Contribution Of Eminent Planners

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ABSTRACT

The term 'Garden City' and 'Neighbourhood' are frequently referred to in the context of contemporary Urban Planning. Since the coining of the term 'Garden City' by Ebenezer Howard, it had become the pioneer of city planning principles in early European cities. The introduction of 'Neighbourhood' Concept by Clarence Perry changed the perspective of residential developments within the city. The concept brought the change in lifestyle of the urban people and made residences safe and livable. In reorganization of Paris by Baron Haussmann his views of Modern City is evident in his Infrastructure Planning. The Sectoral City Planning concept by Le Corbusier imagined city as pre-planned, organized and ordered. The social and physical connotations of planning must be understood in order to be able to carry forward its essence for the benefit of planned development efforts. The report in this context brings forth the concept as forwarded by its protagonists, its interpretation at various points of time, and establishes the need to understand its essence in the contemporary urban context.

1. INTRODUCTION

The aim of this Graduate Report is to understand the evolution of Town Planning Theories and practices in last two centuries. The major breakthrough came in the late 19th century, when Ebenezer Howard gave the theory of 'Garden City'. It was the first step towards decentralization of a city. Further we will discuss various neighbourhood planning concepts and their applications within the cities.

Further we will discuss the relationship of scale of a city with its planning principles. In this we will discuss the different approaches adapted for neighbourhood planning in accordance to the size of the city. We will go through the concept behind the city planning of our New Capital City designed by Edwin Lutyens. The modernization of Paris was first step towads Infrastructure planning in the history of modern city planning. Baron Haussmann introduced the concepts of streets, drainage lines, uniform facades and many more.

Keywords

Garden City, Pre-Planning, Town Planning, Neighbourhood, Sectors, Nodes, Twin-city, The City Beautiful, Surveying.

2. CONTRIBUTION OF EMINENT PLANNERS

2.1 Ebenezer Howard

Garden City Movement

The garden cities were the practical manifestation of a simple yet brilliant idea conceived by a shorthand clerk and inventor, Ebenezer Howard. They were a reaction to the environmental and social legacy of Britain's industrial revolution, the results of a century of industrialisation, and rapid growth, and the poor, unhealthy housing conditions that came with that. In early twentieth century, two new cities of **Letchworth** and **Welwyn** were established on the principles of garden city and are now an integral part of planning history.

Howard (writes, *Town and country must be married, and out of this joyous union will spring a new hope, a new life, a new civilization.)*

The essential features of the garden city can be summarised as follows:

1. **Organised planned dispersal** of industries and people to towns of sufficient size to provide the services, variety of occupations, and level of culture needed by a balanced cross-section of modern society.

2. **Limit of town size** (to around 30,000) in order that their inhabitants may live near work, shops and other facilities and within walking distance of the surrounding countryside. New garden cities to be built once population limit reached.

3. **Spaciousness of layout** providing for houses with private gardens, enough space for schools and other functional purposes, and pleasant parks and parkways.

4. **A close town/country relationship** with a firm definition of the town boundary and a large area around it reserved permanently for agriculture, providing a ready market for farmers and access to the countryside for residents.

5. **Pre-planning of the whole town framework**, including functional zoning and roads, the setting of maximum densities, the control of building as to quality and design while allowing for individual variety, skilful planting and landscape design.

6. **The creation of neighbourhoods** as developmental and social entities.

7. **Unified land ownership** with the whole site, including the agricultural zone, under quasi-public or trust ownership; enabling planning control through leasehold covenants, and capturing land value for the community.

8. **Progressive municipal and co-operative enterprise** without abandoning a general individual freedom in industry and trade.

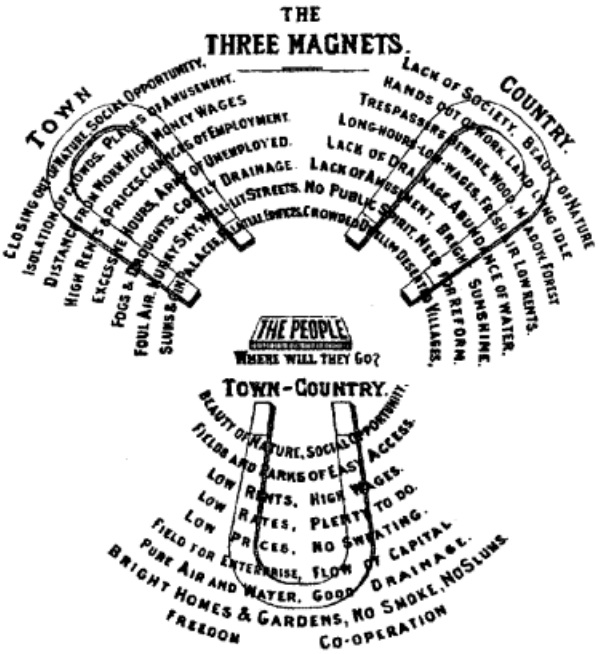

Figure 1 : The three magnets diagram by Ebenezer Howard.

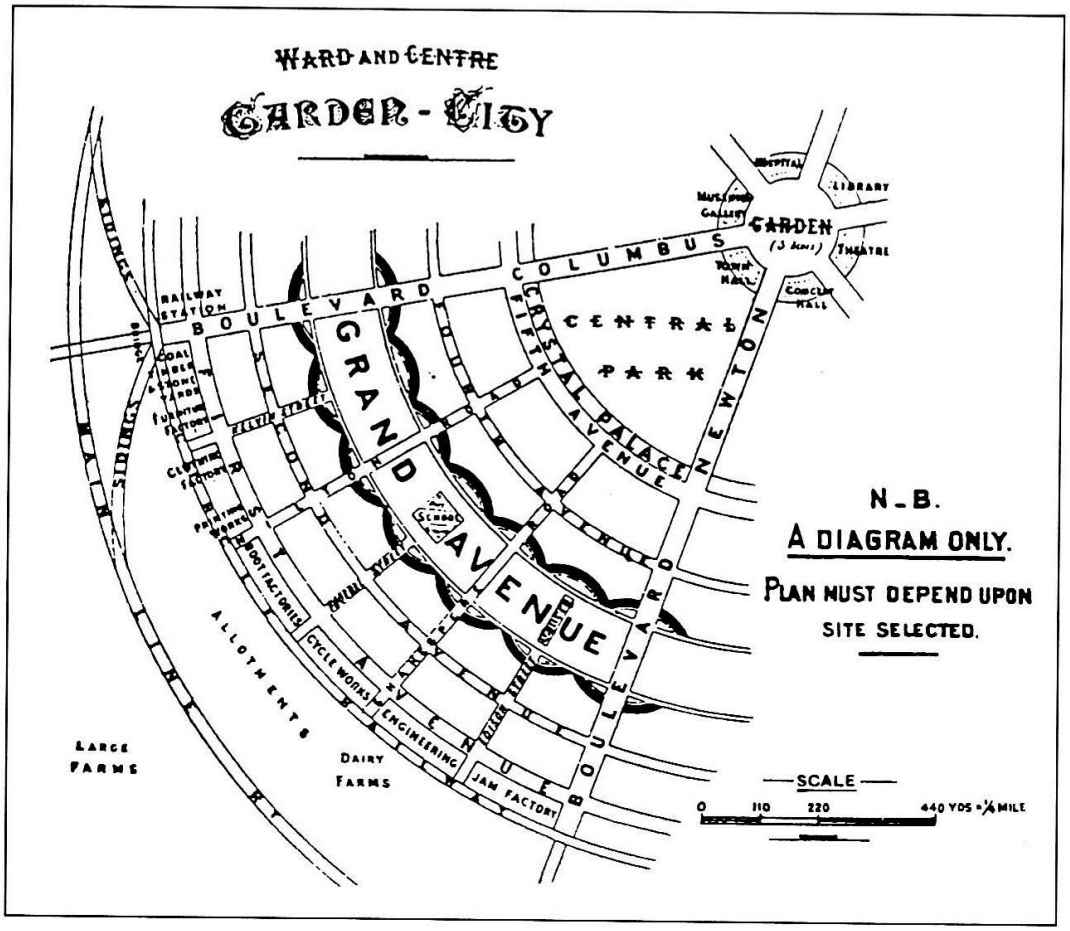

Figure 2 : Ward and Centre diagram by Ebenezer Howard.

2.2 Patrick Geddes

The well-known town planner, sociologist from Scotland, Sir Patrick Geddes has been described as one of the founders of modern town and regional planning. He also gave the theory of 'survey before planning', or 'diagnosis before treatment', to make the diagnosis of the various ills from which the town suffers, and then prescribe the remedies for its cure.

The principles of planning expressed by Sir Patrick Geddes are as follows:

1. Town planning primarily meant establishing organic relationship among folk, work and place.

2. This corresponds to the triad of: organism, function and environment. Accordingly, "the city came to be looked upon as a physical utility for collective living, and a living organism**,** which like all other living creatures, is governed by definite laws of growth and where environments play a part.

3. The city is no longer a mere physical structure but it meant the people, their families and communities they formed, their places to live, work and play. Here, human needs are more important than the physical aspects.

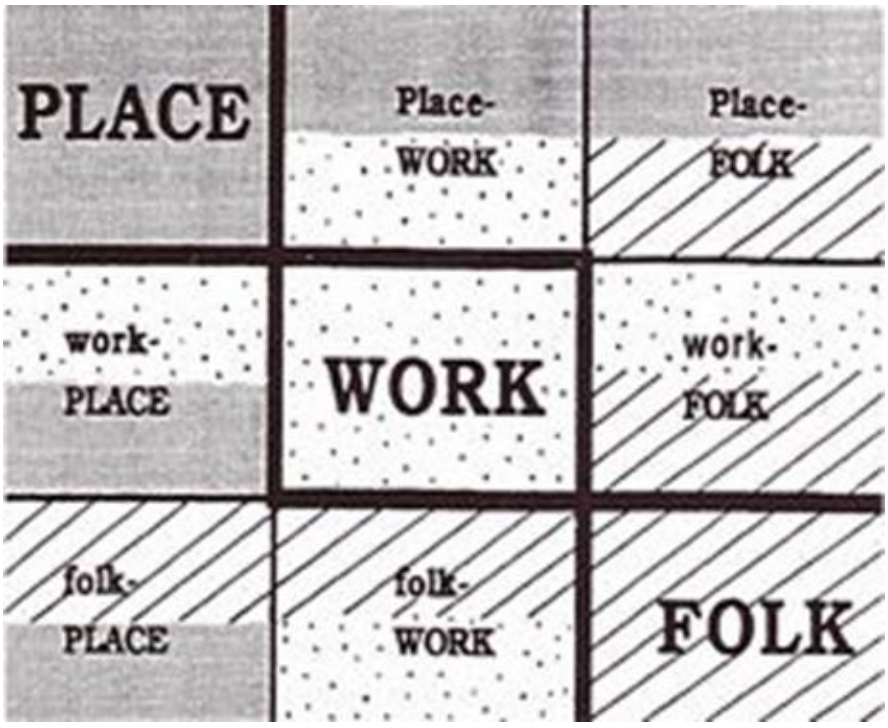

Figure 3 : Place Work Folk : Diagram by Geddes

2.3 Clarence Perry

Conception of the Neighbourhood Unit

Perry described the neighbourhood unit as that populated area which would require and support an elementary school with an enrolment of between 1,000 and 1,200 pupils. This would mean a population of between 5,000 and 6,000 people. Developed as a low density dwelling district with a population of 10 families per acre, the neighbourhood unit would occupy about 160 acres and have a shape which would render it unnecessary for any child to walk a distance of more than one-quarter mile to school. About 10 percent of the area would be allocated to recreation, and through traffic arteries would be confined to the surrounding streets, internal streets being limited to service access for residents of the neighbourhood. The unit would be served by shopping facilities, churches, and a library, and a community center, the latter being located in conjunction with the school (Gallion, 1984).

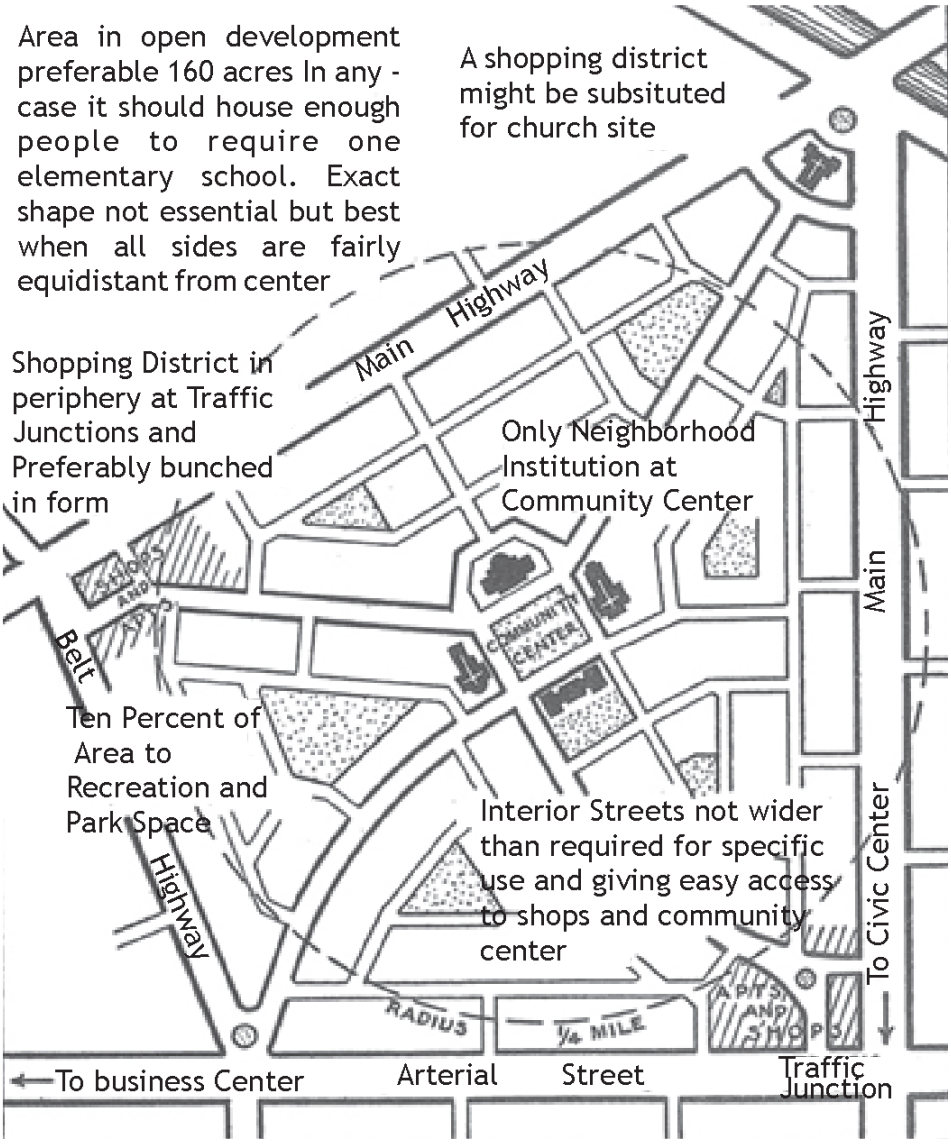

Figure 4 : Clarence Perry's Neighbourhood Unit of 1929.

Perry outlined six basic principles of good neighbourhood design. As may be understood, these core principles were organized around several institutional, social and physical design ideals.

1. Major arterials and through traffic routes should not pass through residential neighbourhoods. Instead these streets should provide boundaries of the neighbourhood;

2. Interior street patterns should be designed and constructed through use of cul-de-sacs, curved layout and light duty surfacing so as to encourage a quiet, safe and low volume traffic movement and preservation of the residential atmosphere;

3. The population of the neighbourhood should be that which is required to support its elementary school;

4. The neighbourhood focal point should be the elementary school centrally located on a common or green, along with other institutions that have service areas coincident with the neighbourhood boundaries;

5. The radius of the neighbourhood should be a maximum of one quarter mile thus precluding a walk of more than that distance for any elementary school child; and

6. Shopping districts should be sited at the edge of neighbourhoods preferably at major street intersections.

2.4 George Eugene Haussmann

Modernisation of Paris

From 1800 to 1850 the population doubled to over one million. In 1850 the majority of Paris was still the medieval style of unplanned narrow winding streets. Open sewage system had became the breeding ground for diseases.

In 1851, Napoleon III appointed Haussmann to rebuild the city. His Urban planning scheme included :

1. A reorganized symmetrical road system.
2. Division of Paris into Districts and its expansion.
3. Wide Boulevards
4. Gas lighting
5. Public Building regulations
6. Monuments
7. Updated Façade
8. Sewer systems

Many contemporary planners bemoaned the destruction of old Paris, because it seemed more intimate, more human in its scale, more individual in its charm. From their point of view, the new boulevards seemed to be too big, too empty. It is only from the perspective of our own dehumanised 21st century cities that we are tempted to find the Paris created during the Second Empire charming and elegant.

Figure 5 : Paris : Streets and Avenues cut by Haussmann (1854-1879)

2.5 Le Corbusier

The swiss born architect Charles – Edouard Jeanneret – Gris, early in his profession adopted his pseudonym **Le Corbusier** (1887-1965), and is one of the creators of the modern movement in architecture. He called for "**universal.. . total city planning**," urging "let's make our plans.. .on a scale with twentieth-century events.. . . Huge!" Le Corbusier's proposed cities could be anywhere: free of context, history, or tradition. He had no patience for environments that had grown up independently over time. "A city should be treated by its planner as a blank piece of paper". His new cities were supposed to be **organized, serene, forceful, airy and ordered.**

He was of strong opinion that organically developed cities lead to chaos. which is difficult to control. His central design theme was strict **separation of societal functions**. There would be separate zones for workplaces, residences, shopping and entertainment center, and monuments and government buildings. The very first of Le Corbusier's design principles was his dictum that "**The Plan is a Dictator**". He repeatedly contrasted traditional cities with the city of the future, which would be consciously formulated from start to finish by one designer.

The City Beautiful – Chandigarh

Chandigarh is one of the most significant urban planning experiments of the 20th century. (Area : 114 sq.km.) The city strictly follows **Grid-iron pattern** of street layout and thus city is composed of **sectors**. Initial design of Chandigarh had 30 sectors. Each sector is **800 meters by 1,200 meters** rectangular area. These sectors catered to the daily needs of inhabitants, which varies from 5,000 to 25,000. Each sector is a self-sufficient unit having shops, school, health centre and places of recreations and worship. The Central Plaza in **Sector 17** was designed as '**Pedestrian's Paradise**'. It houses all the major shopping complexes, sports facilities and congregation spaces. The entrance of cars into the sectors could take place on **four points** only, the center points of four sides of sector.

Type or Roads	Functions/Names
V-1	Roads connecting Chandigarh with other cities like Ambala, Kharar and Shimla. They have dual carriageway, good tree plantation and distinctive central verge lighting.
V-2	They are the major avenues of Chandigarh, with important institutional and commercial functions running alongside. In Chandigarh they are identifiable as 'Marg'.
V-3	They are the corridor- streets for fast moving vehicular traffic. A sector is surrounded either by V-2 of V-3 roads.
V-4	Roads bisecting the Sector with shopping complex located along their southern edge
V-5	Roads meandering through the sector giving access to its inner lands.
V-6	Roads coming off of the V-5s and leading to the residential houses.
V-7	They are intended for pedestrian movement and run through the middle of the sector in the green areas.
V-8	They are intended to run parallel with V-7s for the bi-cycles. Not properly developed, as yet.

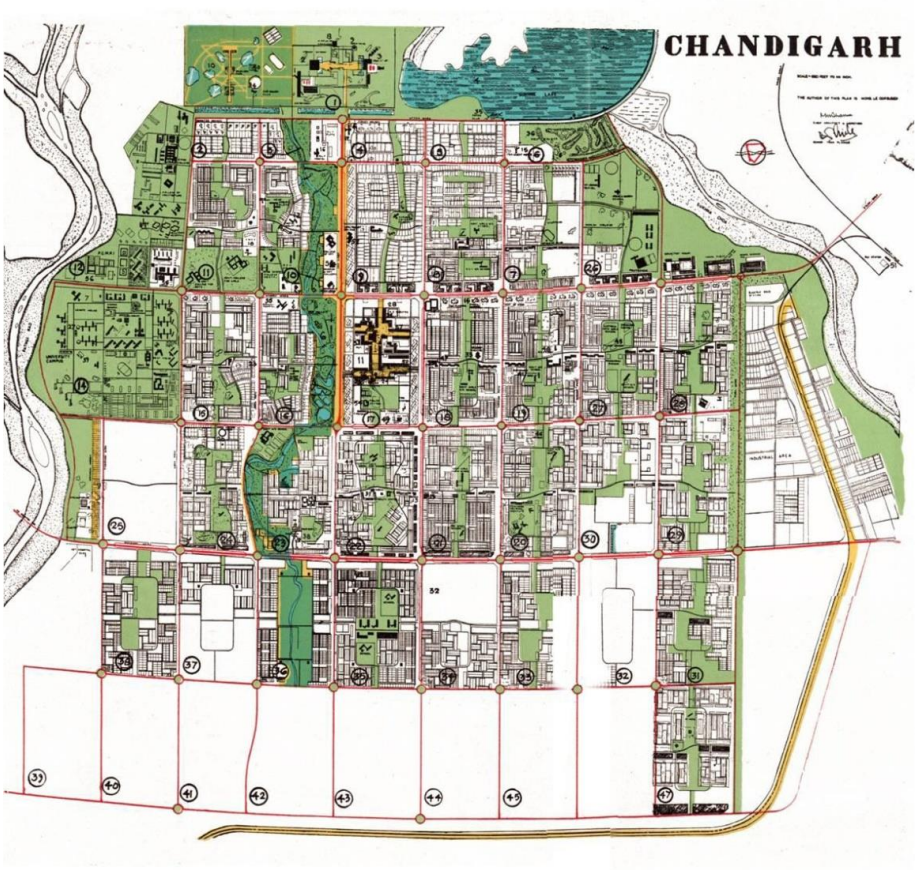

Figure 6 : Plan of Chandigarh by Le Corbusier.

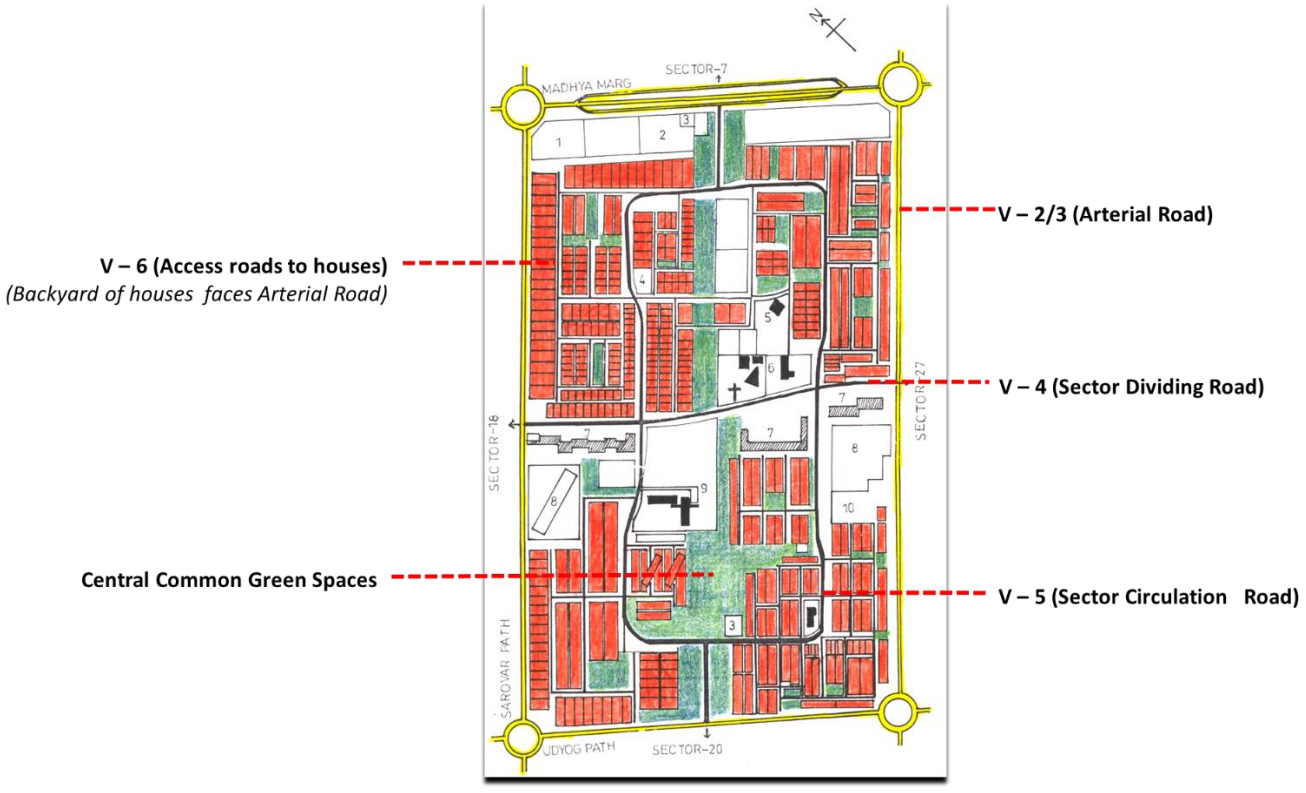

Figure 7 : Typical Residential Sector

2.6 Charles Correa

Planning of Navi Mumbai

In 1964, authors of the 'twin city concept' Charles Correa, Pravina Mehta and Shirish Patel presented to the government a proposal for constructing new growth centres across Bombay harbour on the mainland. It was called NaviMumbai (Area : 344 sq.km.)

Design principles were inspired from the sector planning of Chandigarh:

1. Decentralization by the design of self-sufficient townships (nodes).
2. Residential neighbourhoods (sector).
3. Single-use zoning as opposed to the traditional multiple-use zoning.

Navi Mumbai consists of thirteen townships (or nodes). Each node is self-contained for 100,000 to 200,000 people. Each node is divided into neighbourhoods (or sectors). The nodes contain residential, commercial, infrastructure and recreational sectors.

Navi Mumbai is almost thrice the size of Chandigarh, so single use zoning sectors were adopted to make the unit viable. At a larger scale, nodes share some common facilities such as water reservoirs and transport facilities.

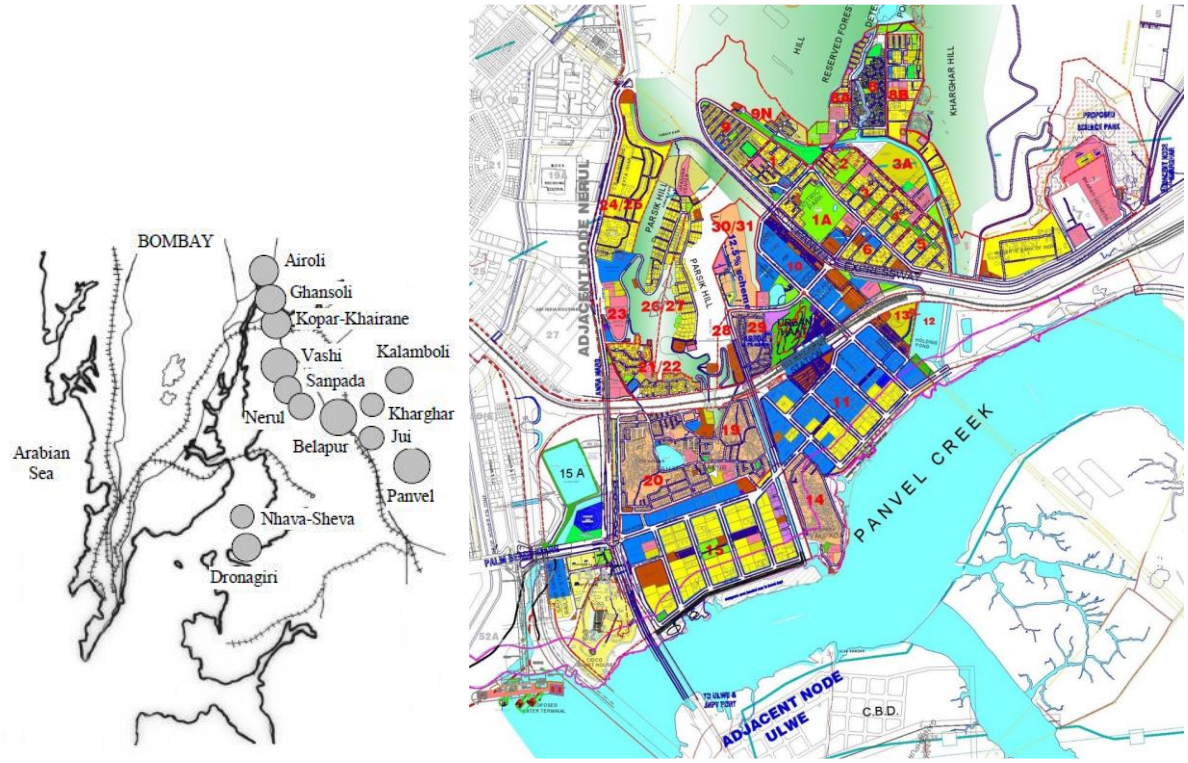

Figure 8 : Nodes of NaviMumbai

BelapurNode
Consists of 31 sectors including the famous housing neighbourhood unit of Belapur housing by Charles Correa

2.7 B. V. Doshi

Aranya Housing Society

B.V. Doshi was commissioned by Indore Development Authority to provide for EWS housing. The target population was **40,000 on a 80 hectare site**, incorporating 6,500 plots ranging between **35 & 475 sq. mts**. The central spine consists of the business districts, and an agglomeration of **six self contained neighbourhood.**

The ideological basis for planning Aranya has been the following:

1. **Vitality** – development to support socio-economic aspirations of the community.
2. **Imageability** – built form to impart identity and inculcate a sense of belonging amongst the inhabitants.
3. **Equity** – to create equitable balanced community with satisfactory level of environmental qualities and opportunities for all.
4. **Efficiency** – to realize development that optimizes natural, material as well as human resources to the advantage of the user group.
5. **Flexibility** – to evolve framework that absorbs with ease the progressive change and growth as a part of natural development process.
6. **Feasibility** – to ensure development within given legal budget.

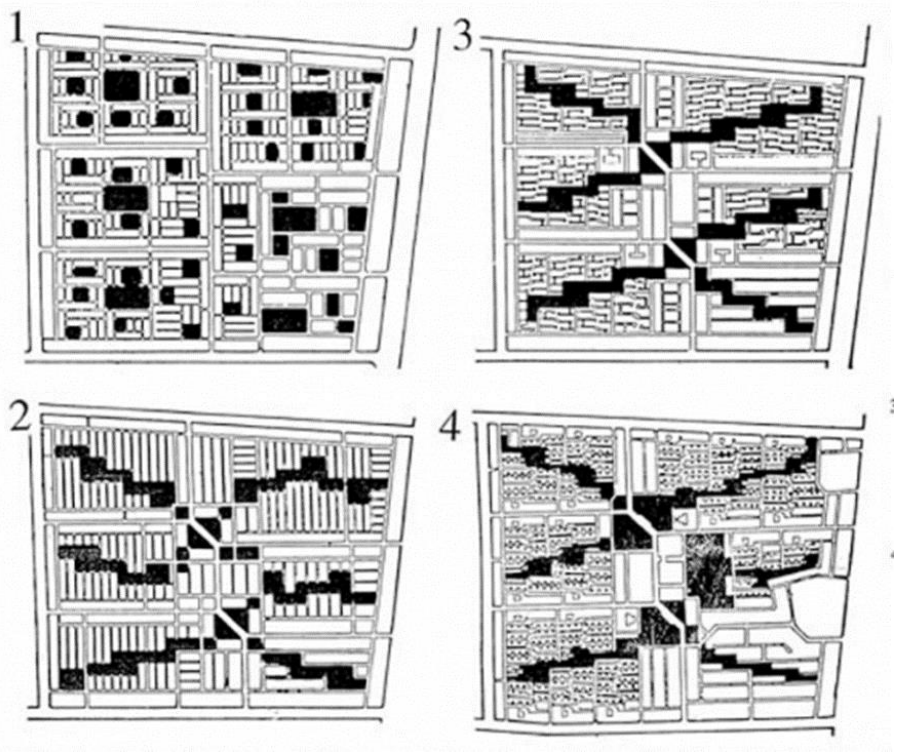

Figure 9 : Evolution of master plan (Aranya Housing Society)

1. IDA initial plan.
2. Doshi's initial plan with open spaces and street hierarchy.
3. Later stage of development with rectified orientation for minimum heat gain.
4. Final development plan with interlinked open spaces and climate responsive orientation.

2.8 Edwin Lutyens

New Capital City

In 1911, King George V laid the foundation stone for New Delhi. Sir Edwin Lutyens was assigned the task of city planning for new capital. Lutyens initial designs included straight lines cutting each other at right angles (*like New York city*) but then Viceroy of India Lord Hardinge told him about the dust storms that sweeps the landscape of this part, insisting on hedges, roundabouts and trees.

Layout of Lutyens Delhi was based on visual corridors and avenues rather than sectors or neighbourhoods. The road network reflects intentions of geometric symmetry achieved through sequence of triangles and hexagons. (All angles being 30 & 60 degrees) The major East-West corridor known as Rajpath connects Rashtrapati Bhavan to India Gate. North-South corridor known as Janpath radiates out of Connaught Place perpendicular to Rajpath.

Strong architectural identity was developed by adapting Victorian style with Indian architectural vocabulary. Careful use of materials and restrictions in building heights has led to a strong urban fabric and a sense of place.

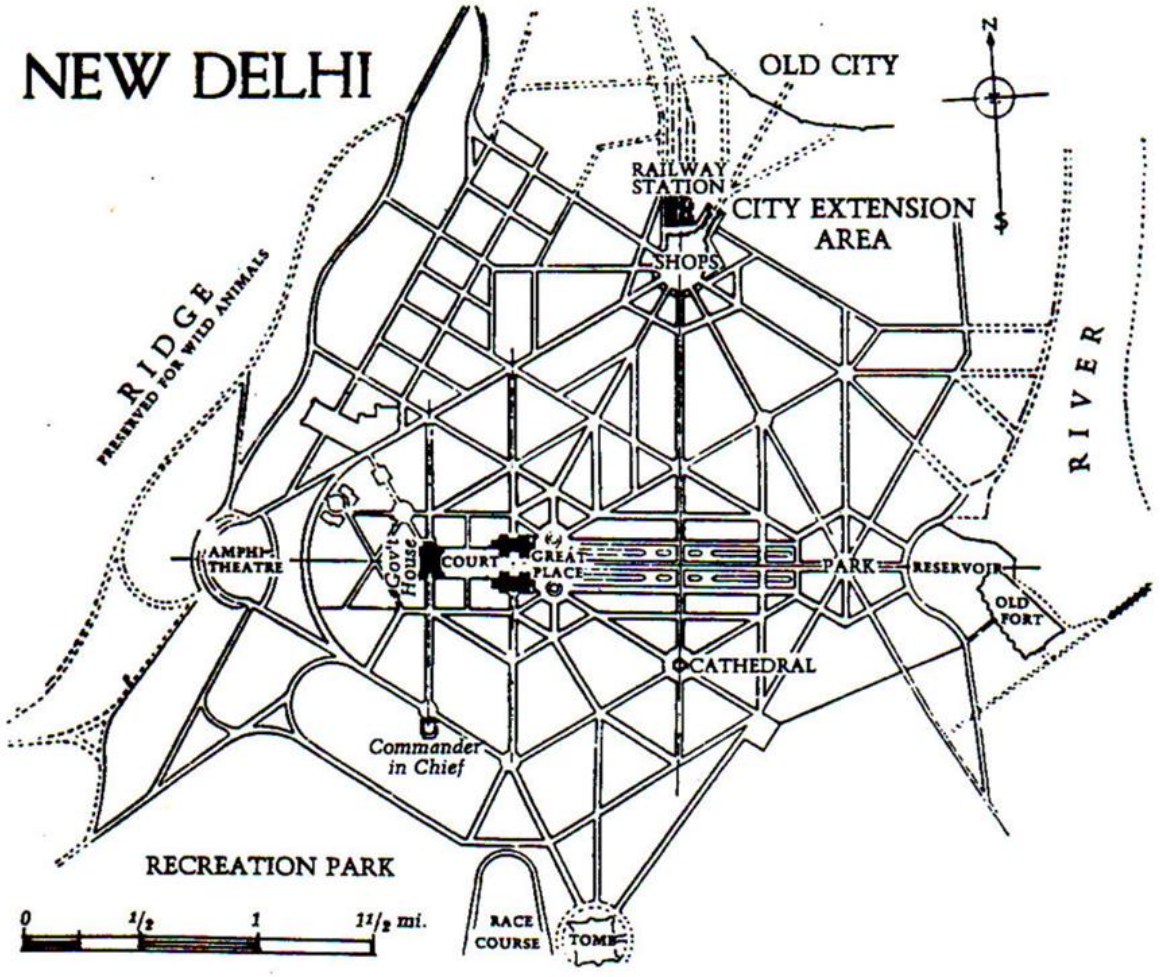

Figure 10 : Edwin Lutyens New Delhi Plan

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