

The mobility transition as a goal?

A study into how medium-sized cities are dealing with the mobility transition in urban redevelopment projects

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Abstract

Medium-sized towns in the Netherlands are in a unique position within the mobility transition. They have fewer alternatives to the car than large cities, yet still face the spatial constraints associated with inner-city densification. This study examines how medium-sized municipalities are addressing the mobility transition in urban redevelopment projects. Two case studies were examined in depth: Het Ambacht in Veenendaal and De Stationstuinen in Barendrecht. The study investigated the mobility strategies adopted and the considerations underpinning them. Data were collected through desk research (policy documents, municipal council meeting reports and newspaper articles) and semi-structured interviews.

The results show that both local authorities are implementing a mobility strategy that combines individual motorised, active and shared modes of mobility. While the car continues to play an important role, it is parked in parking hubs so that public space can be dedicated to nature, leisure, and active mobility. Shared mobility plays a complementary role. However, municipalities are struggling with parking regulations and the public resistance this can provoke. Careful consideration is also required in the implementation of alternatives to the car, such as shared vehicles. Furthermore, finding the right balance between taking control and leaving execution to private companies is important. The research shows that the mobility transition is not an end in itself, but a logical response to the challenges arising from necessary urban densification.

1 Introduction

In recent decades, several changes have taken place regarding mobility, which can be seen as a mobility transition. But what is the mobility transition? This is a very broad concept which deals with different aspects of the mobility system. Also, the mobility transition can be seen from a historical perspective. Lucassen and Lucassen (2009) describe the mobility transition from 1500-1900 to get an insight into the main transport modes over time. For this research, the mobility transition is defined as the transition from motorised transport towards active and zero emission transport (Temenos, 2017). This definition is also used by Moradi and Vagnoni (2018). In practice, cars are increasingly being restricted from city centres to make them more accessible for pedestrians and cyclists, creating a healthier living environment (Karjaleinen et al, 2023; Mouratidis, 2025). City centres often have good public transport connections in and around them, providing alternatives to the car. One aspect in which changing mobility becomes visible is the different role parking plays in urban development (Bauer & Duschinger, 2024). Parking must be given an appropriate share of the spatial demand in public space relative to other functions of that space, in such a way that public spaces do not become large parking lots, but also that there are not too few parking spaces, causing cars to be parked in places where they are not supposed to be. Different spatial demands must be accommodated appropriately within the public space, which inevitably requires making choices. This is closely linked to the mobility strategy, as mobility is a major consumer of space in the public realm (Von Schönfeld & Bertolini, 2017). Because of these competing spatial claims, a balanced decision must be made about the role mobility will play in inner-city area development. The way mobility is accommodated should be considered in conjunction with other spatial demands, such as greenery, climate adaptation, and social interaction (Webster, 2007).

In this mobility transition from motorized transportation to sustainable transport modes, medium-sized cities occupy an intermediate position. In large cities, public transport supply is high because address density and building density are sufficient to generate enough demand. As a result, public transport can compete well with the car, especially in terms of speed. In addition, space for parking vehicles at ground level is often limited, making parking regulation necessary to prevent parking pressure (Lee, Lee, Hiemstra-van Mastrigt & Kim, 2022). In moderately to non-urban areas, public transport is limited, compared to large cities. As a result, the car usually serves as the primary mode of transport. There is generally more space available, as reflected in the lower address density. Consequently, parking cars is usually not a problem, and sufficient space is available for it (Wang, Espeland, Barajas & Rowangould, 2025). Medium-sized cities again occupy an intermediate position. A certain level of public transport is present, but the options and frequency are often insufficient to provide a competitive alternative to the car, particularly within city centres of such cities (Boo, 2023). As a result, car use is higher than in large cities. However, when urban densification occurs, problems may arise due to insufficient space for cars. In municipalities where this happens, authorities are seeking suitable solutions in which the car is assigned an appropriate role. This makes medium-sized cities key players in the mobility transition.

A tension arises between, on the one hand, the need for a healthy living environment and, on the other hand, the need for mobility in whatever form. Using two case studies of area development projects, this research will examine how medium-sized cities which are in a challenging position with regard to this issue are dealing with the mobility transition. The first case study is about the redevelopment of a business site in Veenendaal, named Het Ambacht. This business site will be redeveloped into an urban neighbourhood with a building density of approximately 100 houses per hectare. The other case study involves a similar development in Barendrecht, where an urban neighbourhood, named De Stationstuinen, with a density of around 105 houses per hectare is to be constructed.

It is relevant to get insight into how government bodies like municipalities cope with the mobility transition in their policy making processes, because many strategies are possible. This research contributes to our knowledge by examining the context of medium-sized cities in the Netherlands and applying the mobility transition to a specific urban redevelopment. This sheds light on the choices and considerations regarding mobility in such redevelopment projects, from which lessons can be learned for future developments. A great deal of research has already been conducted into the transition to sustainable mobility. This topic has been a key part of the quest for a sustainable future for many years. Due to the broad nature of the subject, there are many possible angles from which to approach it. For example, some studies have examined the electrification of cars (Sacchi, Bauer, Cox & Mutel, 2022) and alternative transport options (Etukudoh, Adefemi, Ilojiyanya, Umoh, Ibekwe & Nwokediegwu, 2024). Research is also being conducted into new types of mobility, such as self-driving vehicles (Taiebat, Brown, Safford, Qu & Xu, 2018). These studies have mainly focused on making existing mobility systems more sustainable and smarter. Less studies have been focussing on urban redevelopment projects and the role they can play in the mobility transition. Pellicelli, Rossetti, Caselli and Zazzi (2022) have been looking at implemented mobility strategies in urban redevelopment projects, but the examined locations and cities have a higher population density, and those projects often did not involve the densification of houses. Van den Hurk, Pelzer and Riemens (2021) have investigated governance questions regarding the mobility platform of Merwede in Utrecht, but Utrecht is large city with a different spatial context. This study attempts to establish a connection with urban developments in mid-sized cities with an increase in building density, reflecting the practical side of the mobility transition by rethinking the position of mobility within the neighbourhood.

The following research question and sub-questions are formulated to conduct this research. *How are mid-sized cities in The Netherlands dealing with the mobility transition in urban redevelopments?*

1. What is the chosen mobility strategy in Het Ambacht and De Stationstuinen?
2. What are the considerations in the choices of the municipalities for the chosen mobility strategy?

The following chapter outlines all the relevant concepts arising from the research questions. It also clarifies the relationships between them. Chapter three explains how these concepts were made measurable. It details the methods chosen to measure the concepts and answer the research questions. The chapter also includes a description of the selected case studies and explains why these particular studies were chosen. The results of the research are presented in chapter four, followed by a critical analysis in chapter five and a conclusion in chapter six.

2 Literature review

This chapter explores the concepts outlined in the main and sub-questions, linking them together. While mobility strategy is one of the key concepts, urban development challenges and mid-sized cities are also important. These concepts are examined in the context of the mobility transition. Finally, the chapter concludes with a table outlining various mobility strategies that can be used to create an assessment framework.

2.1 Mobility strategies

A specific mobility strategy defines the role of mobility in public spaces. The aim of a mobility strategy is to improve the existing situation and make it more sustainable, thereby creating a better mobility system (Leo, Morillón & Silva, 2017). Mobility options can be utilised more effectively, and available urban space can be used more efficiently, resulting in a healthier living environment (Delgado, Quiroz, Casanova, Álvarez & da Silva, 2021). This is linked to urban redevelopment, as mobility requires significant space that must be properly integrated into new developments. Various modes of transport are possible, including car mobility, active mobility like walking and cycling, public transport, shared mobility and Mobility as a Service (MaaS). In this section, three mobility strategies are explained: individual motorised mobility, active mobility, and shared mobility.

2.1.1 Individual motorized mobility

For decades, cars have been the dominant transport mode. From the 1960s onwards, the car became an accessible means of transport for common households. Over the years, the car has grown into a symbol of freedom and prosperity. With a car, people can go wherever and whenever they want, while not being able to drive a car is often seen as a limiting factor. The car is sometimes regarded as an extension of the home, making privacy also important for many people. As the car became accessible to the general public, street design also changed. The growing number of cars required more space on the street, and that space was not always available in the existing historic parts of cities (Sheller & Urry, 2000). Then, cities have been designed for cars, leading to a huge percentage of land used for car-related mobility. As a result, people are more and more dependent on cars. Wiersma (2020, p. 1) defines car dependency as a moment “when a city or area of a city assumes automobile use as the dominant mode in its decisions on transportation”. Examples of indicators to measure car dependency are for instance infrastructure and car-related land use. On the micro scale, for example household-level, car dependency depends for instance on household characteristics and spatial factors (Boussauw, Papa & Fransen, 2023). The built environment also plays an important role in the extent cities or households depend on cars. According to Cao, Jin, Shou, Cheng, Liu and Witlox (2023), the built environment has a higher relative importance on car dependency than other characteristics. Thereby, urban form and building density are the most important factors which influence the dependence on cars (Cameron, Kenworthy & Lyons, 2003).

Urban form and building density are two factors which can be used by municipalities to steer car use. For example, high building density ensures that amenities are located closer to homes, reducing travel distances. Consequently, people will not need a car to access certain everyday amenities, which reduces car dependency. This creates opportunities for public authorities to develop alternatives to the car. Besides having lots of positive effects on people's life, car-use also leads to many negative effects. These externalities are related to climate change, air pollution, traffic congestion, noise pollution and road safety (Saeidizand, Fransen & Boussauw, 2022). Pritchard (2022) argues that this car dependent mobility system is unsustainable in economic, environmental and social sense. He proposes that MaaS can act as a good solution to decrease car dependency. Together with public transport and active mobility, good alternatives to car mobility are already available. These alternatives will be described later.

Parking

In recent years, the mobility transition is more and more considered into parking policies. Parking and transport planning are strongly connected. According to Marsden (2006), parking policy is the link between transport and land-use policy. The number of parking spaces has a significant impact on the design of public space. Each parking lot requires an estimate of 12 square metres of land. Multiplied by the number of parking spaces in a city or country visualises the impact of parking on land use and public space (Marsden, 2014). Besides, parking policy also affects traffic. A study from Amsterdam shows that an overall reduction in parking demand leads to a 2-3% reduction in traffic (Ostermeijer, Koster, Nunes, & van Ommeren, 2022). In addition to this, this reduction in parking and traffic also impacts the liveability of the city. In Paris, the mayor is taking action to reduce traffic by reducing parking spaces, and this leads to less CO₂ emissions in the city caused by traffic. The retrieved space is being used for greenery and other measures to make the city more healthy (Allam, Nieuwenhuijsen & Allam, 2024).

The fact that land use planning is strongly connected to parking policy is also emphasized by Bakogiannis, Kyriakidis and Siti (2018). They state that future transportation investment policies should be combined with land use policies. Parking is an essential part of land use planning, and transportation policies give meaning to the parking issue. In the Netherlands, parking policy is mostly specified in parking standards. These standards are mostly implemented since the early 2000s to determine a minimum of parking lots in newly planned developments (Milosavljevic, Simicevic & Maletic, 2010). This form of parking regulation has been criticised by scholars because of their impact on car mobility. Van Luipen and Voerknecht (2012) argue that a maximum of parking lots has more impact on reducing car mobility rather than a minimum. Research from Sweden shows that implementing maximum parking standards results in less car ownership, and thus fewer cars being used and less car mobility (McAslan & Sprei, 2023). Engel-Yan, Hollingworth and Anderson (2007) concluded that a reduction in parking standards leads to a reduction in parking spaces in general, because developers are likely to respond to lower standards because of the costs. Guo and Ren (2013) also state that a maximum instead of a minimum required parking lots also leads to less parking supply. These are interesting findings to take in account in future planned developments.

Parking policies are developed to let the municipal government guide and regulate car use and the accessibility of certain areas. Parking policy also affects traffic. When parking restrictions are implemented, the amount of traffic decreases, leading to less congestion and other consequences of traffic (Pitsiava–Latinopoulou, Basbas, Papoutsis & Sdoukopoulos, 2012). By using parking standards, the demand for and supply of parking spaces is more balanced. Parking areas require a lot of land, and this land could be better used if not all parking lots available are needed (Lower & Szumilas, 2021). As stated in the example from Paris by Allam, Nieuwenhuijsen and Allam (2024), this land could be used for greenery. Other possible land use forms are playgrounds for children or meeting points for youth. Thus, parking policy is also related to liveability (Umstatt Meyer, Bridges, Schmid, Hecht & Pollack Porter, 2019).

2.1.2 Active mobility

When it comes to active mobility, the focus is on travelling short distances. These distances can be covered using modes of transport that require only muscle power. Examples of this form of mobility are walking and cycling, which are the most common ones. Active mobility has many advantages. For instance, travelling by these means is healthy, as it requires muscle power. This physical activity has a positive impact on health. Kong, Wu and Li (2023) have investigated that active mobility leads to an improvement of individual health. Active mobility also has a positive impact on mental health, leading to improvements of the quality of life (Scrivano, Tessari, Marcora & Manners, 2024). Thus, active

mobility can contribute to a healthy society. This can be achieved by promoting this mode of transportation actively. However, the use of active mobility is dependent on peoples preferences and personal circumstances (Pisoni, Christidis & Cawood, 2022).

As active mobility has positive effects on health and the living environment, it is desirable that governments are encouraging it (Markvica, Millonig, Haufe & Leodolter, 2020). One way of achieving this is through the effective design of public spaces. The design of public spaces influences how many journeys are made using active mobility. If public spaces are not designed with active mobility in mind, this mode of transport will not be an attractive option. Improving the infrastructure is a key measure to make active mobility more attractive and to encourage its use (Hackl et al., 2019). For instance, constructing cycle paths and improving walking routes makes these forms of active mobility more attractive and quicker. Safety is also an important consideration in this regard. If the infrastructure is unsafe, people will avoid using it. Therefore, in addition to discouraging car use, it is important to make alternatives attractive in order to increase their use (D'Amico, 2024). These are examples of measures that a municipal government could take to stimulate mobility, and a stimulating role of the government can be seen through this.

An urban redevelopment project provides an opportunity to address existing issues in public spaces and encourage active mobility (Pellicelli, Rossetti, Caselli & Zazzi, 2022; Pellicelli, Rossetti & Zazzi, 2024). In practice, however, many measures to improve walkability have yet to be implemented. This may be because they have not yet been incorporated into administrative structures. However, by focusing on this issue more frequently, this situation may change in the future, making it easier to implement measures that encourage active mobility (Carra, Rossetti, Tiboni & Vetturi, 2022).

2.1.3 Shared mobility

A third mobility strategy is shared mobility. In shared mobility, the goal is to optimize transportation options by decoupling usage from ownership (Machado, de Salles Hue, Berssaneti & Quintanilha, 2018). One example of this type of mobility is 'Mobility as a Service' (MaaS). This is a relatively new concept. As the name suggests, it serves the user. It encompasses various forms of shared mobility, as well as automated vehicles. In particular, shared mobility has developed rapidly in recent decades, taking the form of shared bicycles, scooters, mopeds and cars. Different authors have formulated definitions about MaaS, but in each definition, the following overarching concepts become clear. MaaS is a platform that provides real-time information about all available vehicles in the city, enabling multimodal transport, and it is technologically integrated into a program that allows users to book and pay for their mobility needs, with a personalized offering that meets the user's requirements (Arias-Molinares & García-Palomares, 2020). This form of mobility is particularly suitable for people who only need the means of transport in question occasionally.

Another example of shared mobility is public transport. This is a well-known form of shared mobility that has existed for centuries. These days, public transport is mainly associated with trains, buses, trams and metros. The advantage of these modes of transport is that they require little space per passenger. This contrasts with MaaS and shared vehicles, which are usually used by one or a few people only, but the space used per passenger is still less than in the case of private cars (Wong, Hensher & Mulley, 2020). However, the infrastructure required for public transport does take up a lot of space and is expensive. In contrast, MaaS and shared vehicles do not require much infrastructure, and these modes can use existing road infrastructure. Combining the advantages of both forms of shared mobility could lead to an effective mobility system. Public transport can cover longer distances, while MaaS can solve the first and last mile problem (Butler, Yigitcanlar, Paz & Reed, 2022).

Furthermore, this form of mobility does not require as much space as individual forms of mobility. As a result, this mobility strategy is generally considered more suitable for urban development. Wagner et al. (2022) state that urban densification helps reducing CO₂ emissions, because other modes of transportation than motorised vehicles are needed to travel from and to urban locations.

2.2 Mobility challenges in urban redevelopments

Urban redevelopment presents a variety of challenges. Urban redevelopment often involves densification. This leads to an increase in building and population density, creating additional mobility challenges. This issue is also significant in medium-sized cities. According to the Netherlands Environmental Assessment Agency (PBL), urban redevelopment poses new mobility challenges for cities. This is because population growth in urban areas is outpacing that in rural areas. However, it has been concluded that increased urban development can be accompanied by a reduction in car use (Barten, Bos & Temme, 2018). Furthermore, alternatives are more readily available in urban areas, particularly in highly urbanised environments. Consequently, people are less dependent on cars, and the use of alternatives is encouraged (Hilbers et al., 2020). This section describes two key challenges relating to mobility and urban redevelopment. One relates to the design of public spaces and the other to governance questions. These challenges are linked to the aforementioned mobility strategies.

2.2.1 Public space design

Many different aspects come together in public spaces. The public realm must accommodate different spatial claims, such as water storage, greenery, and space for relaxation and recreation, as well as mobility. In order to accommodate all users of public spaces, it is important to carefully consider the interests of each of these groups. Mobility is a major user of public space, and cars use lots of this space. According to Gössling (2020), space should be taken from cars to create healthy public space and urban environments. An example of taking space from cars, is transforming parking lots into green areas (Croeser et al., 2022). In times of climate change and sustainability, there is also a need for more space for modes of transport other than cars, as well as for climate adaptation measures related to preventing flooding and heat stress (Orsetti, Tollin, Lehmann, Valderrama & Morató, 2022). These spatial demands are becoming increasingly important, meaning that other users will have to give up space to ensure a high-quality, healthy living environment.

One way to ensure there is enough space for all the desired functions in the public realm is to reconsider the role of mobility. Various options exist for achieving this, such as the extent to which motorised traffic is granted access to the newly developed neighbourhood, the role of other forms of mobility, and the parking solution. These solutions will increase the quality of public space (Szarata, Nosal, Duda-Wiertel & Franek, 2017). Paid parking is an effective way of reducing car traffic, as it limits the amount of space allocated to cars in public areas. This measure is strongly linked to the mobility strategy of individual motorised mobility, as described in the first section. However, to ensure the success of this measure and prevent transport deprivation, sufficient alternative transport options must be available (Vidović & Simićević, 2023).

Redevelopment offers opportunities to improve the design of public spaces compared to existing ones. For instance, the safety and appeal of public spaces can be enhanced (Gargiulo & Sgambati, 2022). A study by Southworth (2005) shows that the design of public spaces and the built environment influences people's travel behaviour. Improving walking and cycling routes is key to enhancing the perception of public spaces, as well as supporting active mobility, as described earlier. Infrastructural improvements in public space are part of the active mobility strategy. This also promotes sustainable mobility,

contributing to a sustainable and liveable public space. Public spaces then become places to stay as part of community life.

2.2.2 Governance questions

In addition to the practical challenges that arise in public spaces, there are also governance-related questions. Governance, as meant in this study, refers to collective collaboration with private parties to achieve a public objective (Khan & Han, 2023). Over the past few decades, car use has become so commonplace that Dutch towns and villages have been designed with car use in mind (Gössling, 2020). As a result, many people have become dependent on cars. Combined with associated benefits such as freedom, comfort and speed, one's own car can be viewed as an extension of the home (Veldheer, 2004). Measures that increase the cost of car use or restrict it are unpopular from social and political perspectives (Frenken & Pelzer, 2020). This creates a difficult dilemma for local authorities, who must make unpopular choices. This makes it challenging to implement certain decisions effectively.

Societal resistance

As outlined in a previous section, the role of mobility in public spaces is challenging for urban redevelopment projects involving increased housing or building density. Redevelopment results in an increase in demand for mobility. This can put pressure on available parking spaces in public areas. This leads to concerns among local residents who fear that a new development will affect their ability to park for free. A study by Whittemore (2012) shows that area development is, above all, a political debate between different social groups. Residents living near an urban redevelopment project can exert political pressure to ensure that plans either go ahead or are scrapped. Measures that restrict free on-street parking are unpopular and politically sensitive (Taylor, 2020). Research in Bonn and Bergen also shows that parking is a politically sensitive issue. Politicians who wish to support motorists are less likely to vote for measures that restrict car use (Kong, Pojani, Corcoran & Sipe, 2024). This is confirmed by research from Sohoni and Lee (2024), who emphasise that collaboration between residents and their political representatives can be very strong and lead to significant resistance. This political and social resistance makes it challenging to implement targeted mobility measures in urban redevelopment projects.

Collaboration

Besides the aforementioned political and societal debate, governments have to deal with other issues, like the extent to which they regulate mobility. The extent to which the government regulates and influences mobility may vary depending on the mobility strategy. The government can act as a stakeholder and actively steer towards a particular form of mobility. Research by Hörcher and Tirachini (2021) shows that governments regulate public transport by setting fare levels and providing subsidies to operators to deliver a certain service level. Furthermore, the government can promote the integration of various mobility systems by, for example, linking MaaS and public transport on a single digital platform. This would improve accessibility for users and increase usage (Li, 2019). Users benefit from “a MaaS scheme which provides reliable, real-time and flexible transport services” (Polydoropoulou, Pagoni & Tsirimpa, 2020, p. 304). This means that the government must influence collective mobility to a certain extent to make it more practical and appealing (Maas, 2022).

In addition, there are commercial mobility service providers (MSPs) that primarily provide MaaS services and, to a lesser extent, public transport. The government can collaborate effectively with these commercial partners to deliver collective mobility solutions. In Antwerp, for example, the government is collaborating with MSPs to improve accessibility in the city. After several years, results show a reduction of 7,200 car movements per month as a result of this cooperation (Kishchenko, De Roeck, Salens & Van Maroey, 2019). Another benefit of this collaboration is an improvement in service quality.

Research by Lucken, Frick and Shaheen (2019) shows that collaboration between private mobility on demand (MOD) operators and public agencies improves service provision and enhances quality. When collaborating with private sector partners such as MSPs, the government should play a more active role. For example, the municipal government could regulate the cost and supply of shared vehicles, parking arrangements, and integration with spatial development plans and other modes of transport (Shaheen, Cohen & Zohdy, 2016). It is crucial for the government to stay informed about the latest developments in shared vehicle technology to effectively regulate and guide the sector. Collaborating with private sector partners is essential in this regard (Meng, Somenahalli & Berry, 2020).

2.3 Mid-sized cities in The Netherlands

As this study focuses on the mobility transition in medium-sized towns, it is helpful to outline what is meant by this term. There are various definitions of this term. A medium-sized city is one that is neither large nor small, but somewhere in between. The definition of a medium-sized city in the Netherlands differs from that in other countries. Cities in the Netherlands are smaller than cities worldwide. While the largest cities worldwide have more than 10 million inhabitants, the largest city in the Netherlands, Amsterdam, has less than one million inhabitants. Globally, a medium-sized city is defined as having between 50,000 and 500,000 inhabitants (Simard & Simard, 2005), though some definitions use a population of between 500,000 and 1 million. Frick and Rodríguez-Pose (2018) also define a medium-sized city as having a population of 1–3 million. These global differences in definitions demonstrate that whether a city is designated as 'medium-sized' depends on the context and the size of other cities in the country.

In the Netherlands, a distinction is generally made between the following cities:

1. The four largest cities with a population of over 350,000 (Amsterdam, Rotterdam, The Hague and Utrecht).
2. Large cities with a population of over 100,000, such as Eindhoven, Groningen, Arnhem, Breda, Enschede and Amersfoort.
3. Medium-sized cities with between 40,000 and 100,000 inhabitants.
4. Small cities and villages: all places with fewer than 40,000 inhabitants. These places are not relevant when determining whether a city is medium-sized.

Another indicator of the size of cities and villages is the surrounding address density, in Dutch called *omgevingsadressendichtheid*. This figure shows the density of municipalities by looking at the number of addresses located within a one-kilometre radius of a given address, divided by the area of the circle (Den Dulk, Van de Stadt & Vliegen, 1992; CBS, 2026). This number indicates the degree of urbanisation of a geographical area, such as a municipality or neighbourhood. The aforementioned classification of cities by size largely corresponds to the classification based on surrounding address density. Medium-sized cities have a surrounding addresses density of between 1,500 and 2,500 addresses per square metre. This is equivalent to the highly urban category. This subdivision clearly shows that the same distribution arises as that based on population numbers.

2.4 Summarising table

In table 1 on the next page, the three mobility strategies are outlined. It summarises the concepts and characteristics of each strategy, as described in this chapter. The table concludes with expectations for urban developments in medium-sized towns, providing a link to the 'Methodology and Results' chapter. This table will be compared with the results of the content analysis and semi-structured interviews.

Table 1 Summarising table of the literature review

	Individual motorized mobility	Active mobility	Collective mobility
Main transport modes	Cars	Walking, cycling	Shared vehicles, public transport
Role of the government	A guiding role. Regulating car use through measures such as parking restrictions and car-free zones. In some cases, the local authority also manages parking facilities.	A stimulating role. Making active mobility more attractive through measures such as improvements to infrastructure and public spaces.	Regulatory role. This role is more prominent in public transport than in shared vehicles. Imposing rules on mobility service providers.
Role of private companies	Limited, often only in the form of parking facilities, such as car parking garages.	No role	Facilitating role, provider of mobility services, particularly in relation to shared vehicles
Impact on public space	Large, much space needed for roads and parking	Small, less space needed for mobility	Moderate, some space needed for bus lanes and roads, but less than the case of individual mobility
Governance questions	Measures against car use are unpopular. Citizen involvement is necessary when rules are being changed.	Infrastructural renovations needed to improve attractiveness and safety.	Finding a balance between setting guidelines and giving companies the freedom to set up their service.
Expected implications for urban development in mid sized cities	Regulations needed in high urban areas, but not in parts with less building density.	Public space in central areas is mainly designed for walking and cycling.	Shared mobility, combined with existing public transport, can be a substantial mobility system.

3 Methodology

This research uses a case study approach, because case study research enables specific insights into particular cases to be acquired (Schoch, 2020). This approach is well-suited to investigating specific contexts, as is the case with Het Ambacht and De Stationstuinen. Yin (as cited in Baxter & Jack, 2008) identifies four situations in which a case study design may be appropriate:

(a) the focus of the study is to answer “how” and “why” questions; (b) you cannot manipulate the behaviour of those involved in the study; (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study; or (d) the boundaries are not clear between the phenomenon and context. (p. 2)

Given the way the main research question has been framed as a ‘how’ question, the case study approach is also appropriate, namely: ‘How are mid-sized cities in the Netherlands dealing with the mobility transition in urban regeneration projects?’ Researching both cases and taking into account specific contextual conditions, such as spatial, societal and political factors, will provide a sound understanding of the situation.

The next section presents case descriptions for Het Ambacht and De Stationstuinen. This is followed by a discussion of the data collection methods chosen: desk research and semi-structured interviews. Next, the data analysis strategy used, content analysis, is explained. To facilitate the analysis, a coding scheme is provided.

3.1 Case descriptions

Two case studies were used in this research. Examining the cases of Het Ambacht in Veenendaal and De Stationstuinen in Barendrecht enables us to analyse how mobility issues are addressed in the context of urban redevelopment. This provides valuable insights into how local authorities are managing the mobility transition while developing these neighbourhoods.

3.1.1 Het Ambacht, Veenendaal

Het Ambacht is a newly planned neighbourhood in the municipality of Veenendaal, a medium-sized city with 70,000 inhabitants. The area is currently in use as an industrial estate. Having lost its potential as an industrial estate, the municipality has decided to transform the area into an urban neighbourhood with a high building density. This will involve the construction of approximately 2,000 homes on an area of around 18.8 hectares. This equates to a density about 100 homes per hectare, which is significantly higher than average density in neighbourhoods (Hamers, 2020). The site is located near the city centre, close to the station and town centre, so public transport and amenities are nearby. Besides, the neighbourhood will also contain facilities like retail, healthcare and food. The public space will be landscaped to a high standard, incorporating plenty of greenery to create a pleasant living environment. Figure 1 shows the location of Het Ambacht in the municipality of Veenendaal. In figure 2, a sketch of the planned neighbourhood is shown.

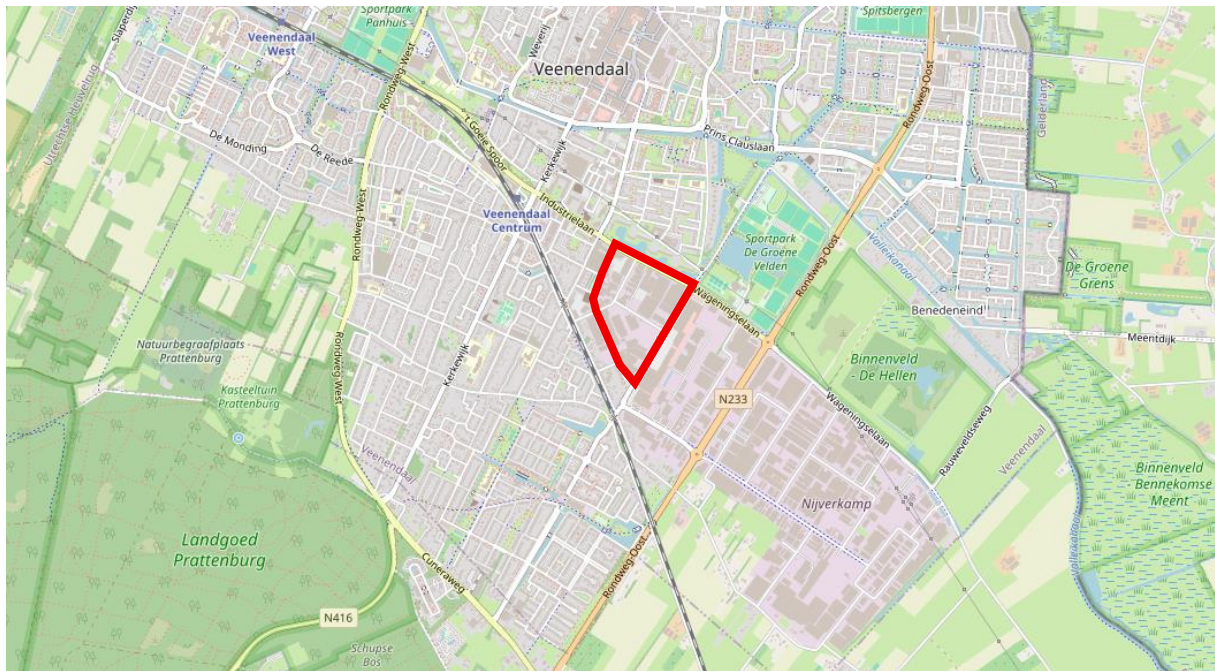


Figure 1 Location of Het Ambacht in Veenendaal (OpenStreetMap Foundation, 2026).



Figure 2 Sketch of the planned neighbourhood in Het Ambacht (Municipality of Veenendaal, 2024).

3.1.2 De Stationstuinen, Barendrecht

The other case is about De Stationstuinen in Barendrecht. Situated just south of Rotterdam along the Rotterdam–Dordrecht railway line, Barendrecht is a town with a population of around 48,000. An industrial site to the east of the station is being redeveloped into an urban residential area. This location was chosen due to its excellent accessibility, given its proximity to Barendrecht railway station, which provides quick access to Rotterdam and Dordrecht. The location is also easily accessible by car, thanks to its proximity to the A15 motorway. The location of De Stationstuinen is shown on the map in figure

3. Furthermore, there is high demand for housing in the region, which is why the municipality intends to build densely on this site. The municipality plans to construct 3,200 houses on the 30-hectare site. This equates to a housing density of around 105 houses per hectare, considerably higher than the 25 homes per hectare average in a Vinex neighbourhood (Hamers, 2020), as seen in Het Ambacht. The neighbourhood will consist mainly of blocks of apartments and similar housing types. In addition to housing, facilities will also be provided, such as retail, healthcare, education, sport, food and culture. There will also be space for small-scale businesses. The public space will be landscaped to resemble a park, with areas designated for play and social interaction (Municipality of Barendrecht, 2022). Figure 4 shows an artist impression of De Stationstuinen.

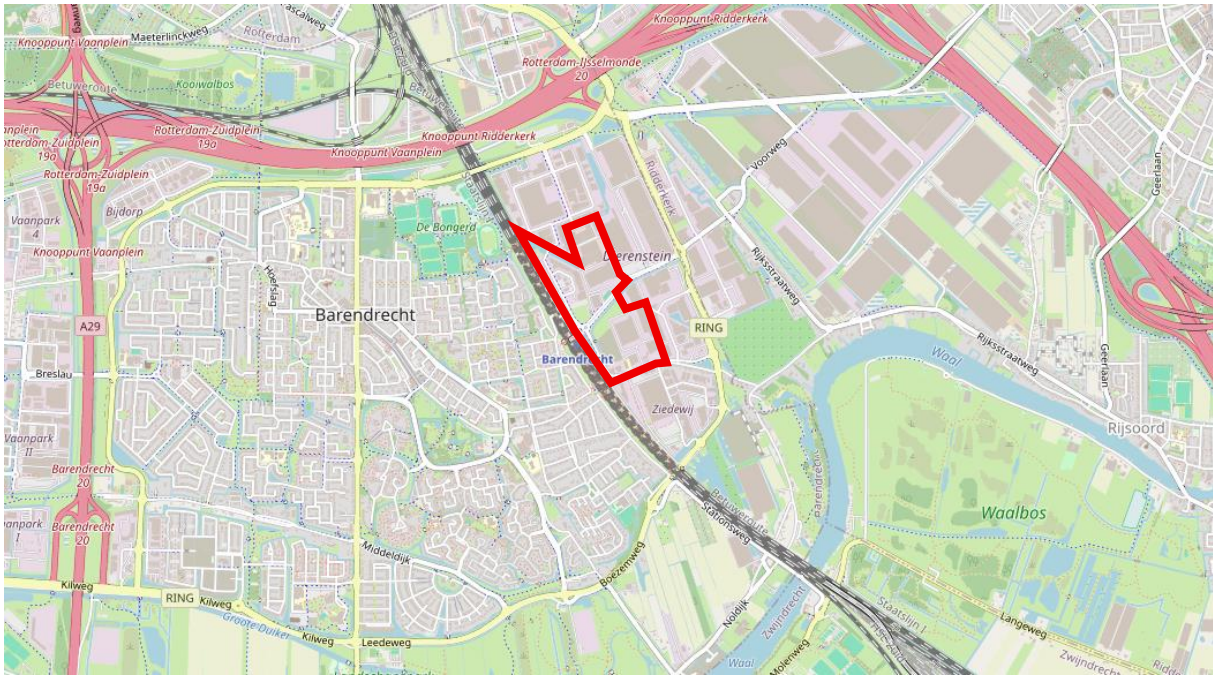


Figure 3 Location of De Stationstuinen in Barendrecht (OpenStreetMap Foundation, 2026).



Figure 4 Artist impression of De Stationstuinen (Municipality of Barendrecht, 2022).

These two case studies were selected primarily because both municipalities can be seen as medium-sized cities. Neither municipality has neighbourhoods with this level of housing density, so both are exploring ways to manage this type of development effectively. This development presents challenges that medium-sized towns have not previously encountered. One such challenge is mobility, which makes these two case studies interesting for examining how medium-sized cities are dealing with this issue and establishing links with the mobility transition. Car ownership in Veenendaal is in line with the Dutch average of 1.1 cars per household, whereas in Barendrecht it is above average at 1.2 cars per household (CBS, 2026). However, in Het Ambacht and De Stationstuinen, there will be less room for car ownership than in the rest of the municipality. Therefore, alternative modes of transport will need to be considered to ensure a comprehensive range of mobility options is provided. An overview of some characteristics of both neighbourhoods is visible in table 2.

Table 2 Characteristics of both planned neighbourhoods

	<i>Het Ambacht</i>	<i>De Stationstuinen</i>
<i>Area</i>	18.8 hectare	30 hectare
<i>Number of houses</i>	Approx. 2,000	Approx. 3,200
<i>Building density</i>	100 dwellings/ha	105 dwellings/ha
<i>Current land use</i>	Business site	Business site
<i>Parking facilities</i>	Parking hub	Parking hub
<i>Public space</i>	Slow traffic only	Slow traffic only
<i>Main transport modes</i>	Walking and cycling, shared mobility	Walking and cycling, public transport, shared mobility

3.2 Data collection

This study drew on both primary and secondary data. The secondary data, which included policy documents, newspaper articles, and reports of municipal council meetings, was collected through desk research. Primary data was collected via interviews. This combination of documents and interviews is well suited to a study of specific policies and policy choices. Yanow (as cited in Owen, 2014) has the following to say on this subject:

Documents can provide background information prior to designing the research project, for example prior to conducting interviews. They may corroborate observational and interview data, or they may refute them, in which case the researcher is ‘armed’ with evidence that can be used to clarify, or perhaps, to challenge what is being told, a role that the observational data may also play. (p. 9)

3.2.1 Desk research

The first step in answering the research questions is getting insight into the documentation of the two relevant municipalities. Therefore, digging into policy documents is valuable to understand the ambitions. Especially policy documents are important. In addition to that, the national and provincial visions also provide information about guidelines set by these government layers. This research employs a content analysis approach to examine how the municipalities of Veenendaal and Barendrecht cope with the mobility transition in urban redevelopments.

The municipal policy documents are of particular relevance, as they contain the most specific policy measures which can be directly related to Het Ambacht and De Stationstuinen. The development frameworks of both neighbourhoods, in particular, include concrete principles for the new residential neighbourhoods. The documents issued by the provincial and national authorities predominantly reflect

broader policy objectives of a more general nature. As such, the main focus of this analysis lies with the municipal policy documents, which serve as the primary source of information.

Policy documents provide insight into decisions made at different levels of government. However, they do not reveal the process that led to the finalisation of the policy. The decision-making process that led to the adoption of a policy can be traced by consulting reports of local council meetings. These explain the considerations and choices made, and record the debate on the proposed policy. Local newspapers also report on policy decisions, particularly politically sensitive issues such as paid parking. Articles in local newspapers often provide a factual account of how discussions unfolded in municipal councils or of how the media views topics such as parking. This can be useful for understanding the considerations and choices made by the local authority and may help answer sub-question 2. An overview of all documents that are collected, can be found in appendix 1. A short summary can be found in table 3.

Table 3 Short overview of the documents collected

<i>Source type</i>	<i>Het Ambacht, Veenendaal</i>	<i>De Stationstuinen, Barendrecht</i>
Policy documents	4	4
Newspaper articles	6	4
Reports of municipal council meetings	0*	2

*the municipality of Veenendaal does not publish reports of municipal council meetings

3.2.2 Semi-structured interviews

Besides using policy documents, newspaper articles and reports of municipal council meetings, this study employed a qualitative research design, using semi-structured expert interviews as the primary method of data collection. Semi-structured interviews are particularly well-suited for exploratory research, as they provide both structure and flexibility, allowing the researcher to probe deeper into emergent themes while maintaining comparability across interviews (Kallio et al., 2016; Brinkmann, 2013). This method is effective for capturing nuanced, expert-level perspectives that are not easily accessible through quantitative approaches (Rowley, 2012).

There are several reasons why interviews were chosen as part of this research, each offering distinct advantages. Firstly, interviews allow questions that remain unanswered after analysing the documents to be clarified. Certain aspects of the policy to be implemented may be open to interpretation, and these can be clarified during an interview. Secondly, interviews provide an opportunity to inquire about the most recent developments. Some policy documents are several years old and therefore may not reflect the latest changes or updates. These can be addressed in interviews, providing a more up-to-date perspective. Furthermore, interviews are a valuable tool for exploring the rationale behind particular decisions. The reasoning and considerations involved in decision-making can be explained in more detail, offering useful insights into the motivations behind specific strategies.

Six interviews were conducted. Each of the six respondents plays a key role in the development of both neighbourhoods. Interviewing municipal officials, experts hired from consultancy firms, and a ministry official who assists local authorities in developing mobility strategies provided a comprehensive picture of the situation. The respondents complement each other well, each offering a different perspective on the case studies. Together, they provide a representative picture of the development of both neighbourhoods and the formulation of the mobility strategy. Table 4 provides a description of each respondent. In the results chapter, the respondent numbers are used to refer to the interviews. The topic list used for the interviews, which is derived from the literature review, can be found in appendix 2.

Table 4 Interview respondents and their role

<i>Respondent</i>	<i>Description</i>
Respondent 1	Project manager Het Ambacht, Municipality of Veenendaal
Respondent 2	Mobility advisor, Municipality of Veenendaal
Respondent 3	Parking expert, involved in Het Ambacht, Spark Parkeren
Respondent 4	Mobility advisor, Municipality of Barendrecht
Respondent 5	Parking expert, involved in De Stationstuinen, Spark Parkeren
Respondent 6	Expert hubs/shared mobility and urban mobility, Ministry of Infrastructure and Water Management

3.3 Data analysis

3.3.1 Content analysis

The policy analysis was conducted using a content analysis. A policy evaluation was not chosen, as such an approach is primarily suited to measuring the effects of policy (Wollmann, 2017). Although this would also be of interest to this research, the current study is more appropriately focused on the content of policy. For this purpose, a content analysis is more suitable. Through content analysis, it is possible to gain a better understanding of the ambitions and objectives embedded within policy documents. In this research, these policy ambitions and objectives were used to identify and interpret the mobility strategy employed in Het Ambacht and De Stationstuinen. The policy documents were therefore analysed based on their content, rather than the implementation or outcomes of the policies, as would typically be the case in a policy evaluation (Gheyle & Jacobs, 2017).

For the analysis of the policy documents, a coding scheme is developed, based on the research questions and the concepts outlined in the theoretical framework and summarised in a table. This enabled a direct categorisation of text segments and allowed for the identification of which parts of the text were relevant to specific research questions. This structure also facilitated the subsequent presentation of the results. As the coding scheme was derived from the research questions and theoretical concepts, it was also suitable for use in the analysis of the newspaper articles, the reports of municipal council meetings and the semi-structured interviews. Taking this approach ensures consistency in analysing all data, whether primary or secondary. The coding scheme can be found in table 5 in the next section.

3.3.2 Coding scheme

Table 5 Coding scheme

Category	Sub-category	Indicators
Mobility strategy	Individual motorised mobility	- Car accessibility - Parking options - Free parking - Road infrastructure
	Active mobility	- Improvements in walking and cycling infrastructure - Bike parking - Safety improvements
	Shared mobility	- Various shared mobility options - Availability of (high-quality) public transport
Role of the government	Regulatory role	- Government intervenes in the mobility strategy

		- Government sets up the 'rules of the game'
	Guiding role	- Government only sets out guidelines, and does not intervene at all
	Stimulating role	- Government promotes a specific form of mobility, but is not an active actor
Role of private companies	Active role	- Private companies are actively involved in an early stage of development - Private companies get a promising role in exploiting the mobility strategy
	Passive role	- If the government does not actively promote shared mobility - Shared mobility is only a limited part of the mobility strategy
Impact of mobility on public space	Large impact	- Much space for mobility, more than half of public space
	Moderate impact	- There is enough space for mobility and an appropriate amount of space for other functions. The division of space between mobility and other functions is almost 50/50.
	Small impact	- More space for other functions than mobility-related functions

4 Results

This section presents all the findings from the content analysis of the policy documents and the interviews. The results are organised by research question. The chapter ends with a summary of the results in table 6.

4.1 The chosen mobility strategy

The first question concerns the mobility strategies adopted in Het Ambacht and De Stationstuinen. The mobility strategy for De Stationstuinen is based on public transport availability (municipality of Barendrecht, 2022a), whereas Het Ambacht's strategy is based on its central location (municipality of Veenendaal, 2024). Both neighbourhoods will have a high building density. Developing a neighbourhood with this level of density requires decisions to be made about how much space to allocate to mobility within the neighbourhood. This is why the municipality of Veenendaal has decided to design Het Ambacht from the inside out, with the aim of “optimising the situation for pedestrians as much as possible” (respondent 2). This is particularly relevant in terms of car use and parking. There is insufficient space to provide adequate parking in public areas or at ground-floor dwellings for residents and visitors. Consequently, these neighbourhoods differ fundamentally from traditional residential areas with lower housing density. Therefore, clustered parking in parking garages, known as 'hubs', is being introduced in both neighbourhoods. Street-level parking in public areas is not permitted, with the exception of disabled parking spaces at certain locations. To fund this, paid parking is being introduced for residents and visitors. In total, there will be 0.9 parking spaces per dwelling, meaning not everyone will be able to own a car. This makes the opportunities for car use more limited than in other parts of both cities (municipality of Barendrecht, 2022a; municipality of Veenendaal, 2024).

To ensure alternatives to car use are available, both local authorities are focusing on this. The order in which priority is given to the various modes of transport follows the STOMP principle (municipality of Barendrecht, 2022a; 2024). This prioritises walking and cycling (active mobility) as the most important forms of transport. Next come public transport and shared mobility, with cars and motorcycles (individual motorised mobility) coming last. This hierarchy of transport modes has been used as a starting point in the development of both Het Ambacht and De Stationstuinen. The following section examines the implementation of these modes of transport in more detail.

4.1.1 Individual motorised mobility

The car remains an important means of transport for many people in Het Ambacht and De Stationstuinen. However, its role within both neighbourhoods will differ. Unlike in many existing residential areas, residents will not be able to park their cars outside their front doors in both neighbourhoods (municipality of Barendrecht, 2022a; municipality of Veenendaal, 2024). In addition, as previously mentioned, there will be fewer parking spaces per household. Parking hubs are being built on the outskirts of both neighbourhoods, near the access roads, where residents and visitors can park their cars. These car parks will be within walking distance of residential buildings and will serve as hubs. The buildings are more than just car parks; they are also places for shared mobility, parcel collection and a range of other functions (municipality of Barendrecht, 2024; respondent 1 and 4).

As parking garages are more expensive to build and maintain than on-street spaces, the council must introduce parking regulations, such as paid parking, for residents and visitors. This measure will be implemented in both Het Ambacht and De Stationstuinen. Ultimately, users will pay for the construction and maintenance of the car park. Some residents do not own a car and will not contribute to the costs in this way (respondent 3). Furthermore, parking regulations are also being introduced in existing

residential areas surrounding the new developments. This supporting policy aims to prevent residents and visitors of the new developments from parking for free in the surrounding areas and avoiding parking costs. In Veenendaal, paid parking is being introduced in neighbourhoods around Het Ambacht, while in Barendrecht, a blue zone is being introduced around De Stationstuinen. This will prevent parking nuisance in existing neighbourhoods and ensure that car parks are actually used.

In addition to a different approach to parking, both neighbourhoods are also less accessible to motorised traffic. The public space is designed to be free of cars. Residents will have to park their cars in the garage and walk the last few hundred metres to their homes. However, the neighbourhood is designed to encourage walking and facilitate social interaction. “Because even that little walk to the hub isn’t just good for your health; you also bump into your neighbour, so to speak, and that’s exactly the sort of thing that needs to happen in that neighbourhood,” said respondent 5. It is a safe environment where there is also space for socialising and playing.

4.1.2 Active mobility

Walking

Active mobility will play a significant role in the new neighbourhoods. Both Het Ambacht and De Stationstuinen are providing daily amenities that residents can reach on foot. This means that residents will not always need to use a car for tasks such as shopping (municipality of Veenendaal, 2024). As a result, dependence on cars will be reduced, and walking will also have health benefits (municipality of Barendrecht, 2022a). As previously mentioned, the public spaces will be designed to encourage walking by making it attractive, easy and safe.

Cycling

In addition, there is a strong focus on cycling. The public space will include bicycle paths and bicycle parking to encourage cycling. Bicycles can also be parked at the entrance to buildings, making it easier to get on a bike. The location of the new neighbourhoods within the city also makes cycling a good alternative, as other amenities are within cycling distance (municipality of Barendrecht, 2022a; municipality of Veenendaal, 2024).

4.1.3 Shared mobility

Public transport

The third type of mobility that will be included in the modal split of the new neighbourhoods is shared mobility. The proportion of public transport used for this form of mobility varies from neighbourhood to neighbourhood. As De Stationstuinen is located near Barendrecht railway station, the train is a good option for public transport. Six trains per hour in each direction stop at the station, which can be considered high-frequency (respondent 4). Furthermore, the possibility of running a bus through the neighbourhood will be explored. Currently, the provision of bus transport is negligible.

The situation regarding public transport in Het Ambacht is different. Although the new residential area is within walking or cycling distance of Veenendaal Centrum station, services at this station are significantly less frequent than in Barendrecht. During normal operating hours, the station is served twice an hour in each direction and four times an hour towards Utrecht Central Station during rush hour. Another drawback is that the line towards Rhenen is a dead end, which makes this route less attractive for passengers travelling from Het Ambacht (respondent 1). Furthermore, a bus currently runs past the neighbourhood, but its frequency is low, running twice an hour during peak hours and once an hour at other times. Efforts are being made to increase this frequency in the future, but this is uncertain. The

municipality of Veenendaal does not regard public transport as a competitive alternative to the car in its planning. Only when the bus runs four times an hour or more can it serve as a viable alternative (respondent 2).

Shared vehicles

Another important form of mobility is the use of shared vehicles, such as car-sharing and bike-sharing. Car-sharing in particular is an important form of shared mobility that will be considered in the development of these neighbourhoods. A significant number of shared vehicles will be made available in both neighbourhoods. In Het Ambacht in particular, the municipality intends for car-sharing to account for a significant proportion of the modal split. Car-sharing vehicles have the potential to replace people's second cars, and the aim is to encourage people to actively engage in car-sharing, for example by purchasing a car together and owning it jointly, thereby reducing costs (respondent 2; municipality of Veenendaal, 2025).

De Stationstuinen also has an active focus on car-sharing. Here, the municipality wants shared mobility to provide an alternative to private cars, since a low-traffic scenario has been chosen. They also intend to provide shared bicycles around the train station. To guarantee the future supply of shared cars, the government intends to play an active role in providing shared mobility. The council is currently developing policy on how this will be organised (respondent 4).

4.1.4 Combined mobility strategy

The first sub-question focuses on the mobility strategies adopted in Het Ambacht and De Stationstuinen. No single, specific mobility strategy can be identified for each neighbourhood. Instead, the mobility strategy for both neighbourhoods is a combination of the strategies mentioned. The results indicate that the car still plays a significant role in both neighbourhoods' modal split. However, its role has changed compared to that in existing, traditional residential areas. As there is no free on-street parking available, cars are less accessible as a means of transport, both physically and financially. Consequently, residents are less inclined to use cars, particularly as alternatives are promoted by the municipal government. Furthermore, the neighbourhood's high building density and available amenities mean that walking and cycling are good alternatives for short and medium distances. Additionally, the greater distance to one's parked car means travel times by car and public transport are more balanced. Consequently, public transport can be a faster option for some destinations, making it worth considering. It should be noted that this will be of greater importance for De Stationstuinen than Het Ambacht, given the limited availability of high-quality public transport there.

In conclusion, the mobility strategies for Het Ambacht and De Stationstuinen involve a variety of transport options. While the car remains important, its use is balanced with active travel for short and medium distances and shared travel for longer journeys. These developments align with the ambitions set out by the local authorities in their policies. For example, Barendrecht aims to keep every mode of transport widely available: "The local authority strives to ensure the greatest possible freedom of choice in terms of transport modes" (municipality of Barendrecht, 2022a, p. 4). This is also reflected in the spatial strategy. Given its size, Barendrecht has a key role to play in promoting cycling, and "restricting car traffic is the starting point in the pursuit of a sustainable improvement in quality of life and accessibility" (municipality of Barendrecht, 2012, p. 28).

In Veenendaal, Het Ambacht's mobility strategy also aligns with the environmental vision's ambitions. The municipality has acknowledged that cars occupy a significant amount of space and that traffic flow is suboptimal. The quality of public transport is moderate and the provision of shared transport is below average. A transition towards walking, cycling, public transport and shared mobility ensures that people

need to use their cars less because there are sufficient alternatives (municipality of Veenendaal, 2020). In its approach to shared mobility, the municipal authority describes how shared mobility can serve as an alternative to the car, and the effect this would have on transport-related space usage. “By facilitating car-sharing and shared cargo bikes at strategic locations, parking pressure will be reduced if this is successful. In the long term, this will create more space for green areas or community facilities” (municipality of Veenendaal, 2025, p. 3).

4.2 Considerations of the municipal government in relation to the mobility strategy

The decision to develop a residential area is preceded by a lengthy process of research and consultation, also in Het Ambacht and De Stationstuinen. It is therefore interesting to examine the considerations taken into account by the municipal government in this regard. Various interests and competing claims on space must be carefully weighed up. This section looks at how the local authority has dealt with these issues, and continues to do so.

As mentioned earlier, both municipalities are facing challenges in terms of housing construction. This challenge stems from high housing demand and has been partly imposed by the central government. The sites identified in both municipalities for this purpose have different characteristics, meaning the authorities are obliged to build a large number of homes. For example, both sites are industrial estates with existing buildings, so a great deal of preparatory work involving additional costs must be carried out before construction can begin. Building more homes will increase returns, making it easier to justify the business case and make the homes more affordable. Furthermore, both sites are centrally located in the city (particularly Het Ambacht) and are easily accessible (particularly De Stationstuinen). This makes it possible to create high-density residential areas at both sites.

However, this ambition has implications for public space. As building density increases, pressure on public space increases too. In order to accommodate all users of public spaces, the council must decide how much space to reserve for mobility, nature, climate adaptation and social and cultural activities. Additionally, the municipality is bound by legislation and regulations, meaning all requirements must be properly met.

4.2.1 Role of the government

Individual motorized mobility

Parking regulations

One decision made by both municipalities was to play an active role in the area’s mobility, during both the development and operational phases. As effective parking management measures need to be taken, the local authority is obliged to take the lead on this (respondent 1 and 2). Agreements are being made with developers regarding the number of parking spaces to be provided and who will bear the costs. The parking issue requires more attention than in a traditional residential area, and the local authority cannot leave it to the market, otherwise no satisfactory solution will be found. Respondent 1 said:

If you want to achieve this in such a complex environment, it is very important that the local council plays an active role. At least, that is our view here in Veenendaal. In other words, you can't just sit back and wait for the landowners to take action.

Implementing parking regulations is an important tool for ensuring the success of these neighbourhoods’ development. Both municipalities are actively addressing how parking is regulated. As previously mentioned, it is more expensive to construct and maintain parking spaces in the hubs than in public

spaces. Consequently, both local authorities are introducing paid parking for residents and visitors. To prevent people from seeking alternative parking elsewhere, the local authority must also introduce parking regulations in the immediate surrounding area. These measures are unpopular with both residents and politicians. In Barendrecht, for example, the council initially agreed to the construction of 3,500 homes, but then refused to go ahead with the plan when it realised that this would involve paid parking. The consultancy firm then explained to the council that it was not possible to build this number of homes and provide free parking at the same time. The council subsequently agreed (respondent 5; Betaald parkeren in de Stationstuinen, 2025).

Blue zone or paid parking

The parking regulations in the surrounding neighbourhoods, known as 'flanking measures', have a financial impact on the municipality. This is one area in which the two local authorities differ, partly because Barendrecht has no experience of paid parking within its boundaries yet, whereas Veenendaal does. In Barendrecht, the municipal authorities are planning to introduce a blue zone similar to the one already in place around the station. This means that people are only permitted to park for free for a limited time. This prevents people from seeking alternative parking locations to avoid charges (municipality of Barendrecht, 2024; respondent 3). An exemption scheme is in place for residents and visitors staying with residents for more than two hours. Anyone who parks for longer than the permitted time will be issued with a parking fine. The revenue from these fines goes to the central government, while the local authority bears the costs of enforcement (respondent 5). This results in a financial loss for the local authority.

The local government in Veenendaal decided to introduce paid parking in the area around Het Ambacht, as this would be more financially advantageous than implementing a blue zone. The matter was discussed with local residents, who expressed a preference for parking regulation in the form of paid parking with permits (Kuijpers, 2025a). The municipal council also adopted the proposal for this form of parking regulation, although the final details have not yet been finalised (Mooijman, 2025b; Van den Berg, 2025). The financial advantage of paid parking over a blue zone is that the revenue goes directly to the local authority and covers short-term parking, permits, and charges for late payment or non-payment of the parking tax. Unlike a traffic fine in a blue zone, this form of parking regulation generates direct revenue for the local authority, which it can use to fund enforcement, among other things (respondent 5).

Parking rights

Furthermore, the council has the option of managing parking by issuing parking rights. This system is based on the premise that there is a limited number of parking spaces which can only be allocated once. If there are more applicants than parking rights available, people are placed on a waiting list. As a result, people cannot own a car until they have been granted a parking right. This decouples parking spaces from homes. When someone no longer needs a car, the parking right becomes available to another local resident. The municipality of Veenendaal is considering introducing this system in the neighbourhood of Het Ambacht (Kuijpers, 2025c).

Operation

Regarding the operation of the parking hubs in Het Ambacht, the Veenendaal municipality has indicated that it will play an active role. One of the reasons for this is affordability. "If we want to keep [parking] affordable for residents and visitors, we'll have to get involved ourselves" (respondent 1). This will enable the council to guarantee lower rates than commercial operators would offer for the park-and-ride facilities. It also allows the council to respond flexibly to demand for parking spaces. As it owns the

parking hubs, the council can increase or decrease the parking capacity of a hub as required. Respondent 1 comments: “You can expand or reduce them later on. You could potentially give them a different function, and you could even build an extra one if you wanted to.”

The availability of public transport and shared mobility also influences the parking standard and the amount of parking space in the hubs. In Het Ambacht, public transport offers only a limited alternative to the car, meaning that parking standards remain somewhat high. Furthermore, as a car-sharing scheme has yet to be set up, it is uncertain whether it will be popular with the new residents (respondent 1). Depending on whether these alternatives to the car are used extensively or very little, the local authority can easily adapt the parking capacity as required.

Active mobility

When it comes to active mobility, the local authority plays a key role in encouraging it. This begins at the design stage of residential areas. The development framework for De Stationstuinen includes the following: “Cyclists and pedestrians will be facilitated as much as possible with through routes and attractive routes within the area that are well connected to routes in the surrounding area” (municipality of Barendrecht, 2022a, p. 28). This is linked to keeping cars out of public spaces and prioritising non-motorised traffic, in accordance with the STOMP principle. It is also important to note that the quality of cycle paths and parking facilities is essential (respondent 4). The local authority can promote active mobility, particularly during the development phase.

Shared mobility

Another issue the council faces is how much responsibility it should take for shared mobility. If it wants shared mobility to succeed as a means of transport, the council must play an active role. This is why the council in Veenendaal intends to pursue an active shared mobility policy in Het Ambacht from the outset. This will help new residents to become accustomed to the idea of shared mobility and encourage them to use it. “If you have a good range of options from the outset and a group dedicated to promoting them, you can make much more active use of shared mobility” (respondent 1).

According to respondent 4, the municipality of Barendrecht does not intend to purchase the cars itself, but rather plans to issue a call for tenders to private parties for this purpose. Respondent 5 suggests that, if the municipality wishes to maintain control over the shared mobility offering, it may have to become the operator itself. “Supply creates demand.” Private operators are risk-averse, which means that supply is initially low and the concept could therefore fail due to decreased availability for users. On the other hand, this does compromise feasibility. “The problem lies in the feasibility. Setting up and managing a car-sharing scheme doesn't quite fit with the local authority's organisational structure.” If the local authority owns the cars, it must be available 24/7 to provide a service. That does not fit with how the local authority operates (respondent 5). However, it is important that the local authority retains control over the contracting of mobility service providers (MSPs). If the council leaves too much to private companies, the shared mobility scheme may not take off properly due to fragmentation (respondent 6).

4.2.2 Role of private companies

With regard to the mobility strategy in Het Ambacht and De Stationstuinen, the role of private companies is more limited. As mentioned earlier, private companies are risk-averse (respondent 5). Consequently, they are less inclined to take the initiative and contribute ideas at an early stage regarding the mobility concept in the new residential areas. They often adopt a wait-and-see approach, leaving it to the local authority to take the first step (respondent 4). Nevertheless, private companies play an important role in operating shared mobility services, which the local authority will introduce to the market in

collaboration with developers (respondent 4). “Those developers aren't going to manage a fleet of vehicles themselves, they'll bring in shared mobility providers for that” (respondent 6). It is still unclear how this will take shape in practice, as Mobility Service Providers (MSPs) are reluctant to enter into contracts of ten years or more straight away, preferring instead to sign contracts for one or three years (respondent 6).

Furthermore, it is financially advantageous for developers if the local authority wishes to reduce the number of parking spaces, since these are costly to construct and may not be profitable. It is even more advantageous for developers if the local authority also purchases parking facilities to take control of them. Another reason is that it is practically impossible to meet standard parking requirements for this number of houses in urban locations such as Het Ambacht and De Stationstuinen. Consequently, a developer may be required to invest in shared mobility to ensure compliance with applicable parking standards (respondent 6). This is also reflected to some extent in Het Ambacht and De Stationstuinen, as otherwise the quality of the public space would fail to meet requirements and the neighbourhood's liveability would be compromised.

4.2.3 Impact on public space

The choice of mobility strategy has a significant impact on the design of public spaces. The development framework for Het Ambacht (municipality of Veenendaal, 2020) states that public spaces designed in this way encourage people to meet and interact, promoting physical activity and health. As previously pointed out, a traditional on-street parking solution leaves no public space (respondent 1). The council has therefore opted for an alternative parking solution to ensure that public space remains available for other purposes (municipality of Veenendaal, 2023). Given the high building density and the fact that people often do not have their own gardens, it is important that the outdoor space is of high quality. Without cars taking up space on the streets, there is room for plenty of greenery and play areas. “People should also get something in return” (respondent 4).

In the case of De Stationstuinen in Barendrecht in particular, the surrounding road network cannot cope with a significant increase in traffic. Takken (2025) warns of this in the Ridderkerks Dagblad. The argument is that the low-traffic neighbourhood will result in traffic being diverted from the neighbourhood itself to the surrounding ring roads. “Barendrecht will not gain a low-traffic residential area in this way, but possibly traffic jams next to houses.” Respondent 4 indicates that the capacity of the surrounding roads has been a key factor in determining the number of homes that can be developed. “The capacity of the road network quickly becomes the determining factor in the number of homes that can be developed.” Consequently, traditional housing development is not feasible at this location, and the council must permit fewer cars per residence. This is also included in the parking policy for De Stationstuinen (municipality of Barendrecht, 2024).

4.2.4 Governance questions

Paid parking as an unpopular measure

The decision to introduce parking regulations has governance implications. In particular, residents are concerned about the introduction of paid parking as an accompanying measure. This is evident in the case of Het Ambacht, where the municipality plans to introduce paid parking on surrounding streets. However, the residents of these streets disagree, feeling that they are being made to pay for a problem created by the council (Mooijman, 2025a). During residents' meetings, the council gave local residents the opportunity to express their preferences regarding different forms of parking regulation, having first informed them of the available options. Local councillors also expressed reservations about the introduction of paid parking, as reported Kuijpers (2025b) and Van den Berg (2025). Various parties on

the local council are questioning the necessity of the parking regulations. “Residents in the new housing estate can choose to live there with those parking rules, but people in the surrounding streets did not make that choice.” Some parties also consider the timing to be premature. They do not want local residents to have to pay for parking when no homes have yet been built. The local council has therefore agreed that local residents will not have to pay for their parking permits for the first three years (Mooijman, 2025b).

Paid parking in neighbourhoods is also a sensitive issue. This is particularly evident in De Stationstuinen, since paid parking has not yet been introduced in the municipality of Barendrecht. When it became clear that paid parking was to be introduced, the municipal council therefore did not agree to it (municipality of Barendrecht, 2020; Parkeren in Stationstuinen gaat geld kosten, 2022). However, when it became apparent that paid parking was necessary in order to build the desired number of homes, the municipal council did eventually agree (municipality of Barendrecht, 2022c). While the council recognised the need for paid parking, they regretted having to take this measure. This is evident from a letter to the editor written by a councillor from Echt voor Barendrecht (EVB). In this letter, the councillor attempts to justify the decision to voters. “The EVB is against paid parking in Barendrecht. We remain opposed to it. However, we are making an exception for De Stationstuinen alone, because otherwise it would be impossible to build affordable housing there” (Van Bommel, 2026).

Collaboration with private companies

It also appears that collaboration between private companies and the local government is necessary in order to organise the effective implementation of a car-sharing scheme. As respondent 4 indicated, the municipality of Barendrecht will not be purchasing car-sharing vehicles itself. Respondent 5 concurs, stating that it is not appropriate for a municipality to manage car-sharing vehicles directly. Therefore, the municipality will need to collaborate with private parties for this purpose. Residents in Het Ambacht could also launch their own car-sharing initiative, as is already happening in other areas of Veenendaal (municipality of Veenendaal, 2025; respondent 2). In addition, both local authorities must collaborate with private sector partners to run the parking hubs. While the local authority may own the hubs, a private sector partner will be required to manage them. MSPs can then offer shared mobility services at the hubs, giving the local authority greater control over these services.

Table 6 Brief overview of the results, as described in chapter 4

	<i>Het Ambacht, Veenendaal</i>	<i>De Stationstuinen, Barendrecht</i>
	<i>Differences</i>	
<i>Mobility strategy</i>	Main focus on walking and cycling. The private car remains important, due to limited public transport options. Shared vehicles are added to compensate the shortcomings of public transport in Veenendaal.	Also main focus on walking and cycling within the neighbourhood. Better public transport options in De Stationstuinen for longer distances, but the private car remains important.
<i>Flanking policy in surrounding neighbourhoods</i>	Paid parking and permits for residents in the surrounding area	Blue zone and exemptions for residents in the surrounding area
<i>Governance questions regarding flanking policy</i>	Municipal council members did not want paid parking as flanking policy in advance.	Municipal council members did not want paid parking in De Stationstuinen, but they finally agreed.
	<i>Similarities</i>	
<i>Role of the government</i>	The local authority is actively promoting specific mobility options. It is taking the lead on parking and shared mobility.	

<i>Role of private companies</i>	Private companies are passive. They will cooperate with the local government, but they will not play a very active role.
<i>Impact on public space</i>	Mobility takes up less space in both neighbourhoods. Within both neighbourhoods, only walking and cycling is allowed. Private cars and shared vehicles are parked in hubs near the edges of both neighbourhoods, which requires very little public space.
<i>Governance questions</i>	Both municipalities struggle with the extent to which they are going to manage aspects of the mobility strategy like the parking hubs and a shared mobility scheme by themselves. They are likely to tender the operation and management of the hubs and the operation of a shared mobility scheme.

5 Discussion

This chapter discusses how the results from the previous chapter relate to the literature, as described in chapter 2.

5.1 The chosen mobility strategy

5.1.1 Importance of car mobility

One of the most striking features is the role assigned to cars. Considerable attention is being paid to effectively addressing car use in the development of both neighbourhoods. Boussauw, Papa and Fransen (2023) explain that household characteristics and spatial factors determine the extent of car dependency. Careful consideration and re-evaluation of the role of the car in the development of Het Ambacht and De Stationstuinen has reduced car dependency. The results show that the car remains the most important means of transport, particularly for long distances. However, promoting alternatives such as car-sharing and public transport for medium and long distances and walking and cycling for short distances also reduces car dependency. This is consistent with the findings of Pritchard (2022).

Another reason why the car remains an important means of transport is that the alternatives for long-distance travel, public transport and shared mobility, are inadequate, particularly in Het Ambacht. The car is often faster and more flexible than public transport, and shared mobility is still only available to a limited extent in both municipalities. This is in line with research of Paulley et al. (2006). This raises the question of whether it will prove popular with new residents.

5.1.2 Active mobility

Active mobility is important for short and medium-distance journeys in both Het Ambacht and De Stationstuinen. Both neighbourhoods have been designed with pedestrians and cyclists in mind, so that they can move around as easily as possible. The central role of active mobility in the neighbourhood's design is key to encouraging this form of travel and ensuring its success (Hackl et al., 2019). Consequently, active mobility is expected to account for a significant proportion of the modal split, resulting in positive health benefits (Kong, Wu & Li, 2023).

5.1.3 Shared mobility

Shared mobility can play a significant role in the modal split, which is why local authorities are actively promoting shared vehicles and public transport. By using shared vehicles and MaaS, some of the demand for car travel can be met, reducing the need for parking spaces. This, in turn, reduces the amount of space taken up by cars. In De Stationstuinen, public transport is the better option as Barendrecht railway station, which is served by six trains per hour in each direction, is located right next to the neighbourhood. In Het Ambacht, however, train options are more limited, and the journey time to the station is longer. Nevertheless, shared vehicles, particularly bike sharing, can complement public transport in both neighbourhoods. This could solve the 'last mile' problem for visitors (Butler, Yigitcanlar, Paz & Reed, 2022).

Furthermore, shared mobility currently accounts for only a small proportion of the modal split. The municipality of Veenendaal expects car and bike sharing to account for an increasingly large share of the modal split, particularly in the context of urban development. This aligns with the findings of Wagner et al. (2022), who argue that urban densification reduces the need for car traffic and renders more sustainable modes of transport, including shared mobility, more pertinent.

5.2 Considerations of the municipal government in relation to the mobility transition

5.2.1 Role of the government

The results show that the municipal government plays a significant part in developing the mobility strategy. In both Het Ambacht and De Stationstuinen, the local authority decided to take the lead in developing the neighbourhoods because the mobility concept would otherwise not have gotten off the ground. One means of steering this process is parking regulation. This is an important tool for local authorities to implement a specific mobility strategy, particularly since parking policy guides spatial planning and determines how public space is organised (Bakogiannis, Kyriakidis & Siti, 2018).

The local authority can play a significant role in establishing mobility hubs where residents and visitors can park their cars. By managing the hubs itself, the local authority can influence pricing. This ensures that parking charges remain affordable for residents and users. Shared mobility within the hubs will therefore remain accessible to all, making it easier for private operators to run shared mobility schemes. When it comes to shared mobility, the local authority must actively steer its use and operation. This works best in collaboration with private parties, as discussed in section 5.2.2. Combining private and shared cars could increase shared mobility use and reduce car dependency, as suggested by Pritchard (2022). The municipality's promotion of alternative modes of transport goes hand in hand with restrictive measures on car use. There are many incentives that encourage people to continue making extensive use of cars. Restricting car accessibility and increasing the cost of ownership, while simultaneously promoting active mobility through public space design and providing a wide range of shared vehicles, can encourage the use of alternative modes of transport.

5.2.2 Role of private companies

Public-private partnerships are an effective way of engaging private companies in developing a mobility strategy (Kishchenko, De Roeck, Salens & Van Maroey, 2019). Collaboration with MSPs is particularly important in relation to shared mobility. It is not feasible for local authorities to purchase and operate vehicles themselves, which is why collaboration is essential. Property developers could proactively approach the local authority to discuss alternatives, as fewer parking spaces represent a financial benefit for them. Implementing alternative modes of transport can reduce parking standards, as discussed by Engel-Yan, Hollingworth and Anderson (2007) in their research.

5.2.3 Impact on public space

In Het Ambacht and De Stationstuinen, the design of the public spaces gives limited priority to travel. The emphasis is on socialising and playing, as well as creating spaces for nature. This approach aligns with Gössling's (2020) assertion that space should be taken from cars to create healthy public spaces and urban environments. Car use and shared transport have been relocated to the edges of the neighbourhood, near major roads. This creates green, park-like public spaces with room for active mobility. According to Szarata, Nosal, Duda-Wiertel and Franek (2017), public space quality improves when there is less space for cars. In Het Ambacht and De Stationstuinen, there is indeed less space for cars, but this is due to the high density of buildings. Consequently, both local authorities have been compelled to redesign the public spaces and restrict car access in order to ensure that sufficient space remains for other uses. An additional benefit of this is that the quality of the public spaces improves, as the authors describe. Furthermore, the municipalities aim to encourage active travel by designing public spaces so that walking and cycling are easy and appealing. This is in line with Southworth's (2005) views.

5.2.4 Governance questions

One of the challenges faced by local authorities when developing residential areas is the need to introduce flanking policies. As a result, residents living near Het Ambacht will have to pay for on-street parking, even though they do not have to at present. This has caused tension as residents are opposed to it. This has already been confirmed by Taylor (2020). If the local authority engages in proper dialogue with local residents in advance, however, a suitable solution can be found. It is important to inform local residents about the background to the decision to be taken in doing so. After all, as Whittemore (2012) describes, area development is primarily a social debate.

The issue with local residents is less of a problem in Barendrecht, as the flanking policy there involves a parking disc zone with exemptions rather than paid parking. Consequently, paid parking has virtually no financial impact on local residents. However, parking in De Stationstuinen itself is subject to a charge, which has led to some political debate, given that paid parking is not currently in place in Barendrecht. While many councillors wish to keep it that way, the councillor responsible and the experts have indicated that the number of homes the municipal council wishes to build would then not be feasible. Councillors' opposition to paid parking is consistent with research by Kong, Pojani, Corcoran and Sipe (2024) relating to restrictions on car use. Generally speaking, residents do not want this, and as a result, such a stance by councillors would be politically unpopular.

6 Conclusion

This study examined the following research questions: *How are mid-sized cities in The Netherlands dealing with the mobility transition in urban redevelopments?*

1. What is the chosen mobility strategy in Het Ambacht and De Stationstuinen?
2. What are the considerations in the choices of the municipalities for the chosen mobility strategy?

6.1 The mobility strategy

The first sub-question is about the chosen mobility strategy in Het Ambacht in Veenendaal and De Stationstuinen in Barendrecht. An analysis of the two case studies shows that, although neither Het Ambacht nor De Stationstuinen has a single mobility strategy, they employ a combination of strategies that result in a modal split accommodating all modes of transport. The car remains important as neither municipality is a major urban centre, and the alternatives, particularly for long-distance travel, are not yet able to compete effectively with the car. Consequently, sufficient space must be allocated for car parking, while ample space must also be allocated for active modes of transport, such as walking and cycling. This is partly because both neighbourhoods feature car-free public spaces. Although shared mobility in the form of public transport, car sharing and bike sharing is available, it will play a secondary role.

6.2 Considerations of the municipalities

The second sub-question is about the considerations in the choices of the municipalities for the chosen mobility strategy. First, the research shows that local authorities generally struggle to address the various spatial challenges involved in developing an urban neighbourhood in an appropriate manner. Due to the high building density, cars must be properly integrated into parking hubs, which is why parking regulation is necessary. As a result, the municipality can choose from various options, each of which has different consequences for the neighbourhood and the surrounding area. Residents of surrounding streets are often reluctant to accept this, so effective public participation and information provision are essential. Local councillors must also be fully aware of the consequences of their decisions.

Furthermore, the local authority must consider how much control it wishes to retain over the development and operation of the mobility strategy, and how much it wishes to leave to private companies and other market players. By owning parking hubs, the local authority can influence pricing and ensure that the situation remains the same in future. When it comes to providing shared mobility services, it may also be desirable for the local authority to coordinate these services itself. This would allow the local authority to create a centralised system, regulate supply and costs, and increase the success of the scheme. However, the local authority would assume financial risk, so they need to investigate whether this level of involvement is necessary and preferable.

6.3 Mid-sized cities and the mobility transition

The main research question is as follows: *How are mid-sized cities in The Netherlands dealing with the mobility transition in urban redevelopments?* It seems that the transition is not an end in itself. The municipalities of Veenendaal and Barendrecht have both stated in their policies that mobility must become cleaner and more sustainable in future. However, this ambition is linked to other goals, which is particularly evident in the development of Het Ambacht and De Stationstuinen. The municipalities wish to build a large number of homes, which will result in an increase in housing density. They are therefore compelled to take measures to regulate mobility, and these measures are consistent with the mobility transition. First, the proportion of private motorised transport in the modal split is lower than

in traditional residential areas. This is in line with the transition towards reduced car use, making transport healthier. Encouraging active and shared mobility is consistent with this. Furthermore, the development of these neighbourhoods provides public spaces in which less space is reserved for mobility, particularly car use. This frees up space for other public space functions, such as nature, climate adaptation, socialising and play areas. In conclusion, given the development of these urban neighbourhoods and the resulting mobility challenges, the local authority must take appropriate measures to discourage car use and encourage more sustainable forms of mobility, thereby contributing to the mobility transition.

This research uses a methodology that is well-suited to determining the mobility strategy in a given area, including the factors considered and the decisions made. It provides a detailed picture of the specific context, from which lessons can be learnt for similar future developments in this and other municipalities of a similar size. Based on the experts' findings, recommendations can be made for future developments. However, the results must be viewed in the context in which they were obtained. As both case studies Het Ambacht and De Stationstuinen have unique geographical contexts, the findings may not apply directly to similar developments in other municipalities. In addition to location, administrative and political situations differ, meaning that developments may be shaped differently. This makes it more difficult to identify trends and developments that apply to the whole country or other parts of the world. This affects the reliability of the results. A quantitative study of these kinds of developments and mobility strategies would be more appropriate, and this can be done by future research.

7 References

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8 Appendix

8.1 Appendix 1 Used documents

	<i>Het Ambacht, Veenendaal</i>	<i>De Stationstuinen, Barendrecht</i>
Policy documents	- Development framework Het Ambacht - Parking policy Veenendaal 2020, 2023 review - Shared mobility action plan Veenendaal - Environmental vision 2040 Veenendaal	- Development framework De Stationstuinen - Parking policy De Stationstuinen - Municipal mobility vision - Spatial strategy Barendrecht
Newspaper articles	- De Rijnpost. (May 29, 2025). <i>Meegedacht over betaald parkeren rondom Het Ambacht.</i> - De Rijnpost. (June 28, 2025). <i>Parkeerregulering noodzakelijk voor Het Ambacht.</i> - XON. (July 2, 2025). <i>Meningen verdeeld over betaald parkeren Het Ambacht Veenendaal</i> - XON. (July 4, 2025). <i>Alsnog akkoord voor betaald parkeren in nieuw deel Het Ambacht in Veenendaal</i> - <i>neemt voorstel parkeerexploitatie en regulering Het Ambacht aan</i> - De Rijnpost. (September 16, 2025). <i>Betaald parkeren voor bezoekers en bewoners in parkeerhubs</i>	- De Schakel Barendrecht. (January 12, 2022). <i>Parkeren in Stationstuinen gaat geld kosten.</i> - De Schakel Barendrecht. (January 14, 2026). <i>Ingezonden brief: Betaald parkeren of betaalbaar wonen.</i> - De Schakel Barendrecht. (January 28, 2026). <i>Betaald parkeren in De Stationstuinen.</i> - Ridderkerks Dagblad. (April 11, 2026). <i>De Stationstuinen Barendrecht: straks een file met woningen ernaast?</i>
Municipal council meetings	None	- Municipal council meeting of December 15, 2020 - Municipal council meeting of January 25, 2022

8.2 Appendix 2 Topic list

Introduction (5 minutes):

- Introducing myself
- The interviewee's role/position, and a brief overview of the development.
- Informed consent and questions to be recorded.

Mobility strategy (10 minutes):

- Why was this mobility strategy chosen? Why was a 'traditional' residential area not chosen?
- What considerations were involved in making this choice?
- What are the objectives of these choices?
- What are the expected effects of the chosen mobility strategy?
- (Follow-up questions on the chosen mobility strategy(ies))

The role of the government (25 minutes).

- What is the local authority's role in designing the mobility strategy?
- What is the local authority's role in its operation?
- How will the local authority collaborate with private sector organisations?

The role of private companies and users (15 minutes):

- What is the role of private companies with regard to mobility in neighbourhood development?
- How will operations by private companies be managed?
- What is the role of residents and users?
- What is expected of residents, users and visitors?

Concluding remarks (5 minutes)

- Summary
- Closing remarks
- Is there anyone else you think I should talk to about this?