

## Greater Copenhagen

An urbanized area and its geographical environments

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### Abstract

*An outline of the urbanization of Greater Copenhagen. The rural remnants are a very characteristic element of the fully developed city, but equally typical are the far advanced signs of city influence. Details are given concerning the population, the industries, the green belts, the agricultural area and the coping with distances.*

In a natural-geographical sense the region belonging to the urban communes of Copenhagen and Frederiksberg, the Copenhagen County Council area and the Roskilde County Council area forms a combination of normal East Danish landscape types representing one harmonious unit. A cultural-geographical summary is rather more difficult to arrive at because the difficulties are considerable, much more than in any other part of the country. The explanation of this is that in addition to the normal combination: scattered habitations, villages, railway-station towns, boroughs, there is still another type of habitation, the great City of Copenhagen, which in various ways makes its own impression on the cultural-geographical pattern.

Drawing an *unequivocal boundary for Greater Copenhagen* is no easy matter. Administratively the town area is divided into a large number of units with local, communal government. For example, a distinction is made between Copenhagen, Frederiksberg and Gentofte communes, which grouped together are called *the capital*; but in addition there are a large number of suburban communes, in all 22, some within the Copenhagen county area and some in Frederiksborg county, all with a certain organic relationship to the capital and geographically closely associated with it.

However, it would not be right to consider these communes solely as administrative bodies, for many of them have the character of local, independent urban organisms with a subdivision into »quar-

ters« which in the aggregate contain the various elements normally found within an urban community of similar size: residential quarters, business (shopping) quarters, and quarters for administration, industry, traffic, recreation and so on. The communes of Greater Copenhagen, and parts of these too, are thus possessed of a certain urban individuality, but also fit into the city organism as a whole.

The geographical boundary between Greater Copenhagen and the surrounding rural districts is often quite sharp, urban habitations and urban living conditions verging upon purely rural areas along a very narrow transitional zone. In other cases the boundary is more a matter of opinion, vague. For example, in the city's foreland there are isolated, built-up areas separated from the compact city by a zone of rural habitations, but so closely associated with Greater Copenhagen that functionally they may be considered part of it. There are examples of these in the more distant suburban communes, and others again beyond them. Conversely, within areas that are distinctly urban in their development one encounters islands of rural habitation and occupational structure.

Attempts have been made in various ways to find more exact expressions of the strength of the peripheral areas' association with the city, such as by means of determining the working places of the active population, and also by an evaluation of the travel distance measured in time from the outer zones to the central parts of the city. It seems that one hour may be employed as the approximate limit of the city's area.

The chief feature of the region is the rapid growth of the city as regards area and population. The process of a countryside changing in character and wholly or partly acquiring an urban form of habitation, occupational structure and general social function is called *urbanization*; a study of the history of Copenhagen reveals its various phases, partly recognizable even now in some of its features, especially by the presence of small remnants of earlier geographical traits, for example old village churches in the outskirts of Copenhagen: Brønshøj, Brøndbyerne, Gentofte, Lyngby, Tårnby; remainders of village settlements: Utterslev, Valby, Gladsaxe, Husum, Rødovre; old roads, traces of bygone land distribution: Bellahøj; former country palaces and summer residences: Frederiksberg Castle, Sorgenfri Palace; local harbours and their buildings: Dragør, Skovshoved; military installations, woods, parks, cemeteries and the like. In other words, the rural remnants are a very characteristic element of the fully developed city, but equally typical are the far advanced

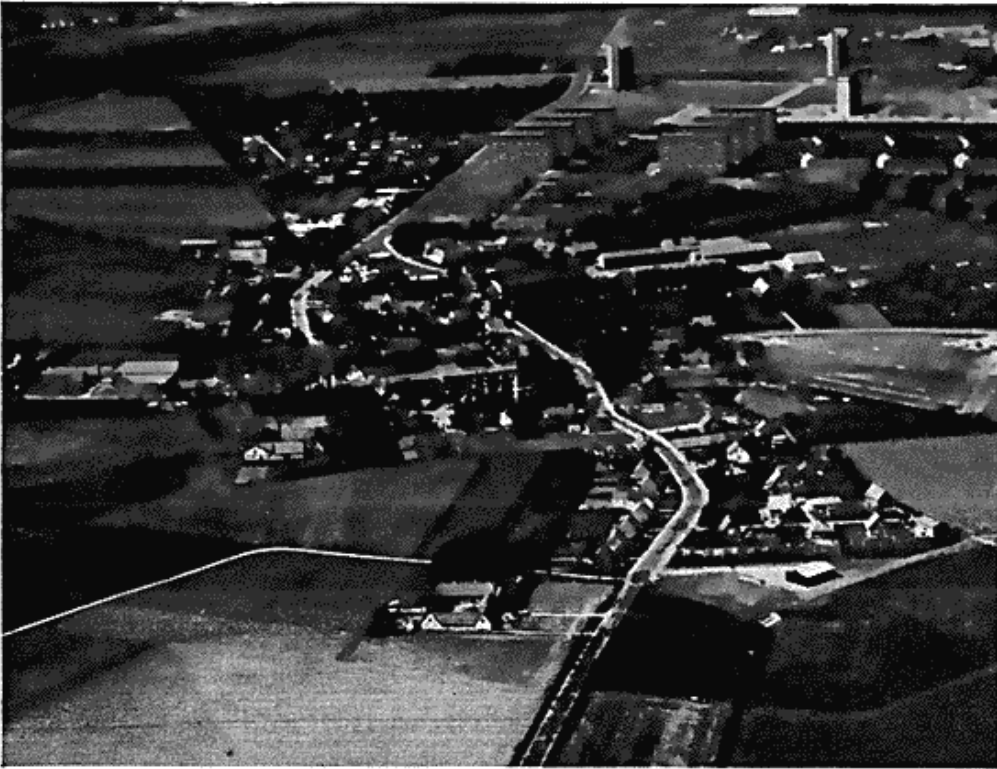


Fig. 1. The meeting of countryside and city. Aerial photo of Brøndbyvester from the south, 1958. In the centre the old village surrounded by the stellar system of exchange strips of the common. The outlines of the farm lots are still discernible, the apices in towards the farmsteads in the village. The properties on the west are still worked as farms, whereas those on the east and north are marked out for building — with tenement blocks northwards nearest the S-railway station.

signs of city influence, away from the compact, urban habitation. This influence affects the countryside fields, its scattered farms and villages as well as railway-station towns and market boroughs. One might in fact speak of different grades or urbanization. There are examples to be found in many parts of Sjælland, but more particularly in the northern and eastern districts. The whole of the region to the north and east of a line from Køge via Roskilde and Frederiksværk to Helsingør (Elsinore), in other words the greater part of the counties of Copenhagen and Frederiksborg, may in many ways be regarded as solidly connected, but in such a manner that the urbanization is highly unequal in its distribution.

As will be seen, the limit of Greater Copenhagen's intensive urbanization coincides more or less with the Copenhagen county boundary, but wedges of urban-like character are extending slowly outwards into the counties of both Frederiksborg and Roskilde. On the other

hand, the less intense and more sporadic growths can be discerned far out over Sjælland.

In some cases the village is the starting part for urbanized expansion and gradually changes into urban habitation and occupational structure. In other cases urbanization proceeds in the way that a large agricultural area is captured by the city by a brief, but violent process of street-laying, factory building and the erection of houses and public premises.

Such a protracted and complicated process as the growth of the Greater Copenhagen city organism took place under the influence of changing factors. The main lines of the earliest town structure were determined by the harbour and the highways in conjunction with the location of ancient villages. Later the defence fortifications became of vital importance as town limits, but from about the middle of the nineteenth century it was other factors that chiefly determined its growth, and today both the shape of the town area and its inner differentiation are governed by an intricate system of forces, some traceable to the conditions of now departed times, others integral with the economic and traffic situation of the present day. In addition, however, *the natural-geographical basis* exerted a remarkably clear influence on the direction and character of the urbanization.

This is exemplified by the coast to the north and south of Copenhagen. The coast northwards from Hellerup (Tuborg harbour) at an early stage attracted first the building of summer houses, later more and more permanent dwellings. The south coast between Vallensbæk and Køge was late in being captured and still consists largely of dwellings of summer-house type. A somewhat similar development has taken place in the lake-and-forest land northwest of Copenhagen, where a number of local towns grew steadily for about a century and in our own time they have advanced so rapidly that the farm lands once lying between them have practically disappeared. In this region woods and lakes are still a most characteristic element of the landscape and have been responsible for the rich mosaic of fully developed urban areas and extensive lots with self-contained houses, separated by woods, lakes, bogs and valleys.

This scenically and aesthetically oriented section of Copenhagen's development gives a special character to the entire northern part of the town organism.

Another and quite characteristic region is the south of Amager. Whereas the northern part of the island is a genuine branch of the city both administratively and functionally, there are parts in the



Fig. 2. Part of the old town around Vor Frue Kirke (the cathedral) in the centre. Extreme right: the main street, "Strøget" (vertically in the picture) and Gammeltorv. Note the curved street lines and the subdivision of the buildings into small plots.

west and south of a different character altogether; the western area is an empty military ground, whilst in recent years the south coast has been drawn into the Copenhagen system through the building of a summer-house settlement. The Copenhagen Airport covers an area of about 685 ha. to the southeast and forms an obstacle to the city's development along Amager's east coast. In St. Magleby parish and part of the parish of Tårnby, however, there are still large areas used for market gardening and farming.

The situation of the principal traffic lines decided the placing of the zones with the greatest growth. Strandvejen, Lyngbyvej, Frederikssundsvej, Roskilde Landevej and Gl. Køge Landevej, together



Fig. 3. Store Kannikestræde, bearing the visible impress of its situation in the university quarter. On the left Borch's College, and, at the foot of the Round Tower, "Regensen".

with the railways: Kystbanen, Nordbanen, Slangerupbanen, Frederikssundsbanen and the line between Copenhagen and Roskilde form the skeleton of communications on which Copenhagen has developed. Along them the city sends out arms from 10 to 25 km. long into the surrounding country. In the northern sector between the coast and Furesøen the rural character has disappeared almost everywhere, or it remains only in patches. Along Roskilde Landevej and the Copenhagen—Roskilde line the older habitations Glostrup, Tåstrup and Hedehusene have become welded together, and along the Køge Bugt too there is an almost continuous settlement, but of another character.

In the sector bounded on the north by Frederikssundsvej and Frederikssundsbanen, and on the south by Gl. Køge Landevej, the city influence except for the Copenhagen—Roskilde railway is of an entirely different character to that in the northern sector and the island of Amager. In places the urban element is very slight; at Ejby, Herstedvester, Herstedøster, Sengeløse and still further westwards the old village structure has been retained. There is little industry and only a very small number of the population have work outside the

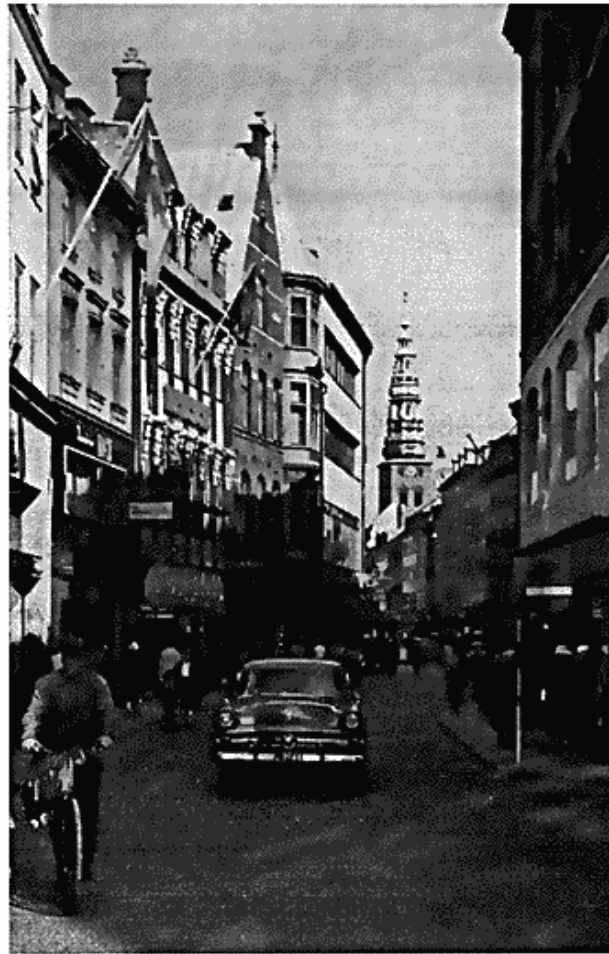


Fig. 4. Vimmelskaftet, the narrow, winding and busy shopping street, looking towards Nikolai Church.

parish. The population density in the region between Ejby and Roskilde Fjord is surprisingly low, about 60 per sq.km., that is to say a very small figure for a Sjælland agricultural community, one that moreover is surrounded north and south by a very dense population and on the east borders right upon the metropolitan area.

The part of Roskilde county lying southwest of the Copenhagen—Roskilde line, between this and the valley of Køge Å, is of a different type in its form of settlement. This part of the county is more densely populated, the villages are larger, the scattered houses and buildings are more numerous, and both railway-station towns and highroad towns are well developed (Viby, Borup, Havdrup, Skensved and Tune). As regards population, the western part of the county, comprising the south part of Hornsherred peninsula and a strip about 10 km. wide running from there southwards to the county's

southern boundary, has a character all of its own. The configuration of the ground is broken, with wide valleys interspersed with plateaus, the area is well wooded, and a large part of the land is owned by large estates and medium-sized farms. The one well-developed station town is Hvalsø. In the northern half of the area village settlement is the predominating form, in the southern half there are more scattered houses. The influence of Greater Copenhagen is perceptible in many ways, even in remote parts of the county, particularly in its built-up areas. Along the Copenhagen—Roskilde line a considerable number of the occupationally employed have their work in the city area. Even in Roskilde and Hillerød this group represents about 10 per cent, whereas Køge and Helsingør have only about 5 per cent. A number of industrial plants connected with Copenhagen establishments have been built, and an increasing number of people working in the capital are moving out to permanent and summer houses in all parts of the county, but more particularly in places adjacent to woods and seaside. Many institutions, such as sanatoria, hospitals, schools and research stations have moved out to rural surroundings (Avnstrup, Skt. Hans, Boserup, Tune etc.), and also the Risø plant on Roskilde Fjord in the western margin of the thinly populated zone north of the Copenhagen—Roskilde line.

The rich variation in the forms of settlement within the counties of Copenhagen and Roskilde is thus partly a result of the geographical conditions, especially in the course of the coastlines and in the contrast between the fertile, unbroken moraine flat in the triangle between Copenhagen—Roskilde—Køge, the extensive hilly country on the north with its lakes and woodlands, and the very complicated fiord and valley landscapes west of Roskilde.

Out of this scenic profusion Greater Copenhagen has grown into a *highly differentiated cultural landscape*, the largest of its kind in Scandinavia, an enormous mosaic of residential, industrial and traffic areas interspersed with green polygons or zones and with a rich variation between overpopulated town areas with more than 50.000 people per sq. km., regions with self-contained houses, »colony» allotments, modern tenements with from 12 to 15 storeys of apartments, city areas with an enormous day population and an extremely small one at night, distinctly industrial areas, harbour quarters, railways, motor roads and airports.

And in contrast, at Ejby — about 10 km. from Copenhagen's city hall — there is practically undisturbed countryside. And still within the Copenhagen corporation area on the west side of the island of





Fig. 5. The "point blocks" at Bellahøj, built in the 1950's.

Amager there is empty land, while 5—6 km. from the large establishments along the east coast of the same island lies Saltholm's 16 km<sup>2</sup>. with about a score of human beings and a few summer-grazing cattle.

It will be seen that an important factor in the urbanization development emanating from Copenhagen is the radial expansion along especially favoured lines and zones (for instance the Copenhagen-Roskilde line). This expansion explains the town's stellate form. For certain reasons Amager has only partly been incorporated into the town's development, and Saltholm not at all; as a result the star is awry, with its strongest growth determined by the terminal points, Helsingør and Køge, of a line running from the north westwards to the southwest.

This stellate system of urbanization, however, is traversed by another form, a ring-shaped zonal system which, although broken here and there, stands out rather clearly and is easily recognizable. One typical example in a state of full evolution today is the large industrial area that can be traced from Lyngby via Buddinge, Gladssakse, Herlev, Skovlunde and Glostrup to Brøndbyvester. In between are residential areas — though these are also in course of develop-

ment — and it is all linked up by the great circular artery from Buddinge to Herlev—Glostrup—Køge Bugt. Analogous ring formations can be demonstrated in the parts of the city which have grown up since the year 1900. Another industrial and traffic zone can be traced from Valby and Sydhavnen across Islands Brygge, the shipyards, over to the Free Port and Tuborg, from where a branch runs down the east coast of Amager to Kastrup and the airport. The siting of the earlier industrial areas was largely dependent on the shipping facilities and the railway goods yards; to a great extent the latter ones were able to take advantage of the increasing importance of the motor lorry to liberate themselves from that dependence.

One special feature of urbanization from Copenhagen is the development of *the industrial area along Mølleåen*. This represents an old phase of the time prior to the era of steam power. From Lyngby to Strandmøllen was a sequence of originally water-driven mills and factories, now either closed down or converted into more modern and effective power supplies; on the other hand this entire area no longer holds an important place in the city's organism and nowadays is something in the nature of a relic.

The outer zones of Greater Copenhagen acquire at any rate part of their character from *modern industrial enterprises*, and the local population may be divided into a locally employed and a commuting group, employed either in the capital or in the establishments of the marginal zone. There are typical examples in Hørsholm, Birkerød, Lundtofte, Ballerup—Måløv, Tåstrup and Hedehusene. One particular group of widely advanced industries is represented by the brickworks (Nivå, Lillerød, Birkerød), the gravel industry (Farum and Hedehusene) and the lime-works (Skensved), all closely connected with the metropolis, but sited according to the situation of the raw materials.

Moreover, the industries at or near the towns in Northeast Sjælland (Køge, Roskilde, Frederiksværk, Hillerød and Helsingør), especially the large establishments, are intimately associated with Greater Copenhagen and with some justification may be regarded as an outer ring-zone in the large population and production region of North Sjælland.

Greater Copenhagen is relatively well supplied with areas which afford the population an opportunity of getting out into the open, there being easy access to *woods, lakes, beaches and sea*. Even disregarding the parks properly so called, chiefly within the metropolitan area, there are many ways of reaching »green zones« by public or pri-

vate means of communication in less than an hour's travelling. In this respects the districts north of Copenhagen have a great advantage for most of the large woodland and lake areas lie to the north of a line from Måløv to Klampenborg. South of this line the countryside is almost devoid of woods, and there are no lakes. Amager has nothing more than Kongelunden and the partly abandoned military ranges. Westwards there are no open-air areas like those in north Sjælland until one is past Roskilde Fjord and at Køge.

Øresund (The Sound) is ideal for yachting and boating of every kind and in fact is utilized intensively. But here again there is something distorted in the conditions. The coast between Copenhagen and Køge has very shallow water and is not used much. On the other hand, along a line from Dragør to Helsingør the conditions are fairly unique and, together with points on the coast of Scania in Sweden form a base for open-air life at sea, such as is rarely found elsewhere in the world. On the other hand bathing beaches are not quite so accessible, though the south shore, the south and east coasts of Amager and especially the coast north of Hellerup are extremely popular seaside resorts in summer; but the best conditions lie somewhat more remote, e.g. along the north coast of Sjælland. Most important of all are the green areas north and northwest of Copenhagen, especially those that can be reached by »S« (electric) trains to Klampenborg, Holte and Ballerup. Most of these adjacent green areas are within the boundaries of Copenhagen county, but the north-Sjælland railways and bicycle traffic make it easy to reach woods, lakes and shore in a more distant zone from Farum through Hillerød to Helsingør; and finally, the motor-car has opened up a rather intensive utilization of outdoor areas up to a distance of about 100 km.

The summer houses (bungalows) properly so called are chiefly intended for the holidays, so it is a type of dwelling that has proved capable of spreading over large parts of the Sjælland archipelago; Bornholm also plays a considerable role as a summer place for the residents of Copenhagen. The types of landscape chiefly preferred are the coasts and the hilly woodland and lake districts. A large proportion of the summer houses lie within a travelling distance of 1—1½ hours from Copenhagen and therefore are convenient for use well outside the actual vacation period.

The many groups of »colony« gardens, or garden colonies, form a very characteristic element of the Copenhagen summer form of dwelling. They are to be found almost exclusively within the west

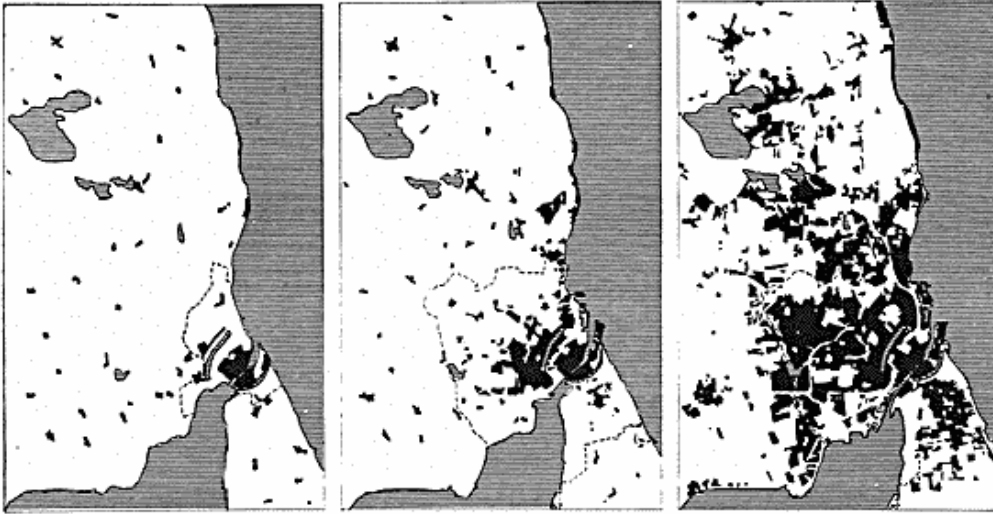


Fig. 6. Building up of the Copenhagen area in three stages. Left: 1850, where apart from some slight suburban building there were nothing but village settlements outside the ramparts. Centre: the situation about 1900, when the suburbs as well as Frederiksberg and quarters in Hellerup, Charlottenlund and Kongens Lyngby were developing. Right: 1950, showing the wide expansion on the north side but also west of Copenhagen at Rødovre, Hvidovre and Glostrup. The stippled line shows the communal boundary between Copenhagen and the suburban communes.

borders of the suburban communes. These gardens are utilized very effectively, most of them being in use throughout the summer on account of the short distance away from home. Summer houses in the proper sense are usually private properties, whereas the garden colonies generally are formed on rented land. In a good many instances older, more centrally situated colonies have had to make way for permanent houses, compensation being secured in the form of new ones at a somewhat greater distance from the metropolitan centre. By this means a displacement is proceeding out to the city's periphery.

The 19 suburban communes belonging to the County of Copenhagen have a total area of about 468 km<sup>2</sup> and they house 309,999 people (1955). There are considerable uninhabited areas with woods, parks, lakes, bogs and military grounds, and even if the *agricultural area* is rapidly decreasing, there are large stretches here and there occupied by farms and market gardens. In 1955, for instance, the 19 communes still had 200 km<sup>2</sup>. of agricultural land or about 43 per cent; but it is most unequally distributed: in the communes of Rødovre and Hvidovre the farm land is less than 10 per cent of the total area, but it is as much as 80—90 per cent in the least urban of them (Ledøje—Smørum and Torslunde—Ishøj).

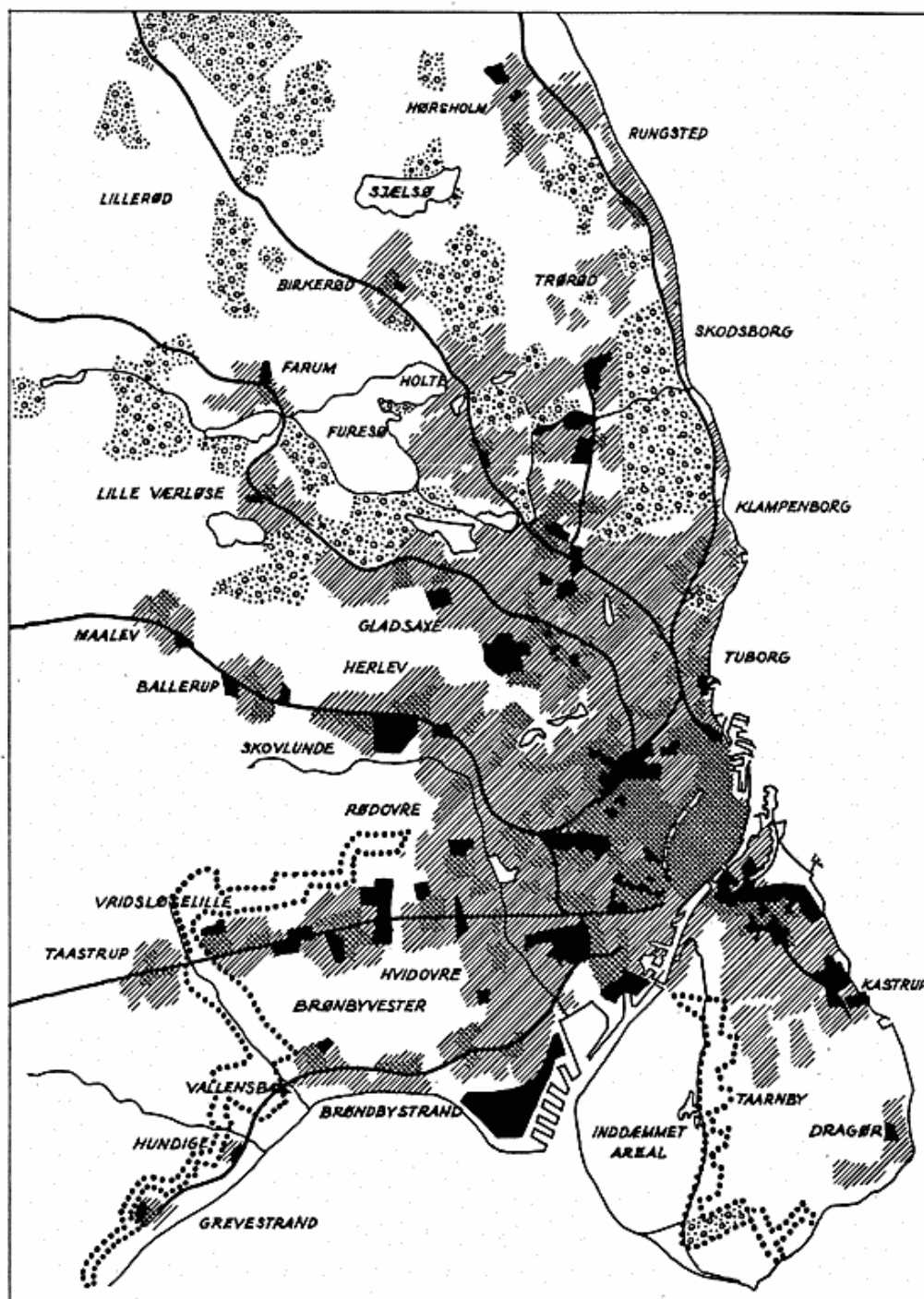


Fig. 7. Draft sketch of a regional plan, 1948. The future residential areas indicated by hatching and the industrial areas by black. The areas inside the stippled lines (west of Copenhagen and on Amager) were suggested as woods.

The agricultural area is also on the decline in the Roskilde county area, but it represents more than 70 per cent of the whole.

In both counties about half the agricultural area is sown with cereals, 10—15 per cent with root-crops. On the whole the crop yield is high. It is a characteristic feature of the Copenhagen county area that about a tenth of the agricultural land is utilized for market gardening, especially for vegetable growing, but with other special crops of importance too. On the other hand livestock in the Copenhagen county area is somewhat low, 0.9 head of cattle per ha., whereas Roskilde county has 1.6. For Copenhagen the figure is rapidly decreasing whereas the Roskilde county figure has increased a good deal, in recent years too.

<i>cattle</i>	<i>1945-49</i>	<i>1955</i>
Copenhagen cty	26.100	18.500
Roskilde cty	71.500	84.500

These figures and evidence of many other kinds indicate that the urbanizing effect of Greater Copenhagen is fairly sharply delimited. Throughout the whole of the Copenhagen county area (with the exception of the few communes of rural character) the effect is well marked. In the Roskilde county area exactly the reverse is the case: a few communes have become more or less affected by urbanization, whereas much the greater number in practically all respects act as »normal« rural communes. In the case of many other cities the situation is that the surrounding country districts within a radius of 30—60 km. are organized for supplying food to the city population. This is so only to a small extent in the environs of Greater Copenhagen.

Greater Copenhagen, i.e. Copenhagen and Frederiksberg, the Copenhagen County area and the communes of Birkerød, Farum and Hørsholm in Frederiksborg county, today contain about 29 per cent of Denmark's aggregate *population*, viz. 1.311.000 on 1st October, 1957. According to the 1955 census the metropolis, i.e. Copenhagen, Frederiksberg and Gentofte, had 960.319 inhabitants; 309.047 were living in the remainder of the Copenhagen County area, and on the same day the population of the Roskilde County area was 82.223, with about half in the towns. Up to about the year 1950 the metropolitan population was growing, but now it seems to have come to a standstill, whereas population increases are still being recorded in the suburban communes. The huge population of the capital is concentrated within a moderate area, about 117 km<sup>2</sup>., of which however

large parts are practically empty of people, such as reclaimed areas, parks, cemeteries, water areas, traffic areas etc. The built-up area, which includes streets, roads and squares, is thus reduced to 60—70 km<sup>2</sup>. This makes the mean population density of the capital about 8000 per km<sup>2</sup>, but in places it is much greater. In the urbanized communes in the neighbourhood 500—1000 people per km<sup>2</sup>. is the usual, but a few communes within the Copenhagen County area are purely or almost purely rural in character with a density of about 50 per km<sup>2</sup>. (Ledøje—Smørum and Sengeløse). These figures clearly illustrate the deep contrast between the city and the adjoining rural areas.

In the rural districts within the Roskilde County boundaries there are wide variations in the size and distribution of the population. Several communes, like so many other island—Danish areas in the period 1901—55, have had fairly constant populations — a few indeed a slight decrease. This type includes communes such as Ejby, Nr. Dalby, Roskilde Vor Frue, Rye—Sonnerup, Tune and Ørsted—Dåstrup, whereas other rural communes in the same period have recorded a moderate growth of 10—20 per cent. Others again, those where there has been a growth of the closed, town-like settlements, have increased in population by about 50 per cent (Hvalsø—Særløse and Osted). Six communes bordering upon Køge Bugt between Greater Copenhagen and the town of Køge: Greve—Kildebrønne, Havdrup—Solrød, Højelse, Jersie—Skensved, Karlslunde, Karlstrup and Ølsemagle, are outstanding in that the local population in the years 1901—1955 grew from 6010 to 12.550 (about 104 per cent), whereas the other rural communes in the county area grew only from 19.245 to 23.341 (about 21 per cent). It is a feature of the communes along Køge Bugt that there is a great seasonal variation, the summer population far exceeding the winter population in numbers. However, both the heavy increase in the local population and that in the summer population are mostly associated with the coast itself and the Copenhagen—Køge high road. The other Køge Bugt communes as regards population seem to have kept pace with the developments in the other rural communes within the county.

Whereas the station towns on the Copenhagen—Roskilde line have a strong Copenhagen impress, those on the far side of Roskilde along the railways to Køge, Ringsted and Holbæk are much more »normal« in character. The station town of Hvalsø alone has a population exceeding 1000. In the more densely populated parts of the county there has been much ribbon development, of which the best example

is Ny Osted, on Main Line No. 1 between Roskilde and Ringsted, where there is now a double row of modern houses, 2—3 km. long, whereas nearby Osted Kirkeby has retained its old village stamp.

There is a paucity of manor houses in both counties, but west and south of Roskilde there are several estates such as Svenstrup, Ledreborg, Ryegård and Lindholm, all one-time majorats, whose extensive fields and woods characterize the landscape; in Køge parish is Gammel Køgegård.

*Industry* in Roskilde County area is closely related to that in Greater Copenhagen. It is particularly associated with the neighbouring towns Køge and Roskilde and their immediate environs, whereas the smaller urban formations in the rural districts only exceptionally contain industrial enterprises of any size. The building industry is the most important, employing over a fourth of the industrial population, but in addition there is an important food and beverage industry, as well as metal and chemical industries. Roskilde has large slaughterhouses, a distillery, tannery, engineering works and a paper-goods factory. Lying in the part of Roskilde commune that extends in a narrow zone to Hedehusene are several large industrial plants, and north of Køge, in Højelse and Ølsemagle commune, is the largest rubber factory in Denmark with its workers' dwellings.

North of the very urban-like zone Copenhagen—Roskilde are six parish communes where, so far, urbanization has been surprisingly slight. The changes in the populations during the period 1901—55 have been as follows:

	1901	1955
Ledøje—Smørum	1259	1556
Sengeløse	1197	1266
Agerup—Kirkerup	1067	1071
Jyllinge—Gundsømagle	1100	1510
Hvedstrup—Fløng	960	1975
Himmelev	606	1560

The first four of these parish communes have preserved their ancient structure so to say completely, whereas since 1940 the last two have increased their population at a relatively quicker rate. From the point of view of population and occupations this region has followed lines of development quite different from those of the surrounding areas which in the present century have recorded a heavy population growth, increased industrialization and an evolution in its trade structure that indicates close contact with Greater Copen-





Fig. 8. Asylgade at Lyngby. In the outer districts of the city there still remain old dwellings, relics of the original village settlement.

hagen. This small enclave has retained its countrified character notwithstanding the growth of the city. Nevertheless, in the last two communes in the above list, bordering upon Roskilde—Hedehusene, an incipient urban influence is now perceptible, for Fløng is coalescing with Hedehusene and Himmelev with Roskilde.

It is characteristic that the southeast section of Roskilde County area, i.e. south of the Copenhagen—Roskilde line and east of the Lejre—Ringsted line, has large villages, well-developed station towns and a considerable, scattered population. The west section of the county is not so thickly settled. The villages of the southeast zone are generally of the size 200—500, those in the other part being much smaller. To some extent the larger villages have lost something of their original character, more and more of the populations being employed in work of an urban type; in most the parish communes, however, the occupational distribution is strongly agricultural, 17 of the 28 having more than 40 per cent of their populations engaged in farming. On the other hand, in 17 parish communes the number of those employed in industry and handicrafts is larger than those

working in agriculture. For comparison, only 4 parish communes in the Copenhagen County area have over 40 per cent occupied in farming and market gardening; these are Ledøje—Smørum, Senge-løse, Store Magleby and Torslunde—Ishøj, with altogether 5761 inhabitants of whom 2738 work on the land. Thus there is a very distinct population boundary which runs almost along by the border between the two county areas. The figures of the occupational distribution are as follows:

	farming etc.	industry handicrafts building
Copenhagen County	14.348	104.942
Roskilde County	17.683	27.560
Purely rural districts in Copenhagen County	4.733	3.195
Purely rural districts in Roskilde County	15.842	8.065

*Coping with distances* is a vital factor in the life of Greater Copenhagen city organisms. Most important are the problems that are associated with the distance between home and working place, though of course distances to centres of education and culture, outdoor areas, shopping centres and places of amusement are also very important and determine traffic requirements and their variation.

As regards Copenhagen, conditions are complicated by the circumstance that the long-distance transit traffic by land is of relatively large volume, because almost all railway traffic between Scandinavia and the rest of Europe has to make use of Copenhagen's railway network, and because a very large part of the motor-cars running between Scandinavia and Western Europe pass through Copenhagen County. The total number of Scandinavian cars crossing the frontiers at Helsingør and Copenhagen inwards is over 100.000 per annum.

The average distance between dwelling and work place seems to be lengthening, i.e. because industrial plants are moving out from central parts of the city to suburban communes, and because since the war it has been difficult for people to remove. Investigations at the more recent industrial quarters suggest that about a fifth of the male workers have more than 12 km. between home and their work, and a half have over 6 km. A considerable section of the population of Greater Copenhagen have to spend between one and two hours daily in travelling to and from their work, and this unproductive employ-

ment of time and transportation fares is one of the city's serious problems. For this reason the development of the traffic system within the Greater Copenhagen area is a matter of the highest importance, and urbanization is intimately bound up with that development.

In the inner zones of the city the tramways form a dense network serving the fully built-up city area and also providing a very considerable part of the conveyance along the shorter distances.

The electrified railways (»S«) attend principally to the traffic between the central parts of the city and the far-outstretched branches of the suburban quarters. There the »S«-railway stations are the terminals of a very well developed network of bus services, and the same applies to the terminals of the tramways. Private conveyances, bicycles and motor cars, have not nearly the same important role as the public means of conveyance.

Motor-car traffic is largely connected with a stellate system of large radial streets and roads which are intersected by ring-roads. Modern motor roads such as the Hørsholm road, the Motor Ring road and Roskilde Highway are growing in importance, and others are projected or in course of construction.

The characteristic feature of Copenhagen County is a very large local traffic, which is indicated simply by the fact that 75 millions or 69 per cent of all train journeys in Denmark in 1956—57 proceeded within the Copenhagen local system (about 25 millions on the »town line«, a section of the electric railway system) i.e. on the lines between Copenhagen and Helsingør, Ballerup, Farum and Roskilde. In addition, a large network of motor-coaches, chiefly in the suburban communes, in 1956 carried about 42 million passengers, whereas the tramways, which run chiefly within the city area, Copenhagen—Frederiksberg—Gentofte, had 206 million passengers. Thus the total number of journeys by public means of conveyance comes up to 320 millions per annum. It is difficult to form a fairly exact idea of the use of private means such as bicycle, power-cycle, motor cycle or car, but about 70.000 cars are registered in the capital as well as about 28.000 motor-cycles and scooters, about 15.000 power-bikes and half a million pedal bicycles.

About 80 per cent of *the city's vegetable requirements* come from market gardens in the vicinity. The glass-house producing establishments are located principally west and southwest of the city area between Køge Bugt and Bagsværd, more particularly in the region south of Roskilde Highway. The outdoor establishments are also

important in the west and in the south of Amager, whereas fruit supplies come from a much larger radius, some from the islands south of Sjælland and from Fyn. There is also a fruit-growing section in the area along the northern edge of geographical Copenhagen, i.e. along the stretch between Værløse, Vedbæk and Hørsholm. Fruit growing is also connected with the hilly area to the north, whereas the market gardens proper are to be found on the flat, very fertile regions in the west and on Amager.

At the present moment water supplies are of some importance to future developments. The stretch between Roskilde Landevej and Gl. Køge Landevej has large reserves of water, so that a further extension of market gardening is to be anticipated there. On the other hand, the reserves in the wedge between Roskilde Landevej and the Husum—Måløv line are not large, a circumstance that argues in favour of retaining the area as normal farm land, which indeed would also be desirable from a scenic point of view.

#### LITERATURE

*J. P. Trap*: Danmark 5. Ed. Vol. I, 2 and II, 1-2. G. E. C. Gads forlag, København 1959-60.

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