

# HAVENSTAD

A vision for a contemporary World Garden City







*This report is a collaboration between the Amsterdam School Museum Het Schip and students from the Urban and Regional Planning Masters program at the University of Amsterdam (UvA). As a product from the UvA's Future Societies Lab, this report is a utopian vision for the Havenstad Development inspired by the principles of the Garden City Movement.*



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# 1 Introduction

*“A modern-day Garden City must address the issues of our time just as the original Garden City addressed the issues of its time. However, they still share the same aim, that of enabling health and wellbeing and of collective prosperity underpinned by a cooperative economy.”*

*- (personal communication, P. Rampuria, February 2, 2022).*

No one should be afraid to dream big, including urban planners. 21st century cities are testaments of the long legacy of urban planning in shaping large human settlements. Throughout history, we have seen the multiple challenges that cities have faced in their shaping as well as the many conquests they have achieved. Ranging from pandemics to natural disasters, cities have shown us the resilience and creativity of urbanites when facing adversity. But the magnitude of problems in cities of the 21st century, exacerbated by factors such as climate change and years of institutionalized discrimination, can make it discouraging to be optimistic. However, urban planning can still provide us with a glimmer of hope. Looking at our past, urban planners were the ones exploring possibilities for new living imaginaries during moments of hardship. Therefore when looking at the future of our cities, we can take inspiration from our past to find the solution that we are searching for.

An urban practitioner of our past to look at is Ebenezer Howard. During a time when English cities were being suffocated by the effects of industrialization in the 19th century, Howard conceived his vision of a Garden City. Started as a movement to protect people from the ills of the polluted industrial city, the Garden City envisioned a settlement that combined the benefits of the countryside and city to provide high-quality socially inclusive housing. Now, in the 21st century, the challenges of housing have changed to problems of affordability and scale. This is evident in cities such as Amsterdam where the effects of the housing crisis have become unavoidable. In response to the housing shortage, the city of Amsterdam has initiated large scale housing developments such as Havenstad to address the crisis. The remaining question is how the Garden City Movement can be applied to modern high-density developments. To answer the previous question, this report presents a vision of Havenstad inspired by the values of the garden city movement.

## Methodology

When putting together this report, the following steps were taken. Inspired by the suggestions from the Het Schip's team, worldwide cases of Garden Cities were first researched. In total, 22 international case studies of Garden Cities were cataloged and summarized. The information was

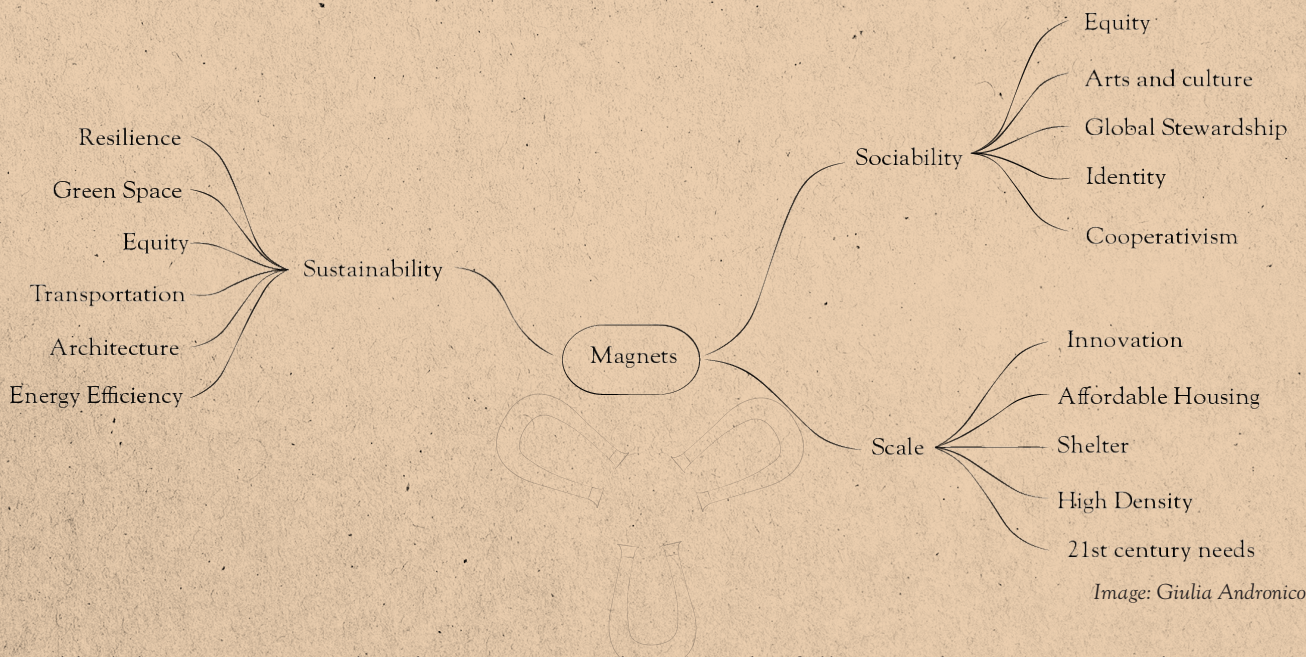


Credits: Giulia Andronico

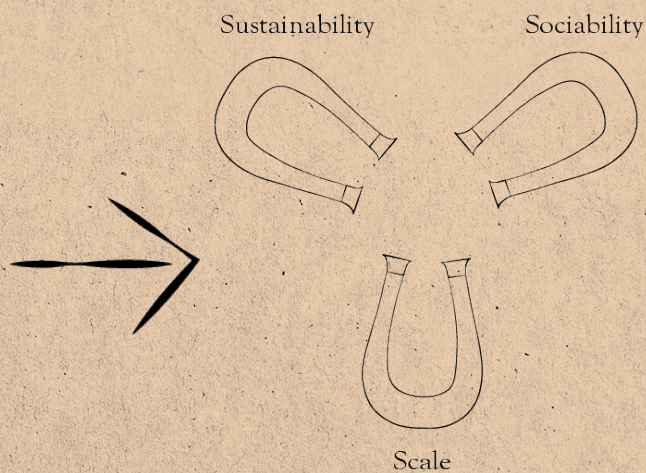
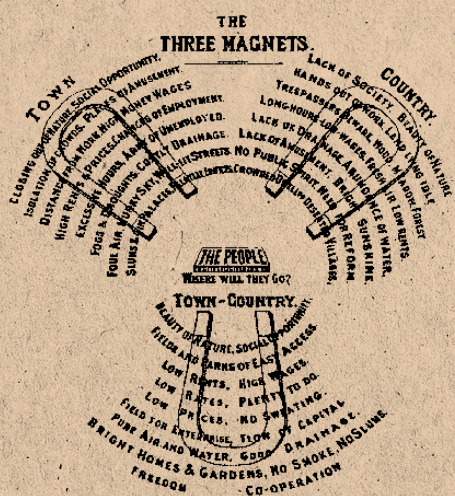


used to create an interactive map displaying the location of each case study. In addition to researching international case studies of Garden Cities, two interviews were held to gain more insight into the Garden City movement and the Havenstad development. The first interview was held with Koos van Zanen, a chief planner at the municipality of Amsterdam and the program manager of amenities in Havenstad. The second interview was held with Prachi Rampuria, co-founding director at EcoResponsive, the organization responsible for the masterplan of the Letchworth Garden City expansion. The interviews helped guide the research in a systematic fashion that is most relevant to the Havenstad project.

Afterwards, the UvA research team synthesized the garden city case studies to identify recurring themes. The most important themes were used as umbrella terms to help expand and establish relationships in a mind map. This helped to organize the information in a manner in which three main themes emerged: sustainability, sociability, and scale.



Inspired by Ebenezer Howard's Three Magnets diagram, the following themes were used to structure and present the information in the report. The three magnets are used as the foundation for the vision of Havenstad to ensure that the core qualities of the Garden City movement are represented.



Just like the original Garden City movement, the development wouldn't work if only one or two magnets are present. Only when all three magnets are activated is when the Havenstad development will truly reflect the Garden City ideals.

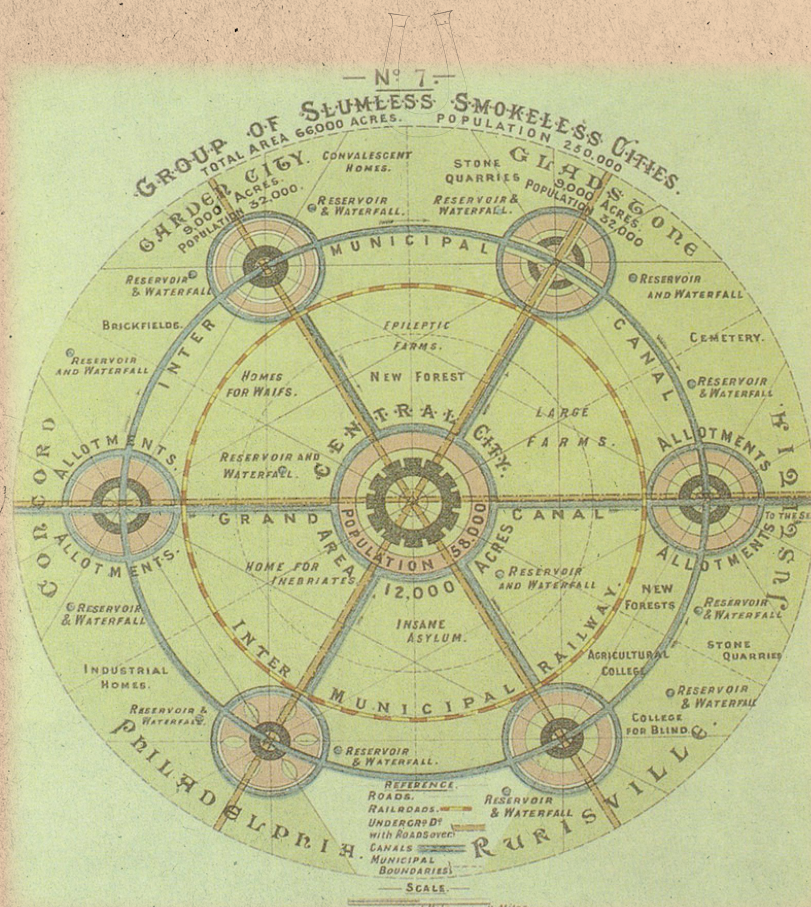


# 2 Theory

*“The town and the country may, therefore, be regarded as two magnets, each striving to draw the people to itself—a rivalry which a new form of life, partaking of the nature of both, comes to take part in.”*

-(Howard, 1898, p.16)

The Garden City movement influenced the role of urban planning in the 20th century. Its creator, Ebenezer Howard, a pioneer of modern urban planning, inspired a new utopian vision with his comprehensive plan of new communities living in a country-city hybrid environment. Howard's vision stemmed as a reaction to the growing inequality and poverty experienced through unregulated capitalist growth in urban areas (Clark, 2003; Gatarić et al., 2019). Out of many people who probably inspire Howard greatly, two distinctively stand out: the geographer Alexeyevich Kropotkin, who predicted the impact of electricity and technology on the decentralization of urban areas, and the economist Alfred Marshall who urged the construction of new cities to decrease the increasing social costs provoked by the concentration of industry in cities (Gatarić et al., 2019). Inspired by these ideas, Howard proposed the establishment of new cities that combine rural and urban settlements in his 1898 book *To-Morrow: A Peaceful Path of Real Reform* he outlined the details of such new settlements.



The Garden City Concept by Ebenezer Howard (Credits: Sonnenschein publishing)



Howard described the relationship between rural and urban areas in three magnets: the Town magnet, the Country magnet and the Town-Country magnet. The first magnet showcases advantages and disadvantages and general characteristics of town (or city) life while the second shows the advantages and disadvantages and general characteristics of country life. For example, the Town magnet, as can be seen in the diagram, offers, in comparison to the Country magnet, the advantages of high wages, opportunities for employment, tempting prospects of advancement, but these are largely counterbalanced by high rents, prices, overworking and pollution (Howard, 1898). The Country magnet, on the other hand, offers low rent, sunshine and fresh air but no society, or existing drainage system. The third, Town-Country life, depicts Howard's proposal of a Town-Country life. In the center, you find the people who are not able to choose between the Town or the Country magnet. The Town-Country magnet would unite and harmonize both factors, and end up attracting the indecisive population to the point where it has more inhabitants than the other two magnets.



The Three Magnets by Ebenezer Howard (Credits: The Guardian)

To achieve this, Howard proposed a comprehensive vision of social and political reform involving the gradual transformation of existing dense cities towards a decentralized but interrelated network of Garden Cities. By decentralizing the city the problems of congestion and density would be minimized through the creation of polycentric cities (Mirkov, 2007). The cities themselves would be conceived of a single center, together forming a polycentric agglomeration of satellite cities (Mirkov, 2007). Such settlements would enable the planning of environmentally friendly developments. Using principles of zoning, each city would be surrounded by a green belt, for the use of agriculture and recreation. This belt would also limit the expansion of the population and spatial expansion (Ward, 2013). In turn, it would allow for higher proximities for all residents to green areas used for recreation and sports. In Howard's vision, each Garden City would have a population of around 32,000 people and housing developments would be facilitated through cooperatives and collective ownership in the community (Gatarić et al., 2019). Therefore, Howard's nuanced vision not only brought in new approaches to planning but also redefined the ways in which community wealth was distributed. Once the initial costs of the buildings were paid off in the Garden City, these new communities would distribute the costs of its future wealth, funding social and other facilities and amenities to be used within these communities through its accumulated wealth. To further this idea, he founded the Garden City Association with the mission to promote the Garden City ideas and built the world's first Garden Cities in Letchworth, where construction began in the year 1903, and Welwyn in the year 1920 (Henderson et al., 2017).



# Sustainability



*“the sunlight is being more and more shut out, while the air is so vitiated that the fine public buildings, like the sparrows, rapidly become covered with soot, and the very statues are in despair. Palatial edifices and fearful slums are the strange, complementary features of modern cities” -(Howard, 1898, p.16).*



# Sustainability & the Garden City

*“The smoke fiend is kept well within bounds in Garden City; for all machinery is driven by electric energy, with the result that the cost of electricity for lighting and other purposes is greatly reduced.”*

*-(Howard, 1898, p.25)*

## Sustainability in historic Garden Cities

Even though climate change was not a concern when Howard conceptualized the three magnets, other aspects of sustainability are visible in the original Garden City plan. For Howard, one of the biggest concerns was access to fresh water and clean air (Parsons & Schuyler, 2002). This is because industrial cities struggled with air and water pollution, while the countryside offered an escape from the negative effects of industrialization. Consequently, the town-country magnet conceptualized a place where people live close to their location of employment, while still enjoying the fresh air and water. As proposed by Howard, air and water pollution would be reduced through technological advancements such as using electricity instead of coal or oil as a fuel source (Howard, 1898; Parsons & Schuyler, 2002). This is exemplified by the Garden City suburbs of Römerstadt, Frankfurt, Germany built in 1935 and Pinelands, Cape Town, South Africa built in 1922. Both Römerstadt and Pinelands use electricity instead of coal (Arquiscopio, 2013; Capetownetc, 2019). However, the Römerstadt neighborhood also includes central heating, which eliminates the use of coal, wood or other polluting fuel sources to heat homes.

Sustainability in Garden Cities is also visible by the magnitude of green spaces they offer. A typical historic Garden City offers lots of open space for residents to enjoy the outdoors and includes tree-lined streets as seen in the Garden City neighborhood of Sokul, in Moscow, Russia (Atlas Obscura, n.d.).



*Sokol's single family dacha style homes with tree-lined streets (Credits: Atlas Obscura).*

When the following historic Garden City neighborhoods were planned, they were situated on the outskirts of the city. Nowadays, remaining Garden City neighborhoods became more centrally located in big cities like Moscow and Tokyo due to urban sprawl (Hidden Moscow, 2018; Oshima, 1996). The Garden City neighborhoods were transformed into places of relaxation in bustling cities, like the case of Sokul, Moscow. However, the case of Tokyo shows how formerly affordable and green neighborhoods have become privatized, expensive and exclusive (Sies et al., 2019). Their evolution into affluent neighborhoods goes against the principles of the Garden City which pushed for low rent housing.



## **Sustainability in contemporary Garden Cities**

For contemporary Garden Cities, an array of sustainability metrics are needed. Thankfully, contemporary conceptualizations of sustainability go beyond factors such as used fuel source and green space, to also include the production of electricity, transport, resilience and equitable green development (Kuhlman & Farrington, 2010; Rasouli & Kumarasuriyar, 2016). An example of sustainable transport is Innisfill, a small rural town north of Toronto, Canada. Innisfill wants to expand its population by 150.000 people, using transit oriented development and the Garden City ideals (MacDonald, 2022). By doing so, the town wants to encourage people to take the train instead of buying a car. Moreover, bike paths will be installed and public transportation will be extended to disincentive car usage. In Amsterdam lack of public transportation is felt by the population. The planned metro line in the west of the city is especially a cause for criticism because it will not be developed alongside the development of housing, but rather after residents have already moved in (Jager, 2019). Developing the metro line first could result in fewer residents purchasing cars because they will have access to public transportation from the start. If done well, it can even promote socially just green development because those who can not afford to purchase a car are no longer excluded.

## **Resilience**

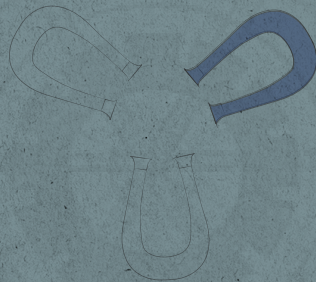
Another important factor in sustainability is the question of resilience. This is especially important in the Netherlands, as it is a densely populated country situated mostly below sea-level. Neighborhoods along riverbanks can be vulnerable to flooding from rivers instead of the sea. Current development plans focus more on green space and nature-inclusive construction ("natuurinclusief bouwen") instead of resilience. This is a missed opportunity due to the risks of climate change in urban areas resulting in, for example, urban heat islands and flooding (Albers et al., 2015). Examples of increasing resilience include green rooftops, water collection and re-use, and keeping crucial infrastructure safe from flooding.

## **Green Space**

Green space provides an important function to the residents as well as the flora and fauna of Amsterdam. Not only does it provide space for relaxation and recreation, but it also serves important ecological services like reducing air pollution (Wolch et al., 2014). These benefits make it clear that there should be enough green space in the contemporary Garden City. However, incorporating green areas into high density areas may be challenging for the contemporary Garden City. For example, as mentioned in an interview by a chief Planner of the municipality of Amsterdam and amenities program manager of the new Havenstad development, Koos van Zanen, the high density of Havenstad makes it more challenging to create enough green space (K. Van Zanen, personal communication, January 26, 2022). In order to meet these regulations, green roofs are implemented alongside regular parks. This shows the difficulty of incorporating the Garden City ideals in a modern city: there is not enough space for green development because of the high density of housing needed to provide for a growing city. While historic Garden Cities like Södra Ängby in Sweden are characterized by low-density single family homes, this is simply not possible in the contemporary Garden City (K. Van Zanen, personal communication, January 26, 2022). Moreover, using rooftop gardens, as proposed by Koos van Zanen, will effectively privatize the benefits of green space to the residents of the housing block, going against the cooperative and communal values of the Garden City movement.



# Sociability



*“It is quite true that the pathway of experiment towards a better state of society is strewn with failures. But so is the pathway of experiment to any result that is worth achieving. Success is, for the most part, built on failure” -(Howard, 1898, p.95)*



# Sociability & the Garden City

*“The Garden City pioneers propagated the ownership and management of housing developments to be based on co-ops, mutual ownership societies and sharing facilities. This was not just rooted in the desire to foster community values. Primarily, the reason was rooted in cost-effective and efficient use of land, perpetual affordability of high-quality homes for everyone and equitable access of limited resources.”*

*-(personal communication, P. Rampuria, February 2, 2022)*

A key pillar of 21st century Garden City planning is the creation of social forms of ownership, management, and identity in neighborhoods. In this context, social “ownership” is defined as the legal extensions of property rights to a collective entity; social “management” means the collective decision making about day-to-day matters in a development; and, social “identity” indicates a sense of self in residents which incorporates their relations with each other and the entire development. Ebenezer Howard’s original vision of the Garden City was not limited to the built environment. In fact, Howard envisioned a community that cooperatively managed the Garden City to shape the identity of the space (Sharifi, 2016). Even though some past Garden City experiments failed to cater to the working class, and appropriated Howard’s vision to create unsustainable sprawling suburbs, it also inspired projects that adapted the original plan to foster tight knit communities (Talen, 2005).

## Social Ownership and Cooperativism

Social ownership in the 21st century is distinguished from social “management” by its conferring of all of the formal rights associated with property ownership to a collective organization. While ownership includes the right to manage, it also includes the right to sale, the protection of the state and formalization within the boundaries of official law. In the Garden City vision, the community is shaped through collective ownership. Howard pushed for all profits from the commons to be repaid and reinvested in the Garden City community as a means to achieve community wealth distribution (Gatarić et al., 2019). In addition, any surplus profit would go towards funding social facilities and amenities for the use of the community.

Howard’s initial vision of the Garden Cities also embraced cooperative practices. For instance, the original garden cities of Letchworth and Welwyn included 3 cooperative residences: Homesgarth, Meadow Way Green and Guessens Court (Borden, 1999). The Homesgarth residence stands out due to its quadrangle plan which served to facilitate communal living. For instance, work class cottages were grouped in quad-rangles and shared a common room for all sorts of gatherings.



*Homesgarth cooperative quadrangle, Letchworth, (1910-1913) (Credits: Iain Borden).*



After WWI, Vienna was the epicenter of cooperative garden cities experimentations. The war left the city with the task of rebuilding itself through radical reforms which led to the creation of the Wiener Gemeindebauten, one of the most successful of co-operative housing projects in Europe at the time (Blau, 1999). To address the housing crisis in the Austrian capital, some locals migrated to the outskirts of cities to create self-sustaining communities. Cooperativism became a medium through which the Viennese expressed the social ideals of the Garden city.

But during the mid-twentieth century the Garden City movement would distance itself from its founding social principles. In the United States, Howard's vision of communities surrounded by greenery led to what is recognized today as American Suburbia (Southworth et al., 1995). One of the most notorious post-war housing developments was Levittown. Levittown was a series of mass-produced suburbs in the East coast of the United States, which consisted of cookie-cutter single-family homes with white picket fences and green lawns and private recreational spaces for people in the community to collectively (Kelly, 1993). Even though Levittown housed multiple veteran families in the United States, its legacy is plagued by exclusion. Infamously, Levittown was accessible only to white American families, meaning that people of color were segregated from these communities (Woods II, 2013). In addition, the green lawns which were meant to improve the quality of life of the residents, ended up becoming an unsustainable practice due to the amount of water needed to maintain them (Gray, 2012). The case of Levittown and American Suburbia highlights how easily the values of the Garden City movement can be co-opted. Therefore, when planning for the 21st century Garden City, it is imperative that contemporary developments are in touch with the history of the movement to ensure they are promoting the founding principles.

### Arts & Placemaking

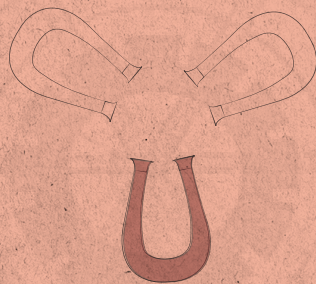
Given that the Garden City movement emerged during 19th century England, it comes to no surprise that Howard's vision embodied principles of the Arts and Crafts movement. Ebenezer Howard was fascinated by designer William Morris and his critiques of industrial society. Morris was vocal in his distaste for the industrialization of cities and wanted to transform them into gardens where just societies could thrive (Clark, 2003). Inspired by Morris, Howard's Garden City vision would serve as an arts and crafts solution for those who wished to escape the ills of the industrialized city. The Arts and Crafts movement also helped shape a visual identity for the Garden City movement. Howard envisioned the Garden City consisting of individualized homes constructed by locally sourced materials and executed by craftsmen; this resulted in the array of cottage style houses as seen in Letchworth, England (Lewis, 2015).

The Arts and Crafts movement would contribute to the placemaking values of the Garden City. Placemaking focuses on strengthening the connection between people and the built environment through public spaces (Wyckoff, 2014). One way of achieving this is through individualized approaches in shaping the built environment. For instance, Craftsmanship was a way for the population to reflect their desires and identity in their homes while also making each house unique from each other. But placemaking expands beyond the house and into the public realm. Howard made sure his vision would include public spaces that the community collectively owned and were situated in the center of the neighborhood (Batchelor, 1969). By doing so, the Garden City vision included spaces in which the residents could exercise placemaking.

Urban theorist Jane Jacobs pointed out the importance of public spaces for fostering lively neighborhoods. Jacobs argued that by allowing the population to take ownership and participate in the shaping of public spaces, it will help to achieve a vibrant community (Horgan, 2019). Therefore, the 21st century Garden City can not thrive without public spaces and needs to be designed with the intention of facilitating placemaking.



# Scale



*The town will grow; but it will grow in accordance with a principle which will result in this—that such growth shall not lessen or destroy, but ever add to its social opportunities, to its beauty, to its convenience. (Howard, 1898, p.129)*



# Scale & the Garden City

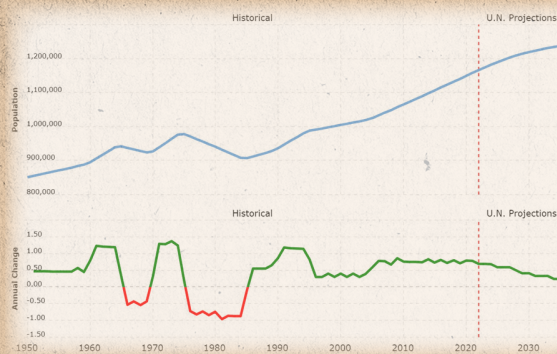
*“High density too has its issues regarding integration of landscape and natural spaces, enabling everyday life nestled in nature, air quality, access to natural ventilation and light.”*

*(personal communication, P. Rampuria, February 2, 2022).*

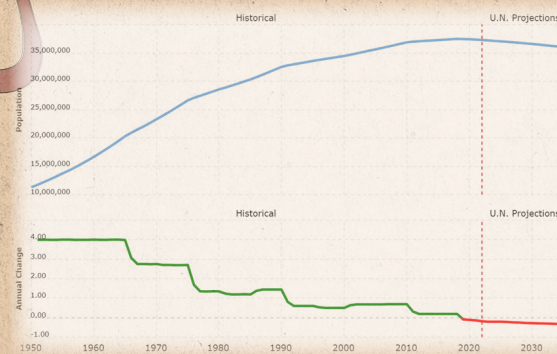
Howard's early 20th century vision for Garden Cities imagined satellite garden villages of 32,000 people wrapped around central cities of 58,000 (Goodall, 1998). During these times, the problems these cities were meant to solve were primarily a lack of space and greenery for city workers and a lack of opportunities other than farming for rural workers (Howard, 1902). Residents in 21st century cities, on the other hand, number in the hundreds of thousands or millions, and transportation and housing needs must scale accordingly to meet them. The amount of people cities need to serve is increasing in two ways: First, the world's population is increasing exponentially. Second, the proportion of the world's population who lives in cities continues to grow every year (Ritchie & Roser, 2018). As a result, cities around the world must fulfill human needs at a scale unseen by Garden City advocates in the early 20th century.

## Housing

Growing cities are forced to build new housing at a scale commensurate with their population growth. Otherwise, urban metro cores develop housing shortages, and the prices of housing increase. Contrasting Amsterdam with Tokyo demonstrates this nicely; despite Tokyo exceeding Amsterdam in population growth and average salary, average rent for a Tokyo studio is 760 euros while rent for an Amsterdam studio typically starts at about 1181 euros (Meesterburrie, 2022; Japan-Guide, 2021).



Amsterdam Population Growth (Credits: Macrotrends).



Tokyo Population Growth (Credits: Macrotrends).

The difference is visible in Tokyo and Amsterdam's skylines; while Tokyo tripled housing construction, Amsterdam consistently allowed housing construction to lag population growth.



Amsterdam Skyline (Credits: Holland.com).



Tokyo Skyline (Credits: YellowKroner).



Tokyo shows us that approaches to housing development that meet the scale of housing demand do not require a special amount of creativity. Simply allowing developers to build enough housing works well enough; it requires active effort through height restrictions, design standards and other government regulations to suppress housing supply.

The housing challenge for 21st century garden cities is not “how do we build enough housing?”, but “how do we build enough housing without becoming unsustainable or lowering the sociability of the communities in which we build?”. Tokyo is applicable here. Part of their housing construction boom comes from frequent “scrap and build” projects which, along with increasing floor space and aggregate number of units, have elevated Tokyo’s household carbon footprint by 39% since 1990 (Smith, 2008). At the same time, the liberalization of housing policy which generated enough housing to meet demand has also made social housing into a collection of mostly off-limits, alienated housing in which social contact is so rare that dying alone is a regular phenomenon within it (Watanabe et al., 2019).

### Transportation

The original Garden City plan involved economically independent garden villages with short commutes. However, they spawned a distortion called “garden suburbs” which depended on reliable transportation for workers to commute to jobs in the central city (Hall & Ward, 2002). These garden suburbs were described by Mumford (2002) as the antithesis of Howard’s original vision of Garden City villages as a method of integrating more effectively into urban life. In the 21st century, transportation networks are designed to serve the mass commuting needs of hundreds of thousands of urban residents who each have jobs, social lives, and specific shopping needs. However, scaling up transportation to get hundreds of thousands of residents around is not enough to build cities that adhere to 21st century garden principles. Two specific cases demonstrate why an adequate scale of transportation almost definitionally interferes with sustainability and sociability.

The interstate highway system in the United States is the backbone of suburban commutes into downtown urban cores. Whenever more demand is added into the system, highways are expanded to allow more commuters to make the same trip. While this system is scalable with population increases, it is not sustainable. The Katy Freeway’s experiment in lane expansion demonstrates this. Three years after the Katy Freeway expanded for \$2.2 billion to become one of the widest roads in the world, morning and afternoon commuter times both increased by more than 20 percent (Christian, 2018). Expanding the highway didn’t just result in no change; it actually reduced the efficiency of the average commute (Cortright, 2015). Additionally, the entire highway system in the larger Houston area proved unusable when evacuating from a major hurricane. Houston’s transportation infrastructure allowed 100 people trying to evacuate Hurricane Rita to die in a traffic jam with 2.5 million cars before the storm even landed. This death toll surpassed the death toll of people who didn’t evacuate at all (Gilmour, 2017).



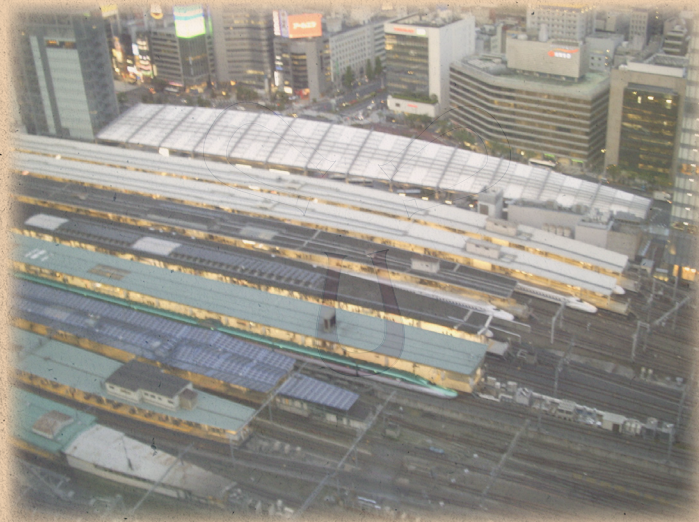
*The Katy Freeway (Credits: Houston Chronicle).*



In addition to making residents more vulnerable to natural disasters, plans for the Katy Freeway's expansion will demolish historic neighborhoods of color if enacted (Garnham, 2019). Scale in regional transportation capacity will come at the expense of entire communities. This is bad for sociability and local identity, even if it adds regional connectivity. Additionally, whenever automobile infrastructure is expanded to accommodate new traffic, the additional cars each add 4.6 metric tons of carbon each year (EPA, 2021). Building up highways increases transportation scale to the 21st century, but is fundamentally incompatible with a shared focus on sustainability and sociability in development.

### **Scaled Multi-Modal Transit**

Non-auto transportation takes up less space per person moved. Cars pack people much less densely even when they maximize occupancy per car. They maximize the space taken up by each person and the amount of breathing room between each small group of people needed for safe transportation. Minimizing space taken up by transportation assists in sociability by freeing up more land for public uses and with sustainability by moving more people per unit of energy. However, minimizing car use is not a panacea that resolves the problems contemporary approaches to transportation scaling cause for sustainable and sociable development. Where it does exist on the street, transportation infrastructure separates buildings and is mutually incompatible with communal meeting spaces meant for people staying somewhere for an extended period of time. Since cities are always growing, the amount of space consumed by transportation is also always growing, worsening the problem.



*Tokyo Train Station (Credits: Dr. Yellow).*

The following train station in Tokyo divides one neighborhood from another. As the amount of people who can be moved increases the amount of space for staying still and being sociable decreases. A highway for cars would be worse, but the conflict between moving people and building remains.

Street-level regional transportation competes in a zero-sum game with street-level communal gathering spaces and undisturbed ecosystems. More fundamentally, it takes space from the compact urban village and uses it to move to some other place. Switching from car-dominated modes of street-level regional transportation reduces transportation-related demand for space, but does not maximize communal and ecosystem space enough to assist in the creation of a 21st century Garden City. A new approach that does not force a zero-sum competition between space for transit and space for living and space for the environment is required for a Garden City to flourish at a 21st century scale.

While planners can take inspiration from the scale of these developments, each of them fails to meet the necessary criteria for Garden City developments in the 21st century by neglecting sustainability and/or sociability. They are a demonstration of scale in isolation, which meets the needs of a growing population while neglecting foundational principles of Garden City living.



# The Havenstad Vision



*Havenstad (Credits: Architectenweb).*



# 3 The Havenstad Vision

As cities continue to grow, densification becomes necessary, given the mere necessity for housing. The Havenstad, which literally translates to 'Port City' in English, is a newly planned residential area in the Norwest of Amsterdam aiming to provide homes to more inhabitants in the city. Plans are set to include a mixed, highly urban living and working area. A total of 50,000 to 70,000 housing units are expected to be built throughout the coming 30 years, where 150,000 people will live (Gemeente Amsterdam, 2021). In addition, Havenstad planners have the ambition to create between 45,000 and 58,000 jobs in the area (Gemeente Amsterdam, 2021).

Amsterdam city planners have published the "Integral Framework Port-City" for Havenstad as well as Social Vision and Sustainability Vision. The Social Vision report outlines the importance of developing 'the story' of Port-City hand in hand with carefully developing the physical transformation of Port-City. Havenstad planners outline three core values said to guide the social vision of the new port area: liveable, just and connected. Part of attaining the values of the port city is putting serious attention to its social facilities. The Sustainability Report addresses the visions, goals and targets for the Haven-Stad to become a sustainable urban development. Finally, the "Integral Framework Port-City" – is a more concrete governing document and framework which is meant to steer the developments for the entire area.

Though the city has received praise for the project, it also received criticism. Its plans have been criticized for the use of the already existing Westerpark as a measure of greenery for the area. The Westerpark is visited by residents in other neighborhoods in the West area including the Bos en Lommer, Staatsliedenbuurt and Spaarndammerbuurt. But Westerpark will not be able to cope with an additional 70,000 Haven-Stad inhabitants (Bloemberg-Issa, 2020). In addition, the city council of Amsterdam has been criticized for sacrificing green space in favor of building plans or artificial greenery. Based on satellite images 11 percent of the green space within the Ring disappeared between 2003 and 2016 (Giezen et al., 2018). This is equivalent of three square kilometers, about 550 to 600 football fields.

The existing plans also raise questions about mobility. The late construction of the public transit system will make it difficult for residents to reach the new development by public transportation. The public transport system must be based on the metro given the capacity that is to be expected (AT5, 2017). Moving the amount of people in the area demands a reliable, independent form of transportation. However, the plans for such construction seem to be delayed. As mentioned by Koos van Zanen, the metro line will not be necessary for the first years, since 80% of the house will not be built straight away given current licenses for industrial activity (K. Van Zanen, personal communication, January 26, 2022). Therefore, a bus transit service is a sufficient solution to replace the metro. However, the licenses will only be valid until 2029, and according to Ms. van Huffelen, at least 15 to 20 years are necessary for a metro line to be opened, from start to finish. The lack of public transport indicates the lack of accessibility to the development in its first few years, appealing almost entirely to a specific part of the population, namely car users. Moreover, when addressing sustainability, the implementation of a late transportation system would also conflict with the 'Autoluw' (Car-free) agenda for Amsterdam, including the Havenstad development. The current plans of the Havenstad make only 15 percent of the available space in the district designated for cars; compared to the average 25 in the Amsterdam ring area. But with the late construction of the metro line, the planned percent seems to be subject to change.



# Sustainability



“Common ground between high-density development and the original Garden Cities ethos is the opportunity for sharing; not just in terms of open spaces - whether public or communal - but also resources such as water, waste and energy.”  
(personal communication, P. Rampuria, February 2, 2022).



# Sustainability: With Innovation

*“The Garden City ethos must be adapted not just in the context of density, but also in the context of climate change and the biodiversity emergencies that we’re living in, where greenspace and health equity is likely to be an issue.”*

*-(personal communication, P. Rampuria, February 2, 2022)*

Developing Havenstad with a sole focus on sustainability can lead to unintended side effects. Historically, privileged urban communities have better access to urban green spaces like parks than communities which are socially and economically disadvantaged (Jennings et al., 2012). This means that disadvantaged communities experience fewer benefits of urban green space, like cooler temperatures in summer, mental health benefits, and spaces for relaxation (Cole et al., 2017; Makarewicz-Marcinkiewicz, 2016). Implementing urban green space can also lead to green gentrification. This happens when newly implemented green space becomes a catalyst for other revitalization, leading to higher real estate prices and thus inaccessibility for less-privileged residents (Cole et al., 2017).

To ensure sustainability without gentrification, Havenstad as the modern Garden City will include the perspectives of sociability and scale. In this vision for Havenstad, all green space will be accessible to everybody. Even with rooftop gardens, they should be accessible to every resident of the Havenstad development so that there are no private green spaces for wealthier residents. To ensure affordability for social housing, and thereby mitigating green gentrification, the land prices will be kept low artificially by “increasing revenue in other areas like high-rent housing and office buildings” (K. Van Zanen, personal communication, January 26, 2022).



AM Highnote Plint, (Credits: AM.nl)

An example of what this can look like is increasing the commercial activity on the ground floor, which offsets the revenue lost by implementing social housing instead of luxury sector housing. Here, urban green space can also be used to make these commercial spaces feel more attractive and tie them in with the sustainable architecture of Havenstad.



## Sustainable architecture

To make sure that there are more sustainable components than just urban green space, special attention also has to be paid to sustainable architecture. This can also be a way of how large-scale housing developments can still be sustainable. Examples like De Warren, and Hotel Jakarta show how this has already been achieved in Amsterdam. Using building materials with a lower carbon footprint like wood instead of concrete, triple glazed glass, incorporating green space in the building itself, and installing solar panels lead to a building which could be energy positive: they produce more energy than they use.



*Duurzaam by De Warren, (Credits: Natruified Architecture)*

Transparent solar panels could be used in the windows and skylights of the buildings, leaving more space for green or blue roofs which decrease pluvial flooding and provide extra biodiversity services (Shafique et al., 2018). Another benefit of green roofs is that they lead to lower energy use in a building (Shafique et al., 2018). Combining this with the transparent solar panels could thus more easily lead to energy positive architecture. Energy cooperatives consisting of residents of each building can then decide how this electricity should be used. It can be stored locally using large batteries, it can be converted into hydrogen and stored or used elsewhere, or it can be sold back to the electricity grid. In the last case, residents can make agreements on what to do with this money, for instance using it for neighborhood events, or investing it back into generating more sustainable electricity. This shows how sharing is not only limited to public space, but can also be used for sustainable resources, as is also mentioned in an interview by Prachi Rampuria.

## Resilience

Havenstad will provide at least 50.000 housing units. This provides new challenges when it comes to climate change resilience. Because Havenstad houses many people in a high density, the number of people impacted during extreme weather events like floods, droughts and heat waves increases (Albers et al., 2015). Green infrastructure and improved building design are two important factors to increase the resilience to these events (Albers et al., 2015). This is also why this vision focuses heavily on urban green space and sustainable architecture. To be resilient against flooding, critical infrastructure (like the batteries to store solar power) should be located above the flood level, so that people will still have power during a storm (Albers et al., 2015).

Green space can be used to mitigate the urban heat island effect, which can be especially dangerous for the elderly population (Albers et al., 2015). To combat this in Havenstad, a green corridor or not only green roofs, but also tree-lined streets and urban parks are envisioned. This will ensure that the green elements of the historic Garden City movement will also be present in the Havenstad developments. This is especially important as the total area of green space in Amsterdam has decreased by 11% between 2003 and 2016, even though there was a policy to become a green city (Giezen et al., 2018). This shows the need for Havenstad to become a truly green area and to compensate for this loss in green space to protect its residents now and in the future.





Rotterdam's new Parkstad development puts urban parks on every block., (Credits: Grozdanic)

### Green space, accessibility and transportation

This vision of Havenstad also recognizes the importance of the accessibility to these green spaces. This accessibility is not only for humans, but also animals, to ensure a green corridor throughout the Havenstad developments. To make these urban parks accessible, pedestrian and bike paths are envisioned inside and between the parks. Mopeds and other motorized vehicles besides handicapped vehicles are banned. This makes it easier for residents throughout Havenstad to visit the parks and to move from one park to the next. This will also encourage residents to take sustainable modes of transport, like their bike instead of a moped, to go from their home to their destination surrounded by green space.

Besides cycling and walking, other transportation modes should also be encouraged to limit emissions of motorized vehicles. One mode is the metro link. As previously mentioned, the late installation of the metro link is one of the largest criticisms of the Havenstad plans. In this vision, the metro link should be installed alongside the housing developments. This will not only decrease the nuisance of construction noises, but will also provide high-quality public transportation. Besides the metro, other modes of public transportation like buses and trams should also have good connections in the Havenstad developments. A bike-sharing system should also be implemented, but this should not come at a cost for public space in the docking station. Therefore, the OV-fiets should be expanded to not only train stations, but also strategic nodes in the public transportation network. All in all, no-one should have to rely on motorized transportation to make their journey in Havenstad.



OV-fiets bij meer metrostations in Rotterdam (Credits: De Ster).



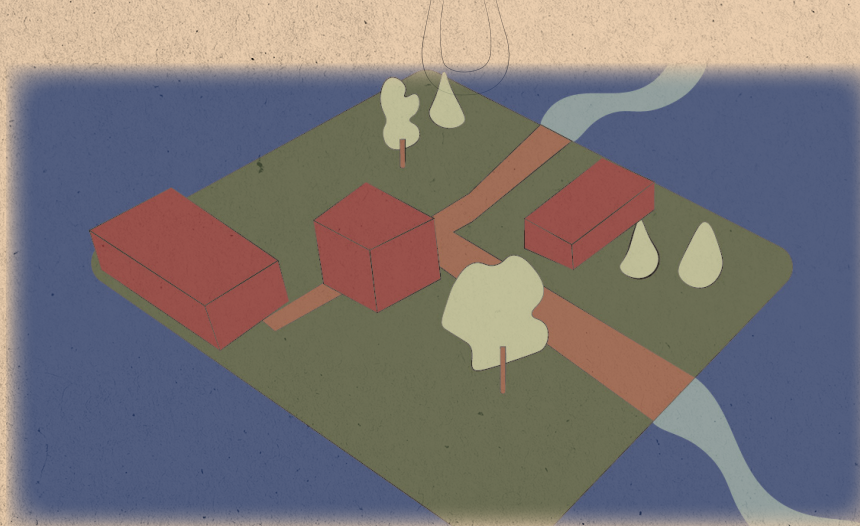
## Innovation in Sustainability

To establish Haveneiland as a sustainable modern Garden City, this vision proposes an innovation in sustainable food production. The idea is based on the original satellite cities model, invented by Ebenezer Howard to link multiple Garden Cities to each other. These satellite cities will consist of multiple man-made islands in the IJ-river, connected to each other by floating greenhouses and floating docks. The islands are conceptualized in green, while the floating docks can be seen in blue.



*Credits: Marloes Noordermeer*

On these satellite islands, food can be produced by community volunteers, decreasing the food chain to just producers and consumers. Moreover, these farms can also host recreational activities which teach children and adults about sustainable living. Special activities for residents with disabilities can also be held. This means that these farms not only provide a sustainable function, but also a sociability function. These islands tie in with the identity of Amsterdam as a maritime city which creates new land to keep up with the housing demand. Moreover, the national identity of the country as a leader in agriculture and horticulture is reflected in this project.



*Credits: Giulia Andronico*

Because the islands are connected, they also form a new way for residents to move from one bank of the IJ to the other. The docks provide recreational space for people to swim in the river in the summer. To accommodate for boats and larger ships, the docks separate from the islands at scheduled intervals to allow them to pass. All in all, this idea of satellite island farms shows that sustainability, combined with community engagement and identity making, allow for the high-density development of Havenstad to still feel like a green and sustainable neighborhood. This happens because the three magnets of sustainability, sociability and scale link together to and become greater than the sum of its parts. Moreover, it also proves that identity and placemaking can be tied to creative ideas in a new neighborhood, which will also be shown in the next section.



# Sociability

*“Shared activities engage the community and empower a sense of ownership. Continuity of such activities over time enables community participation to be permanent and lasting. For example, with open spaces, residents can be closely involved in its programming and how it may get used over the seasons.”  
(personal communication, P. Rampuria, February 2, 2022).*



# Sociability: Fostering Community

*“We have high expectations of Havenstad becoming an attractive place for businesses to settle. It is very creative but also close to the center. Also the people needed to work in the knowledge economy, highly educated, young creative people, live close by.”*

*-(personal communication, K. Van Zannen, January 26, 2022)*

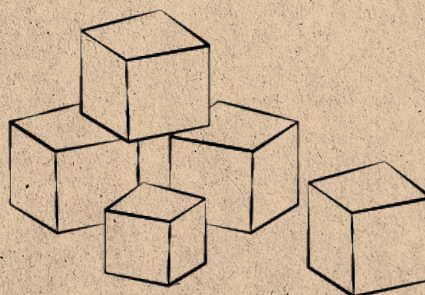
When building planned neighborhoods, a common challenge is how to foster community (Williams et al., 2010). Because the neighborhood was not organically shaped, it does not have the social foundations that made it emerge in the first place. As a result, much focus needs to be placed on the built environment as certain features can hinder the process of establishing community relationships (Boyer et al., 1996). For instance, large scale developments can overpower public spaces such as sidewalks and transform them into urban deserts (Whyte, 1980). Therefore, it is the job of the urban planner of providing a platform for social connections to be artificially built. But for the case of the Havenstad, it is important to not only create an environment where a just society can thrive but also establish a community through sustainable mediums.

To promote the social values of the Garden City in Havenstad, this vision will incorporate transition management (TM). TMs allow for experimentation in urban interventions in order to find the most suited pathway to achieve long term envisioned goals (Nevens & Roorda, 2014). By approaching Havenstad as a transition experiment, it leaves room for locals to express their feedback and participate in shaping the public realm. This intervention uses public spaces to promote citizen participation as they are sites for the population to express their right to the city (Harvey, 2008). Hence in order to transform Havenstad as a space for the people, it is imperative that the local population has the agency to shape their neighborhood. To achieve this, the population needs a medium to manifest their right to the city. In the case of Havenstad, the medium will be in the shape of build-blocks.

## Playing the City

The vision of the population shaping their public spaces takes inspiration from children. Because placemaking requires for the community to consistently reinvent its public spaces, it requires a lot of creativity, and nothing is more creative than the imagination of a child. The world-building of a child's imagination is endless. Hence, it requires everyone to imagine like a child to be able to consistently reinvent their own public spaces. In doing so, a citizen can truly engage in placemaking.

Given that current plans of Havenstad have in their agenda to establish a creative community in the neighborhood, it feels appropriate to approach placemaking with an imagination. When playing, a child can manifest their imagination through the help of a toy. Therefore, the Havenstad vision would like to provide the population with a toy to participate in placemaking. In this case, the most suited “toy” would be building blocks as they can rearrange them in whatever fashion they want to shape their space. Therefore, the vision will provide blocks for the population to shape their public spaces.



*Credits: Giulia Andronico*

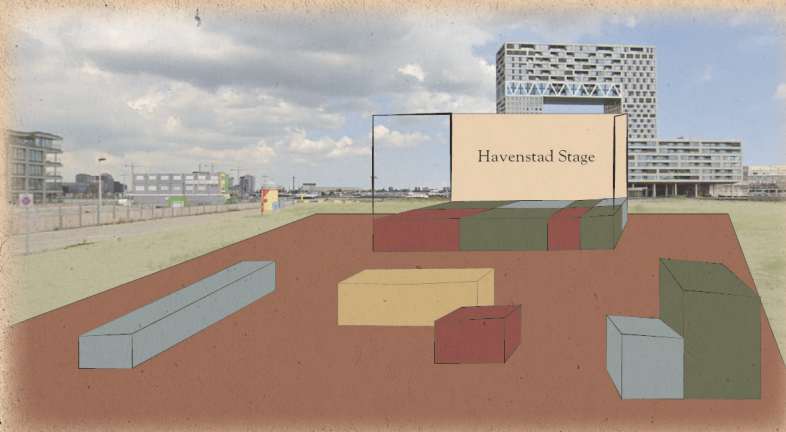


The advantage of blocks is that they can be rearranged, stacked and moved to create different types of infrastructure such as benches, tables, stages etc. As such, the blocks can serve as a foundation to host different types of events such as markets, shows, exhibitions etc. Because of this, the blocks will facilitate transition experiments in the neighborhood, allowing the population to observe which types of events are most suited and successful for their community. To avoid the blocks looking like monolithic pieces, we plan on inviting the children of the school to draw on each block so that it will look like a colorful mosaic that represents the residents of Havenstad. On top of that, in order to stay true to the values of the Garden City, the blocks will be cooperative owned and managed as well as made from recycled materials



Credits: Giulia Andronico, image source: Google Street View

The following images show two potential scenarios that can be built with the blocks. The first one is a Market the second one is a stage event. The advantage of creating a market is that it could be an event where local creatives and business can showcase their products for the rest of the community to enjoy. If markets turn out to be popular with the community, the neighborhood can decide how many times they would like to organize it. Same can be applied to a staged event. Given that the Havenstad development is planning to attract creatives, it would be suited to provide them with a platform to perform to the community. The point with the blocks is that the options are endless, giving the community the most agency to organize the events to their interests.



Credits: Giulia Andronico, image source: Google Street View

The blocks will serve as an infrastructure that fosters community. Through the blocks, Havenstad's public spaces, instead of being static, are transformed into a malleable canvas which the population can continuously change according to their interests. By hosting various sorts of events, it will help the population to be in conversation with each other and aware of what is happening in their own neighborhood. The variety of events will also help to encourage diversity. By allowing residents to express themselves, it will help to make Havenstad a more welcoming place as well as a place to visit in the city of Amsterdam. Through this intervention, the vision hopes it will naturally lead to the creations of traditions and events in the neighborhood. Because if this becomes the case, it will help transform Havenstad into a lively-neighborhood.



# Scale



*“This is a walking-scale settlement, within which no one needs a car to go anywhere; the densities are high by modern standards, thus economizing on land; and yet the entire settlement is suffused by open space both within and outside, thus sustaining a natural habitat” - (Hall and Ward, 1998)*



# Scale: A Contemporary Approach

*“The town will grow; but it will grow in accordance with a principle which will result in this—that such growth shall not lessen or destroy, but ever add to its social opportunities, to its beauty, to its convenience.”*

*(Howard, 1898, p.129)*

The modern Garden City will need to scale to modern needs while also being sustainable and encouraging sociability. While current examples of modern scale developments are plentiful, many do not incorporate sociability or sustainability fully into their design, or worse, actively harm the social fabric and/or sustainability of a neighborhood. In this section we propose multi-level development as a bold idea to address the challenge Havenstad will face when addressing the modern need for higher scales of residential development while still extending Garden City principles into the 21st century.

## Challenges with Building Up for Scale

Havenstad's developers want to build a lot more housing than usual for a development in the Netherlands, and right now, they want to do so primarily by building up. The potential pitfalls for this fall along the sustainability and the sociability axes. Building up sustainably is a challenge because additional people require more resources from the environment. Preserving the sociability of communities with large apartment towers is a challenge as well. Large towers require a greater proportion of space to be dedicated to transportation infrastructure; in other words, more space for going somewhere else instead of being social within the neighborhood. They also are inherently against the existing character of Amsterdam houses, whether they're Dutch canal houses or Amsterdam School apartment complexes. What is to be done? Havenstad developers could expand the practice of “building up” from private use to the public sphere by considering all three dimensions of space when developing public spaces and designing buildings with sustainability in mind. Havenstad developers already refer to this in their report:

*“In a residential environment with relatively many high rise buildings, it is not only the design of the horizontal street that contributes to the feeling of liveability and the connection with other. The vertical street also offers a perspective: where the possibilities on the ground are spatially limited, ‘street elements can be used to create a ‘street’ such as outdoor play areas and meeting places which are created in and around the higher buildings.” (Gemeente Amsterdam, 2020: 8)*

Our contention is that Havenstad can think bigger and bolder than just providing a playground here and a meeting spot there. Instead, Havenstad can plan the entire public arena as a multi-level experience and incorporate three dimensions into every level of planning. Below, we propose aspects of multi-level planning that Havenstad can implement to make building up more sociable and sustainable.

## Multi-Level Development

For the sake of simplicity, imagine vertical space as three levels. What is usually thought of as the “street level” is First Level, the underground is the Basement Level, and everything above street level is Second Level. Multi-Level Development changes the status quo of planning by incorporating all three levels fully into public space instead of only incorporating them fully into private residences and/or office towers. It is also an expansion of the early 20th century Garden City concept. Thinking in three levels allows planners and developers to envision Garden City developments as a tree, where the Basement contains roots and soil, the First Level contains grass and ground animals, and the Second Level contains the trunk, branches and flying and climbing animals.



## Basement Level Transportation

In Amsterdam, taller buildings come with a larger transportation footprint. This is a mathematical certainty; the more people per unit of land, the more transportation infrastructure is needed to move them. Transportation infrastructure separates buildings and is mutually incompatible with communal meeting spaces meant for people staying somewhere for an extended period of time. The space set aside for transportation can be reduced by switching people from cars to transit, and in this regard Havenstad is already doing well by providing only one parking spot for every five households (Gemeente Amsterdam, 2022). However, the development of train stations, tram tracks, bike storage, loading zones, highway connections, and intersections with other streets still takes a lot of land that could otherwise be used to reinforce the sociability of a neighborhood and/or reduce a neighborhood's environmental footprint.

To solve this, Havenstad developers could put most transportation infrastructure (except for bikes) underground and put parks, playgrounds, gardens, preserved ecosystems, carbon sequestering, more traditional Amsterdam homes, and avenues of community expression at the street level. Though this proposal is radical for transportation (other than subways), it is commonplace in other essential aspects of urban infrastructure. Thanks to the boldness of planners who decided to put all water pipes, sewage pipes and utilities either underground or up high we do not have to reserve extra horizontal space for those uses. If Havenstad developers act in a similarly bold manner, people gathering, biking, walking, eating and doing what they will won't have to fight tram tracks, cars, and transit stations for space. This will allow Havenstad to build up while leaving plenty of room for more traditional Dutch architecture, communal spaces and preserved natural environments.

Imagining the below picture with more traditional Amsterdam homes, undisturbed ecosystems, and/or public meeting spaces where the transportation infrastructure currently is demonstrates the value of a basement floor for transportation.



(Credits: Amsterdam Tips)



## Second Level Bridges

Canals, harbors, rivers, and other waterways are a central part of Amsterdam local identity. This identity was forged not because Amsterdam arbitrarily chose to make water a part of its character, but because of geographical proximity to water, the ever-present threat of flooding, and the use of water to facilitate trade all putting water's stamp on the city. The same is true for the narrow, but deep canal houses that are the bedrock of Amsterdam's residential architecture. These houses were built narrowly to earn favorable taxation treatment under a policy where the width of a home was taxed separately. In each case, Amsterdam's architectural character was formed not as an arbitrary act of artistic indulgence, but as a response to practical matters in everyday life.

Havenstad as a "port city" that is trying to build much higher than usual in response to modern demands for housing has a chance to extend that architectural tradition of synthesizing water and practical matters into the 21st century. We propose that Havenstad do so by building "Second Level" bridges that go higher than street level and connect buildings that sit across from each other on a canal. The below photo of a second-level bridge spanning Nieuwe Achtergracht demonstrates that second-level bridges are an attainable reality.



*(Credits: Thales Connect)*

Second-level bridges don't have to be one-off architectural novelties. A system of second-level bridges spanning the canals, rivers and dykes in Havenstad could provide much needed space for housing and other uses without disrupting the centrality of water in the development's identity. Similarly, second-level bridges need not be restricted to the insides of buildings. Parks, playgrounds, and other outdoor spaces like the ones below can be built between buildings and benefit from an aerial view of a canal. Entire squares could be built over a canal as well.

It is worth noting that outdoor spaces built as second-level bridges would be enhanced by an aerial view of a canal. In addition to the space-saving and social benefits, second level bridges exemplify ecosystem preservation by building over canals and other bodies of water instead of substituting water for a building. The concept can then be extended to wetlands, rivers, forests and other ecosystems to preserve them while still making room for housing.

A multi-level city produces enough scale to meet the housing and transportation needs of residents while minimizing their sacrifice of sustainability and sociability. Sustainability is maximized through the expansion of space available for local street-level ecosystems and environmental impact mitigation. Sociability is maximized by making space for people to live vibrant communal lives and by allowing for identity-affirming architecture to exist alongside larger towers.



# 4 Discussion & Conclusion

This vision has used the Garden City movement by Ebenezer Howard to show an alternative development of the Havenstad neighborhood in Amsterdam. Using the three magnets of the modern Garden City movement - Sustainability, Sociality, and Scale - examples have been given of how to best achieve a modern Garden City Havenstad where all three elements are visible. The challenge of one of the magnets overpowering the others have been addressed by radical ideas which go beyond contemporary planning to show that the Garden City movement can bring all three S-magnets together. The first radical idea is sustainable floating farms on the IJ-river, where social activities are held. The second idea is the use of blocks as a way of playing the city in placemaking and citizen participation. These blocks can be used to develop the identity of an otherwise desolate high-rise neighborhood. The last idea is the multi-level city which uses second-level bridges and buried transportation networks to create more community activities and undisturbed ecosystems in a high-density environment.

If, after reading this vision of Havenstad as a modern Garden City, you want to get in touch with the authors, feel free to send an email to [Reply.Havenstad@gmail.com](mailto:Reply.Havenstad@gmail.com). We would like to hear your opinions on this vision. If you are inspired by the ideas mentioned here you can organize neighborhood meetings to discuss how you can be involved in the development of Havenstad. To get directly in touch with the developers of the original Havenstad plans, email [havenstad@amsterdam.nl](mailto:havenstad@amsterdam.nl). You have the power to shape your own neighborhood!

If you are reading this as a professional in urban planning or real-estate development, we would like you to consider the following thought provokers:

- How can we use cooperatives to regulate energy ownership?
- How can second-level bridges contribute to the housing density needed for large scale city developments?
- What would cities look like if we built public space vertically as much as private residences?
- Which current street-level parts of development could be buried to make space for ecosystems and public gathering?
- Can building sustainable, large-scale, and affordable housing go hand in hand?
- What is needed in terms of community space to attain a lively high-density neighborhood?
- Which placemaking activities are most suitable for new residents to create their own identity as Havenstad residents?
- Can citizen participation in the form of child-play be upscaled to the city level instead of just the Havenstad neighborhood level?
- How can developers set a new context in which taller buildings feel like part of neighborhood character?



# Bibliography

Albers, R., Bosch, P., Blocken, B., Van den Dobbelsteen, A., Van Hove, L., Spit, T., Van de Ven, F., Van Hooff, T., & Rovers, V. (2015). Overview of challenges and achievements in the climate adaptation of cities and in the Climate Proof Cities program. *Building and Environment*, 83, 1–10. <https://doi.org/10.1016/j.buildenv.2014.09.006>

Altes, Willem K. Korthals, and Andreas Faludi. "Why the greening of Red Vienna did not come to pass: An unknown chapter of the Garden City movement 1919–1934." *European Planning Studies* 3.2 (1995): 205-225. AM.nl (2020, November 11). AM Highnote Plint. <https://www.am.nl/gemeente-almere-en-am-tekenen-overeenkomst-voor-realisatie-stedelijk-woonicoon-highnote/am-highnote-plint/>

Amsterdam, G. (2022, February 1). Haven-Stad: Veranderen Van Gebied. *Amsterdam.nl*. <https://www.amsterdam.nl/projecten/haven-stad>

AT5. (2017, November 15). GVB pleit voor nieuwe metrolijnen naar Haven-Stad. *AT5*. <https://www.at5.nl/artikelen/175268/gvb-pleit-voor-nieuwe-metrolijnen-naar-haven-stad>

Blau, E. (1999). *The architecture of red Vienna, 1919-1934*. MIT Press.

Bloemberg-Issa, J. (2020, February 20). 'Een eigen park hoort bij Haven-Stad.' *Het Parool*. <https://www.parool.nl/columns-opinie/een-eigen-park-hoort-bij-haven-stad-b5043631/>

Borden, I. (1999). Social space and cooperative housekeeping in the English Garden City. *Journal of Architectural and Planning Research*, 242-257.

Boyer, E. L., & Mitgang, L. D. (1996). *Building Community: A New Future for Architecture Education and Practice*. A Special Report. California Princeton Fulfillment Services; 1445 Lower Ferry Road, Ewing, NJ 08618.

Capetownetc. (2019; July 26). The unique history of Pinelands. <https://www.capetownetc.com/cape-town/the-unique-history-of-pinelands/>

Clark, B. (2003). Ebenezer Howard And The Marriage Of Town And Country. *Organization & Environment*, 16(1), 87-97. <https://doi.org/10.1177/1086026602250258>

Cole, H. V. S., Garcia Lamarca, M., Connolly, J. J. T., & Anguelovski, I. (2017). Are green cities healthy and equitable? Unpacking the relationship between health, green space and gentrification. *Journal of Epidemiology and Community Health*, 71, 1118–1121. <https://doi.org/10.1136/jech-2017-209201>

De Warren. (n.d.). Duurzaam. Natruified Architecture. <https://dewarren.co/duurzaamplus>

Gatarić, D., Belij, M., Derčan, B., & Filipović, D. (2019). The origin and development of Garden cities: An overview.

Zbornik Radova - Geografski Fakultet Univerziteta U Beogradu, 67(1), 33-43. <https://doi.org/10.5937/zrg-fub1901033g>

Gemeente Amsterdam. (2020, November). Maatschappelijke visie Haven-Stad. <https://www.amsterdam.nl/projecten/haven-stad/>

Gemeente Amsterdam. (2021a, January). Programmaplan maatschappelijke voorzieningen Haven-Stad. <https://www.amsterdam.nl/projecten/haven-stad/>



Gemeente Amsterdam. (2021b, December). Integraal Raamwerk Haven-Stad. <https://amsterdam.nl/havens-tad>

Goodall, B. (1998). Penguin dictionary of human geography. Penguin.

Gray, M. (2012). A Preservationist's Perspective on Levittown Communities: Urban Planning and Design's Awkward Dilemma. *Inquiries Journal*, 4(01).

Grozdanic, L. (2016, August 12). Rotterdam's new Parkstad development puts urban parks on every block. <https://inhabitat.com/rotterdams-new-parkstad-development-puts-urban-parks-on-every-block/parks-tad-rotterdam-by-delva-landscape-architects-and-urbanism-powerhouse-company-1/>

Hall, P., & Ward, C. (2002). *Sociable cities: The legacy of Ebenezer Howard*. J. Wiley.

Harvey, D. (2008). The right to the city. *The city reader*, 6(1), 23-40.

Henderson, K., Lock, K., & Ellis, H. (2017). *The art of building a garden city*. RIBA Publishing.

Hidden Moscow. (2018, February 28). Moscow's unique garden village. <http://hiddenmoscow.com/2018/02/28/moscows-unique-garden-village/>

Horgan, D. (2019). Placemaking. In *International Encyclopedia of Human Geography* (pp. 145-152).

Howard, E. (1898). *To-morrow: A Peaceful Path to Real Reform*. Swan Sonnenschein & Co.

Howard, E. (1902). *Garden cities of to-morrow: Being the third edition of "To-morrow: A peaceful path to real reform"*. S. Sonnenschein & Co.

Jager, J. (2019, March 6). Internationaal panel kritisch over Haven-Stad. *Stadszaken*. <https://stadszaken.nl/artikel/2077/internationaal-panel-kritisch-over-haven-stad>

Japan-Guide. (2021, July 23). Living Costs. <https://www.japan-guide.com/e/e2202.html> this is the source for the Japanese prices.

Jennings, V., Johnson Gaither, C., & Gragg, R. S. (2012). Promoting environmental justice through urban green space access: A synopsis. *Environmental Justice*, 5(1), 1-7. <https://doi.org/10.1089/env.2011.0007>

Kelly, B. M. (1993). *Expanding the American dream: Building and rebuilding Levittown*. SUNY Press.

Kuhlman, T., & Farrington, J. (2010). What is sustainability? *Sustainability*, 2(11), 3436-3448. <https://doi.org/10.3390/su2113436>

MacDonald, S. (2022, January 5). Massive development centred around new GO train station in Innisfil expected to get rolling in 2022. *The Star*. <https://www.thestar.com/local-innisfil/news/2022/01/05/massive-development-centred-around-new-go-train-station-in-innisfil-expected-to-get-rolling-in-2022.html>

Meesterburrie, A. (2022, January 11). Huurprijzen van studio's in Amsterdam en Utrecht lopen fors op in vrije sector - in Den Haag en Rotterdam gaat het iets minder hard. *Business Insider Nederland*. <https://www.businessinsider.nl/huur-studentenkamer-appartement-studio-amsterdam-rotterdam-den-haag-utrecht-2022/>

Lewis, J. (2015). Preserving and maintaining the concept of Letchworth Garden City. *Planning perspectives*, 30(1), 153-163.

Oshima, K. T. (1996). Denenchōfu: Building the Garden City in Japan. *The Journal of the Society of Architectural Historians*, 55(2), 140-151. <https://doi.org/10.2307/991116>

Parsons, K. C., & Schuyler, D. (2002). *From Garden City to Green City: The legacy of Ebenezer Howard*. The



Johns Hopkins University Press.

Rasouli, A. H., & Kumarasuriyar, D. A. (2016). The social dimension of sustainability: Towards some definitions and analysis. *Journal of Social Science for Policy Implications*, 4(2), 23–34. <https://doi.org/10.15640/jsspi.v4n2a3>

Ritchie, H., & Roser, M. (2018, June 13). Urbanization. Our World in Data. <https://ourworldindata.org/urbanization#:~:text=UN%20estimates%20therefore%20report%20that,55%20percent%20of%20the%20world.>

Shafique, M., Kim, R., & Rafiq, M. (2018). Green roof benefits, opportunities and challenges – A review. *Renewable and Sustainable Energy Reviews*, 90, 757–773. <https://doi.org/10.1016/j.rser.2018.04.006>

Sharifi, A. (2016). From Garden City to Eco-urbanism: The quest for sustainable neighborhood development. *Sustainable Cities and Society*, 20, 1-16.

Sies, M. C., Gournay, I., & Freestone, R. (2019). *Iconic Planned Communities and the Challenge of Change (The City in the Twenty-First Century)*. University of Pennsylvania Press.

Smith, C. (2008). Greening a giant: Shrinking the footprint of Japan's building sector. Our World. <https://ourworld.unu.edu/en/greening-a-giant>

Stern, R., Fishman, D., & Tilove, J. (2013). *Paradise planned: The Garden Suburb and the modern city*. Monacelli Press.

Southworth, M., & Ben-Joseph, E. (1995). Street standards and the shaping of suburbia. *Journal of the American Planning Association*, 61(1), 65-81.

Talen, E. (2005). *New urbanism and American planning: The conflict of cultures*. Psychology Press.

Ward, S. (2011). *The Garden City. Past, present and future*. Taylor and Francis.

Watanabe, M., Tsuji, K., Hongo, R., & Kimura, H. (2019, June 11). How Tokyo's suburban housing became vast ghettos for the old. *The Guardian & Waseda Chronicle*. <https://www.theguardian.com/cities/2019/jun/11/how-tokyo-suburban-housing-blocks-became-ghettos-for-the-old>

Whyte, W. H. (1980). *The social life of small urban spaces*.

Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough.' *Landscape and Urban Planning*, 125, 234–244. <https://doi.org/10.1016/j.landurbplan.2014.01.017>

Williams, P., & Pocock, B. (2010). Building 'community' for different stages of life: physical and social infrastructure in master planned communities. *Community, work & family*, 13(1), 71-87.

Woods II, L. L. (2013). Almost "no negro veteran... could get a loan": African Americans, the GI bill, and the NAACP campaign against residential segregation, 1917–1960. *Journal of African American History*, 98(3), 392-417.

Wyckoff, M. A. (2014). Definition of placemaking: four different types. *Planning & Zoning News*, 32(3), 1.



