GREEN BELT AS A PLANNING TOOL
AND
GREEN BELT OF ANKARA

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ABSTRACT

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AND
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The scope of this thesis is to emphasize the relation between the green belts as tools of urban containment, and the planning policies. In this respect, the idea of containment and the green belt are explored in historical perspective. The role of green belt idea in Britain's planning history is elaborated, particularly around the history of London's green belt, as British planning embodied the green belt idea from the beginning. Green belts have been used in other countries also and these different uses of green belts in Russia, Israel and United States are studied. In the light of these examples, the green belt of Ankara and the change in planning policy in time is evaluated. The course of the green belt policy and the state policies appear to be related to each other.

Keywords: Green belt, urban containment, Ebenezer Howard, Ankara, planning policy.

ÖZ

PLANLAMA ARACI OLARAK YEŞİL KUŞAKLAR VE ANKARA'NIN YEŞİL KUŞAĞI

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Bu tezin amacı kentlerin büyümesini kontrol etmekte kullanılan yeşil kuşaklar ve planlama politikaları arasındaki ilişkiyi ortaya koymaktır. Bunun için, yeşil kuşak fikrinin tarihçesi araştırılmıştır. Başlangıcından itibaren yeşil kuşak fikrini içerdiği için İngiliz planlama tarihi ve Londra'nın yeşil kuşak deneyimi incelenmiştir. Rusya ve İsrail gibi yeşil kuşakları kullanmış ve uygulamış başka ülkelerin planlama yaklaşımları ve planlama tarihçeleri ile birlikte, Amerika Birleşik Devletleri gibi uygulamada başarısız olmuş bir ülke de bir örnek olarak incelenmiştir. Bu incelemelerin ışığında, Ankara yeşil kuşağı ve yeşil kuşağın zaman içinde uğradığı değişiklikler değerlendirilmiştir. Devlet politikalarının ve yeşil kuşağın değişiminin birbirine paralellik gösterdiği görülmüştür.

Anahtar Kelimeler: Yeşil kuşak, Ankara, planlama politikası, Ebenezer Howard.

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Our summer studies in R305 with Cansu Canaran were both fun and work. The mutual support and encouragement smoothened the misery we were in.

The patience and respect my family and my friend Sinem showed, deserve more than just a salute on this page, but this is what the format of this dissertation allows.

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CHAPTER 1
INTRODUCTION

An examination of the course that the green belt idea has followed and the stress on the role of green belt and significance as a planning tool seems to be a worthy study. The idea of containment of settlements can be traced back to the Old Testament, but the size and growth of cities have not necessitated the use of green belts until after the industrial revolution. The ills created by industrialization and the transformations that it caused in the cities have vivified the notion of green belt and urban containment. Here it is intended to elucidate the relation between the green belt concept and regional planning policies. In this respect, the history of green belt is conveyed. London's green belt and the history of British planning system are scrutinized, not only because London was the first city to have a green belt encircling it but also that green belts comprise a central theme in the British planning system.

The history of urbanization starts with the advance of agriculture. The first cities were built to share and exchange the grain coming from the surrounding agricultural lands, as well as for purposes of protection and spiritual needs. Transformation from hunter-gatherer societies to settled agricultural communities forced a change in the belief system. The king was a semi-god and even the god at times, and the city represented the cosmos. The size of the city was limited with the grain that the surrounding lands could supply.

The containment of settlements by agricultural lands is first seen in the Old Testament, where the New Jerusalem was to be surrounded with inviolable agricultural lands.

Aristotle and Plato have limited their ideal cities in terms of a predetermined population. Aristotle has put "the need for someone else" as the reason for building of cities and he limits the size of the cities with the population that would not prevent citizens from knowing each other. Plato, on the other hand, has limited the population to 5040 citizens. As the right to be a citizen was a privilege of house owner men, the 5040 citizens point to a approximate population of 20.000, adding the other members of the house. In practice, Greek cities were limited with the fertility of the surrounding lands also. Besides, a strip of sacred land called *pomerium* surrounded the Roman cities. This strip was devoid of buildings and had to be de-consecrated, redrawn and then consecrated again, when the city needs expansion. Another tool Romans used was *Ager Effatus*, a consecrated field, actually the territory attached to the city. The city was not a bunch of houses; it was the home of the gods, turning the city into a *templum* (Osborn, 1969; Rykwert, 1988).

After the collapse of the Roman Empire, the Roman institutions lived on, until the trade routes got under control of Muslims by the 8th century. The cities dissolved and bishops filled the gap left by the trade and the administration. New cities started to form around the cathedrals and churches as they were feared and were free of attacks from vandals and princes (Pirenne, 1974). Augustine's image of Heavenly and Earthly cities constituted the medieval knowledge of cities. This Heavenly City image is clear in the engravings and maps of the time, influenced by the New Jerusalem depiction in the Old Testament (Rosenau, 1974). The church overtook the part of the social services like hospitals and almshouses. Gardens were included in the cities also and access to the surrounding countryside and use of it for food raising and hunting was easy. As population increased and the cities were surrounded by walls, gardens were opened to housing. This was what caused the destruction of sanitary conditions in medieval cities (Mumford, 1966).

In Renaissance, not a city but patches of geometric order of the period, and some utopian writings can be mentioned. Social or military goals were effective over those plans. City beautification or small-scale interventions are the only implementations of the period (Mumford, 1966). Thomas More's "Utopia" is a philosophical approach, depicting the life on an imaginary far away island state. The cities on that island were surrounded by country belt, agricultural fields and were limited in population.

Until 1800s, when industrialization initiated the second urban revolution, people were living in an environment providing easy access to nature. What industrialization did was to change the means of production, cause decline in the rural population and increase the density of the cities. The industry did not provide the housing, but just the job people sought. Overcrowding and inadequate living conditions coupled with smog, produced dreadful environments.

Industrialization started in Britain with the technological innovations leading to invention of the steam machine and steam powered railroad. As technological innovations took over the production of goods, a clash with agriculture, an important reason for emergence of cities, began. London was uncontrollably spreading on to the island's most fertile lands.

Many solutions were proposed, but each one approached the problem from one point only. Ebenezer Howard's Social Cities proposal grasped the problem from a wider perspective and proposed the development of new towns around any city, releasing the population pressure and renewing the slums in that particular city. Green belts would be the tools to protect the surrounding countryside from the unplanned development of the cities.

Planners influenced by Howard's views became very influential during the foundation of the British planning system and kept the notions of green belt and containment on the agenda. The ideas of growth restriction and the use of green

belts for this purpose have been important elements since the beginning of the planning legislation. Their size, role and permanence were scrutinized by the leading names of planning history, starting with Ebenezer Howard, Charles B. Purdom, Clarence Stein and Patrick Abercrombie. Green belt policy and legislation were considered and run in relation with regional development policies. Today the frame of Green Belt Policy is set by regional and strategic planning guidance. According to Planning Policy Guide on Green Belts (PPG2, 1995), there are 5 purposes of including land in green belts:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighboring towns from merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

Regional role of green belts is also underlined in Israel. After the foundation of the State in 1948, the immigrants flooded the country. What the State lacked was the resources to provide shelter and job for everyone. A new hierarchical settlement pattern was formed according to the size of towns. Green belts surrounded those towns in order to control and direct the development and to provide agricultural land. This agricultural land was used to provide food for the contained town and development over this land was prohibited. Zionist ideal was very effective over the founders of the State, the immigrants and the policy forming the ownership and settlement pattern of the land.

Russia was another example, where political idealism formed the urban development policy. This time Marxist idealism was dominant over the planning ideology. The difference between the city and the country was conceived as an outcome of capitalism and the elimination of this difference was one facet of the transformation program that the Soviet set out. To eliminate this difference, industry had to be decentralized and agriculture had to be collectivized and industrialized. After the initiation of Five-Year Plans in 1928, this development program was run according to a general plan. Cities that were built were mostly linear in form. Strips of green were used as buffer between residential and

industrial zones, and industrial and agricultural zones. Also parks separated neighborhoods. Moscow was reconstructed into a capital. The city was limited in size and development and contained within a green belt at least 10 miles of wide. The green belt was to define the fringe also. There was a continuous system of greenery starting from the green belt, reaching the central park and neighborhood parks. Agricultural production was included in the green belts of agricultural cities. Those cities would be formed by uniting all Soviet collective farms into a large *kolkhozy*. The surrounding green belt would include private plots used to meet kitchen needs of families.

United States constitutes another example, but this time of not being able to use green belts as a planning tool. Use of green belts in the States was being considered since the onset of new towns. First movement was fueled by Howard's influence and was run by Garden City Association of America. The Association tried to build 5 garden cities on sites selected for this end but they were not built. Second attempt to build new towns was directed by Regional Planning Association of America. In 1924, Sunnyside Gardens, in Queens, New York, was the first city built according to garden city principles. In 1928, Radburn, New Jersey, was started. Third attempt was a government program run by Federal Resettlement Administration (FRA), established in 1935.

The FRA was proposing a resettlement program in regional scale, in which agriculture and auxiliary rural development played a crucial role. But the socialist nuances in the program, economic hindrance and public and political opposition to Rexford Tugwell, the director of FRA, caused failure. Three towns were built, but they were sold in the 1950s, as they became costly.

Another city where a green belt was implemented is Ankara. Ankara is the first city in Turkey to have a surrounding green belt, like London and the city resembles Moscow also, since both towns were planned and redeveloped according to the needs of a modern capital.

Lacking the services that a capital city requires, Ankara needed a development plan. The planning and development of the city also posed an example for other cities of the country and also its success would be the success of the Republic. The first plan was the winner of a limited international competition held in 1928 and it was prepared by Herman Jansen. This plan was followed by Uybadin-Yücel plan in 1957. Both plans became futile since they were prepared according to narrow population projections. The populations they were prepared for was reached long before the year they were prepared for. Also the land speculation, squatter developments and rapid urbanization caused their insufficiency. Green belt idea for Ankara is included in 1990 Plan prepared by Ankara Metropolitan Area Plan Bureau. This green belt was used to limit the size of the city, to decrease the air pollution, to provide open area for recreation and to safeguard public lands from squatter housing. All the public lands included in the green belt were handed over to the Ministry of Forestation for afforestation. In the following plan, Ankara 2015, it was advised that the width of the green belt should be increased in order that it would be effective. The idea of green belt nearly vanishes in the last plan, Ankara 2025. The name does not even occur and limiting the growth of Ankara is not sought.

In the last chapter of this thesis, green belt of Ankara is evaluated, through comparison with examples of green belt experiences of mainly Great Britain, and Israel, Russia and United States. Comparison is made according to purpose and functions; physical qualities (density, width and continuity) of green belts and change in the policy in time.

CHAPTER 2
URBANIZATION AND CONTAINMENT OF CITIES UNTIL 1800S

Steps of the Senate was where Julius Caesar was assassinated, Invasion of Constantinopolis changed the intellectual scene of Europe, on the way to renaissance. Jerusalem, was the holy city, many crusades were started and many wars were fought for. These examples, showing the role and importance of cities in human civilization as cores of the complex relationships mankind has developed throughout history, can be multiplied. And beneath them, the cities, as sets of human conduct and culture, lies a heap of interwoven relations, even at the stage of emergence. Even the first cities were limited in size, as the yield of surrounding lands was limited and an efficient transportation system was lacking. This chapter aims to study the emergence of cities and the factors limiting their sizes. The meanings attached to the city and the countryside are also elaborated in the historical perspective.

2.1. Agriculture and starting of urbanization

Considering the start of urbanization, one should first take a look at the economic activities and their effect on human groups. The human settlements' transformation from village to city has followed the change from hunter-gatherer economy type to agriculture economy. Agricultural revolution caused the emergence of cities, but the factors affecting or necessitating agricultural

production, acted as both cause and effect. Bairoch (1988: 7) quotes from Petersen (1975):

> "Demographic factors, in short, typically are both cause and effect, elements in a material-cultural complex; and to view them as only the consequence of Neolithic or urban revolutions is, like any other monistic theory, distortive".

That is to say, though urbanization seems to have started after agriculture appeared, the factors intermingle and support each other. Starting of Neolithic Age is dated to 10000-12000 years ago and agriculture's appearance is seen 10000-10500 years ago.

Change in the type of economy type took place first in the more arid and fertile parts of the world, in the Fertile Crescent, Mesopotamia and Euphrates and Tigris valleys. Oldest city known is Jericho, founded around 3000 BC (Mumford, 1966). What caused or necessitated this change in economic and settlement patterns was both the increase in population, the increase in food production from agriculture, the need to store this food surplus for exchange and future needs and as requirement of agricultural production (Bairoch, 1988). Old chiefs and kings were the founders of the cities, owner and controller of the land, a god or semi-god. They were with the religious authorities, in charge of exchange and storage of goods and administration. When the word "merchant" appears in Mesopotamian writings in the second millennium, it is used to represent "the official of a temple privileged to trade abroad" (Mumford, 1966).

> "Owning land and exercising control over a sizable artizanry, the temples played an important part in the life of the Sumerian cities, as they did again later in Egypt, and also, after their fashion as would the churches in the various Christian cultures. But even though the Sumerian kings had close links with the Temple and its clergy, the effective direction of the city lay in the hands of an administration directly answerable to the to the sovereign. This administration seems to have performed a decisive role in external trade (of which definite signs remain) and probably in the internal commercial life of the city as well" (Bairoch, 1988: 26).

These cities were the markets of their surrounding lands. This led to the first division of labor, where "the peasant traded his surplus products for manufactured goods (and services) provided by the city" (Bairoch, 1988: 9).

Change from a village was not just achieved by physical and economical transformation. As Mumford states, the city was not just a gathering of people and houses, but also represented the cosmos and its gods (1966). Classification of the functions of a city, made by Saint Isidore of Seville, demonstrates this transformation. One function of the city is *urbs,* the physical elements of shelter commerce and warfare, while the other is civitas, the emotions, rituals and convictions that take form in a city (cited in Sennett, 1992).

The administrative and regulating role of the kings changed in time and they became a god-like figure, whose word was the word of god, in a city that represented the heaven on earth and the cosmos. From the side of the citizens, living in the city "was to have a place in man's true home, the great cosmos itself ... At the same time, living in the city, within site of the gods and their kings was to fulfill the utmost potentialities of life" (Mumford, 1966: 63). Rosenau (1974: 10) cites an Assyrian proverb, clarifying the role of the king and the citizen:

> "The man is the shadow of the god
> The slave is the shadow of the man
> But the king is god"

The granaries, the palace and the temple, these three were the only buildings made of stone, on square plans, representing their cosmic relation and importance. The walls were not built just for defense reasons, but also to keep the evil spirits out of the city. The lands left between the cities were not under control of a specific god and they represented the collision ground of many gods, representing many cities.

Starting of urbanization may have been like this, but when depicting what cities were and what meanings they were given, first written record on the matter

was perhaps the Old Testament. As the scope of this thesis is mainly related with limited growth of cities and the idea of greenbelt, while narrating this short history of urbanization, ideas on limited growth also will be mentioned. The size of Mesopotamian cities would have been limited with the number of citizens that the surrounding agricultural lands could support, since the transportation costs were too high and there was not a system efficient enough to provide the food for extra citizens (Bairoch, 1988).

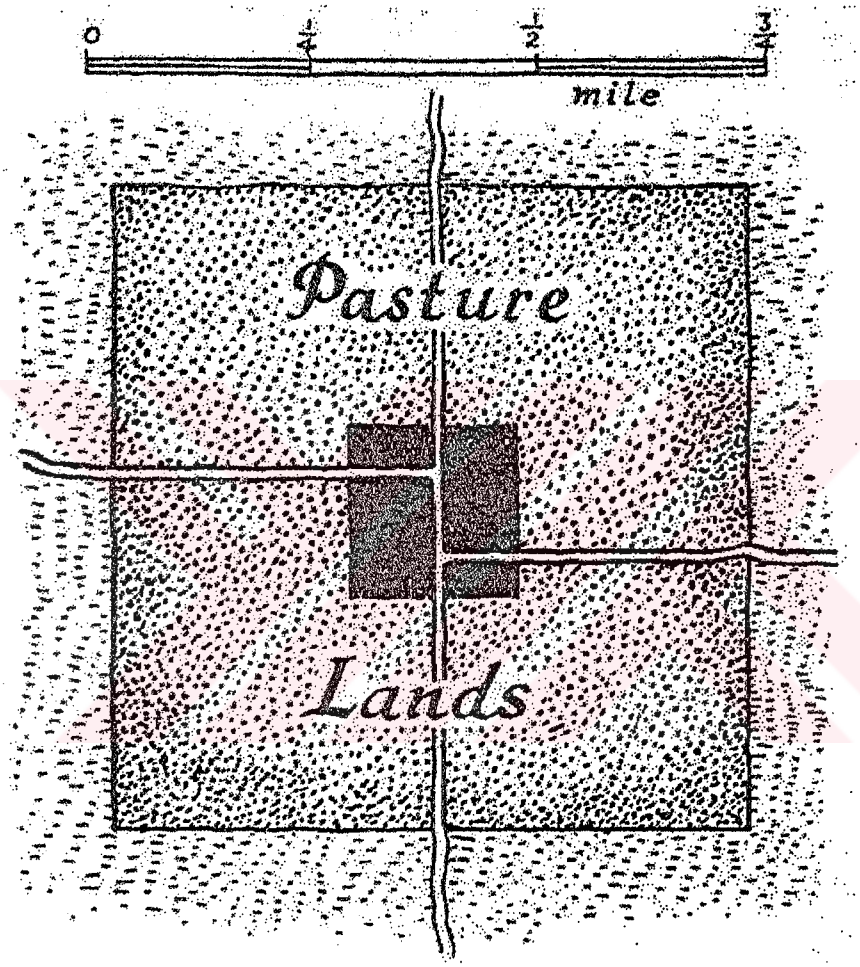

Fig 1 Diagram of a typical Levitical city derived from description in the Old Testament and the modern excavation of Gezer (Osborn, 1969: 170).

Concerning the matter from the point of a rural land exempt from development, surrounding a city and restricting its growth is a proposal dating

back to 13th century BC, to the Book of Leviticus, where the layout of the cities of new Palestine was depicted.

> "And the Lord spoke unto Moses... saying, Command the children of Israel, that they shall unto the Levites... cities to dwell in: and pasture lands for the cities around them... And the cities shall they have to dwell in: and their pasture lands shall be for their cattle, and for their substance and for all their beasts. And the pasture land ... shall be from the city and outwards a thousand cubits around about" (Old Testament, Numbers 35:v. 1-4).

> "The field of the suburbs (pasture lands) of their cities may not be sold: for it is their perpetual possession" (Old Testament, Leviticus 25: v. 34).

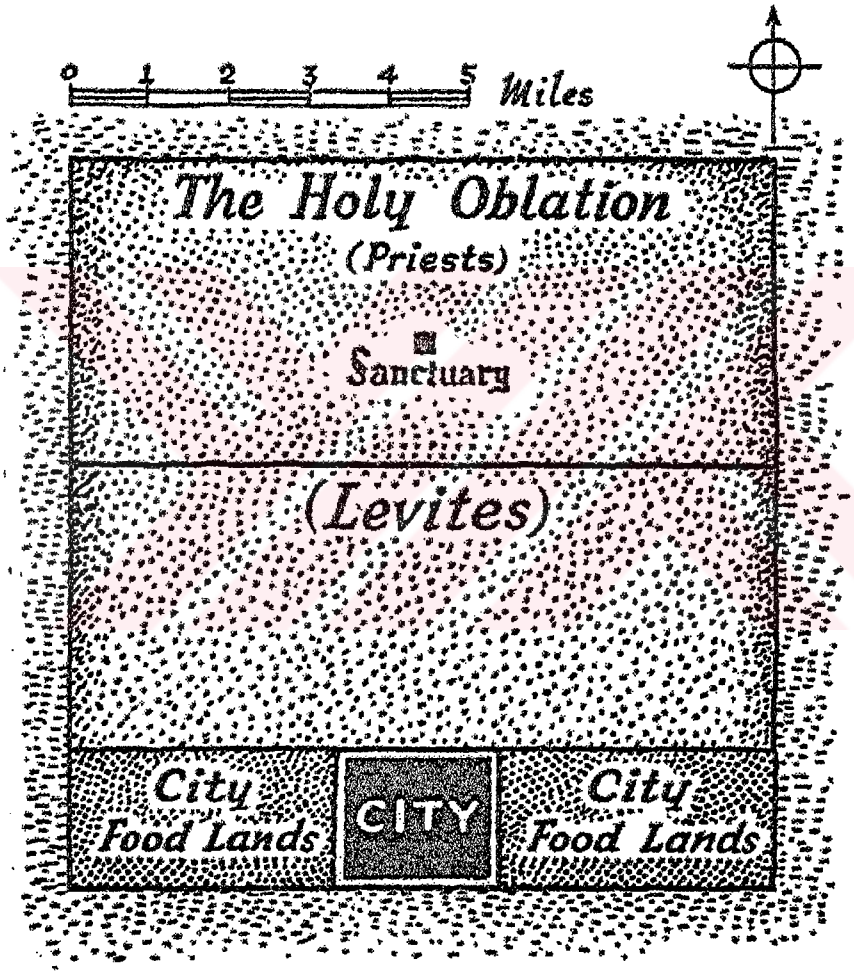

Fig 2 Layout of New Jerusalem as depicted in the Old Testament (Osborn, 1969: 168)

The city size given in other verses are different, argues Osborn (1969), but the notion of a city in the middle of permanent agricultural lands is persistent.

Mumford (1966) reports early Sumerian bards who "looked back to a pre-urban golden age", where "there was no fear, nor terror; man had no rival". This recalls Leo Marx's examples of such longings from different periods, he has given in his *Machine in the Garden* (1972).

2.2. Greek and Roman Cities

Before going into what went on in Greek and Roman cities, Aristotle's and Plato's ideal cities should be mentioned. Aristotle has put the union of man and woman to the nucleus of a city, and enlarged this unity step by step up to a city or a polis, composed of several villages. Need of some other person and other persons is the reason villages came together forming a polis. T. A. Sinclair, in the introduction to *The Politics*[1], deriving from the motto "Whatever is good is according to nature", says the *polis* was good from Aristotle's point of view, since he determines the necessity of it from the unity of man and woman, which is natural in itself. When it comes to the size of the city, according to Aristotle, the city should be sized not larger than that prohibiting the citizens from knowing each other.

Plato was more determinative than Aristotle, in terms of the size of the cities, for the maximum number of citizens was 5040. Bairoch (1988) reaches to a total population of 20000, as he interprets a "citizen" as the head of a household. Aristotle finds Plato's city too crowded and says that the area needed for this city would be as large as Babylon (Aristotle, Politics, II, 6). Plato's aim is to achieve a classless society, in order to establish one city, not cities of different classes contained in a wall.

[1] Aristotle, 1969, Penguin Books LTD.

The common point in Aristotle's and Plato's views is that the population of their cities is set to provide the attendance of all citizens to the public meetings (Bairoch, 1988).

Practically, Greek cities were not established and run on these theories. Their size was determined by the agricultural fertility of the surrounding lands and when a city approached a population of 20000-30000, a new city was developed instead of continuing development of the mother city (Bairoch, 1988).

From these examples, it is evident that city growth was both practically and theoretically limited; limited even though Greeks were probably importing grain enough for nutrition of 20-40 % of its urban population (Bairoch, 1988).

Romans had two traditional tools to limit the growth of a city (Osborn, 1969). One of these is called *pomerium* (Rykwert has used the term as *pomoerium,* Carcopino (1940) on the other hand has used it as *pomerium*) and the other is called *Ager Effatus. Ager Effatus* can be translated as a "designated field", "a belt of open space quite distinct from the *pomerium* and extending outside it" (Osborn, 1969: 170). The *pomerium* line was redrawn, using a plough dragged by a cow and bull, as the city enlarged in time. The old *pomerium* had to be de-consecrated to build upon. Though they seem to be effective tools against urbanization, Osborn says, *pomerium* was just a thin ribbon of land around the city and *Ager Effatus* was not reserved against suburban development.

Rykwert (1976: 46) gives more clues on that subject. *Ager Effatus* is "a place that had been consecrated and shared many characteristics with the *templum*". *Pomerium* was the border of the range of *mundus*, the hearth of the town. Earth taken from the land surrounding the city was put into mundus, sacrificing and taking possession of the "agricultural hinterland" of the town. Rykwert, states that the wall that Remus jumped over was not the actual defense

wall of Rome, but the "ridge, thrown up by the plough". The walls were considered sacred and punishment for jumping over them was death (Rykwert takes this from a text of Varro, now lost) and Remus was killed because of his hostile act. This means that the defense walls were nòt built on the track opened by the plough, the track was marking the *pomerium*. The defense wall was some distance inside from the *pomerium* (Rykwert, 1976). Carcopino (1940) reports that all Greek and Roman cities had been composed of two parts that can be called, as in example of Rome, *Urbs Roma* and *Ager Romanus*. *Urbs Roma* is the name give to urban agglomeration and *Ager Romanus* is the rural territory attached to the city. The *urbs* part of the cities was:

> "the home of gods and their sanctuaries, of the kings, and the later of the magistrates who were heirs to his dismembered power, of the Senate and the *comitia* who, in co-operation first with the king and later with the magistrates, governed the city-state" (Carcopino, 1940: 12).

With these qualities, the city was a *templum*, not just a cluster of houses. Carcopino declares that *pomerium* was *post murum*, which we learn about the term from Plutarch that it means "after or beside the wall"[2].

2.3. Medieval Cities

The effects of the collapse of Roman Empire did not immediately surface on the urban scene at first. The traditions and methods of the Empire lived on, though in pieces, not only in Byzance, but also in Gaul, Spain, Africa and Italy up to 5th century. The administrative, the economic, the political and the religious were so merged into each other that their distinction is elusive at times. As an end of this set of interwoven relations, the municipal system was identified with the constitutional system (Pirenne, 1974). The foundation rites and the rituals performed, demonstrate this mixed character of the state. This was stretched further on to the Mediterranean, adopting the gods and beliefs of the invaded

lands. This adaptive character of the Empire and the strong interaction between the counterparts provided the constancy of the institutions until the 8th century. Advent of Islam in the Mediterranean, cut the trade routes and declined the trade enabling the cities survive and opened way for further decline. As trade and tradesman left the cities, cities lost population. Bishops filled the gap left by the trade and the administration. As the church was feared, their diocese was free of attack of the princes. New cities began to form around the monasteries. Rome became the pontifical city in the hands of St. Peter, shedding light on the image the cities tried to create due to the growing effect of the Old Testament.

In the background of medieval cities lies a vision of two cities, one being the Heavenly City and the other being the shadow of it on Earth[3]. This twin image is also relevant for gardens.

> "One garden is controlled by the ultimate satisfactions of the City of God. The other recalls the pristine openness of Eden. One is architectural, the other natural, even wild. Between them there is historically and ideologically a basic conflict. But in practice they have learned to compromise with each other. The paradigm of that collaboration is the garden city" (Hunt, 1992: 334).

The cities were the grounds that Christian life was performed and churches were the neighborhood centers. Churches were the generators of many institutions like hospitals, almshouses and caring of the aged (Sennett, 1992).

The reason for building cities, was to contain and protect the believer, since believer is promised to be taken care of, especially taken care of nature, which has turned into a punishment of God, as knowledge of nature was absent (Sennett, 1992: 5). The reason for surrounding the cities with walls and also the gardens with some sort of physical enclosure is because of the reason that "the

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[2] Plutarch, *Romulus,* from http://classic.mit.edu/Plutarch/romulus.html, 14-June-2000.
[3] Augustinus, *The City of God,* trans. by Gerald G.Walsh, S. J., et al., New York, Image, 1958: 325, cited in Sennett, 1992:6.

bastioned city satisfies as a representation of triumph, power and security, the garden as a representation of innocent delights" (McClung, 1983)[4].

Gardens were also included in the cities for purposes of food production and raising of medical plants and there was a strong relationship with the surrounding countryside. Mumford (1966: 332) reports that "a good part of the population had private gardens behind their houses and practiced rural occupations within the city". Access to the surrounding countryside and use of it for lumber, game and fishing was ample. Early city plans represent a setting, closer to present villages. What changed this green setting was houses built on those gardens because of over crowding, also altering the sanitary conditions of the cities (Mumford, 1966).

At first, the twin city image, not only of Holy Rome but most other cities also overtook this mission, was influenced by Old Testament's New Jerusalem depiction. It was not until the Crusades that information with realistic content and appearance about Jerusalem was provided and that realistic drawings carrying traces of approaching humanism is seen. A painting in Salai dei Nove of the Palazzo Pubblico, in Sienna, of Bad and Good Governments and their surrounding lands, is important in this respect. In the panel of Good Government, "urban life appears aristocratic, the emphasis being on festive maidens and riders on horseback", and the rural surrounding of the city is "represented in a landscape depicting the blessing of tilled agricultural land in a realistic manner" (Rosenau, 1974: 34).

2.4. Cities until 1800s

Renaissance is a period of which the starting and ending dates are elusive. The change in arts and the philosophical milieu also embodied a change in the

[4] McClung, 1983; cited in Hunt, 1992: 332.

conception of the city. In this period, social themes lost effect in planning, aristocratic sterility and manner was aimed through geometric order. Cities had square, circular or polygonal plans, but the streets start to dominate their primacy on the forms and angles of the squares. Filarete, Alberti, da Vinci, Dürer, Scamozzi, etc. drew fortress town plans. Renaissance's impact upon city building and the ideal city was

> "related to military or social goals, ranging from practical solutions such as Scamozzi's heavily fortified town, Da Vinci's workers' satellite towns, and greenbelts for Milan to philosophical approaches such as More's Utopia" (Clapp, 1971: 21).

Mumford (1966: 399) says that there is no such thing as the Renaissance city, "but there are patches of Renaissance order, openings and clarifications, that beautifully modify the structure of the medieval city". He further indicates that some transformations made in Florence in that period were as organic as the previous order.

Though there is not much practice of limited growth in this age, Leonardo's plan for Milan and Thomas More's book "Utopia" (1516) include the idea. The idea of limited growth and a system of cities was used by Da Vinci in his plan of Milan (Mumford, 1938 and Clapp, 1971). Leonardo is said to ask permission from the Duke of Milan to built ten cities of 30000 inhabitants each:

> "in order to separate this great congregation of people who herd together like goats on top of another, filling every place with foul odor and sowing seeds of pestilence and death" (Mumford, 1938: 398).

These cities would be separated by communally owned and municipally watered gardens.

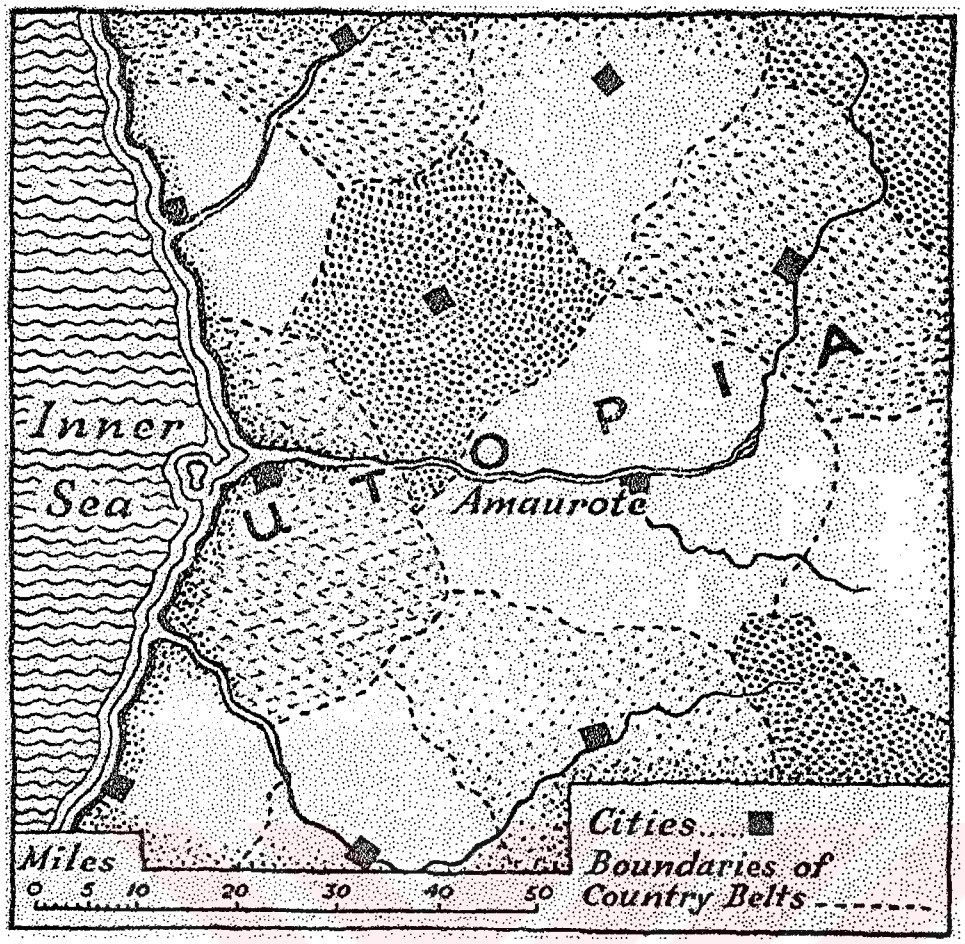


Fig. 3 Layout of the cities in Thomas More's *Utopia* (Osborn, 1969: 173).

Sir Thomas More wrote his book "Utopia" in 1516 in which he described in detail, a republic founded on a far away island where harmony and unity were achieved through planning and strict implementation of these plans. Every one of the 54 cities of the republic Utopia were surrounded with country belts that were 20 miles deep agricultural land, determined by the distance from each other. This agricultural land is cultivated by the inhabitants of the city and also used for recreation purposes by the citizens. The number of families in the city would be maximum 6000 and the population of the city is controlled by birth control and by migration to cities with a population less than 6000 families. Most important point is that the land, houses and means of production were communally owned.

2.5. Conclusion

Cities have been formed according to changes in the economic and technological structure. They have been assigned belief and ritual oriented meanings also. Their sizes have been determined according to both the material determinants and theological dues.

Agricultural production does not conform to a hunter-gatherer existence and necessitates settling down, grazing and control of the land. The cities built for this purpose were able to house just the population the surrounding lands could sustain. Old Testament depicted the cities of New Jerusalem with inalienable agriculture fields surrounding them with agricultural fields. Greek and Roman cities were limited in population with the yield of surrounding lands. There were two mechanisms that Romans have utilized to contain cities. Both were related to consecrated strips of land. One of these, *Ager Effatus* was the city and the surrounding countryside, marking the borders of the sphere of protection and control of the gods of the city. Second, *pomerium,* was the sacred strip of land outside the city walls and surrounding the city, on which buildings of any kind was prohibited. Actually, agricultural yield was more significant in determining the city size. Medieval cities were formed around the cathedrals and were surrounded with walls for protection. The holy city image of the Bible was effective over the theory. The cities were limited in size as regards the agricultural yield and the limited space inside fortifications. Renaissance does not provide information on the matters discussed above, except than some plans and writings. Perfection through geometric order was sought in this period and many plans of fortified towns were drawn and there was a partial implementation of geometric order via building of boulevards and squares.

Agricultural production and technology have determined the size of the cities from the start, but gradually lost their grip over the city with the advent of technology. This gradual change is a consequence of transformation the society

and mainly man's personalization. Man was no more heavens bound but an earthly creature A secular view evolved over the society. This change started with emergence of cities in the 12th century. The debate between the Scholastic and the nominalist philosophers on the search for the meaning, ended with separation of the theology and natural sciences and philosophy. The scholastic thinking lost its effect over the intellectual circles. Nature, once the lowest class of the scholastic hierarchy, became meaningful in itself and nature and its elements were opened to examination. The same applied for technological innovations. As science and philosophy was not ruled by technology, they set their own course to progress by "trial and error" and observations. According to Roger Bacon, the knowledge of nature aimed to establish man's control over nature. This determined the course of modern science and the innovations leading to industrialization (Akyürek, 1994).

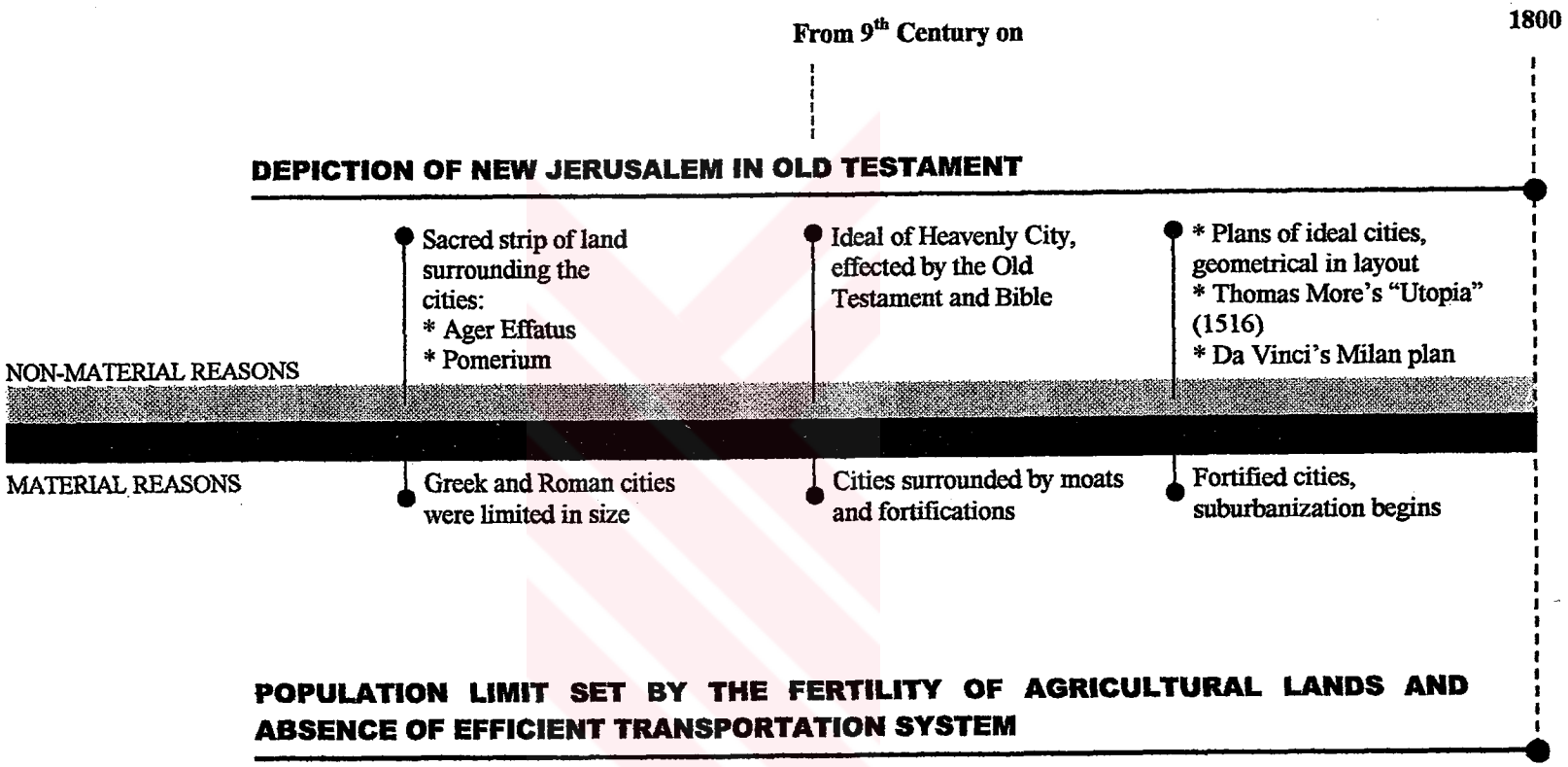


Fig. 4 The evolution of the green belt idea in Great Britain until 1800.

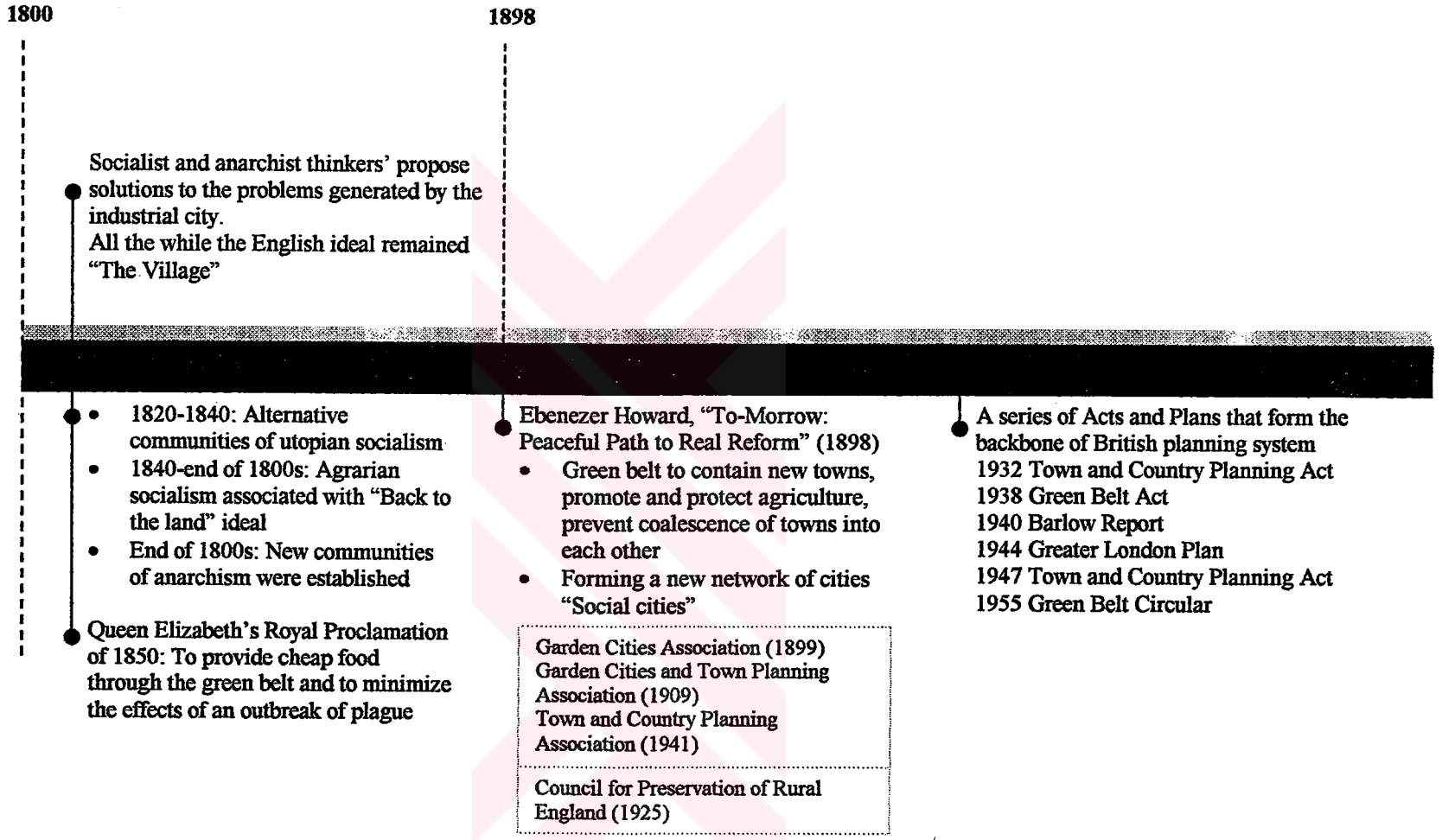


Fig. 5 The evolution of the green belt idea in Great Britain after 1800.

CHAPTER 3
INDUSTRIAL CITY AND THE ROLE OF GREEN BELTS IN BRITISH PLANNING SYSTEM

3. 1. EMERGENCE AND CONSEQUENCES OF INDUSTRIAL CITY

This chapter deals with the consequences of industrialization and the reactions to the industrial city. These reactions appeared in forms of plans, factory towns and utopias. Among these plans is Ebenezer Howard's proposal uniting all of the previous ideas into an original synthesis. Howard's proposal gives the green belt concept an essential role and constitutes the basis of its comprehensive use.

3.1.1. Emergence of Industrial City

Industrialization has caused a radical change in every aspect of human life and cities, as cores and generators of human relationships of all kinds, had their slice of the pie. The change in the urban landscape has many phases and facets, technologically, culturally, politically, economically and environmentally. This change posed many problems in the human environment. The environment where man had easy access to rural or wild nature had changed, and the components of his living environment had been replaced with the priorities of transport, production and what technology enabled.

Coal and mining have been the generators of technological innovation (Hall, 1992). Thomas Newcomen, had first used steam power to pump away the water in coalmines in 1712, and it was in 1769 that James Watt patented his steam

piston (McNeill, 1994). Other important inventions were the steam locomotive and railroad. "In 1825 the first steam railroad was operated for public transportation in England, and a line was laid in the United States in 1829" (Gallion and Eisner, 1963).

Most important technological innovations took place in Britain according to unique and inherent conditions. One of these conditions was that the private enterprise and empirical discoveries found larger ground for implementation than in the Continental Europe. Secondly, coal was the basic source of energy for industry and coal pits in Britain were easier to mine than in Europe (McNeill, 1994).

3.1.2. Impacts of Industrial City

The new world produced by industry and technology had both physical and psychological effects on all classes of the society.

The change in the production method impinged on the location of industries, due to advancing technology. Concerning the change in the environment, first, industries like textile or iron and steel making were located in the countryside, between 1700-1780, in England. This change was due to easy access to coal, water, cheap manpower and cotton (Hall, 1992). The absence of an effective transportation system and intention to avoid the intervention of guilds were also effective in the localization of industry in the countryside (Mumford, 1966). What caused the real expansion of cities and changed them was the introduction of coal and steam powered railroad transportation. These two, changed the location of industry, first around coalmines and then around railroad junctions and port cities, where transportation of coal and later of goods to the market were of vital importance. This was also the order that population increase followed, first around coal mines and then along railroad lines, at the industrial centers on the lines, at junction points and port cities.

The third stage of change is marked by rapid expansion and density increase of cities. As England's agricultural production began to decrease and was replaced by manufacture, people from the countryside flooded the cities. The factories were providing the job for the masses, but cities lacked elementary services, as potable water, waste disposal and hygiene (Hall, 1992).

The industry located itself where there was easy access to railroads and ports attracted the workers, yet without providing housing for them, thus causing the rise of slum housing provided by the workers themselves. There were problems of sanitation, lack of municipal services and public transport. Basements were turned into workers dwellings. Rooms were separated into two and there were no beds empty at any time of the day due to working with shifts.

The radical change caused by ever accelerating technological innovations and their rapid implementation in the production process was not only a shock for the ordinary peasant, but also a shock for the intellectual minded. Though this change triggered a reaction against technology and the cities, this was only an increased reaction caused by the same increased disturbance, already present in the society. This disturbance is expressed in literature and paintings with motives like "flight from the city" or "an inchoate longing for a more natural environment" (Marx, 1972).

Though this idea may seem to be related with effects of industrialization, avoiding civilization and fleeing to nature and rural beauties had occurred long before Industrial City's emergence. This can also be represented with weekend houses of Roman well to do where they enjoy the beauties and products of nature, in their refuge. Unfortunately this was possible for the ruling classes, aristocrats and the like. Workers had to live in the city under poor conditions. Building villas and houses in the countryside had begun as early as 13th century in Florence and Venetia. First, this was a luxury of aristocratic families. London, a few centuries

later, was surrounded by small gardens accommodating houses within. Not just hygienic conditions of the suburb attracted men, but also as Alberti has put, "liberty to do just what one pleases" is another main reason of the exodus to the countryside (Mumford, 1966). For the adventurous ones, conquest and colonization of new lands and for the more domestic ones fishing, picnicking, etc., were the alternatives.

> "Without waiting for Rousseau to prove that most of the ills of life were derived from the arid rituals of an over-refined civilization, many Europeans had begun to act on these premises. Country life seemed best; and the farther one got away from the city the more one gained in health, freedom, independence" (Mumford, 1966: 549).

3.2. EBENEZER HOWARD AND "A UNIQUE COMBINATION OF PROPOSALS"

The effects of industrialization came upon every class of the society, due to the absence of scientific knowledge; lack of administrative and financial body that would overcome the *laissez faire* and provide social services; and the unawareness of political body of the state of those living in industrial towns (Hall, 1992).

As to the solutions to the problems of the Victorian city, alternative communities of utopian socialism were started between 1820s and 1840s. From 1840s on, communities of agrarian socialism associated with "back to the land" ideal became popular. Approaching the end of 1800s, new communities of anarchism were established (Hardy, 1979; cited in Cherry, 1988: 9). Along with all the industrial and urban developments, the English ideal remained the village (Rosenau, 1974).

Concerning the alternatives from the point of prevention of urban sprawl, Queen Elizabeth's Royal Proclamation of 1850, was the first planned green belt establishment attempt. Elizabeth's idea was that London was too crowded and to curtail crowded housing and poverty, this regulation was needed. Yet, these were not included in the Proclamation directly, instead providing cheap food through the green belt and "to minimize the effects of an outbreak of plague" were emphasized. According to this Proclamation, no new buildings would be allowed within a 3-mile radius of London City Gates. James I and Cromwellian Parliament in 1657 made similar attempts to limit London's growth. Cromwellian attempt was to lower density by forcing all the new buildings to be constructed on at least 4 acres of land (Rasmussen, 1937; cited in Morris, 1997: 81).

3.2.1. Howard's Garden City Idea

In 1898, Ebenezer Howard published his book "To-Morrow: A Peaceful Path to Real Reform". It aroused great interest from every part of society. The second print came in 1902 under the title of "Garden Cities of Tomorrow". Considering the amount and the composition of the former ideas on the subject, what Howard had proposed was a unique and appropriate combination of previous proposals and his personal farming experience in Nebraska (Osborn, 1969). The proposals where he borrowed ideas from and recomposed vary from Ledoux, Owen, Pemberton, Buckingham, Marshall, Kropotkin to More, Saint-Simon and Fourier, and also to decentralized factory towns like Cadbury and Lever (Hall, 1996: 90).

Here, the conflict over the terms used to recite the tools used for containment purposes and for the new settlements must be interpreted, since they have been used and anticipated by communities that lacked those qualities. Osborn has clarified their meanings after the definition made by the Garden Cities and Town Planning Association in 1919:

"A *Garden City* is a Town designed for Healthy living and industry; of a size that makes possible a full measure of social life, but not larger; surrounded by a rural belt; the whole of the land being in public ownership or held in trust for the community".

"*Country Belt, Agricultural Belt, Rural Belt.* These terms are synonymous. They describe a stretch of countryside around and between towns, separating each from the others, and predominantly permanent farmland and parkland, whether or not such land is in the ownership of a town authority.

Green Belt. Originally used by Unwin as a further synonym for Country Belt, this term has also been applied, thus far confusingly, to a narrow strip of parkland more or less encircling part of a built-up metropolitan or large urban area. Park Belt is a better name for such a strip" (Osborn, 1969: 182).

3.2.2. Role of Green Belts in Howard's Social Cities

Ebenezer Howard's aim was the "marriage of town and country life". In other words, marriage of nature and culture, through a movement: a corporate migration of workers and slum dwellers to the green fields, and at last, after an experimental city, building of a bunch of Garden Cities around London and then the rebuilding of London. These new cities would be build for 30,000 inhabitants, all contained, balanced, economically self-sufficient and linked with each other and with a mother city of 250,000 inhabitants, forming a system of cities of what he calls "Social Cities". The concept of containment was replaced by "agricultural greenbelts", containing also the recreation grounds of the citizens (Howard, 1965).

Howard used diagrams to express his intention and aim, to avoid a misunderstanding and to escape from, *as is* implementation of a plan prepared for a specific site. One of his diagrams is called "The Three Magnets". Two of the magnets show the advantages and disadvantages of town and country. The third magnet summarizes the town-country proposal of Howard, aiming at the unity of culture and nature in a picturesque environment, combining the benefits of other two magnets.

culture and nature in a picturesque environment, combining the benefits of other two magnets.

> "Essentially, therefore, Howard's planning objective is a single one with, many different implications; it consists of trying to maximize accessibility and environmental quality simultaneously" (Hall *et al.*, 1973: 44).

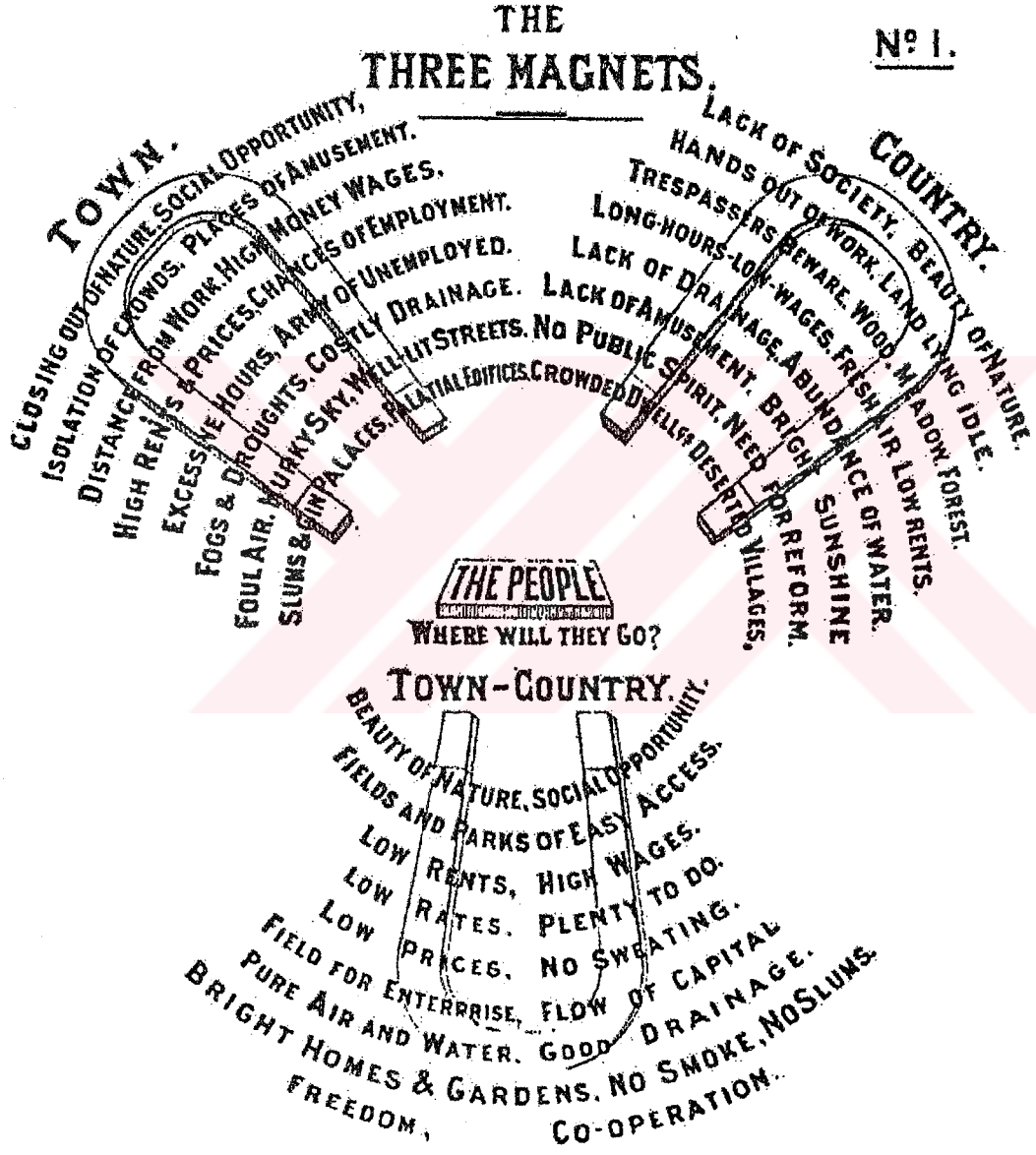


Fig. 6 The Three Magnets (Hall et al., 1973: 43).

There are three important points in Howard's approach. One is the public ownership of the land and return of the possible increments to the community. Second is controlled growth and limited population of the city through bordering the city by a permanent reserve of open country for agriculture and recreation. The aim of this belt is also the production of food for the city enclosed and fulfilling the requisites of "the notion that a modern city, no less than a medieval town, must be planned to the human scale and must have a definite size, form and boundary" (Mumford, 1938: 397). The third point Mumford asserts is a functional balance, both through regional relations, through the relations between town and country, between home, industry and market, and between political, social and recreational functions.

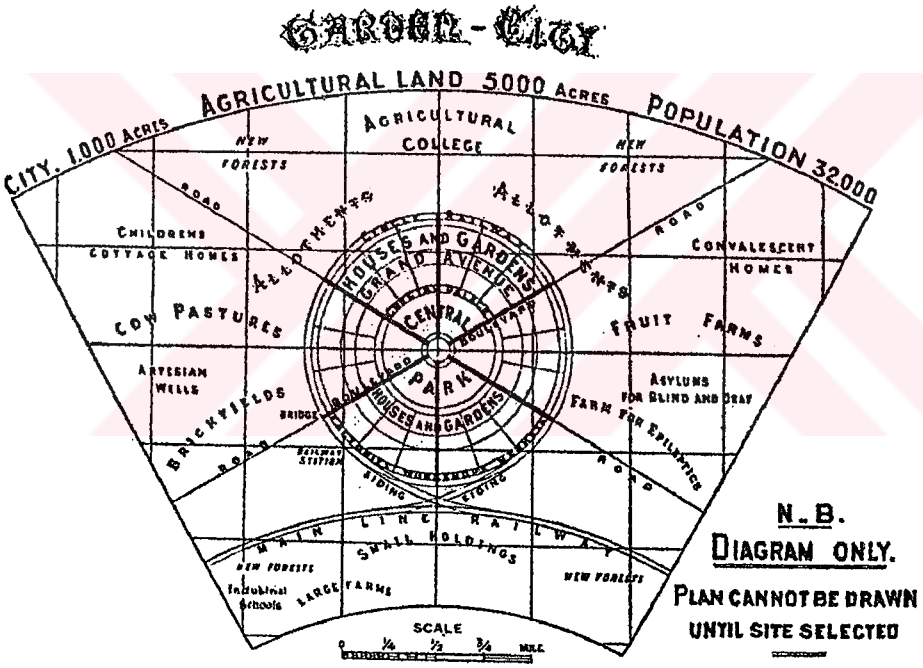


Fig. 7 The Garden City diagram showing the principles behind the Garden City and its agricultural belt (Cherry, 1988: 66).

3.3. EMERGENCE OF BRITISH PLANNING SYSTEM

3.3.1. Acts and Plans

Foley (1963) gives an account of the proposals, other than Howard's, forming the basis of British planning legislation. One of these is Lord Meath's proposal of building of a narrow "green girdle to encircle all London". This was followed in 1909 by D. B. Niven's proposal "of a ring road and a depressed railway around London about ten miles from the center". George Pepler has made an identical proposal, in 1910, of a "parkway–type ring road in a green belt". Pepler has, from the twenties on, started to advocate green wedges against green belts. In 1911, Arthur Crow has "prepared what is probably the comprehensive modern plan for Greater London, featuring a transport web and ten dormitory garden cities" (Foley, 1963: 15). Another proposal was London Society's wartime plan and it featured "an irregular pattern of scattered but linked open spaces".

In 1927 Neville Chamberlain, the Minister of Health, formed the Greater London Regional Planning Committee. Raymond Unwin was appointed the technical advisor of the committee in 1929. There were two alternatives discussed by the Committee, of which the first one was "the provision of relatively small areas of open space within a background of built-up or potentially buildable land". The second alternative was "the acquisition of a great background of open space – a vast green belt – within which planned building areas could be controlled" (Foley, 1963:16).

The Committee ceased Unwin's services due to economic reasons in 1933 and Major Hardy-Sims took his place. Hardy-Sims's sketch plan foreshadows the 1944 Greater London Plan more than any other plan (Foley, 1963).

Fig. 8 Unwin's Green Girdle (Hall et al., 1973: 55).

3.3.1.1. 1932 Town and Country Planning Act

1932 was the year the first legislation that contained the word 'country' was released. Town and Country Planning Act underlined the urgency to stop unplanned development over the Britain's countryside. The local authorities were given the duty to prepare and exert plans for urban development:

> "to control development; to secure proper statutory conditions (amenity and convenience); to preserve existing buildings or other objects of architectural or historic interest and places of natural interest and beauty; and generally to protect existing amenities" (Cherry, 1972: 150, cited in Morris, 1997: 78).

These objectives provided the local authorities the right to preserve land, permanently or temporarily. In fact, the local authorities reserved large areas for building purposes, but often could not open them to development. The reason

behind this and the general inefficiency of the Act was that the resources for compensation were scarce (Morris, 1997).

Regional Studies Association (1997) reports that the decision to establish the green belt was taken in 1935 by The Greater London Regional Planning Committee, according to the 1933 Greater London Regional Plan, containing Unwin's green girdle idea. The Committee adopted a policy to establish the green belt. Land purchase was started without planning controls and compensation for the loss of development and legal basis for the regulation of development.

3.3.1.2. 1938 Green Belt Act

In July 1937, the Parks Committee, in order to give protection and to assign a legislative character to the green belt, states that parliamentary legislation was needed. This resulted in the London County Council's releasing of the Green Belt (London and Home Counties) Act in 1938. The Act:

> "allowed local authorities to enter into covenants with landowners, which were restrictive of the use of land, to pay compensation and to buy land for the green belt. The Act conversely restricted the right of local authorities to dispose of green belt land, but did not rule out disposal"(Morris, 1997: 82).

London County Council directed the purchase of land as well and 2 million Pounds were allocated for this purpose (Foley, 1963). With the absence of speculation, 35,000 acres of inexpensive land was bought before the onset of the Second World War (RSA, 1990).

Morris (1997: 80) states that suburbanization, powered with the profit seeking land developers, extended the problems of the industrial city further:

> "By the outbreak of the Second World War in 1939, private ownership had increased so much that nearly one-third of all dwellings, out of a total of 12.7 million dwellings, were owner-occupied, while 10 percent of these had been built by local authorities since the First World War" (Cherry, 1972: 133; cited in Morris, 1997: 78).

3.3.1.3. 1940 Barlow Report

Barlow Report, published in 1940, approached the two sides of the problem at once: economic and regional problems, and "the physical growth of the great conurbations" (Hall, 1992: 6). These two were treated as one problem. Barlow Commission also decided to contain the towns to stop their growth for social advantages, even though there were examples of cities as healthy as the countryside and the evidence that journeys to work had not changed much between 1921 and 1937 (Hall *et al.*, 1973).

Scott Report on Land Use in Rural Areas was influenced by L. Dudley Stamp and concluded that agricultural land was the utmost national value and it would not be lost for any purpose (Hall *et al.*, 1973). After the Scott report, the concept of activities in green belts slightly changed. The green belt lands started to be considered as rural lands and the farmer and his agricultural activities were considered as natural, and there would be no prohibition on them.

3.3.1.4. 1944 Greater London Plan

Abercrombie has sought to achieve three goals with Green Belt in Greater London Plan: "restriction of urban growth, definition of an outer limit or boundary to restriction, provision for recreation as a primary use of the land" (RSA, 1990: 11).

The plan Abercrombie had drawn demonstrates a proposal resembling the cluster development, taking place in North America, of which:

> "essentially consists of grouping urban development in clustered units with land of a park-like character all around; it has very little similarity to the green belt concept as understood in Britain since the Second World War" (Hall *et al.*, 1973: 54).

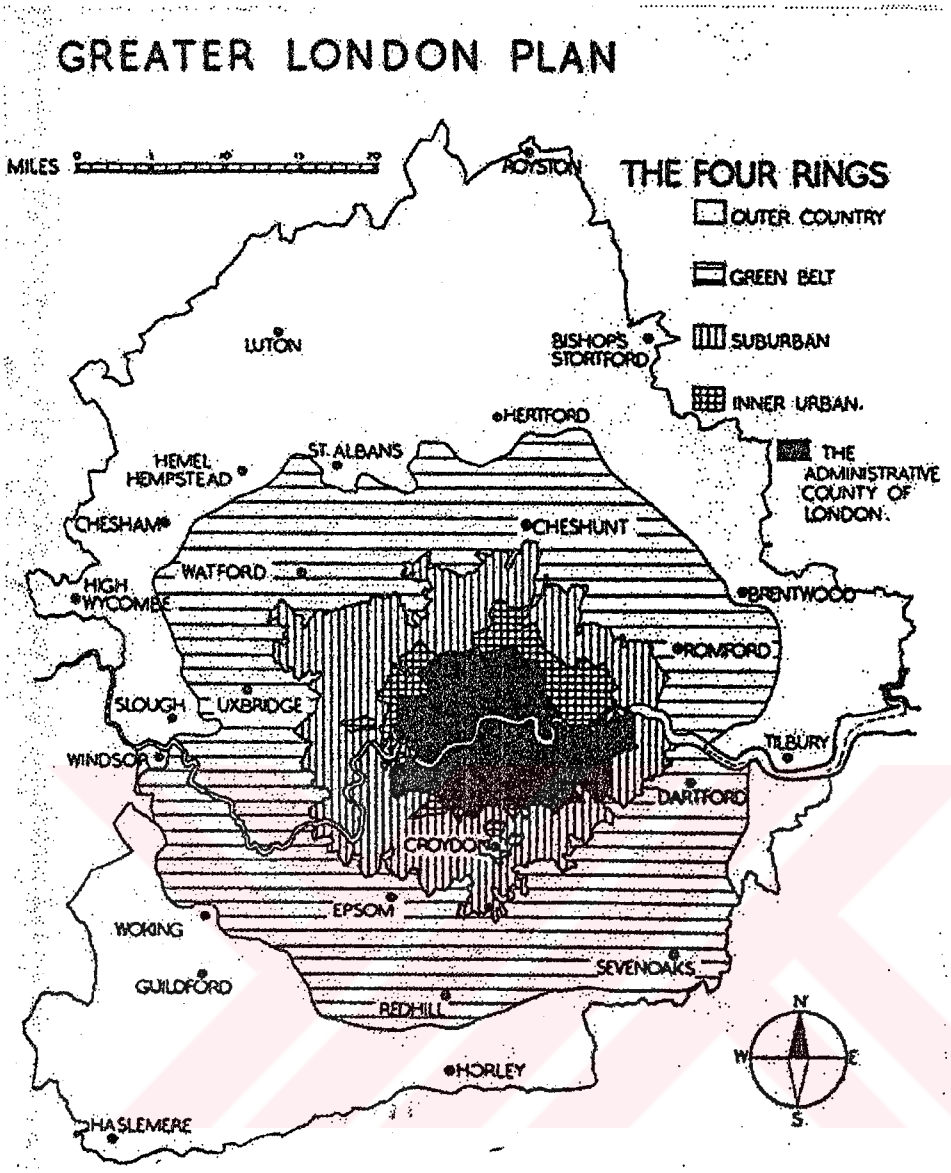


Fig. 9 The Greater London Plan of Patrick Abercrombie (Cherry, 1988: 125).

3.3.1.5. 1947 Town and Country Planning Act

In the postwar period, there is a transformation in the British planning system, from the 1920's determinative system to comprehensive and compulsory planning (Rydin, 1998).

The 1947 Town and Country Planning Act emphasized that the expansion of large cities into the countryside was unacceptable, their growth should be restricted and the new development would be channeled to the new and expanded towns. The new towns would meet the housing needs of London and other large cities, would be self sustaining and balanced and would be developed by government sponsored corporations. Green belts, along with industrial location control and expanded towns program were conceived as complementary policies (Cullingworth, 1993). The power and effectiveness of this act depends on compulsorily purchasing all development rights, through the development control provisions (Rydin, 1998).

The containment idea was very effective on the creators of 1947 planning system. 1947 Plan was a uniting step in a series of plans and acts circling around one purpose.

There were assumptions behind the containment idea of 1947 Act. Population was feared to increase and keep on centralizing. Commuting was not preferred. Recreation needs of the inhabitants of the big cities were to be met by the green belt. Also the agricultural lands invaded by urban sprawl was another drive for the containment policy. However, in reality, population declined and decentralized itself. Decentralization of jobs started in the 1960s and commuting was on the scene by the 1970s and thereafter. The open country and fresh air was not the recreation need of the modern man anymore, with increasing mobility beaches and the sea were preferred (Hall et al., 1973: 47-48).

The resistance to change in the rural areas as well as the postwar approach to agricultural policy supported the tendency to conserve agriculture and agricultural lands. The 1947 Agriculture Act aimed at creating "a stable and efficient industry, capable of providing such part of the nation's food as in the national interest it is desirable to produce" (Cullingworth, 1993: 184).

There were two Councils that have been influential on the forming of 1947 planning system. One is the Council for Preservation of Rural England (CPRE) founded by Patrick Abercrombie and a few others in 1925. Under the chairmanship of Abercrombie, the Council worked against the speculative spreading of development over the countryside. It must be stressed here that the Council was not on behalf of pure urban containment orthodoxy, but they preferred planned peripheral development to green belt planning and satellite towns. The reason for that was the worry that development would leapfrog the green belt and would destroy the countryside (Hall *et al.*, 1973).

The Town and Country Planning Association (TCPA) is the second, but a more active and older association on the planning scene than CPRE. The history of TCPA can be traced back to the first Garden Cities Association established in 1899, right after the first publication of Howard's book. In 1909 this association changed its name to Garden Cities and Town Planning Association, which was later followed by the change into Town and Country Planning Association in 1941 (Hall, 1996).

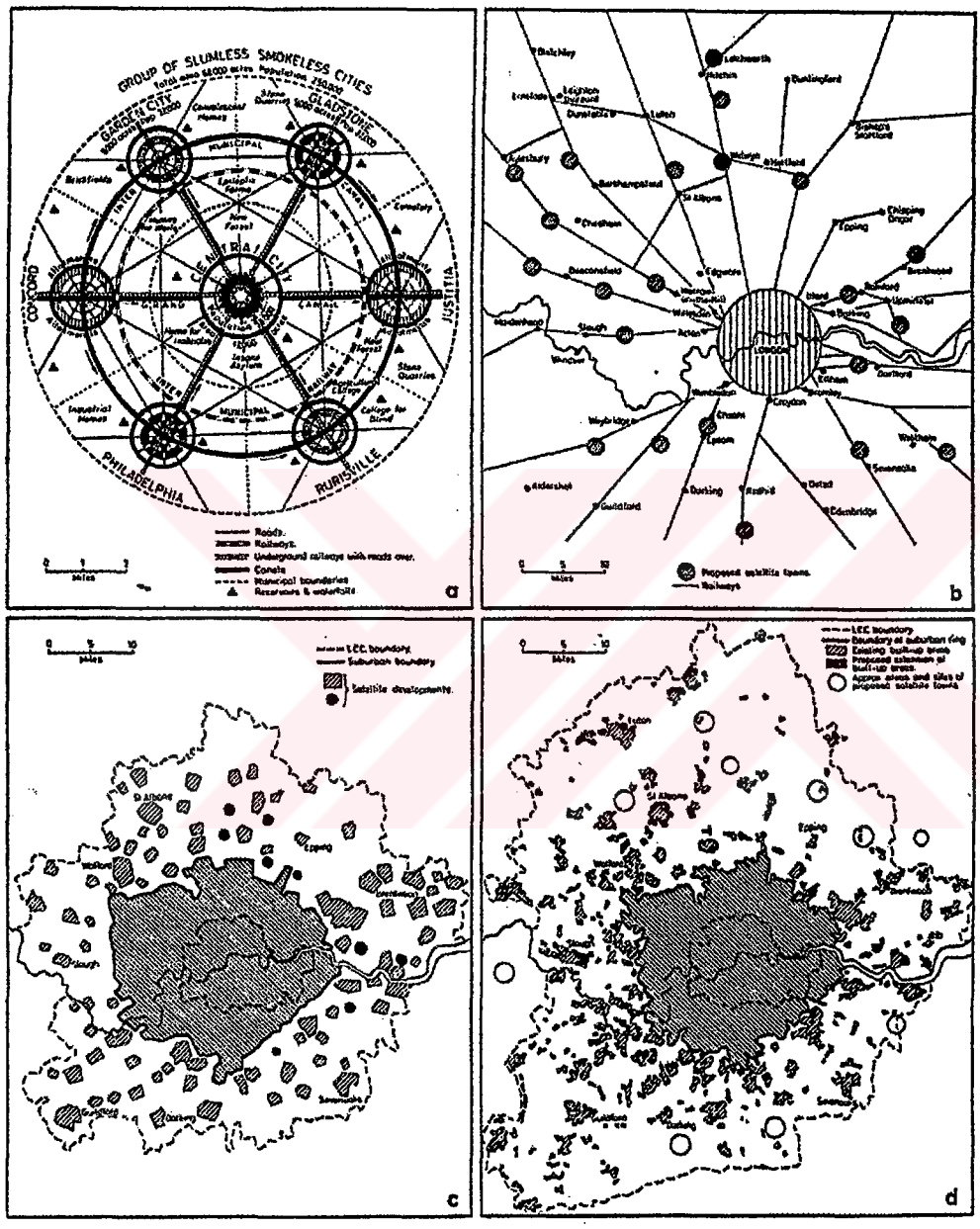
CPRE and TCPA united forces in that sense. CPRE acted on the behalf of agriculture and inhabitants of the countryside, while TCPA was working for the planned decentralization into new towns, raising this on the idea that:

> "agriculture and industrial productivity should be a main objective of town and country planning, but should subserve, and not have priority over good living conditions for all, which is the greatest of objectives" (Osborn, 1942: 5; cited in Hall *et al.*, 1973: 50).

Another effect of TCPA was that some members were influential planners, as well as active Labor Party members, such as Frederick J. Osborn (Rydin, 1998).

The objectives of green belt policy during the 1930s and 1940s show the effects of TCPA and CPRE. Urban containment and providing citizens adequate

access to the countryside are related with easement of urban life, while protection of agricultural land and rural life is directly related with the interest of country people. The first two seem to have originated from TCPA and the last one seems to have formed under the influence of CPRE (Hall *et al.*, 1973).



(a) Howard's Social Cities
(b) Purdom's Diagram of Satellite Cities
(c) Unwin's Diagram of Satellite Cities
(d) Abercrombie's Diagram of Satellite Cities

Fig. 10 The four different green belt diagrams (Hall et al., 1973: 53).

The form green belts have taken or the forms that have been proposed for green belts range between two extremes determined by their densities and sizes. On one end is the thin and not necessarily continuous ribbon of green belt, reserved for recreational use of the population. On the other end is the entirely preserved countryside, with urban development allowed at intervals against a green background. From these two types of green belts, authors point to a conflict in the understanding of green belts. The thin and scattered green belt is described as a positive tool, opening way for a pattern of regional planning, assisting and directing development. The other green belt, preserving the rural way of life and countryside has a negative impact on development - blocking development only and having no purpose of fulfilling requirements of a regional plan (Hall *et al.*, 1973).

3.3.1.6. 1955 Duncan Sandys' Green Belt Circular

Green belts around towns other than London were not implemented until the Ministry of Housing and Local Government Circular on Green belts, publicized in 1955. This circular provided the nation-wide use of green belt policy and advised the "planning authorities to consider establishing a green belt:

- To check the further growth of a large built-up area;
- To prevent neighbouring towns from merging into one another; and
- To preserve the special character of a town" (Cullingworth, 1993: 182).

The green belt policy of 1955 was part of a:

> "three-pronged attack on regional planning problems which included the dispersal of population to new and expanded towns, the deployment of green belts and the redevelopment (at lower densities) of urban areas" (Elson *et al.*, 1993: 134).

Duncan Sandys, the Minister of Ministry of Housing and Local Government has given the objectives of the green belts as:

"The primary purpose of green belts was to set a limit to urban expansion and help preserve rural areas for the enjoyment of town dwellers; agriculture should be the principle land use but sports fields would be an appropriate element" (Town and Country Planning, 24, 1956, p.151; cited in Hall *et al.*, 1973: 57).

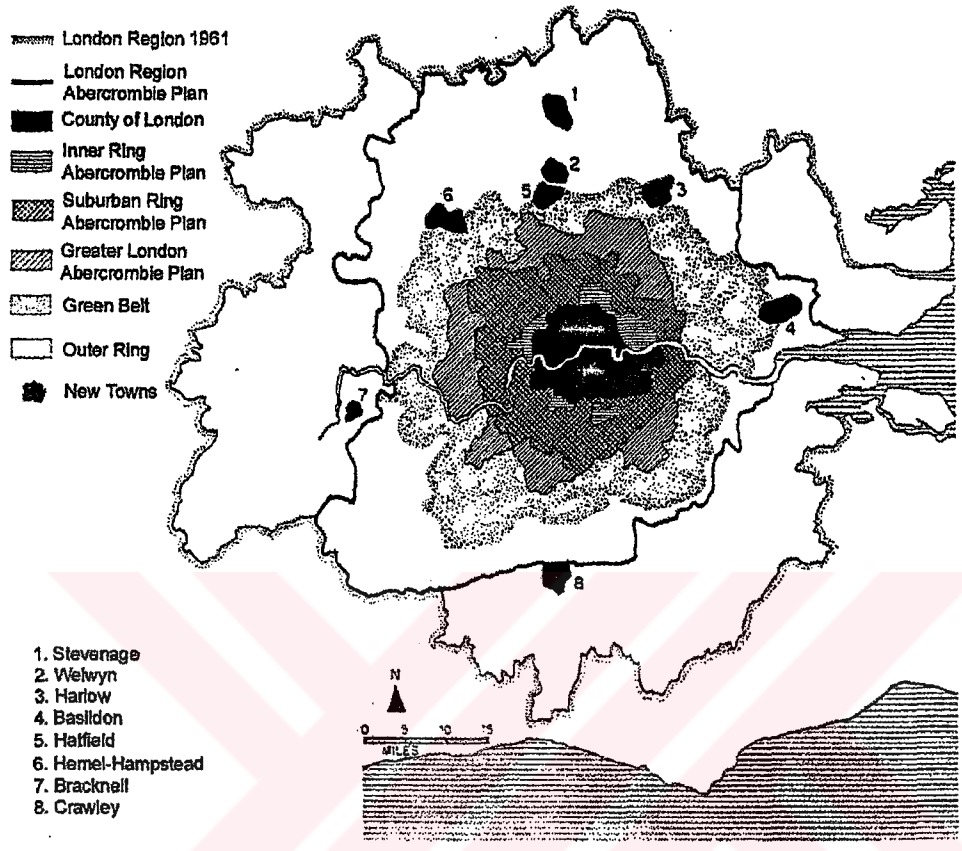


Fig. 11 The London region (Gallion and Eisner, 1963: 337).

3.3.2. State of Green Belts Since 1960s

Starting from the 1960s, the green belt policy was criticized to be out of date. In 1970s and 1980s, when "the designations of postwar development plans were proving out of date", the state and appropriate boundaries of green belts were questioned in UK and both the central government and the local governments expressed their opinions on the matter. Though some local developments and proposals were not in accord with the green belt idea, most local governments preferred to keep and even expand the green belts. Surprisingly, Department of Environment had preferred "to contain the spread of

green belts, pruning back extensions, removing interim status from large areas and refusing to approve some new belts" (Elson, 1986; cited in Rydin, 1998: 266).

Marxists would judge Department of Environment's decision as a favor to the "speculative builders keen to obtain development land generally and planning permission on their land-banks in particular. On the other hand, the New Right would see this as a move against overly restrictive, anti-development policies of NIMBYist (Not In My Back Yard) local councils" (Elson, 1986; cited in Rydin, 1998: 266). Rydin's interpretation of professional planners' comment on the matter is that DoE's decision was aimed at meeting the needs of strategic planning, "to mesh together county council policies on a regional scale and meet regional demographic forecasts" (ibid.).

In the Thatcher period, after 1970s' oil crisis, high unemployment and industrial disinvestment, planning was criticized from the point that it restrained investment and development. Many papers and reports were advocating the idea that planning should be more sensitive to private sector and capital. Planning was handed to private firms in that respect. Difficulties in the implementation process of green belts led to the questioning of the policy in the 1980s. The 1984 circulars on Green Belts (14/84) and Land for Housing (15/84) prove that the government was intending to relax the green belt policy (Cullingworth, 1998: 183).

Preservation of agricultural land, the green belt policy and the restrictive planning idea in general, were regarded as the reasons for the rise in residential land prices and rents in the 1980s. As practically available land was reserved for other purposes than residential development, the land prices and rents were rising. The difference between the agricultural and residential land prices was caused by the planning system. This brought with it the demand for pulling down the restrictions on the use of agricultural land for housing.

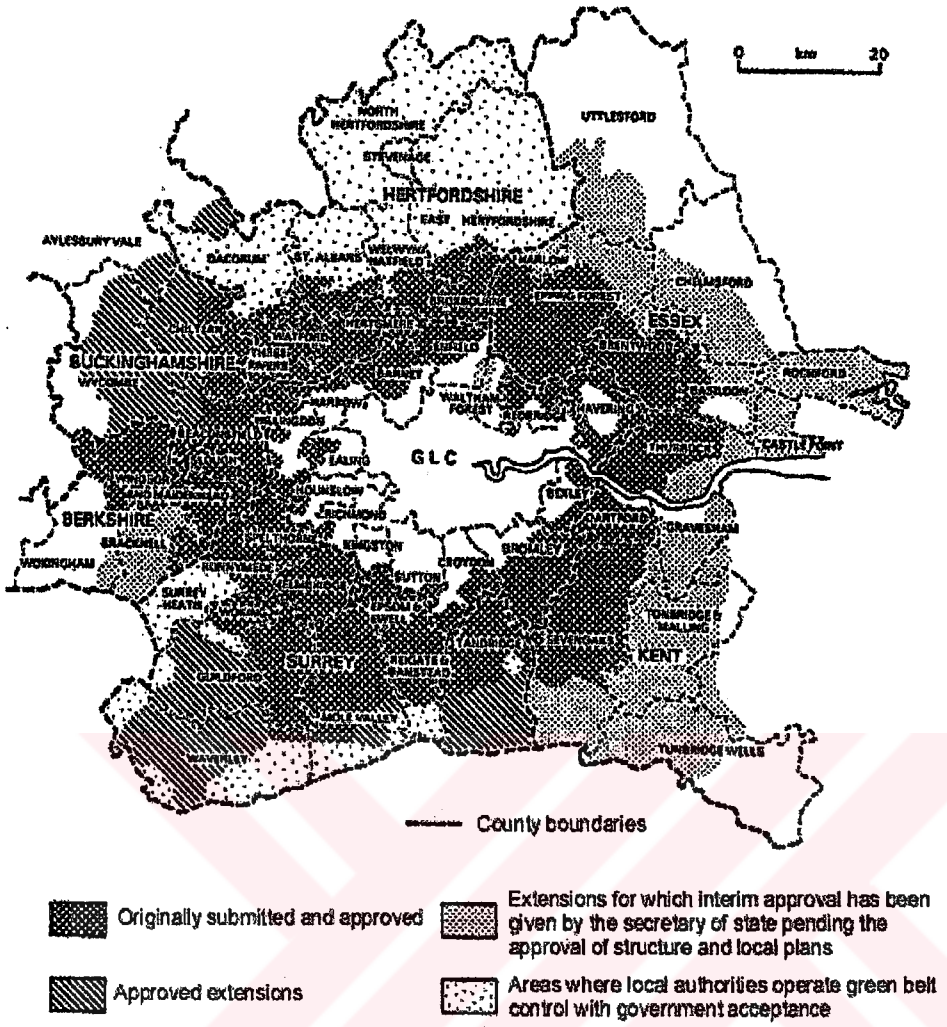


Fig. 12 London' green belt in 1975 (Munton, 1983: 22).

In the 1990s, in turn, growing concern for environmental issues, the European politics and economics started to shape the planning scene. 1970s welfare economics was replaced with environmental economics (Rydin, 1998).

"Planning Policy Guidance Notes (PPGs) set out the Government's policies on different aspects of planning" (PPG1, 1997). These series of guidance notes are prepared to aid local planning authorities that prepare development plans. Planning Policy Guidance 2 is related with Green Belts. This note (PPG2: Green Belts, 1995):

"states the general intentions of Green Belt policy, including its contribution to sustainable development objectives; reaffirms the specific purposes of including land in Green Belts, with slight modifications; gives policy a more positive thrust by specifying for the first time objectives for the use of land in Green Belts; confirms that Green Belts must be protected as far as can be seen ahead, advises on defining boundaries and on safeguarding land for longer-term development needs; and maintains the presumption against inappropriate development within Green Belts and refines the categories of appropriate development, including making provision for the future of major existing developed sites and revising policy on the re-use of buildings".

The purposes to contain land in green belts are five folds according to PPG2 (1995: 1.5):

1. To check the unrestricted sprawl of large built-up areas;
2. To prevent neighboring towns from merging into one another;
3. To assist in safeguarding the countryside from encroachment;
4. To preserve the setting and special character of historic towns; and
5. To assist in urban regeneration, by encouraging the recycling of derelict land and other urban land.

The area of approved green belts in England had reached 1.550.000 hectares, doubling the area covered by the agreed green belts in 1979. The total area covered by Green Belts in England in 1997, according to PPG2, is about 1.556.000 hectares, equaling to 12 % of Kingdom's total area (Elson et al., 1993).

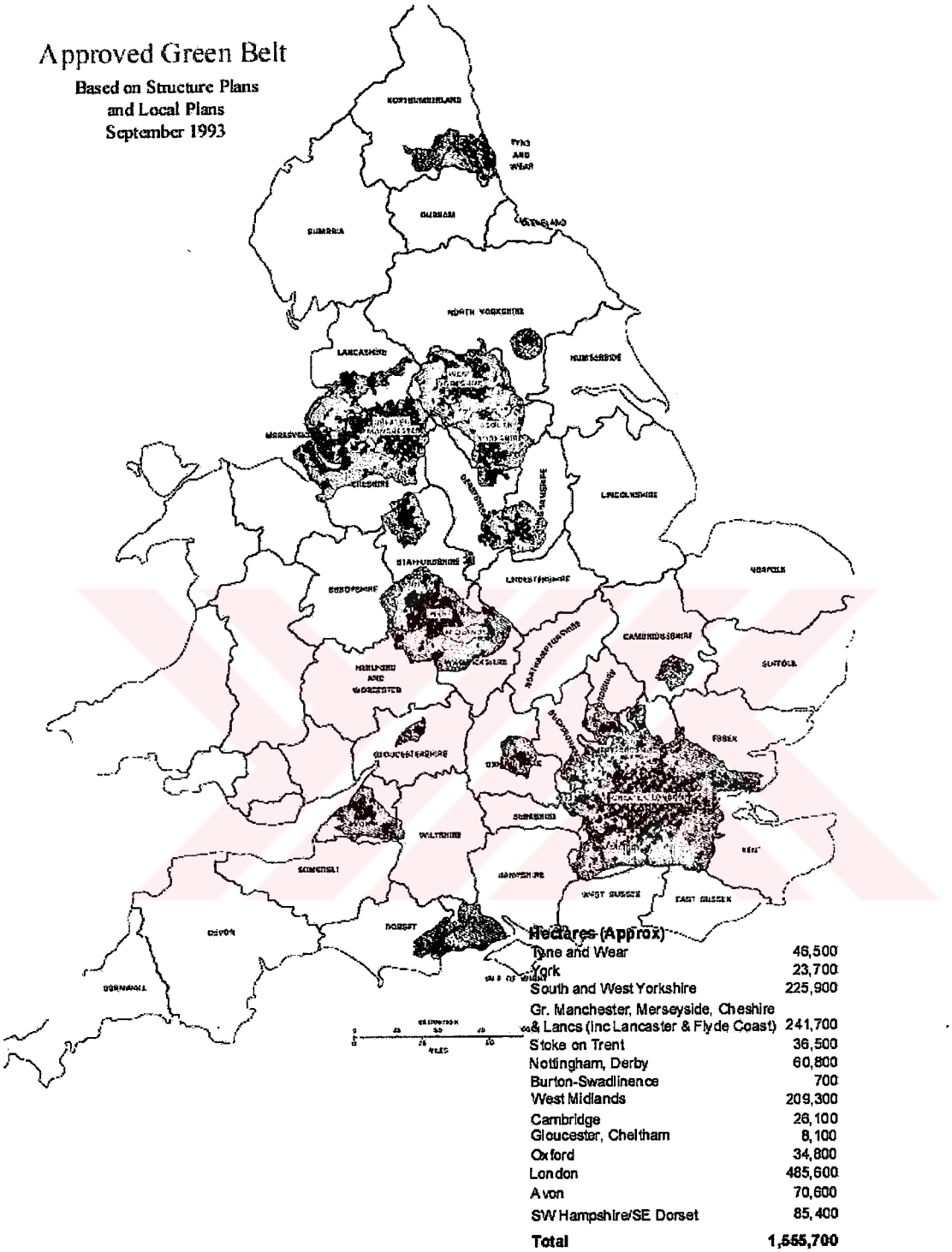


Fig. 13 The approved green belts in Britain (PPG2).

3.3.3. Development, Uses and Recreation in the Metropolitan Green Belt:

Though green belts are strategic planning instruments, developments in accord with local needs or public interest cause changes in their indispensable qualities. According to Circular 42/55 there are two categories of use:

1. "non-conforming uses, such as housing and industry, which is in the normal run of events should be prohibited, and
2. conforming uses including farmland, woodland and public open space which are often acceptable to all concerned" (Munton, 1983: 49).

There are also uses allowed in green belts such as mining, public utilities and major roads, which are conforming uses but not rural activities.

Land use	MGB	Green belt zone
1. Residential and commercial	6,2	14,3
2. Manufacturing	0,2	0,7
3. Extractive	1,8	1,6
4. Transport	1,5	2,1
5. Public services	0,9	1,2
6. Institutions standing in extensive grounds	1,1	1,4
7. Woodland	11,8	10,3
8. Water	0,6	0,5
9. Recreational	6,2	5,4
10. Agricultural	69,5	62,3
11. Unused	0,2	0,2

Table 1 Land use in the Metropolitan Green Belt and green belt zone, 1960 (per cent of development plan green belt as approved) (Thomas, 1970: 130-133; cited in Munton, 1983: 50).

Studies made in 1963, 1964, 1970 and 1974 to find out land uses in the Metropolitan Green Belt (MGB) have produced similar results showing that there is an increase in non-conforming uses in the green belt. Though this increase covers 7812 hectares, it is only 2.5 % of the total MGB area. These developments have taken place on agricultural land, but agriculture is still the dominant land use

and most non-conforming land uses have occurred on the edges of towns (Munton, 1983).

Recreational uses are among the conforming uses, but:

1. the time and money spent to reach the recreation site,
2. the kinds of recreation in the MGB,
3. insufficient public transport for the ones who do not own a car,
4. the sheer size of London for whom owning a car limit the use of recreational facilities (Munton, 1983).

The 5 % of recreational use in the MGB come from the inner city and over 70 % of the visitors live within 10 kilometers of the site. The size of London, for the ones without a car, limits the use of recreational facilities (Munton, 1983).

3.3.4. Outcomes and costs of green belts policy

As Elson (1986; *cited in* Elson *et al.*, 1993: 137) has put forth that green belt policy has six basic outcomes:

> "1. Green belts have managed the process of decentralization into specific physical forms,
> 2. Green belts have contained patterns of new development,
> 3. Green belts have ensured separation between urban areas, thus retaining their much valued identities,
> 4. Green belts have retained valuable agricultural land and other space extensive uses,
> 5. Green belts have retained accessible land in pleasant surroundings nearer to people living in cities than would otherwise have been the case,
> 6. Green belts create a degree of clarity in policy, which reduces excessive bureaucracy and associated costs".

The possible costs of green belt policy is gathered under eight topics (Elson *et al.*, 1993: 139):

> "1. Increase in land cost and house prices;
> 2. Ineffectiveness in tackling sub-regional problems;
> 3. Diversion of development into the deeper countryside;
> 4. Urban intensification;
> 5. Increase in travel and CO2 pollution;

6. Inflexibility, and difficulties in altering boundaries;
7. Strictness in terms of development control;
8. An inability to allow growth where needed".

3.4. CONCLUSION

Stopping and controlling unplanned urban development over rural lands, preserving agriculture and rural values have formed the initial impetus of the British planning system. Thus these two purposes have remained intact and have been joined by other purposes in time.

EVALUATION OF GREEN BELT OF LONDON	
History and Origin	Ideal life is conceived as rural life. Preserving rural life finds acceptance in the society. Description of New Jerusalem and protestant ideals are also effective.
Purpose	To check the unrestricted sprawl of large built-up areas; To prevent neighbouring towns from merging into one another; To assist in safeguarding the countryside from encroachment; To preserve the setting and special character of historic towns; To assist in urban regeneration, by encouraging the recycling of derelict land and other urban land.
Land Use	Main uses in Metropolitan Green Belt (Munton, 1983: 50): Agriculture (69.5%), Woodland (11.8%), residential and commercial (6.2%), recreational (6.2%) and others (6.3%)
Physical Qualities	A continuous belt, undisturbed other than uses and developments approved by and in accord with regional and national plans and policies.
Management and Administration	Local governments and authorities accept and implement green belt policies willingly. They propose plans of extensions for green belt and the local government is responsible for directing and approving those plans according to regional plans.

Table 2 Evaluation of the Green Belt of London.

Howard's successors have been active names during the forming of the planning legislation. It has taken 67 years to set up the green belt policy in 1955, since the first publishing of Howard's book in 1898.

Green belts have fulfilled some of their purposes well and they have failed to achieve some of their goals. They have side effects, some with stark contrast with their primary purposes. Still, they stand among the strongest policies related with urban development and regional planning. Green belts are planning tools and here a strong correlation lies between the power to plan and implement and the power to control. The first legislation from the central government that has formed the green belt policy now provides the local administrations the power to control development.

Though green belts are planning tools, they are not planning per se. They have to be implemented and run in accord with other subregional, regional and even national policies. Their use in Britain has been conducted according to regional and nationals plans, and still the Planning Policy Guides comprise the green belt policy essentially as a growth directing and limiting tool.

The garden city idea at the turn of the century was very popular not only in Britain but also in many countries of the world. Many countries formed their own garden city associations. As the green belt idea is closely related with the new town and garden city principles since the initiation of the idea, the following examples of Israel, Soviet Russia and the United States are studied through the new towns movement in those countries.

CHAPTER 4
SOME EXAMPLES OF GREEN BELT IMPLEMENTATIONS

As regards the instant that "green belt" entered the planning agenda, one notices the idea's constant relation with the new town idea, with property problems and with regional development policies. Implementation and use of green belts have been also formed through each country's conditions.

4.1. Urbanism and new towns in Israel

The Mandate over Israel has brought the European, especially the British effect to the planning scene, though this effect could not become dominant after the State was founded. Especially the garden city idea had been widely accepted. Zionist ideal of the return to the land and the working of the soil with one's own hands were alive in the founders. There was a high rate of immigration even when the immigrants were not promised jobs, constant wages and even adequate habitation. Providing them adequate conditions, to grow their own food was another reason behind accepting the garden city idea. Though the absence of building industry was an obstacle, agrarian settlement pattern with one or two storey single and semi-detached housing was faster and easier to construct with local materials and techniques (Spiegel, 1967).

Israel's new town movement changed the urban system, unlike the British new towns, not within a regional framework, but change of the urban system in a

national level was sought and achieved. The reason for this was that internal colonization was a fundamental concept of national development. "The policy was launched when it was recognized that the uneven distribution of the population between the coastal strip and the inland districts was a threat to the security of the state" (Galantay, 1975: 36). One objective of this movement "had been based on concern over the effects of the Primate City over the economic, social and cultural systems of the country" (Shachar, 1972: 38). Designing the roles of new towns as service centers for the agricultural population and achieving regional integrity was another objective.

To achieve these objectives, Tel Aviv, the Primate City, was restricted in growth. The housing developments for the immigrants were directed to the new towns and through physical land use control; agricultural land around the city was kept free from urban expansion. According to a 5 stepped hierarchy, from the rural settlement to the biggest town; new towns were given the 2nd, the 3rd and the 4th rank. New towns, as service centers, were located "to increase the efficiency of the marketing and distribution system throughout the whole country; they were also meant to decrease the economic dependency of the rural and small urban settlements on large towns" (Shachar, 1972: 39).

The implementation process was not disturbed with land speculation as in Britain, since the land belonged to the State, agricultural land was exempt from development and there was an abundance of desert and derelict land. The first towns built show the same characteristics: "a series of neighborhoods separated by green strips penetrating right into the center, each of them generously endowed with open spaces" (Spiegel, 1967: 58). Each town was surrounded by a green belt, where green belts, along with their development limiting qualities, are used as barriers between industrial areas and residential quarters.

Between 1948 and 1951, 18 new towns were developed and growths of most of these were disappointing. 10 more new towns were built between 1952

and 1957. New towns were not acting as service centers for the rural areas, since Israel was a single market, there was good communication system and the country is small. This was an obstacle for the program (Galantay, 1975).

Since 1958, this approach had to change according to fiscal and climatic conditions. Climatic conditions and the natural habitat were preventing the lands reserved as green space to be kept green. Furthermore, resources spent for the road, sewer, water and electricity systems had to be regained by more frequent use. This ended with a change to denser and higher building codes and a more suitable landscape design. New housing was built on large garden lots of the previous housing (Spiegel, 1967). Furthermore, segregation and lack of jobs were the problems of the program. Four or five of the cities were economically viable and the rest needed state support since they could not reach the critical mass and the momentum to become self-supporting, as was aimed (Galantay, 1975).

4.2. American new towns movement

Unlike the British or Israel governments, US Government never had a national new towns policy. The new towns founded by the US Government or by its agencies were founded to meet some particular needs. Purposes of the new towns ranged from providing "wartime industry and housing" to "regional resource development" and to some experimental projects as Federal Resettlement Association's Green Belt Towns (Clapp, 1971).

As is the case for most parts of the world, there have been great influences of Ebenezer Howard's ideas in America also. The Garden City Association of America was founded in 1906. The Association tried to build 5 garden cities on selected locations, but the 1907 panic disrupted the movement. Up to 1920s, garden city and new towns movement did not gather much attention and support in America (Arnold, 1971).

America's garden city experience begins with the foundation of Regional Planning Association of America in 1923. Most active members of the group were Lewis Mumford, Clarence S. Stein, Benton MacKaye, Frederick L. Ackerman and Henry Wright, Sr., all of whom were advocates of garden city principles (Schaffer, 1992).

The effort spent by the Association was not enough to change the planning scene in America. The first city built through garden city principles was Sunnyside Gardens, in Queens, New York, in 1924. Radburn, New Jersey followed this, in 1928. Benton MacKaye's plan of the Appalachian Trail and Henry Wright's regional plan of New York were other efforts of the members (Schaffer, 1992).

Frederick Roosevelt's "New Deal" program made way for the building of green belt cities. An economist, Rexford Guy Tugwell was an effective member of Roosevelt's brain trust and convinced him to establish Federal Resettlement Administration in 1935. The reasons of urbanization and suburbanization in United States were not much different than other countries. Those disturbed by the state of cities, moved on to suburbs, where the advantages of city and nature were united. As the land between suburbs was later filled with housing, factories, shops and the like, dispersion accelerated. "The cycle of expansion and decay spiraled rapidly and covered much larger areas" (Arnold, 1971: *xii*). The purpose of the Federal Resettlement Association was:

> "* to provide economic, educational and technical aid for economically savable farms,
> * to execute a program to manage moving of rural families living on unproductive land to individual or cooperative farm communities on fertile land, and
> * to provide adequate living conditions for the families driven off agriculture by increasing technological efficiency (Arnold, 1971: 25).

These point to a regional and even perhaps a national development scheme.

Tugwell's scheme was not very different than Howard's: "to go just outside centers of population, pick up cheap land, build a whole community, and entice people into them" (Hall, 1996: 130). To achieve that, 9 projects for 9 different sites were prepared. As the purchase of only 3 sites were completed by the end of the budgetary deadline, only 3 of the 9 projects by FRA were realized: Greenbelt, Maryland; Greendale, Wisconsin and Greenhills, Ohio. Purposes behind building these garden cities were:

> "* to give useful work to men on employment relief,
> * to demonstrate in practice the soundness of planning and operating towns according to certain Garden City principle,
> * to provide low rent housing in healthful surrounding, both physical and social for families that are in the low income brackets" (Clapp, 1971:34).

Three basic principles were used in these towns: The Garden City, the Radburn idea and the neighborhood unit. Green belts were used in the plans and their function was "to provide a balance between the urban and rural land use areas, a geographic limitation for the size and density of the community and a wall of protection from external encroachment" (Mumford, 1941, introduction to Fulmer, 1941: 2)*.

In both three of the built FRA towns, the community centers, sports facilities and stores are located at or near the center of the plans. Greenbelt, Maryland had allotment gardens in the countryside. "They were not planned as self-contained towns: they were more like dormitory villages, the sources of employment for the residents being in the near-by cities" (Gallion and Eisner, 1963: 144).

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* Mumford, 1941, introduction to Fulmer, O. K., 1941, *Green Belt*, American Council of Public Affairs, Washington, D.C.: 2; cited in Clapp, 1971.

Fig. 14 Plan of Greenbelt, Maryland (Gallion and Eisner, 1963: 144).

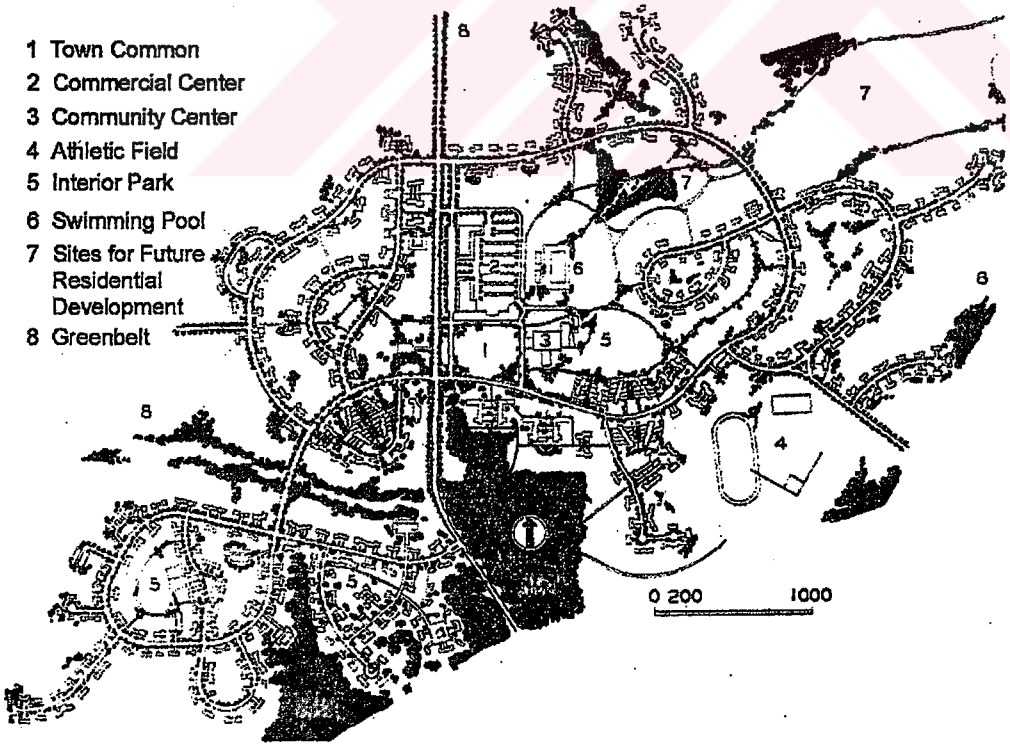


Fig. 15 Plan of Greenhills, Ohio (Gallion and Eisner, 1963: 145).

This program was abolished in 1950s since the 3 towns had become financial burdens on the Federal Government. Also the conservative Congressmen, the media, the building and real estate industries and the banks had protested the movement, "to whom the `Tugwell towns` represented the start of a socialist takeover" (Hall: 1996: 130). The movement included concepts such as "physical planning" and "communal ownership of real estate" which were alien to the American society. Physical planning was thought to be socialistic or communistic. Today, this conservatism still is on the scene in America that the garden city and even urban planning is not on the political agenda (Schaffer, 1992).

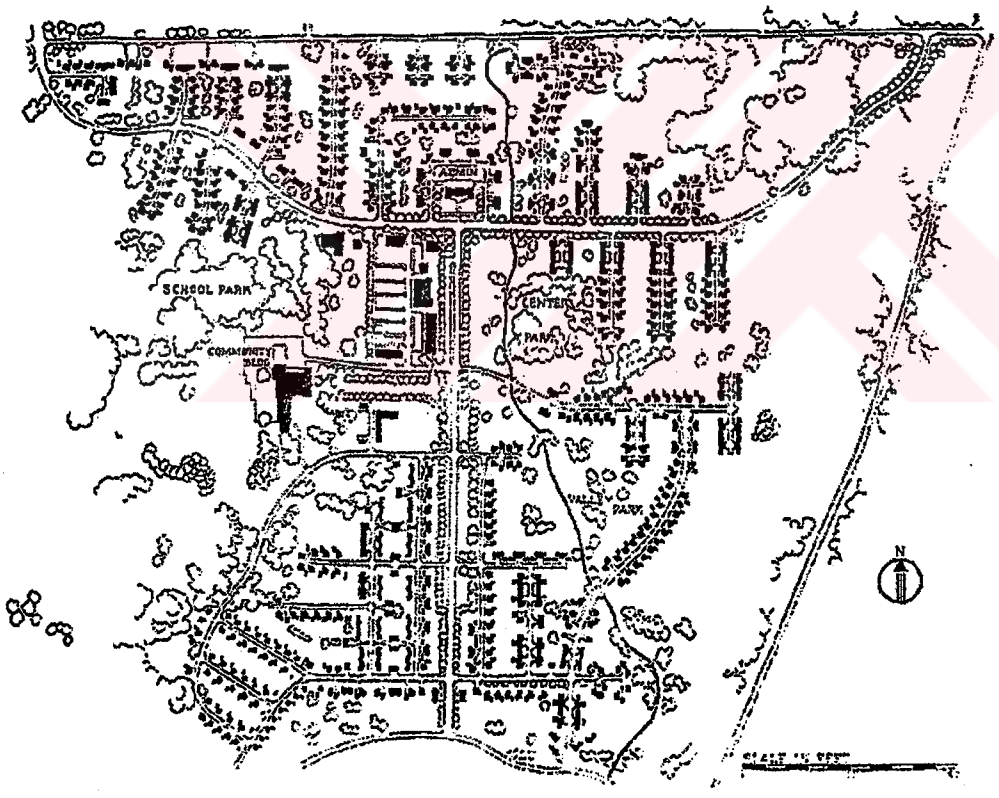


Fig. 16 Plan of Greendale, Wisconsin (Gallion and Eisner, 1963: 146).

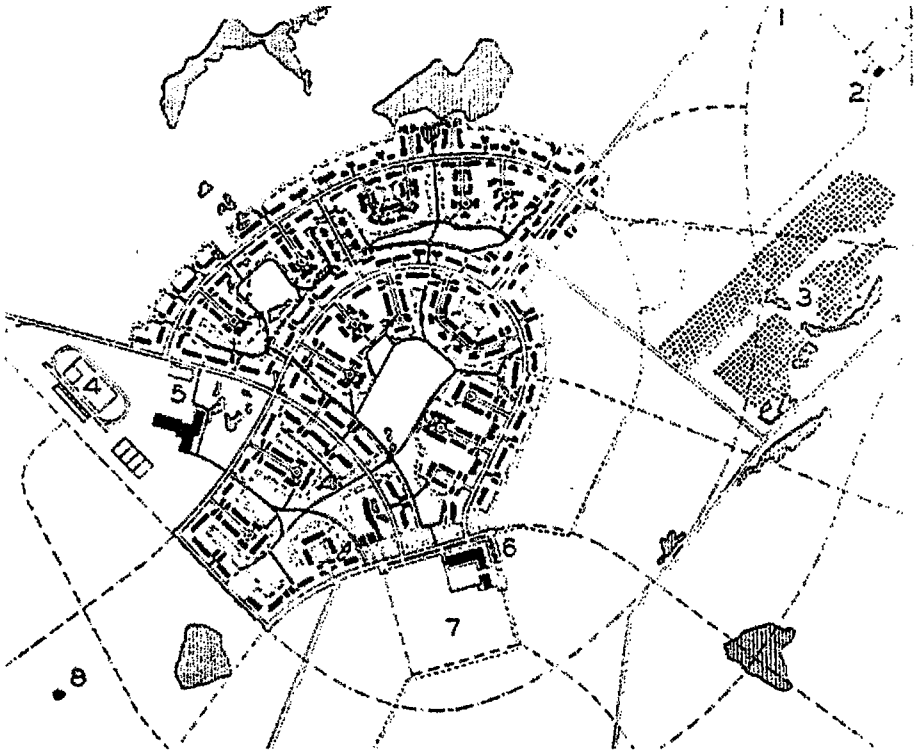


Fig. 17 Plan of Greenbrook, New Jersey, one of the unbuilt FRA towns (Gallion and Eisner, 1963: 146).

"The National Capital Plan for the Year 2000" and "The Wedges and Corridors Plan" is two plans that evaluate the new towns principles in a regional the complex. The National Capital Plan was prepared in 1961 and proposed channeling of

> "development into 6 corridors of new towns radiating from the District of Columbia into Maryland and Virginia. Corridors are to be separated by wide green wedges and individual towns surrounded by low density development green belts" (Clapp, 1971: 225).

The Maryland branch of this regional development proposal is The Wedges and Corridors Plan. These two plans could not be implemented because of some inconsistencies and some faulty projections. From the point of green spaces and green belts, some differences are evident between Britain, as the origin of the preservation of country, and the US.

"Lower density suburban development, less traditional concern for immediately accessible countryside, greater land availability and more wide-spread use of the automobile in the United States may serve to make large areas of open space surrounding urban areas both less necessary and less desirable" (Clapp, 1971: 227)

Recreational value of green belts is said to decline, since for most recreational needs of the people, larger single-family lots are sufficient and more specialized recreational needs are met at the regional level, at which everyday life of the dweller passes anyway (Clapp, 1971). "A second home 50 miles away might mean more to the resident of megalopolis than a greenbelt close at hand" (Fishman, 1992: 156).

Containment through green belt rests on the assumption that cities grow tidily at the edge and that; beyond the edge there are still untouched rural areas. "One can thus control urban growth with a green belt much as a gardener plants a border around a flower bed that has a tendency to spread" (Fishman, 1992: 152), but the city growth today takes place over the whole region simultaneously.

The unpopularity of green belts in America also has its roots in the beliefs of the society, even though FRA green belt towns were built and regional plan proposals containing the idea were prepared. One reason for this is that, unlike the British, Americans place industry prior to agriculture. "The underlying attitude is, that the increasing productivity of industry will bring forth all the production needed, without any worry about land supply and real cost reduction" (Clawson and Hall, 1973: 181). Americans contain a faith in free enterprise and believe that the development controls should not be set to limiting it, but helping it to be more effective. Furthermore, in theory and practice of planning in America, pragmatic approaches are preferred rather than theoretical approaches (Galantay, 1975). When compared with European new towns programs run according to ideological debate and comprehensive legislation, first US new town acts emerge later because of "seminal thrusts of private development" (Galantay, 1975: 71). Another reason is that, only courts are seen as the guardians of the public interest,

not political power and process at any level. Also the absence of control mechanism between plan making and implementation processes nullifies the value of positive planning (Clawson and Hall, 1973).

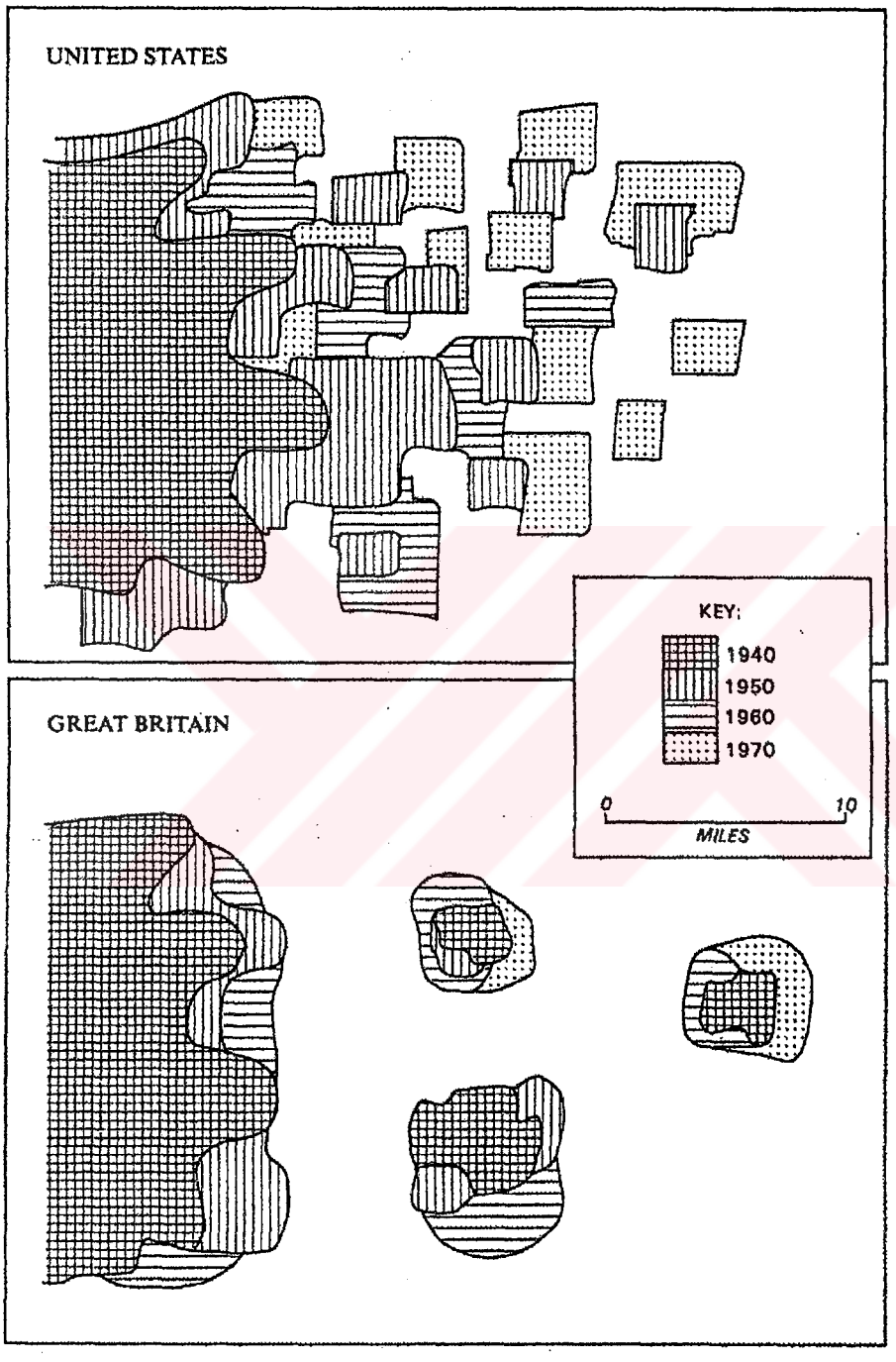


Fig. 18 Postwar growth of cities in the United States and the Great Britain (Clawson and Hall, 1973: 131).

4.3. Russian Cities and Marxist Idealism

Russia, after the 1917 Revolution, started a redevelopment program according to the goals of the new regime. The Bolshevik Party socialized the land in early 1918 and Sprague (1974) takes this date as the origin of Soviet town planning. After 1918, "no longer would the forces of capitalism so influence the development of cities-socialist principles of town planning would. Land was expropriated and along with it most urban real estate" (Bater, 1980).

Ancient and medieval Russian cities were fortified, composed of a *kreml'* (fortress) surrounded by a moat and a *posad* (suburb). "The *kreml'* was inhabited by the aristocracy and the *posad* by commoners and was used for commerce" (Parkins, 1953: 3).

The living conditions of the industrial workers were worst than their counterparts in the west, partly because of the fact that newly freed serfs had deserted the countryside for the city and partly due to the late reaction of the Russian industrialists to build workers' houses. These two facts were quadrupled with the speculation in land and extreme overcrowding in the slums, producing a revolutionary proletariat (Sprague, 1974).

The Soviet government started a large-scale program of industrial, agricultural and social development to solve this very complicated problem. Here we see one of the earliest principles underlying Soviet city planning: to eliminate the differences between the city and the village (Parkins, 1953). The theoretical outlines of this aim were laid down in the writings of Marx, Engels and others. Elimination of capitalism was essential to eliminate the difference between the city and the country.

There have been two approaches impinging on Soviet city planning after 1900. One is the revivalist movement, underlining the grandeur of the 18th century

city and proposing solutions to the problems of the cities through direct intervention by the state. Other effective idea is the garden city, offering solutions by building new satellite towns and relieving the pressures over the cities (Bater, 1980).

Debate between the revivalist and the garden city movements in 1920 gave way to the emergence of two opposite theories about the future of Soviet socialist city. The revivalist movement was effective over the urbanist school, while the garden city idea effected the de-urbanist school. None of the schools were dominant in the field of planning, but principles common in their approaches were used.

A member of the urbanist school, Soviet architect L. Sabsovich, who was an urbanist on behalf of "high density, tightly scheduled city life (Sprague, 1974: 28), prepared a plan of a city of 50.000, complying with garden city principles. De-urbanist school, on the other hand, was on the side of a "townless socialist society in which the age-old contradiction between town and country would be abolished once and for all" (Bater, 1980: 23). They proposed ribbon development, individual dwellings located in natural surrounding, with easy access to communal centers.

As a synthesis of these two schools, stands N. Miliutin's schema for a linear city. Achieving a sense of community, which was non-existent in the urban agglomerations, was aimed for and green buffers were used to separate industry, transport and residential zones. Miliutin's concern was with "the problems inherent in the physical and social transformation of housing patterns in order to achieve the new socialist way of life" (Sprague, 1974: 27).

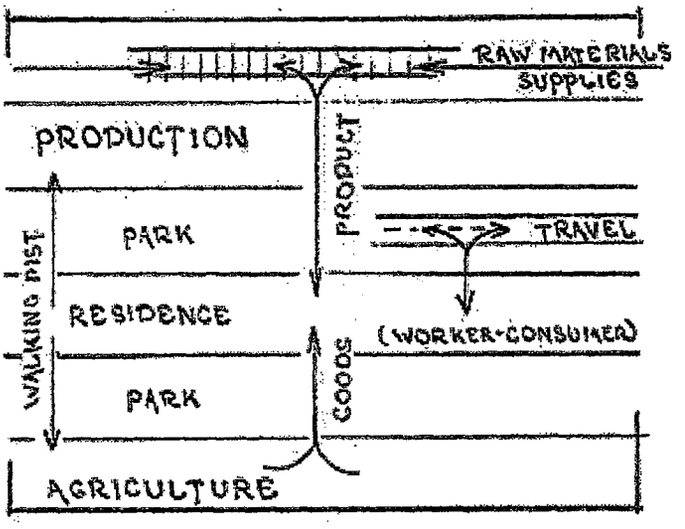
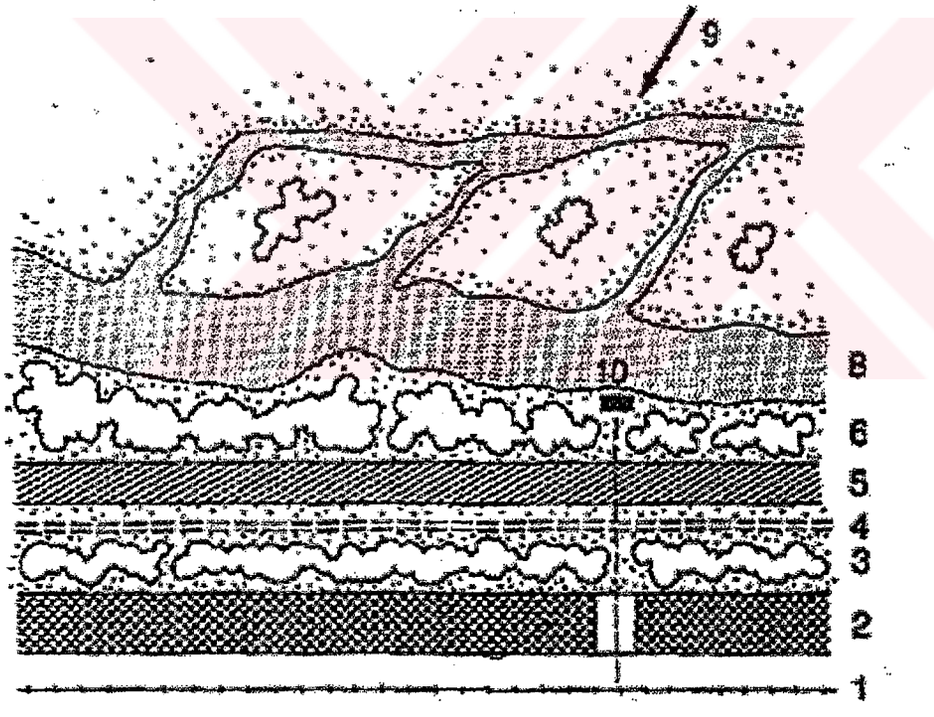


Fig. 19 "N: A. Miliutin's city, providing proximity of residence to both production and agriculture. Diagram by Arthur Sprague" (Sprague, 1974: 20).



Stalingrad

1 Railway 2 Industrial Zone 3 Green Zone 4 Throughfare 5 Residential Zone
6 Park 7 Ural River 8 Volga River 9 Prevailing Wind 10 House of Soviets

Fig. 20 Miliutin's plan proposal for Stalingrad city (Bater, 1980: 25).

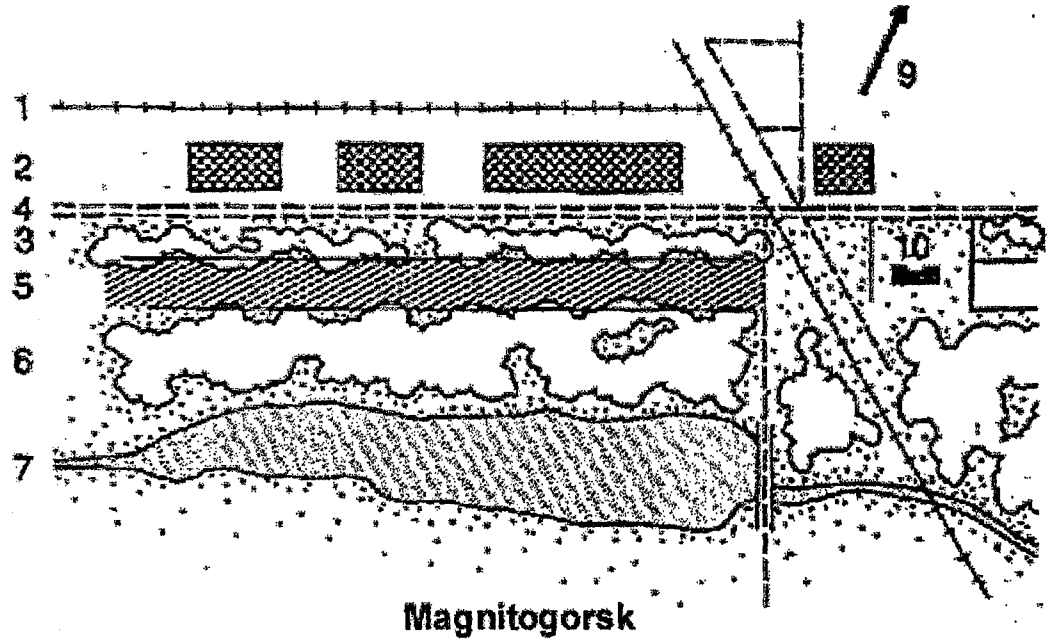


Fig. 21 Miliutin's plan proposal for Magnitogorsk city (Bater, 1980: 25).

These two schools were not sufficiently effective over the practice of rapid city planning and development, during the Five-Year Plans period.

When Russian cities after the 1917 Revolution are considered, ideas of Marx and Engels seem to have played an important role on their planning and development, particularly after 1932. Marx had proposed that the duality of urban and rural also marks the difference between the "physical labor" and "ideal labor". Socialist planners have formed their approach on this urban-rural antagonism, willing to decrease this difference. To attain this goal, decentralization of industry to create regional autonomies, and collectivization and industrialization of agriculture was sought for. (Tekeli, 1980).

After the foundation of the USSR, developments took place according to a definite "general plan". Stalin initiated the Five-Year Plans in 1928 and after that plans were prepared for 5-year periods and were based on fairly detailed objectives. The First Five-Year Plan considered the industrialization of 30 large

cities and the construction of 60 new cities. In the Second Five-Year Plan, construction of more than 400 cities were conducted. The Third Five-Year Plan included construction and planning of more than 300 cities.

These cities were developed according to linear city principles. Green strips of 500 meters width to separate industrial and residential zones and a park zone including recreational facilities between residential and agricultural zones were used in those cities. Parks separated neighborhoods and buildings occupied only 15-20% of the residential districts.

The reconstruction of Moscow is important from the point that the city was being rebuilt into a new capital through the aims of the Union. An international competition was held and all the plans submitted were ignorant of the old Moscow. All plans were refused. Then, committees composed of Soviet planners, architects, engineers, economists, etc., overtook plan preparation. In 1935, the Moscow General Plan was prepared by those committees and was approved "by the Council of People's Commissions of the USSR and the Central Executive Committee of the All-Union Communist Party, making it a state law" (Parkins, 1953: 34).

The plan defined a limited and balanced development for Moscow, an organic unity of the old and new parts of the town and the underlying topography and nature and the city.

The general principles for planning Moscow were limited city size, state control of housing, planned development of residential areas, spatial equality in the distribution of items of collective consumption, limited journey to work, stringent land use zoning, rationalized traffic flow, extensive green space, symbolism and the central city, town planning as an integral part of national planning (Bater, 1980).

Fig. 22 General Plan for the Reconstruction of Moscow, 1935 (Parkins, 1953: 35).

The population of the city was set as 5 million people and there was a strict control on incoming migration. The city was going to be ringed with a green belt of at least 10 miles of depth and zoning according to the land suitability. The green belt was to define the boundary of the city as well. There would not be a scruffy, rural-urban fringe. A single system of green areas starting from the green

belt and reaching the neighborhoods was inserted. The industrial zones, as well as the city, would be surrounded by green belts. The belt around the city would be linked with the central park in the center of the city. A hierarchy starting from the green belt reaching the districts and neighborhoods were thought to provide this connection.

The 5 million-population limit set by the General plan was surpassed in 1959. The 1956 regional scheme proposed the building of 20 new towns around Moscow, each inhabiting 1 million inhabitants (Galantay, 1975).

Another type of settlement in accord with the features of the Soviet planning system was *agro-gorod* (agricultural city). These settlements would be formed by uniting all Soviet collective farms into a large *kolkhozy*. These agricultural cities would be surrounded by green belts "consisting of private kitchen garden plots (owned by individual collective farmers) of 0.15 hectare each" (Parkins, 1953: 119).

4.4. Conclusion

These three examples demonstrate different use of green belts, emphasizing the relation of green belts with development policies. Israel's redevelopment program was run free from intervention of speculation. Decisions as regards agriculture, industry and development of new towns were all interrelated and supported each other. Emphasis given to agriculture, traditional building techniques and rural development pattern was related with the conditions of the state, mainly to provide the immigrants the shelter and husbandry. These conditions necessitated a control of the growth of settlements.

	SOVIET SOCIALIST UNION	ISRAEL
History and Origin	Green belts are implemented according to a national colonization program according to which all lands are expropriated.	
	Underneath the Soviet colonization lays the Marxist ideal: to overcome capitalism and establish a nation on socialism, and to eliminate the difference between town and country.	Zionist ideals lie in the heart of the nation. New settlement pattern provided the opportunity to realize these ideals to an extent.
Purpose	To achieve urban containment, To provide recreation ground, To sustain rural activities, To form buffer between uses as housing and industry.	To achieve urban containment, To provide recreation ground, To sustain rural activities.
Physical Qualities	A continuous strip of 10 km wide, penetrating into the city center with green wedges (in case of Moscow).	All undeveloped lands are reserved for agriculture and recreation.
Management and Administration	Central government conducted planning according to national plans of 5-year intervals.	

Table 3 The evaluation of Soviet and Israeli uses of green belts.

Restructuring of Russia after the Revolution bears a political purpose. The Soviet Government aimed to create a socialist community both with its people, its environment and its economy. Accordingly, the new towns were to diminish the difference between the rural and the urban. This difference was fueling the capitalist system and abolishing that difference was the duty of the new government. The use of green belt in Moscow as a mediator between the natural and urban is significant. The green belt flows into the heart of the city with green wedges. This provides pedestrian access to the open countryside and increases recreation facilities.

Russian and Israeli governments have taken advantage of public ownership of all lands. This advantage has provided them the opportunity to prepare plans on the national scale. Green belts were devices limiting the growth of cities, safe guarding land for agriculture and land recreation. The main point is that they were planned and implemented.

America forms the opposite example where private land ownership and speculation made it impossible to reserve lands devoid of development. It is evident that one main problem in front of the FRA New Towns Program was the land speculation increasing the price of the new development land.

CHAPTER 5
GREEN BELT IDEA IN PLANS OF ANKARA

Ankara is the first city in Turkey with a plan proposing to establish a green belt is developed. The plan was prepared and this decision was taken after painstaking surveys and analysis. The significance of this green belt also comes from the comprehensiveness of the plan that it is related with. The green belt was implemented with a coordinated effort between related institutions. A review of Ankara's planning history and a study of the present state of its green belt will shed more light to the understanding of the green belt and concept of urban containment.

5. 1. Jansen Plan and Open Space System

Ankara was declared to be the capital of the young republic of Turkey in 13 October 1923. This date is also the beginning of planned development for Ankara.

Ankara was a little town of 20.000-25.000 of population at that time, lacking adequate conditions and facilities, both socially and physically, that a capital city required (Yavuz, 1980). Housing and the buildings that could be used by the government and government officers were scarce. Apart from these practical needs for a planned development, Ankara was the city where the national bourgeoisie and culture was going to settle and rise. The importance given to the development of Ankara was because; success in planning of the new capital was

conceived as the success of the Republic. The new ideology was going to diffuse from the capital into Anatolia (Tekeli, 1980: 50).

On 16th February 1924, Ankara Şehremaneti was established. From then on, how the further development of Ankara would take place was elaborated. The importance of this development rises not only from the need for housing, but also from the mission that the Republic has taken: The responsibility of rising the country to the level of developed countries (Yavuz, 1980). Conditions of Ankara were suitable for this purpose, the capital would be developed in the middle of the steppe utilizing latest planning ideas and was going to constitute an example for the whole nation and other cities. Two alternatives were discussed: Would the new development take place on the site of the old city or would the further development be directed on new land?

Bademli (1985) argues that property holders of old Ankara were kept out of this decision taking process, resulting with the passing of a law, which enabled the Şehremaneti to buy land for new development. Development on new land was underlined by the Lörcher plan prepared in 1927. Two events that have taken place in 1925 have been effective in directing the new development onto the new land. One was M. Kemal Atatürk's new residence in Çankaya and the other was the expropriation of 4 million m^2 of land between Çankaya and the historical Ankara.

There were plans prepared other than Lörcher's as well, but they all were proposing solutions to overcome one facet of the problems (i.e. housing) of the city. To achieve a plan that would handle all the problems of the city comprehensively, an international and limited competition was held. Three planners, two Germans and one French, were called in. Out of the three plans prepared by Professor M. Brix, Professor H. Jansen and L. Jausseley, Jansen's plan was chosen in 1928 (Yavuz, 1980). The Jansen plan is first of the two plans, which suggested the relation of open spaces and the city at the core (Öztan, 1978). The

second plan is the Ankara 1990 Plan. Plans other than these two do not propose an extensive green system for the city.

Hermann Jansen was a German planner, influenced by Sitte. In this respect, Camillo Sitte's ideas on town building are important. In 1889, Camillo Sitte, a Viennese architect, published his book called "Town Planning According to Artistic Principles". This book was a response to the formalist planning movement of the times. What Sitte aimed was to capture the artistic principles of the Roman and Medieval times. What he has done in this respect was to study Classical and Middle Age towns, "aiming to discover in the organism of these towns the fundamental laws of town building" (Saarinen, 1965: 117). According to Saarinen, Sitte's study is based on three points:

> "First, Sitte emphasised the informal nature of the classical and medieval mode of town building. Second, he emphasised the coherent organism of these towns, which was achieved through proper correlation of building units. And third, he stressed the formation of plazas and streets into organic spatial enclosures"(Saarinen, 1965: 118).

Nature, according to Sitte, did not mean the landscape, but "the idea of an inner force or an organic consistency". Sitte has used the term "nature" to refer to the city as "the environment of man as a social and artistically sensitive being" (Collins and Collins, 1965: 49). This environment would derive its impression from the picturesque.

> "However, it must be conceded that in modern times one dares strive only for the picturesque, considering the higher level of poetic town building to be unattainable" (Sitte, 1965: 173).

According to Sitte, the informal and gradual growth of cities was because that this growth followed an irregular feature like a road or a stream, producing pleasant picturesque sceneries. Therefore, he proposed that roads be designed according to the topography, building of pedestrian squares, that gardens be included in courtyards and that public parks be surrounded with high walls in order

to prevent dust and smoke from penetration. He was not an advocate of wide ring boulevards or avenues planted with trees, since these filled with heavy traffic features did not offer the pedestrians any chance of a pleasant and refreshing stroll. Besides, the amount of trees planted were enough to form an entire forest or two or three parks, "which would be more effective as regards the health, recreation, peace, air and shade that city dwellers seek" (Sitte, 1965: 177).

Sitte finally categorizes the greenery within the city into two: *Sanitary greenery* and *decorative greenery*. Sanitary greenery is formed of large tracks of land, separated from the effects of traffic by physical means. Decorative greenery contains water bodies and is placed on places like road junctions where many people would see them. Psychological effect is more important for decorative greenery, where sanitary greenery should provide an environment free from dust, sheltered from wind, quiet and shady in summer (Sitte, 1965).

Jansen was a successor of Sitte according to Mithat Yenen (Tekeli, 1980). He believed that planning was a social activity. According to Tekeli (1980), this social activity was marked by public welfare and public interest achieved in a "Siedlung" type physical setting. Jansen's Ankara was formed of neighbourhoods of houses in gardens. Jansen has planned his town regarding the accessibility of open areas. These open areas were planned according to a hierarchy, starting from the street reaching to open countryside. This system included recreation areas and sports fields and provided access the to the open countryside through protection of riverbeds, valleys and hills (Ankara İmar Planı, 1937). This hierarchy resembles the "nature-culture/ wilderness-city" scale and demonstrates the garden city motives in Jansen plan.

As stated above, in this green area system, lakes, riverbeds, valleys, forests and hills are protected and integrated with the urban green system. The valleys include parks, sports fields, gardens and even swimming pools and afforestation of

hills is recommended in order to keep them free from development and provide their use for recreation. Also, coupled with reduced motorcar traffic in narrow streets, pedestrian circulation through this green system was sought for. Gardens and schools are located near parks; enabling students reach their schools on foot and citizens to enjoy easy pedestrian access to greenery (Ankara İmar Planı, 1937).

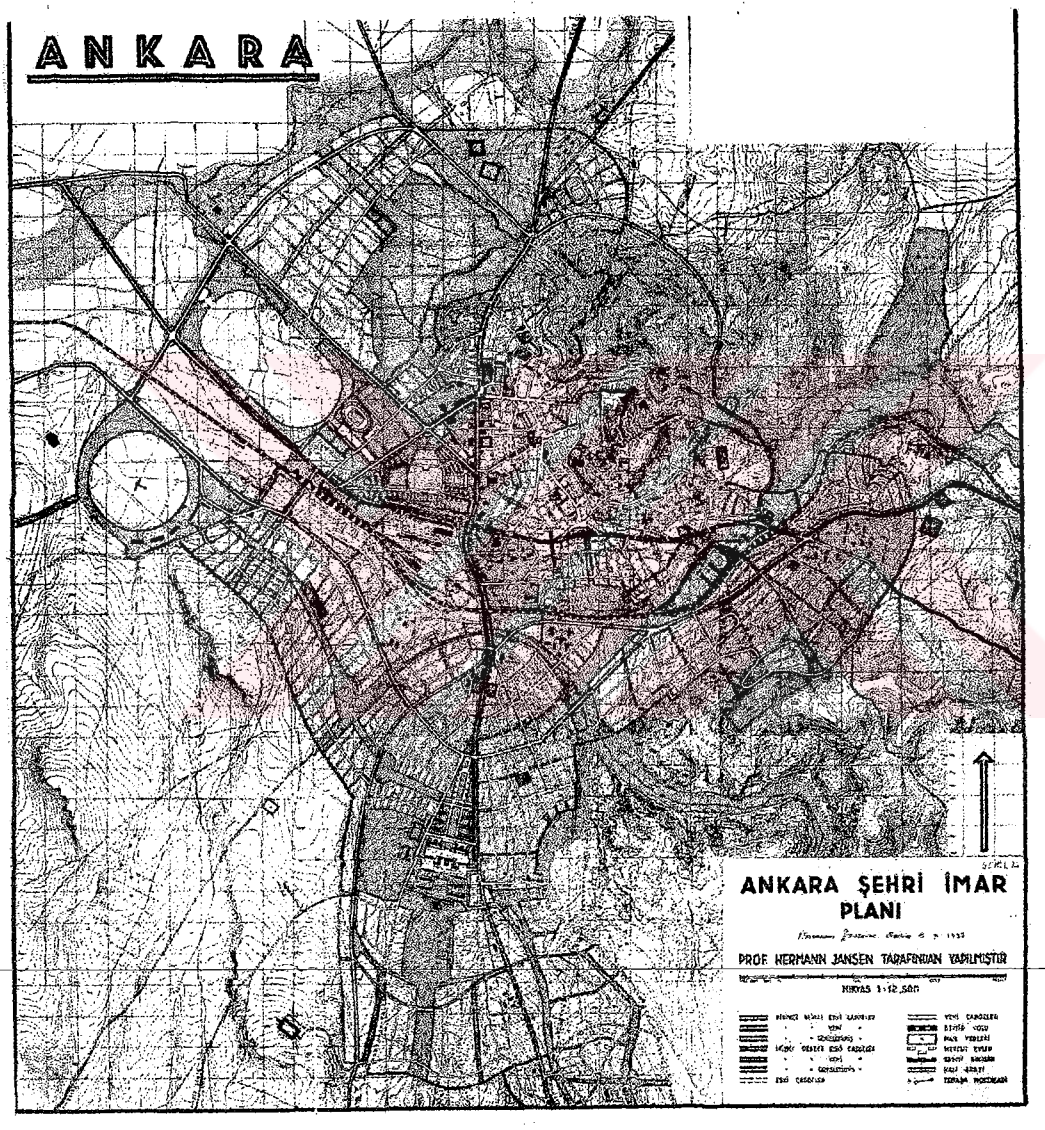


Fig. 23 Herman Jansen's Ankara 1932 Plan (Baykan Günay's personal archive).

Jansen, in the plan report, has opted against limiting Ankara's growth, since the surrounding terrain provided habitable lands. Strips of open green land were

surrounding Ankara, but those strips were sanitary greens of Camillo Sitte, rather than growth limiting barriers of Howard, serving for agricultural and recreational purposes.

Tankut (1990) points out that a reserve land on the northern slopes of Altındağ for future development of Ankara was zoned in the 1928 plan. As this reserve land was not included in the 1932 plan and there were some density and population inconsistencies in the plan, Tankut (1990) concludes that neither Jansen nor the administrators had any vision pertaining to the future growth of Ankara. The population limit for future Ankara he has set, as a measure against air raids is 300.000.

Jansen determined two conditions that would provide the implementation and success of his plan:

1. Establishment of a powerful administration to control and direct development,
2. Ceasing of land speculation.

The first condition was realized with the establishment of Ankara İmar Müdürlüğü in 28th May 1928. But the second condition was never fully achieved. Even the Members of the Parliament and close relatives of Atatürk were not hesitant to earn money through land speculation (Yavuz, 1980).

Another factor proving this plan ineffective was the population projection contestants were given, which assumed that population of Ankara would reach 300.000 in 50 years' time (Yavuz, 1980). Population of Ankara had reached this amount by 1950.

Though this plan was never fully implemented, because of squatter housing, speculation and political obstructions of various kinds, Ankara owes the present green system in the city to the implemented portion of the plan.

5. 2. 1954 Uybadin-Yücel Plan

As the population, that Jansen plan was drawn according to, was reached by the 1950s', a new plan was needed. This time an international competition was held in 1954 and Raşit Uybadin and Nihat Yücel Plan was the winner. This plan was prepared according to the assumption that population of the city would reach 1.500.000 in 30 years' time, twice the population projection given to the competitors (Cengizkan, 2000).

Regarding the open green areas, only four decisions are mentioned in the Plan Notes. A zoo around İncesu Dam and an Olympics Complex on plain fields of Atatürk Forest Farm were proposed. Sites for riding club and golf club were determined. The site of civil airport in Tandoğan, which is moved to Esenboğa is reserved for civil aeronautics clubs. Additionally, no decisions as regards the reserve land for future development or development restriction was mentioned (Ankara İmar Planı İzah Notları, 1957).

As to the open space system, the plan embodied decisions opposing the open space decisions of Jansen's plan. Irrelevant developments were proposed in parks like Abdi İpekçi and Kurtuluş Parks. Site for intercities bus terminal was chosen as the Poligon Park. Routes alternative to Atatürk Boulevard were proposed (Uzel, 1991). The gardens in front of the buildings, proposed and built according to Jansen plan, were used to widen the roads (Cengizkan, 2000).

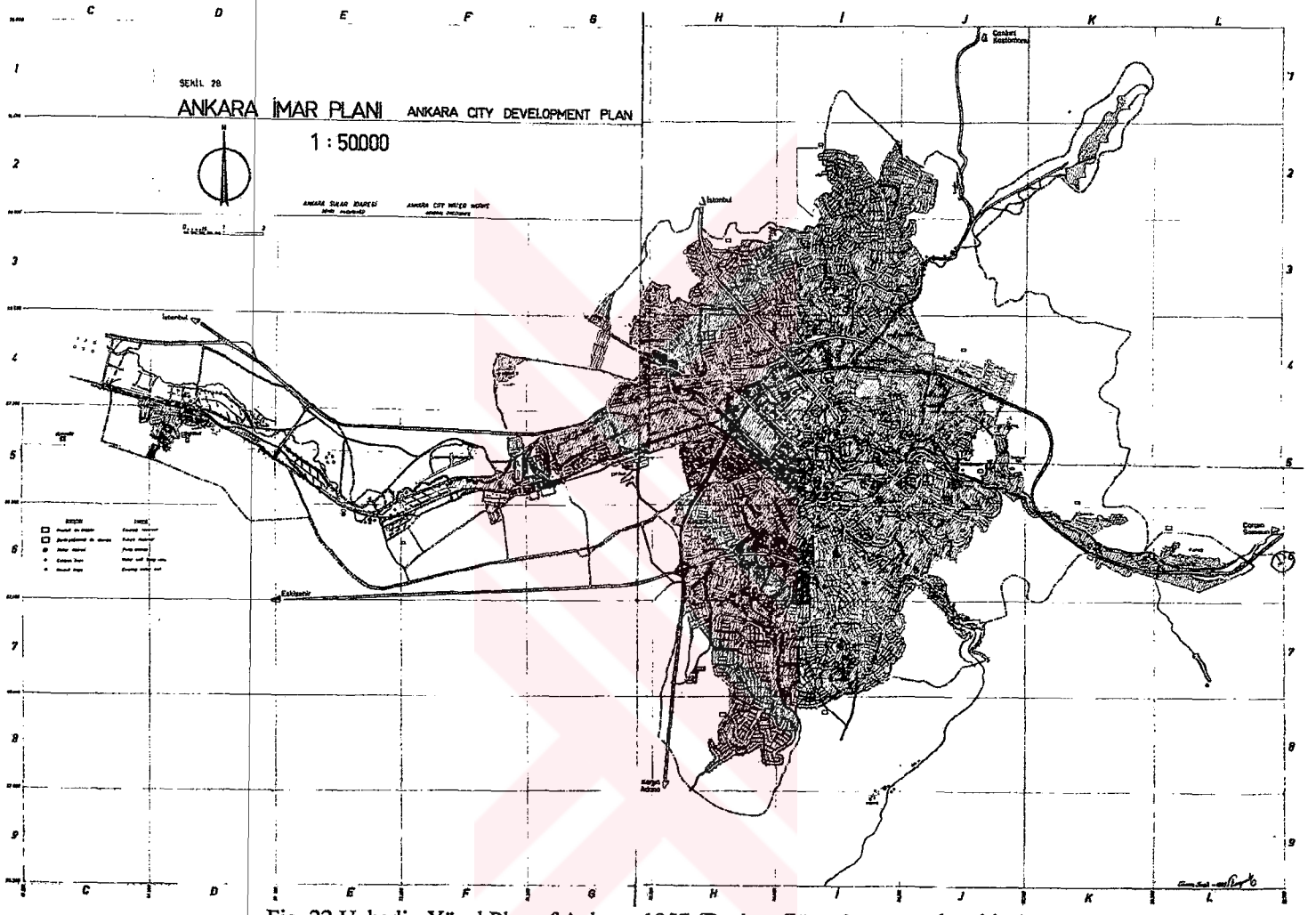


Fig. 22 Uybadin-Yücel Plan of Ankara, 1957 (Baykan Günay's personal archive).

Following the Uybadin-Yücel Plan there comes a period of "development condonations" and "development amelioration plans", promoting and encouraging the unplanned and squatter developments.

5. 3. Ankara 1990 Plan and Ankara's Green Belt Experience

In 1968, Ankara Metropoliten Alan Nazım Plan Bürosu was established to accomplish the tasks of preparing development plans of Ankara, İzmir and İstanbul, and to take the necessary legislative precautions rendering as is implementations of these plans. According to this, the responsibility of the Bureau was to prepare the plans and the Ministry of Development and Settlement was responsible of implementations of the plan by the municipalities.

While preparing a development plan for Ankara, extensive surveys and analyses on the city were made and standards, both current in city and the objective standards were set. The study aimed to create a balance between city size, cost, macroform, density and space standards.

Among the alternative plans prepared, the one directing the future growth of the city to the west corridor was chosen. The containment idea was seen in other alternative plans too (Ankara Metropoliten Alan Nazım Plan Bürosu, 1977).

The lands, on which development was proposed until the year 1990, were determined in the plan and lands suitable for agricultural and recreational purposes were kept free from development other than the agriculture and recreation.

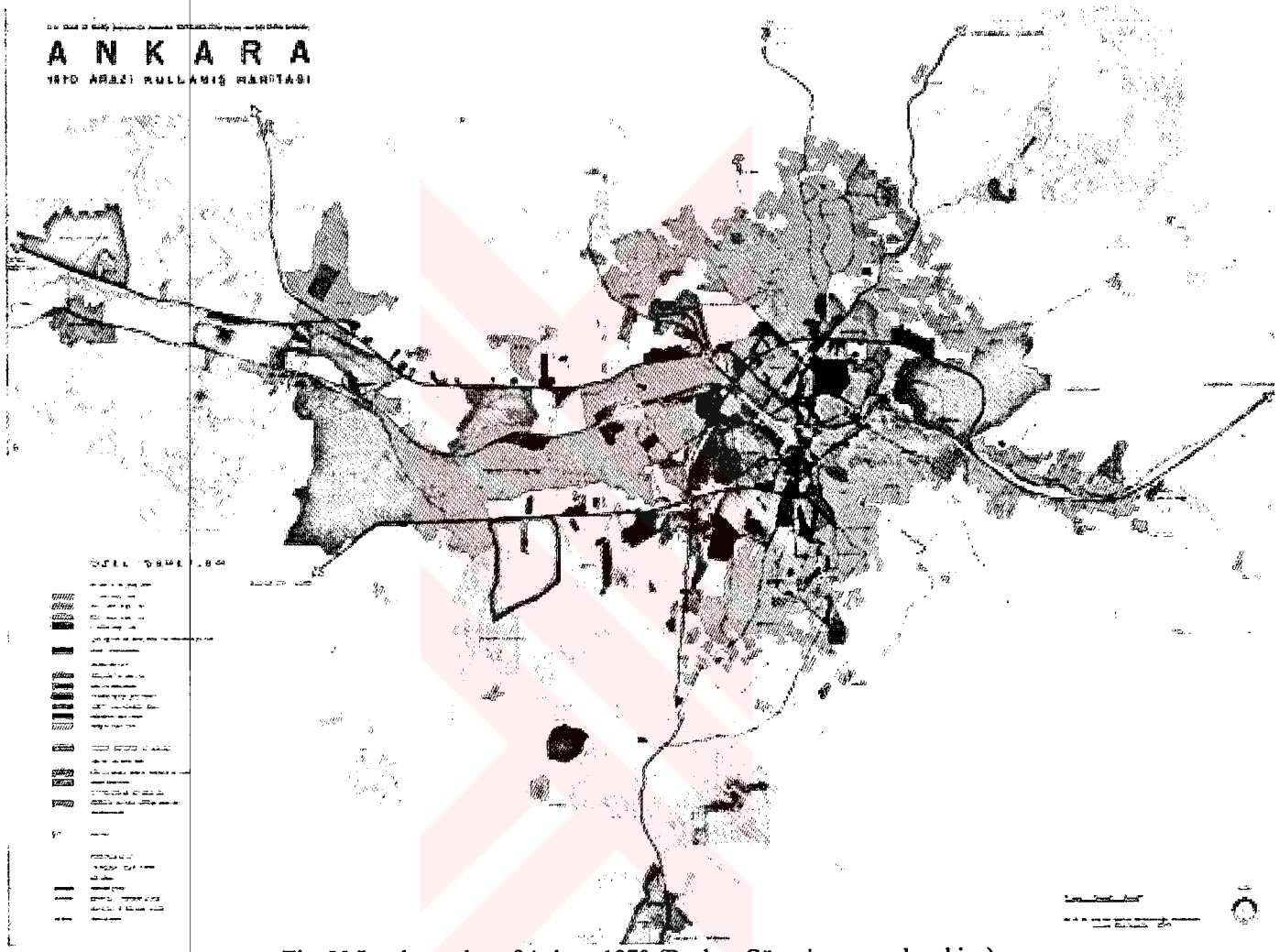


Fig. 23 Land use plan of Ankara 1970 (Baykan Günay's personal archive).

Valleys, dams and water bodies and areas with such natural value, but outside the urban development were secured from urban development. Forming a green buffer to channel development according to the plan decisions was intended. This buffer was placed between Sincan and Eskişehir State Road development axis, between Eskişehir State Road-Çayyolu and Konya State Road development axis. All the lands that are important from the point of urban ecology in macro scale were protected. In the plan it was advised that a priority action program should be run with coordination between institutions in charge to achieve these goals.

There is a forerunner of the idea of containing Ankara in a green belt before the 1990 Plan. The first proposal for establishing a green belt around Ankara was made in 1965 by Yüksel Öztan. Öztan, after stating that the amount of open green areas in Ankara was not sufficient, has concluded that the open green area system of Ankara should prevent the vicinities of Ankara from growing into each other and also the city from spreading into the surrounding countryside (Öztan, 1965).

Öztan's plan contained two green belts. One belt contained the old Ankara and the squatter housing north of the citadel. This inner green belt would check the merging of the historic and squatter settlements with the surrounding Marangozlar Sitesi, Yenişehir, Cebeci and Gülveren. This inner belt is composed of Golf Club, campuses of Agricultural and Veterinary Faculties, Sarıkışla land, Kazıkiçi market gardens on the north and northwest sides. Hippodrome, Youth Park and the wagon house delineate the west wing of the belt. On the south, afforestation zone of Halkevi, Numune Hospital and the gardens of other hospitals that were being built, Hacettepe, Kurtuluş and Cebeci stadium take place. Agriculture fields of Hatip stream and valley, Asri Cemetery and Military School complete the belt on the east side.

This proposed belt would also be effective in preserving the special character of the historic part of the town and protect it from current development, while providing recreation grounds for the citizens in this section.

The second green belt runs on the periphery of the city and was supposed to stop the growth of the city and merging with the suburbs (Öztan, 1965). This belt is formed with both existing green bodies and some proposed areas; composed of the golf field on the north, Çubuk Stream, Atatürk Forest Farm and afforestation areas, Söğütözü afforestation area and a green area on the south of Bahçelievler. Military Academy and a park in Aşağıayrancı would provide the link to Çankaya valley and to Cumhurbaşkanlığı Köşkü. The east part would be formed of Gazi Osman Paşa, Büyük Esat Bağları, İncesu Stream, parts of Balkiraz vineyards prone to squatter development, agriculture lands of Hatip stream and the military school. This belt would contribute to the development of the city in many ways:

1. It would stop uncontrolled spread of the city,
2. It would prevent merging with settlements with suburban character like Keçiören, Etlik, Dikmen,
3. Developments beyond this belt would take place in gardens and be independent to an extent,
4. Recreation grounds in the green belt would attract people helping decrease the overcrowding and high density in the center,
5. The belt would be a buffer zone preventing squatter housing on the periphery,
6. Citizens would be living in a relaxing environment close to rural physiognomy,
7. The city would have an attractive setting with a green belt around (Öztan, 1965).

These two belts would be linked by means of tree-lined roads, boulevards, parks and gardens with each other in order to establish a web like green system over Ankara. Çubuk stream, Hatip stream, İncesu, Dikmen river and Ayrancı valley with the valley stretching from Dikmen to Anıtkabir's south facing slopes, Ankara stream and Atatürk Forest Farm provide the natural opportunities for this purpose (Öztan, 1965).

Green belt in Ankara 1990 Plan was proposed as a tool to stop inversion and to prevent air pollution. Ankara has been facing a huge problem of air pollution starting from the 1970s'. The pollutants were smokes from fuels used for heating and for production of energy, and exhaust gases of the vehicles. The topography of the site the city is settled upon and the directions of the main winds are natural factors, increasing air pollution. The plan proposes the use of valleys (İncesu-İmrahor, Dikmen, Hatipçayı, Macun valleys) as urban green areas. Development in these valleys was prohibited to keep wind corridors open to provide airflow and also to provide recreation ground for citizens (A.M.A.N.P.B., 1977).

The green belt was also conceived as a tool to stop unplanned developments on public lands. Lack of development control and regulation of unplanned development have turned the development plans into ineffective drawings. Also preservation and afforestation of water reservoirs and basins of dams, to increase the amount of insufficient recreation grounds and to control the flood prone riverbeds are reasons that necessitated a green belt around Ankara.

Fig. 24 Ankara 1990 plan prepared by Metropolitan Planning Bureau (Baykan Günay's personal archive).

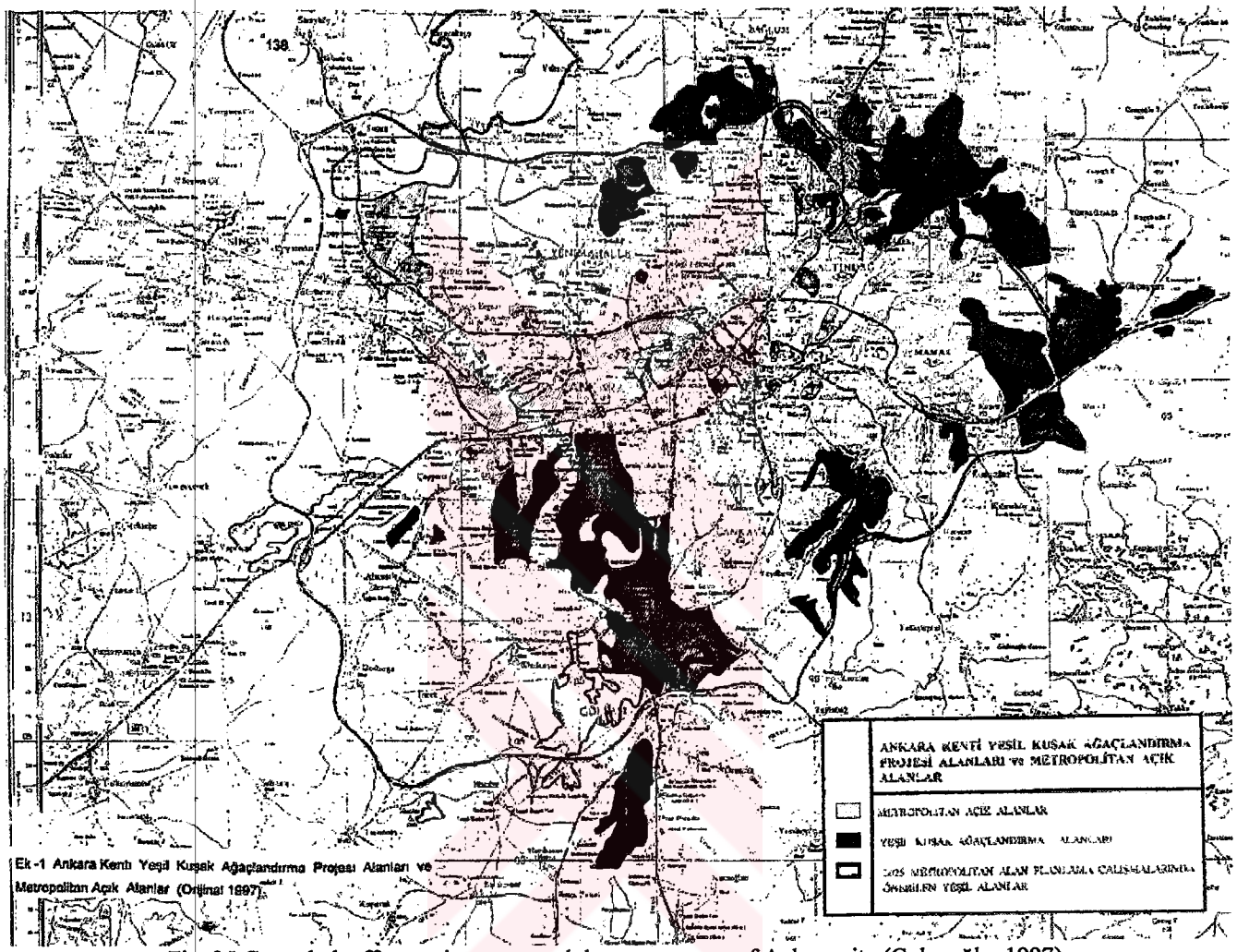


Fig. 25 Green belt afforestation areas and the open spaces of Ankara city (Çulcuoğlu, 1997).

The public lands in the Corridor Scheme were handed over to the General Directorate of Forestry on 24th December 1982 for afforestation according to the "Ankara Green Belt Project". The project area covers Çubuk, İmrahor and Hatip river basins. The green belt is implemented as three rings:

1st Ring: Starting from Atatürk Forest, including Eymir and Mogan Lake basins, stretches past İmrahor and Hüseyingazi boundaries to Çubuk Dam, Bağlum, İvedik, Macunköy and finally to Atatürk Forest Farm.

2nd Ring: Starts from Bayındır Dam basin, covers some of Nenek, Tatlar, Mahmudiye, Susuz Village lands and reaches to Sincan, Osmaniye, Elvan, Bağlıca and Alacatlı areas.

3rd Ring: Includes Elmadağ, Hasanoğlan, Kırıkkale, Kurtboğazı Dam and south facing slopes of Kızılcahamam district and some part of Haymana district and Beynam Forest (A.M.A.N.P.B., 1977).

By the end of 1996, afforestation on 16.131 hectares of the total 23.409 hectares area had been completed. 22.800.000 saplings were planted during this period. In 1997, 900 hectares of the green belt area was planted, reaching to 17.031 hectares.

5. 4. Ankara 2015 Plan

Ankara 2015 Plan was prepared in 1986 by a group of academicians from the Middle East Technical University. The plan aimed to provide the information base and macroform proposals for the transportation study conducted by EGO General Directorate.

The plan was based on a dispersal scenario mainly. The decentralization would be placed along the İstanbul road and Eskişehir road, outside the topographical bowl. New settlements would be limited with 300.000 population

and also provide for land uses to create job opportunities. Existing settlements in a 35-40 kilometres radius from the city would be expanded to accommodate some of the population. The green belt that was planned by the A.M.A.N.P.B. in the 1990 Plan, is included in this plan too, but the depth is proposed to be increased to 8-10 kilometres in order to attain the aimed microclimatic effect. Natural resources around the city are considered in a protection - use balance and integration of green areas within and around the city. To achieve this: İmrahor-İncesu Valleys, Bayındır and Çubuk Dams and Gölbaşı under the influence of development will be used solely for recreational purposes. Valleys and natural features not yet under the influence of development, like Nenek Valley, Hüseyin Gazi Mountain and the environs, Ravlı River valley, Hatip Stream basin, İdris Mountain, Lalahan stormwater drainage site and valley, Kurtboğazı Dam and environs, will be protected. As a means of limiting and directing planned urban growth, development of recreation grounds between Sincan and Eskişehir roads development axis and Çayyolu and Konya roads development axis, should be completed. Flora, valleys, riverbeds and dams should be protected and afforestation and erosion preventive activities should be conducted in order to enhance urban ecology in macro scale. Penetration of the green belt into the city through the valleys is sought. Co-ordination between various government bodies in order to reach these goals is needed.

The role of green belt in this plan is:

1. to support and enhance urban ecology,
2. to prevent inversion and help the winds blow away the air pollution,
3. provide recreation grounds for citizens.

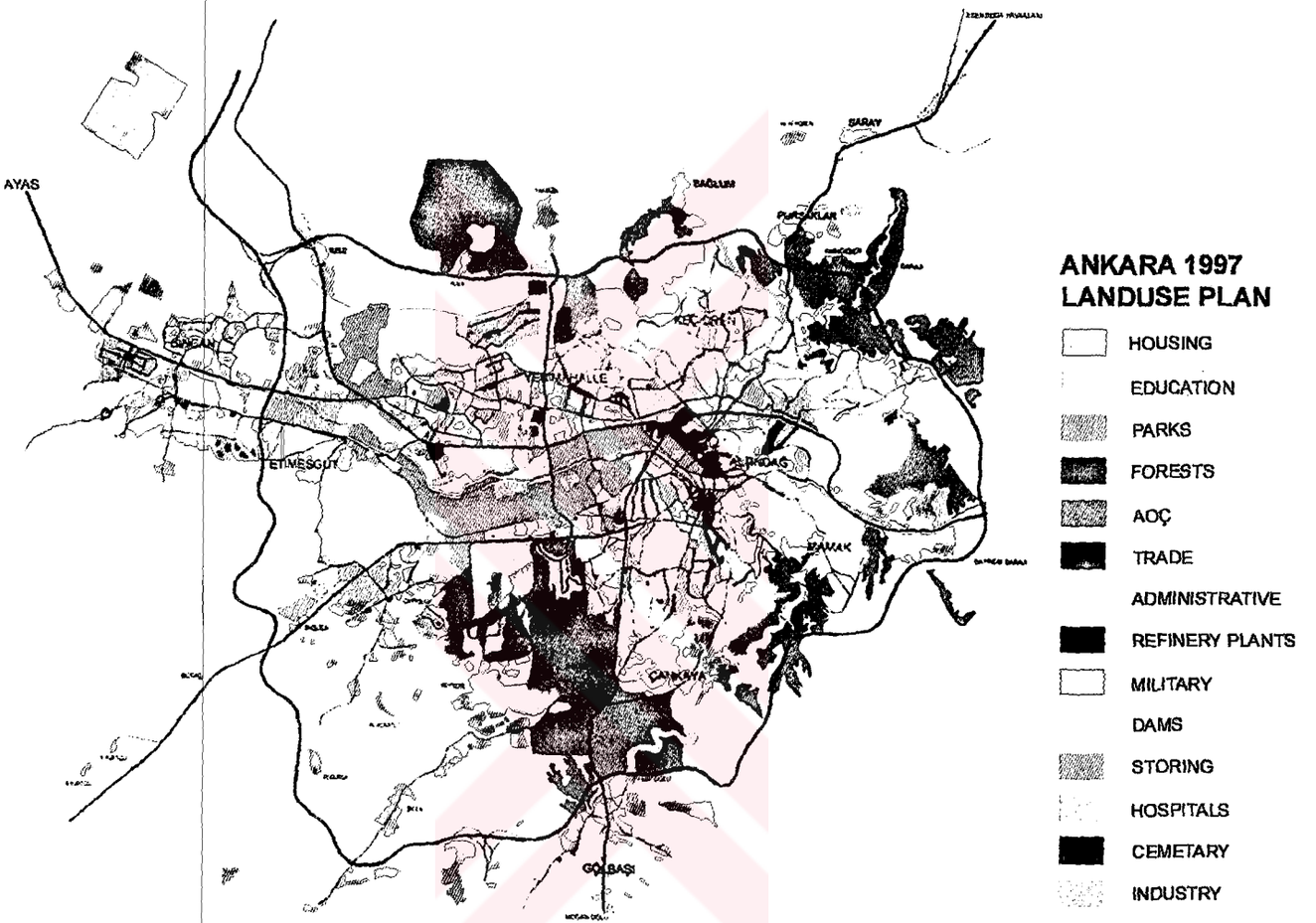


Fig. 26 Land use plan of Ankara 1997 (Metropolitan Planning Bureau).

5. 5. Ankara 2025 Plan

The 2025 Plan is initiated and prepared by Ankara Greater Municipality. The plan aims to determine the areas worthy of conservation within the metropolitan and county boundaries along with the question how these areas are going to be protected, and what form the urban macroform will take according to these conservation areas. In this respect, establishing a database that would be useful for planning purposes and determining conservation areas and areas suitable to development is needed. The decision will be taken after that step and it will be consistent within the entire county (Kuntay et al., 1997; cited in Değirmencioğlu, 1998: 139). Permission of the Municipality is obligatory for developments on public lands inappropriate to the plan.

The article 2.1.5 is titled "rural housing estates with designated features" (Özel Koşullu Kırsal Konut Alanları) and identifies the character of the transition zone as intense urban zone and rural zone. These lands contain low density housing development. With this article, a pastoral zone intended to be formed between the city and the rural surrounding.

In articles 1.12, 2.7.1 and 2.7.2 the plan prohibits development on agricultural land and on land with high water table and composed of Grades 1 and 2 soils. The article 2.7.3 forbids any development other than recreational uses in valleys, on flood prone land, steep slopes, and ecological and geological conservation areas. These lands are listed as Eymir Lake, İmrahor Valley and environs stretching between Tuzluçayır and Akdere, Dikmen Valley, Büyük Esat Valley, Çankaya Botanical Garden Valley, the valley that Seğmenler Park is built upon, Papazın Bağı (Gazi Osman Paşa) Valley.

Forests and afforestation areas are also secured from development according to article 2.7.4. Areas of this kind are defined according to Forest Law

(numbered 5831) and developments allowed would only be for recreational and touristic purposes.

The 2025 plan limits development on lands not yet developed but under speculative pressure. Development on such areas (Macun Stream district, Çubuk Stream, Büyükesat Valley and region, İmrahor Valley, Kutugün Stream, Karaağaç Stream, Kumludere, Yunus Pond, Susuz Lake, etc.) is limited with recreation and park (Art. 2.4.5.5).

5.6. Conclusion

The green belt in Ankara 1990 plan was proposed to reduce air pollution, to control squatter housing spreading over public lands and to reduce the flood risk. The public lands were included in the green belt and were handed over to the General Directorate of Afforestation. The General Directorate started afforestation on public lands, but development control over private lands reserved for agricultural and rural activities according to the 1990 Plan, was absent. In addition to the plan decisions, the district municipalities needed areas for housing development and private lands in the green belt were used for this. The green belt was not untouchable and was not a strong policy as in the case of Britain.

The next plan, Ankara 2015, carried on the green belt idea, but the policy was still not strong enough. There was not a compensation of loss or an alternative development scheme for the private lands in the green belt.

Ankara 2025 Plan is being developed at the present, but the draft plan does not include the containment via green belt. The aim of the plan is to determine the practically protectable and conservable areas and along them to safeguard 1st grade agricultural lands as well. From the beginning, sufficient effort was not made to

keep those lands in the green belt and green belt was conceived as an afforestation project.

EVALUATION OF GREEN BELT OF ANKARA

History and Origin	Containment idea has not been an issue until the Republic, especially the 1990 Ankara Plan.
Purpose	To curtail air pollution, To stop unplanned development on Public lands, To prevent floods by preserving the water reservoirs, river and dam basins and keeping them free from development.
Land Use	Lands contained in the green belt covers public institutions, universities, military lands, Atatürk Orman Çiftliği, forests, dams and river basins, valleys, public lands, private lands and agricultural lands. Agriculture and recreation are attested as the main uses on agricultural lands and afforested public lands, while all the developments over private lands are limited with rural activities.
Physical Qualities	The green belt lacks the width to control urban development and to curtail air pollution. The belt is scattered around the city, does not form a continuous strip.
Management and Administration	Management of lands reserved for afforestation is under authority of Ministry of Forestry. The Greater Municipality controls development on green belt lands. The green belt policy is not accepted and supported by the local municipalities.

Table 4 Evaluation of Green Belt of Ankara.

CHAPTER 6
CONCLUSION

Between the two urban revolutions there is a time gap of about 4800 years - between Jericho that was founded around 3000 BC and the year 1800. Due to many reasons, ranging from practical such as to defend, to theological, aesthetical and sanitary, containment of cities was preferred. At first, the size of the city was limited with the agricultural yield of the surrounding lands. The Old Testament depicted the New Jerusalem, surrounded with agricultural lands and pastures. Later, in Greek and Roman cities, this zone kept evil spirits out of the city and provided a defensive strip against the approaching enemy. The relation of the city with the surrounding lands according to the reasons of size and defense was not problematic in the middle ages.

The growth of cities with the technological innovations caused a more drastic change. The environment of man, formed in time and in constant relation with the interwoven relations of production, theology, and technology, changed dramatically. This meant a change from "eotechnic" to "paleotechnic" (Mumford, 1938: 495). The new technology spread rapidly and attracted men in need of job, without creating the habitation for them. Sanitary conditions in the cities disturbed everyone, but only a minority could afford to move to the countryside. After a while, this spread gained a sporadic character. The merging of settlements into each other and the deterioration of the countryside gave way to ideas about ideal settlements. Each one of these utopias and experimental settlements settled one aspect of the problems arising from the industrial city. Yet, Ebenezer Howard's

"Social Cities" proposal, a unity of its precedents, formed a consistent whole out of them. Containment through green belts played an important role in his proposal, just like in the British planning system, owing its existence to the works of his disciples.

Since the forming of the legislative background in 1955, green belts have been used in Britain to safeguard the countryside from urban sprawl, to assist urban regeneration, to preserve certain characteristics of towns, to prevent merging of settlements into each other and to form a border to the unrestricted sprawl of large cities. The politicians and the developers criticized the policy when liberal policies were on the rise in the 1970s and '80s, but the trend did not change. The main reason for this is that, there was no alternative for the policy, in case it was changed. The present green belt policy gives both the local and central governments the power to control development and without it development would be uncontrollable. Besides, the overall planning policy was developed according to a green belt in the center. Controlling development, controlling growth of cities and directing them according to regional and national policies and plans must be underlined in the British example.

Controlling development according to a general plan was not achieved in the case of United States where the attitude towards planning and control of development is on behalf of inviolate private property and right to private development. Federal Government was not able to control development rights over private lands. Moreover, the inherent socialistic properties of planning were evaluated as communistic and planning efforts of the Federal Government on behalf of planning faced resistance from every party in the community.

On the other hand, the Russian and Israeli authorities formed their redevelopment policies around an internal colonization policy. In both countries, all national land was expropriated and development was conducted according to general plans. In Israel, it was aimed to achieve the integration of new towns with

agricultural settlements and turn them into local service centers. The effect of Zionism over the immigrants and protagonists of the policy is evident. Meanwhile, the policy in Russia was established through the Marxist idealism. The difference between rural and urban environments was to be diminished to establish the new order. Physical determinants of this new order were decentralized industry and industrialized agriculture. Linear cities were developed according to this principle. The reconstruction of the capital city, Moscow, was important from the point that it had to reflect the ideology of the state. The plan was prepared for a city of 5 million and included a green belt and satellite cities to inhabit the excess population of Moscow. The absence of private ownership facilitated the implication of the plans in both countries, but there were complications coming from the plans and from conditions that changed in time.

Moscow and Ankara are similar examples since they were planned according to the ideals of governments established after revolutions. The planning history of Ankara starts with the establishing of the Republic, but the green belt is included in the first comprehensively prepared plan: Ankara 1970-1990 Plan. The green belt was introduced in the plan because of the severe air pollution of those years. The topographical bowl in which Ankara is located causes inversion, preventing the winds from blowing away the dirty air. The green belt was conceived as an afforestation land and was supposed to decrease the temperature around the city thereby causing wind. The plan was directing the development of the city out of this topographical bowl by means of roads to the west and northwest of the city. At first, the green belt project was implemented with coordination between the Metropolitan Planning Bureau, several Ministries and the Municipality[1]. The General Directorate of Forestry was responsible for the afforestation on the public lands in the green belt.

The green belt was included in the following plan, Ankara 2015, and it was advised that its width had to be increased in order to achieve its full effect.

[1] Personal conversation with Haluk Alatan.

The 2025 Plan is now being prepared and the green belt policy is abandoned, since the green belt policy and a thick strip of development exempt land is found to be impractical and false. The practically conservable lands are determined and the rest are opened to development. The valleys, 1st grade agricultural lands, forests, afforestation areas, dams and river basins and inhabitable lands are going to be conserved according to the draft plan.

The failure of Ankara's green belt odyssey should be sought for in the concept and practice of the green belt itself. A review of these will undoubtfully enhance the understanding of the reasons underlying such a failure and perhaps will also be helpful to come up with remedies.

Success and effect of green belts rely on a few conditions, derived from the examples in Chapters 3 and 4:

* Relation of a particular green belt to its surrounding lands is crucial and should be according to a regional plan, prepared to meet the development channeled out of the green belt. An opposite attitude would result with urban, industrial and suburban invasion of the rural/natural lands surrounding the green belt. Monitoring the green belt and providing feedback to the policy must be achieved. No policy is sacrosanct and any policy needs adjustments through time.

* The success of any policy relies on public and political support. Without public support, implementation of any plan would be difficult and watered down.

* Ownership of land: The proposed green belt lands should be expropriated or belong to an administrative body, such as a municipality or a local government, in charge of controlling those lands, the city and further development. Private ownership did not pose a problem for Britain nor Israel and Russia. In Britain the policies of the welfare state were effective after the Second World War, when the Labor party had gained power. Another important point is

that green belt lands around London are owned by aristocrats who depended on the yield of those agricultural lands (Günay, 1999). Meanwhile, Russia and Israel have expropriated all the lands and gained the power to shape the urban structure. Politically, the green belts play an important role in regional and urban planning in Russia and Israel. Here, the success of green belts in these three examples can also be found in the analysis of their way of tackling with property problems, supporting the green belt as a government policy and setting up all the green belt related policies and plans.

* In circumstances preventing public ownership of land, controlling and even abolition of development rights for the benefit of the community would provide the implementation of green belt and achieve effectiveness of the green belt. Abolition and control of development rights brings with them the need to compensate the loss of profit from the abolition of development, which would otherwise have taken place. From which fund this compensation would be met is another problem surfacing at this point.

An analysis of the green belt of Ankara seems possible through a comparative study made through the criteria below:

1. History and origin
2. Purpose and functions
3. Physical qualities (Continuity, density, width)
4. Management and administration / Change in time

History and origin: Green belt is a tool that evolved from and through planning and planning is an outcome of the search to mitigate the ills of industrialization. Industrialization started in Britain and spread rapidly to other countries. The ills of industrialization were lived in Britain and Russia as well as other countries. Britain housed the crystallization of comprehensive planning and formed its planning legislation with the idea of containment of cities at the core.

The policies and ideas formed in Britain were carried to Israel during the British command. In British and Israeli examples, there is a considerable effect of New Jerusalem description of the Old Testament. The pastoral ideal and the Biblical agricultural belt found implementation through reasonable justification. In Russia, reaction to the ills of industrialization and capitalism came after the Revolution as the practice of the political writings of Marx and Engels. In both examples green belt policy was a part of a extensive policy.

Modernization in Turkey started in the Ottoman Empire in the middle of 1800s. Industrialization and transformation of the society as an end to industrialization is limited with the efforts during the first years of the Republic. This span of time was not sufficient to complete the social and institutional structure the industrial society required. In addition, the Turks started to found settlements later, after their introduction to the Islam. They were living a nomadic life when China was living the agricultural revolution in 3000 BC. The very minority of the Turks was living in cities and the rest were still nomad when they encountered with Islam. Their experience of the city life was not initiated by the agricultural revolution, nor included the ills of industrialization. Moreover, just like any other nomadic tribe, Turks' vision of the world knew no boundary other than that of the horizon (Akyürek, 1994).

Purposes and functions: The green belt of London was implemented with an act that passed through the Parliament. Green belt was the tool to surround Moscow and limit its growth, provides ground for recreation and for agriculture. In case of Ankara, the introduction of green belt idea was in the form of a planning decision pertaining to the 1990 Plan. The aim of this belt was to prevent air pollution and to save public lands from the invasion of squatter housing and also to direct further development to the west of the city. The public lands in the plan were handed over to the General Directorate of Forestry and today General Directorate of Afforestation is conducting the "Ankara Green Belt Afforestation

Project". According to the plan, only recreation, agriculture and buildings needed for rural and agricultural activities are allowed to take place in the belt.

Uses and development within the green belt are also important since the quality of these uses would help the green belt policy gain public support. Any derelict or vacant land, even if it were in the green belt, would face development demand. In case of Ankara only afforestating of the green belt lands has been a misjudgment. In addition to the hardship of afforestation due to natural conditions of Ankara, the abundance of vacant lands in green belt makes it hard to legitimize in front of the public. Thus, there has been and there is still today much pressure to change the use of lands that take place in the green belt. These charges come from every distinct part of the community and give clues to the absence of public awareness and indifference and disobeyance to planning and laws. Thus, completing a full circle, starting from the lack of public support and closing with the absence of public awareness. What lies behind this is the fact that the industrial revolution, that caused appearance of the public institutions and thus transforming the society, was not lived in Turkey. This change, which is also marked by the increase of population in the cities, has taken place in Turkey approximately 200 years later.

Physical qualities: Physical qualities that help easier perception are important to achieve the containment of the city. The green belt should be a wide and continuous strip and have a distinct character from the surrounding lands. This is possible through a strong visual and functional existence. The green belt of London asserts itself over the city as a huge mass of rural land. In case of Ankara, the public lands reserved for afforestation were physically scattered and this scattered composition prohibits this belt from being perceived. The land use plans of 1993 and 1997 demonstrate the sprawl of the city over the green belt. Only valleys, public institutions, forests and the graveyards seem to be free from urban development. This pilfered state of the green belt recalls the plundering that Atatürk Orman Çiftliği faced.

Management and administration / Change in time: As regards the management of the green belts, the authority in charge must be free from the political pressures that are probable to happen. Besides, the pressure the authority in charge must be capable of tackling with urban problems and making adjustments to the green belt policy. The Ministry of Forestry is an institution that lacks those qualities. The green belt is a strip of land that is under pressure from urban sprawl. The Ministry of Forestry is not an urban planning authority. The articles of the Forest Law, that gave the afforestation areas inalienable qualities, have been changed because of political preferences.

This change in the government policy in time has opened the forests and even 1st grade agricultural lands to private development. This change in the policy points to a change in the state policy. This is a problem emerging from the policies giving private enterprise higher freedom and promoting the free market since the 1980s. This conflicts with the green belt policy. Green belt is a comprehensive planning tool, in search for public good. The political view behind that kind of a search for public good is the welfare state. Making regional plans and implementing them requires power. This power must be provided by the state.

The green belt is not a vacuum around a city. Green belt's vividness relies on its relations with the city and the uses over it. Green belt's relation with the regional development policies makes it a development directing and regulating tool. Moreover, a green belt with its development restrictive quality gives the local governments the power to develop plans and conduct them. The 1990 Plan has no provisions as regards the management of the green belt. The Ministry of Forestation is not an institution to run such urban planning projects, since the Ministry is an organization, which lacks the administrative experience of controlling lands that are under the pressure of urban development. Moreover the Ministry is not the organization to conduct neither an urban development plan nor

a regional development plan and is a bureaucratic institution, as any other ministry.

Decisions: The following decisions for the future use of green belts in Turkey are deducted from the analysis above:

1. All the public lands contained in the green belt project must be retained in public ownership. This is chiefly related with the inalienable character of the public lands and restoring the development regulating character of the government.

2. Preventive measures to prohibit uncontrolled development on the entire first and second grade agricultural lands, forests, valleys and river basins must be taken. The development pressure over these lands must be decreased by means of new taxes brought over private developments in those lands. A fund, raised by these taxes, must be formed and be used for management of the public lands. The protection of the water basins, forests and agricultural lands are also an obligation of international conventions the Turkish government has signed.

3. To release the pressure over public lands and to keep them free from development, a green belt law must be passed from the Parliament. This law must be prepared not particularly for development of Ankara, but it must regulate development in a national and regional scale. This law must be protected with Constitution.

4. Support from public and political bodies is vital for such a far-reaching policy. Public must be informed and the details of the policy should be formed according to their responses.

5. To achieve public support, the green belt should provide some public services the city lacked. The development on private lands in the green belt must be regulated considering the character of the green belt.

6. It is evident that a green belt, as implemented in Britain, causes speculative increase in land prices and the rents as a consequence. To limit and prohibit the speculative increase:

i) a nation wide policy as regards urban lot must be developed;

ii) in the long run, the future development lands of the cities must be appropriated;

iii) this speculative increase must be taxed in order to limit the increase, to provide the funds for compensation of loss of development over private lands in the green belt and for appropriation of these lands and these taxes must be adjusted in proportion to the increase in the land prices;

iv) the long term leasing of the development rights on public lands in the green belt for public interest must be considered, but this must be done without changing the statutory state of these lands;

v) the developments conforming with the green belt policy must be encouraged with methods such as tax subsidies, low interest rates and long term credits;

vi) the state of the green belt must be constantly monitored and the policy must be transformed in time according to changing needs.

A green belt is not a plan decision, but a planning policy in itself, which must be run by the government. Use of green belts necessitates planning for public interest in every scale, from national to regional. A change in the state policy must be achieved in order to attain these ends.

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