but to enable it to circulate more efficiently. The effect would therefore be that, as traffic increased on the approach routes, the scheme would channel the bulk of it into the Circus.

112. We have made it clear that our concern is at least as much with the creation of a good environment for pedestrians in the Circus, as with the efficient circulation of traffic. We seriously doubt whether such a heavy concentration of traffic as the Swallow Street scheme would produce in the Circus would be compatible with the maintenance of good environmental conditions if the main pedestrian concourse and vehicular circulation were combined at ground level – as the Holford scheme envisaged. Nor, for that reason, would it be compatible with Lord Holford's conception of the Circus as a place of pedestrian resort. We have therefore thought it right to pursue our inquiry a stage further and to consider whether an alternative approach to the problems of the Circus offers the prospect of a better environmental solution.

5 A new Circus

The new factors

113. It is no part of our task to redesign the Circus; but we are required to have regard to 'the changes that are likely to take place in this area in the foreseeable future'. Having shown how the pressures of change will bear on the Circus in the future, we have to reconsider the problem of its redevelopment in the light of these changes and other factors that have emerged since the Holford scheme was prepared.

114. The two most significant of these factors go right to the core of the assumptions on which the Holford scheme was based (see para. 7 above). First, we now have a great deal more information available about the nature of traffic demand at the Circus, the trend of future demand, and the relationship of the Circus to the traffic system of central London. We have shown that the traffic capacity afforded by the Holford scheme is no greater than is available in the Circus at present, and that on the critical west side of the Circus traffic is already approaching the limit of capacity provided in the Holford scheme. Second, we have found that the opportunities for comprehensive redevelopment in this area are far wider than appeared likely when the Holford scheme was in preparation. There are virtually no fixed points that limit the extent or character of redevelopment in the Circus. In particular, the possibility of comprehensive redevelopment in Regent Street alters the whole picture.

115. The likelihood of radical change in this part of the West End as redevelopment gathers pace is a much more significant factor, in this context, than the probability of traffic increase. The growth of traffic demand can be catered for to a greater or lesser extent by various methods and would not necessarily compel a different approach to the redevelopment of the Circus. But the prospect of extensive redevelopment in Regent Street and other areas around the Circus opens up new opportunities for a wider and more radical approach to the problem.

The case for vertical separation

116. In his reports to the L.C.C. Lord Holford showed that to provide for 50% increased traffic capacity within the Circus would be incompatible with the general conception and design of his scheme. We have found that by providing the additional capacity in Swallow Street it would be possible to accommodate