Figure 2.32

Block structure of Skarpnäck as defined by the municipality before the parallel competition.

Top: page number 7 from magazine Arkitektur, 1980.

Bottom: final formalization of the blocks after collaboration between municipality, designers and developers. Later additions are outlined without black filling.

A blue dot indicates the position of the metro station. Originally placed outside of the housing area. Then moved to the central alley, first at the square at its southern, emphasised by a tall building. Finally to central location in front of the park and next to the cultural centre, the school and the church.

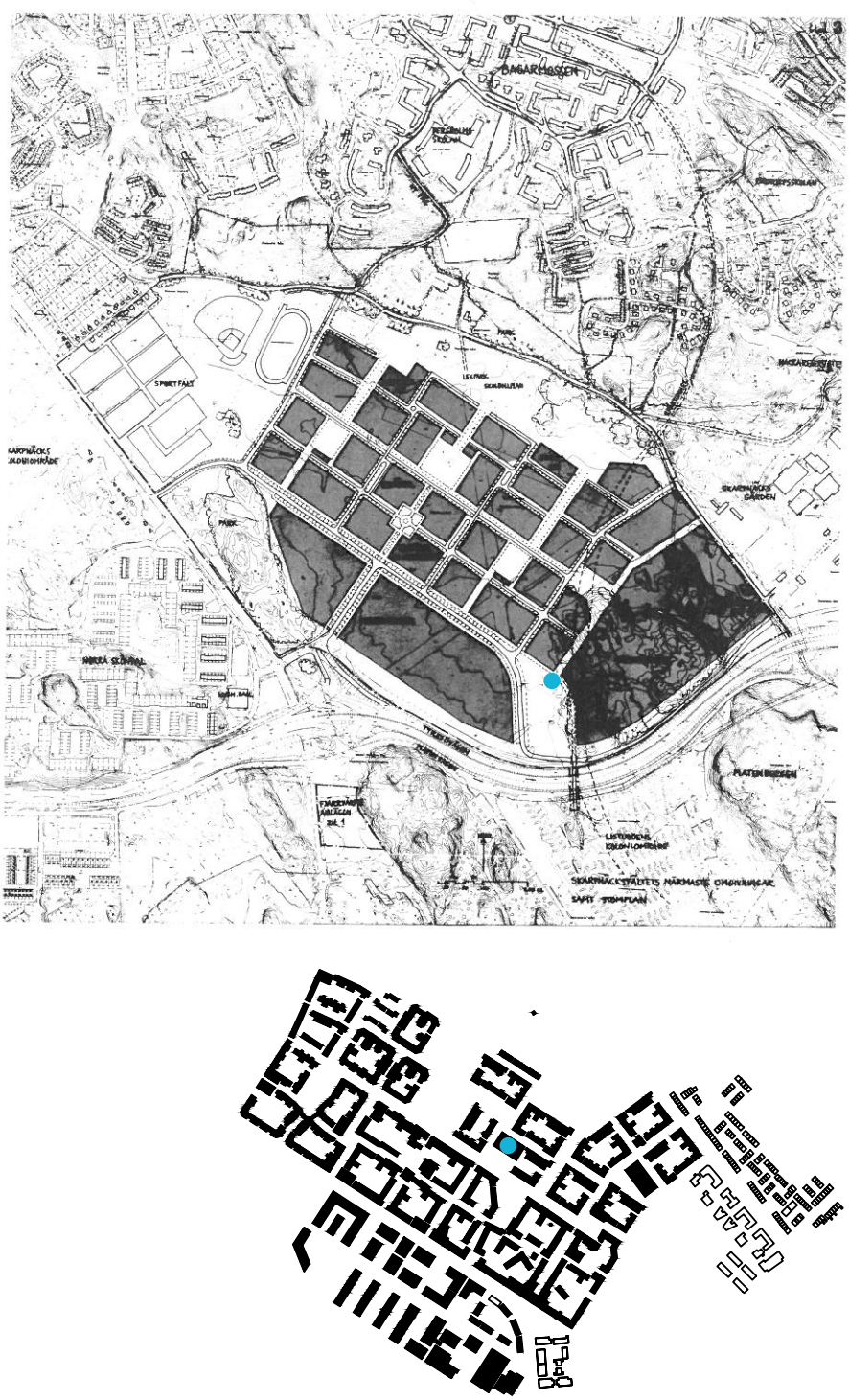


Figure 2.33
Skarpnäck. The contrast between the traffic to the quite domestic space. The transition is done through a sequence of order of streets that increase privacy and decrease traffic and speed.
Top: The border towards Horisontvägen. Protection of the domestic sphere from high speed traffic. Clear border of offices and parking buildings. Extra lanes of trees to enhance separation.
Middle: Central axis with apartment buildings, controlled car access and commercial bottom floor.
Bottom: A protected common garden.

several developers, which is visible in variation of colours and architectonic elements such as balconies or windows.

According to Leif Blomqvist, the use of brick in Skarpnäck was somehow accidental. In a context of economic crisis had been planed the construction of white rendered volumes. However one of the developers proposed to use directly the brick because it would be more economic during the construction phase, and more durable, as the rendering requires more continuous maintenance. Proposal that was accepted by the municipality and the other developers. We see how in both cases the intention was to reintroduce the white rendered volumes of the first functionalist projects of the 1930s, that were connected to affordable housing, in both cases technical and economic reasons resulted in the change of the final solution.

2.7. From 'house in the park' (hus i park) to 'park in the block' (park i kvarter).

During the 1910s and 1920s the ideal were single family houses surrounded by greenery that is often denominated as the house in the park (*hus i park*). In the garden city (*trädgårdstad*) the single family houses dialogue with the street, and generate varied urban space with changes of vistas and sequences of spaces. In this period, similar principles are applied in large blocks with gardens (*storgårdskvarter*) that create streets with façade fronts and inner world of intricate green spaces. Multifamily housing associated to white rendered prismatic slab-typologies of functionalism were introduced in the 1930s, and became the dominant typology until the 1970s. That typology evolved through the period loosing contact with the street and inviting the car as a main actor in urban planning.

I propose to see the evolution of the suburban block as an evolution of these slab-typologies that aim to recover both the relation with the green and with the street. They are regrouped to embrace a garden in the inside at the same time that they define a street with an urban character in the outside. Kv. Dalen and Skarpnäck incorporated qualities of the garden city in multifamily housing inserted in a grid structure with block typologies. The design of Kv. Dalen starts by shaping the urban space, the block can be conceptualised as a linear slab that bends over itself to embrace the garden, with low buildings, intricate public spaces and

transitions between public and private defined by landscape elements. Skarpnäcak still has big gardens and a well designed transitions, it incorporates a more clear orthogonal grid that is then deformed to introduce variation in the urban spaces, searching an increase of the urban character the streets incorporate active bottom floors and controlled car traffic, and increases the height. In Hammarby Sjöstad the design starts by tracing linear streets, establishing a clear hierarchy of the character and means of transportation that characterize each order of streets, the blocks are the resultant rectangles of the orthogonal streets. The typologies that form the block are more clearly a sum of four slabs located in the four sides of the block. Each slab has two sides, one domestic facing the common garden and one public facing the street, always introducing elements that soften and modulate the transition between the domestic sphere of the buildings.

I propose to call the typology that evolves from Kv. Dalen to Hammarby Sjöstad typology the *park in the block (park i kvarter)*. The house in the park evolved into the city substituted by the slab-house in the park, while the garden in the block recovers the importance of the park and the garden by enclosing it. The garden in the block embraces the greenery instead of being surrounded by it, and generates clear facade front towards the street, aiming to incorporate urban values associated to the street as a social space, in what has been introduced at the beginning of the chapter as the attempt to harmonise the qualities of the suburb and of the inner city (fig. 2.34).

In the chapter 3 is studied the period of the slab in the park from 1930 to 1975, aiming to trace a more nuanced sequence of the slab, which is done by understanding better the functionalism, its different moments and the different ways it is approached.

There is an evolution (fig. 2.34) where in Kv. Dalen the design starts from shaping the public space and the blocks are adapted to it, and the blocks are formed as continuous linear elements that bend and twist over themselves. This is an expressionist approach to design where the resultant space is product of decisions that relate to the experience from the human perspective. As often happens, this expressionist period of approach to design is followed to a more rationalist period that aims to reintroduce some control and order. In Skarpnäck the basic structuring element of the space will be the block, therefore the public space will be

Figure 2.34
Diagrammatic evolution of the suburban block
From Kv. Dalen inspired in the garden city inspired to a rationalistic Hammarby Sjöstad through Skarpnäck

the result of the shaping of the blocks and not the other way round, in the evolution of the project the blocks will be twisted to incorporate some of the qualities of the space explored in the 1970s in projects as Kv. Dalen. In Hammarby Sjöstad we see an evolution towards more rationalisation of the space. The structuring element will become the street, through the clear hierarchy and definition of each street, and each side of the block is characterised by the kind of street that frames it. The linear buildings located in the perimeter are less a continuous element that bends over it self and more a sum of slab-buildigns that form the block.

To some extent the street network of Kv. Dalen has connection to medieval towns formed by sequences of space, receiving the influence from the garden city movement, connected to the arts and crafts, the work of Raymond Unwin and Camilo Sitte, with romantic empiricist flavour. The grid of Skarpnäck has some inspiration from Reinassance grids, of more or less square blocks and street axis that prolong the space into the surrounding landscape, which is reinforced by including narrower porticoes in the perimeter. Following this logic, Hammarby Sjöstad has a rationalist influence in how the slab-typologies are incorporated in the block and the clear hierarchy of levels of streets.

Kv. Dalen, Skarpnäcak and Hammarby Sjöstad suggest that beside the characteristic styles of each period that run as a sequence one after the other, there are different approaches to design, from more expressionist to more rational that run in parallel through the century and across scales. Which allows to trace different paths in which design is approached that

are explored in the following chapter, these approaches are not circumscribed to a period or a style but they run transversally giving continuity to the design practice. In chapter 4, connecting the driving forces and the paths that represent approaches to design is described a taxonomy of the suburban block, discussed Hammarby Sjöstad at a moment of changes in which those driving forces and paths are considered to then contextualise the suburb as a process running within the 20th century, including an extended sequence of the one proposed in figure 2.35.

From the House in the Park to The Park in The Block

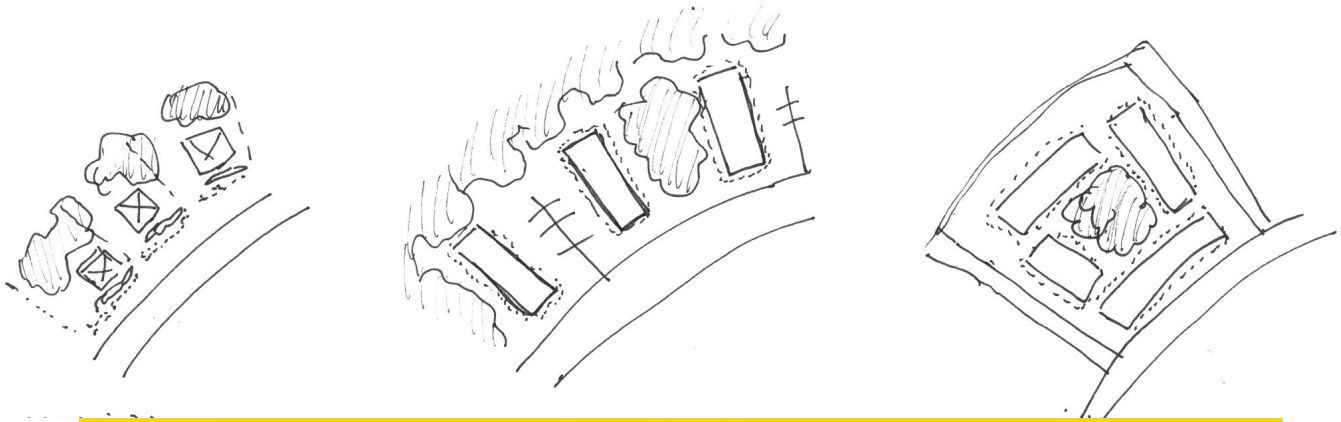


Figure 2.35
House in the park - 'hus i park
City in the park - 'stad i park'
Park in the block - 'park i kvarter'

Chapter 3

What Functionalism?

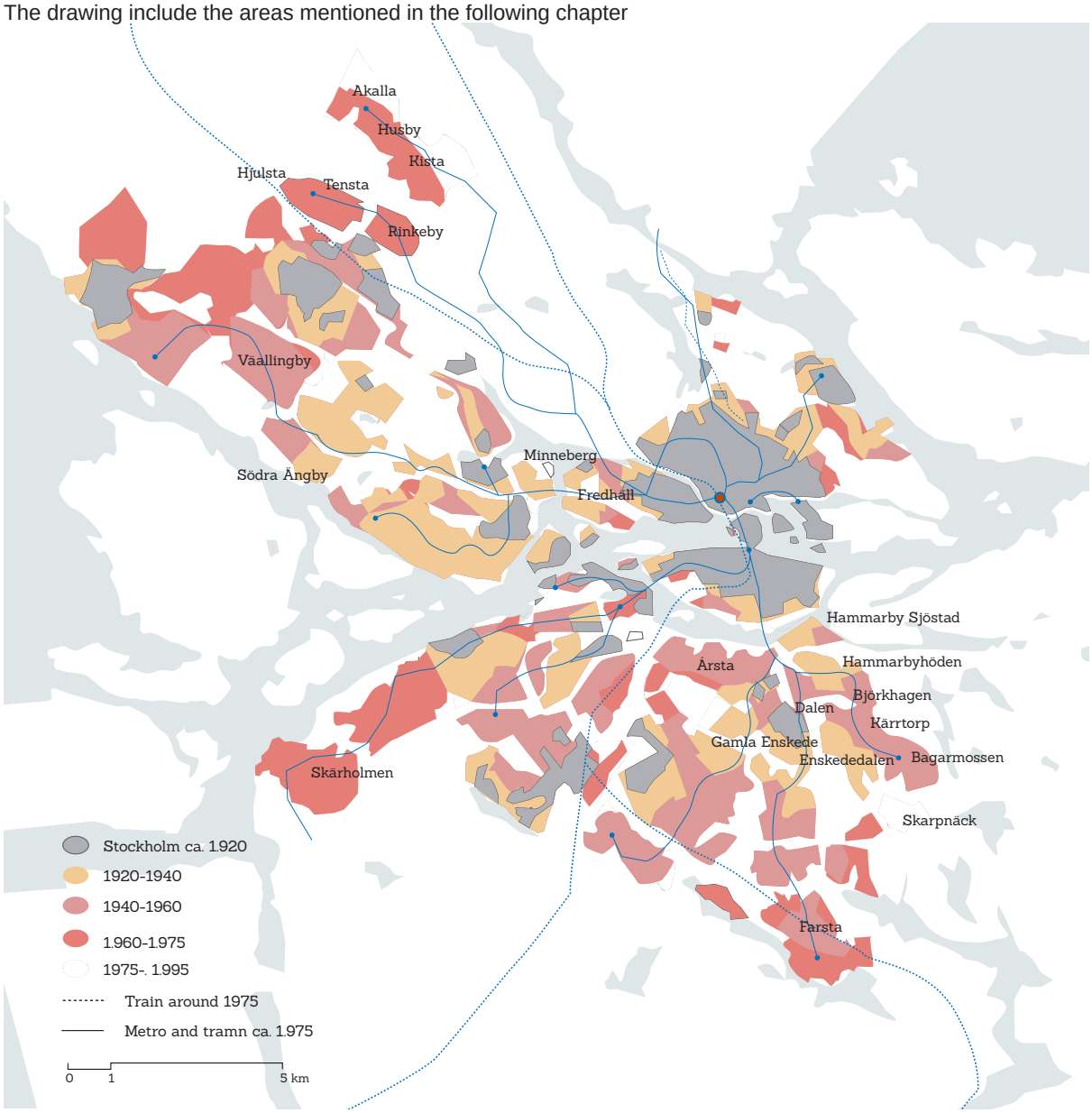
Alternative Paths Within Stockholm Functionalism

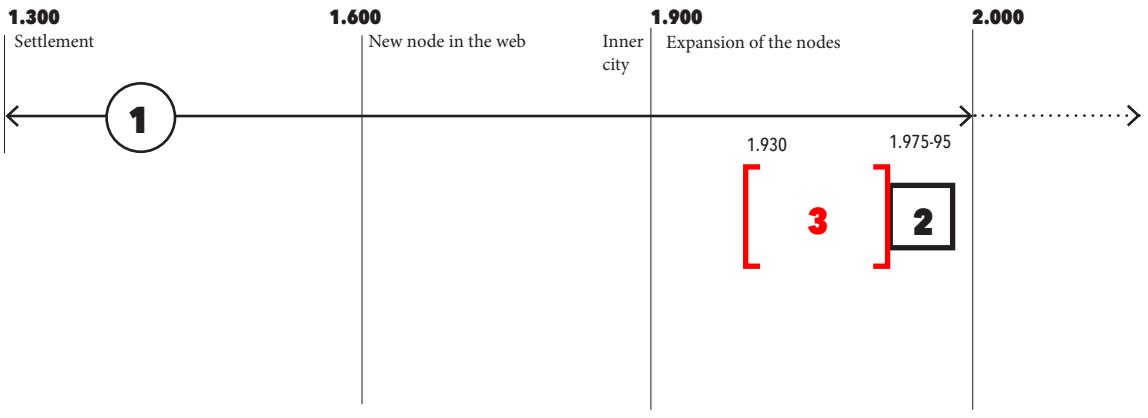
This chapter explores the evolution of functionalism in Stockholm's housing areas between 1930 and 1980, aiming to understand better the ideas, trends and forces that shaped the suburban block between 1975 and 1995, discussed in chapter 2. Instead of looking to the whole functionalist period as a unitary style, it is questioned what is meant by functionalism and unravelled different ways to approach it. The different paths introduced here allow to give continuity to the way design is approached through different periods of urbanism. With this chapter concludes the analysis and exploration the central object of study of this thesis introduced in chapter 2, that is the genealogy and formation of the suburban block. Chapters 1 and 3 help to identify and contextualise important aspects shaping urbanism, namely, driving forces, paths or approaches to design and styles. These allow to re-define the suburban block and the construction of the suburb in chapter 4. And to propose, in chapter 5, a different way to read of the city and the suburbs as nodes that form part to the construction and consolidation of the bureaucratic and centralised state. This re-interpretation is the first action of a more conscious and sustainable approach to urban design.

Figure 2.1

Stockholm functionalism 1930-1980

The drawing include the areas mentioned in the following chapter





3.1. Overview of Functionalism in Stockholm

Functionalism in Stockholm has been dated between 1930 and 1980 (Arkitektrurmuseet, 1980), and implemented to a large extent in the construction of residential suburban enclaves characterised by multifamily rectangular linear volumes or *lamellhus* (slab-typologies). These housing areas are connected to the effort from the authorities to provide with affordable quality housing to large sectors of population, and to the construction of the welfare state, also known as Folkhem, that can be translated as people's home (Gundström and Molina, 2016).

This urban growth is part of a larger process of suburban expansion of Stockholm that runs through the whole 20th century that is explored in chapter 4.3. In terms of typologies, functionalism is preceded by garden cities dominated by single-family houses (*trädgårdstad*), and followed by the re-introduction of grid schemes and perimeter-block typologies with shared inner-gardens that I have introduced in chapter 2 as suburban blocks or park in the block (*park i kvarter*).

The breakthrough of functionalism in Sweden in 1930 is connected to the Stockholm Exhibition and the manifesto Acceptera by the art historian Gregor Paulsson and the architects Gunnar Aplund, Wolter Gahn, Sven Markelius, Eskil Sundahl, and Uno Åhrén. The manifesto announced a new society, proclaimed the introduction of modernity and scientific methods, the need to break with the past, and adopted the neat style of modernism. The period between 1930 and 1960 can be characterized by prismatic white volumes with flat roofs popularly referred as *funkis* (contraction of the Swedish word *funktionalist*), which is opposed to *tradis* (from *traditionell*), associated to the traditional pitched-roof timber house. Early on was formulated a critique to the monotony of the repetitive volumes of functionalism, and, in the 1940s are introduced notions of variation, addressed through new typologies, and of efficiency, which would evolve into systematisation and industrialisation. At the same time, in terms of urban space, buildings loose direct relation with the street. In the 1950s we see an attempt to humanise functionalism, but also the irruption of the car and of the shopping centre that will condition urban structure and design. The impulse from the Swedish government

to build one million dwellings between 1965 and 1975 is known as the *Miljonporgram* (Million housing programme). This period can be extended to 1960 under the denomination of *Rekordår* (Record years), as the pace of construction had increased before the program was made public. It is characterised by mass-production and large scale developments, separation of transport modes, and an urban space dominated by the car. While early examples of *funkis* can be associated to a more gentle image of cubic white buildings, the Miljonprogram is mostly associated to large scale and prefabricated concrete elements. Mass-housing came by hand with the industrialization of the building sector and the concentration of the process in fewer and bigger construction companies and architectural offices. (Arkitektrurmuseet. 1980; Sax, 1980; Söderqvist, 1999; Boverkt, 2007; Hall and Vidén, 2015).

During the record years "[t]he reality, however, was much more diverse, with homes and buildings showing a wide variety of forms, in both single-family houses and multi-family apartment blocks" (Hall and Vidén, 2015 p. 204). Despite being an improvement in the housing conditions for many people with increase of construction and design standards, the urbanism of some of the large scale developments of the Miljonprogram, built in short time, far away from the inner-city and segregated by traffic infrastructures, became the stigmatised image of functionalism in the collective imaginary. Projects as Hammarkullen in Gothemburg (Arkitektrurmuseet. 1980), or Tensta (fig. 3.2) in Stockholm (Bengtzon, Delen and Lundgren, 1970), received severe critique even before being finished. After 1975 follows a decline in construction and by 1980 was already on place a diagnosis against how functionalism had evolved and the problems perceived as intrinsic to it, coming one of the more severe critiques from architect Hans Asplund (1980), son of one of the authors of Acceptera, who declared the "Farewell to Functionalism".

The evolution of functionalism in Stockholm's housing areas between 1930 and 1980, is a period of exponential growth (fig. 3.1) when is produced high diversity of projects. Despite this diversity, functionalism is commonly identified with its rationalist codification as a style by the Modern Movement around 1930 and subsequent evolution. Therefore, rather than as a unitary style, functionalism is understood as a philosophy or approach to design

Figure 3.2.
Top: *Rinkeby and Tensta by the autho*r. Construction circa 1968-1971,.
Bottom: *Photo of Tensta.* by Holger Ellgard (2009). Creative Commons Attribution-Share Alike 3.0. https://creativecommons.org/licenses/by-sa/3.0/deed.en.

that manifests under a wide range of forms, as it was formulated in the 1920s (Bletter, 1996), and reclaimed back after 1950 by, among others, Ralph Erskine, an architect apparently far away from functionalism. To explore this view, the chapter draws on Adolf Behne's foundational text from 1923 where can be found four ways functionalism approaches design: expressionism, rationalism, a middle ground between them, and utilitarianism. It is explored to what extent the approaches described by Behne remain relevant through the period in Stockholm, and how they manifest in the cases selected to illustrate functionalism in Sweden. If styles are organised as a sequence of independent periods that succeed each other, the approaches to design are threads with continuity across those periods. Finally, it is proposed to read the housing developments as the result of the interaction between the style in what they were expressed, the strand from where design was approached, and the driving forces that defined them.

Functionalism(s)

Ralph Erskine (1980), defined himself as a "latter day Functionalist", for "functionalism is no style but a method of thought, a work process" (pp. 657-658). Erskine moved to Sweden in the 1930s attracted by its social and modern approach to architecture, and became critical to the path mass-produced architecture was taking after 1950 (Egelius, 1988). Besides, his active relation with the Team 10, allows to connect with the critique they did from inside the Modern Movement. The critique was not to functionalism, but to how modernism had evolved into production, object-oriented architecture, its codification as a style, or the way the Athens Charter was being applied.

Adolf Behne wrote in 1923 what is provably the first book introducing the notion of functionalism.[1] This and other German publications of the 1920s dealing with modern and functional architecture included examples of a wide variety of approaches to design. It is not until 1930 that is codified as a style in relation to the production of affordable housing in Germany, and to the formulation of the International Style (Bletter, 1996). In Behne can

1 According to Rosemarie Haag Bletter, the book "International Architecture" by Walter Gropius was edited earlier, but had been written in a later date.

be found two main approaches to functionalism differentiated by the prevailing point of departure of design: romantic-expressionism, where form results from the internal expression of the space and its experience, and rationalism where mathematical order and types organize the space. A third approach is a middle ground between them, and a fourth, utilitarianism, focuses in narrow functions of production and efficiency.

For this study I have selected case studies of housing areas in Stockholm that showcase the different approaches to functionalism, and analysed them in relation to contemporary European trends and examples that inspired them. The analysis of the cases allows to localise driving forces that influence how the space is shaped, in order to discern those characteristics that cannot be attributed to functionalism. At last, I have borrowed the approaches to functionalism described by Behne, and explored if they remain relevant through the whole period and how they are manifested in each case, what has allowed to conceptualise them as paths that give continuity to different ways to approach design that run across periods.

3.2. Cases Introduced

The selected case studies show a diversity of approaches to functionalism in different decades. Their plans are drawn in the same fashion and presented in the same scale to make tthemcomparable. In the decade of 1930 three projects exemplify different paths: Fredhäll, Hammarbyhöjden, and Södra Ängby. During the 1940s new typologies are illustrated through Björkhagen, that was built as a continuation of Hammarbyhöjden. Vällingby is the more representative example from the 1950s, and Kärrtorp is included because it was built as a continuation of Björkhagen. what provides a good comparison between three contiguous areas (fig. 3.3). For the 1960-1975 period, Tensta has been introduced above as the paradigm of the stigmatisation of the Miljonprogram, and Skärholmen has been showcased elsewhere as an example of functionalism dominated by car and retail (Mattson, 2015). At last, Kista and Husby, we will see, introduce some elements of transition into the following period.

To understand functionalism and its different ramifications I draw on two seminal texts. Reynar Banham’s “Theory and Design in the First Machine Age” from 1960, that

Figure 3.3.
Hammarbyhöjden (1930s) Björkhagen (1940s), Kärrtorp (1950s) and Bagarmossen (1950s).
Drawing by the author.

explains the codification and evolution of modernism in the first half of the century. And Adolf Behne's "The Modern Functional Building" from 1923, including the introduction by Rosemarie Haag Bletter to the 1998 edition, that explains well the context in which it was written.

3.3. Paths for Functionalism in Stockholm

In order to classify and understand different periods in architecture and urbanism we tend to display them as a sequence of styles or models, tracing imaginary lines that separate what was done before and after a certain date. This is certainly useful in order to communicate and define characteristics that describe the dominant trend at any given moment in time. Besides, the case of Stockholm offers an almost ideal case study to analyse this sequence of models due to the clarity of its growth: in the suburban expansion outside the limits of the inner-city each development has been built as a new enclave next to the previous with no or little overlapping, where can be defined almost every decade the characteristics of dominant urban and architectural models.

However, the sequential narrative omits aspects of continuity between periods, and transmits the impression that the characteristics that define the model of each period form a unity that cannot be separated, as if history offered us a set of static models to choose from. Here is defended that, to develop knowledge from the past that helps us to inform current urban design, it is relevant to look to each urban project, not as a unity or a model, but identifying its characteristics and tracing the evolution of those characteristics through time. Design qualities, elements, or approaches, can be conceptualized as intertwined paths or threads that can coexist temporally and run transversally across different periods, they appear, disappear and re-appear again, interacting with other driving forces that shape the city.

Funkis versus Tradis

A common division in the public debate in Sweden is the contraposition between *funkis* and *tradis*. A classification that falls into a mere stylistic choice between two different traditions. One codified during the 19th century both as individual houses of pitched roofs

or as the architecture characteristic of the grid plans of the urban regularization. The other codified around 1930 within the modern movement. Such a simplification is not going into fundamental characteristics and elements of the city.[2]

According to Reynard Banham (1972 [1960]), functionalism was codified as a language in the modernist housing estates in Germany (Siedlungen), through modest means, prismatic volumes rendered in white, with simple small openings following minimum daylight standards, and composition of the facade according internal distribution. This codification of the modern style from 1924 was the result of applying economic constrains to the production of large-scale, low-cost housing rather than an expression of modern materials and techniques that formed part of the early functionalist discourse:

> The Siedlungen had to be built down to the most stringent budgets, and a ruthlessly rational approach was required to extract the maximum performance from materials, machinery, and every square meter of built floor space and occupied site area. (p. 272)

In a significant parallelism, the iconic image of the *tradis* house can be traced as-well to a specific moment in history, codified stylistically after economic constraints, and referring to models from the continent. Martin Rörby (2007) has described it as a reinterpretation of classical forms using available means such as wood and red painting in from the Swedish countryside, instead of brick or stone applied in Greek and Roman temples:

> The rectangular volume and saddle-back roof are a legacy from the temples of the ancient Greek and Romans...The red paint is a Swedish invention...a suggestive of brick buildings, which helped to make it popular. The white corner joints did not become a standard feature until the second half of the 19th century. Some people see in them a stylised version of pilaster from the ancient civilisations of the Mediterranean. (p.15)

2 A simple online search returns multiple articles from both newspapers and specialized publications on current debates about implementing back traditional 19th century style as if the architectural style broough with it qualities of the traditional city.

1930s Blurring the Transition Between garden City and Functionalism

By 1930 the task to respond to housing needs was already fully assumed by public authorities. In Stockholm, under the impulse of Axel Dahlberg, Real Estate Director in Stockholm municipality, new housing developments adopted simple white prismatic multifamily typologies. Fredhäll and Kristineberg (fig. 3.4) to the west of Stockholm, are structured as a series of repetitive *lamellhus*. The scheme of Hammarbyhöjden (fig. 3.3), located on top of the heights right to the south of current Hammarby Sjöstad (*sjöstad* means city of the water, *-höjden* means height), does not follow the same rationalistic logic, as it incorporates twisted roads adapted to the landscape and topography, and the buildings face the street and change direction. In Hammarbyhöjden, the *lamellhus* of 'the white city', are inserted in the forest (fig.3.5), there is attention to detail around doors or windows, and the buildings have a relation with the street (Sax, 1989).

These characteristics of Hammarbyhöjden connect it to the garden city that prevailed during the first two decades of the century, implemented in Stockholm after influences from Camilo Sitte and Raymond Unwin (Rådberg, 1994), even its first scheme was designed by Ragnar Östberg, architect from the national-romantic period. Furthermore, in the records of the municipality meetings, Hammarbyhöjden is discussed as part of the garden cities of Stockholm (Kommunfullmäktigetrycket 1937 and 1939).

In the other side of the overlapping between garden city and functionalism we find Södra Ängby, the "garden city in functionalistic style" (Olofgörs, 2021). It is formed by individual plots with villas, and a continuous street network adapted to the landscape with a centrum with common services next to the public transport. Unlike other garden cities, the houses are white prismatic volumes with flat roofs that do not aim to form a street front, and the urban structure is not organised as a community around central common services with a well defined perimeter of appartment buildings (fig. 36).

Codification of Rationalism

We can already identify rationalism in Fredhäll, romantic-expressionism in Hammarbyhöjden while Södra Ängby combines both. The functionalism promoted in

Figure 3.4.
Kristineberg and Fredhäll, by the author.
Photo of Fredhäll from the air. 1938
Photorgrapher Oscar Bladh. Stadsmuseet i Stockholm https://se.creativecommons.net/om-cc/licenserna/.

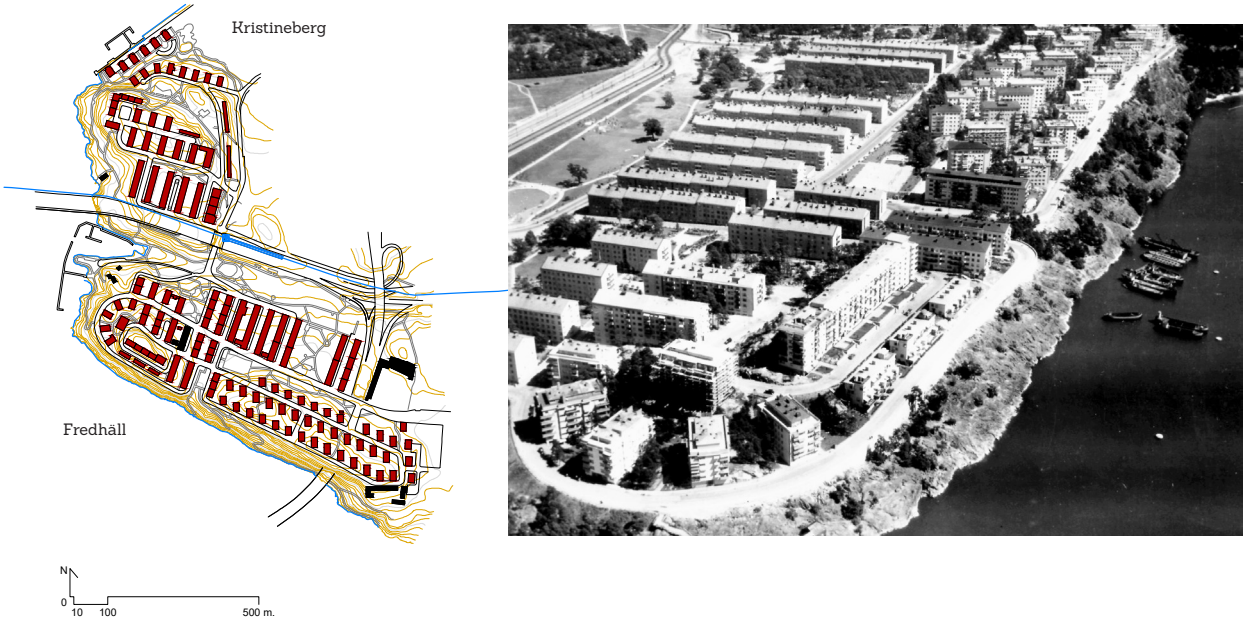
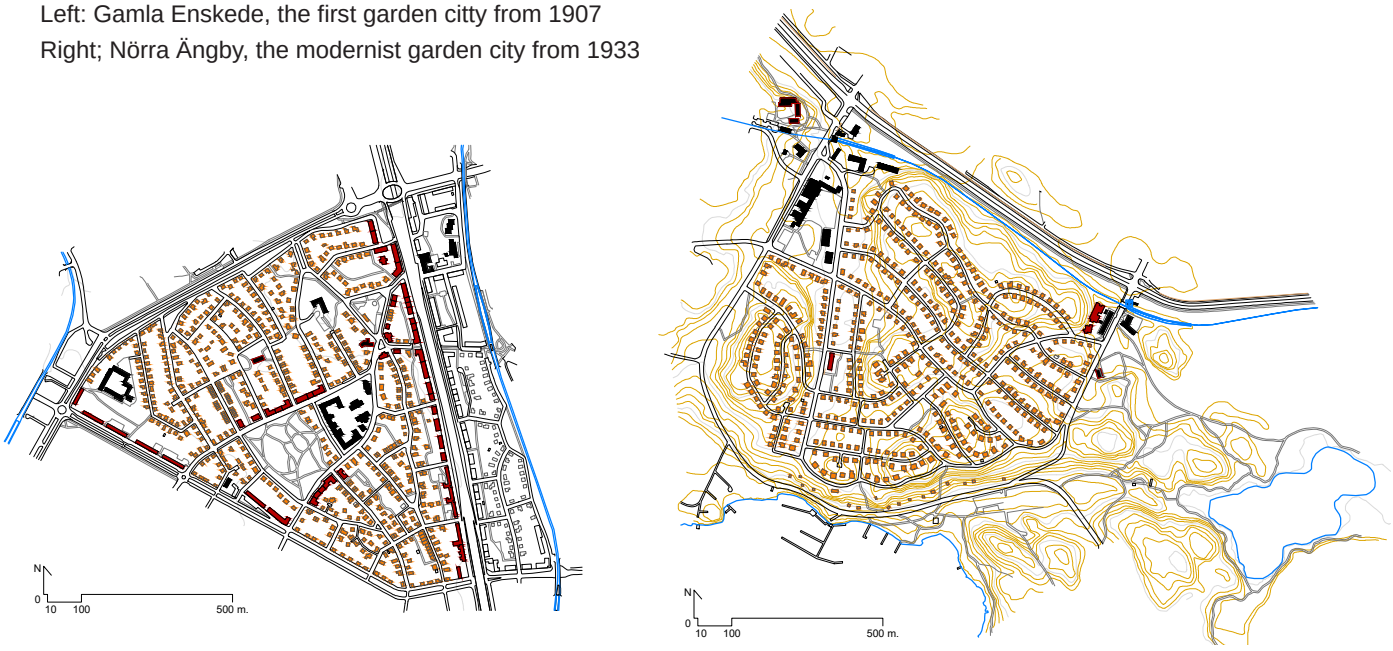


Figure 3.5.
The white city in the forest. Hammarbyhöjden 1962.
Photographer unkown. Arkdes Arkitektur-och design centrum. ARKM.1962-101-0862. Public domain https://creativecommons.org/publicdomain/mark/1.0/deed.en
In the background can be observed the flat surface of Hammarby Sjöstad occupied only by two industries,

Figure 3.6.
Comparison of the plan of two garden cities
Left: Gamla Enskede, the first garden citty from 1907
Right; Nörra Ängby, the modernist garden city from 1933



Acceptera, that will mark the approach to functionalism in Sweden, is rationalist, including a call to move away from the garden city and the traditional villa, advocating that the modern individual is expressed within the mass.

Influences were coming from Germany where many Swedish architects had direct contact with the first functionalistic housing developments. (Creagh, 2008 and 2011; Rörby, 1996). The figure of Axel Dahlberg in Stockholm mirrors those of Ernst May in Frankfurt and Martin Wagner in Berlin, both directors of municipal planning departments who played an important role in the production of modernist housing. Both sought technical rationalisation, while Wagner was more critical to the adoption of minimum units and less attached to the repetition of types (Hellgardt, 1987) and interested in cooperative housing associations (Bletter 1996, p. 53). Acceptera in particular is influenced by May's rationalist approach in Frankfurt characterized by production of types and aiming at scientific methods based on research.

> Research into economy and maximum performance was carried to its farthest point in this period by Ernst May and his team at the Municipal Building Department at Frankfurt am Main, who developed special building techniques and special furniture

Figure 3.7
Left: Großsiedlung Siemensstadt buildings by Hans Scharoun. Photograph: Leonard Lenz, Sept. 2024. https://creativecommons.org/publicdomain/zero/1.0/deed.en.
Right: Hammarbyhöjden, Stockholm. Photograph: Spegel Skribent, Feb. 2021. https://creativecommons.org/licenses/by-sa/4.0/deed.en: xxx

equipment in order to hold down costs and speed up the work of building. (Banham, 1972, p.272)

Within the Siedlungen there are examples such as the Stuttgart Weissenhof (1927) designed by Mies van der Rohe, a rationalist architect working with the order and the right angle, where Bahnam notes that even Mies, known by his luxury finishes that explore the qualities of the material, contributed to the codification of modernism by implementing modest means and simple white volumes. On the other hand, the scheme of Berlin Siemensstadt (1929) by an expressionist architect such as Hans Scharoun, shows higher interest in the articulation of the space. Hammarbyhöjden is closer to this expressionist approach, reflected in a higher articulation of the volumes (fig. 3.7), while Fredhäll applies a more standardised rationalism.

Hygienism: Air, Sun and Greenery

The construction of affordable housing as part of a project of sanitation that responded to overcrowded and polluted city centres is not exclusive of functionalism. If there is one aspect that gives unity to the construction of housing suburbs built through the entire 20th

century since the garden city is hygienism. Suburbs looking for sun, air, greenery and quiet environments for family life. Still, according to Beatriz Colomina (2019) “tuberculosis helped make modern architecture modern. It is not that modern architects made modern sanatoriums”, the sanatoriums made architects adopt a modern clean architecture of of horizontal lines, surrounded by the forest and fresh air “[Alvaar] Aalto was a neoclassical architect before his “conversion to functionalism” in the 1927 competition entry for a tuberculosis sanatorium at Kinkomaa he already emploied “horizontal lines arid wide terraces for the cure that anticipates Paimio”. (pp.63-65). She connects its codification as a style to “the constant preoccupation with ventilation, sunlight, hygiene, and white walls that turned all buildings into medical equipment” (p. 94).

3.4. Functionalism as an Approach to Design Formalised in Different Ways

For Behne (1996 [1923]) functionalism reacted against an academicism that had fallen into façadism, where form was independent of the functions, needs and spatial experience of architecture. Functionalism prioritises composition and articulation of volumes over the representation of historical styles and ornamentation. The same way abstract art eliminates the figure to unveil the structure and composition of painting, functionalism eliminates ornamentation and stylistic choice to focus in the articulation of the space.

Behne considered what I am calling here romantic-expressionism as the more pure functionalism, because its resultant form is specific to each case, derived from internal, specific spacial qualities, needs, and the functions the building fulfils addressing perception and experience of the space. Eric Mendelshon in his early work, Hugo Häring and Hans Scharoun are clear exponents. However, dealing with “Häring’s organic functionalism he rejected it because it was not workable in larger social context” (Bletter, p. 71, note 9). Rationalism departs from geometric order, predefined organisation of the space based in mathematics and the right angle, it deals with standardisation and types, and aims to universalise solutions, being Le Corbusier its more clear proponent. Utilitarianism, is an extreme version of rationalism that omits human or spacial functions, addressing exclusively

efficiency and production. Behne considers that utilitarianism should be avoided, while defends an optimal middle ground between rationalism and romantic-expressionism, were the functions related to human spatial qualities are harmonised with a rational construction and organisation of the space. Figures that can be inscribed in this middle way are Walter Gropius, Mies van der Rohe or JJ.P.Oud.

These strands can be also traced in Banham's review of first modernism (1972[1960]), even if he is not using the same classification. Aspects of the romantic-expressionism connect to the Arts & Crafts movement in England, to empiricism and to the solutions adapted to each situation, with references to medieval townscapes and craftsmanship. Rationalism, connected to industrial production and universalised solutions, can be traced back to Le Corbusier, Tony Garnier, the rationalims of J:N.L. Durand and French Academicism, including the scientific approach of Guadet (pp. 14-23). The middle ground integrates both, and is located the geographical core that goes from Viena to Amsterdam, where modernism evolved from Otto Wagner, Peter Behrens and Hendrik Petrus Berlage. In Germany the Deutsche Werkbund harmonised the arts & crafts and English romanticism, with the new modern style. In Netherlands de Stilj and the Dutch Elementarism (pp.148-200), would integrate lessons from abstract art modernism with French rationalism, Cubism made in an influence in conjunction wtih Futurism Duchanp (pp. 204, 205) .

Hugo Häring and Mies van der Rohe are an illustrative example of the richness of functionalism and an intellectual debate not focused in forms or styles but in fundamental principles Despite having very different approaches to architecture, connected to expressionism and rationalism respectively, they shared office and multiple discussions. Rather than opposed perspectives, they shared interests and respected each others work. (Blundell Jones, 1997, 94-103).

Rationalism evolved into some excesses in terms of monotony, repetition, lack of human scale and an urban space dominated by car and traffic safety measures. In the 1950s architects like Erskine reclaimed back the values of functionalism, as also did members of Team 10 such as Aldo van Eyck, for whom "what is really required is functionalism–

functionalism in more levels–of a broader inclusive kind" (2003 [1981]). In their critique becomes apparent the distinction between functionalism and modernism[3] that they perceived as dogmatic and stereotyped, it "quickly became a style, and this was it's tragedy...was consistent with production but no longer satisfying for those who would use it". Being a fundamental aspect of architecture, the discussion should not be about the form or the style. According to Giancarlo de Carlo Erskine was interested in form, but form should remain implicit, "in talking about architecture he would talk about energy-saving...or about participation" (Tuscano, 2005, p. 343). The resulting form in Erskine's projects is the solution he found to the questions at the heart of the project, he admitted that other designers might find other solutions that could be equally valid, yet buildings are to be discussed in relation to how solve specific architectural problems (1980). In the functionalism of Erskine, forms are not arbitrary or predefined, they respond to specific functions, such as climate or user interaction, not necessarily forgetting about the function of rational construction (fig.3.8). Modernism in codifying a pre-defined style and an object-oriented architecture was falling in the same trap than the academicism it was reacting to.

Modernism in codifying a pre-defined style and an object-oriented architecture, losing sight of fundamental functions of climate, shelter, site, community and human life was falling in the same formalistic trap as the Academicism against which it originally reacted. For Bahnam it was in a later phase that modernism became impoverished. For him, when the discussion moved to the periphery, away from the geographical core where it was developed, it lost the intellectual depth of the discussion around architecture (pp. 320-321). I would argue that, as we will see in the case of Stockholm, in a context of accelerated increase of production of mass-housing and integration of the car and large scale retail, this evolution can be also be connected to the forces and interests that shape the questions design responds to.

3 A definition of Modernism that fits well here can be found at RIBA's web page: "Rejecting ornament and embracing minimalism, Modernism became the single most important new style or philosophy of architecture and design of the 20th century. It was associated with an analytical approach to the function of buildings, a strictly rational use of (often new) materials, structural innovation and the elimination of ornament. It was also known as International Modernism or International Style, after an exhibition of modernist architecture in America in 1932 by the architect Philip Johnson". https://www.architecture.com/explore-architecture/modernism (last visited 28th april 2025)

Figure 3.8
Ralph Erskine's expressionist functionalism. Alhuset at Stockholm university. 1979.
The canopy responds to climate, water collection and transmission of forces to the ground. Individualizing the structural components, the scale and choice of materials to invite the students to appropriate the building. Photo by the author.

Figure 3.9
New typologies from the 1940s
Left: stjärnhus in Gröndal. Unknown photographer: Arkdes. ARKM.1962-101-2045. Public Domain https://creativecommons.org/publicdomain/mark/1.0/deed.en.
Right: punkthus in Björkhagen. Photo by the author.

1940s Variation and Efficiency

As introduced above, rationalism is interested in types, thus it addressed the monotony of repetitive parallel blocks by incorporating new typologies (fig.3.9). An interesting note about this experimentation is the *stjärnhus* (star house) introduced by Reinius and Backström in 1944 in Gröndal, Stockholm. Much more extended is the *punkthus* (point house) which is square in plan and high. These new types were not only aiming at more variation, but also at more optimisation of the construction. The blocks become deeper in order to have more floor area per staircase, the *punkthus* makes possible to have four apartments per stair case, instead of the two of the *lamellhus*, not to speak about the increase of height up to 10 or 12 floors. Another characteristic of rationalist modernism is the focus in the architectural object. The volumes are objects distributed in the landscape rather than grouped to shape the urban space, diminishing the relation between them and between building and street. In the plan of Björkhagen can be appreciated the squared-shaped typologies (fig. 3.3).

1950s New Empiricism and the Humanisation of Functionalism

The so called new empiricism represents well the evolution of functionalism during the 1950s, and the crossed influences between England and Sweden (Monica Andersson, 2016; Creagh, 2011; Carolin, 2008; Sigge, 2008). Rather than as new style, here is discussed as a reinterpretation of functionalism. Beside the rationalist typological response to monotony discussed above, it represents a different response in line with romantic-expressionist addressing perception, user experience, and human scale. The Architectural Review (1947, 1948) introduced the Swedish New Empiricism, as an attempt “to humanize the aesthetic expression of functionalism”, that aims to introduce more objectivity and still deals with science, but other kind of science, such as psycology and those that deal with how we perceive the space and it influences us (1947, p. 199). Ralph Erskine was one of the architects included to exemplify this tendency, but also Sven Markelius, one of authors of Acceptera. Other authors of Acceptera reflected about the excesses of the paradigm that they had advocated for:

> In 1936 Asplund suggested that while the ‘lamellhus’ type offered great increases of sunlight and fresh air, the monotony entailed in these lengths of identical apartments standardized the lives of their occupants….Asplund warned of the dangers of lost individuality...Åhrén was to write that the great failure of 1930s was the reduction of housing to purely statistical terms, emphasizing efficiency at the expense of individual needs and a sense of place and community. (Creagh, 2008, pp. 135-136)

However, these excesses that lead into a utilitarianism reduced to the application of a narrow set of parameters can be traced back. The monotony and repetition derived from a housing focused in production and efficiency is not new, neither intrinsic to functionalism, as is found in the text by Raymond Unwin, core figure of the garden city movement:

> ...we have neglected the amenities of life. We have forgotten that endless rows of brick boxes, looking out on dreary streets and squalid backyards are not really homes for people, and can never become such, however complete may be the drainage system, however pure the water supply, or however detailed the bye-laws under which they are built. (1911 [1907], p.4)

New empiricism recovers aspects of the garden city, incorporating non-orthogonal street network, artistic urban planning in British and German tradition, relation to greenery, it is also connected to the style known as Swedish grace, that precedes functionalism combining classicism with new ideas from modernism imported from Germany (being the more famous example is the city library in Stockholm by Gunnar Asplund). As Monica Andersson suggests, the new empiricism and the garden city, can be inscribed both in modernism, and in a long tradition of austerity in Swedish design. She also opposes it to rectilinear rationalism.

> The garden city era emerged at the turn of the century in 1900 as an early modernist reaction to the shortage of workers’ housing in the inner city with right-angled streets and narrow dark courtyards. It was built organically with tree-lined streets and lots of greenery in artistic city plans based on international models. The ideas were reshaped here following the austerity characteristic of Swedish traditions since 18th century, such as the internationally admired Swedish Grace. In the 1940s, the ideas resurrect

> in a new form internationally known as New Empiricism together with neighborhood planning, a reaction against the rectilinear type of modernism that broke through around 1930. (2016, p. 131, translated and adapted from Swedish by the author[4])

General plan from 1952

Uno Åhrén and Sven Markelius were important figures in the promotion of rationalism in Sweden. They participated in the CIAM from its foundation, and had direct contact with the work of Le Corbusier, May and Wagner at the housing exhibitions in Germany. Both also became very influential in the development of urban planning in Sweden, Åhrén was professor in urban planning, and both were directors of the planing offices in big Swedish cities, Åhrén in Gothemburg and Markelius, between 1944 and 1954, in Stockholm, taking direct action in the planning and design of many of urban developments of the period. In their influences, after World War II there is a shift from Germany to England, and an increased interest in social aspects of planning. Specially in Markelius can be appreciated a softening of the rationalist forms.

Markelius was director of the city planning office when was released the General Plan for Stockholm from 1952 (Stadsplanekontoret) that replaced the one from 1928. The new General Plan was very comprehensive and would guide the growth of Stockholm in the following forty years. It was based in a previous document, *Det Framtida Stockholm* titled in English “Stockholm in the Future: Principles of the Outline Plan of Stockholm” 1946 (Stadsplanekontoret, 1946), were are defined the structural guidelines of the General Plan, which thus reflects discussions raised already during the 1940s. It introduced and systematised a model of growth inspired in London’s New Towns. The model is composed of a series of satellite towns built around a metro station, aiming that should work

4 Translated and adapted by the author. The original in Swedish reads as follows: “Trädgårdssstadsepoken uppstod vid sekeskiftet 1900 som en tidig modernistisk reaktion mot arbetarbostadsnöden i innerstaden med rätvinkliga gator och trånga mörka gårdar. Den byggdes organiskt med trädkantade gator och mycket grönska i konstnärliga stadsplaner efter internationella förebilder. Idéerna omformades här i den svenska sparsmakade traditionen från 1700-talet som Swedish Grace, beundrat internationellt. På 1940-talet återuppstod idéerna i en ny form som internationellt kallas New Empiricism med grannskapsplannering, en reaktion mot den rätlinjiga typ av modernism som slog igenom runt 1930”.

Figure 3.10
Vällingby, by the author.

independently, incorporating all the elements of urban life. The model would be marketed later as the ABC city, making reference to the three areas A for *arbete* (work), B for *bostad* (housing) and C for *centrum* (centre that contains all the services and community facilities.

Car and Retail

The majority of the developments built under this model were not big enough or far away from the city to work as independent units, however, it is consolidated a model that consists in a sequence of housing areas around a centrum with a metro station, shops, post office, typically a library, and sometimes a swimming pool. Workplaces are missing in most of the developments and the model leaned towards neighbourhood units organised around the idea community, rather than being fully functional towns. There are two developments from the early 1950s designed by Markelius that are closer to the proposed model due their size

and the scope of the services incorporated, Vällingby (fig. 3.10) to the north, and Farsta to the south. Both have as a direct precedent the development of Årsta from the early 1940s, that counted with the participation of Åhrén. Vällingby became a reference in urban planning in Europe (Creagh, 2011; Hall, 2008).

The three above mentioned developments incorporate multifamily housing slab-typologies that seek direct contact with greenery, light and fresh air. The contact with surrounding greenery is not defined by a clear border, so the buildings can be merged with nature. In the street network there are influences from the garden city and the more sensorial approach of romantic-expressionism. The layout adapts to the landscape in winding streets that break the monotony. But, aside the form that moves away from the rectilinear rationalism, it can be found a rationalist approach in the clear hierarchy of orders of street types, including cul-de-sacs in the lower levels. Buildings are conceived as objects in relation to the landscape and to their own plot, rather than disposed to shape the urban space. In Vällingby the same logic of order and hierarchy affects the overall scheme, which is organised around a centrum with services and public transport, with a first ring of apartment buildings (higher next to the centrum) and a second ring of single family houses. This clear hierarchy was not present in Årsta, where are built apartment buildings, predominantly slab-typologies and also point-buildings, with a more even distribution, aiming at a close contact with the forest.

In the transition between Årsta and Vällingby retail and car gain importance as new driving forces shaping urban space. The centrum in Årsta was clearly community oriented, with a car-free well defined central square, built in the four sides, surrounded by a cinema-theater, a culture centre and some shops. In Vällingby the centrum is transformed into a shopping centre with a regional scope (Sax 1998; Creagh, 2011), the square, still car-free, becomes more open in the sides and connected to parking areas that attract visitors. The open square, the shopping mall of regional scope, the adjacent parking areas, and the higher concentration of density and height around the centrum, are clearly present in Farsta, and, in a smaller scale, in the plan of Kärrtorp (fig. 3.3).

Garden Cities of To-morrow versus the Garden City Movement

Sven Markelius moved from a strict rationalism influenced by German experiences and the CIAM, towards a more "humanised" functionalism, with references from England and London New Towns that connect to ideas of the garden city that he had rejected in Acceptera. Nevertheless, at this point is important to differentiate between the garden city originally formulated as a project for social reform by Ebeneezer Howard (1965 [1898]), and the formalisation of the garden city movement that prevailed as an urban typology. The General Plan of Markelius is clearly influenced by Howard's model, while, as we have seen, functionalism in the 1940s and 9150s will incorporate design characteristics from the garden city movement (fig. 3.10).

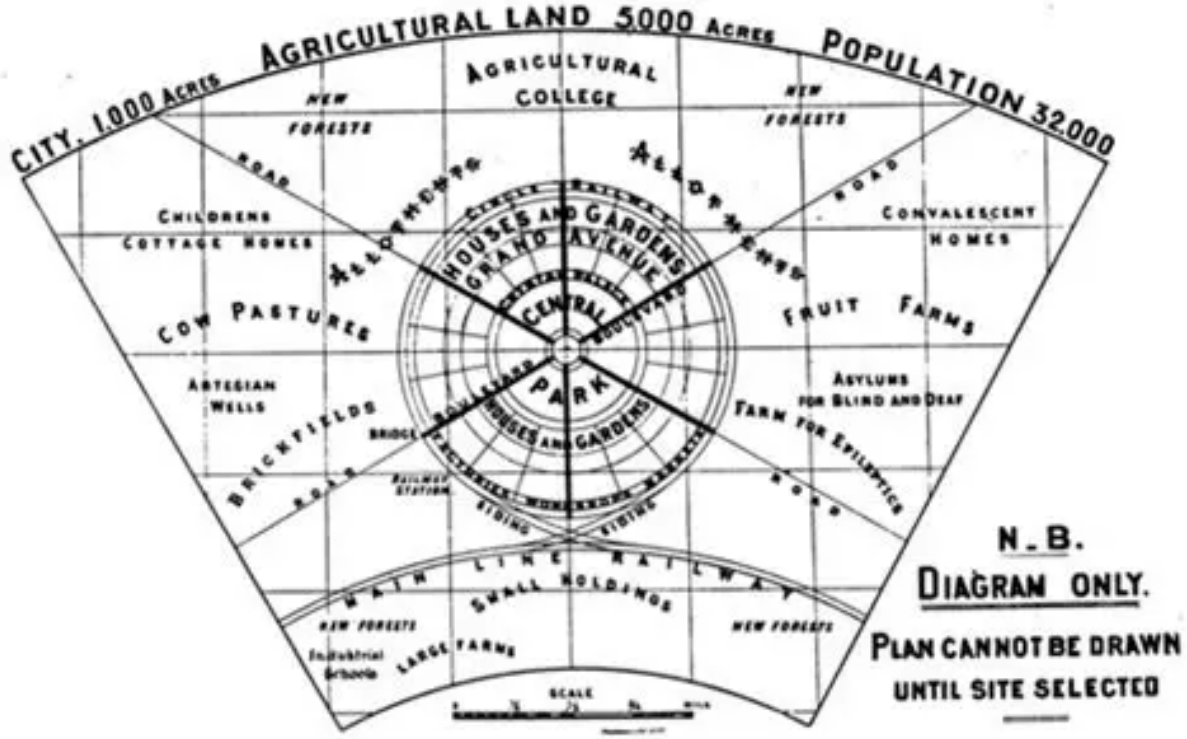
Ebenezer Howard offered a comprehensive development plan, including a social, economic and structural model. It proposes to build new self-functioning cities separated from the overcrowded city centres for of around 30.000 inhabitants, an ownership model and a business plan, it talks about density and sizes of streets but not about specific typologies, styles or design rules.

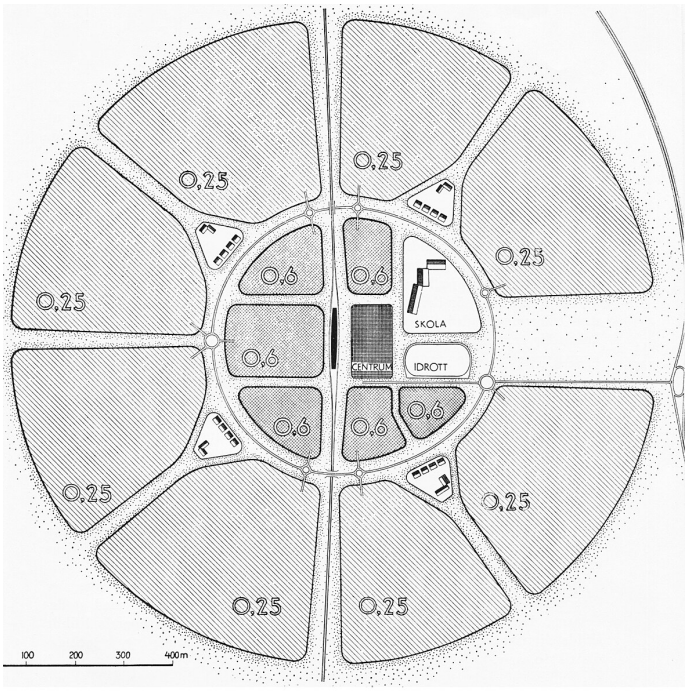
However, since the implementation of the first garden cities is lost the structural aspect focusing in its spacial qualities, the experience of the user and the idea of community. Influenced by Arts & Crafts, the English village tradition, and close to Camilo Sitte's artistic planning, garden cities are codified as small scale areas, continuous non-orthogonal street network and single family houses with a garden, and greenery in parks and the streets. This codification is very influenced by the work Raymond Unwin, both theoretical (1911 [1907]), and his practice with Barry Parker designing the first garden cities. Letchwork, built in 1903, the first garden city, with the direction of Howard, followed by the garden suburb of Hampstead from 1906, both for over 10.000 inhabitants.

The garden city incorporates the idea of community. Buildings frame the public space and vistas that emphasised landscape elements or by landmarks such as the church or the school. These characteristics can be found also in the garden cities in Germany, that received influence of English houses and villages through the book "The English House" from

Figure 3.11

Top: The garden city model by Ebenezer Howard (1965 [1898], page 52);
Bottom: the model proposed by Sven Markelius
“Scheme for a suburban community of ca. 10.000 inhabitants”.(Stadsplanekontoret,1946, page 57)





1904 by Herman Muthesius (Banham (1972 [1960])). Both English and German models influenced the Swedish garden city (Rådberg, 1988 and 1995) that was largely implemented in Stockholm suburbs in the first two decades of the 20th century.

The proposal of Markelius is closer to the territorial model proposed by Howard (fig 3.11) while in the design of neighbourhoods he does not incorporate the principles of the garden city movement aside the non-rectilinear streets. But now we need to make a further distinction to understand better much of he functionalism of the 1940s and 50s, that of the first garden city from its later re-vision in the USA.

The Garden City Rationalised: the Neighborghood Unit and Radburn.

The first garden city includes elements related to perception and experience that can be traced in the romantic-expressionist approach to functionalism. Travelling to USA, the garden city movement is revisited in Clarence Perry's neighbourhood unit form 1929. Still associated to community building, it becomes rationalised introducing systematisation and a technical scientific approach, what is reflected in Perry's words "the next great step to be taken in the community movement, it seems to me, is not a change in field but the development of a scientific technique for its study" (Perry 1930, p. 560).

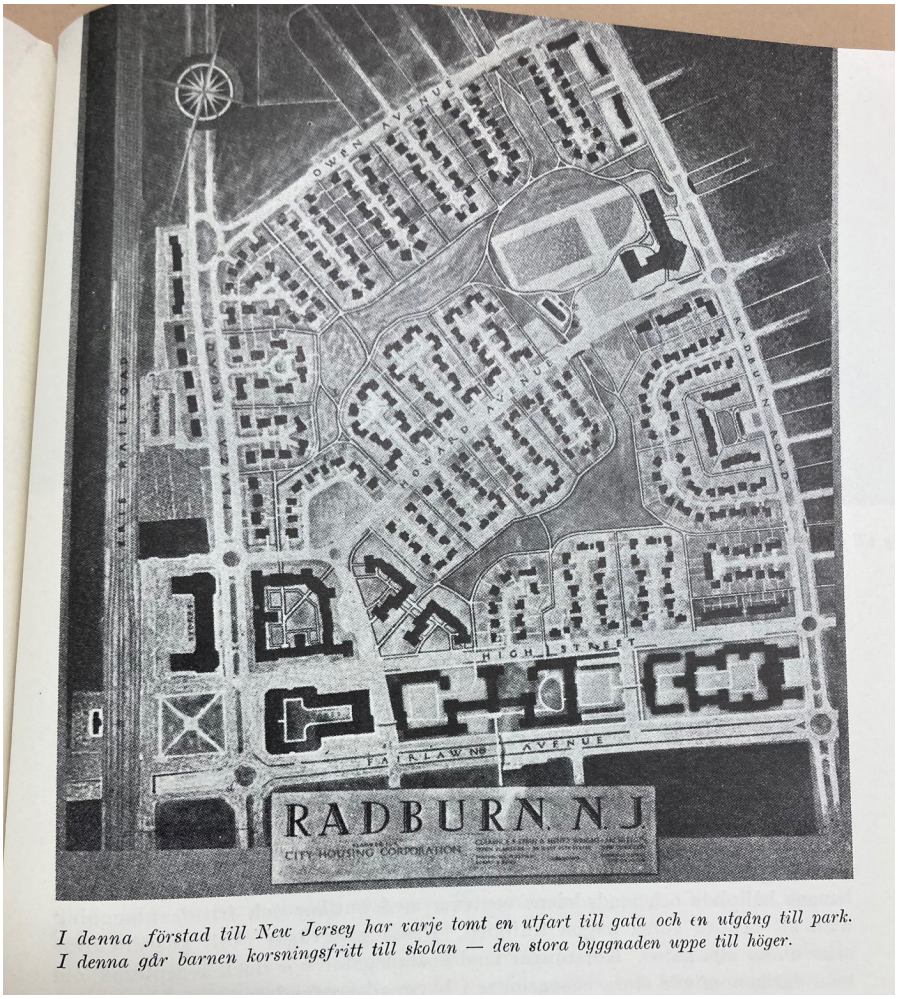
The housing development of Radburn in New Jersey, also from 1929 by Clarence Stein and Henry Wright, was an important reference in Sweden (see chapter 1), and it is included as a reference in *Det Framtida Stockholm* (1946) that precedes the General Plan from 1952. In the footnote for the plan of Radburn its qualities are explained as follows: "in this suburb of New Jersey every plot has an access to the street and an access to the park. Children can go without crossing any street to the school – the big building up to the right" (p. 97) (figure 3.12).

In the neighbourhood unit (fig. 3.13) there is still a community centre and the streets are not orthogonal, aiming to provide changes of views and perspectives to the pedestrian. Different from the garden city, that relied in row houses and villas to create a dialogue with the street, in Radburn the villa is a much more individualised object (as it happened in the evolution of modernism), that prioritises its own views, access and protection than the

Figure 3.12

Radburn as included in the page 97 of Det Framtida Stockholm

"In this proposal from New Jersey, every plot has one access to the street, and one access to the park. Here, children do not cross any street to go to school - the big building up to the right".



I denna förstad till New Jersey har varje tomt en utfart till gata och en utgång till park. I denna går barnen korsningsfritt till skolan — den stora byggnaden uppe till höger.

promotion of a social space. The street network is also more rational in that it introduces different street levels to reduce the speed in each of them, ending with cul-de-sacs, leaving a car free area in the middle. This is different from the garden city that has an integrated continuous street system. Still, the neighbourhood unit does not have a built border, here the border is defined by main streets that divert faster traffic in the periphery of the unit, while buildings are separated form the border to protect them from the traffic.

We can localise two main driving forces that influence this transformation. One is the car together the safety measures to protect the interior space from the traffic. Another is a shift from understanding the disposition of the houses as part of the community (which is reflected in how they frame the street as the common space for socialisation), to a more

Figure 3.13

Neighbourhood Units for single family houses (above) and multifamily buildings (bottom)

From: Perry, Clarence (2020 [1929]) pp 262 and 466

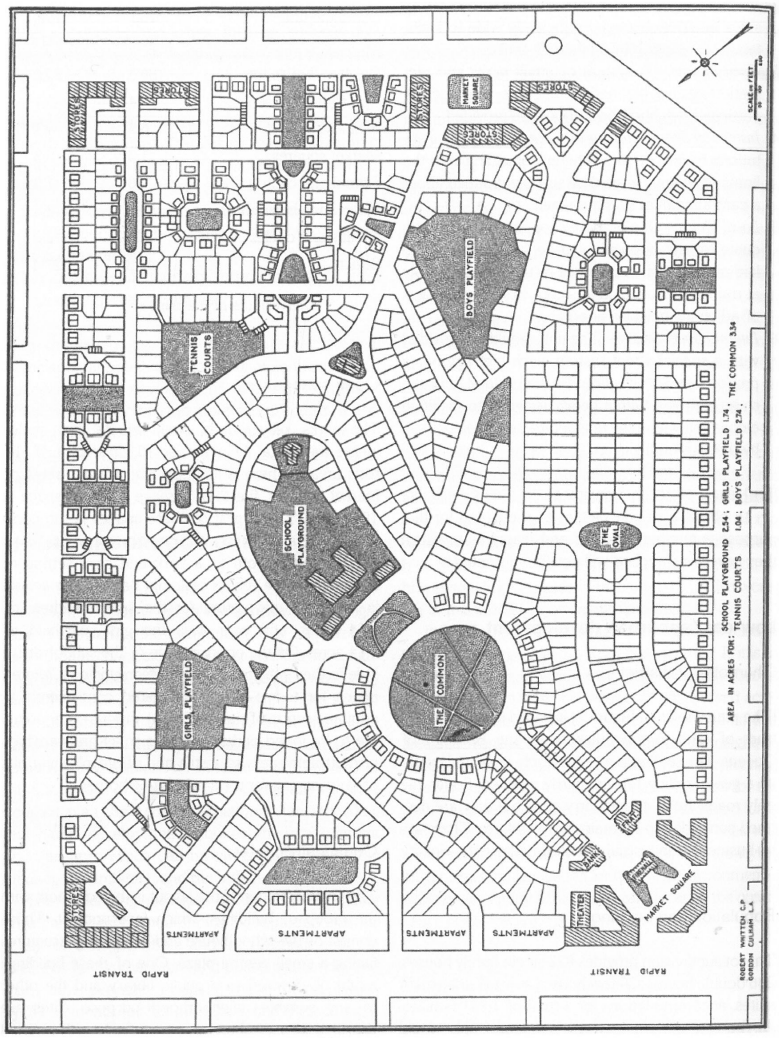


Figure 1 A Subdivision for Modest Dwellings Planned as a Neighborhood Unit

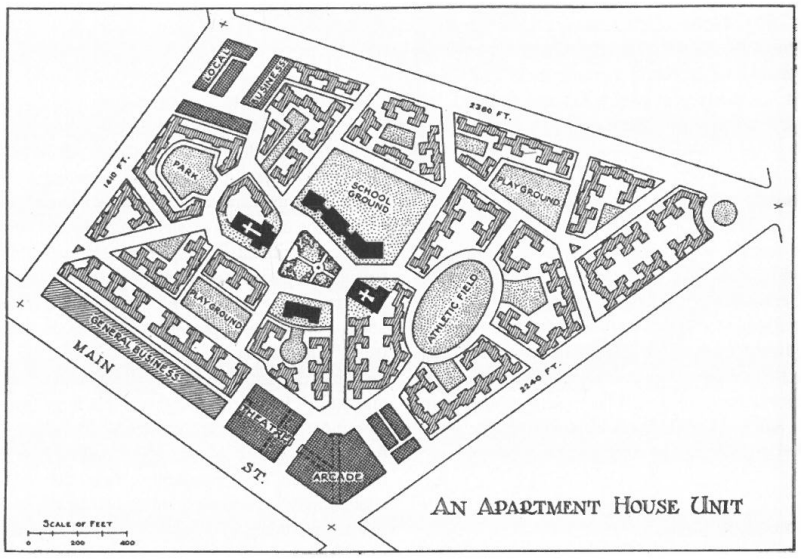


Figure 3 A Method of Endowing a Multiple Family District with Interesting Window Vistas, Greater Street Safety, More Liberal Open Spaces, and a Neighborhood Character

individualistic understanding of the house as an object, placed in relation to its own vistas, to the sun and to privacy from disturbances from the public space. While the street becomes a vector of movement for the car. In an efficient rational way, socialisation will not occur in the integrated continuous urban space, but in specific allocated spaces, such as the park or the community centre. Perry's neighbourhood units were not restricted to villa areas, he also proposed multifamily units, the footnote of the example of the "apartment house unit" is emphasised that the design provides with "Interesting Window Vistas, Greater Street Safety" ((2020 [1929]) p. 566) what mirrors the object oriented approach of modernism

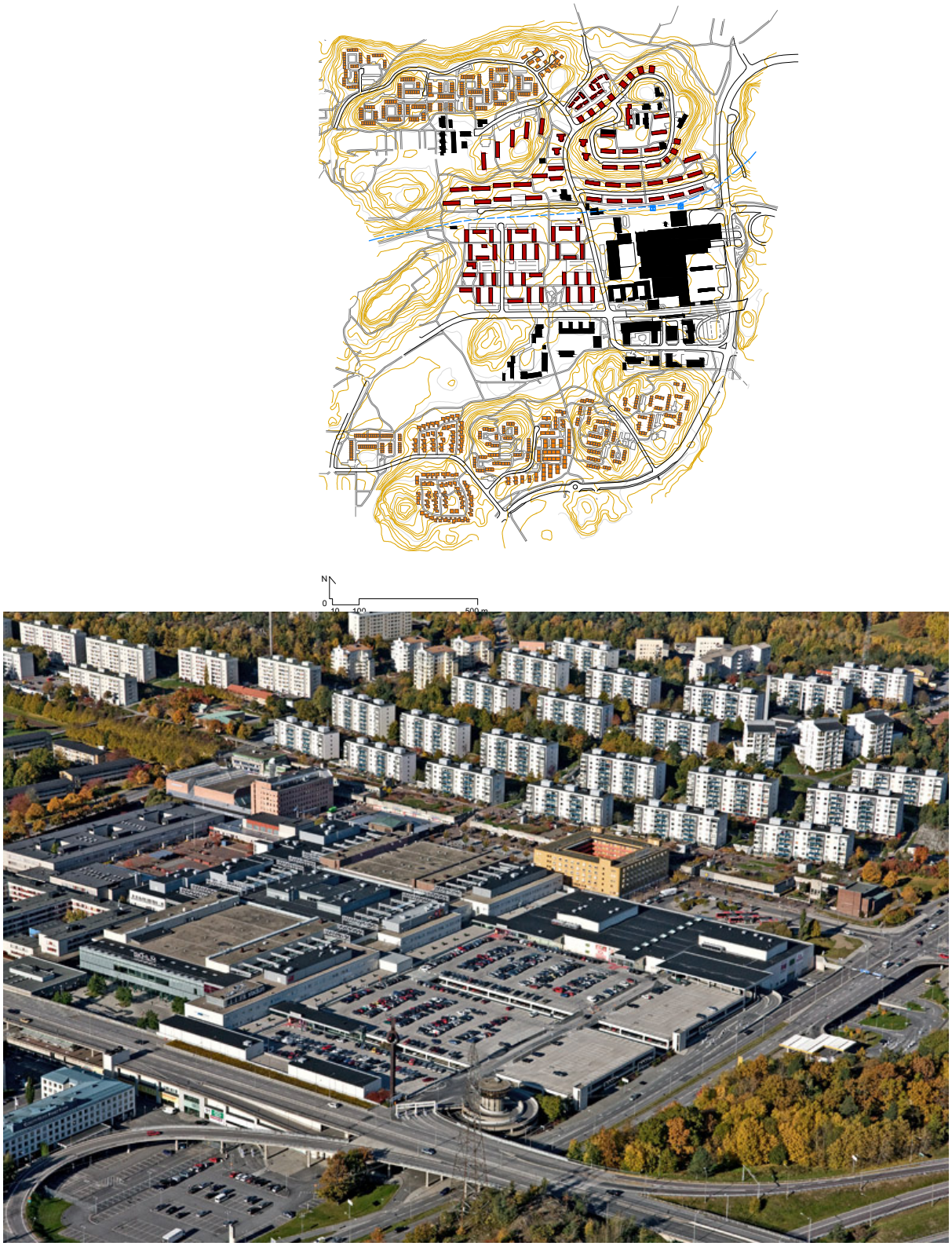
Altogether, rationalist areas from 1940s and 1950s in Sweden (see in this chapter Björkhagen, Kärtorp, Vallingby) inspired in the neighbourhood unit principles aim to keep the winding streets embracing the landscape, although, after the introduction of the car and rationalist systematisation, they do not form a continuous street network, instead, they introduce a hierarchy of street levels. Pedestrian paths make possible to move without interfering with the car and to have access to nature, often introducing bridges or tunnels to cross main streets. There is typological experimentation, altering types and how buildings are grouped. Housing is protected from the street and the object-buildings look for vistas to greenery rather than to interact with the street. A clear hierarchy is established with a centrum that concentrates services and housing surrounding it, often with a gradient of density.

1960s Car-Oriented, Production-Driven.

Functionalism in its more extreme utilitarian form becomes a matter of production. The designer and the craft-person disappear from the process, and the city is the result of applying parameters, models and industrial repetition. Skärholmen in Stockholm (fig. 3.13), includes a regional shopping centre, large parking spaces and industrialised production. It is a prototypical example of a development driven by the interests of building, retail and traffic corporations, where even the name of the architects cannot be found in the documentation of the project (Mattson, 2015).

In the mass-housing period the Record Years (Rekordår) that starts in 1960, industrial production and efficiency define large scale developments characterised by prefabricated

Figure 3.14
Skärholmen.
Top: drawing by the author.
Bottom: photorgraph by Jan Augustsson / Kulturmijöbild, Riksantikvareämbetet Swedish National Heritage Board.
https://creativecommons.org/licenses/by/2.5/deed.en



concrete elements, repetition of well design apartment units, as well as by traffic separation and hierarchical street networks. Urban design in Sweden has been done to a large extent following traffic safety recommendations that define an urbanism based in traffic separation, clear hierarchy of streets, well defined neighbourhood units, simplicity and uniformity, forming a paradigm that aims to be scientific (Hagson, 2004). Car has been a predominant function of urbanism since modernism, not only in those cases that are clearly designed for traffic efficiency, but also in pedestrian areas that depend in the re-distribution of traffic around them, creating small or large islands delimited by traffic apparatus and parking areas (Koch 2021).

Rationalist examples based in industrialised production, repeat a well-designed and flexible apartment type to form linear lamellhus, which in turn are repeated to conform the urban landscape (figs. 3.2 and 3.13). Later on, planning director Torsten Westman (1980) reflected that developments like Tensta had good, well built and flexible apartments but the repetition, lack to attention to the detail and the street-scape was not providing with good urban spaces.

3.5. Relation Between Objects and Between People and Objects

Team 10 member George Candilis expressed the reaction to the dogmas adopted by CIAM, not in terms of the validity of the ideas, but of how they were implemented and of the bureaucratization of city making:

> In the cities destroyed by the war, town plans were drawn up. But the architects and senior bureaucrats were unable of undertaking genuine reconstruction because they'd never done it before…New town plans for each city and village begun, in compliance with what was stated in The Athens Charter. It was ridiculous to follow the rules that way, without understanding what they were about. (Tuscano, 2005, p. 322)

Annie Pedret (2013) emphasises the role of Dutch architect Jap Bakema in the formation of Team 10 and in introducing the idea of town planning based on relations between objects and between man and object, which aimed to substitute the object-centred

approach of the previous generation. In 1952 future Team 10 members organised a gathering in Sigtuna, Sweden, to prepare the CIAM IX conference under the concept of habitat. This meeting became an important moment in the process that culminated in the formation of Team 10 and the dismantling of CIAM in 1959. The idea of habitat "represented to them [Team 10] an approach to modern architecture and planning based in relationships – social, physical, and formal – integration, articulation of differences, and change over time" (p. 83).

There have been also traced to this gathering discussions that raised an interest on the ideas of time and adaptability, particularly from members of the Swedish and Dutch delegations, ideas that would be further developed by structuralism (Sigge, 2015), which aims to systematise adaptability and change over time. Structuralism could be opposed to functionalism in the sense that it does not deal with the functions of the spaces. But that opposition is only true if we reduce functionalism to a very narrow understanding of architectural functions of spaces defined by specific uses. Structuralism fits into a functionalism understood in a broad sense, considering also architecture functions of order, production, growth, adaptability or maintenance. In essence is rationalist for relying in geometrical order and repetition, however, if not of typologies, or construction solutions.

Structuralism is not a coherent theoretical body and approaches the question differently in different countries and contexts, either from the perspective of production or from the perspective of the spacial configuration. Swedish structuralism was pragmatic and it was not supported by a theoretical corpus. It dealt with standardisation, dimensional agreements, industrialisation, efficiency, and systematisation of design and production, as well as with facilitating the replacement of components. Production-oriented structuralism was systematically applied by the Swedish National Board of Public Buildings (SKB), and can be recognised in the production of large scale mass housing of the 1960-70s (Ahrbom, 1980; Sigge, 2016). Falling into utilitarianism in its more extreme versions based on production and traffic efficiency.

As it should be clear by now, the same theory or doctrine can follow different paths. Within Dutch structuralism we find a rationalist approach in Jonh N. Habraken, pioneer

in the conception of the mass production of flexible housing in the 1970s, while Herman Hertzberger, moved away from the question of production, to approach structuralism from the conception of the spatial configuration and the interaction with the space. He participated in some Team 10 meetings and was a direct collaborator of Aldo van Eyck who is considered as the father of Dutch structuralism, particularly for his Amsterdam orphanage. Hertzberger (2015) describes spatial rules that allow the user to play freely in the built environment, exploring geometrical spatial configurations that permit differences in the way they are appropriated and adapted to different uses. He saw structuralism as a way to enhance the user experience and its interaction with the space. For him "space unfailingly requires a degree of order, as freedom from restraint cannot exist without rules of play" (p. 7).

The spatial experience and the appropriation of the space is searched in Sweden by Ralph Erskine from an expressionist attitude. Based in the specific qualities of the place and the project, the form will express those qualities rather than a narrow definition of functions. The same qualities are searched in the Netherlands from a rationalist approach by van Eyck; and continued by Hertzbergers's structuralism based in geometrical order and a systematic repetition of construction solutions (rather than repetition of types), that allow for variation and adaptation to generate different spacial conditions, whose use will defined by the user.

1970s Grouping Buildings in Stockholm Suburbs

Rinkeby and Tensta (fig. 3.2) form the first phase of the development of Järva. In a second phase were built Kista, Husby and Akalla in the 1970s (fig. 3.15). They maintain the rationalist mass-production, the traffic-oriented planning and the regional shopping centre. However, if during the 1940s and 1950s, a rationalism focused in the object had abandoned the street as the space of socialisation. As it has been discussed in chapter 2, Torsten Westman (1980) described a conscious evolution towards recovering the experience of the urban space and what he called *stadsmässighet* (city-ness). Variation is addressed through changes in height and the use of material. Buildings are grouped to enhance the relations between them, and with the public space, which are the first steps towards the incorporation during the 1980s of grid plans and building typologies that occupy the four sides of the block to recover the street as a social space.

Figure 3.15
Kista, Husby and Akalla Drawing by the author.

1980s Postmodernism and Social Functionalism

Architecture and urban design during the 1980s often fall under the label of postmodernism. On the one hand, stylistically it diverts from modernism's or the Internationals Style's white cubic architecture with no ornament. Postmodernism incorporates elements of classical architecture such as frontispieces or columns, often used in an ironic way, aiming to soften and humanise the dry architecture of the rationalism. On the other hand, for Team 10 members, such as Van Eyck, Erskine and Giancarlo de Carlo, postmodernism was merely a continuation of the kind modernism they criticised for being object centred and self-referenced, denying the context and the relations (Tuscano, 2005). Now incorporating different elements of design, what to some extent falls back in the façadism based in the choice of styles that the early functionalism was criticising from Academicism. Aldo van Eyck ((2023 [1981])) was specially belligerent against postmodernism, but here I will not go into evaluating or judging the ideology behind it, here postmodernism is introduced as a part of the path that gives continuity to rationalist modernism in the way the buildings and the space are structured.

In the 1980s municipal architects still had a big influence in the formalisation of the urban projects. There are three names that appear repeatedly as city architects in charge of urban projects in this period: Aleksander Wolodarski, Jan Inghe-Hagström, and Leif Blomquist. The last two, whose work has been discussed for being the city architects of the case studies presented in the previous chapter, allow us to trace further rationalist and romantic-expressionist paths in the decade of 1980. Both work within the same working environment in of the municipality, the same planning processes still grounded in Folkhem ideals and still following the last impulse of the Miljonprogram. Both had a social concern about the effect of architecture and of urbanism to provide with a good environment for everyone.

Inghe-Hagström was the architect in charge of Minneberg (fig. 3.16) to the west of Stockholm, not far from the inner-city. The project shows a clear symmetry and postmodern elements in the architecture. He was also on charge of one of the relevant projects at that

Figure 3.16
Minneberg. Drawing by the author.
Note that this plan i is double scale than the other plans in this chapter

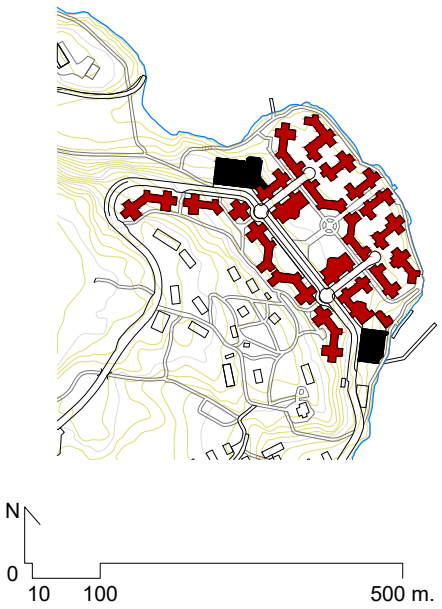


Figure 3.17
Skarpnäck
Expressionism in the blocks designed by Arken Arkitekter

time, Södra Station, in Södermalm (see fig, 2.24). Inghe-Hagström, known for promoting postmodernism in Stockholm, invited Leon Krier and Ricardo Bofill to participate in different ways in this project (Mattson, 2020). I line with the interpretation of postmodernism as a continuation of modernism, his approach in both projects - Minneberg, in the suburbs, and Södra station, in the inner-city - is rationalistic in the systematic way solutions are applied and the introduction of typologies combined in the urban space. An approach to postmodernism and rationalism that I have discussed in chapter 2 can be also appreciated in Hammarby Sjöstad, were Inghe-Hägstrom was also responsible architect.

On the other hand Skarpnäck (see fig. 2.25), where Blomquist was the responsible architect, with its use of brick and pitched roofs could be associated stylistically to postmodernism, but there are differences in the approach to the design and the urban structure that indicate that Skarpnäck follows a romantic expressionist path. Which is specially visible in the six blocks to the southwest of the area designed by Arken arkitekter (fig. 3.15), becoming apparent their experience in the office of Ralph Erskine. In their case the pitched roofs are not elements added to the architecture but an adaptation to the climate of the north, used to create a varied landscape that emphasise specific corners. Among the different architects working, provably these blocks are closer to the spirit expressed by Blomquist (1980) of bringing the qualities of the garden city. In this sense, if we look to the approach to urban design of Blomquist in both Kv. Dalen and Skarpnäck, it is more connected to romantic-expressionism, to the empiricism and to the work of P.O. Hallman. Blomquist in a personal interview (April 22 and June 13, 2024) made reference to the work of Ingrid Gehl (1971) and her study of the influence the urban environment has in people and social relations. His goal in the design of the intricate spaces of Kv. Dalen and in the sequencing of Skarpnäck is to generate social spaces, contact, care and spontaneous surveillance of the space, in order strengthen the community in what he denominates social functionalism, which connects him to the idea Erskine had about early functionalism, or architects like Jan Gezelius who Blomquist recognises as an influence. Blomquist social functionalism that can be thus associated thus to the romantic-expressionism, followed a different path to address the same objectives than Inge-Hägström’s rationalism.

3.6. Recapitulation

Functionalism in Stockholm has been analysed as a philosophy or approach to design that can be manifested under a wide range of forms, as it was understood since its early formulation in the 1920s, and reclaimed again after 1950. It is avoided a deterministic view of functionalism as a unitary style that evolves inevitably into large scale, repetitive, grey urban environments dominated by the car. This requires to distinguish between functionalism theorised as a philosophy or approach to design for the first time during the 1920s, from modernism, in which functionalism builds on, but started to be formulated already in the 1890s, which shall be further differentiated from its codification as a style after 1930 under the Modern Movement. Furthermore, when analysing an urban area, is needed to differentiate between the doctrine or philosophy itself and other driving forces that influence how is shaped the space.

Drawing on the early classification of functionalism by Adolf Behne, the approaches to design have been conceptualised as paths that run across periods and styles. When studying and classifying the selected urban environments, due to their complexity, it is not possible to fully ascribe them to a path, but it is possible to localise elements and tendencies from either paths. Romantic-expressionism is expressed by non-orthogonal street networks adapted to landscape, that favour perception of the urban experience, often seeking a dialogue of the building with the streets and with the landscape. It typically includes articulation of volumes, relations between objects, and specific solutions for each situation. It connects to an idea of community and craftsmanship related to the Arts & Crafts movement and loosely to idealised medieval townscapes and guild organisations, reflected in the disposition of the buildings framing the common public space, later expressed by Team 10 as the relations between buildings and between people and buildings. Rationalism focuses in the object itself and produces types to be repeated and adapted to specific conditions. It seeks mathematical order in orthogonal street network, establishing hierarchies of levels of streets. It relates to industrial production and universal solutions that can be repeated, while aiming to recognise the individual within the mass. Individualism in a rationalist urban space is manifested

through the consideration of the buildings as individualised objects. The types are repeated and distributed, often not in relation to each other or to the common urban space, but to maximise their own conditions of light, views and protection from traffic and noise. Which was expressed by Team 10 as object-centred architecture. In extreme versions, zonification takes over spatial distribution, and too strict application of hierarchy of street levels disconnects them from each other, what is reflected in separation of modes of transportation and cul-de-sacs. Big scale production is not intrinsic to rationalism, but mass-production can lead to over-rationalisation of the design, reducing it to a matter of production of housing units in a mere utilitarian way. Utilitarianism can be the result of an unbalanced equilibrium of forces when design is dominated by traffic, production or retail interests. A middle ground between romantic-expressionism and rationalism can be manifested as a hybrid between both, or by incorporating elements from both. For example, in Stockholm since the 1940s street networks of winding streets adapted to the landscape, incorporate a strict rationalist hierarchy of orders of streets, and object-oriented architectural volumes that follow standardisation of types that are distributed with a direct relation to the landscape.

If styles are explained as a sequence of independent periods that succeed each other, the paths that represent approaches to design have continuity across those styles or periods. This allows to blur the transition between functionalism and the styles that precede and follow it. Finally, a style or a doctrine alone cannot explain a housing development, here it is thus proposed to read the resultant urban or suburban areas as the product of the interaction between: the style in which they are expressed; the strand from where design is approached; and the driving forces that influence the materialisation in each case. The three of them will not have the same weight in the final outcome, but a balance shall be searched by the application of the strands, if the style dominates, the project will fall into formalism, and, if certain driving forces dominate, the project will fall into utilitarianism (fig. 3.18).

Under this perspective sustainability is considered as a one of the driving forces that shape the city. In the epilogue, dialogue is proposed as a path for a more sustainable design.

Paths styles & driving forces in Stockholm suburbs

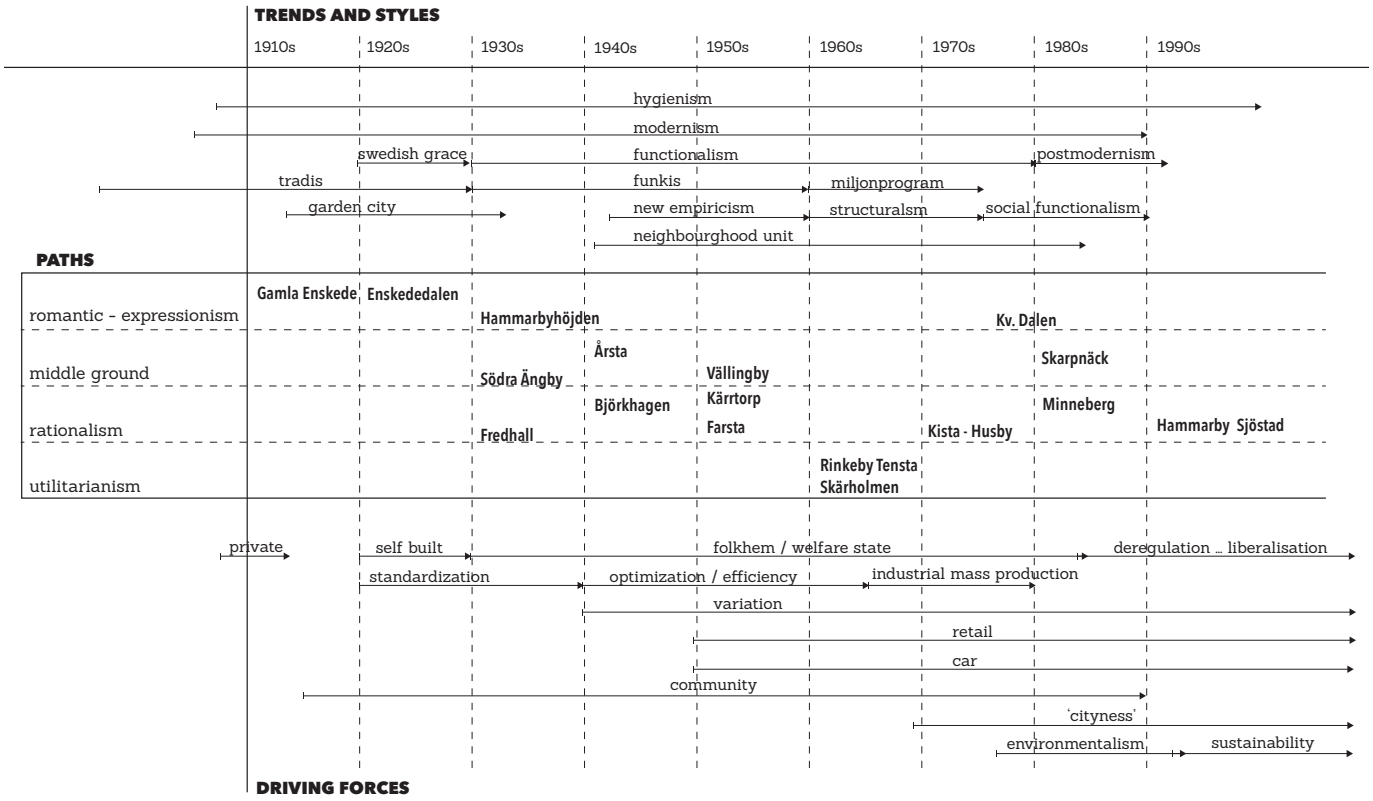


Figure 3.18

Styles, Paths (design approaches) & Driving Forces

The diagram presents a possible way to represent the interaction between the dominant styles of each period, the paths that represent approaches to design and driving forces that influence urban form. Are included the cases introduced in this chapters. Not all the styles or driving forces have a clear start or end, neither they apply to all the projects of their period of influence. Neither the projects fit hundred percent in a specific classification. Therefore, this diagram does not intend to be a scientific representation, but a base for debate and discussion.

Chapter 4

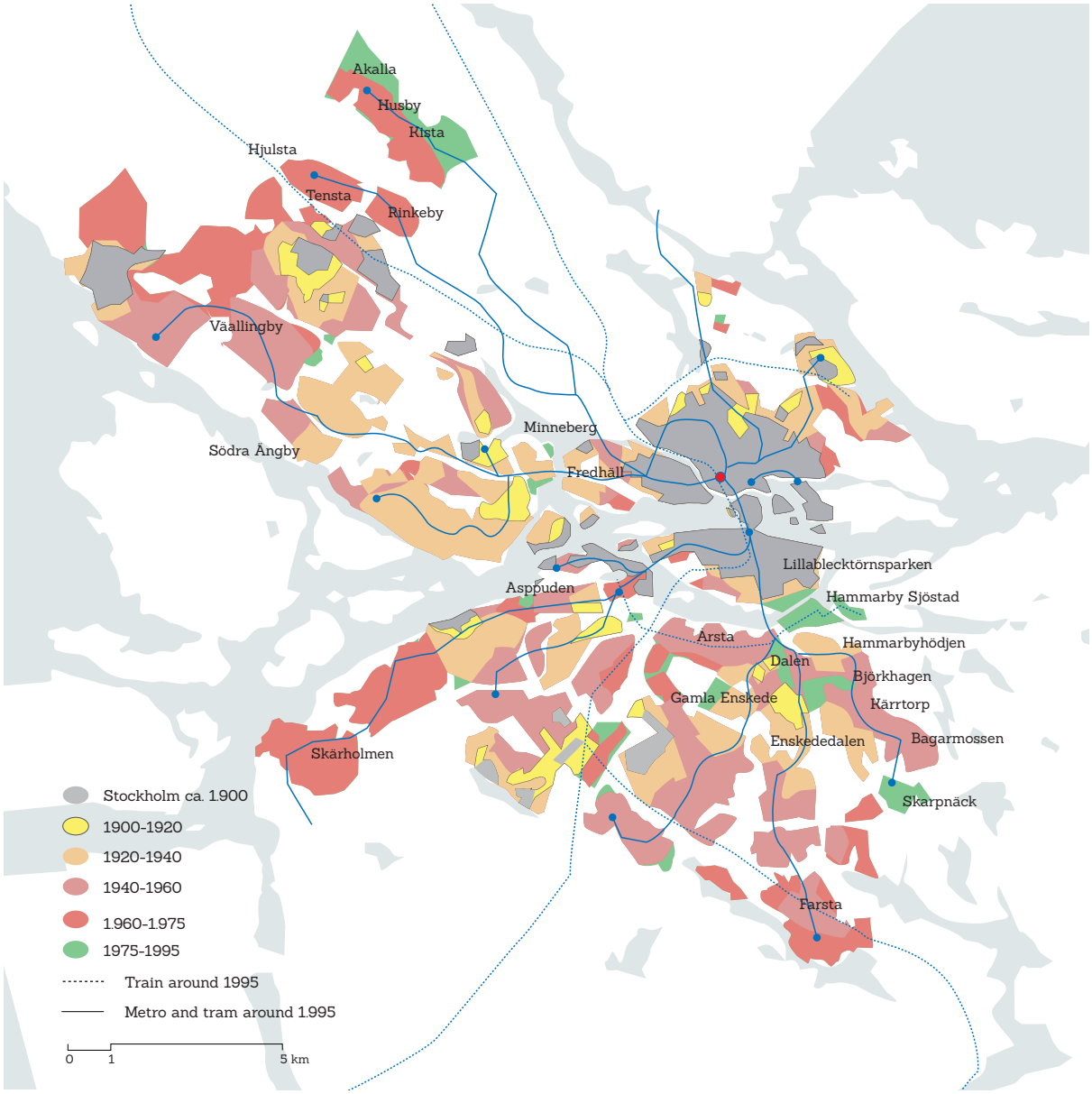
Defining The Suburban Block and the Expansion of the Nodes

The Suburban Block and the Construction of the Stockholm Suburb 1905-1995

During the research has become apparent that provably the most interesting aspect of Hammarby Sjöstad as a case study is that it falls in the middle of a series of paradigm shifts, what positions it at the end of the process of construction of the hygienist suburb during the 20th century, (fig. 4.1) opening the way to explain the suburb as a distinct structure from that of the urban core, and outline some of the characteristics of new paradigms in urbanism. Furthermore, it allows to (see chapter 5) project into the future design of the city, not a model of the sustainable city to be replicated, but a way to approach, read and define the design of the sustainable city in relation to the already existing urban and suburban structures. This chapter deals with the construction of the suburb as a process that starts and ends within the century, which is one of the moments of transformation of the city presented in the first chapter: the expansion of the nodes outside the consolidated city centre. Following are presented the elements that define the suburban block (see chapter 2), in relation it to that larger process of transformation, to driving forces that shape the city (see chapter 1), and to paths in which design is approached (see chapter 3). Then, are defined those paradigm shifts referred above. And, finally, is proposed an account of the construction of the suburb through a sequence of changes in how typologies are applied and relate to the surrounding environment, that expands the one introduced in chapter 2 (see fig. 2.34) adding steps for a more nuanced narrative.

Figure 4.1

Stockholm suburbs 1905-1995



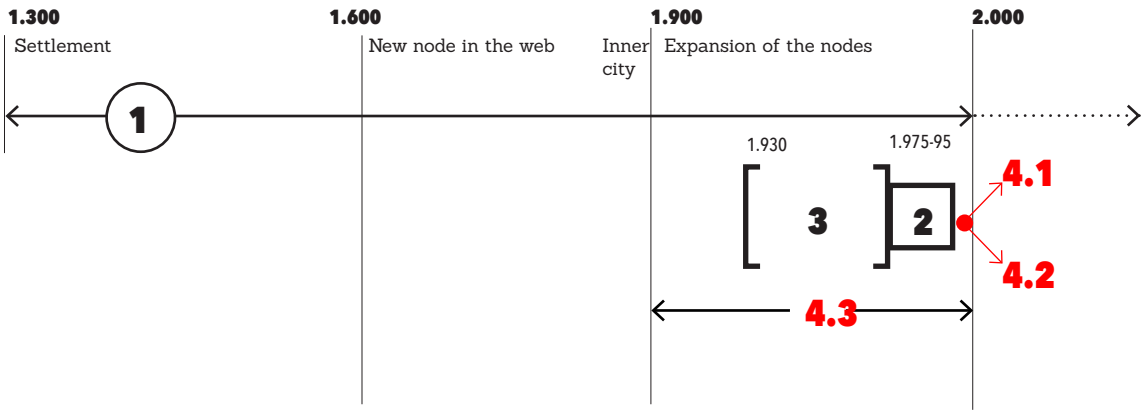


Figure 4.2
The suburban block from 1975 to 1995
Kv, Dalen, Skarpnäck and Hammarby Sjöstad

4.1. A Taxonomy of the Suburban Block. Dissecting Kv. Dalen, Skarpnäck and Hammarby Sjöstad.

Typology: the Suburban Block *(fig. 4.2)*

In chapter 2 has been extensively discussed the genesis and characteristics of the suburban block as a typology of buildings placed in the perimeter of the block, they embrace an inner garden while defining a street scape in the outside. In relation to the urban block, it is characteristic of the suburban block, the conception of the buildings as linear elements, that leave openings in the perimeter to allow sun and vistas, and the careful design of the transition between the domestic and the shared and public spaces.

The typology evolves from Kv. Dalen, as a linear building that bends over itself to embrace a garden, that incorporates qualities of the garden city, with relation to the 'block with big garden' (*storgårdskvarter*) of the 1920s but less self-referenced, aiming to generate an open urban space between the blocks, which, following the rationalist-expressionist path, it is shaped as a continuous urban space of wider and narrower spaces, with changes of vistas, defined before the shape of the blocks, that frame the space. Skarpnäck falls in the middle ground, following the evolution of trends from the 1970s to the 1980s, is introduced some degree of rationalist order by establishing first the regular shape of squarish blocks that define regular linear streets. However, still aiming to introduce the romantic-expressionist sensorial experience of the space, from a first regular scheme, the blocks are twisted to introduce variation of more intricate urban spaces. In Skarpnäck, the buildings are linear elements along the perimeter of predefined block. Hammarby Sjöstad is more clearly positioned in the rationalist path. The urban scheme is departs from tracing streets as linear elements of communication. The character of the space is not defined by its shape and sequence as in Kv. Dalen, here the character is defined by the characteristics of the street, each of them with clear character and means of transport. The buildings are linear elements placed in the sides of the rectangular blocks. Each of the four sides has a different dialogue with the public space depending on the street it faces. Somehow, there is an evolution where in Hammarby Sjöstad the linear buildings placed in different sides form less a unity, while in Kv. Dalen each

irregularly shaped blocked is formalised as a unit.

The approach to the way the blocks are formed has references in different historical moments, that follow in relation to the qualities they try to replicate a similar evolution, where experimentation in expressionist forms that are shaped from the internal needs, are followed by attempts to introduce higher order. See also in chapter 3 how within functionalism, the first period includes more expressionist experimentation to the come to a more controlled middle ground, evolving in time towards rationalism and utilitarianism, which is responded again by looking back to romantic-expressionist. Kv. Dalen, following the tradition of the garden city connected to the arts & crafts movement, looks back to spatial qualities of medieval towns formed by a sequence of narrow and well defined spaces, aiming to replicate in a planned city qualities historical formed by processes of aggregation. The grid of Skarpnäck is closer to the Renaissance tradition, what is reflected in the squared shape of the buildings and the relation with the surrounding landscape, the town is placed as an independent unit in the landscape a complete unit with clear borders, where the streets are visually prolonged outside (note that in Kv. Dalen the vistas are broken and is the space what leads outside the are) and the access points are emphasised with porticoes. The shaping of the grid in Hammarby Sjöstad based in rectangular blocks is closer to the Dutch neoclassical grid, it also introduce a more clear hierarchy an explicit control of the space characteristic of the bureaucratic and centralised state. Even the three are product of the same structure, they reflect different moments, and different balance of forces, that, significantly, follow the same sequence towards higher control and rationalisation. The 1970s look to recover the perspective of the people and looks to qualities of spaces product of spaces of aggregation. Skarpnäck in the 1980s, also in this a middle ground, introduces some degree of order, but also of independence looking to models product of independent city-states of the pre-modern times that are independent units but with a clear rule. Hammarby Sjöstad is embracing the rationalist mechanisms of order and control characteristic of centralised states, and the formalisation of the grid it is closer to be conceived as part of a whole rather than as independent unit.

Public-Private Interface: When Distance Brings Closeness *(figs. 4.3; 4.4; 4.5)*

An important aspect that differentiates the suburban from the urban block is how it mitigates the friction produced by the very direct contact between the street and the building that is found in urban environments. In the suburban block there is a nuanced design of the transitions to protect the domestic space both towards the street and towards the inner garden, introducing a series of elements such as low vegetation, fences, rough pavements or elevation of the bottom floor.

In Kv. Dalen the inner garden is elevated in relation to the street. The perimeter of the block is built in the totality, leaving small openings and arcades to access inner gardens, the thickness of the buildings allows to introduce small ramps to solve the difference of height. The bottom floors are in contact with the ground in the inner side. The streets are either pedestrian or cul-de-sacs with restricted traffic. Balconies generate separation of the domestic space from the street. Next to the buildings, rough pavements and low vegetation protect the space next to the facade, preventing the pedestrians to stop too close to the windows, that are elevated from the street level.

In residential environments the aim to place the buildings framing the urban space while protecting the private realm, distance brings closeness in terms of visual contact. If it existed a direct connection between public and domestic space the resultant interface would be a wall to avoid intrusion of the intimacy. The elements of transition make possible to have mitigated contact, for some distance allows to see without invading the private realm. It is also enhanced an indirect contact, because the spaces of transition are used and cared by neighbours, leaving traces of inhabitation, signals that indicate their presence even when they are not present, establishing a silent dialogue with the passer by.

In Kv. Dalen the access doors to the buildings are located in the interior of the garden, which, together with the mediation spaces, results in streets with very low activity. In Skarpnäck and Hammarby Sjöstad, are introduced more points of access from the streets, which increases activity in the public space, they also incorporate specific streets with commerce and direct contact between buildings and street, while in the more residential

Figure 4.3
Interfaces between building and street; and between building and inner garden.
Kv, Dalen

Figure 4.4
Interfaces between building and street; and between building and inner garden.
Skarpnäck

Figure 4.5
Interfaces between building and street; and between building and inner garden.
Hammarby Sjöstad

streets incorporate the above mentioned elements of transition, both towards the street and to the inner garden: low vegetation, variation of the pavement balconies. Private patios for the bottom floor apartments generate in the inner-garden a transition from the private realm into the shared garden.

Border *(figs. 4.6, 4.7)*

In Kv. Dalen the clear footprint of the blocks and the specific choice of materials defines a very clear border. This contrasts with the functionalistic developments from the 1940s and 1950s built along the metro line 17 and the nature reserve of Nacka (introduced in previous chapter), that tended to have undefined borders to invite the nature inside the area. The bold clear border is also present in Skarpnäck, where the entries to the development are emphasised by making a narrower the distance between façades, with colonnades over the sidewalk (fig. 4.7) . In both areas the border, together with the use of one material reinforce the sense of belonging and identity. References to these borders can be found in earlier periods of the garden city, specifically in nearby garden cities of Gamla Enskede and its continuation Enskededalen, that introduce in the perimeter apartment buildings that protect the internal area reserved for small scale villas and row houses, and where are present the passage tunnels to access the interior of the shared gardens that are present in Kv. Dalen. In Skarpnäck the south edge limiting with greenery is very sharp and bold with a very clear limit without transtion int the natural elements. In Hammarby Sjöstad, the border is defined by water bodies and a road, it is still a recognisable whole, but not as clearly defined as an architectural wall. The border to the north is a very characteristic and bold water walk, sometimes in dialogue with the buildings and sometimes as an independent boardwalk (see also figure 4.13). The border to the south limits with a thoroughfare and incorporates elements of transition to protect the housing, a roundabout and a service street followed by to lanes of blocks dedicated to offices and industrial buildings. If in Skarpnäck the working areas are to the other side of the road, in Hammarby Sjöstad they are used as a buffer for the housing.

Figure 4.6
Border
Kv, Dalen
Skarpnäck
Hammarny Sjöstad

Figure 4.7

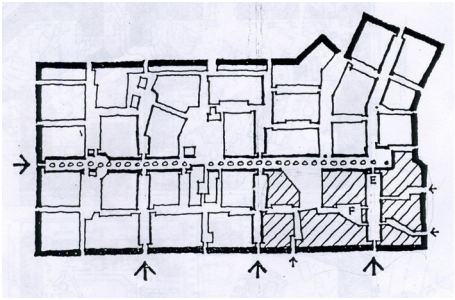
The sharp border defined by the buildings relates to the garden city from 1910s and 190s

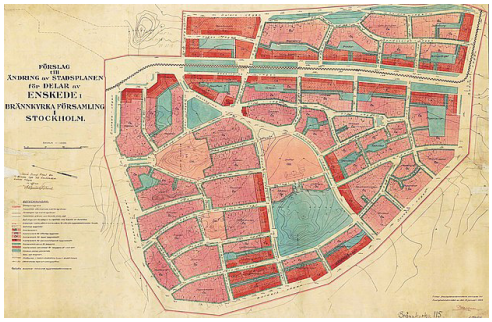
Skarpnäck drawing from Arken arkitekter archive.

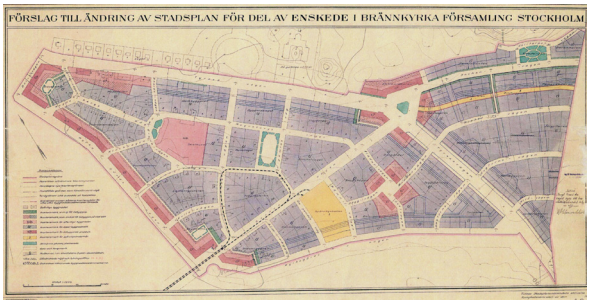
KV. Dalen municipality's detail proposal from 2 December 1976 by Leif Blomquist. Register number PI7535A

Gamla Enskede garden city. Proposal of change of the plan from 1922. The north is rotated 45degrees to the left.

Enskedealen garden city. Plan by the municipality from 1922. The north is rotated 45 degrees to the left.







***From Centrum to Spine** (fig. 4.8)*

Most of the multifamily suburbs of Stockholm built between the 1930 and 1980 include a centrum that agglutinates public transport and services, shops, a library, sometimes a swimming-pool. The centrum came sometimes with a concentric network of streets, specially in those cases from 1940s and 1950s that do not have a clear border and a perimeter street, and where the main street with car traffic goes through the development, introducing parking next to the centrum, which remains as a pedestrian oasis.

In Kv. Dalen, Skarpnäck and Hammarby Sjöstad the centrum will be transformed into an alley, which works as an internal spine that articulates the space but is not extended outside the enclave, neither connected to other urban areas. Along the spine are located public transport, services, parks and will evolve to increase the sense of urbanity by incorporating traffic through it and commerce in the bottom floors. In the suburban block structure, the border that prioritises pedestrians within its limits, is reinforced by perimeter streets for more intense traffic and with the evolution of the centrum into an internal spine, that expands the centrum as a central element, avoiding a concentric hiearrchy. Furthermore, in Kv. Dalen and Skarpnäck are built parking houses in the perimeter to prevent cars go into the housing area.

In Kv. Dalen there is still a square in one end of the spine that acts as a centrum located next to the perimeter, near the peripheral metro station, where are placed the supermarket and other shops, a library, a swimming pool and, originally, the post office. From this square departs the alley, Dallenallé that occupies the central position of the enclave, ending in a public park at the other end of the alley. This spine is pedestrian and, except in the western end, does not contain services or commerce. It is a pedestrian green promenade with grass in the middle and two lines of trees. If the inner-garden is the meeting space of the neighbours of each block, the alley acts as a central space where the neighbours of all the blocks meet. In its conception is almost a baroque salon where people is invited to meet, where see and be seen. Françoise Choay (1969) explained baroque planning as independent, self-referenced, well designed public spaces inserted in the urban tissue, different from the regularisation of the plan Haussmann for Paris, were the avenues are extended, aiming to stitch together the city.

Figure 4.8
The spine

Kv. Dalen; pedestrian avenue

Skarpnäck: controlled car access adn bottom floors

Hammarby Sjöstad: urbanity

Dalenallé is the reference point for the enclave, with a clear start and end. It has not a direct prolongation as urban space, but it is continued by smaller paths for pedestrians and bicycles with passages that go under the perimeter roads and the metro that connect with the inner city. These passages put Kv. Dalen in relation to the local context in a slower pace of the pedestrian or the bicycle, connecting with Gamla Enskede to the west and with the green field of Nytorpsgärde to the east.

Skarpnäckallé is equally well defined as an internal, self-referenced spine, with a clear end and start, located at the heart of the enclave. It introduces a higher sense of urbanity by incorporating commerce in the bottom floors and allowing controlled traffic through it. In the alley, buildings have direct contact with the side-walk. In one end, the entrance to the enclave is defined by a colonnade that covers the side-walk, and in the other end a small square with a high rise building as a landmark indicates the end of the spine. In the original project, the metro station was planned to be located in this end, but it finally was placed in the middle of the alley. Around the metro station are disposed the public buildings (culture centre, church, school) and a public park.

In Hammarby Sjöstad is also defined a central spine as a well defined self-referenced urban space. It aims to be an “urban street” with lanes for pedestrians, bicycles, cars and tram, with higher buildings and commerce in the bottom floors. Even if the tram, bicycle and car lanes expand outside the limits of Hammarby Sjöstad, Hammarbyallé, understood as a coherent, well defined urban space, shaped by the surrounding buildings, lines of trees, and with continuity in pavements and textures is, as in the previous examples, a spine self-contained in the core of the enclave that does not have continuity stitching different areas of the city. If Kv. Dalen proposed the traffic in the periphery to leave a traffic-free interior, Hammarby Sjöstad is the reverse, it introduces local traffic in the core, leaving the north perimeter free of traffic, which is occupied by a pedestrian water-walk.

The spine is not a new invention, it can be also found in Järva. Both in Rinkeby-Tensta (fig. 4.36) there is a central that alley runs along the core of the enclaves connecting centrums of consecutive areas, only in these cases is not as clearly framed by buildings

that create a continuous street wall. In the inner city there are also examples of pedestrian streets that create a self contained spaces, protected from traffic, that agglutinate commerce amd services. In Stockholm, the modernist project of Sergelsgatan built between 1955-65, conceived by Sven Markelius and with the participation of rationalist architect David Helldén, it is a commercial pedestrian passage that connects two important squares in the city centre, with crossings in different levels and framed by high rise rationalist buildings. The precedent is located in Rotterdam, Lijbaan, from 1953, the first purpose-built commercial pedestrian street in Europe design by Van der Broek and Bakema.

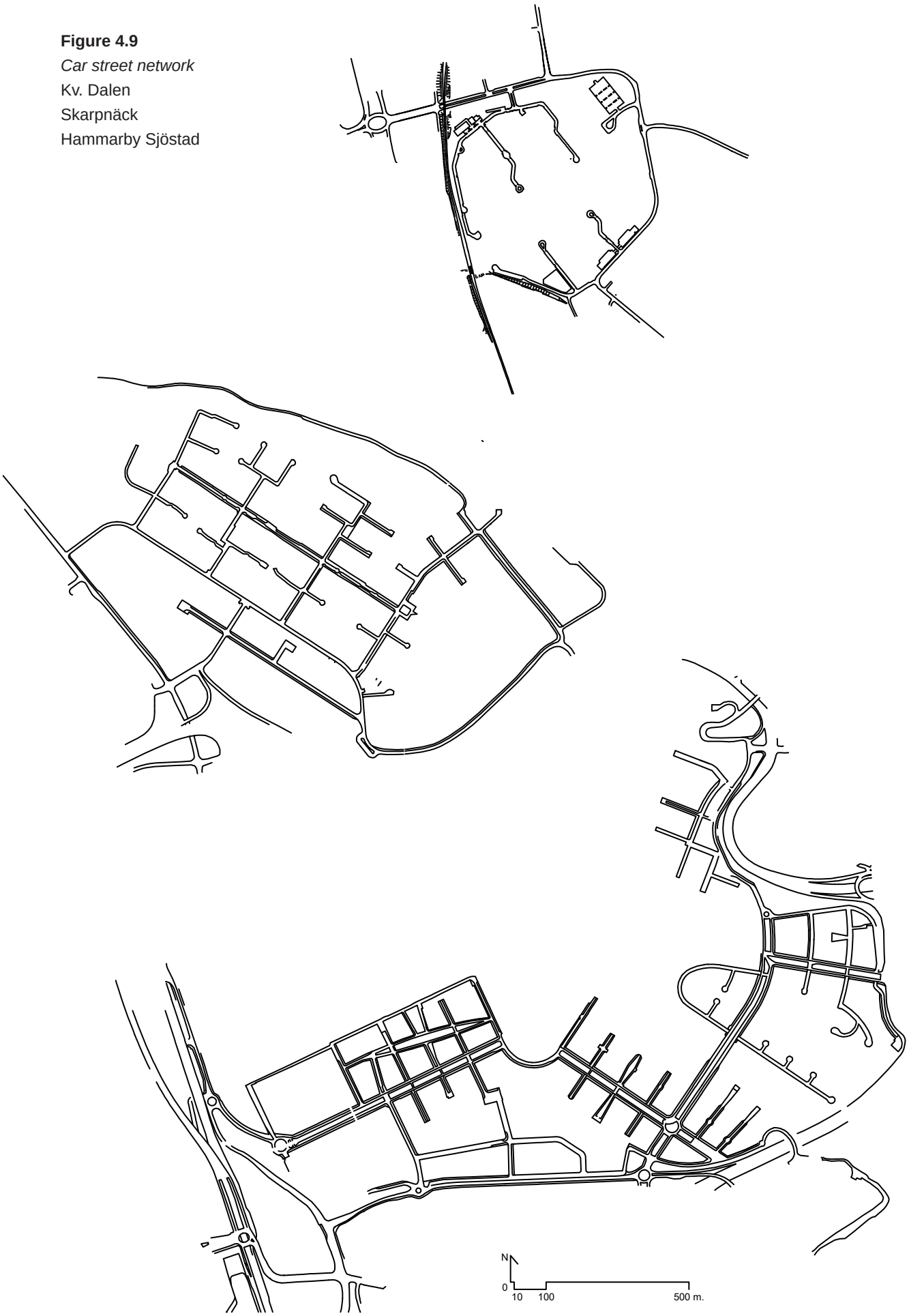
The idea of linear elements that can connect different centres was theorised by Team 10 member Shadrach Woods (1960) as the stem. For him the stem would recover the street in the suburb and would agglutinate services and social spaces. He does not challenge the idea of suburban housing enclaves, but questions their conception as isolated self-contained units, designed at once as total projects. The stem, as theorised by Woods, is a street that agglutinates services and has the function of connecting centres, giving continuity to the suburbs. However, most of the examples that incorporate a central artery tend to be conceived as self-contained enclaves. That is why I have chosen the term spine, because it is contained within the development.

Street Network *(fig. 4.9)*

Even if the three developments have the grid as the basic urban structure, there are clear differences in the way it is implemented. Kv. Dalen rather than a grid formed by linear elements with parallel façades in both sides, is shaped as a continuous pedestrian space with continuous changes of direction and disruptions of the straight line, with sequential spaces and changes of view.

Of the three cases, Skarpnäcksgård has the more clear grid structure of perpendicular streets with continuity in both directions, defining a structure of almost square blocks, even if the strict grid is broken to promote alternative movements for the pedestrians through the inner gardens of the blocks, or to introduce alterations in the rigidity of the grid.

Figure 4.9
Car street network
Kv. Dalen
Skarpnäck
Hammarby Sjöstad



Hammarby Sjöstad looks like an integrated grid, but the street structure has a clear directionality and a clear hierarchy of street levels. There is a central spine along the whole enclave that contains all means of transport, commerce and services. There are two other pedestrian axes parallel to the central spine. One to the north, next to the water, conceived as a leisure waterfront, and one internal to the south to provide with an alternative pedestrian path. Further to the south we find the service road that feeds the remaining industrial area that sets a clear limit to the development. The secondary order of residential streets is perpendicular to the spine, they often end in cul-de-sac in order to reduce amount of traffic next to the residential bottom floors. (see fig. 2.11)

Traffic separation. The idea of protection from car traffic has been a defining aspect of urban planning since the 1940s, aiming to both secure the efficiency of the traffic, and to to create safe spaces protected from that efficient traffic, specially for children. If in some of the previous developments in Järva, such as Tensta, it is introduced traffic separation in different levels, in Kv. Dalen the separation of transport modes is done in the same level by keeping the traffic in the periphery with some insertions in the neighbourhood that end in cul-de-sac. In Skarpnäck all means of transportation aim to have continuity in the same level, although there is not a homogeneous integration of all the means of transport in all the streets. Parking houses in the perimeter, reduction of the speed and interruption of some of the secondary streets, are measures that aim to reduce the amount of traffic in the area. In Hammarby Sjöstad, as we have seen, the structure is linear and hierarchical, pedestrian and bicycles have continuity through the whole area, while the car traffic is confined to specific arteries, with a clear control of where and how traffic occurs.

Services

Kv. Dalen was designed for around 7.000 inhabitants, its smaller size comes with a higher conscience about the existing neighbouring areas, which are taken into account in order to propose new services. It relies in the existing schools in Hammarbyhöjden and Gamla Enskede, while it introduces kindergartens in the bottom floors that will use the garden of the block, which will become a common element of the suburban block in the

following decades. The supermarket aims to serve also the neighbouring areas, as well as the swimming pool, the library, and a local restaurant (this is no longer active) which were built next to each other. In the late 1970s, elderly homes are built in Swedish cities, and one of them is built next to the centrum of Kv. Dalen (Arkitketur, 1979).

Skarpnäck has today around 10.000 inhabitants. It has its own schools, culture centre and church. It was conceived in connection to the existing area of Bagarmossen. In order to enhance exchange between them, even a street was planned to connect both (Arkitektur, 1980). Nevertheless, the street was not built, because they are a bit far from each other, and the road had to go through a green area that lies between both. This green area provides obvious qualities and common space, but it does not enhance the daily contact and exchange of urban life. The connection to existing areas through paths or streets in Kv. Dalen, is more successful, partly to the proximity of such areas. This disconnection and its location to the limit of the municipality make Skarpnäck the more isolated of the three cases.

In Hammarby Sjöstad services and commerce are more distributed along the central spine and the two parallel axes. Due its size for over 20.000 inhabitants, it contains most of the necessary services. In this case we do not find clear connections to neighbouring areas, which is reinforced by the sharp geographical borders and high speed roads that delimit it. However, its size and its closeness to the city centre reinforce the feeling of being integrated in the overall urban structure.

Variation *(figs. 4.10, 4.11)*

Until 1900 cities were built following a sequence of interventions extended in time within a common framework. In this process, several actors were engaged in different plots and in different moments, what entails that, even in the same period most use the same techniques and similar principles, there is always a variation in the implementation. Furthermore, the urban project defined blocks divided in plots so each project occupied a fraction of a block, sometimes the whole block and rarely more than one block, entailing the participation of more actors in the conception, promotion, design and construction of the city. During the 20th century, the suburb becomes a total architectural project, design and built at

once, having all the blocks and buildings the same characteristics. Soon raised the question of monotony and repetition and a search of the qualities of variation that naturally arose in the traditional process of urbanisation. The task was to introduce variation in projects designed and built in short time, with clear definition of spatial, architectural and production qualities.

Since the 1940s was present the question of avoiding the monotony of series of parallel blocks characteristic of rationalistic planning. In that period the response was to experiment with new typologies. In the 1970s is introduced the idea of harmonised variation, aiming at a recognisable environment with common elements, still with variation in motives and the way the common principles are implemented.

Material and Colour. In Kv. Dalen the search for variation within uniformity is translated to the use of prefabricated concrete elements that change form and size and are adapted to a pre-designed urban form. The concrete elements are painted in different colours following a common palette of yellow and red pastel colours. The pitched roofs rather than being a repetitive solution of traditional triangular roofs, are forming a skyline. These ideas are still present in Skarpnäck, only that instead of using concrete, the brick will bring unity, and the roofs still create a playful landscape. Here, the variation is in the way brick is used by the different teams of architects engaged in the development. In Hammarby Sjöstad, there is not the same consistency in the use of one material assigned to the whole development, and there is some variation in materials but still a clear dominance of façades rendered in different colours, that will become the norm in Stockholm from the 1990s. The introduction of different teams of architects in each block also provides variation in the colours chosen and in the kind of balconies and windows.

Developers engaged. In Kv, Dalen there was only one developer and one architectural office engaged for the whole area, and they followed the volumetric and spatial disposition of the buildings done at the municipal office prioritising the urban space. The control over the design process allows to design a diversity of spaces, narrower alleys and sequence of public spaces.

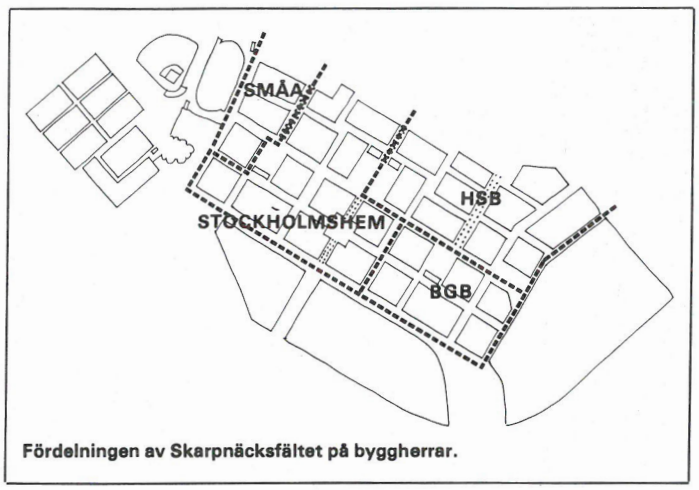
In Skarpnäck the municipality traced a plan to organise the streets and the blocks.

Figure 4.10

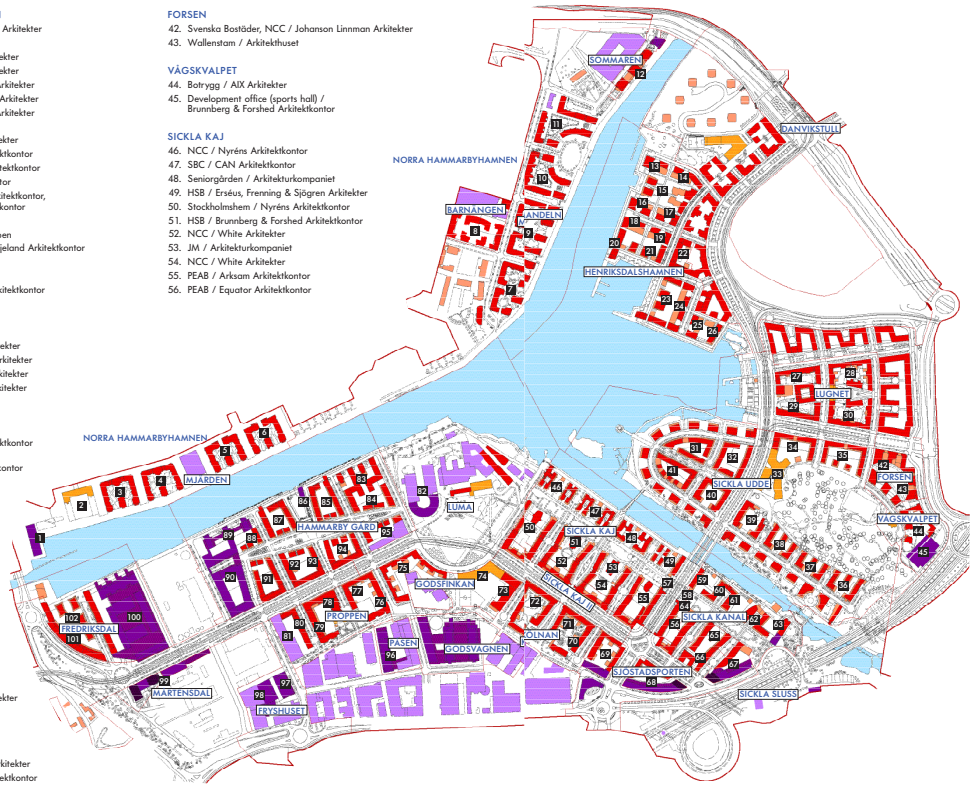
Developers

Above: Distribution of the blocks in 4 developers (Arkitektur, 1908, p. 9)

Bellow: List of all the developers in Hammarby Sjöstad



HAMMARBY SJÖSTAD – DEVELOPERS AND ARCHITECTS



NORRA HAMMARBYHAMNEN
1. New office building for White Arkitekter
2. SISAB / Tullgårdsskolan
3. Familjebostäder / White Arkitekter
4. Familjebostäder / White Arkitekter
5. JM / Åsberg och Buchmann Arkitekter
6. SKB / Åsberg och Buchmann Arkitekter
7. JM / Åsberg och Buchmann Arkitekter
8. JM / FFNS Arkitekter
9. PEAB / Roman Wozniak Arkitekter
10. Seniorgården / Nyréns Arkitektkontor
    Stockholmshem / Nyréns Arkitektkontor
11. Folkhem / Nyréns Arkitektkontor
    Lennart Ericsson / Nyréns Arkitektkontor,
    Brunnberg & Forshed Arkitektkontor
    Besqab / 5 ARK-gruppen
    Einar Mattsson / 5 ARK-gruppen
    Reinhold Gustafsson / Jan Fidjeland Arkitektkontor

SOMMAREN
12. PEAB / Lindberg Stenberg Arkitektkontor

HENRIKSDALSHAMNEN
13. Borätt / Erséus Arkitekter
14. Familjebostäder / Erséus Arkitekter
15. Skanska PDR Sweden / AIX Arkitekter
16. Järntorget Bostad / White Arkitekter
17. Svenska Bostäder / White Arkitekter
18. Borätt / Erséus Arkitekter
19. Botrygg / AIX Arkitekter
20. Botrygg / AIX Arkitekter
21. Seniorgården / Nyréns Arkitektkontor
22. Abacus /
    Lindberg & Stenberg Arkitektkontor
23. JM / ÅWL Arkitekter
24. Wallenstam /
    Frenning & Sjögren Arkitekter
25. Järntorget / White Arkitekter
26. ByggVesta / White Arkitekter

LUGNET
27. Borätt / Erséus Arkitekter
28. Riksbyggen / Kod Arkitekter
29. Wallenstam /
    Frenning & Sjögren Arkitekter
30. Stockholmshem / White Arkitekter

SICKLA UDDE
31. JM / Nyréns Arkitektkontor
32. Svenska Bostäder /
    Erséus, Frenning & Sjögren Arkitekter
33. SISAB (school) / Arksam Arkitektkontor
34. Familjebostäder / White Arkitekter
35. Familjebostäder / White Arkitekter
36. Skanska / Hedborg Gyllenhammar Arkitektkontor
37. JM / ÅWL Arkitekter
38. Svenska Bostäder / Lindberg & Stenberg Arkitektkontor
39. HSB / Modern Line Arkitekter
40. HSB / Modern Line Arkitekter
41. Skanska / Brunnberg & Forshed Arkitektkontor

FORSEN
42. Svenska Bostäder, NCC / Johanson Linnman Arkitekter
43. Wallenstam / Arkitekthuset

VÄGSKVALPET
44. Botrygg / AIX Arkitekter
45. Development office (sports hall) /
    Brunnberg & Forshed Arkitektkontor

SICKLA KAJ
46. NCC / Nyréns Arkitektkontor
47. SBC / CAN Arkitektkontor
48. Seniorgården / Arkitekturkompaniet
49. HSB / Erséus, Frenning & Sjögren Arkitekter
50. Stockholmshem / Nyréns Arkitektkontor
51. HSB / Brunnberg & Forshed Arkitektkontor
52. NCC / White Arkitekter
53. JM / Arkitekturkompaniet
54. NCC / White Arkitekter
55. PEAB / Arksam Arkitektkontor
56. PEAB / Equator Arkitektkontor

GLASHUSETT
57. Environmental Information Centre –
    Stockholm Vatten, Fortum, City of Stockholm

SJÖSTADSKAPELLET
58. Sofia Parish - Veidekke / Reflex Arkitekter

SICKLA KANAL
59. Reinhold Gustafsson / AQ Arkitekter
60. Einar Mattson / AQ Arkitekter
61. Besqab / FFNS Arkitekter
62. Lennart Ericsson / Johanson Linnman Arkitekter
63. Riksbyggen / Folkhem / Jan Fidjeland Arkitektkontor
64. Katarinastiftelsen / FFNS Arkitekter

SJÖSTADSPORTEN
65. JM / Nyréns Arkitektkontor
66. Svenska Bostäder / Nyréns Arkitektkontor
67. Botrygg / Omniplan
68. Skanska / Erséus Arkitekter
69. Primula / Rosenbergs Arkitekter, Primula

KÖLNAN
70. Familjebostäder / FFNS Arkitekter
71. HEFAB / Lindberg & Stenberg Arkitektkontor
72. SKB / ÅWL Arkitekter
73. SSSB (student accommodation) / Murman
    Arkitekter
74. SISAB (school) / FFNS Arkitekter

GODSFINKAN
75. ByggVesta / White Arkitekter, Arkitektur-huset

PROPPEN / REDAREN / SJÖFARTEN
76. Familjebostäder / Rosenbergs Arkitekter
77. Borätt / AW Arkitekter
78. Primula / Thomas Eriksson Arkitekter
79. HSB Bostad / Rits Arkitekter
80. Einar Mattsson / Tengbom Arkitekter
81. LjungbergGruppen /
    Ahrbom & Partner Arkitektkontor

LUMA
82. Fabege / Murman Arkitekter

HAMMARBY GÅRD
83. HSB / AIX Arkitekter
84. Folkhem / Brunnberg & Forshed Arkitektkontor
85. Stockholmshem / Tengbom Arkitekter
86. Erik Wallin / Tengbom Arkitekter
87. Riksbyggen / Tengbom Arkitekter
88. Fabege / architect not appointed
89. Fabege / (extension) Vegesack Arkitekter
90. Fabege / AIX Arkitekter
91. Fabege / architect not appointed
92. PEAB / Equator Arkitektkontor
93. Riksbyggen / Tengbom Arkitekter
94. SKB / Wingårdh Arkitektkontor
95. ByggVesta / White Arkitekter

PÅSEN
96. Fabege / Tengbom Arkitekter

FRYSHUSET
97. Development office / architect not appointed
98. SISAB / Jack Pattison

MÄRTENSDAL
99. Development office / architect not appointed

FREDRIKSDAL
100. SL, Skanska /
     Brunnberg & Forshed Arkitektkontor
101. Skanska / ÅWL Arkitekter
102. Skanska / Kjellander +
     Sjöberg Arkitektkontor

After a period during the 1970s where is prioritised the design of intimate and small scale sequential public spaces (Hultin, 1979), in the 1980s (Caldenby, 1980) there is aim to reintroduce some rationalist order in the design of well defined urban spaces, . Kv. Dalen was somehow perceived as monotonous for being designed by the same architects and landscape architects, but on the other hand we can observe a much more care in the details and specially in the landscape, vegetation and textures of the ground. Skarpnäck can be considered as an intermediate stage towards higher rationalisation. The development is divided in six areas, each of them comprising four or six blocks, which will be assigned to different developers that will take care of the buildings and the landscape. The design evolved in dialogue between municipality, developer and architects. The plan from the municipality traced common guidelines and the choice of brick provides with unity (Arkitektur, 1980).

Hammarby Sjöstad goes a step further. Here the layout of the blocks is provided in the municipal plan, but each block is assigned to a different developer, sometimes intervening different developers in the same block. It can be observed a change of legislation and building culture during its process of implementation (Grundström & Molina, 2016), where less control is exercised over each building by the municipality. It can be observed in different contexts and countries that more relevant than the diversity of actors is the diversity of the kind of actors, in each period there is a tendency to a dominant construction, and different private developers tend to apply similar solutions (Montes, Camps & Fuster, 2011).

Solutions respond to the economy and technologies of the time, moving from prefabricated concrete elements in the 60s and 70s, to the use of brick during the 1980s, to the introduction of façades rendered in light colours during the 1990s. The variation in materials found in Hammarby Sjöstad may be connected to occasional innovation of specific projects, and the fact that the whole area has been completed under a longer period of time when different solutions art tested.

Further variation in the 2000s. Even if it falls out of the scope of this thesis, to understand how rooted is the idea of variation as an important factor in urban design we can look to two projects that were conceived as Housing Fairs that explicitly aimed to introduce

Figure 4.11
Further variation in developments built after Hammarby Sjöstad
Left: Bo01 in Malmö. 2001
The plan shows divesity of developers and kind of ownership in a small scale development.
Right: Vallastaden in Linköping. 2017
Diversity of developers, ownership, architecture and materials result in a varied urban space.

alternative and innovative approaches to housing, particularly from the perspective of social sustainability.

The plan for Bo01 in Malmö from 2001 is a small scale development with intimate alleys and sequential public spaces, the blocks do not contain big gardens and each block is subdivided in many developers. Variation is addressed by introducing not only materials and construction techniques but variation in kinds of ownership (rental, owned, shared), and variation in types of developers (big, small, collective). The map of the ownership gives a very colourful picture of the fine grain city that it intends to replicate.

In Vallastaden 2017 in Linköping, the plan does not introduce regulations in materials and style. It defines a number of floors but not how high are those floors. It also defines the disposition of the buildings in relation to the street. Narrow plots, a high number of entrances and points of contact with the street, increase the number and diversity of interactions. Land allocation is introduced as a tool for variation, as land is not assigned via price tendering, but by assigning points connected to architectonic, social and environmental qualities. The result

is a very diverse mix, of different styles and types that can be read either as diverse or as chaotic.

It can be questioned to what extent the diversity contributes to social sustainability, or to to achieve a social mix, a question worth to be explored in future studies but that lies out of the scope of this thesis. However, a quick insight helps to infer that these areas tend to assimilate social sustainability to social contact, while the homogenous composition of these areas does not talk about social mix, and should be rather connected to community building. They still inherit many of the neighbourhood unit principles and a set of mind that understands the city as a series of enclaves separated by traffic infrastructures with a homogeneous community with strong bonds..

Landscape and ground planning *(figs. 4.12, 4.13, 4.14)*

In the rationalist urbanism of parallel linear slab-buildings or individual point-buildings of Stockholm, the space in between buildings is often covered by grass or incorporates existing trees. In contrast, Kv. Dalen, the designed landscape is much more detailed and designed in tight interaction with the buildings. The inner gardens incorporate small hills, and each block plants different species of trees that give name to the block. The public spaces incorporate diversity of pavements, bushes and trees to define different areas. There are squares, a central alley, and a park, but the whole is conceived as a continuous space and designed as a unity, without a bold separation between streets, pavements, squares and inner gardens.

In Skarpnäck there are streets defined by a roadway and side-walks, but the landscape and the buildings are still designed in close relationship to the urban landscape. There are four teams of designers, and each team designs several blocks, and within each part we see the close collaboration between architects and landscape architects to give unity to buildings and landscape.

In Hammarby Sjöstad there is an evolution of the landscape, which is more independent from the buildings. Each block designs its own internal garden, but not the space in the outside. Besides, as result of a more privatised housing market, the gardens are

Figure 4.12
Stormwater management integrated in the landscape in Hammarby Sjöstad

no longer inviting to be crossed as occurs in the other two examples. The public space is not characterised by squares understood as enclosed spaces defined by the façades of the buildings. The public space is linear, widening in specific locations to form open spaces. There are included two characteristic landscape elements. One is the park that integrates the storm water management (fig. 4.12). The other is the waterfront conceived as a linear walkway, as a recreation place (fig. 4.13). It is an evocative landscape of long lines and different ways to meet the water. The city architect responsible of the project, Jan Inghe-Hägstrom, was influenced by Christian Norberg-Schulz, and his idea of the genus-locci, Inghe-Hägstrom tried to incorporate a romanticised landscape that replicates natural environments (Mattsson, 2020). I have argued how Hammarby Sjöstad follows a rationalist approach to design in the way it establishes a hierarchy in the street network and systematises block typologies. However, in the treatment of the landscape it incorporates a romantic flavour, but not as an integrated part of the whole, it rather replicates an idealised landscape as an entity distinct from the bulidings.

Figure 4.13
Promenades along water in an evocative treatment of the landscape in Hammarby Sjöstad

Figure 4.14
Examples of landscape urbanism of long winding parks detached from the buildngs.

Årstidernas park. Umeå. 2015. Source: Mickeno. Wikimedia Commons

Hornsbergs strandpark, Stockholm 2012. Source: Nyréns architects webpage

In Hammarby Sjöstad, we see how it has crystallised the typology that will be dominant in the following decades. A typology of blocks that incorporate slab-buildings of at least five floors, with façades renderer in light colours, and leaving openings to allow the sun into the inner-garden. In terms of landscape, since the late 1990s, will be characteristic the landscape of long, winding parks or promenades that incorporate vegetation in an organic way (fig. 4.14). These parks are not conceived in connection to the buildings, neither enclosed or defined by the façades. On the one hand, they have a romantic style. On the other hand, they are conceived as independent objects and transformed into typologies to be implemented, in a rationalist path that codifies and systematises the elements of urbanism.

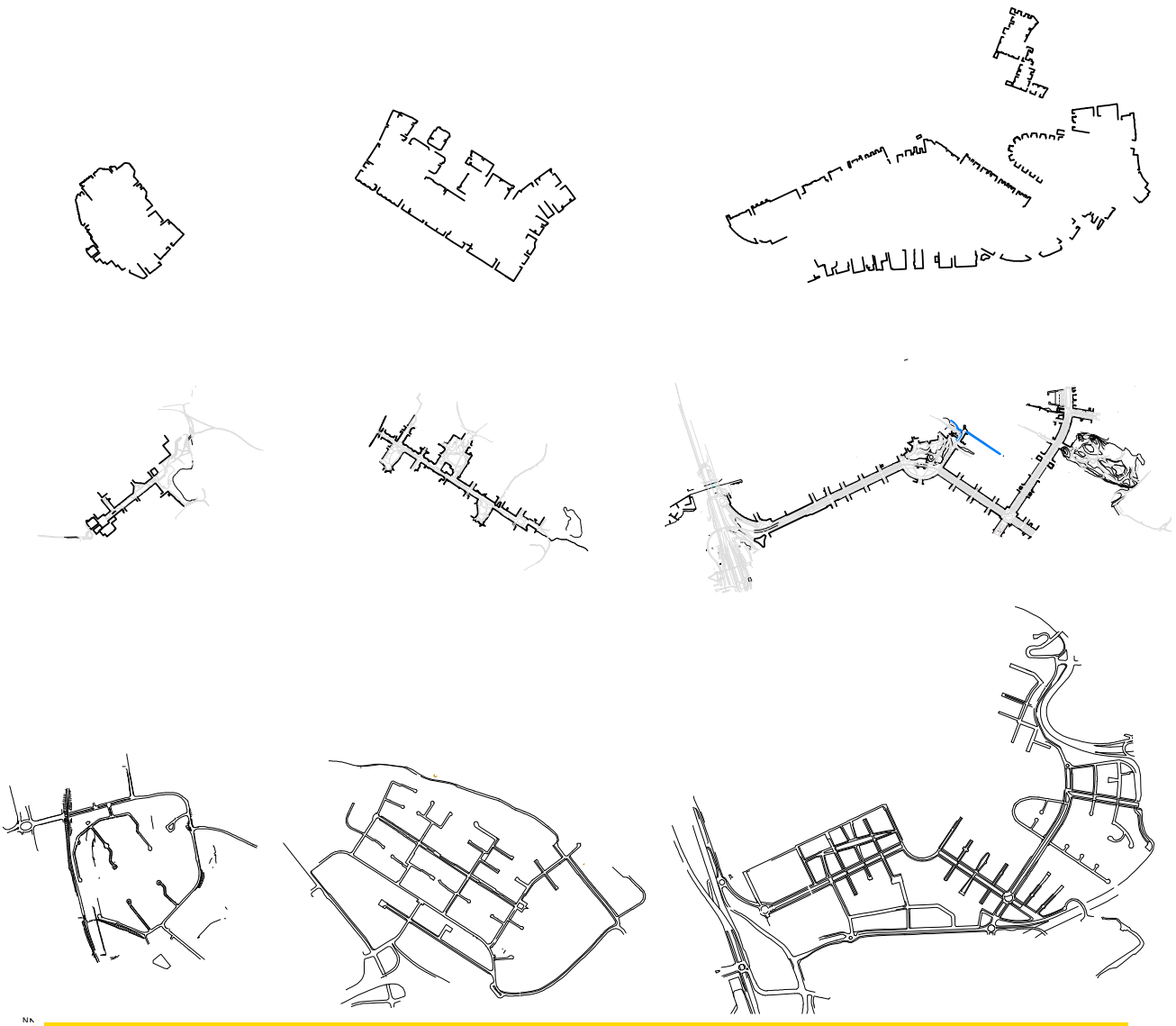


Figure 4.15

The border, the spine and the street network

4.2. Changes of Paradigm Hammarby Sjöstad at the End of the Process of Construction of the Suburb

The continuity of the urban scheme and typologies of Hammarby Sjöstad with previous processes and experiences have been explored in previous chapters. During the development and implementation of the project we can see also changes in the way urban planning and design are implemented. The city had stopped to expand some years earlier, and a new paradigm of building within the city limits is on place. New comprehensive plans bring a more strategic way to understand the city. Urban planning and design become complex process with less direct control over the final form from the municipality. There is a significant change of housing policies towards de-regulation and liberalisation. Drawing on the previous chapters, here are listed paradigm shifts that occur around 1995 and that can be traced in the implementation of Hammarby Sjöstad, what allows to situate it at the end of the process of construction of the suburb that starts around 1905, a process that is described in the closing section of this chapter.

Housing policy - Bostadspolitik

The Miljönprogram is often presented as a governmental program launched to build one million housing units that started in 1965 and finished in 1975. However, rather than as a program, it is more accurate to consider it a housing policy from the Swedish government. The studies and the document where was calculated the need for that amount of housing, even if published in 1965 were produced in an earlier date, and the increase in the production had already started in 1960 in what is known as the record years or Rekordår (Hall & Vidém, 2005; Söderqvist, 1999).

The same way the impulse of Miljonprogram started before 1965, it does not have and official end in 1975. Even if the goal of building one million homes had been reached by 1975, and the demand had been reduced earlier on, the impulse, the working models and the industrial organisation were still on place the following years, while the significant change in the housing policy occured in the 1990s, following changes that hadt started already by 1975.

According to Gudström and Molina (2018), the period that started in 1930 “saw “the

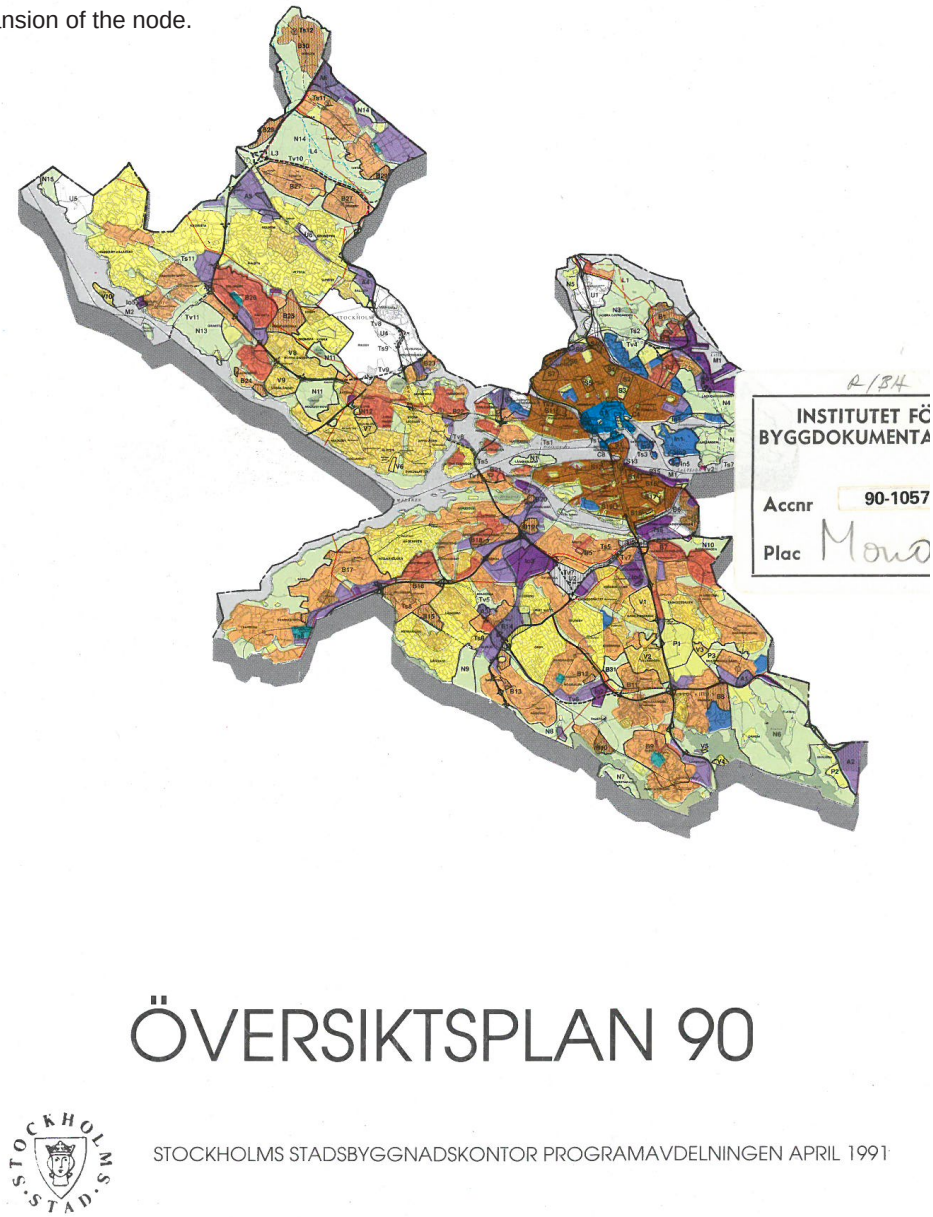
development and implementation of the Folkhem model for housing provision….It ended in 1974 when the Folkhem model resulted in a surplus of housing units and the first steps toward deregulation were taken." After that starts a new period when "deregulation begins, with changes to rent regulation in 1975. Housing construction fell dramatically, from 110,000 new units in 1974 to 30,000 per year in the mid-1980s. At the beginning of the 1990s, a paradigmatic shift towards deregulation, abolition of subsidies and marketisation occurred when liberal political parties introduced housing policies based on supply and demand" (p. 318).

For Leif Blomquist (personal interviews April 22 and June 13, 2024), city architect responsible of the project, Kv. Dalen is still part of the impulse of the Miljönprogram, even-though few would consider it, as it does not fit in the prototypical image of a Miljonprogramm area. In relation to these, Kv. Dalen is smaller in size and in scale of the buildings, it is closer to the inner-city and relates to other neighbouring suburbs, specially it implements different urban scheme and housing typologies. Nevertheless the monography dedicated to Skarpnäck by the magazine Arkitektur (Westman, 1980), it is clear that the process within the municipality has clear continuity with the construction of Järva in the north of Stockholm. The continuity includes both, design decisions that mirror or repeat those previously implemented, and decisions that aim to correct what did not work well. For example, the use of concrete elements by the construction company, is a clear element of continuity with Järva, but its application was adapted to new ideas that aimed to avoid excessive repetition and lack of human scale.

General Plan

A comprehensive general plan had been in place since 1952, and t its general guidelines are followed until is released a new comprehensive plan for the whole municipality in1990, known as Översiktsplan or ÖP 91 (Stadsbyggnadskontor, 1991a) (fig. 4.16). The new plan is less thorough, and is more strategic, a tendency that will be increased in subsequent comprehensive plans (fig. 4.17),. The General Plan from 1952 (Stadsplanekontoret, 1952) is based in preliminary studies published in the book ´Det

Figure 4.16
Cover of the Comprehensive plan for Stockholm from 1990 - Översiktsplan 90.
The plan shows the final territorial extension of Stockholm and the areas built in different periods.
The end of the expansion of the node.



Framtida Stolckholm' (Stadsplanekontoret, 1946) under the direction of Sven Markelius, who was director of the city planning office, and recognised as the intellectual responsible of the model of growth presented in this book, influenced by London's New Towns (morphological aspects of it have been discussed in chapter 3).

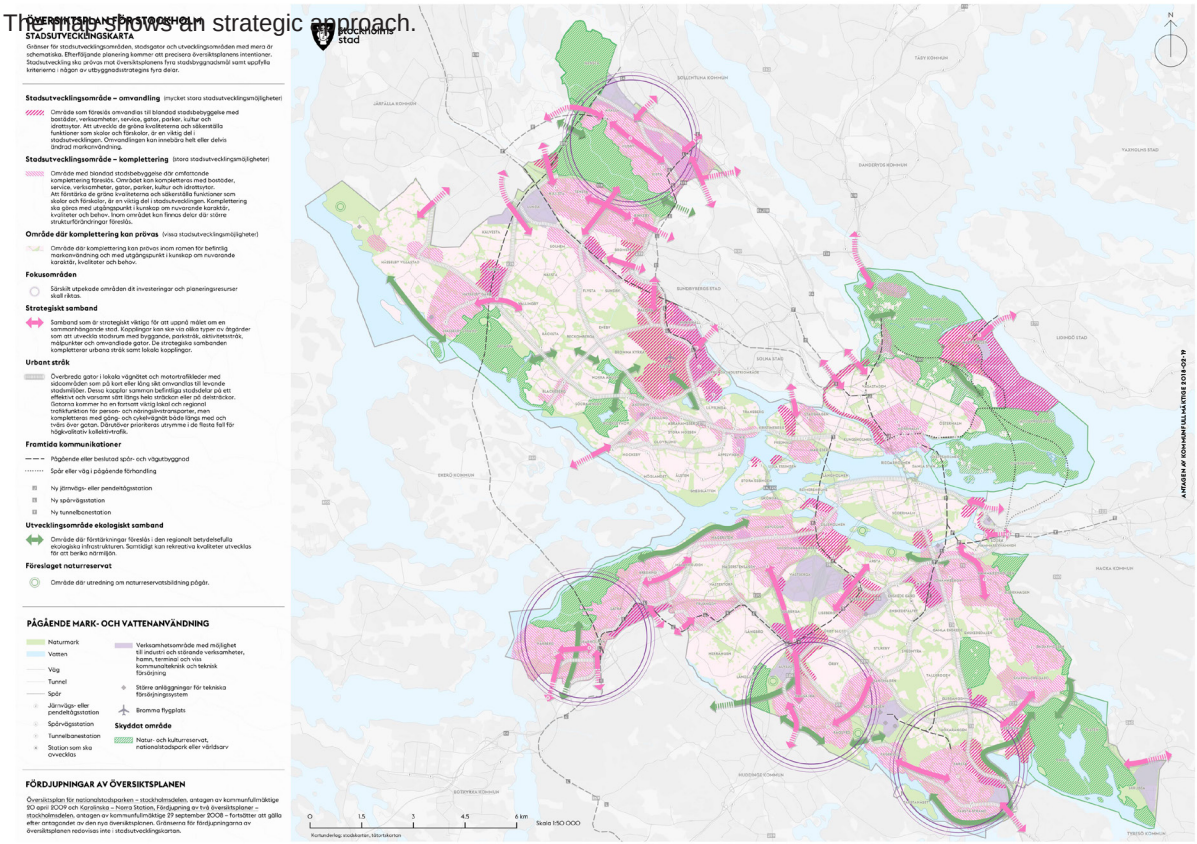
We see already in the name of the two plans differences in the approach. The general plan in 1952 makes more emphasis in the physical definition of the space. While the one from 1990 provides with an overview (*översikt*), that is more strategic and less specific. Furthermore, the department in charge of the document shifts from city planning office

Figure 4.16

Urban development map (stadsutveclingarta) from the current översiktplan for Stockhol from 2018

Downloaded from Stockholms municipality webpage https://vaxer.stockholm/tema/oversiktsplan-for-stockholm/

The map shows an strategic approach.



(*stadsplanekontor*) a name that suggest that the aim is to plan how the city will evolve, to city building office (stadsbyggnadskontor), which suggest that the main purpose is the actual construction of the city. I suggest that these names follow the shift in the housing policies introduced above, a shift in the main purpose of the construction of housing areas from being a means to provide better living conditions, to being the end the very construction of housing as an economic enterprise. The construction of housing becomes a means to finance the municipality and to attract tax payers, what follows processes of liberalisation, and the predominance of speculative capitalist mechanisms of profit generation in the articulation of the social and economic relationships (in chapter 1 has been introduced capitalism as a driving force in urban development and is further discussed in chapter 5).

The model of growth of Stockholm since the 1910s was based in a process of land acquisition to build new housing areas. Therefore, the shape of the municipality is not compact, it is defined by an urban core from where expand different arms. The shape, to

Figure 4.18
Generalplan 1952
page123

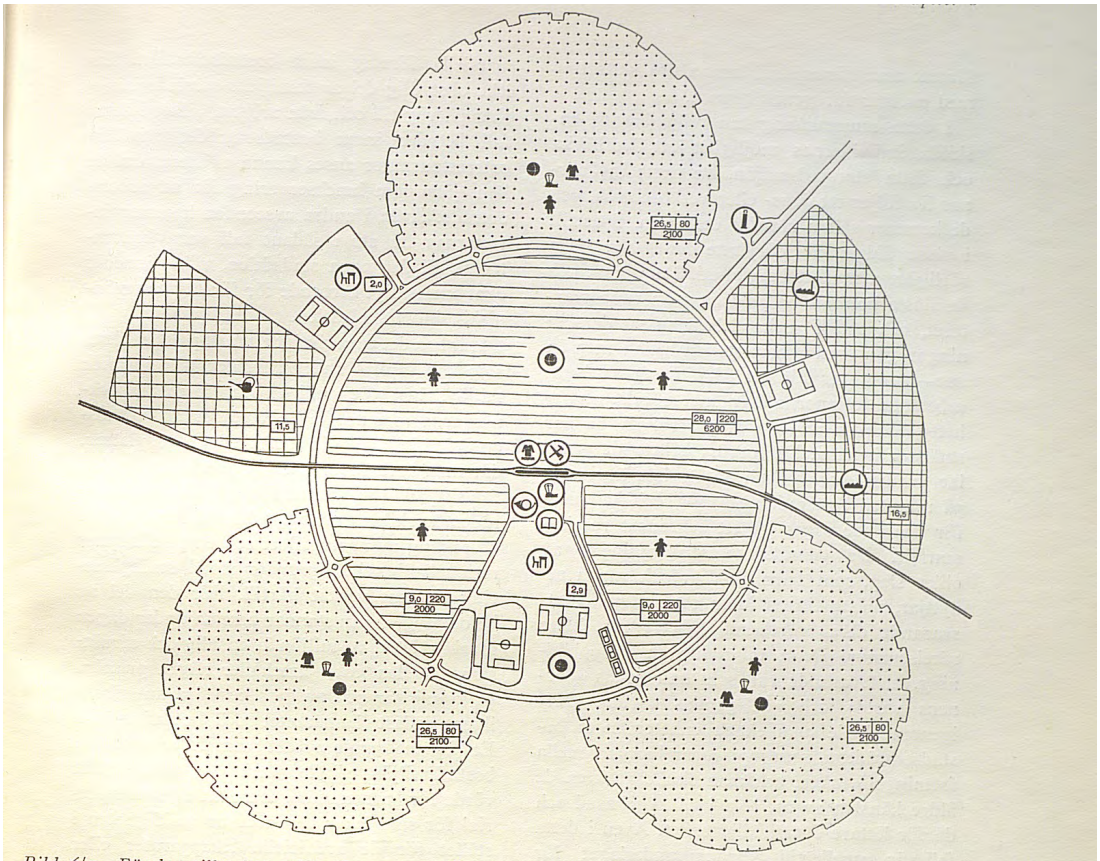


Bild 6/2. Förslag till schemaplan för stadsdel med förortsbaneförbindelse.

Antal invånare:

Hyreshus	*ca*	*10,200*	*62 %*
Radhus + Småstugor	*»*	*6,300*	*38 %*
Totalt	*ca*	*16,500*	

Bebyggelsearealer:

Hyreshus	*ca*	*46,0 ha*
Radhus + småstugor	*»*	*80,0 »*
Stadsdelscentrum	*»*	*1,0 »*
Grannskapscentrum (3 st)	*»*	*1,0 »*
Skolor (2 st)	*»*	*5,0 »*
Idrott och fest	*»*	*7,0 »*
Industri	*»*	*16,5 »*
Kolonilotter	*»*	*11,0 »*
Totalt	*ca*	*170,0 ha*

Befolkningstäthet:

Hyreshus	*220 inv/ha*
Radhus + småstugor	*80 »/»*

Avstånd från stadsdelscentrum:

Till hyreshusgräns	*450 m*
» småstugegräns	*900 »*
» industri	*600 »*
» kolonilotter	*600 »*

Avstånd från grannskapscentrum:

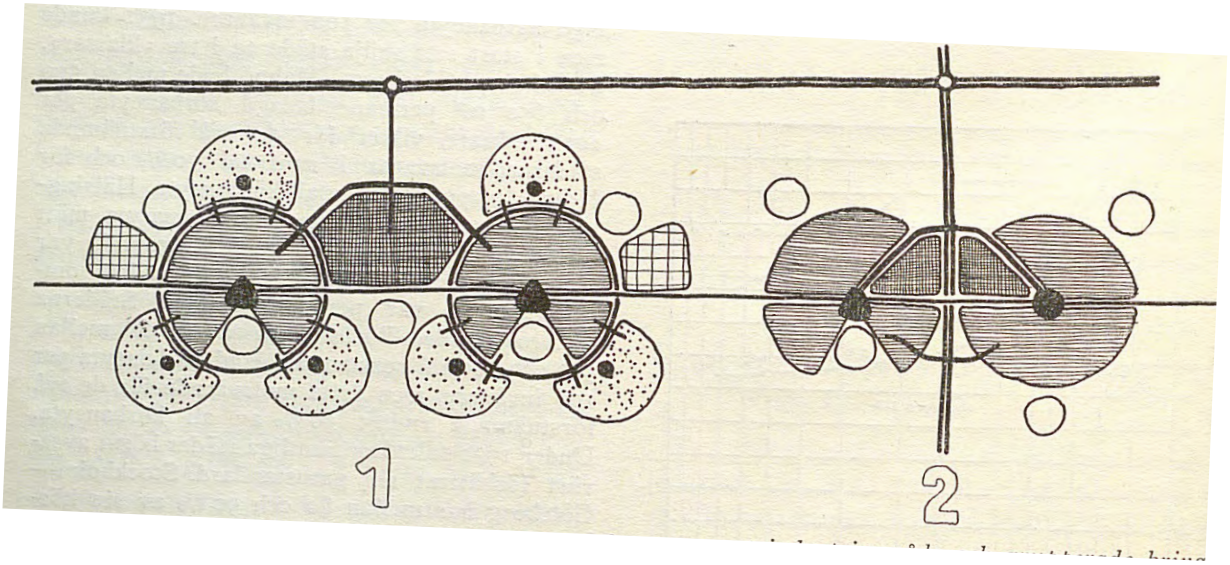
Till småstugegräns	*300 m*
» stadsdelscentrum	*600 »*

Symboler:

- *Butikscentrum, större*
- *» , mindre*
- *Kulturellt centrum*
- *Postanstalt*
- *Hantverkeri*
- *Industri*
- *Tvätteri, större*
- *» , mindre*
- *Servicestation för bilar*
- *Daghem*
- *Folkskola*
- *Idrottsplats*
- *Träningsplan*
- *Tennisplan*
- *Lekplats, större*
- *» , mindre*
- *Kolonilotter*

9—1670 50

Figure 4.19
Generalplan 1952
The growth is not done extending the city, but by building new units separated from each other.
page180



a large extent, responds to the areas where land was available. Since the beginning of the century the new housing areas are designed as a new development connected to the urban core by rail and road transport systems. In the General Plan from 1952 is established a model of growth based on a sequence of new enclaves built along metro or commuting train stations. Each development is intended to be a new piece of town, aiming to combine good conditions for housing in relation to greenery, fresh air and protection from noise and traffic and all the services around a centrum, with direct connection to the urban core. This way the city grows along lines of metro and roads, what in turn allows to increase their the distance to the city centre (figs. 4.18 and 4.19).

In this model are delimited areas for new development, each will become a new total architectural projects, producing a plan based in what are the street patterns and building typologies considered optimal at that time of design, very influence by the consideration of aspects of traffic safety, density and relation to light, air and greenery.

In the 19th century urbanisation was a process run by lawyers, geographers, politicians, and the gridiron plans where a framework that defined infrastructures, land

division, ownership and regulations concerning issues such as aesthetics or fire (Hall, 2008). The construction was mainly a matter of private initiative and subject to speculation (Sax, 1989). The construction of the suburbs from 1910s came together with higher control from municipalities over construction form and design, aiming to combat speculation and to ensure good living conditions. The suburban expansion was made as a series of independent enclaves, which meant that since Gamla Enskede to Skarpnäck, the spacial definition of the urban design is done as a total architectural project, where the municipal workers responsible of the development are architects. In Hammarby Sjöstad, during the process of implementation that started in the 1990s, is reduced the control from the municipality of the spacial definition as an architectural project, at the same time increase liberalisation and housing speculation as a means of profit generation (Grundström & Molina, 2016). The process gears towards a more specialised urban planning approach with strong relevance of infrastructural and technical and environmental disciplines, while the architectural definition is dealt with the building scale, increasing also the distinction between the architecture and the landscape. This process eliminates the idea of the urban enclave as a total architecture project, it has the potential of integrating several disciplines and perspectives in the process, as well as understanding the construction of the city as an ongoing process rather than as a project with an start and an end, while it has the risk of loosing the holistic view and falling on an excess of specialisation of the different aspects of urbanism if different disciplines do not communicate with each other.

From around 1975 the growth of the city will not depend on the acquisition of new land. Kv Dalen, is built in a former quarry and allotment gardens in an area inside the municipality. Skarpnäck is built in a former airfield located in municipal land. Hammarby Sjöstad is part of new philosophy of building inside rather than expanding outside. Already in the ÖP90 is visible the strategy of transforming a set of industrial areas located as a belt around the inner-city into new housing developments, while industry and work places will be located further away from the urban core, being Hammarby Sjöstad the first of these transformations. This will be reinforced by a belt road and a belt tram that surround the inner city and are clearly represented in later general plans (see fig. 2.22).

ABC stad - ABC city

The above referred model implemented in the General Plan from 1952 consisting on a series of independent units was labelled later on as the ABC *stad* (ABC city) that responds to the Swedish words for work (*arbete*), housing (*bostad*), and centre (*centrum*) considered the main components of the unit. The aim was that each unit would become a fully functioning town, connected to the whole. Of the three elements, the *centrum* is implemented in most of the new developments, it is conceived as a community centre that includes public transport and services, typically grocery stores, post office, some shops, often a library and sometimes other equipments such as a cultural centre or a swimming pool. Housing is arranged around the centrum, often, specially between 1940s and 1960s, with higher density next to it. However, the working areas were rarely implemented as part of the development, provably due to the size and relative closeness to the urban core, to which all the units are well connected by rail and road systems. For example, Kv. Dalen was built taking into account the proximity to the urban core and the proximity to other urban areas (see chapter 4). On the other hand, Skarpnäck, built in the fringes of the city, in order to allocate some of the industries that where already being pushed away from the city centre incorporated an area for industries and working places. Hammarbby Sjöstad, formerly and industrial area, maintains some industries next to the southern limit of the road, but it does not have the structure of the ABC city. In Hammarby Sjöstad the centrum has disappeared completely and the services and commerces are distributed along a spine that runs through the whole development to increase urban life.

According to Leif Blomquist, architect responsible of the project, Skaprnäck shall be considered the last ABC city. It includes housing and a new industrial area, even if separated by a street to avoid disturbances, aiming to accommodate industries that were already being displaced form the urban core. There is a diagram (fig.4.20) that clearly shows the disposition in bands with working area separated by the road Horisontvägen, followed by a buffer band that combines working and housing, before the majority of the housing comes, connected directly to the nature reserve.

Figure 4.20

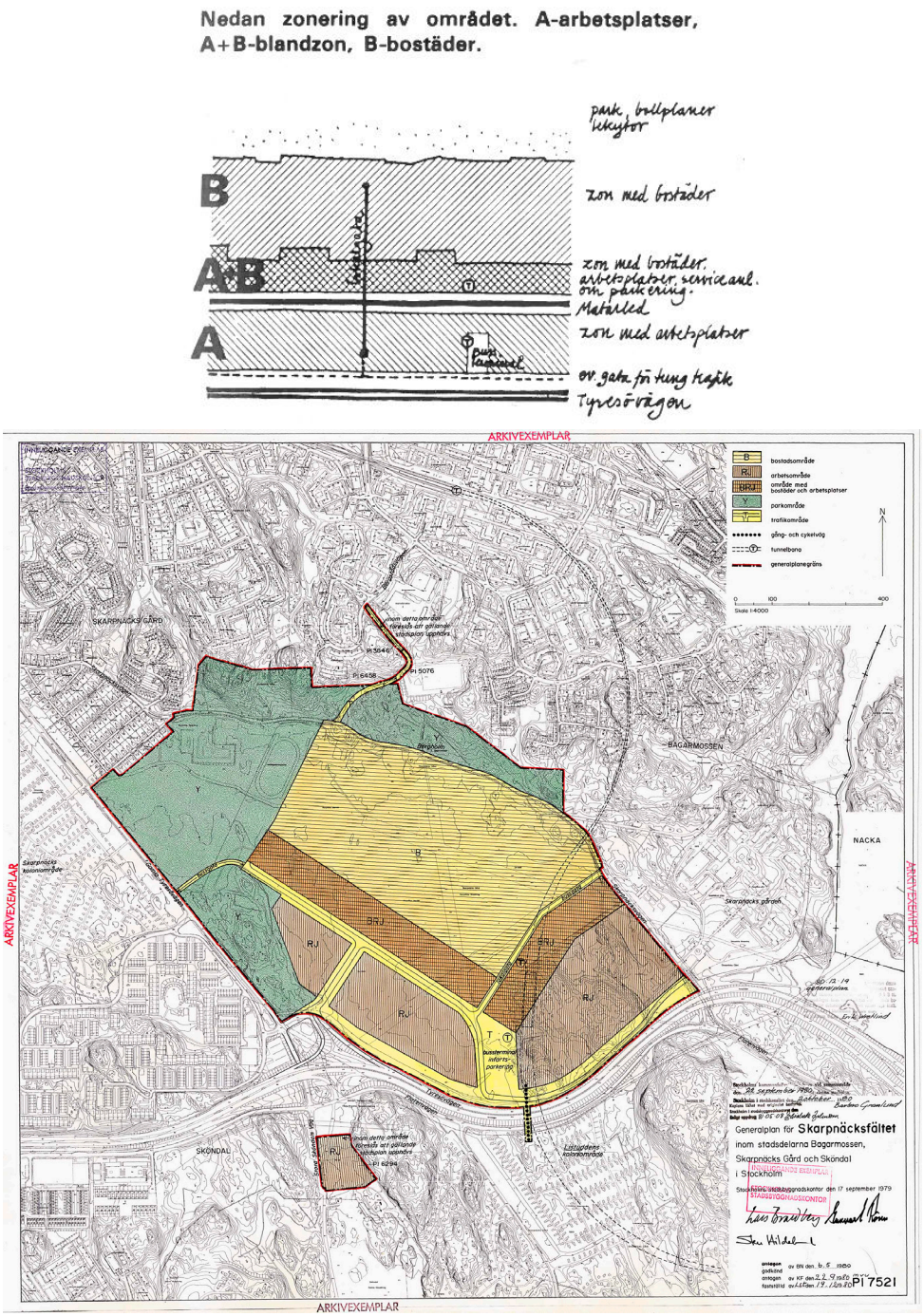
Above: Skarpnäck as an ABC stad.

Source: magazine Arkitektur, 1980, page 7.

Diagram from the genaral plan that indicates a an area dedicated to housing (B), and for working places (A), and an border that combines both (A+B). The centrum (C) is locacted in the spine.

Bellow: Generalplan 1980 PL7521. Stockholms Stadsbyggnadskontor.

Translation of the diagram to the detail plan. The park (green - Y) limits directly with the housing area (yellow - B), followed by housing and working area (orange - BRJ) and working areas (pinkish - RJ). It appears the street that puts distance with the working area. Here, a peripheral square with the metro and bus terminal is located in this street, to the southern corner, with a second exit in what will be the square at the end of the alley, then will be moved to a central location the housing area. The BRJ area to the south east will not be built, kept as green area.



Even if the centrum is incorporated in an alley with active bottom floors, the main services are still are concentrated around the metro station the services typical of the centrum a cultural centre with a library, a church, a park that acts as the central square of the area, and the school is nearby.

Neighbourhood Unit – Grannskapsenhet

The construction of the suburb as a sequence of enclaves in Stockholm is influenced by the idea of the neighbourhood unit (grannskapsenhet), present already in the 1940s it precedes the General Plan, and many of its characteristics influence the model introduced there. In chapter 3 has been discussed its relation with the garden city, London New Towns, Also, Radburn (fig. 3.12) and the neighbourhood unit proposed by Clarence Perry (fig 3.13), whose ideas were introduced in Sweden through Lewis Mumford (1954), whose influence started with the translation of his book 'Culture of Cities' in 1942 (Creagh, 2011).

I have argued that the garden city, in its re-formulation in the USA through Radburn and Perry's neighbourhood unit, the focus in the community building is kept but the layout of the buildings becomes more individualistic or object-oriented, and less related to the street, as it happened in the evolution of modernism. The street network even if it is not formed by straight lines becomes more rationalistic, more hierarchical and specialised, influenced by the appearance of the car as a determinant factor in urban design. The units become defined by a perimeter of high speed streets, and homogeneous in their composition. Perry (1929) saw as a benefit the homogeneity of the unit in order to enhance the construction of the community, as people could meet with those with similar background, interests and values, what would strengthen the bonds within the community. But the neighbourhood unit has also been read as segregation project (Mehaffy, Porta and Romice, 2015) were people of different backgrounds, social class and interests do not meet, and that surrenders to the car, by assuming as a given a network of high-speed arteries that divides the territory in smaller units, that become homogeneous in its composition. These characteristics are present in many of the suburbs in Stockholm.

Segregation occurs in an structural level and connected to a lack of continuity of the urban tissue that is visible in figure 4.26 where are included all the developments of the south-east of Stockholm analysed in this thesis. The construction of a community within each area can be enhanced by a good design that promotes encounter and exchange. A good example is the work of Ralph Erskine in housing communities that include very carefully designed corners and transition spaces to increase contact, chatter and gossiping (Kajita, 2023). However, Erskine (1982) reflected on his own work to describe the disconnection from the urban structure: “whilst I have been fortunate enough to design small communities or parts of communities, despite all my endeavours it has not yet been possible to achieve fully the weave of functions of which I speak”, he lamented that, despite improved environments, the communities remained “the mono-functional housing areas I decry and a palliative rather than a solution for our living environment”.

Skarpnäck can be read as a well defined unit, reinforced by the boldly formalised border and the use of brick, with carefully designed inner gardens and parks. Hammarby Sjöstad does not present the characteristics of the community typical of the other well defined units of the suburbs. Its more distributed scheme relates to the individualisation of each block and the anonymity of the urban space, than to the unit built around a community centre, where the spaces are designed to meet the neighbour.

Total Architecture Project

During 19th century, urban plans were defined as a process. The grid was implemented as a system of occupation of the territory, followed by infrastructures allocated along the linear elements of communication that are the streets. Spaces for squares and parks are delimited to be designed in a later stage. Regulations concerning fire, hygiene or aesthetics are defined, but architecture is formalised in a later stages. Urbanism becomes a matter of geographers, lawyers, politicians, as described by Thomas Hall (2008) for the case of Stockholm. Some of the core figures of urbanism on the late 19th century are a layer (Haussmann), a civil engineer (Ildefons Cerdá), a stenographer (Ebenezer Howard), or a biologist (Patrick Geddes).

With the construction of the suburb we see how urbanisation becomes not a matter of managing the complexity of the whole city as an economic, legal system, but it is subdivided in smaller units that are self-referenced. Each unit is an enclave contained in predefined limits and, within the limit, is defined an architectural project, where an architect designs the urban structure, the buildings and the public spaces as whole. Even if in the process until its implementation there are changes and more actors engaged, the point of departure is a fully designed unit. It might not be a coincidence that the zoning model was formalised by an architect, Tony Garnier in his Cité Industrielle (1907), somehow the division of specialised areas facilitates that the architect can manage the design of all the parts of the city.

In line to the critique to the evolution of the Modern Movement from the 1950s, Shadrach Woods writes in “Stem” from 1960 (a text that has been referred above in relation to the spine), that before the period of the architect-planner the city was the result of interactions, and since then, planning has been reduced to the production of cells, simplified to become a means of self-expression of the architect in the search to design the optimum cell. He questions those plans that are conceived as an aesthetic or plastic arrangement which is static and is not concerned with the life within it. His critique is connected to the repetition and production of simplified cells in high numbers, resulting in mass construction, disappearing the process of change and evolution of the city in rigidly designed solutions.

In Stockholm we see this already from 1905 with the design of Gamla Enskede by architect P: O. Hallman who became a prolific and successful architect-planner, still working in a more nuanced way that the one Woods would criticise later. Through the century the definition of enclaves goes by hand with the architectural project, which is still recognisable in Rinkeby-Tensta around 1965 (fig. 4.36). In Kv. Dalen there is still a quite strict control of the spacial definition from the project, while in Skarpnäck starts to be diluted a bit, as the original plan defines a block structure that will be developed architecturally in a second phase where the development is divided in several projects. In Hammarby Sjöstad it does exist a plan from the municipality where are defined the buildings, but in the process of implementation the control over the architectural definition changes, and each block will

become an independent project and the landscape another self-reference project of an objects. This is one of the change of paradigm that become apparent during the implementation of Hammarby Sjöstad. This change in the way planning is approached is not mirroring the urbanism of the 19th century, it is more related to the process of liberalisation, where the individualisation of the blocks, and profit maximisation of each intervention becomes a driving factor.

Mobility: from SCAFT to TOD

Kv. Dalen and Skarpnäck are built around a metro station, an existing one in the case of the first, and extension of the metro line in the second, following the centralised linear structure established in the General plan from 1952. In Hammarby Sjöstad, public transport is still important but it comes in the form a circular tram line introduced in the general plan from 1990 (ÖP90). Both systems show a change in the structural understanding of the city. The metro system is highly centralised and aims to reach the more distant areas of the city. The tram is conceived as a circular line that aims to mitigate the centralisation of the system, it connects the first circle of suburbs outside the inner city.

In Hammarby Sjöstad we see also a new way to think about mobility that aims to reduce the use of the car, not only within the enclave, but also in the displacements to other parts of the city. Since 1950s, with the universal access to the car, much of the urban planning is defined by traffic efficiency in the large structural scale and traffic safety measures in a local scale towards a family oriented design. In Sweden, guidelines for traffic planning will be collected in a document known as SCAFT 68, where a research group from Chalmers university in Gothemburg collected a series of recommendations and principles for an efficient car traffic combined with safety measures specially for kids, most of them that were being applied earlier on and reflect the predominance of traffic planning in urban design. In the SCAFT 68 (fig. 4.21) are characteristic tree-like street structures, traffic separation for cyclist and pedestrians, and the introduction neighbourhood unit principles (Hagson, 2004).

In Tensta, during the 1960s, traffic separation was done introducing different levels for the different traffic means. Each network is functioning by itself, the car is kept in the

Figure 4.21
SCAFT 68
page 16+17 and 6+7

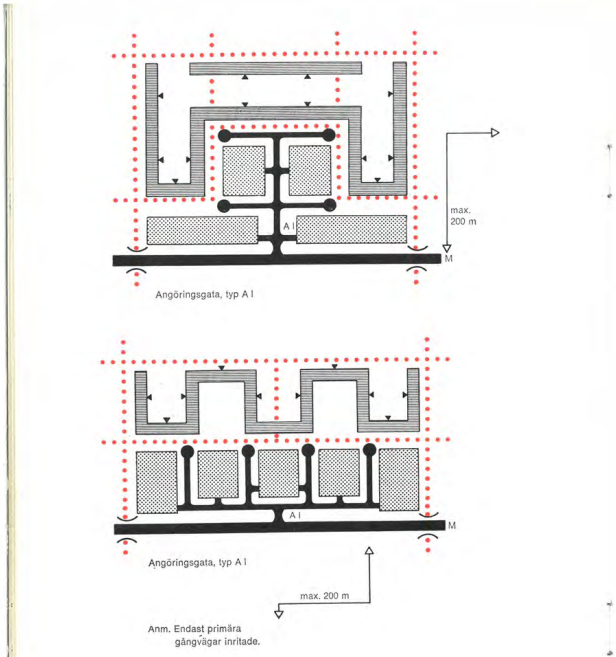


Fig. 3 Trafikschema för angöringsgator, typ A I. Storhusbebyggelse.

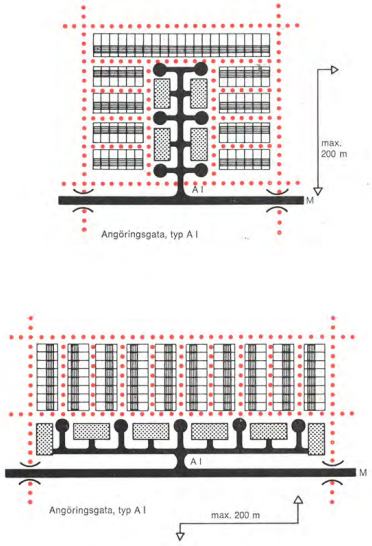


Fig. 4 Trafikschema för angöringsgator, typ A I. Småhusbebyggelse.

16

17

BETECKNINGAR

område för bostäder

område för skola, service, centrum

område för industri, kontor etc.

grönområde

parkeringsplats i markplan, under markplan eller på däck

flerfamiljshus med entréer

enfamiljshus på tomt

F fjärrled

P primärled

S sekundärled

M matarled

A angöringsgata

E entrégata

planskild korsning

planskild korsning eller kanaliserad plankorsning

3-vägskorsningar

angöringsplats eller vändplats

gångväg

gångtunnel eller gångbro

HPL hållplats

enkelriktning

6

BEGREPPSFÖRKLARINGAR

Nedan upptagna ordförklaringar täcker i första hand riktlinjernas behov av särskilda begrepp. Beteckningarna på leder och gator är interimistiska.

trafiknät — en systematisk uppbyggnad av förbindelselänkar (förbindelser), som medger trafikutbyte mellan olika punkter.

trafikseparering — åtskillnad av trafik i rum eller tid så att konflikter elimineras mellan trafik med olika egenskaper (t. ex. skilda trafiknät för bilar och fotgängare, planskildhet för korsande trafikströmmar).

trafikdifferentiering — klassifikation av förbindelser inom ett trafiknät med avseende på trafikens funktioner och egenskaper så att trafikströmmen blir så homogen som möjligt (t. ex. ordnandet av bilförbindelser för genomfartstrafik, bilförbindelser med olika tillåten hastighet med hänsyn till funktion och utformningsstandard).

led — bilförbindelse med tillåten hastighet 50 km/h eller högre, utan in- och utfarter från tomt, parkeringsplats eller dylikt samt fri från gång- och cykeltrafik.

- *fjärrled* — led för främst interregional trafik.
- *primärled* — led mellan tätort och fjärrled samt mellan tätortsdelar.
- *sekundärled* — led mellan tätortsdel och primärled samt inom tätortsdel.
- *matarled* — led mellan grannskapsenhet och sekundärled samt inom grannskapsenhet (i vissa fall med tillåten mopedtrafik).

gata — bilförbindelse med tillåten hastighet lägre än 50 km/h, med in- och utfarter från tomt, parkeringsplats eller dylikt samt med tillåten mopedtrafik och i vissa fall även gång- och cykeltrafik.

- *angöringsgata* — gata utan gång- och cykeltrafik.
- *entrégata* — gata på vilken även gång- och cykeltrafik tillåts.

mopedväg — förbindelselänk enbart för mopedtrafik.

cykelväg — förbindelselänk enbart för cykeltrafik.

gångväg — förbindelselänk enbart för gångtrafik.

angöringsplats — område med parkeringsförbud avsett för tillfällig uppställning av fordon i samband med av- och påstigning eller lossning och lastning.

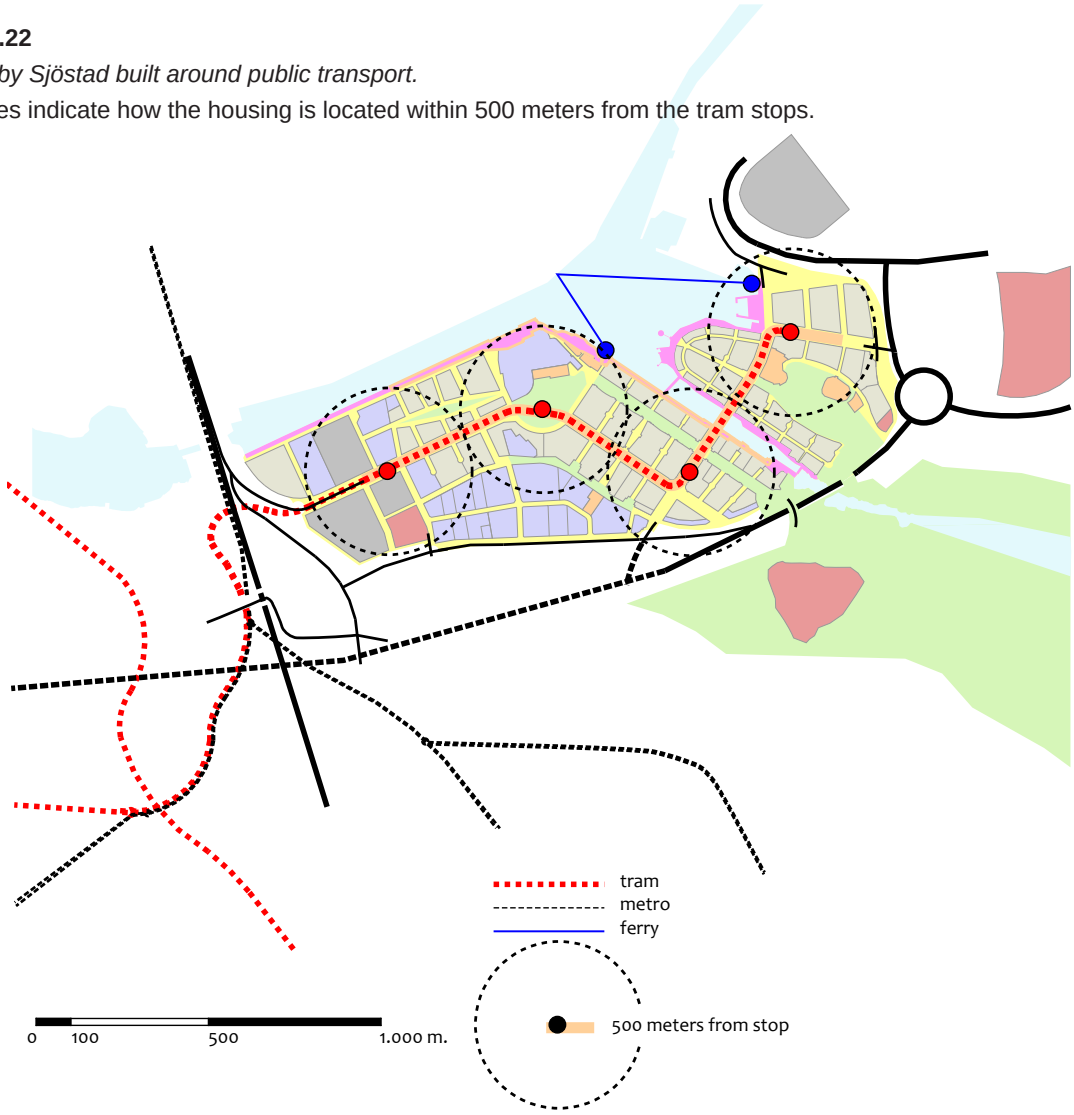
grannskapsenhet — bebyggelseområde med en bosättning dimensionerad för en inom gångavstånd belägen minsta serviceenhet (t. ex. låg- eller mellanstadieskola, mindre butikscentrum, hållplats).

bana — kör- eller gångytan hos en trafikförbindelse.

skyddszon — väg- eller tomtmark vid sidan av körbanan, fri från skymmande föremål (vegetation, bebyggelse, reklamskyltar o. dyl.) och med enhetlig markbehandling, så att avkörning medges vid olycks-tillbud.

7

Figure 4.22
Hammarby Sjöstad built around public transport.
The circles indicate how the housing is located within 500 meters from the tram stops.



periphery and pedestrians can find paths free of traffic. But the separation in different levels brought disconnection of the urban space and spaces that where not used. In Kv. Dalen the means of transportation are also separated but kept in the same level. The car traffic is kept in the periphery with an interior free of traffic. In Skarpnäck, still influenced to some extent by SCAFT guidelines, the integration of modes of transportation go a step further, and the central alley incorporates car traffic to feed shops and influx life into the area.

In Hammarby Sjöstad there is also a peripheral street for higher speeds and the central spine integrates all the means of transport. Here, several measures are taken to actively discourage the use of the car. It is no longer a matter of choice, but to force to not

use the car. The amount of parking is reduced, and is mainly placed on the surface along the streets, with no parking areas inside or bellow the blocks, very few parking buildings, and the introduction of car pools. The tram and the pedestrian are predominant over the car and there is a complete bicycle network. Some principles of mobility are close to Transit Oriented Development (TOD), which refers to a development articulated around public transport, with a sequence of stops that give continuity to the urban tissue, and that concentrate more density and services around them. The stops are located along the main edge, and from that edge there are the connections to a local cyclist and pedestrian movement into more residential streets. While the focus moves away from the car, this approach is still very much focused in mobility as the main structural element of urban planning and design (fig. 4.22).

Hammarby Sjöstad can be considered a first stage in change of traffic paradigm, represents the first sustainable cities that move away from prioritising the car and traffic efficiency into prioritising the pedestrian and public transport but where still dominates the infrastructural and rationalist perspective, while the evolution of the sustainable city will require to incorporate the experience of the built environment from the point of view of the pedestrian (Cervero, Guerra & Al, 2017).

Sustainability discourse

It has been already discussed in chapter 2 how during the process of implementation of Hammarby Sjöstad is generalised a new sustainable discourse. In the General Plan from 1991 there are environmental concerns connected to the scarcity of resources and biodiversity loss raised in the 1980s, still there is no mention to the notion of sustainability. In fact, Hammarby Sjöstad is first marketed as an eco-district, and the sustainability discourse will become dominant a bit later. The model implemented after 1994 introduces an integrated approach to sustainability, still, as already said, very much focused in infrastructural aspects that characterise the first sustainability discourses, that, as Cervero, Guerra and Al (2017) argue, should change the focus and priority from mobility to human aspects.

Following the paths introduced in chapter 3, the principles collected in SCAFT 68 promote a rationalistic approach to design, as they rely in research, efficiency and

systematisation, and have the risk of falling into utilitarianism if they rule out other aspects of design. The introduction of aspects of suitability in Hammarby Sjöstad gives continuity to that way of approaching design, because it still focuses in infrastructural aspects and follow a rationalistic logic of systematising solutions ad applying parameters and typologies that aim to bring certain qualities. Later development of the sustainable discourses will aim to integrate the social aspects and the way people relate to the environment, that could be enhance incorporating some of the qualities of the expressionist and experiential approach to design, and also to promote the aggregation of more perspectives in the bureaucratic and centralized structures of decision making that promote urban planning.

Developers, Building Companies and Designers

In Kv. Dalen, only one building company working with one architectural office was responsible of the 14 blocks. The city architect draw in advance a plan of the whole area with focus in the shape of the urban spaces and the common gardens. In the process one floor was added to the original plan (reaching three floors, occasionally four) which would affect the access to sun light in certain locations. Nevertheless, the footprint and spirit of this plan was respected to a large extent by the developer, architects and landscape architects. The developer was Svenska Bostader (SB) one of the big municipal housing cooperatives acting in Stockholm. During the Miljönprogram the rental regime (*hyresrätt*) promoted by big housing cooperatives had been the main way to make housing accessible to the whole population, the whole Kv. Dalen consisted initially of rental apartments (*hyresrätt*). Nowadays, after shifts in housing policy that are introduced above, 12 of the blocks have been transformed into housing associations (*bostadsföreing*) with ownership regime (*bostadsrätt*).

In Skarpnäck the 30 blocks were assigned to four different developers, two of them housing cooperatives (HSB and Stockholmshem), and six blocks assigned to the company BGB. Three of the blocks were originally assigned to Småa, which is a company that since 1927 works with self-construction (*självbyggeriet*) that had been common in Stockholm specially in the 1920 and 1930s, but finally where built as regular housing project. The plan

from the municipality does not include the specific shape of the space, instead provides with a basic common framework where are defined the streets and block structures, the built and the non-built. Under common guidelines such as the basic urban structure and a common material, each developer with the selected team of architects and landscape architects designed the assigned blocks and landscape around them, in direct dialogue with the city planning office, engaged in the whole process.

The choice of one developer in Kv. Dalen was connected to previous experiences in Järva, particularly Tensta, where the construction process had been chaotic with many actors engaged. In Kv. Dalen a relatively small size for a housing development made feasible to have only one actor to make the process more smooth. One office designed all the blocks with the same materials and construction solutions, what received critiques for excess of monotony, even if it was sought a variety in the heights, disposition of the buildings and to break down the scale in smaller elements. The choice of several developers in Skarpnäck is connected to bigger size, but also to the aim for more variety within uniformity, which would be provided by assigning the same material to all the blocks, material that would be used differently by the different architects.

In Hammarby Sjöstad, each block is assigned to one developer, and sometimes one block is divided into several developers, and the municipality did not maintain the same level of control over the architectural resolution. The shift in Hammarby Sjöstad corresponds to the changes described in housing policies and planning processes, towards higher liberalisation. Rental regime will not be any more the dominant form of ownership, addressing now to a more liberalised market and to higher profit. Furthermore, the suburb is no longer built to allocate working classes, but to attract middle-high income classes that can afford more expensive dwellings. The city architects that designed the scheme of Hammarby Sjöstad, worked under the culture of defining the footprint and the architectural qualities, however, in the implementation that took place from 1996, they had no longer the same level of control and direct participation over the final architectural resolution after the land was allocated to the developer.

Parallel competitions – Parallela uppdrag

Parallel competitions started to be implemented in the late 1970s and have become common practice since then. The municipality asks the developer to invite three or more architectural offices to present a proposal for the design of the area before deciding who will be on charge of the design. In Kv. Dalen after the parallel competition the company FNNS was assigned to design all the blocks (Andersson & Feuk, 1980, p. 20). In Skarpnäck each building company would invite three offices (except HSB that invited two because they had an older agreement). The selection of the offices and the subsequent development of the project was done in close collaboration with the municipality to ensure the parameters of quality the municipality had established. Finally HSB hired Brunnberggruppen, Stokcholmshem FFNS and BGB Ralph Erskine office (Arkitektur 1980, p9). However, the development of the project of the last was done by Arken arkitketer, that was founded by 14 collaborators of Erskine, some of these collaborators were who actually had done the proposal for Skarpnäck, first working under Erskine, but they soon started their own practice being Skarpnäck their first commission.

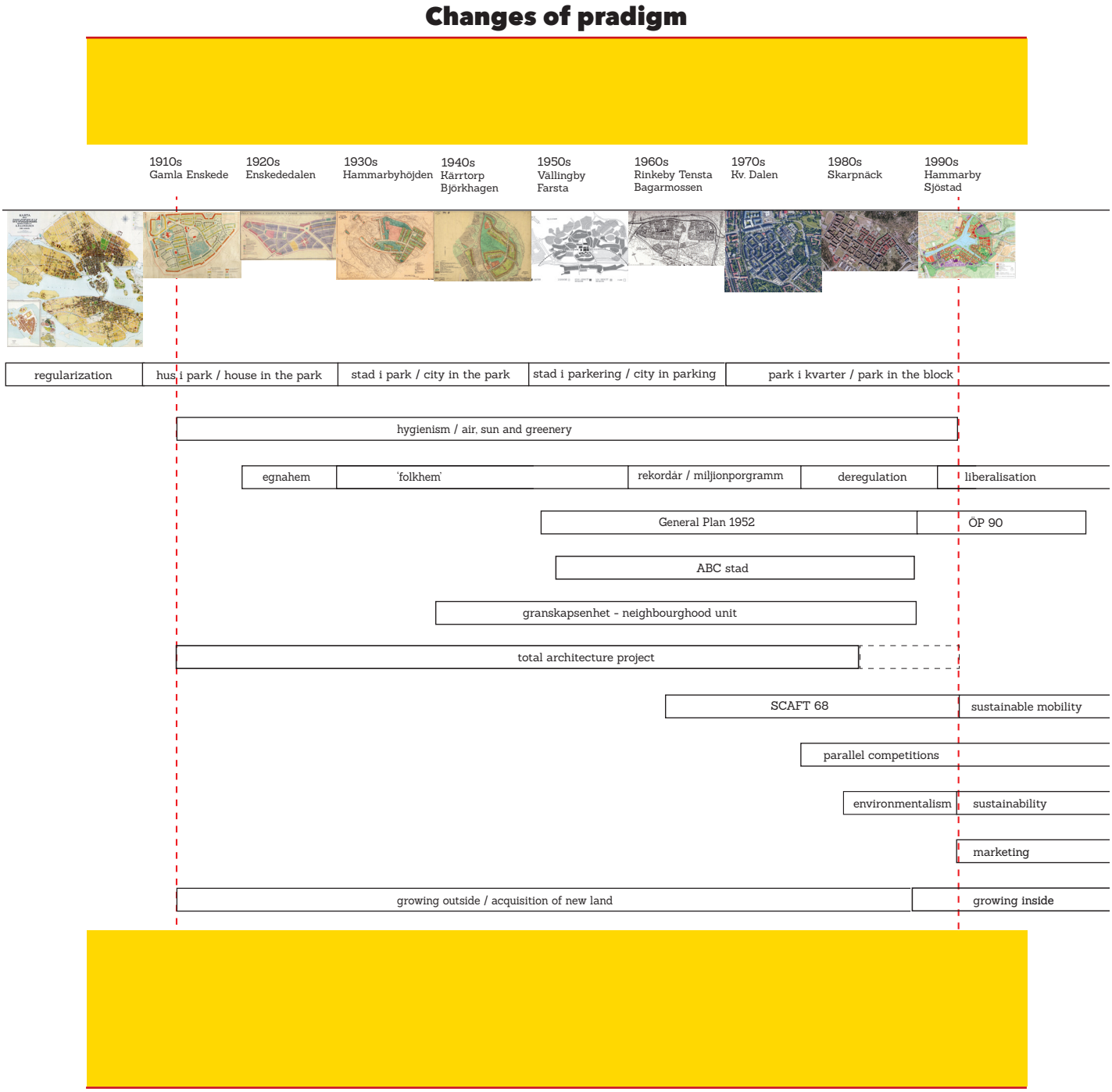


Figure 4.23

Changes of Paradigm around 1995

The diagram shows when are operating different paradigms that influence urbanism in relation to some of the examples used in the thesis.

4.3. The Construction of the Stockholm Suburb. A Process that Starts and Ends Within the 20th Century

This chapter deals with a process of suburban expansion of Stockholm that starts and ends in the 20th century, roughly between 1905 and 1995, taking the garden city of Gamla Enskede as point of departure of the effort from the municipality to provide with good housing conditions to the whole population. For most of the period, the expansion is based on acquiring land, increasing the size of the municipality (figs. 4.24 and 4.25), a expansion that, as it has been introduced, is followed sometime during the 1980s by a shift towards building the city inwards.

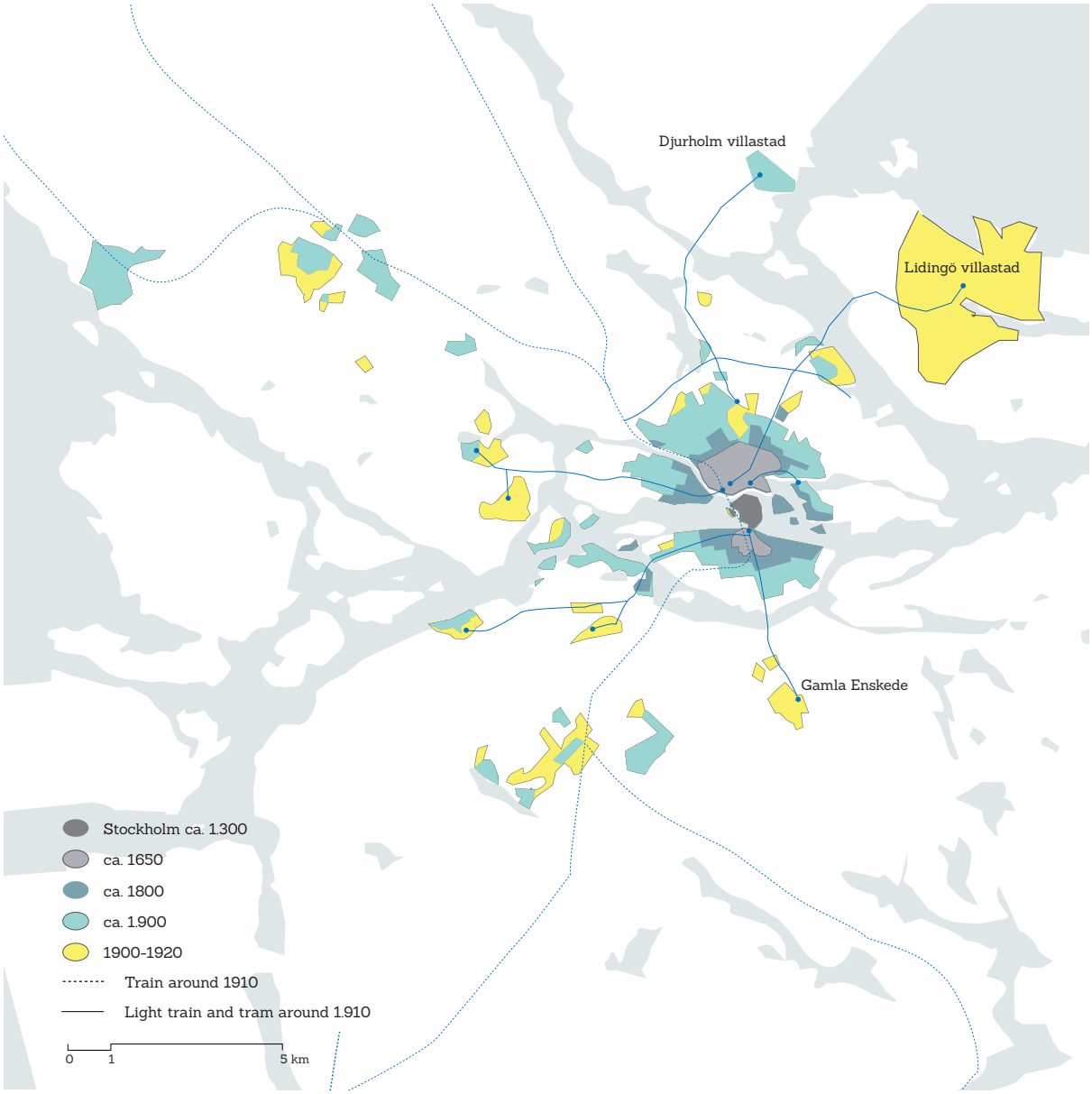
The construction of the suburb during the whole period is characterised by hygienist principles of light, air and greenery, aiming at of community building. Well defined enclaves that get formalised after the dominant styles, typologies, approaches to design and street patterns operating in each period. Here, I focus in the construction of new multi-family housing areas, leaving out large villa areas that form the sprawl, which offer a different problematic in terms of urban design and sustainability, that would be worth to explore in future research.

The date of 1995 takes as reference the introduction, around those years, of the ecological profile in Hammarby Sjöstad in connection to the Stockholm candidature for the Olympic Games. This ecological profile dealt mostly with technical and environmental aspects, adding a layer to the already existing urban scheme and typologies, which is the focus of this thesis. In the development and implementation of Hammarby Sjöstad became apparent several paradigm shifts that suggest a different way to approach urbanism, discussed above, that relate to how the city grows (growing inside instead of acquiring new land), housing policies (liberalisation and de-regulation), change of general plan (becoming more strategic), planning processes (higher specialisation and complexity), environmental concerns (sustainability discourses) or target groups (from improved living conditions for the working class to building for middle classes to maximise profit).

The construction of the suburb, rather than understood as a sequence of independent models conceived in each period, it is read in continuity, which entails that each enclave

Figure 4.24

Suburbs built in the first decade of the 20th century. Including Djurjolm and Lidingöstad outside Stockholm



incorporates lessons from previous experiences, sometimes applying the same decisions or elements, others reacting to them by correcting perceived mistakes. This way each enclave is not read as unitary model whose elements are indivisible from each other. The elements of design are read as threads or strands that evolve through the century, sometimes having continuity, others disappearing, or appearing again, when, in order to correct failures from the previous experience, is looked into older examples for inspiration.

Departing from existing labels of the ideals applied in some moments it is proposed a more nuanced sequence of the typologies that explain the different moments of the

Figure 4.25
Expansion of Stockholm.
The red line indicates the municipal borders around 1891.
To the south, land recently acquired in Enskede and Årsta
Source: Topografiska corpsen. Stockholms stadsarkivs kartsamling NS 442, SE/SSA/0234/J 4 B:5, kartblad 5
“Mellersta bladet” ur Trakten omkring Stockholm i 9 blad, utgiven 1861, översedd 1891-1893

construction of the suburb. The typologies are defined by the relation of the building type with the surrounding and discussed having in focus the evolution of design principles and ideals, and how they reflect the trends and driving forces that influence them at each time. The sequence proposed has been partially introduced in previous chapters, here is completed and extended. Its formulation started by questioning a simplified story of the 20th century that traces a direct line from the urban block of the 19th century to the suburban block of Hammarby Sjöstad, a simplified narrative that considers the functionalist suburb of slab-typologies as a parenthesis (fig. 2.4). Instead, by considering the suburban block and structure as a an entity with different characteristics, logic and dynamics from those of the urban block

of the inner-city, it has been connected to a process of evolution that starts with the garden city in the first decade of the century, a narrative where both the garden city and the slab-typologies will influence the subsequent formalisation of the suburban block (fig. 2.34).

The reading of the moments of transition between the three larger periods of the century (garden city, functionalist city, suburban block), together with the definition of core driving forces that have shaped the urban environment (among others car, retail and mass-production) allows to trace a more nuanced, sequence of the transformation of the typologies of the suburb: house in the park – city in the park – slab-house in the park – slab-house in the parking – parking in the block – park in the block I consider important to include the Swedish terminology, because it is of common use and I have departed from this language to establish the sequence.

This classification is unravelled in this chapter, I depart from common terminology to refer to urban types for the first two periods. And for the third one, I borrow the term *skivhhus i park* used by Torstern Westman (1980), introduced in chapter 2 to refer to the linear slab typologies). I propose the three later terms in order to complete the sequence. It is important to note that this it is not a strictly linear process, the use of different types can overlap in time, a project can be a mix between two of them and not all the developments of a period follows those types. Rather than pursuing a term that describes the majority of the production of a period, the interest of the sequence is to follow the introduction of certain design characteristics, principles and approaches that have been important in defining the character of urban design and, specially, its evolution.

The sequence will be discussed and exemplified using cases already introduced in this thesis, roughly representing the way urban design was approached each decade (fig. 4.26). I have chosen to use areas built in the same area of Stockholm, to the south east, along metro lines 17 and 18, to see them in relation to each other, except for the period of the record years, which is not present in the area. This absence is significant, because it is not only a period of mass-production and large scale developments, it is also a period that housing areas are built further away from the inner city. This period is exemplified through the developments