

## (ix) THE GREEN BELT

The London green belt is vital and must stay. But it seems likely that a limited amount of housing land can be found in the green belt without any serious loss. The proposals for extending the metropolitan green belt should be critically re-examined before they are confirmed, but substantial parts of them should be approved.

## General conclusion

2. So far as the basic problem is concerned, there is little choice; large population increases in the South East are inevitable. Twenty-year forecasts can go badly wrong; but present evidence suggests that if the estimates made in this Study prove to be inaccurate, they will be shown to be under-estimates.

3. Where the choice does lie is in the type of plan to deal with the population increase. The Study, while recognising the strength of the economic forces which are leading to more and more growth in the London area, takes as its main principle the decentralisation of population and employment. The aim is to break the vicious circle of growth generating more growth in the most crowded and congested part of the South East—not only the London conurbation itself, but the ring around it, which has been experiencing the fastest population growth of any part of the country.

4. At this stage, it is difficult to make any reliable forecast of the distribution of the population growth over the South East; much depends on the number of the planned expansions which can be got under way, and the speed at which they can be developed. But the policy suggested in the Study would produce the kind of pattern shown in the following table, which makes certain assumptions for illustrative purposes.

Distribution of population growth in the South East 1951-61 and 1961-81

TABLE VII

	Population growth 1951-61 (actual)		Population growth 1961-81 (estimated)	
	Number (millions)	Distribution (per cent)	Number (millions)	Distribution (per cent)
Metropolitan region . . . . .	0.8	63	1.9	54
<i>London conurbation</i>	—0.2	—15	<i>nil</i>	<i>nil</i>
<i>Outer metropolitan region</i>	1.0	78	1.9	54
Rest of South East England . . . . .	0.5	37	1.6	46
Total (South East England) . . . . .	1.3	100	3.5	100

This table shows that, in spite of the greater total growth to be accommodated in the South East, a much smaller share of this total would, under the proposals in this Study, be concentrated in the belt around London. The amount of increase there, over the 20-year period of the Study, would be at a slightly lower rate than over the last ten; and the proportion of the total growth which would go to the outer metropolitan region would fall sharply.

5. This would make a start on the road towards a more even distribution of population growth in the South East; and, as the new big cities built up, the change in the pattern of population growth would be reinforced by a gradual shift in the economic balance within the South East.

6. The starting point of the Study was an estimate of the amount of population growth that is likely to take place in the South East; this made allowance for improvements in other regions. Given this estimate, there is an urgent need to make plans now for the accommodation of this large and inescapable population increase in the best way and to make sure that enough land is brought forward to provide for it.

## **The need for review**

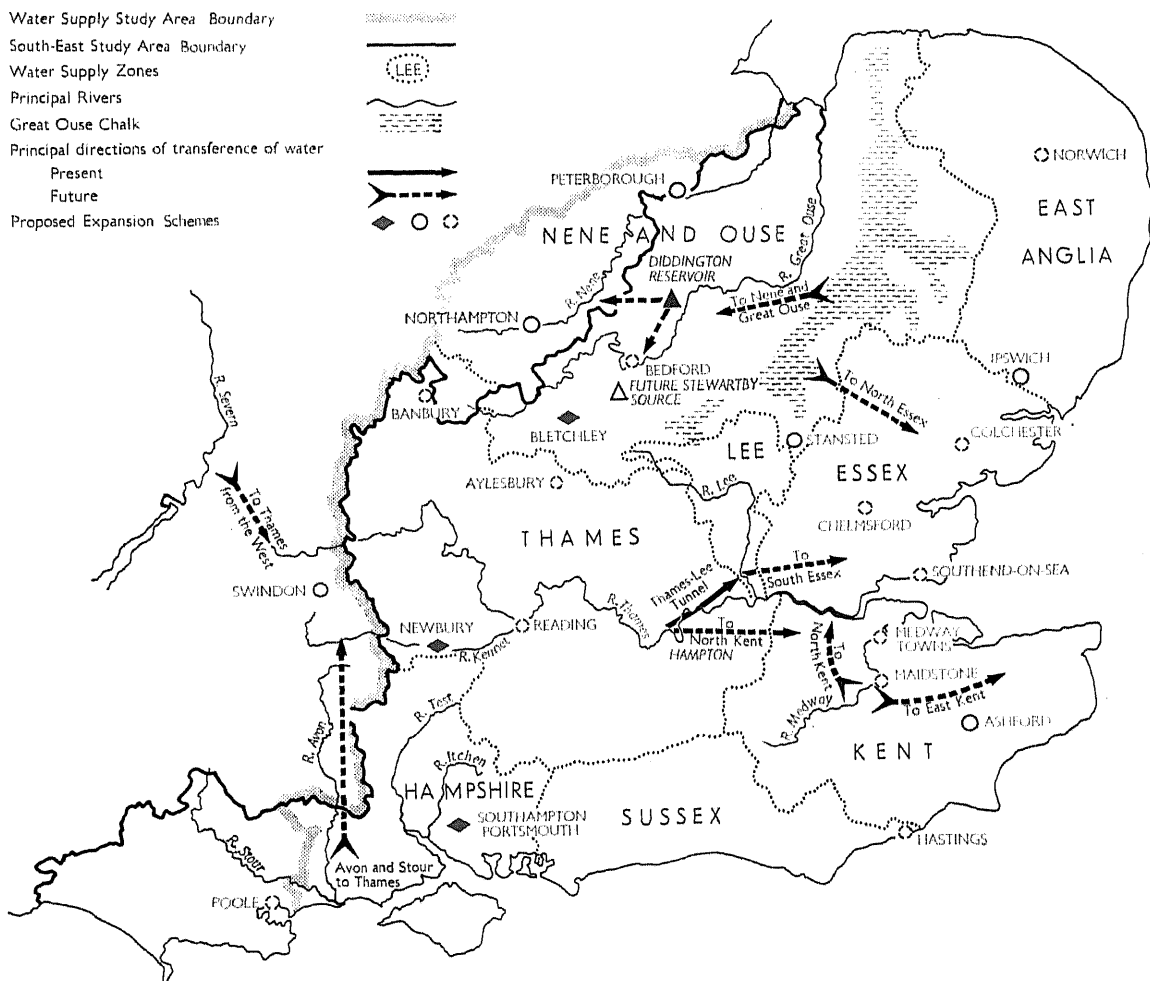
7. Nobody who has examined the history of planning in London and the South East since the days before the war can fail to be conscious of the possibility of error and of the possibility of social and economic changes that may overturn basic assumptions. There is no way of avoiding mistakes when planning for a long period ahead; but regular and frequent reviews can give early warning if events are falsifying predictions. These should be provided for.



# **Part Three**

---

## **APPENDICES**



**Fig. 26. Water supplies**

The arrows showing direction of transference of water to augment supplies in the future are diagrammatic and merely indicate possible sources of supply

# Water supplies in South East England

---

A CRITICAL factor for the carrying through of the big new schemes of expansion, and, indeed, in the accommodation of the population increase in the South East generally, is the provision of adequate supplies of water. An examination of the water supply situation in South East England is being made in parallel with this planning study.

## Summary of the water situation

2. The broad conclusion on water is that, given the necessary expenditure on schemes to develop sources of supply, and given statutory powers to undertake the works where these are required, there is no overriding obstacle to the provision of enough water to meet the needs of the population of the Study area, which will have grown to well over 21 million by 1981.

3. But it takes time to plan and execute a major water scheme, and in some areas where new towns and town expansions are proposed, and where heavy natural increase of the population

is likely, the present sources of supply are strained. In some water catchment areas too, different big expansions are competing for the same water supplies. This will affect the timing of some schemes, and may mean that, at any rate over a given period, the pace of growth at one town may be influenced by the rate of development at another. It might indeed prove desirable to defer the start of some until water supplies have been improved.

4. These questions are, of course, inter-dependent on other factors which may govern

the target for expansion and the speed of development at any given place, and the availability of water will be one of the matters for detailed investigation at each place. But certain problem areas stand out.

5. Natural increase alone will produce problems in **South Essex** and would, in time, require expensive schemes to bring more water into the area. The further increases considered in the Study, both of commuters and in planned expansion schemes (e.g. Chelmsford, Colchester and Southend), will make the provision of more water an urgent matter. This might be done through a tunnel passing water from the Thames catchment to Essex. There is already one such tunnel—it cost £5 million to build—but it may not have sufficient capacity to meet all the demands expected in Essex by 1981.

6. The situation in **Kent** is similar. Here too there will be a large natural increase, and expansion at Ashford and Maidstone will make the problem more urgent. The solution might be the exploitation of the resources of the River Medway Basin, or perhaps ultimately another tunnel from the Thames.

7. The other area of difficulty is the **Great Ouse** and **Nene** water areas. Four expansion schemes

which might be among the largest (Bletchley, Northampton, Peterborough and Stansted) may have to look to these areas for their supplies. There may be enough water available locally, but expensive schemes might be required to obtain this. Expansion at Stansted, unless it were designed to drain northwards to the Great Ouse basin, might have unfortunate effects on existing water supplies from the River Lee.

8. The **Thames Basin** is likely to be the key to water supply in the region. On present population estimates it should be able to meet all demands made on it up to 1981. Thereafter, it may be that the flow in the Thames will have to be augmented by bringing water from other catchments to the west. This would be a direct result of the total population increase in the region, and not of the particular distribution of that population suggested in the Study.

9. The size and urgency of the problems in the South East are such that a preliminary investigation of the possibilities of various major regional water schemes should be set on foot at once. This could be one of the first problems to which the Water Resources Board (to be established under the Water Resources Act 1963) will wish to turn its attention.

## The water supply study

10. The area included in the water supply study is not quite the same as that of the planning study, for physical and hydrological reasons. Northamptonshire and the Soke of Peterborough are included, and Dorset is omitted. Otherwise the boundaries are generally co-terminous.

11. The area is bounded on the landward side by the Northampton Uplands, the Cotswolds, the Berkshire Downs, the Hampshire Downs, Salisbury Plain and Cranborne Chase, and on the seaward side by the North Sea, the Strait of Dover and the English Channel. Apart from the

low coastal belts in the Fens and in Hampshire, the relatively high ridge boundary is interrupted by the Thames Valley in the Vale of White Horse and in the Kennet Valley.

12. The principal river systems are those of the Nene, the Great Ouse and the Thames; and there are some relatively small river systems discharging to the sea around the coastline.

13. The sedimentary geological formations in the area range from the Lower Lias of the Jurassic to the Norwich Crag of the Pleistocene measures. The principal measures of importance

to underground water supplies are the Chalk and Lower Greensand and the Oolitic Limestones. Many useful supplies are also obtained from other pervious formations, although in much smaller quantities.

14. At the end of 1963 there were 130 water undertakings in the area, of which 81 were local

authorities, 19 water boards and 30 water companies. This number will continue to be reduced by amalgamations and regroupings. There are 10 river or catchment boards in the area who will, in due course, be superseded by nine river authorities to be established under the Water Resources Act 1963.

## Present conditions

15. The basis for ascertaining present conditions was the information contained in returns for 1961 made to the Ministry of Housing and Local Government by statutory water undertakings.

16. In that year, the population in the area which was directly supplied was about 18 million. This population was supplied with 909 million gallons per day, of which 615 were unmetered (domestic), and 294 metered (trade, etc.). This total figure is equivalent to 50.3 gallons per head per day.

17. The area is supplied with water from surface sources and from underground sources in the Chalk, Lower Greensand, the Oolites and lesser supplies from other pervious strata. In 1961, of the total of 909 million gallons per day supplied, 433 were from underground sources and 470

from surface supplies, the balance being accounted for by bulk supplies. Of 470 million gallons per day obtained from surface supplies, 306 million gallons per day were obtained by the Metropolitan Water Board from their intakes in the rivers Thames and Lee. The next largest surface water supply was 34 million gallons daily from the River Stour for the South Essex Waterworks Company.

18. Surface supplies generally are either by direct abstraction of raw water from the river or by pumped storage. Upland impounded supplies are rare in the South East, the only example of note being the impounding reservoirs in the Nene catchment of the Mid-Northamptonshire Water Board.

## Future conditions

19. It is estimated in the planning study that the population of South East England will increase by  $3\frac{1}{2}$  million by 1981, of which  $1\frac{1}{2}$  million would be accommodated in new and expanded towns.

20. In the water supply study consideration has to be given to the water demands for the whole increase in population of  $3\frac{1}{2}$  million, in addition to the increasing demands of the present population. The provision made for planned expan-

sions of  $1\frac{1}{2}$  million is only a part of the whole problem.

21. The demand for water per head of population is showing a tendency to increase considerably because of the introduction of domestic appliances such as washing machines, the provision of waterborne sanitation and fixed baths in more private houses, the general raising of standards of personal hygiene, the more general



use of inexpensive hoses and sprayers for garden watering and the development of spray irrigation for agricultural purposes. A statistical examination of trends in the past, as far as comprehensive records are available, shows that, if present trends continue, the demand per head per day in England and Wales as a whole, including both domestic and trade supplies, may by 1981 have increased from the present 50·4 gallons per head per day to at least 65 gallons per head per day.

## Availability of water

23. The area has been divided into eight units, which correspond approximately to the hydro-metric areas used by the Surface Water Survey Unit of the Ministry of Housing and Local Government. In some cases those areas have been grouped together.

24. It must be emphasised that the schemes outlined below are merely suggestions put forward as a possible means of meeting the demand, and their final adoption must depend upon the results of considerable exploratory work, the consideration of other interests (such as agricultural use of land, riparian interests and the interests of other water users), and the obtaining of the necessary powers to enable them to be carried out. The Minister of Housing and Local Government is in no way committed to any of the schemes.

25. Until it is known with more certainty whether particular planned expansion schemes will go forward, it is not possible to go into the water schemes in any detail, and the pattern and timing of the rate of building development will influence their phasing. Up to ten years may elapse between the first inception of a scheme involving major works and the time when it first produces water in useful quantities.

26. **EAST ANGLIA.** In this area there is a surplus of underground water in the Chalk and

This figure does not include industrial and other supplies drawn from privately-owned sources.

22. On the basis of these figures and the expected population increase, the 1961 consumption of 909 million gallons daily will rise by 1981 to 1,372 million gallons daily; as the reliable yields of existing headworks and sources are little more than adequate to meet present demands, further developments will be necessary to produce the additional 463 million gallons daily.

some supplies can be made available by utilising surface water from reservoirs of the pumped storage type. The balance of surface and ground water should be integrated to make the best use of each.

27. The construction of a barrage at Great Yarmouth to exclude sea water from the Rivers Bure and Yare could produce a considerable quantity of water but it would interfere with other interests and, at this stage, it can be considered as no more than a possibility.

28. **NENE AND GREAT OUSE.** It is doubtful if there would be sufficient ground water reserves to meet any large additional demands in the Nene catchment area, but surface water might be exploited in limited quantities by the use of pumped storage such as may be available in the disused clay pits in the Peterborough area.

29. The surface water resources of the Great Ouse Basin are already being exploited and works are now in progress for the construction of a pumped storage reservoir at Diddington and trunk mains for distribution. This first phase should be producing water by 1967 and later phases are timed to be completed before 1990. A later phase of the Great Ouse scheme, which cannot, however, be started for some years to come, and for which powers have not yet been

obtained, would include an intake at Kempston, near Bedford, and would use pumped storage in disused clay pits near Bedford.

30. Surface water resources might be augmented by using some smaller and less economical sites for reservoirs, but these proposals would probably fully develop the available surface water resources of the Great Ouse Valley. With the accelerated building development proposed in the Great Ouse Valley and in the areas served by the Great Ouse scheme which are dependent upon it for water supplies, it is probable that the development of the Great Ouse Water Supply scheme to its ultimate capacity will have to be accelerated considerably.

31. There are large reserves of water in the Chalk on the eastern side of the Great Ouse Basin. This Chalk is in a belt extending from an area east of King's Lynn to the neighbourhood of Cambridge. The resources of this Chalk belt have not been fully explored as a whole and the ability of the Chalk to yield up its stored water has not been fully proved. It is, however, regarded as a potential source of future supplies, some of which may well be available for export to other areas such as the Lee Basin and north Essex.

32. ESSEX. In the planning study several large and important developments are suggested in Essex, an area in which the unexploited resources of both ground and surface water are extremely limited. It will be necessary to import water from other areas to meet the large demands for major expansions and development in Essex.

33. For supplies in north Essex, additional water could be drawn from Suffolk and East Anglia, and from the Chalk in the Great Ouse Basin. The Metropolitan Water Board have completed the Thames-Lee Tunnel main which is to convey untreated Thames water from Hampton to the Lee Valley in east London and an arrangement already exists for supplying a considerable quantity of this water into south Essex. To increase this supply the discharge capacity of the Thames-Lee Tunnel could be augmented and ultimately it may be necessary to duplicate the tunnel. There is a potential site for a reservoir for

storage of Thames water on the Cobbins Brook in the Lee Basin, which could be used for supplies to south Essex.

34. THE LEE BASIN. This is a critical area, as it contains the new towns of Harlow and Stevenage and places in Hertfordshire which would be affected by the spread of commuter population from London.

35. No major additional abstraction of ground water can be relied upon in the future and the surface water resources are already more than fully exploited. Therefore, to meet the large development expected in this area, water will have to be imported from outside the basin. This could be done by importation of ground and surface water from the Great Ouse Basin and by water from the Thames catchment.

36. KENT. There are certain ground water reserves in east Kent and with proper regulation of the flows in the rivers, particularly the Medway, the local resources may be able to meet the expected demands for some years to come. However, if the developments in mid and south Kent envisaged in the planning study materialise, it is unlikely that local water resources will prove to be adequate. In the long term, the supplies in north Kent could be augmented by Thames water, possibly conveyed into the area by a tunnel like the Thames-Lee Tunnel.

37. THAMES. The Thames Basin is the most important unit in the system of water supplies for South East England. In addition to the many important supplies given within the basin, both of ground and surface water, most of which is returned to the River Thames in the form of sewage effluents, the river forms the lifeline of surface water supplies to the London area and, in the future, may well serve to augment local supplies in south Essex and north Kent.

38. In addition to natural increases in population in the basin, major planned developments may take place at Aylesbury, Banbury, Reading and Swindon, as well as a big new town in the Newbury area.

39. The water resources of the Thames Basin should be sufficient to support supplies to the future population within the upper basin, most of the water so used being returned to the river for re-use.

40. Water flowing in the Thames channel above Teddington Lock is abstracted during the wetter periods of the year and stored for use in the drier periods and by this method supplies are maintained throughout the year to the population needing them. This method is being extended by the Metropolitan Water Board by the construction of more storage reservoirs in the Thames Valley, and they have had under consideration the construction of more reservoirs in the Thames Basin. The possibility has also been considered of utilising the underground storage available in the Chalk and Oolites under the Thames Basin and augmenting the flow in the Thames channel in dry periods by pumping into it water from underground. By such means as these, the water available in the Thames catchment area could be utilised to the full.

41. There are further possibilities of augmenting the flow in the Thames which may well merit consideration, either as additional or as alternative measures. One is that water might be pumped northwards from the basins of the Rivers Avon and Stour in Hampshire to discharge into the Kennet. Another suggestion is that water might be pumped into the upper reaches of the Thames from further west.

42. It is, therefore, considered that the Thames, possibly augmented by importation of water from neighbouring catchment areas, should be capable of meeting the demands for the Thames Basin, London and the areas of south Essex and north Kent for many years to come.

43. Development of the potentialities of the Thames would entail major engineering work such as the construction of large storage reservoirs, the exploration and construction of numerous boreholes for the abstraction of ground water to augment the river flows, the possible duplication of the Thames-Lee tunnel

for conveying Thames water into south Essex and a similar tunnel for conveying water into north Kent.

44. SUSSEX. Where rivers are fed from chalk springs, the ground and surface waters are inter-dependent, and for optimum exploitation must be developed as one. There are reserves of ground water in the county especially in the chalk of the South Downs and surface water in the rivers is capable of development, if adequate storage can be provided.

45. There need be no great anxiety about water supplies in Sussex, if the exploitation of ground and surface resources is properly co-ordinated.

46. HAMPSHIRE. The principal planned expansion suggested in Hampshire is in the Southampton-Portsmouth area. The main sources of water supplies are the Chalk for ground water and direct abstractions from rivers. Southampton draws supplies from both, but Portsmouth relies mainly upon the Chalk. The rivers are mainly chalk-fed so that the ground and surface water cannot be treated independently; large scale exploitation of the ground water may affect the flow in the rivers. The effect of this on fishing, particularly in the Itchen and the Test, will need to be considered.

47. It is probable that large scale exploitation of the water reserves would be from the rivers. This would entail providing adequate storage to regulate the flow, when suitable sites can be found. In general, storage sites as far downstream as possible and near to the tidal waters would probably be least open to objection from the point of view of riparian interests.

48. Poole, in Dorset, is included in the towns proposed for development. This area depends at present upon ground water for its supplies and there is a limited reserve of water which could be exploited. If this proves inadequate, consideration could be given to the development of river supplies in the neighbourhood, provided that suitable storage sites could be found.

## Capital investment

49. At the present stage of the development proposals for South East England it is very difficult to estimate what would be the total capital cost of water supply. This is largely due to unavoidably incomplete knowledge of the final location of the future centres of population and the phasing of the major schemes which will be necessary.

50. Approximate broad and comprehensive figures are suggested, based upon major works which have been or are being carried out in the post-war period, and adjusted to give some indication of present-day costs. These include

headworks and treatment works for major schemes and what is thought to be a reasonable allowance for trunk mains for conveying water from sources to the points from which it would be distributed. No allowance is made in these figures for distribution systems within the towns. 51. On this basis, the cost of major water supply schemes for an additional population of  $3\frac{1}{2}$  million would be of the order of £65 million. This figure can only be taken as a broad indication of the order of the capital cost involved. No indication of the probable phasing of expenditure can be attempted at present.

## Conclusion

52. To provide for the expected increase in population in South East England over the next 20 years it will be necessary to develop a number of major new water supply schemes. This will call for careful co-ordination on a much larger scale than has been necessary in the past, not only to provide for the delivery of additional water into areas with inadequate local resources, but to ensure that available resources are exploited to the best advantage and that the phasing of the programme of exploitation is geared to the pattern of increasing demand for water.

53. In the next decade, water undertakings will be faced with increasing demands for water both from the increase in demand *per capita* and from increasing population and industry. They will undoubtedly have to develop fully their existing sources of supply and seek to exploit many local potential sources. At the same time and in parallel with this, the authorities responsible for water conservation and the allocation

of available water resources will need to consider the major schemes, such as those involving the transference of water between the various river basins. In addition to this, exploratory and preparatory work should be carried out as soon as possible to prove the practicability of certain of the major schemes which will become necessary in the not very distant future.

54. As a general guide, it is suggested that the following steps might be taken:

(i) A more detailed investigation of the suitability of sites for storage of surface water in East Anglia than was possible by the Surface Water Survey.

(ii) Consideration of the possibility of accelerating the present programme of the Great Ouse Water Authority and the possibility of developing the Kempston Intake and the Stewartby storage scheme at an earlier date than was expected.

## THE SOUTH EAST STUDY

(iii) The field exploration of the potentialities of the Chalk in the Great Ouse Basin, by the appropriate authority.

(iv) The immediate acceleration of all projects for full development of all the available resources in Essex. This should include the possibility of augmenting the present arrangement for the supply of Thames water into south Essex and the possible need for additional storage for this purpose.

(v) The immediate acceleration of a more detailed field exploration of the available sites for regulating and pumped storage reservoirs in Kent, especially on the Medway, any necessary further exploration of the Chalk reserves, and the elimination of saline contamination in the mining areas.

(vi) Proposals for seeking additional storage sites

in the Thames Valley and for exploring the possibilities of exploiting the underground storage in the Thames Basin should be encouraged.

(vii) The possibilities of further connections between the Thames and Lee basins and of such a connection between the Thames catchment area and the area of the Kent river board should be considered.

(viii) Transfers of water into the Thames catchment area from the west and south should be the subject of preliminary investigation.

(ix) A start should be made on detailed exploratory work for exploiting the ground and surface water resources of Hampshire, in particular the field exploration of sites for regulating or pumped storage reservoir sites for surface water.

# Tables

---

**T**HIS Appendix brings together some of the detailed material on which the argument in the text is based. Most of the tables are related to the figures illustrating the text. They are divided into three main sections. The first section contains the definitions of the major divisions of England and Wales and the subdivisions of South East England used in the Study; the second deals with population; and the third with employment.

## Definition of areas

2. For the purposes of the Study, England and Wales has been divided into five major areas; and South East England has been further subdivided. These tables give the composition, and the estimated civilian populations, of each of these divisions in 1961.

3. **Table 1** gives the composition of the major divisions of England and Wales used in the Study (see Fig. 2). These divisions are, in general, made up of the ten standard regions defined

by the Registrar General for the 1961 Census. The only exception is in the case of Dorset, the whole of which is included in the South East as defined in the Study. (For comparison with the regional boundaries used by other government departments, see footnotes 1 and 2.)

4. **Table 2** shows the subdivisions of South East England used in the Study, and Tables 3, 4, 5 and 6 give the composition of them (see Fig. 3).

5. The main subdivisions of the South East are

the metropolitan region, which is the area within about 40 miles of the centre of London, where the influence of London is most strongly felt; and, within the metropolitan region, the Greater London conurbation, as defined for the 1961 Census, which comprises the built-up area lying inside the metropolitan green belt.

6. **Table 3** gives the composition of the conurba-

tion. The outer metropolitan region (i.e. that part of the metropolitan region that falls outside the conurbation) has been divided into two rings, the inner country ring and the outer country ring, and **Tables 4** and **5** show the composition of these. **Table 6** gives the composition of the remainder of the South East outside the metropolitan region.

## Population statistics

### 7. POPULATION DISTRIBUTION AND CHANGES.

The chief source of population statistics is the Census, which has been held every 10 years (with the exception of 1941) since 1801. The Registrar General's published estimates of *home population*, based on the Census, include, however, members of the British, Commonwealth, and foreign armed forces in the area, and it is more appropriate for the purposes of land use planning to use his specially prepared mid-year estimates of *civilian population*.

8. **Table 7** shows the distribution of population in 1951 and 1961 and the changes occurring between these dates, principally by natural change and migration. These changes are illustrated in Figs. 4, 5 and 6.

9. **Table 8** shows the growth of the population of South East England since 1801, and how the area's percentage share of the total population of England and Wales has varied.

10. **Table 9** deals with changes in population distribution within the metropolitan region. It shows how, in a cross-section of the region from Reading to Southend, the balance of population has shifted both within the conurbation and between the conurbation and the outer metropolitan region over the period 1901-61 (see Fig. 15).

11. **THE BIRTH RATE.** **Table 10** gives the number of live births recorded in each year from 1946 to 1962 in England and Wales as a

whole and in the subdivisions of South East England. For each area, the post-war low is shown in heavy type. The table also gives the figures for each area on a ratio basis related to 1955, which was the low point for the birth rate trend in England and Wales as a whole. These changes in trend are illustrated in Fig. 12, and the birth rate trend for England and Wales as a whole over the period is shown in Fig. 7.

### 12. EXISTING PLANNED OVERSPILL SCHEMES.

**Tables 11 and 12** deal with the provision already made under the New Towns Act 1946 and the Town Development Act 1952 for the housing of overspill population from local authority areas in London which have been recognised as exporting areas for the purposes of Section 9 of the Housing Subsidies Act 1956. The major schemes are shown in Fig. 14.

13. One purpose of these two tables is to show the capacity remaining unused in existing schemes in 1961, as a basis for calculating the further provision needed (Chapter 10, paragraph 19). For this purpose, schemes which have been agreed since 1961 are relevant and capacity to be provided in them has been shown as existing in 1961, which is the base date for the relevant calculation.

14. **Table 13** compares the age structure of the population of the London new towns in 1961 with that of England and Wales as a whole (see Fig. 24).

## Employment statistics

15. **AREAS.** The geographical divisions of England and Wales and of South East England used in the Study (Tables 1–6) are made up of local authority areas. Some boundaries of Ministry of Labour local office areas (which are the basic units for employment data) do not correspond with those of local authority areas, and the divisions in the tables relating to employment therefore differ slightly from the divisions used in the population tables.

16. Two of the major divisions, Midlands and Northern England, were affected by changes in Ministry of Labour regional boundaries made in 1962 when three regions (Midland, North Midlands, and East and West Ridings) were combined to form two new regions (Midlands, and Yorkshire and Lancashire). The figures used here are for the regions as constituted up to 1962.

17. For most of the tables the figures for South East and South West England have been adjusted so as to include in the South East the part of Dorset (i.e. the whole of the county except Poole) which falls in Ministry of Labour South Western Region. In Tables 16, 19, 20, 21 and 23, however, South East England does not include the whole of Dorset.

18. **SCOPE OF THE STATISTICS.** The employment statistics are derived from the Ministry of Labour's annual (June) estimates of employees (employed and unemployed). For Great Britain as a whole these estimates account for 92 per cent of the total working population (i.e. people of working age who either work for pay or gain or who register themselves as available for such work). The balance is made up of employers and people working on their own account (6 per cent) and members of Her Majesty's Forces and Women's Services (2 per cent).

19. **INDUSTRIAL CLASSIFICATION.** In some tables the total number of employees is analysed

by groups to provide a picture of the structure of employment.

20. The Standard Industrial Classification, issued by the Central Statistical Office in 1958, groups industries in 24 Orders. The classification is based on industries and not on occupations, and administrative, technical, clerical and ancillary staff are included in the figures of employment for the industry concerned. Thus the head office of a firm operating in the United Kingdom is classified as far as possible according to the major activity of the firm.

21. The Industrial Orders are further subdivided into Minimum List Headings; the particular industries included under each heading are set out in the Standard Industrial Classification. In most of the tables dealing with employment structure the analysis is in terms of either Orders or Minimum List Headings, but for some general tables the Orders have been grouped, for the purpose of the Study, into three broad categories—primary, manufacturing, and service industries. The composition of these categories is shown in Table 16.

22. **PERIODS COVERED.** Detailed employment statistics cannot be produced on a comparable basis for the period taken for population statistics, 1951–61. A broad regional analysis of changes in the distribution of employees for the period 1952–62 has been specially prepared by the Ministry of Labour and is given in Table 14. In general, however, comparable employment statistics are not available for years earlier than 1955 because the figures before that date are not corrected for 'bulk exchanges' i.e. to allow for the fact that some large firms may exchange the national insurance cards of some of their employees in a region other than that in which they work. Regional analysis of employment on a comparable basis is, therefore, possible only for the period 1955–62.



23. Changes in classification were introduced when the Standard Industrial Classification was revised in 1958; for this reason, most of the tables analysing employment structure cover the period 1959–62 only. In Table 18 figures for the three broad categories have been compiled for an earlier period, 1955–58, on the basis of the 1948 edition of the Standard Industrial Classification. These figures, however, are not fully comparable with those given for 1959–62.

24. **NUMBER AND DISTRIBUTION OF EMPLOYEES.** **Table 14** shows the distribution of employees, by major divisions of England and Wales, in 1952 and 1962, and the changes that took place between these dates. These figures for a 10-year period have been specially prepared by the Ministry of Labour; figures are not available for the subdivisions of South East England used in the Study.

25. **Table 15** is a similar analysis for the period 1955–62. Comparable figures of total employees are available over this period, and figures are given for the subdivisions of South East England (see Fig. 8).

26. **EMPLOYMENT STRUCTURE.** **Table 16** lists the 24 Industrial Orders in the three broad categories used in the Study and shows how the structure of employment in South East England in 1962 differed from the structure for England and Wales as a whole. The table also indicates the changes in the numbers in employment in each Industrial Order in Great Britain over the period 1952–62. These figures have been specially provided by the Ministry of Labour; no breakdown for the subdivisions of South East England is available in terms of Industrial Orders.

27. **Table 17** is an analysis of employment structure in 1962 in terms of the three broad categories only, but with a breakdown for the subdivisions of South East England. The differences in structure are illustrated in Fig. 10.

28. **Table 18** illustrates the differential changes that have taken place in the distribution of employment in the three broad categories in each of the divisions and subdivisions of the country.

The analysis covers two three-year periods 1955–58 and 1959–62. No estimates of change are available for the year 1958–59 during which changes in classification were introduced.

29. **Table 19** is based on an analysis of the changes in the numbers employed in each of the 24 Industrial Orders in *Great Britain as a whole* over the period 1952–62. It shows how employees in Orders with differing rates of employment growth or decline were distributed between the major divisions of England and Wales in 1962. **Table 20** is based on a similar analysis, relating only to manufacturing industries, and in terms of Minimum List Headings, not Industrial Orders. For this more detailed analysis the standard of comparison has to be the relatively short period, 1959–62, and not the ten-year period used in Table 19 (see Fig. 9).

30. **Table 21** sets out the industries (in terms of Minimum List Headings) which have had employment increases of over 3,000 in South East England in the period 1959–62. **Table 22** contains a similar analysis for the London conurbation only.

31. **FACTORY AND OFFICE BUILDING.** **Table 23** gives figures of industrial buildings completed in the years 1952–61 (inclusive), and the estimated employment provided, in each of the major divisions of England and Wales and of South East England (see Fig. 11).

32. These figures are based on information available to the Board of Trade as a result of applications for industrial development certificates. They relate to completed buildings known to the Board of Trade by 30th June 1963. The estimates of employment provided are those accepted when the applications were decided. They relate only to labour requirements which could be attributed to the proposed building or extension itself.

33. The table also relates the estimated employment provided in each area to its total insured population in 1952; no figures are available for the subdivisions of South East England, except for the London conurbation.

34. **Table 24** illustrates the growth in office floor

space in central London (see Fig. 17). The estimates of office floor space have been provided by the London County Council; they relate to buildings for which the principal use is offices,

for the purposes of the Town and Country Planning (Use Classes) Order 1963 (S.I. 1963 No. 708). The table also includes the Council's estimates of further commitments.

## List of tables

### DEFINITION OF AREAS

- Table 1. Major divisions of England and Wales
- Table 2. Subdivisions of South East England
- Table 3. London conurbation
- Table 4. Inner country ring
- Table 5. Outer country ring
- Table 6. Rest of South East England

### POPULATION STATISTICS

#### *Population distribution and changes*

- Table 7. Civilian population changes: England and Wales and South East England 1951–61
- Table 8. The proportion of the population of England and Wales resident in South East England 1801–1961
- Table 9. Population changes in a cross-section of the metropolitan region 1901–1931–1961

#### *The birth rate*

- Table 10. Live births: England and Wales and South East England 1946–62

#### *Existing planned overspill schemes*

- Table 11. Reception capacity in existing new towns mid-1961
- Table 12. Reception capacity in agreed town development schemes mid-1961
- Table 13. Age structure: London new towns and England and Wales 1961

### EMPLOYMENT STATISTICS

#### *Number and distribution of employees*

- Table 14. Changes in the distribution of employees: England and Wales 1952–62
- Table 15. Changes in the distribution of employees: England and Wales and South East England 1955–62

EMPLOYMENT STATISTICS *continued*

*Employment structure*

Table 16. Employment structure by Industrial Orders: England and Wales and South East England 1962

Table 17. Employment structure by broad categories: England and Wales and South East England 1962

Table 18. Changes in numbers of employees in primary, manufacturing and service industries: England and Wales and South East England 1955-58 and 1959-62

Table 19. Employment structure (all industries), analysed by reference to national employment changes 1952-62: England and Wales 1962

Table 20. Employment structure (manufacturing industries), analysed by reference to national employment changes 1959-62: England and Wales 1962

Table 21. Industries with increases in employment of 3,000 or more: South East England 1959-62

Table 22. Industries with increases in employment of 3,000 or more: London conurbation 1959-62

*Factory and office building*

Table 23. Industrial development: England and Wales and South East England 1952-61

Table 24. Office growth in central London since 1939

NOTE. *Figures have been rounded to the nearest final digit and, in some tables, there may be a slight discrepancy between the sum of the constituent items and the total as shown.*

## Major divisions of England and Wales

TABLE 1

<i>Composition of major divisions and standard regions of England and Wales</i>	<i>1961 civilian population (thousands)</i>	<i>Composition of major divisions and standard regions of England and Wales</i>	<i>1961 civilian population (thousands)</i>
(1)	(2)	(1)	(2)
<b>All areas</b>	<b>45,852</b>	<b>Midlands continued</b>	
<b>South East England</b>	<b>17,747</b>	Northamptonshire	398
London and South Eastern Region	11,034	Nottinghamshire	902
Essex (part)	1,003	Peterborough, Soke of	74
Hertfordshire (part)	154	Rutland	23
Kent	1,689	<b>South West England</b>	<b>3,132</b>
London	3,173	South Western Region (part)	3,132
Middlesex	2,222	Cornwall	330
Surrey	1,722	Devon	801
Sussex, East	662	Gloucestershire	998
Sussex, West	409	Somerset	595
Eastern Region	3,711	Wiltshire	408
Bedfordshire	380	<b>Northern England</b>	<b>13,969</b>
Cambridgeshire	188	Northern Region	3,239
Isle of Ely	89	Cumberland	291
Essex (part)	1,276	Durham	1,519
Hertfordshire (part)	682	Northumberland	816
Huntingdonshire	77	Westmorland	67
Norfolk	553	Yorkshire, North Riding	546
Suffolk, East	340	East and West Ridings	4,166
Suffolk, West	127	Yorkshire, East Riding	523
Southern Region	2,783	Yorkshire, West Riding	3,643
Berkshire	502	North Western Region	6,564
Buckinghamshire	485	Cheshire	1,369
Dorset (part)	90	Derbyshire (part) ( <i>see Note 3</i> )	69
Hampshire	1,308	Lancashire	5,127
Oxfordshire	306	<b>Wales</b>	<b>2,621</b>
Isle of Wight	92	Wales	2,621
South Western Region (part)	219	Anglesey	50
Dorset (part)	219	Breconshire	54
<b>Midlands</b>	<b>8,384</b>	Caernarvonshire	120
Midland Region	4,759	Cardiganshire	53
Herefordshire	128	Carmarthenshire	167
Shropshire	293	Denbighshire	172
Staffordshire	1,737	Flintshire	148
Warwickshire	2,028	Glamorgan	1,223
Worcestershire	573	Merionethshire	37
North Midland Region	3,625	Monmouthshire	442
Derbyshire (part) ( <i>see Note 3</i> )	812	Montgomeryshire	44
Leicestershire	682	Pembrokeshire	92
Lincolnshire: Parts of Holland	103	Radnorshire	18
Parts of Kesteven	132		
Parts of Lindsey	499		

## NOTES

1. South East England as defined in the table corresponds with two Board of Trade regions (London and South Eastern, and Eastern), together with that part of Dorset, i.e. the whole Administrative County except Poole M.B., which is within Board of Trade South Western Region.
2. Apart from some areas where Ministry of Labour administrative boundaries do not coincide with those of local authority areas, South East England is the equivalent of two Ministry of Labour Regions (London and South Eastern, and Eastern and Southern), together with the local office areas in South Western Region which serve Dorset.
3. The area of Derbyshire falling within Northern England (North Western Region portion) comprises Buxton M.B., Glossop M.B., New Mills U.D., Whaley Bridge U.D. and Chapel en le Frith R.D.

## Subdivisions of South East England

TABLE 2

<i>Area</i>	<i>1961 civilian population (thousands)</i>
(1)	(2)
<b>South East England</b>	<b>17,747</b>
Metropolitan region	12,402
London conurbation ( <i>see Table 3</i> )	8,132
Outer metropolitan region	4,269
Inner country ring ( <i>see Table 4</i> )	2,317
Outer country ring ( <i>see Table 5</i> )	1,952
Rest of South East England ( <i>see Table 6</i> )	5,345

## London conurbation

TABLE 3

<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>	<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>
(1)	(2)	(1)	(2)
<b>All areas</b>	<b>8,132.4</b>	<b>Kent (part)</b>	<b>503.5</b>
<b>London</b>	<b>3,172.6</b>	Beckenham M.B.	76.6
<b>Middlesex</b>	<b>2,222.4</b>	Bexley M.B.	89.6
<b>Essex (part)</b>	<b>1,003.1</b>	Bromley M.B.	68.2
East Ham C.B.	105.4	Chislehurst and Sidcup U.D.	87.1
West Ham C.B.	156.6	Crayford U.D.	31.3
Barking M.B.	72.2	Erith M.B.	45.0
Chigwell U.D.	61.5	Orpington U.D.	79.8
Chingford M.B.	45.9	Penge U.D.	25.8
Dagenham M.B.	109.0	<b>Surrey (part)</b>	<b>1,077.0</b>
Ilford M.B.	177.6	Croydon C.B.	252.3
Leyton M.B.	93.3	Banstead U.D.	41.0
Waltham Holy Cross U.D.	11.7	Barnes M.B.	39.0
Walthamstow M.B.	108.8	Beddington and Wallington M.B.	32.6
Wanstead and Woodford M.B.	61.2	Carshalton U.D.	56.5
<b>Hertfordshire (part)</b>	<b>153.8</b>	Coulsdon and Purley U.D.	73.8
Barnet U.D.	27.3	Epsom and Ewell M.B.	69.9
Bushey U.D.	21.4	Esher U.D.	60.5
Cheshunt U.D.	35.5	Kingston-upon-Thames M.B.	36.0
East Barnet U.D.	40.6	Malden and Coombe M.B.	46.3
Elstree R.D.	29.1	Merton and Morden U.D.	67.6
		Mitcham M.B.	63.7
		Richmond M.B.	40.7
		Surbiton M.B.	62.5
		Sutton and Cheam M.B.	77.9
		Wimbledon M.B.	57.0

## Inner country ring

TABLE 4

<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>	<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>
(1)	(2)	(1)	(2)
<b>All areas</b>	<b>2,317.2</b>	<b>Hertfordshire continued</b>	
<b>Berkshire (part)</b>	<b>86.0</b>	Welwyn Garden City U.D.	35.3
New Windsor M.B.	26.6	Hatfield R.D.	40.0
Easthamstead R.D.	43.8	Hemel Hempstead R.D.	13.2
Windsor R.D.	15.6	Hertford R.D.	10.1
<b>Buckinghamshire (part)</b>	<b>234.2</b>	St. Albans R.D.	38.3
Beaconsfield U.D.	9.8	Ware R.D.	12.3
Chesham U.D.	16.5	Watford R.D.	58.2
Eton U.D.	5.4	Welwyn R.D.	7.0
Slough M.B.	80.7	<b>Kent (part)</b>	<b>238.3</b>
Amersham R.D.	55.4	Dartford M.B.	45.5
Eton R.D.	66.3	Gravesend M.B.	50.7
<b>Essex (part)</b>	<b>614.2</b>	Northfleet U.D.	22.4
Basildon U.D.	89.7	Sevenoaks U.D.	17.5
Brentwood U.D.	49.6	Swanscombe U.D.	8.9
Canvey Island U.D.	15.7	Dartford R.D.	53.3
Epping U.D.	9.8	Sevenoaks R.D.	40.0
Harlow U.D.	54.3	<b>Surrey (part)</b>	<b>553.7</b>
Hornchurch U.D.	130.7	Caterham and Warlingham U.D.	34.0
Romford M.B.	114.7	Chertsey U.D.	41.0
Thurrock U.D.	113.4	Dorking U.D.	22.4
Epping and Ongar R.D.	36.3	Egham U.D.	30.8
<b>Hertfordshire (part)</b>	<b>536.9</b>	Frimley and Camberley U.D.	27.4
Chorleywood U.D.	7.0	Guildford M.B.	53.5
Harpenden U.D.	18.4	Leatherhead U.D.	36.2
Hemel Hempstead M.B.	55.7	Reigate M.B.	54.3
Hertford M.B.	16.0	Walton and Weybridge U.D.	45.4
Hoddesdon U.D.	18.0	Woking U.D.	67.7
Rickmansworth U.D.	28.8	Bagshot R.D.	16.2
St. Albans M.B.	50.1	Dorking and Horley R.D.	31.5
Stevenage U.D.	43.6	Godstone R.D.	40.0
Ware U.D.	10.0	Guildford R.D.	53.5
Watford M.B.	75.0	<b>Sussex, West (part)</b>	<b>53.9</b>
		Crawley U.D.	53.9

## Outer country ring

TABLE 5

Constituent areas	1961 civilian population (thousands)	Constituent areas	1961 civilian population (thousands)
(1)	(2)	(1)	(2)
<b>All areas</b>	<b>1,952.0</b>	<b>Hertfordshire continued</b>	
<b>Bedfordshire (part)</b>	<b>206.4</b>	Bishop's Stortford U.D.	19.0
Dunstable M.B.	25.7	Hitchin U.D.	23.8
Leighton Buzzard U.D.	11.7	Letchworth U.D.	25.8
Luton M.B.	132.0	Royston U.D.	6.1
Luton R.D.	37.0	Sawbridgeworth U.D.	4.7
<b>Berkshire (part)</b>	<b>261.3</b>	Tring U.D.	6.0
Reading C.B.	120.4	Berkhamsted R.D.	6.3
Maidenhead M.B.	35.3	Braughing R.D.	10.1
Wokingham M.B.	11.5	Hitchin R.D.	23.0
Bradfield R.D.	28.3	<b>Kent (part)</b>	<b>413.6</b>
Cookham R.D.	16.6	Chatham M.B.	48.0
Wokingham R.D.	49.2	Gillingham M.B.	71.0
<b>Buckinghamshire (part)</b>	<b>197.0</b>	Maidstone M.B.	59.4
Aylesbury M.B.	27.0	Rochester M.B.	50.2
Bletchley U.D.	16.9	Royal Tunbridge Wells M.B.	39.7
High Wycombe M.B.	50.2	Southborough U.D.	9.7
Linslade U.D.	4.1	Tonbridge U.D.	22.3
Marlow U.D.	8.7	Maidstone R.D.	20.0
Aylesbury R.D.	30.5	Malling R.D.	40.0
Wing R.D.	8.9	Strood R.D.	28.8
Wycombe R.D.	50.6	Tonbridge R.D.	24.6
<b>Essex (part)</b>	<b>343.7</b>	<b>Oxfordshire (part)</b>	<b>31.5</b>
Southend-on-Sea C.B.	163.7	Henley M.B.	9.0
Benfleet U.D.	32.6	Henley R.D.	22.5
Chelmsford M.B.	49.9	<b>Surrey (part)</b>	<b>91.4</b>
Rayleigh U.D.	19.1	Farnham U.D.	27.0
Chelmsford R.D.	47.7	Godalming M.B.	16.4
Rochford R.D.	30.7	Haslemere U.D.	12.7
<b>Hampshire (part)</b>	<b>93.1</b>	Hambledon R.D.	35.3
Aldershot M.B.	27.9	<b>Sussex, East (part)</b>	<b>123.7</b>
Farnborough U.D.	29.0	Burgess Hill U.D.	14.1
Fleet U.D.	13.0	Cuckfield U.D.	20.1
Hartley Wintney R.D.	23.2	East Grinstead U.D.	15.5
<b>Hertfordshire (part)</b>	<b>145.0</b>	Cuckfield R.D.	30.5
Baldock U.D.	6.7	Uckfield R.D.	43.5
Berkhamsted U.D.	13.5	<b>Sussex, West (part)</b>	<b>45.3</b>
		Horsham U.D.	21.3
		Horsham R.D.	24.0

## Rest of South East England

TABLE 6

<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>	<i>Constituent areas</i>	<i>1961 civilian population (thousands)</i>
(1)	(2)	(1)	(2)
<b>All areas</b> . . . . .	<b>5,345.1</b>	The parts of the following geographical counties that are not within the Metropolitan Region:	
The whole of the following geographical counties:		Bedfordshire (part) . . . .	173.5
Cambridgeshire . . . . .	187.7	Berkshire (part) . . . .	154.8
Dorset . . . . .	308.9	Buckinghamshire (part) . . . .	53.5
Isle of Ely . . . . .	88.7	Essex (part) . . . .	318.3
Huntingdonshire . . . . .	76.7	Hampshire (part) . . . .	1,214.4
Norfolk . . . . .	552.6	Kent (part) . . . .	533.8
Suffolk, East . . . . .	340.1	Oxfordshire (part) . . . .	274.5
Suffolk, West . . . . .	126.9	Sussex, East (part) . . . .	538.3
Isle of Wight . . . . .	92.3	Sussex, West (part) . . . .	310.1



## Civilian population changes

TABLE 7

*England and Wales and South East England 1951-61*

(thousands)

Area	Distribution 1951		Changes 1951-61							Distribution 1961	
			Total		By births and deaths		Estimated gain from armed forces	Estimated net balance by migration			
	No.	Per cent	No.	Per cent	No.	Per cent	No.	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
England and Wales . . .	43,269	100.0	2,583	6.0	1,975	4.6	321	287	0.7	45,852	100.0
South East England . . .	16,480	38.1	1,267	7.7	730	4.4	124	413	2.5	17,747	38.7
Metropolitan region . . .	11,605	26.8	796	6.9	575	5.0	87	134	1.2	12,402	27.0
Midlands . . . . .	7,732	17.9	652	8.4	465	6.0	58	129	1.7	8,384	18.3
South West England . . .	2,947	6.8	185	6.3	99	3.4	22	64	2.2	3,132	6.8
Northern England . . .	13,541	31.3	427	3.2	597	4.4	98	—268	—2.0	13,969	30.5
Wales . . . . .	2,569	5.9	52	2.0	84	3.3	19	—51	—2.0	2,621	5.7
South East England . . .	16,480	100.0	1,267	7.7	730	4.4	124	413	2.5	17,747	100.0
London conurbation . . .	8,321	50.5	—189	—2.3	334	4.0	60	—583	—7.0	8,132	45.8
Outer metropolitan region . .	3,284	19.9	985	30.0	241	7.3	27	717	21.8	4,269	24.1
Inner country ring . . .	1,658	10.0	659	39.7	156	9.4	14	489	29.5	2,317	13.1
Outer country ring . . .	1,626	9.9	326	20.0	85	5.2	13	228	14.0	1,952	11.0
Rest of South East England	4,875	29.6	471	9.6	155	3.2	37	279	5.7	5,345	30.1

## NOTES

1. The estimates are for civilian population only and allowance has, therefore, to be made for reduction in the size of the armed forces over the period. In the absence of information on the destinations of demobilised personnel, the net gain to the civilian population of the country as a whole from this source has been allocated to areas (column 8) *pro rata* to their 1951 populations.

2. The estimates of net migration (column 9) have been calculated by deducting from the total change (column 4) the estimates of natural change (column 6) and the allowances made for gains from the armed forces (column 8).

**The proportion of the population of England and Wales  
resident in South East England 1801-1961**

TABLE 8

<i>Year</i>	<i>Population of South East England</i>			
	<i>Enumerated</i>		<i>Civilian</i>	
	<i>No. (thousands)</i>	<i>Percentage of the population of England and Wales</i>	<i>No. (thousands)</i>	<i>Percentage of the population of England and Wales</i>
(1)	(2)	(3)	(4)	(5)
1801	3,214	38.6		
1811	3,669	38.5		
1821	4,321	38.4		
1831	4,954	37.8		
1841	5,579	37.2		
1851	6,307	35.2		
1861	7,047	35.1		
1871	8,031	35.4		
1881	9,157	35.3		
1891	10,409	35.9		
1901	11,786	36.2		
1911	13,276	36.8		
1921	13,663	36.1		
1931	14,897	37.3		
1941	<i>No Census</i>	<i>No Census</i>		
1951	16,653	38.1	16,480	38.1
1961	17,868	38.8	17,747	38.7

**NOTE**

The figures given in column 2 are the census enumerated populations. In column 4 the Registrar General's mid-year estimates for 1951 and 1961 are given for comparison; equivalent estimates are not available for earlier years.

# Population changes in a cross-section of the metropolitan region 1901-1931-1961

TABLE 9

THE SOUTH EAST STUDY

(thousands)

Area	Census enumerated population						Population changes					
	1901		1931		1961		1901-31		1931-61		1901-61	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
All areas . . . . .	4,029.5	100.0	4,662.0	100.0	4,504.3	100.0	632.6	16	157.7	3	474.9	12
Outer metropolitan region (west)	177.9	4.4	257.6	5.5	442.0	9.8	79.7	45	184.5	72	264.2	149
Outer country ring . . . . .	129.0	3.2	172.0	1.8	263.3	5.8	43.1	33	91.2	53	134.3	104
Inner country ring . . . . .	48.9	1.2	85.6	3.7	178.8	4.0	36.6	75	93.2	109	129.9	266
Conurbation . . . . .	3,751.7	93.1	4,126.1	88.5	3,432.1	76.2	374.4	10	694.0	17	319.6	9
Suburbs (west) . . . . .	118.3	2.9	316.7	6.8	567.4	12.6	198.4	168	250.7	79	449.1	380
Inner urban (west) . . . . .	1,158.8	28.8	1,275.7	27.4	1,072.7	23.8	117.0	10	203.0	16	86.1	7
Central area . . . . .	504.1	12.5	347.0	7.4	214.4	4.8	157.2	31	132.5	38	289.7	58
Inner urban (east) . . . . .	1,900.2	47.2	1,923.1	41.3	1,229.7	27.3	22.9	1	693.4	36	670.5	35
Suburbs (east) . . . . .	70.3	1.7	263.6	5.7	347.8	7.7	193.3	275	84.3	32	277.5	395
Outer metropolitan region (east)	99.9	2.5	278.3	6.0	630.2	14.0	178.5	179	351.8	126	530.3	531
Inner country ring . . . . .	49.0	1.2	126.4	2.7	383.4	8.5	77.3	158	257.0	203	334.3	682
Outer country ring . . . . .	50.9	1.3	152.0	3.3	246.8	5.5	101.1	199	94.8	62	196.0	385

## NOTES

1. The figures used are the census enumerated populations and not the civilian populations. The enumerated populations in the 1901 and 1931 Censuses have been adjusted to relate to the local authority areas as constituted in 1961.

2. The cross-section has been defined in terms of local authority areas and its width varies from 5 to 10 miles. The local authorities included are:

Outer metropolitan region (west)	Outer country ring	Reading C.B., Maidenhead M.B., Wokingham M.B., Bradfield R.D., Cookham R.D., Wokingham R.D.
	Inner country ring	New Windsor M.B., Slough M.B., Eton U.D., Eton R.D.
Conurbation	Suburbs (west)	Ealing M.B., Heston and Isleworth M.B., Southall M.B., Uxbridge M.B., Hayes and Harlington U.D., Ruislip and Northwood U.D., Yiewsley and West Drayton U.D.
	Inner urban (west)	Chelsea Met.B., Fulham Met.B., Hammersmith Met.B., Hampstead Met.B., Kensington Met.B., Paddington Met.B., St. Pancras Met.B., Acton M.B., Brentford and Chiswick M.B., Willesden M.B.
	Central area	City of London, Finsbury Met.B., Holborn Met.B., St. Marylebone Met.B., City of Westminster.
	Inner urban (east)	Bethnal Green Met.B., Hackney Met.B., Islington Met.B., Poplar Met.B., Shoreditch Met.B., Stepney Met.B., Stoke Newington Met.B., East Ham C.B., West Ham C.B., Barking M.B., Leyton M.B., Walthamstow M.B.
	Suburbs (east)	Dagenham M.B., Ilford M.B., Wanstead and Woodford M.B.
Outer metropolitan region (east)	Inner country ring	Romford M.B., Basildon U.D., Brentwood U.D., Hornchurch U.D.
	Outer country ring	Southend-on-Sea C.B., Benfleet U.D., Rayleigh U.D., Rochford R.D.

# Live births

TABLE 10

England and Wales and South East England 1946-62

(thousands)

Year	England and Wales		South East England							
			Total		London conurbation		Outer metropolitan region		Rest of South East England	
	No.	Index (1955=100)	No.	Index (1955=100)	No.	Index (1955=100)	No.	Index (1955=100)	No.	Index (1955=100)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1946	820.7	123	307.9	126	159.7	139	58.8	105	89.4	120
1947	881.0	132	326.2	133	168.1	147	63.1	112	95.0	128
1948	775.3	116	281.0	115	142.1	124	55.4	99	83.6	113
1949	730.5	109	263.0	107	131.9	115	53.1	95	78.9	106
1950	697.1	104	250.5	102	124.0	108	<b>49.2</b>	88	76.9	104
1951	677.5	101	245.2	100	120.4	105	50.5	90	74.3	100
1952	673.7	101	<b>243.6</b>	99	118.3	103	51.3	91	<b>74.0</b>	100
1953	684.4	102	246.7	101	117.9	103	52.9	94	75.9	102
1954	673.7	101	246.8	101	116.6	102	54.5	97	75.7	102
1955	<b>667.8</b>	100	245.0	100	<b>114.7</b>	100	56.1	100	74.2	100
1956	700.3	105	256.6	105	119.2	104	60.4	108	77.1	104
1957	723.4	108	265.3	108	121.0	105	64.4	115	79.9	108
1958	740.7	111	275.0	112	125.0	109	69.1	123	80.8	109
1959	748.5	112	279.8	114	126.5	110	71.7	128	81.6	110
1960	785.0	118	295.2	120	133.2	116	75.8	135	86.1	116
1961	811.3	112	306.1	125	138.2	120	80.0	143	87.8	118
1962	838.7	126	318.4	130	143.3	125	83.6	149	91.4	123

## NOTES

1. The table gives the number of live births occurring during each calendar year as recorded in the Registrar General's annual *Statistical Review*, Part II.
2. The figures in heavy type are the post-war low points for each area.

# Reception capacity in existing new towns mid-1961

TABLE 11

<i>New town</i>	<i>Year of designation</i>	<i>Population at designation</i>	<i>Increase by planned growth in development stage</i>	<i>Population proposed for end of development stage</i>	<i>Estimated population mid-1961</i>	<i>Capacity remaining in mid-1961</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
All London new towns	—	99,000	352,000	451,000	337,000	114,000
Crawley	1947	10,000	44,000	54,000	54,000	—
Hemel Hempstead	1947	21,000	42,000	63,000	55,000	8,000
Basildon	1949	25,000	61,000	86,000	54,000	32,000
Bracknell	1949	5,000	45,000	50,000	21,000	29,000
Harlow	1947	4,500	66,500	71,000	54,000	17,000
Hatfield	1948	8,500	16,500	25,000	21,000	4,000
Stevenage	1946	7,000	53,000	60,000	43,000	17,000
Welwyn Garden City	1948	18,000	24,000	42,000	35,000	7,000

## NOTES

1. This table relates only to the planned population growth in the development stage of the new towns, during which they are administered by development corporations. In the second stage of the development of the existing new towns there will be no further planned inward movements from London although the population will continue to grow, mainly by natural increase. Crawley and Hemel Hempstead have now reached this stage and the assets of the development corporations were transferred to the Commission for the New Towns on 1st April 1962.

2. The Bracknell designated area has been extended since mid-1961 thus enabling the population at which planned growth is expected to cease (column 5) to be raised from 40,000 to 50,000. The figure in column 7 therefore represents the difference between 50,000 and the estimated population at mid-1961.

**Reception capacity in agreed town development schemes**  
*mid-1961*

TABLE 12

<i>Receiving area</i>	<i>Additional population as agreed</i>	<i>Population received under planned schemes by mid-1961</i>	<i>Capacity remaining in mid-1961</i>
(1)	(2)	(3)	(4)
<b>All London schemes . . . . .</b>	<b>216,700</b>	<b>30,000</b>	<b>186,700</b>
<b>Outer metropolitan region . . . . .</b>	<b>41,000</b>	<b>12,300</b>	<b>28,700</b>
Aylesbury . . . . .	10,500	900	9,600
Bletchley . . . . .	10,500	4,300	6,200
Canvey Island . . . . .	1,400	800	600
Frimley and Camberley . . . . .	4,100	1,400	2,700
Houghton Regis (Luton R.D.) . . . . .	4,900	3,400	1,500
Letchworth . . . . .	6,100	600	5,500
Luton . . . . .	3,500	900	2,600
<b>Rest of South East England . . . . .</b>	<b>142,400</b>	<b>1,700</b>	<b>140,700</b>
Andover . . . . .	21,000	—	21,000
Ashford (Kent) . . . . .	14,900	100	14,800
Banbury . . . . .	7,000	—	7,000
Basingstoke . . . . .	40,300	100	40,200
Bury St. Edmunds . . . . .	5,200	—	5,200
Haverhill . . . . .	5,000	700	4,300
Huntingdon . . . . .	3,500	100	3,400
*King's Lynn . . . . .	12,300	—	12,300
*Mildenhall . . . . .	7,000	—	7,000
St. Neots . . . . .	3,500	—	3,500
*Sudbury and Cornard . . . . .	7,000	—	7,000
Thetford . . . . .	5,200	700	4,500
*Witham . . . . .	10,500	—	10,500
<b>Elsewhere . . . . .</b>	<b>33,300</b>	<b>16,000</b>	<b>17,300</b>
*Grantham . . . . .	1,800	—	1,800
Swindon . . . . .	21,000	16,000	5,000
*Wellingborough . . . . .	10,500	—	10,500

NOTE

The schemes marked with an asterisk have been agreed since mid-1961; the whole of the planned increase in population is included in the calculation of capacity available within the period of the Study (column 4).

**Age structure**

TABLE 13

*London new towns and England and Wales 1961**(thousands)*

<i>Age group</i>	<i>Total population</i>			
	<i>London new towns</i>		<i>England and Wales</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
(1)	(2)	(3)	(4)	(5)
<b>All ages . . .</b>	<b>335.5</b>	<b>100.0</b>	<b>45,852</b>	<b>100.0</b>
0-4 . . .	42.6	12.7	3,665	8.0
5-9 . . .	37.5	11.2	3,254	7.1
10-14 . . .	30.5	9.1	3,667	8.0
15-19 . . .	18.9	5.6	3,150	6.9
20-24 . . .	17.8	5.3	2,752	6.0
25-29 . . .	28.2	8.4	2,797	6.1
30-34 . . .	33.5	10.0	2,939	6.4
35-39 . . .	32.0	9.5	3,196	7.0
40-44 . . .	23.9	7.1	3,053	6.7
45-49 . . .	19.2	5.7	3,225	7.0
50-54 . . .	14.2	4.2	3,206	7.0
55-59 . . .	10.8	3.2	2,962	6.5
60-64 . . .	8.2	2.5	2,465	5.4
65-69 . . .	6.7	2.0	1,996	4.4
70-74 . . .	5.3	1.6	1,540	3.4
75-79 . . .	3.5	1.0	1,087	2.4
80-84 . . .	1.8	0.6	601	1.3
85 and over . . .	0.9	0.3	297	0.6

## NOTES

1. The eight London new towns are listed in Table 11.

2. The age structure of their population (column 2) is based on the 1961 Census enumerated population. The figures for England and Wales (column 4) are the Registrar General's estimates for the civilian population as at 30th June 1961.

# Changes in the distribution of employees

TABLE 14

*England and Wales 1952-62*

(thousands)

Area	Distribution 1952		Change 1952-62		Distribution 1962	
	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
England and Wales . . .	18,684	100·0	1,933	10·3	20,617	100·0
South East England . . .	7,262	38·9	1,083	14·9	8,345	40·5
Midlands . . . . .	3,435	18·4	426	12·4	3,861	18·7
South West England . . .	1,072	5·7	143	13·3	1,215	5·9
Northern England . . . .	5,981	32·0	240	4·0	6,221	30·2
Wales . . . . .	934	5·0	41	4·4	975	4·7



# Changes in the distribution of employees England and Wales and South East England 1955-62

TABLE 15

THE SOUTH EAST STUDY

(thousands)

Area	Distribution 1955		Change 1955-62		Distribution 1962	
	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
England and Wales . . . .	19,307	100.0	1,310	6.8	20,617	100.0
South East England . . . .	7,579	39.3	766	10.1	8,345	40.5
Metropolitan region . . . .	5,784	30.0	571	9.9	6,356	30.8
Midlands . . . . .	3,595	18.6	266	7.4	3,861	18.7
South West England . . . .	1,113	5.7	102	9.1	1,215	5.9
Northern England . . . . .	6,074	31.5	147	2.4	6,221	30.2
Wales . . . . .	946	4.9	29	3.1	975	4.7
South East England . . . .	7,579	100.0	766	10.1	8,345	100.0
London conurbation . . . .	4,444	58.6	293	6.6	4,737	56.8
Outer metropolitan region . .	1,340	17.7	278	20.8	1,619	19.4
Inner country ring . . . .	677	8.9	168	24.7	845	10.1
Outer country ring . . . .	663	8.8	111	16.7	774	9.3
Rest of South East England .	1,795	23.7	195	10.9	1,990	23.8

## NOTE

The estimates for subdivisions of South East England, except the London conurbation, incorporate adjustments to cover employees (such as established civil servants not holding national insurance cards) who are excluded from the Ministry of Labour statistics for areas smaller than complete regions and the London conurbation. They are, therefore, less precise than the other estimates.

Employment structure by Industrial Orders *England and Wales and South East England 1962* TABLE 16

Industrial Order		Distribution of employees 1962			Changes in numbers of employees in employment in Great Britain 1952-62 Per cent
No.	Title	South East England		England and Wales	
		No. (thousands)	Per cent	Per cent	
(1)	(2)	(3)	(4)	(5)	(6)
	All industries . . . . .	8,273.3	100.0	100.0	10
	Primary industries . . . . .	222.8	2.7	5.4	
I	Agriculture, Forestry, Fishing . . . . .	204.0	2.5	2.3	— 25
II	Mining and Quarrying . . . . .	18.9	0.2	3.1	— 19
	Manufacturing industries . . . . .	2,770.1	33.5	39.2	
VI	Engineering and Electrical Goods . . . . .	992.4	12.0	12.3	20
IX	Metal Goods not elsewhere specified . . . . .				
XV	Paper, Printing and Publishing . . . . .	322.3	3.9	2.7	23
VIII	Vehicles . . . . .	290.6	3.5	4.1	14
III	Food, Drink and Tobacco . . . . .	274.5	3.3	3.5	13
XII	Clothing and Footwear . . . . .	188.4	2.3	2.6	— 1
IV	Chemicals and Allied Industries . . . . .	173.6	2.1	2.4	10
XIV	Timber, Furniture, etc. . . . .	135.3	1.6	1.3	2
XVI	Other Manufacturing Industries . . . . .	124.4	1.5	1.4	25
XIII	Bricks, Pottery, Glass, Cement, etc. . . . .	91.6	1.1	1.6	3
V	Metal Manufacture . . . . .	55.9	0.7	2.7	12
VII	Shipbuilding and Marine Engineering . . . . .	55.8	0.7	0.9	— 16
X	Textiles . . . . .	42.9	0.5	3.4	— 13
XI	Leather, Leather Goods and Fur . . . . .	22.5	0.3	0.3	— 8
	Service industries . . . . .	5,280.4	63.8	55.4	
XX	Distributive Trades . . . . .	1,156.8	14.0	12.7	25
XXIII	Miscellaneous Services . . . . .	986.8	11.9	9.3	5
XXII	Professional and Scientific Services . . . . .	848.7	10.3	9.4	36
XIX	Transport and Communication . . . . .	674.8	8.2	7.2	— 4
XVII	Construction . . . . .	572.5	6.9	6.7	16
XXIV	Public Administration and Defence . . . . .	556.3	6.7	5.8	2
XXI	Insurance, Banking and Finance . . . . .	335.9	4.1	2.6	31
XVIII	Gas, Electricity and Water . . . . .	148.6	1.8	1.7	4

NOTES

1. In this table South East England comprises Ministry of Labour London and South Eastern and Eastern and Southern Regions, and does not include Dorset.
2. Industries are classified by the Industrial Orders given in the 1958 edition of the Standard Industrial Classification. Within each broad category, the Orders are listed in descending order of the size of their labour forces in the South East.
3. Some employees who cannot be industrially classified are excluded from these estimates.

# Employment structure by broad categories

## England and Wales and South East England 1962

TABLE 17

(thousands)

Area	Estimated numbers of employees					
	Primary industries		Manufacturing industries		Service industries (including Construction)	
	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
England and Wales . . .	1,115	5.4	8,080	39.2	11,421	55.4
South East England . . .	232	2.8	2,782	33.3	5,331	63.9
Metropolitan region . . .	72	1.1	2,258	35.6	4,016	63.3
Midlands . . . . .	275	7.1	1,913	49.6	1,673	43.3
South West England . . .	73	6.0	381	31.4	760	62.6
Northern England . . . .	408	6.6	2,702	43.4	3,111	50.0
Wales . . . . .	127	13.0	302	31.0	546	56.0
South East England . . .	232	2.8	2,782	33.3	5,331	63.9
London conurbation . . .	18	0.4	1,588	33.5	3,131	66.1
Outer metropolitan region . .	55	3.4	670	41.7	884	54.9
Inner country ring . . .	22	2.6	374	44.6	443	52.8
Outer country ring . . .	33	4.2	296	38.5	441	57.3
Rest of South East England .	159	8.0	525	26.2	1,315	65.8

## NOTES

1. For the Industrial Orders included in each of the three broad categories see Table 16.
2. The estimates for subdivisions of South East England, except the London conurbation, incorporate adjustments to cover employees (such as established civil servants not holding national insurance cards) who are excluded from the Ministry of Labour statistics for areas smaller than regions and the London conurbation. They are, therefore, less precise than the other estimates.
3. Some employees who cannot be industrially classified are excluded from these estimates.

**Changes in numbers of employees in primary, manufacturing and service industries**  
*England and Wales and South East England 1955-58 and 1959-62*

TABLE 18

(thousands)

Area	All industries				Primary industries				Manufacturing industries				Service industries (including Construction)			
	1955-58		1959-62		1955-58		1959-62		1955-58		1959-62		1955-58		1959-62	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
England and Wales . . . . .	369.0	1.9	892.0	4.5	54.6	4.0	172.7	13.4	78.0	0.9	384.9	5.0	343.3	3.5	685.0	6.4
South East England . . . . .	236.5	3.1	477.5	6.1	16.0	5.6	31.8	12.1	89.5	3.2	173.3	6.6	162.5	3.6	338.0	6.8
Metropolitan region . . . . .	198.7	3.4	347.0	5.8	5.8	6.3	10.0	12.2	61.6	2.7	118.8	5.6	143.5	4.2	240.9	6.4
Midlands . . . . .	42.0	1.2	215.6	5.9	8.0	2.4	41.8	13.2	14.0	0.7	134.0	7.5	63.8	4.6	123.9	8.0
South West England . . . . .	20.5	1.8	59.5	5.1	6.8	7.7	8.4	10.3	11.7	3.1	20.6	5.7	15.2	2.4	47.8	6.7
Northern England . . . . .	64.0	1.1	115.4	1.9	14.2	2.9	66.5	14.0	7.7	0.3	39.5	1.5	85.0	3.2	144.2	4.9
Wales . . . . .	6.0	0.6	24.0	2.5	9.5	5.8	24.2	16.1	1.5	0.5	17.5	6.1	16.8	3.6	31.1	6.0
South East England . . . . .	236.5	3.1	477.5	6.1	16.0	5.6	31.8	12.1	89.5	3.2	173.3	6.6	162.5	3.6	338.0	6.8
London conurbation . . . . .	84.0	1.9	190.0	4.2	0.4	1.9	0.8	4.3	11.5	0.7	33.4	2.1	95.8	3.6	158.0	5.3
Outer metropolitan region . . . . .	114.7	8.6	157.0	10.7	5.4	7.7	9.2	14.4	73.0	13.2	85.4	14.6	47.8	5.9	82.9	10.3
Inner country ring . . . . .	59.1	8.7	99.1	13.3	3.3	11.3	3.4	13.5	40.9	14.2	58.3	18.5	20.4	5.7	46.4	11.7
Outer country ring . . . . .	55.5	8.4	57.9	8.1	2.1	5.1	5.8	15.1	32.2	12.2	27.1	10.1	27.4	6.0	36.5	9.0
Rest of South East England . . . . .	37.8	2.1	130.6	7.0	10.2	5.3	21.8	12.0	27.9	5.6	54.5	11.6	18.9	1.7	97.1	8.0

NOTES

1. For the Industrial Orders included in each of the three broad categories see Table 16.
2. The estimates for subdivisions of South East England, except the London conurbation, incorporate adjustments to cover employees (such as established civil servants not holding national insurance cards) who are excluded from the Ministry of Labour statistics for areas smaller than regions and the London conurbation. They are, therefore, less precise than the other estimates.
3. The estimates for all industries, columns 2 and 4, include some employees who cannot be industrially classified and who are accordingly excluded from the numbers recorded under primary, manufacturing and service industries.

# Employment structure (all industries) analysed by reference to national employment changes 1952-62

*England and Wales 1962*

TABLE 19

Each of the Industrial Orders in the Standard Industrial Classification has been placed in one of three groups according to the changes in the numbers employed in the industries in each Order in *Great Britain as a whole* over the period 1952-62. The percentage changes in employment in each of the Industrial Orders for the period are given in Table 16 (column 6). The table shows the distribution of employees in each of these groups of industries in 1962. The three groups are defined as follows:

- Group I. Employment increase of 20 per cent and over  
 Group II. Employment increase of 0 to 19 per cent  
 Group III. Decline in employment

(thousands)

Area	Distribution of employees							
	All industries		Group I industries		Group II industries		Group III industries	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
England and Wales . . . .	20,615·2	100·0	8,471·8	100·0	8,050·8	100·0	4,092·6	100·0
South East England . . . .	8,273·3	40·1	3,780·5	44·6	3,285·6	40·8	1,207·2	29·5
Midlands . . . . .	3,860·5	18·7	1,557·5	18·4	1,552·2	19·3	750·9	18·3
South West England . . . .	1,285·8	6·2	485·1	5·7	559·8	7·0	240·9	5·9
Northern England . . . . .	6,220·9	30·2	2,333·0	27·5	2,240·5	27·8	1,647·4	40·3
Wales . . . . .	974·9	4·7	315·8	3·7	412·7	5·1	246·3	6·0

## NOTES

1. In this table South East England comprises Ministry of Labour London and South Eastern and Eastern and Southern regions, and does not include Dorset.

2. Changes in the numbers employed over the period June 1952 to June 1962 have been estimated by the Ministry of Labour for Industrial Orders as defined in the 1958 edition of the Standard Industrial Classification. They cover all persons aged 15 and over, in employment, excluding employers and persons working on their own account. They include employees temporarily laid off and persons unable to work on account of sickness.

3. Some employees who cannot be industrially classified are excluded from these estimates.

# Employment structure (manufacturing industries) analysed by reference to national employment changes 1959-62

TABLE 20

England and Wales 1962

Each manufacturing industry defined by a Minimum List Heading in the Standard Industrial Classification has been placed in one of five groups according to the changes in the numbers employed in that industry in *Great Britain as a whole* over the period 1959-62. The table shows the distribution of employees in each of these groups of manufacturing industries in 1962. The five groups are defined as follows:

- Group I. Employment increase of 20 per cent and over
- Group II. Employment increase of 10 to 19 per cent
- Group III. Employment increase of 0 to 9 per cent
- Group IV. Decline in employment 0 to 9 per cent
- Group V. Decline in employment of 10 per cent and over

(thousands)

Area	Distribution of employees											
	All manufacturing industries		Group I industries		Group II industries		Group III industries		Group IV industries		Group V industries	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
England and Wales .	8,079.9	100.0	558.0	100.0	1,943.5	100.0	3,689.3	100.0	1,324.6	100.0	564.5	100.0
South East England .	2,770.1	34.3	305.0	54.7	789.2	40.6	1,180.0	32.0	371.5	28.0	124.3	22.0
Midlands .	1,912.7	23.7	88.7	15.9	546.5	28.1	1,020.9	27.7	173.9	13.1	82.8	14.7
South West England .	393.2	4.9	24.6	4.4	87.3	4.5	169.4	4.6	82.0	6.2	29.9	5.3
Northern England .	2,701.6	33.4	126.6	22.7	468.2	24.1	1,145.0	31.0	653.3	49.3	308.6	54.7
Wales .	302.4	3.7	13.1	2.3	52.3	2.7	174.1	4.7	43.9	3.3	19.0	3.4

## NOTES

1. In this table South East England comprises Ministry of Labour London and South Eastern and Eastern and Southern regions, and does not include Dorset.

2. Changes in the numbers employed over the period end-June 1959 to mid-June 1962 have been derived from *Numbers employed in Great Britain: Industrial Analysis* published in the *Ministry of Labour Gazette*. They cover all persons, aged 15 and over, in employment, excluding employers and persons working on their own account. They include employees temporarily laid off and persons unable to work on account of sickness.

# Industries with increases in employment of 3,000 or more

## South East England 1959-62

TABLE 21

THE SOUTH EAST STUDY

Scale of employment growth (in South East England)	Manufacturing industry				Service industry			
	Minimum List Heading		Increase in numbers of employees (thousands)		Minimum List Heading		Increase in numbers of employees (thousands)	
	No.	Title	No.	Per cent	No.	Title	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Over 20,000	364	Radio and other electronic apparatus	29.9	20	820	Retail distribution . . .	62.3	9
					899	Other miscellaneous services . . .	45.9	27
	381	Motor vehicle manufacturing .	21.3	14	500	Construction . . .	40.5	8
					872	Educational services . . .	38.1	13
					860	Insurance, banking and finance	25.5	8
					874	Medical and dental services . .	23.3	8
10-20,000	351	Scientific, surgical and photographic instruments, etc.	15.3	19	810	Wholesale distribution . . .	19.5	8
	489	Other printing, publishing, bookbinding, engraving, etc.	13.7	11	906	Local government service . .	15.6	5
					707	Postal services and telecommunications	13.8	10
	399	Metal industries not elsewhere specified	12.2	16	887	Motor repairers, distributors, garages and filling stations	11.4	8
	349	Other mechanical engineering not elsewhere specified	11.8	18				
3-10,000	496	Plastics moulding and fabricating	7.9	26	889	Hairdressing and manicure . .	8.7	25
	339	Other machinery . . .	7.4	6	706	Air transport . . .	8.1	24
	212	Bread and flour confectionery .	6.8	18	879	Other professional and scientific services . . .	7.0	7
	486	Printing, publishing of newspapers and periodicals	6.7	9				
	469	Abrasives and building materials, etc., not elsewhere specified	6.6	18	709	Miscellaneous transport services and storage	6.7	18
	272	Pharmaceutical and toilet preparations	6.6	17	602	Electricity . . .	6.3	8
					873	Legal services . . .	5.3	15
	341	Industrial plant and steelwork	5.1	17	832	Dealing in other industrial materials and machinery	5.0	10
	333	Engineers' small tools and gauges	4.9	35	704	Sea transport . . .	4.4	6
	361	Electrical machinery . . .	4.6	10	871	Accountancy services . . .	4.2	13

TABLE 21 *continued*

<i>Scale of employment growth (in South East England)</i>	<i>Manufacturing industry</i>				<i>Service industry</i>			
	<i>Minimum List Heading</i>		<i>Increase in numbers of employees (thousands)</i>		<i>Minimum List Heading</i>		<i>Increase in numbers of employees (thousands)</i>	
	<i>No.</i>	<i>Title</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Title</i>	<i>No.</i>	<i>Per cent</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3-10,000	445	Dresses, lingerie, infants' wear, etc.	4.1	8	901 883	National government service . Betting . . . . .	4.2 3.3	2 34
	369	Other electrical goods . . . .	3.8	6				
	214	Bacon curing, meat and fish products	3.7	20				
	491	Rubber . . . . .	3.6	12				
	338	Office machinery . . . . .	3.3	10				
	494	Toys, games and sports equip- ment	3.2	23				
	337	Mechanical handling equipment	3.1	24				
	474	Shop and office fitting . . . .	3.0	23				

## NOTE

In this table South East England comprises Ministry of Labour London and South Eastern and Eastern and Southern regions, and does not include Dorset.



## London conurbation 1959-62

Scale of employment growth (in the conurbation)	Manufacturing industry				Service industry			
	Minimum List Heading		Increase in numbers of employees (thousands)		Minimum List Heading		Increase in numbers of employees (thousands)	
	No.	Title	No.	Per cent	No.	Title	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Over 20,000					899	Other miscellaneous services (see Note 2) .	36.3	24
					820	Retail distribution . . .	30.6	8
					500	Construction . . . .	26.5	10
10-20,000					860	Insurance, banking and finance	11.5	5
					810	Wholesale distribution . .	11.1	6
					874	Medical and dental services .	11.0	7
3-10,000	364	Radio and other electronic apparatus	9.5	11	906	Local government service .	8.3	5
	381	Motor vehicle manufacturing .	8.5	13	707	Postal services and telecom- munications	8.2	9
	489	Other printing, publishing, book- binding, engraving, etc.	7.0	8	872	Educational services . . .	8.1	6
	351	Scientific, surgical and photo- graphic instruments, etc.	6.5	11	706	Air transport . . . .	6.3	22
	399	Metal industries not elsewhere specified	4.7	9	709	Miscellaneous transport services and storage	4.3	14
	212	Bread and flour confectionery .	4.5	19	602	Electricity . . . .	3.2	7
	486	Printing, publishing of news- papers and periodicals	4.4	7	871	Accountancy services . .	3.0	12
	341	Industrial plant and steelwork .	3.5	14	704	Sea transport . . . .	3.0	6

## NOTES

1. The figures in this table relate to the Ministry of Labour's Greater London area; this does not differ substantially from the conurbation.

2. Examples of 'other miscellaneous services' are service of Commonwealth and foreign governments and international organisations; trade associations and trade unions; business services; head offices of firms operating abroad; and head offices of firms which are concerned with more than one activity and which cannot, therefore, be classified in any other heading.

*England and Wales and South East England 1952-61*

Area	Floor space completed (million sq. ft.)	Estimated employment provided (thousands)			Employment provided as a percentage of the total insured population June 1952
		Total	Male	Female	
(1)	(2)	(3)	(4)	(5)	(6)
England and Wales . . .	395.0	599.1	389.2	209.9	3.2
South East England . . .	128.3	203.9	128.2	75.7	2.8
Metropolitan region . . .	97.7	139.4	91.5	47.9	n.a.
Midlands . . . . .	91.2	109.8	66.9	42.9	3.2
South West England . . .	21.6	38.0	24.9	13.1	3.4
Northern England . . .	128.8	202.7	136.7	66.0	3.4
Wales . . . . .	25.1	44.7	32.5	12.2	4.8
South East England . . .	128.3	203.9	128.2	75.7	2.8
London conurbation . . .	44.5	44.2	27.4	16.8	1.0
Outer metropolitan region . . .	53.2	95.2	64.1	31.1	n.a.
Rest of South East England . . .	30.6	64.5	36.7	27.8	n.a.

## NOTES

1. In this table South East England is defined in terms of Board of Trade (cols. 2-5) or Ministry of Labour (col. 6) regions, and does not include Dorset.
2. The statistics of industrial building relate only to those new buildings and extensions for which Board of Trade locational approval has had to be obtained. In respect of such schemes approved up to 31st March 1960, only those completed projects which involved more than 5,000 sq. ft. of floor space and which were for applicants engaged in the manufacturing industries have been included. All completed projects for which approvals were given since that date are included. In these cases the figures cover only those parts of buildings for which an Industrial Development Certificate, as provided for in the Local Employment Act 1960, was required.

## Office growth in central London since 1939

TABLE 24

Item	Floor space (million sq. ft.)	
	Change	Total
(1)	(2)	(3)
Pre-war offices 1939 . . . . .		87.0
War damage . . . . .	— 9.5	
Existing, mid-1948 . . . . .		77.5
Change, 1948–mid-1962 . . . . .	37.3	
<i>New building</i> . . . . .	35.5	
<i>Change of use</i> . . . . .	10.0	
<i>Demolitions</i> . . . . .	— 8.2	
Existing, mid-1962 . . . . .		114.8
Future commitments . . . . .	25.6	
<i>Approved but not yet completed (net)</i> . . . . .	14.0	
<i>Estimated further commitments</i> . . . . .	11.6	
Total . . . . .		140.4

## NOTES

1. The total for approvals not yet completed is a *net* figure arrived at by deducting from the total floor space in all outstanding approvals the amount of floor space in existing offices which will be lost through demolition. Permissions for sites which have subsequently been developed for other purposes are not included.

2. Central London comprises the Greater London Conurbation Centre as defined in the 1961 Census (see Fig. 16, page 37).

# Index

---

- Abercrombie, Sir Patrick, *page* 26, 64  
    Greater London Plan, 7, 26, 28  
Ashford, 73, 74–75, 78, 99, 106  
Aylesbury, 73, 76, 109
- Banbury, 73, 109  
Barlow, Sir Montague  
    Royal Commission under, 26  
    Report of, 7  
Basildon, 75  
Basingstoke, motorway to (M3), 61, 73, 97  
Bedford, 73, 109  
Bedfordshire, 86  
Beeching Report, 59  
Berkshire, 86  
Birmingham, 67, 73  
Bishop's Stortford, motorway to (M11), 61, 63, 75, 97  
Bletchley, 73–74, 78, 99, 106  
Board of Trade, 18, 81  
Bournemouth, 86  
Brighton, 67, 86  
Bristol, 61, 63, 74  
British Railways Board, 34, 42, 44–46  
    Southern Region, 44–45  
Bromley, 78
- Buchanan Report, 30, 42, 52, 67  
Buckinghamshire, 86
- Cambridge, 67  
Cambridgeshire, 86  
Canterbury, 86  
Central Scotland, 82  
    regional study of, 23  
Channel Tunnel, 59, 74  
Chelmsford, 73, 76, 106  
Chilterns, 90, 94  
Chiswick–Langley, motorway (M4), 61  
Colchester, 73, 106  
Commission for the New Towns, 76  
Commonwealth Immigrants Act 1962, 12  
Crawley, 75  
    motorway to (M23), 61  
Croydon, 78  
    airport, 33
- Dartford, 78  
Dorset, 4, 86, 106, 110
- East Anglia, 58, 61, 108, 109  
Eastbourne, 86

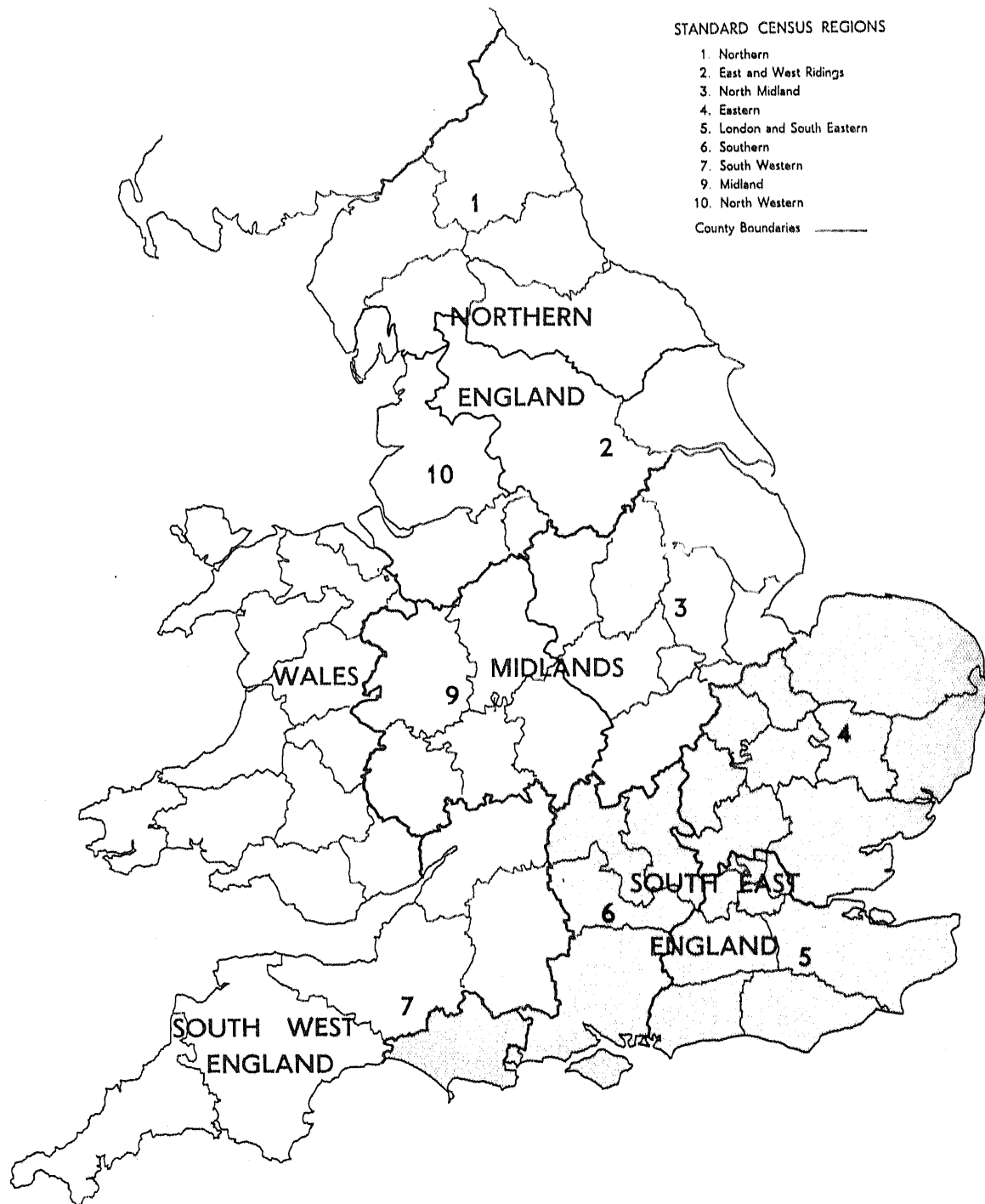
- Ely, Isle of, 86
- England and Wales, major divisions of, 6, 113, 119
- Erith Marshes, 33
- Essex 68, 86, 106, 109, 110, 112
  - County Council, 92
- Gatwick, *see* London, airports for
- Government Actuary, 11, 22
- Great Ouse, River, 106, 108, 109, 112
- Great Yarmouth, 86, 108
- Greater London Council, 32
- Guildford, 76
- Hall Group, report of, 30
- Hampshire, 86, 106, 110, 112
- Harlow, 75, 79, 109
- Hastings, 73, 76, 86
- Hemel Hempstead, 75
- Hertfordshire, 86, 109
  - County Council, 92
- Hungerford, *see* Newbury-Hungerford
- Huntingdonshire, 86
- Ilford, 78
- Ipswich, 60, 67, 71, 73, 74, 76, 78, 79, 86, 99
- Kent, 86, 106, 109, 112
- Kidbrooke, 33
- Kingston-upon-Thames, 78
- Lea or Lee River, 106, 107, 109, 112
  - Valley, 90, 92
- Location of Offices Bureau, 39-40
- London, definition of, 4, 114, 120
  - airports for, 63, 75
  - central, 26, 36, 38-41, 43-44
  - City of, 30, 36, 38, 40, 42, 76
  - County of, 26
  - County Council, 33, 38, 92, 117
  - port of, 38, 63
  - West End, 36, 38, 40, 76
- London Traffic Survey, 97
- London Transport Board, 42, 44-46, 97
- London White Paper, 3, 31, 44, 91, 93
- London-Birmingham motorway (M1), 60, 73
  - South Wales motorway (M4), 60, 61, 63, 73-74, 97
- Luton Hoo, 94
- Maidenhead, 76
  - motorway (M4), 60
- Maidstone, 73, 76, 106
- Medway Towns, 73
  - motorway (M2), 60
- Metropolitan region, definition of, 4, 114, 121-2
- Middlesex County Council, 32
- Midlands, 13, 14, 22, 63, 74, 97, 99
  - definition of, 119
- Nene, River, 106, 107, 108
- New Towns Act 1946, 114
- New Towns Commission, *see* Commission for the New Towns
- Newbury, 73, 74, 78, 99, 109
- Newbury-Hungerford, 63, 74
- Norfolk, 86
- North East England, 82
  - regional study of, 23
- Northampton, 73, 74, 76, 78, 99, 106
- Northern England, 13, 14, 16, 18, 22
  - definition of, 119
- Northern Ireland, 12
- Norwich, 73, 76, 86
- Oxford, 67, 86
- Oxfordshire, 86
- Peterborough, 67, 71, 73, 74, 76, 78, 79, 99, 106, 108
- Poole, 73, 110
- Portsmouth, 60, 72, 73, 86
  - see also* Southampton-Portsmouth
- Reading, 73, 76, 86, 109
- Registrar General, 4, 8, 113, 114
- Reigate, 76
- Rochdale Committee on Ports, report of, 72
- Romford, 78
- Scotland, 9, 12
  - see also* Central Scotland
- Sevenoaks, 76
- Sharpenhoe Beacon, 94
- Slough, motorway (M4), 60
- South Coast, 76, 84, 91
- South East England, definition of, 4, 113, 119
- South Wales, 61, 74
  - see also* London-South Wales motorway (M4)
- South West England, 13, 22
  - definition of, 119
- Southampton, 63, 72-73, 74, 76, 86, 97, 99
- Southampton-Portsmouth, 72-73, 78, 99, 110
- Southend, 63, 73, 76, 86, 106

- Stansted, 63, 73, 75, 78, 99, 106  
 Stevenage, 60, 75, 79, 109  
 Suffolk, East, 86  
     West, 86  
 Surbiton, 78  
 Surrey, 86  
 Surrey Hills, 90  
 Sussex, East, 86  
     West, 86  
 Swindon, 73, 74, 78, 79, 99, 109  
  
 Thames, River, 106, 107, 109, 110, 112  
     Valley, 90  
 Third Schedule (Town and Country Planning  
     Acts 1947 and 1962), 36, 38  
 Tonbridge, 76  
  
 Town Development Act 1952, 74, 114  
 Tunbridge Wells, 76  
  
 Underground, network, 42, 43, 45  
     *see also* London Transport Board  
 Uxbridge, 78  
  
 Victoria line, 45-46  
     *see also* London Transport Board  
  
 Wales, 13, 14, 18, 22  
 Watford, 78  
 West Midlands, 73, 74  
 Wight, Isle of, 86  
 Woolwich Arsenal, 33  
 Worcester, 67

# **Part One**

---

## **THE PROBLEM**

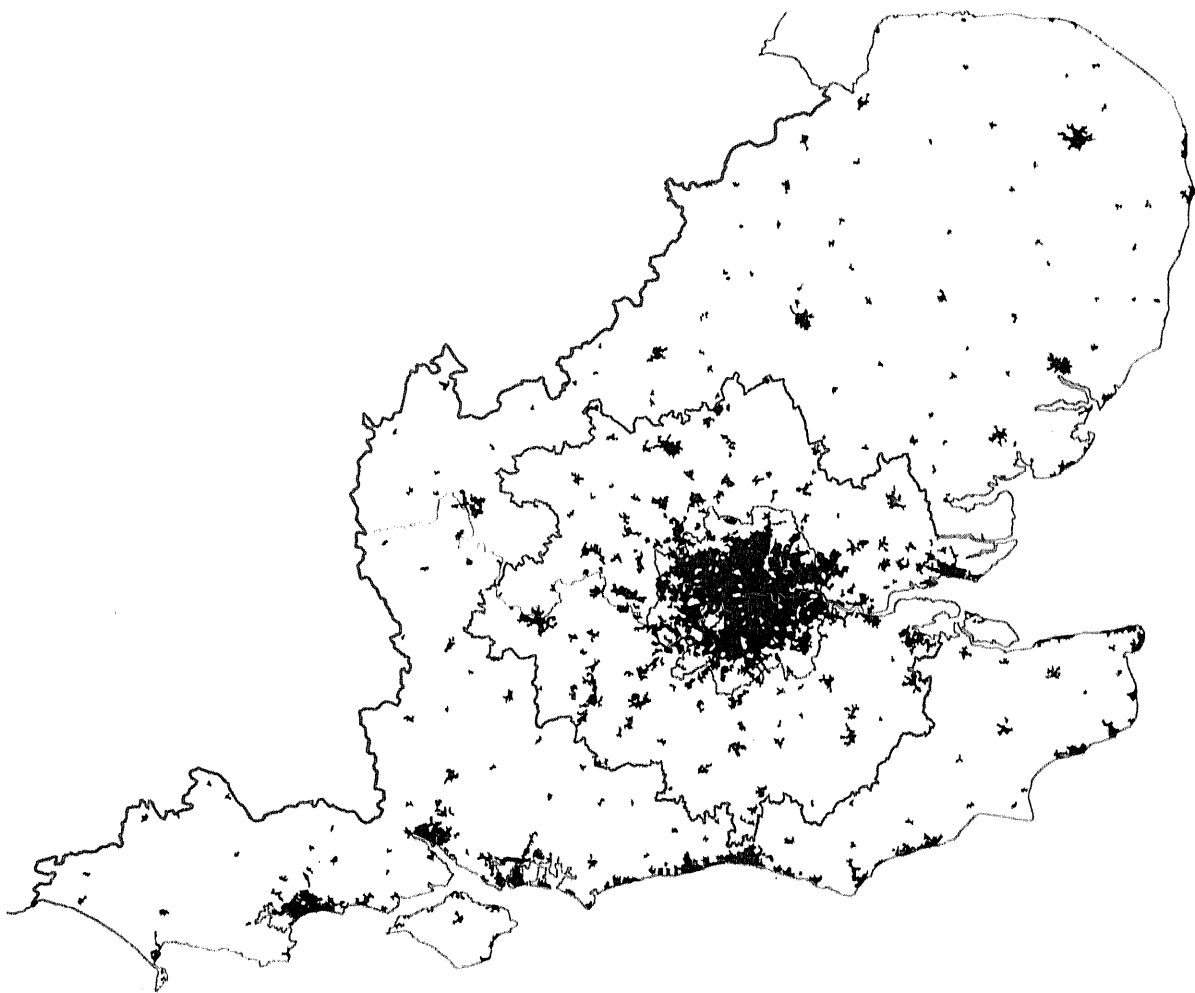


**Fig. 2. Major divisions of England and Wales**

These divisions are comprised of standard regions as defined for Census purposes with the exception of South East and South West England. South East England comprises standard regions 4, 5 and 6, together with the remainder of Dorset which is part of standard region 7 (see Appendix 2, Table 1)



# THE SOUTH EAST STUDY



**Fig. 1. The main built-up areas of South East England 1958**

The map shows the extent of built-up areas in terms of bricks and mortar. Open uses on the periphery of towns (e.g. grounds of hospitals, institutions and large houses, and airfields) are not shown as built up; within towns, only the largest open spaces are shown