Designing a strategy

for greening private gardens in Delft

Master Thesis
Strategic Product Design
Joukje Harkema
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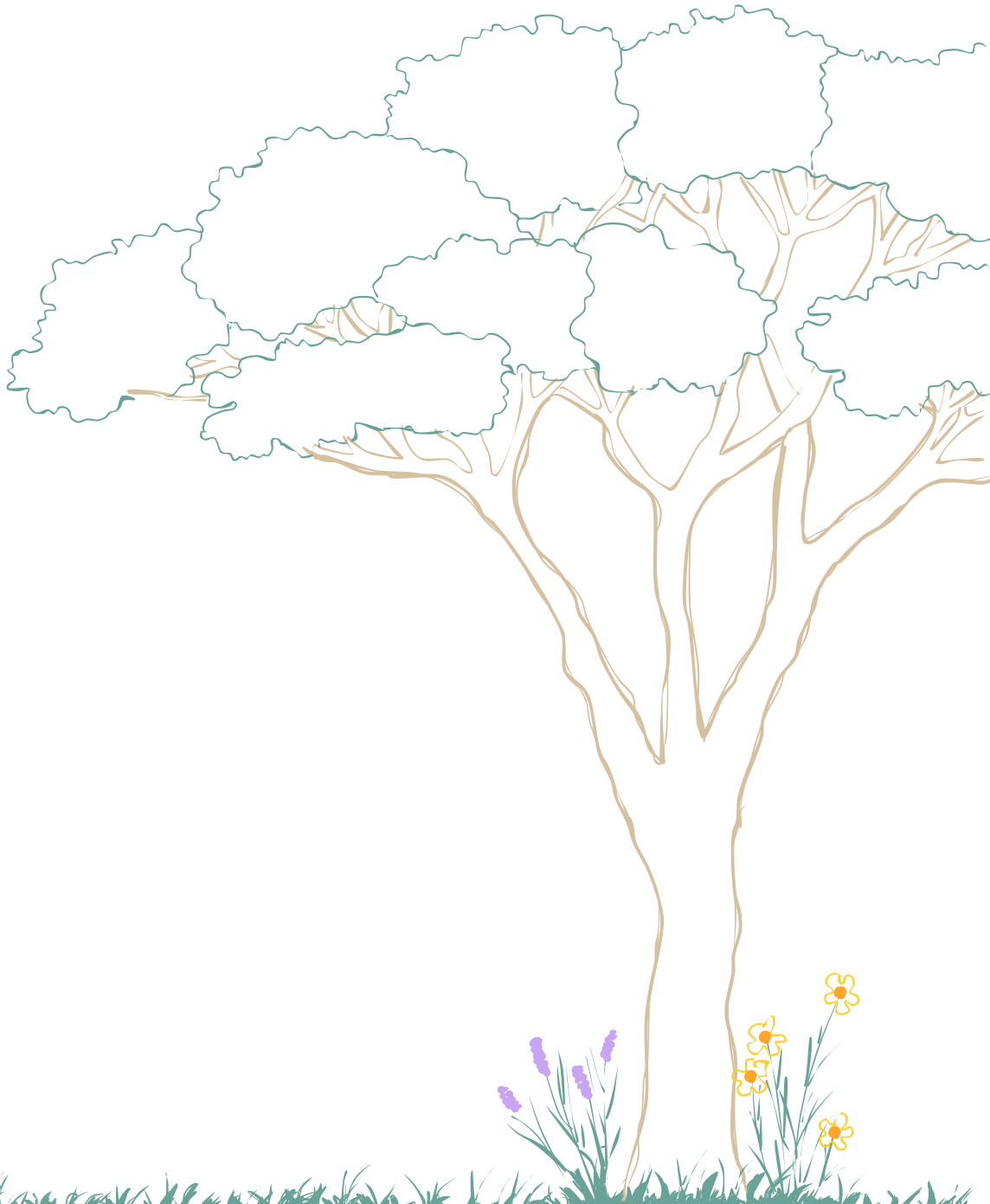

TU Delft

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Master thesis
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MSc Strategic Product Design

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Acknowledgement

Dear reader,

Before you lies the graduation report 'A systemic design perspective on enhancing vegetation in private gardens'. Over the course of 20 weeks, I conducted literature research on drivers and barriers regarding greening gardens, went out into the streets multiple times to test my results with residents and sparred with the municipality and Klimaatmaat. I learned a great deal from all of these things. I would like to thank everyone who helped and supported me during this time.

I am very grateful to my supervisors from TU Delft, Steven Flipse and Willemijn Brouwer. Your feedback and advice helped me throughout the entire project. You were always ready to think along with me, challenge me, and bring me to new insights.

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Lastly, I would also like to thank my friends and family for the joint study sessions, breaks, and motivating words over the past few weeks.

Thank you all!

Joukje Harkema

Abstract

Urban heat stress is an increasing challenge in Dutch cities such as Delft. This heat in urban areas is largely due to the extensive presence of paved surfaces. A substantial proportion of these paved surfaces is located within private gardens. Therefore, this thesis focuses on increasing vegetation in private gardens in Delft. Two paved neighbourhoods are central. Voordijkshoorn, a highly educated, high-earning neighbourhood and Afrikabuurt-West a average educated, average- to lower-earning neighbourhood.

The ecological and social benefits of urban vegetation are well recognised; however, a significant intention-action gap exists among garden owners regarding greening practices. This graduation project follows a research-for-design approach to bridge this gap by developing a strategy for the Municipality of Delft and Klimaatmaat. Through a systematic literature review, door-to-door surveys in two diverse neighbourhoods (Afrikabuurt-West and Voordijkshoorn), and expert interviews, the study identified key drivers such as biodiversity and joy, alongside major barriers including maintenance, costs, and a lack of gardening skills.

Comparing these drivers and barriers with existing municipal policies revealed gaps in practical support for garden maintenance and emotional motivation, like the joy of butterflies, birds, and bees in a green garden. These findings informed the design of the final strategy. The campaign 'More Life in Your Garden', integrates a brochure featuring five low-maintenance, biodiverse garden plans with a proposed green subsidy.

This strategy is tested based on the Theory of Planned Behaviour, which indicated that the intervention creates a strong positive attitude and high perceived behavioural control among residents of both neighbourhoods. However, the intention to act varied significantly per neighbourhood, remaining neutral in lower-income areas while being high in more affluent ones. These findings suggest that while the strategy successfully bridges the intention-action gap for some, future iterations must further address this gap for others who are not socially and economically advantaged, in order to green private gardens equitably and effectively, and thereby reduce heat stress in Delft.

Keywords: Biodiversity; COM-B model; Delft; drivers and barriers; green subsidy; greening private gardens; intention-action gap; strategic design; Theory of Planned Behaviour (TPB); Urban heat stress

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Heat stress is a common challenge in urban areas, largely due to the extensive presence of paved surfaces. This issue is also evident in Delft, where a substantial proportion of paved surfaces is located within private gardens. This thesis focuses on increasing the greening of private gardens by aiming to create behavioural change among garden owners. To achieve this, research was conducted into the drivers and barriers influencing garden owners' decisions, as well as the policy instruments currently used to encourage garden greening.

1 Introduction

1.1 Project context

The following subsections elaborate on the heat stress context, the selected neighbourhoods, and the relevant stakeholders. Lastly, the research questions of this study, will be presented.

1.1.1 Heat stress due to paved private gardens

Due to climate change, temperatures continue to rise. This effect is even bigger in cities, due to Urban Heat Islands (Kleerekoper et al., 2024; McCaffrey et al., 2025). In Figure 1, the urban heat island effect is shown for a city in the Netherlands, Delft.

In cities, many buildings and hard surfaces are being built, leading to the loss of vegetation in these areas. This leads to a higher absorption of solar radiation, as buildings and streets have a low reflectivity. The lack of vegetation reduces water evaporation. Together, this leads to increased heat in cities (McCaffrey et al., 2025; Tsilini et al., 2015). This is referred to as heat stress, which has been linked to negative effects on citizens' health. The increasing temperatures are even a leading cause of weather-related human mortality (Oleson, 2015).

Climate adaptation is needed to decrease this heat stress. One effective way to mitigate urban heat islands is to increase vegetation in cities. This urban green infrastructure can help regulate the local microclimate by reducing temperatures through evapotranspiration and shading. Furthermore, it contributes to managing stormwater and decreasing air pollution (Hanson et al., 2021). One essential part of urban green infrastructure is private gardens, which mostly cover a large part of cities (Hanson et al., 2021). Therefore, this thesis will focus on these private gardens.

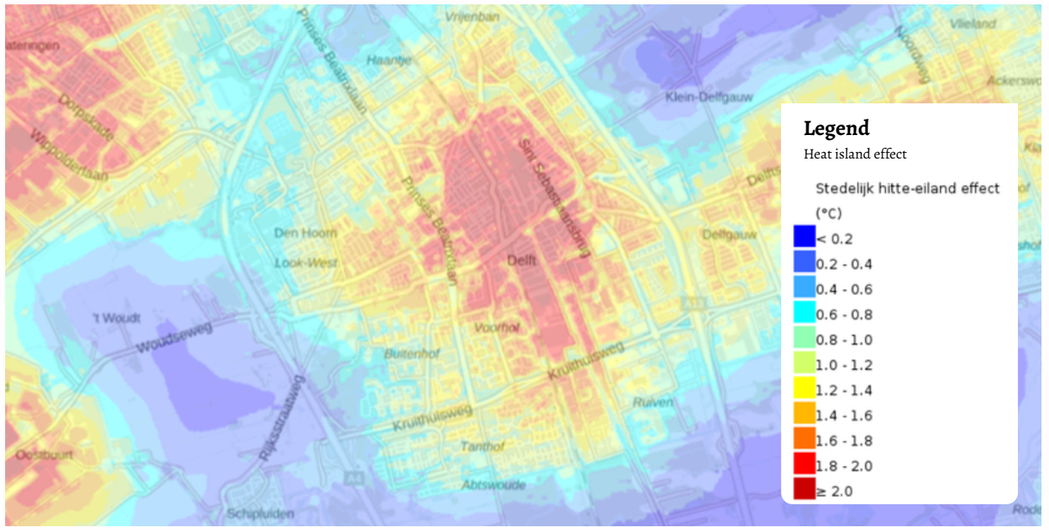


Figure 1: Heat island effect Delft (RIVM, 2020)

Private gardens contribution

Besides reducing heat stress, private gardens can also support biodiversity in cities. In addition to their sustainable benefits, increased vegetation in gardens contributes to improved mood and reduced stress levels (Cervinka et al., 2016; Hanson et al., 2021). The effect on both society and individuals depends on the size of the garden, its design, and management practices. Whareas garden size is largely determined by municipal planning, decisions regarding design and management rest primarily with the owners (Hanson et al., 2021).

In spite of the known benefits, many private gardens are mostly tiled. In 2023, one-third of the Dutch gardens were fully tiled (IVN Natuureducatie, 2023). Figure 2 shows the percentage paved in neighbourhoods in Delft. As can be seen there are some really paved neighbourhoods with more than 60% paved area.

1.1.2 Project scope: Two neighbourhoods in Delft

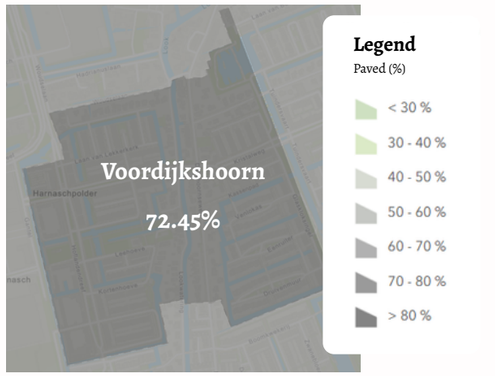
The focus of this thesis will be on two of those paved neighbourhoods in Delft. The choice for these specific neighbourhoods is based on various maps: the Steenbreek opportunities maps, urbanisation maps, the heat island map, and the heat perception map. The Steenbreek opportunities map is made by Steenbreek; it combines the hottest neighbourhoods with the amount of paving in neighbourhoods to come up with the opportunity neighbourhoods (Steenbreek, 2024).

Based on these maps, five neighbourhoods emerged as urbanised, hot, and with the greatest opportunities. To further refine the selection, the percentage of houses versus apartments was examined. Since the focus of my graduation project lies in gardens rather than balconies, neighbourhoods with more houses with gardens were chosen.

Figure 2: Paved neighbourhoods Delft (Cobra Groeninzicht, 2021)

Subsequently, neighbourhoods showing the greatest differences were identified.

From this analysis, the neighbourhoods of **Afrikabuurt-West** and **Voordijkshoorn** emerged. Those neighbourhoods are both quite paved, as shown in Figure 3. Additionally, they perceive their gardens as very hot. There are significant differences between the Afrikabuurt-West and Voordijkshoorn neighbourhoods in terms of house values, education levels, age, voting behaviour, and construction periods (AlleCijfers.nl, 2025a & AlleCijfers.nl, 2025b). Consequently, these two neighbourhoods may require a different approach, or a strategy that engages a broad audience.



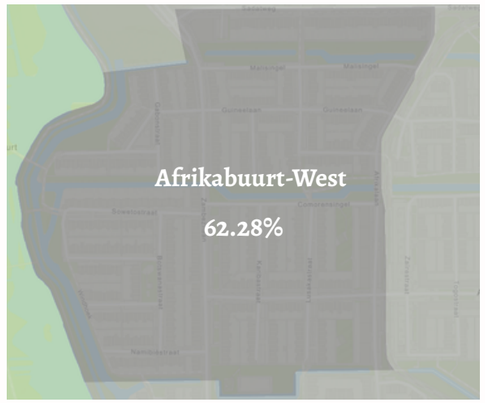


Figure 3: Chosen neighbourhoods Delft (Cobra Groeninzicht, 2021)

Neighbourhoods comparison

To design a certain strategy for these specific neighbourhoods, the characteristics of this region and its residents must be thoroughly mapped out. For all the details on the differences between these neighbourhoods, see Appendix A. One of the differences that have come up is that Voordijkshoorn has quite a high average house value of €603.000 (AlleCijfers.nl, 2025b). While Afrikabuurt-West house value is closer to Delft's average with €416.000 (AlleCijfers.nl, 2025a). Furthermore, 24% of the residents of Afrikabuurt-West are aged 65 or older. In Voordijkshoorn, this percentage is just 3%.

There is also a difference in the age groups in the neighbourhoods. Most residents of Voordijkshoorn are in the 25-45 age group, making it a quite young neighbourhood (Allecijfers.nl, 2025b). The largest group of residents in the Afrikabuurt-West is aged 46-65 (Allecijfers.nl, 2025a). Another interesting difference lies in the education levels. Most of Afrikabuurt's residents are moderately educated, and in Voordijkshoorn, most of the residents have a high level of education, see Figure 4.

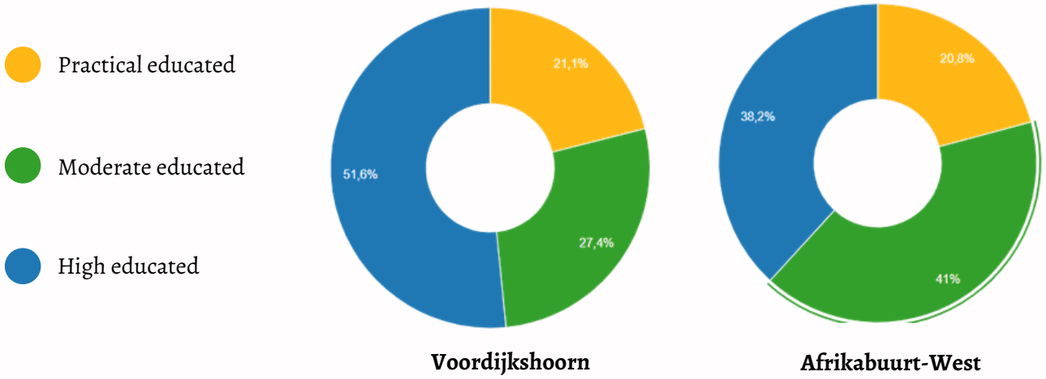


Figure 4: Education levels neighbourhoods (AlleCijfers.nl, 2025)

Income recipient residents of the Voordijkshoorn neighbourhood have an average gross annual income of €53.900. While in the Afrikabuurt-West neighbourhood, this amount is €42,600. Furthermore, these neighbourhoods differ in voting behaviour, which may be relevant for designing a strategy for greening the gardens in these neighbourhoods.

The D66 and GroenLinks-PvdA parties finished high in the 2025 elections in both neighbourhoods; see Figures 8 & 9. These parties both support greening the Netherlands: D66 promotes green cities (GroenLinks-PvdA, 2025), and GL-PvdA has climate as its key focus, aiming for a 65% reduction in CO2 by 2030 (Kooijman, 2025). As the neighbourhoods voted for these parties, this could increase the potential motivation of the residents of both neighbourhoods to green their private gardens. However, the PVV is voted most in the Afrikabuurt-West and also quite a lot in Voordijkshoorn. This party has an anti-climate policy, which could make it more difficult to motivate these residents to go green (Kooijman, 2025).

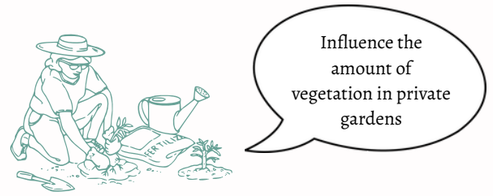
1.1.3 Stakeholders

To design an appropriate strategy for greening private gardens in Delft, all stakeholders must be taken into account. I define the stakeholders with the most influence on this problem. These stakeholders are the environment, garden owners, the Klimaatmaat and the municipality of Delft.

The environmental interest involves maintaining and restoring ecological balance while reducing heat and climate stress. The garden owners have the greatest direct influence on the amount of vegetation in private gardens. The municipality of Delft has a performance obligation under the European Nature Restoration Law, which requires that, by 2030, there is no net loss of urban green space compared to 2024.

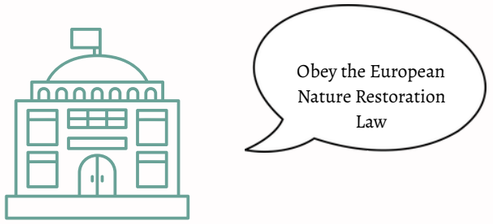
The municipality of Delft has called in the organisation Klimaatmaat to address the greening of private gardens. As such, Klimaatmaat is responsible for implementing the aspects of the municipality's greening policy that aim to motivate residents to green their gardens. This organisation provides expertise, practical support, and advice to garden owners in Delft on making their private gardens climate-proof.

Environment



Garden owners
of the neighbourhoods Afrikabuurt-West and Voordijkshoorn in Delft

Klimaatmaat
Sustainability organisation in Delft focusing on motivating residents to green.



Municipality of Delft
Climate department

Stakeholders map

The main stakeholders operate in a bigger system that has influence on them. For examples due top-down regulations and other external factors. Figure 5 shows an overview of all the stakeholders in the system of greening private gardens.

The municipalities of the Netherlands have been instructed to green their cities by the government and the government is instructed by the European Commission. The municipality of Delft has outsourced the greening of private gardens to the sustainability centre, de Papaver. The Papaver has made the Klimaatmaat executor of this project. This top-down policy chain is visualised in Figure 5.

The Klimaatmaat interacts with residents of Delft to motivate them to go green. These residents have their own drivers and barriers regarding greening, which the Klimaatmaat tries to influence with, for example, providing free plants, general advice and a tile taxi during the NK tile removal.

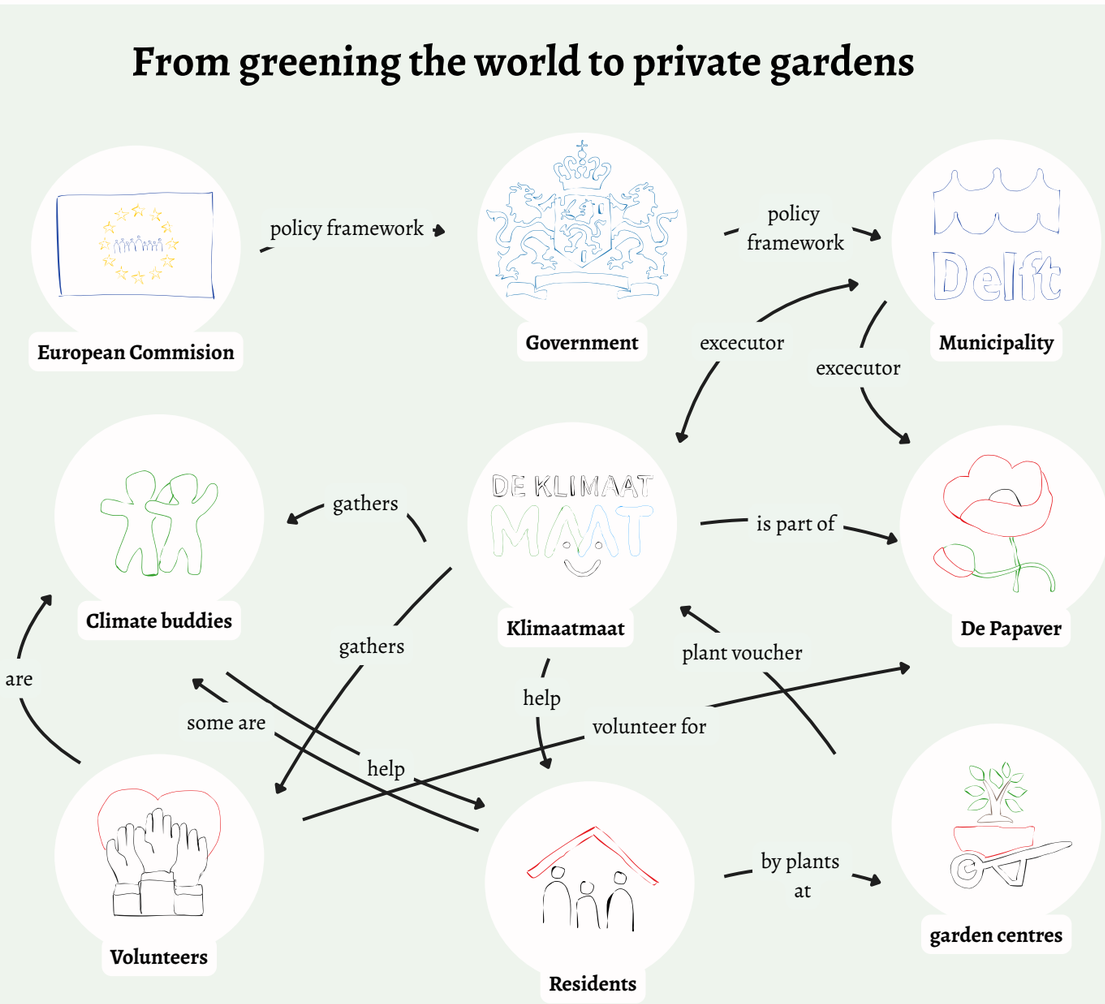


Figure 5: Stakeholdermap

1.2 Project focus

This project is a graduation project for my master strategic product design at the faculty of Industrial Design Engineering at the TU Delft. The goal of this project is: Designing a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens. To guide the design of this strategy, the double diamond approach is applied. Beginning with researching the context of greening private gardens. As can be seen in the stakeholder map, residents' behaviour is influenced by a variety of factors. This thesis focuses on the drivers and barriers experienced by garden owners, as these provide important insights into their attitudes and behaviour regarding garden greening.

Additionally, both the municipality of Delft and Klimaatmaat play a role in motivating residents to green. Therefore, the following research questions have been set up. The four research questions progress from understanding the problem (RQ1, RQ2) to analysing the fit between problem and existing solutions (RQ3), and finally to designing a response: a strategy (RQ4).

1.2.1 Drivers and Barriers

The ecological and social benefits of vegetation in private gardens in cities are well represented in academic literature (Diduck et al., 2020; Freeman et al., 2012; Krols et al., 2022; Moxon et al., 2023; Niess et al.,2026). However, there is limited understanding of the motivations, perceptions, and barriers that influence garden owners' choices regarding garden design and management and how to move from intention to action. Addressing this gap is needed to develop an effective strategy to enhance vegetation in
private gardens. Therefore, question 1 is:

RQ1: Which drivers and barriers influence private garden owners' behaviour regarding garden greening?

1.2.2 Municipal context

Private gardens constitute a substantial proportion of the paved area in Delft and in other cities. Due to the European Nature Restoration Law, the green areas of these cities may not decrease. Therefore, it is important for those municipalities to motivate their citizens to green their gardens. To understand which policies and strategies municipalities currently apply, the following research question was formulated:

RQ2: What municipal policy instruments and strategies are currently employed in major Dutch municipalities to encourage garden greening?

1.2.3 Municipal policy instrument compared to drivers and barriers

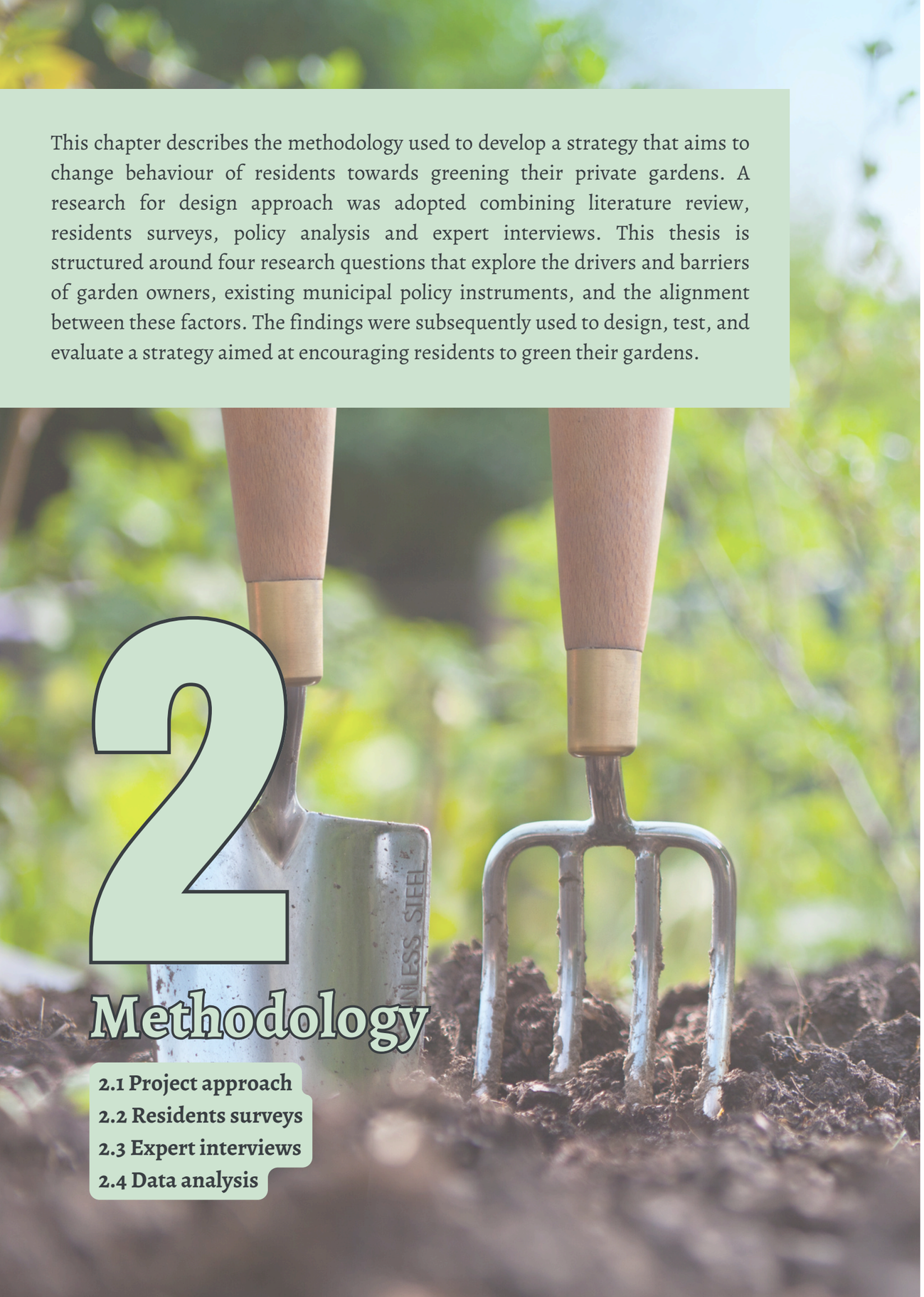
To gain an understanding of the extent to which identified drivers and barriers on greening private gardens are reflected in current municipal policy instruments and strategies,
the following research question was formulated:

RQ3: How do existing municipal policy instruments and strategies align with the identified drivers and barriers of garden owners?

1.2.4 Designing a strategy

How the identified drivers and barriers of garden owners and the investigated policy instruments can be integrated into a strategy that aims to increase vegetation in private gardens in Delft will be researched through the question:

RQ4: How can drivers and barriers of garden owners and policy instruments be integrated into a strategy that aims to increase vegetation in private gardens in Delft?



This chapter describes the methodology used to develop a strategy that aims to change behaviour of residents towards greening their private gardens. A research for design approach was adopted combining literature review, residents surveys, policy analysis and expert interviews. This thesis is structured around four research questions that explore the drivers and barriers of garden owners, existing municipal policy instruments, and the alignment between these factors. The findings were subsequently used to design, test, and evaluate a strategy aimed at encouraging residents to green their gardens.

2 Methodology

2.1 Project approach

This thesis adopted a research-for-design approach, in which research enables the design of a strategy that aims to change residents' behaviour towards greening private gardens. This approach is combined with elements of research through design, in which knowledge is created through designing, prototyping, testing, and reflection (Stappers & Giaccardi, 2017). See Figure 6 for an visual overview of the whole project approach. This study is structured around four research questions.

2.1.1 Research question 1

Q1: Which drivers and barriers influence private garden owners' behaviour regarding garden greening?

To answer this question, the behavioural context surrounding greening private gardens was investigated. To identify drivers and barriers for greening private gardens, a systematic literature review on the drivers and barriers of garden owners and a door-to-door survey in opportunity neighbourhoods in Delft were conducted. The findings from the literature review and the survey were combined in a visual representation.

2.1.2 Research question 2

Q2: What municipal policy instruments and strategies are currently employed in major Dutch municipalities to encourage garden greening?

This question was addressed through reviewing municipal instruments and strategies of major Dutch cities related to greening private gardens. Additionally, a semi-structured interview was conducted with the climate adaptation advisor and urban ecologist of the municipality of Delft and the project manager of Klimaatmaat. The strategies of the major Dutch municipalities are compared in a table using a deductive qualitative content analysis combined with a cross-case comparison. (Hsieh & Shannon, 2005; Yin, 2018). The 5 municipalities are compared to each other with 5 predefined categories.

2.1.3 Research question 3

Q3: How do existing municipal policy instruments and strategies align with the identified drivers and barriers of garden owners?

To answer this question, the findings of the first two research questions were compared. It reflects how the identified barriers and drivers come back in the existing municipal instruments and strategies for greening private gardens.

2.1.4 Research question 4

Q4: How can drivers and barriers of garden owners and policy instruments be integrated into a strategy that aims to increase vegetation in private gardens in Delft?

To answer the last research question, the focus lies on the development and evaluation of the final strategy. First, a list of requirements and wishes for the strategy is compiled based on insights from the answers to the first 3 research questions. With this list and previous research in mind, the ideation phase started.

To answer this question, the findings of the first two research questions were compared. It reflects how the identified barriers and drivers come back in the existing municipal instruments and strategies for greening private gardens.

2.1.4 Research question 4

Q4: How can drivers and barriers of garden owners and policy instruments be integrated into a strategy that aims to increase vegetation in private gardens in Delft?

To answer the last research question, the focus lies on the development and evaluation of the final strategy. First, a list of requirements and wishes for the strategy is compiled based on insights from the answers to the first 3 research questions. With this list and previous research in mind, the ideation phase started.

Taylor's structured free association method is used for the initial concept generation. This method is an individual variant of brainstorming in which a word, number, object, or condition is noted. In this case, it was: greening private gardens. Then every thought that comes to mind is written down. Afterwards, the associations that seem to solve the design problem are made concrete ideas (Roozenburg & Eekels, 2015). In this study, 5 concrete idea directions emerged from this individual's brainstorming method.

To select one idea direction, the idea directions have been evaluated by both residents and experts. A door-to-door survey in the opportunity neighbourhoods has been conducted. The survey consisted of questions based on the behavioural change model of COM-B. This model comprises three components: opportunity, motivation, and capability. Additional questions were about which of the identified motivational factors from research question 1 came back in the idea directions according to the residents. The idea directions have been presented through a drawing and a short textual description of 3-5 sentences. Additionally, the municipality and Klimaatmaat have reviewed the supposed feasibility and supposed effect of the idea directions during a semi-structured interview.

With the knowledge from these tests, one strategy has been chosen. For this strategy, some research into the elements of the strategy has been conducted to make a prototype of this strategy. This prototype is used to test the strategy with a door-to-door survey with a question list of the theory of planned behaviour and an expert evaluation.

Based on the combined results, the last research question can be answered.

2.2 Residents surveys

The main stakeholders in this study, the residents of the opportunity neighbourhoods, have been involved throughout the research. In total, three door-to-door surveys were conducted in the neighbourhoods: Voordijkshoorn and Afrikabuurt-West.

The participants were recruited through convenience sampling, a non-probability sampling technique described by Golzar et al. (2022). Participants are selected based on accessibility and ease of access. The people who answered their door and were willing to participate were selected. Although convenience sampling introduces a degree of selection bias, it was considered appropriate given the exploratory nature of this study and the practical constraints of conducting door-to-door fieldwork within the project timeframe.

2.2.1 Drivers and Barriers survey

The first survey identified the drivers and barriers influencing residents' decisions regarding garden greening. A total of 22 residents participated, including 11 from Voordijkshoorn and 11 from Afrikabuurt-West.

The survey consisted of open-ended questions that explored residents' drivers to green and barriers to green. Additionally, there was one question about the preferred source of communication about greening private gardens with 5 options: Social media, Flyer/brochure, website, neighbourhood app and other.

2.2.2 Survey for selecting idea direction

The second survey conducted was to evaluate five idea directions. In total, 10 participants filled in the survey. 5 from Voordijkshoornand 5 from Afrikabuurt-West.

The questionnaire is based on the COM-B model. According to this model, behaviour is influenced by capability, opportunity and motivation. The ideas were presented with a small drawing and a short textual explanation. For each idea direction, the participants evaluated these three factors using a five-point Likert scale, with one being 'strongly disagree' and five being 'strongly agree'.

Additionally, a list of motivational factors was presented to the participants. They were asked to choose per idea direction which factors influenced them to green their gardens.

2.2.3 Survey for testing strategy

To evaluate the final strategy, the third survey was set up. The strategy was tested with a prototype of the brochure with garden plans and information about the green subsidy. This prototype was brought physically to the door-to-door surveys. In total, 20 residents participated, 10 from Voordjikshoorn and 10 from Afrikabuurt-West.

The questionnaire is based on the theory of planned behaviour. According to TPB, behavioural intention is shaped by three

factors: attitude, subjective norms, and perceived behavioural control (Ajzen, 1991).
The participants evaluated the strategy using a series of statements about these four measures scored on a seven-point scale. Additionally, the participants were asked to rank five types of garden plans from most preferred to least preferred. Lastly, the residents were allowed to give additional comments for tips or concerns.

2.3 Expert Interviews

Next to the surveys, expert interviews were conducted with the municipality, Klimaatmaat, and an ecological garden designer. Expert interviews were conducted on three separate occasions during the research process.

2.3.1 Municipal instruments and strategies

At the beginning of the research, a semi-structured interview was conducted with the climate adaptation advisor of the municipality of Delft and the project manager of the municipality of The Hague. During these interviews, participants were asked about the current policies and strategies for greening private gardens in Delft.

2.3.2 Selecting idea directions

After the ideation phase, 5 idea directions were evaluated during a semi-structured interview with the municipality of Delft and Klimaatmaat. They evaluated each idea direction during the interview and scored them on supposed feasibility and supposed effect on a three-point scale. This scale ranged from 1 (slight), 2 (moderate) and 3 (strong).

2.3.3 Evaluation of strategy

For the evaluation of the strategy, several experts have been interviewed. The prototype of the brochure was brought to these interviews. At the main semi-structured interview, 3 experts were present. The urban ecologist and the climate adaptation advisor of the municipality of Delft scored the strategy, brochure and subsidy on a scale from 1 to 10 on its feasibility. Further, they gave additional feedback. Lastly, an ecological garden designer was asked to evaluate the prototype of the brochure.

2.4 Data analysis

Data from the first survey about the drivers and barriers were analysed using thematic analysis. They were reviewed and grouped into recurring themes related to drivers and barriers surrounding greening gardens with Atlas.ti. These themes were used in combination with the findings of the systematic literature review to answer research question one. Additionally, the answers per neighbourhood have been presented in a table.

The second survey was analysed by calculating the mean response per question. So the mean for opportunity, motivation and capability per idea direction was taken into account to select an idea in combination with the scored motivational factors. These were analysed by summing up the number of motivational factors chosen per idea direction. Additionally, the recurrence of specific motivational factors across idea directions was examined. Additionally, the expert scores for feasibility and expected effectiveness were compared across the different idea directions.

The third survey, which tests the elements of the strategy, is analysed by calculating the mean score per factor of the theory of planned behaviour: attitude, perceived norm, perceived behavioural control, and intention. Additionally, the mean of those 4 together is calculated. The scores for the brochure and the subsidy have been separated and combined. Further, the differences per neighbourhood are highlighted.

The additional comments from this survey on the strategy have been analysed using thematic analysis in Atlas.ti. The same analysis method was used to analyse the last interviews to evaluate the strategy with the municipality, Klimaatmaat and the ecological garden designers.

Additionally, the municipality's and Klimaatmaat's scores for the strategies, subsidies, and brochures' feasibility are used to evaluate the overall strategy.

Project approach visualised

The Double Diamond approach guided the design of a strategy aimed at encouraging residents to green their gardens. The project progressed through all four phases of the framework: Discover, Define, Develop, and Deliver.

3.1 Drivers and barriers | 3.2 Municipal instruments and strategies

3.3 Drivers and barriers compared to municipal instruments

3.4 Design goal

4.1 Mapping idea directions

4.2 Selecting idea direction

5.1 Strategy: campaign More Life in Your Garden | 5.2 Green subsidy | 5.3 Brochure

6.1 testing the strategy | 6.2 Evaluation experts

7.1 Discussion | 7.2 Conclusion

8. Recommendations

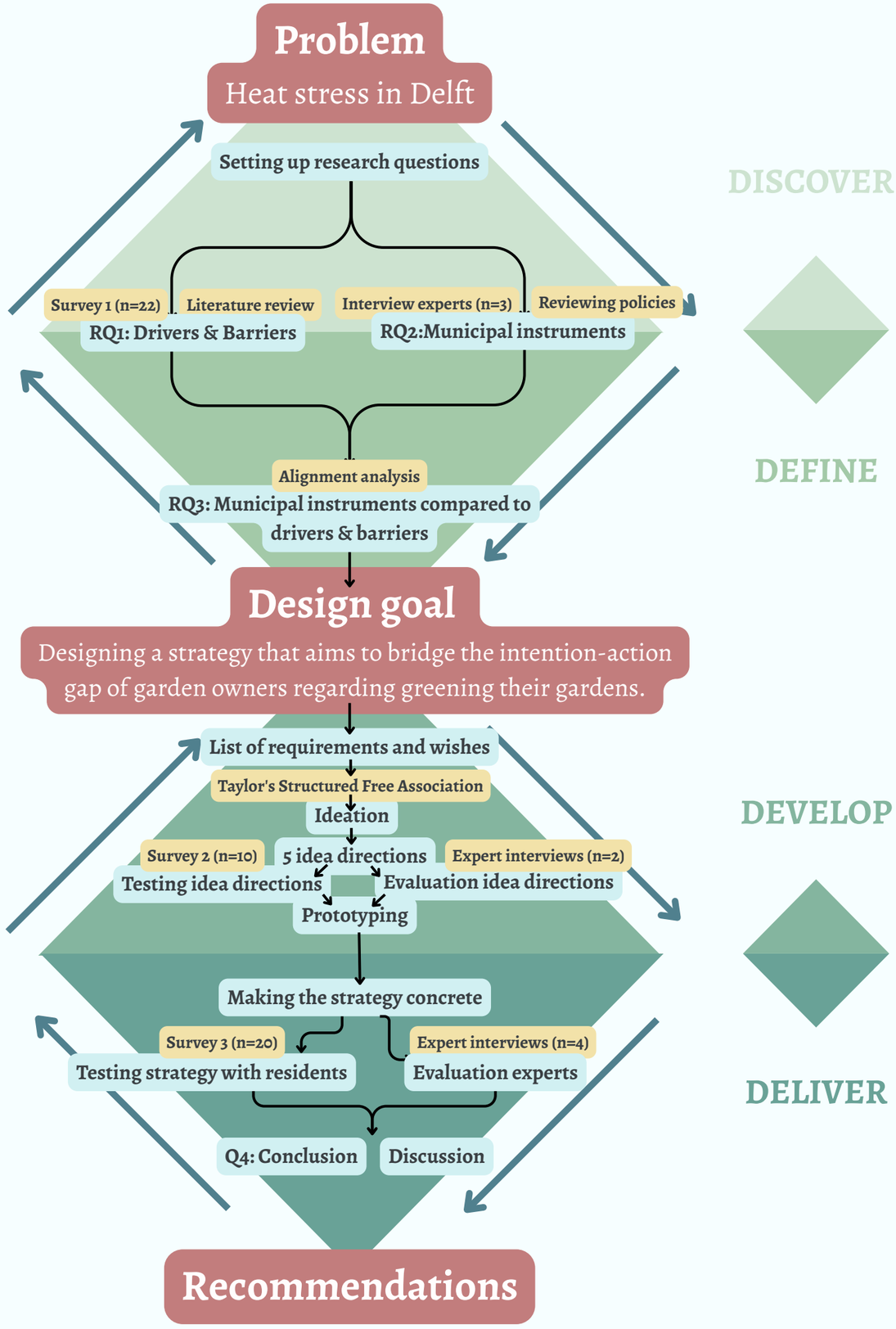
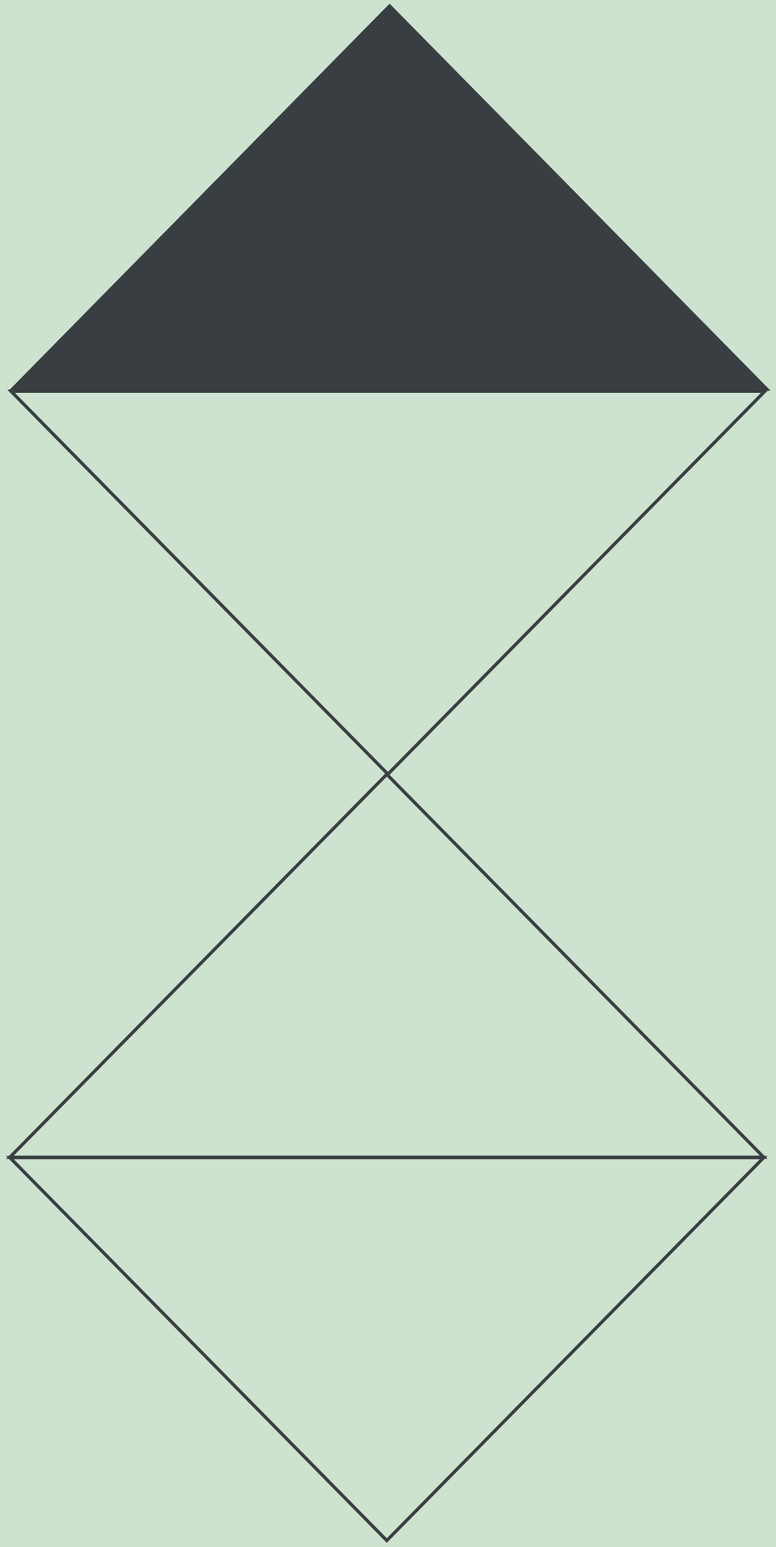
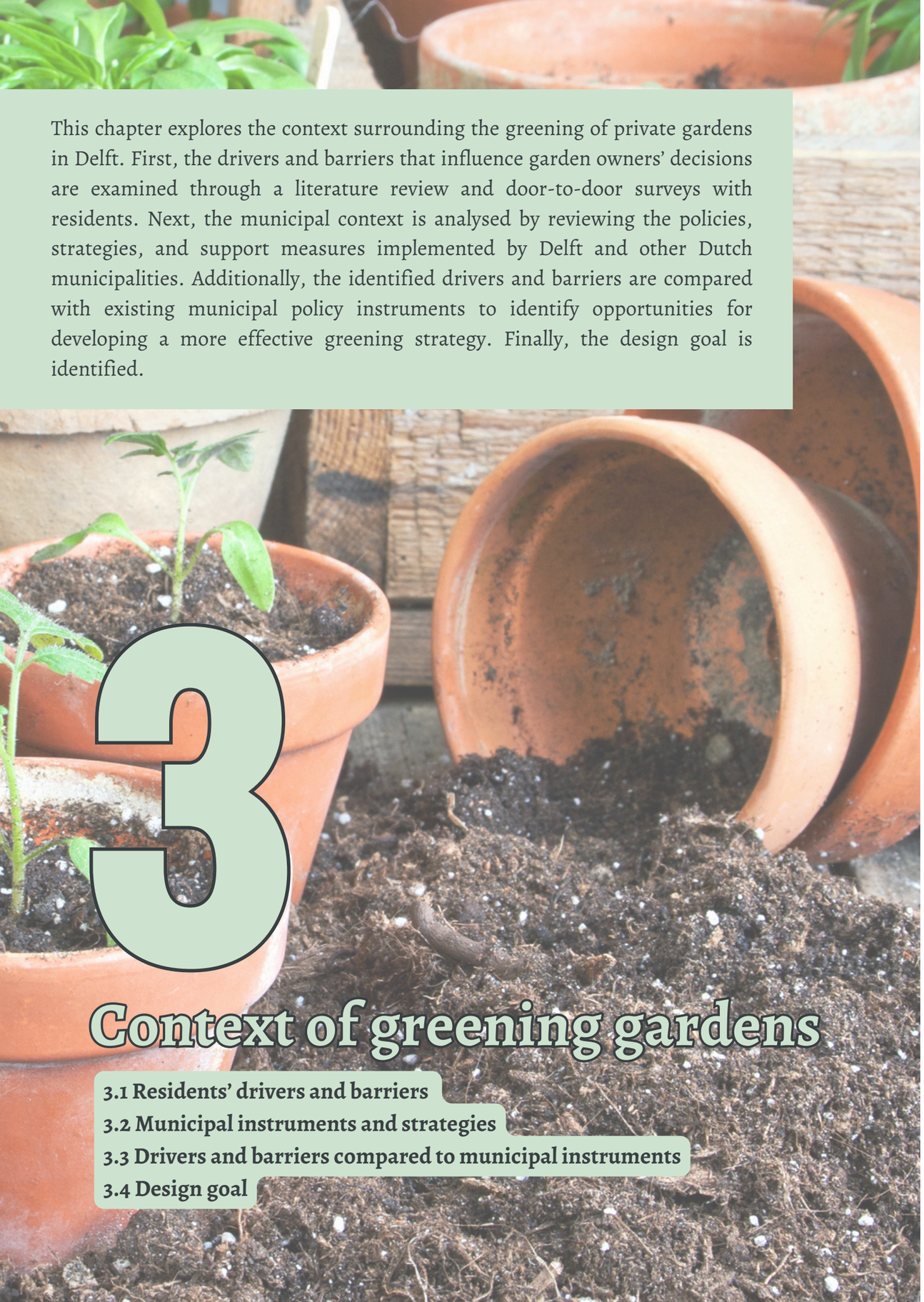


Figure 6: Project approach visualised

DISCOVER

During the discover phase the first two research questions are tackled. These are aimed to discover the context surrounding greening private gardens. The drivers and barriers that influence garden owner's decisions and municipal instruments and strategies are researched.





This chapter explores the context surrounding the greening of private gardens in Delft. First, the drivers and barriers that influence garden owners' decisions are examined through a literature review and door-to-door surveys with residents. Next, the municipal context is analysed by reviewing the policies, strategies, and support measures implemented by Delft and other Dutch municipalities. Additionally, the identified drivers and barriers are compared with existing municipal policy instruments to identify opportunities for developing a more effective greening strategy. Finally, the design goal is identified.

3

Context of greening gardens

3.1 Residents' drivers & barriers

3.1.1 A systemic literature review: *Drivers and barriers influencing private garden owners' behaviour regarding garden greening*

A literature review has been conducted to create an overview of the drivers and barriers influencing private garden owners' behaviour regarding garden greening that are presented in literature. In combination with door-to-door surveys in the opportunity neighbourhoods in Delft this research aims to answer research question 1.

Research question one:
Which drivers and barriers influence private garden owners' behaviour regarding garden greening?

Method

Search query
To answer RQ1. The following search query is formulated and entered into Google Scholar and Scopus:

TITLE-ABS-KEY("private garden" OR "residential garden" OR "urban garden" OR "home garden" OR "garden owner" OR "citizen")
AND TITLE-ABS-KEY("motivation" OR "driver" OR "barrier" OR "perception" OR "attitude" OR "behaviour" OR "behavior")
AND TITLE-ABS-KEY("greening" OR "green" OR "vegetation" OR "biodiversity")

Selection of literature
See Figure 7, for the full selection process. The following selection criteria were formulated:

- The paper must be written in Dutch or English;
- The paper must fall into one of the following subject areas:
  - Environmental science;
  - Agricultural and Biological Sciences;
  - Social sciences;
  - Health professions;
  - Psychology;
  - Decision sciences;
  - Arts and humanities;
  - Economics, Econometrics, and Finance.
- The paper must involve private gardens.

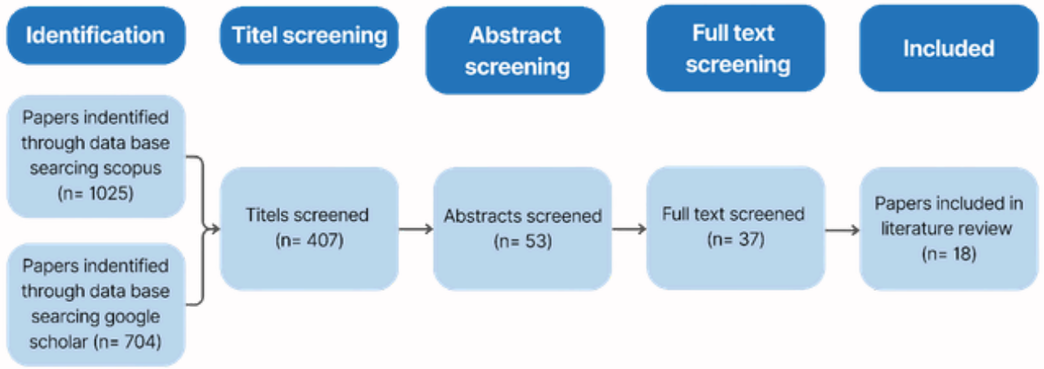


Figure 7: Selection of papers

Results

The literature indicated several drivers and barriers influencing the greening of private gardens in cities. In this section, the results will be shown and analysed.

Theoretical frameworks

To explore the intentions of garden owners regarding gardening choices, behaviour models such as the Theory of Planned Behaviour (TPB), COM-B, and the behaviour model are used in the literature.

According to the Theory of Planned Behaviour (TPB), behavioral intention is the most immediate predictor of actual behavior (Martens et al., 2025). This intention is shaped by attitude (positive or negative evaluation), subjective norms (perceived social pressure), and perceived behavioural control (the perceived ease or difficulty of performing the action) (Ajzen, 1991). TPB is primarily used to explain the rational pathway to behaviour change (Martens et al., 2025). The COM-B model suggests any given behaviour is driven by opportunity, motivation, and capability (Moxon et al., 2023; Niess et al., 2026). Lastly, a behavioural change model is proposed by Stobbelaar et al. (2021), see Figure 8.

This model follows a sequence of awareness, motivation to create action.

Drivers for greening private gardens

Psychological and cognitive drivers

Private gardens are often experienced as a place that provides joy and relaxation. Krols et al. (2022) and Freeman et al. (2012) highlight that gardeners are often driven by the direct pleasure from observing nature. They suggest green private gardens are an antidote to work-related stress. Furthermore, Martens et al. (2025) extended version of the Theory of Planned Behaviour indicated that moral obligation has a significant positive influence on attitude towards greening, increasing intentions (see Figure 9).

Additionally, some people see gardening as a part of their identity and personal expression. According to Krols et al. (2022) and Samus et al. (2022), individuals with higher nature connectedness are more likely to manage more complex gardens. In addition, Bosone et al. (2026) introduced the concept of Environmental cognitive alternatives, which "demonstrated that individuals' intentions to engage in climate change mitigation actions are strongly influenced by their ability to imagine eco-

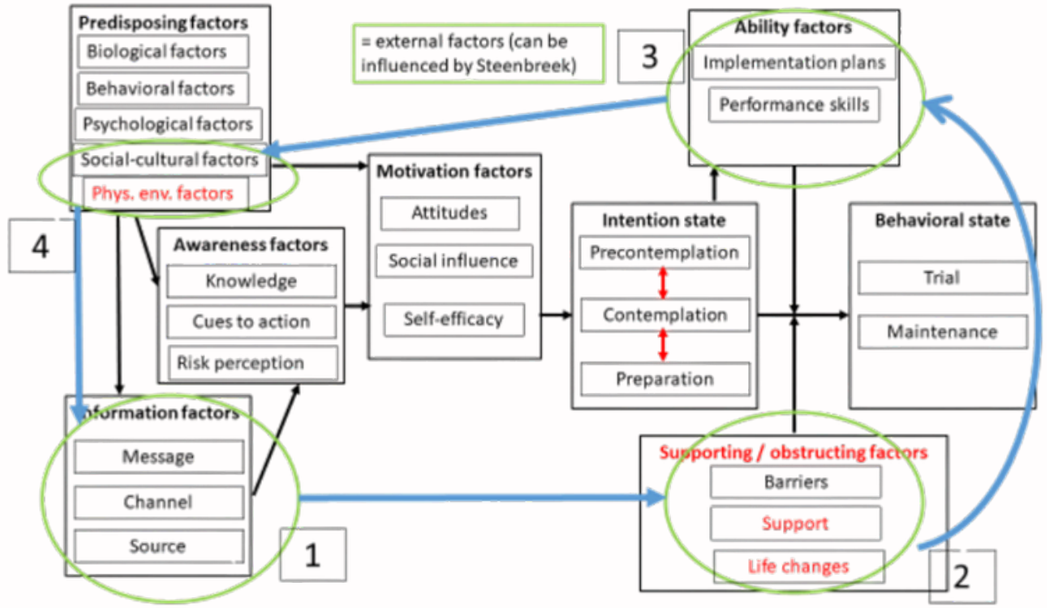


Figure 8: Coherence between elements of the garden greening behaviour mode (Stobbelaar et al., 2021)

sustainable future societies".

From a COM-B perspective, "perceived behavioral control was identified as the strongest predictor of intention" (Samus et al., 2023) for green gardening practices. Including perceived access to knowledge, time, and skills.

Social and cultural drivers

According to Moxon et al. (2023) and Niess et al. (2026), social opportunity, like cultural norms and neighbours' concerns, plays a role in their intentions and behaviour around greening their gardens. Stobbelaar et al. (2021) also mentioned 'neighbourhood mimicry', suggesting that seeing green in nearby gardens inspires others to adopt similar practices.

Furthermore, gardening often serves as a tool for community building and family bonding. Freeman et al. (2012) and Diduck et al. (2020) note that this is a positive factor regarding greening private gardens.

Educational level

According to Stobbelaar et al. (2021), there are profound differences in the motivations for greening private gardens among people with higher, middle, and lower levels of education. "Lower educated residents are relatively more motivated by approval, pleasure, personal benefit, financial compensation, by seeing examples of good behaviour and by help (facilitating)" (Stobbelaar et al.,2021). Higher-educated residents see themselves as more competent. They wish to contribute directly, mentally or physically. The most educated residents are more motivated to do something good for the environment.

Practical and contextual drivers

"Facilitating conditions, such as financial and practical support, also positively influence intention to soil de-seal" (Martens et al., 2025). Soil de-seal refers to removing

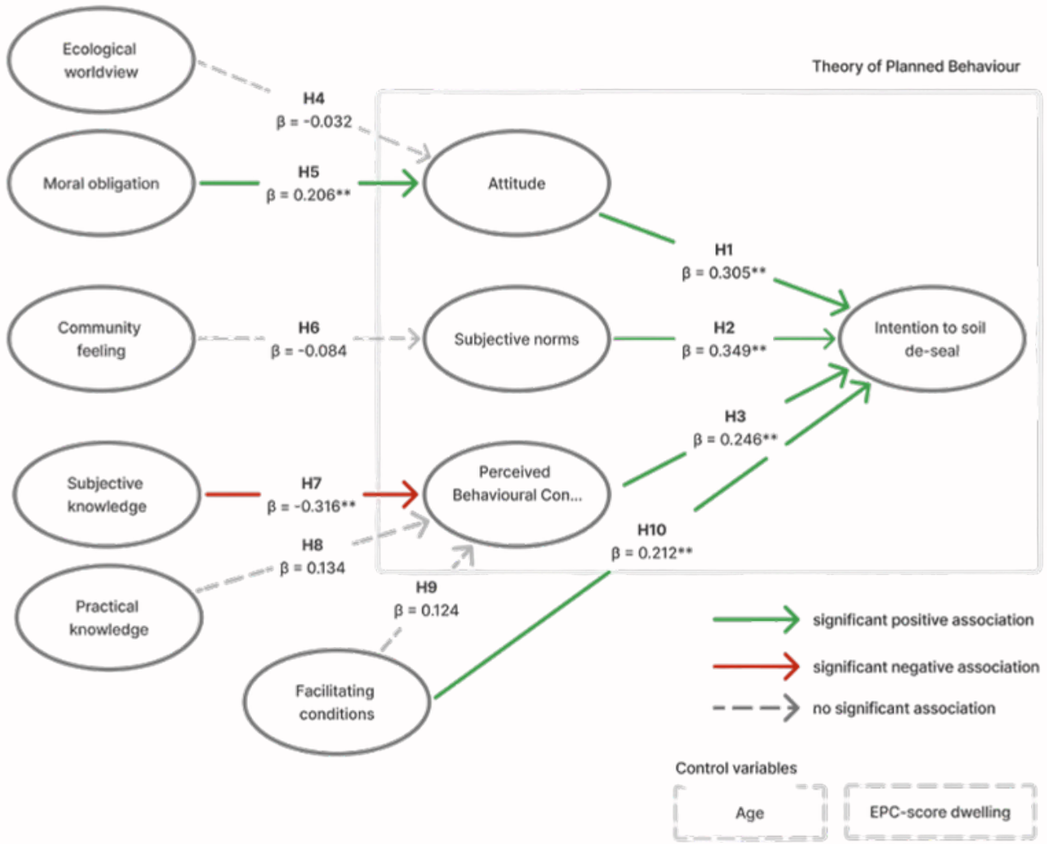


Figure 9: Extended Theory of Behaviour (Martens et al., 2025)

the asphalt or concrete to implement natural subsoil to increase the vegetation. The support could include financial subsidies, free plants, expert advice, and tile-removal schemes. Those external support mechanisms increase the chances of bridging the gap from intention to action (Martens et al., 2025; Jacqmarcq et al., 2024).

Another strong motivator includes growing food. People who grow vegetables in their gardens usually spend more time in their gardens and develop a stronger emotional connection with nature (Collard et al., 2026). Furthermore, life-changing events like moving to a new home or the birth of a child create opportunities for adopting greener gardening routines as old habits can be more easily broken (Stobbelaar et al., 2021).

Barriers for greening private gardens

Despite all these drivers, many private gardens are still mostly paved. This section will highlight the barriers to greening private gardens.

Psychological and cognitive barriers

Martens et al. (2025) suggests that subjective knowledge has a negative influence on perceived behavioural control. The more people thought they knew about greening their gardens, the less they felt in control of the situation. This could be as increased knowledge makes individuals more aware of the complexities, high costs, and practical barriers associated with increasing the vegetation in private gardens.

Social and cultural barriers

Regreening behaviours are often deeply situated within the social context of the neighbourhood and the household (Moxon et al., 2025). In many communities, there is a strong norm of neatness. Residents who try to green their gardens often feel judged by neighbours or fear that their gardens appear neglected rather than intentionally green (Stobbelaar et al., 2021). This social pressure acts as a major barrier for high-impact biodiversity actions (Van Heezik et al.,2026; Nassauer et al., 2009).

Furthermore, within a household, the garden often serves multiple functions, such as a place for the children to play and the parents to chill. If family members do not agree on the garden design, greening efforts are likely to stall (Van Heezik et al., 2026; Moxon et al., 2025; Tahvonen & Airaksinen, 2018) . Additionally, many citizens do not feel an immediate need to green their properties as they have not yet personally experienced high-impact climate change events, like flooding. The motivation to contribute to an environment stays low without a perceived local threat (Grashof, 2019; Stobbelaar et al, 2021).

Practical and contextual barriers

Final barriers for greening often include physical and economic constraints. According to Stobbelaar et al. (2021) and Martens et al. (2025), the investment into plants and new materials in combination with the ongoing maintenance remains the top barrier.

An external barrier arose due to the modern urban infill of building larger homes on smaller pieces of land. This has reduced available garden space a lot (Tahvonen & Airaksinen, 2018; Hanson et al., 2021). These small gardens often do not have a place for large trees or diverse habitats, leading to basic functional paving instead of vegetation (Hanson et al, 2021). Furthermore, in socio-economically deprived areas, garden owners often face more urgent problems like job insecurity or financial hardship. This drives environmental actions to the background (Stobbelaar et al., 2021; Moxon et al., 2025).

Other barriers surrounding greening initiatives arise at the municipal and policy levels. Due to a lack of financial resources, employers' programs like 'Steenbreek' (Grashof, 2019) often experience difficulties. Many municipalities find it difficult to move from raising awareness to providing direct practical support, such as tile collection or expert advice that garden owners require (Stobbelaar et al., 2021). Furthermore, there is a lack of a clear policy for existing private lands, which often results in a focus on planning for only new developments (Moxon et al., 2025 & Zarei & Shahab, 2025). Lastly, real estate and landlords often prioritise a tiled garden over the preservation of private green gardens, as it is easier to maintain (Zarei & Shahab, 2025; Tahvonen & Airaksinen, 2018).

Conclusion

The literature demonstrates that garden greening is influenced by a complex interaction of drivers and barriers across psychological, social, practical, and institutional levels. See Figure 10 for an visual overview. Behavioral frameworks such as the Theory of Planned Behaviour, COM-B, and the behaviour model are used

in literature to understand those interactions and intentions (Martens et al., 2025; Moxon et al., 2023; Niess et al., 2026; Stobbelaar et al., 2021). However, most literature focuses on the intention and does not reach the action stage, where garden owners start greening their gardens. This creates a gap in the literature between the intention and the action of greening gardens. Still, some literature discusses how to overcome barriers and move to the action stage. Breaking through these barriers requires more than only providing information. Successful interventions should combine financial motivations and practical support with strategies to make a change towards new social norms (Martens et al., 2025; Jacqmaarcq et al., 2024; Stobbelaar et al., 2021; Van Heezik et al., 2026).

Visual interpretation of literature

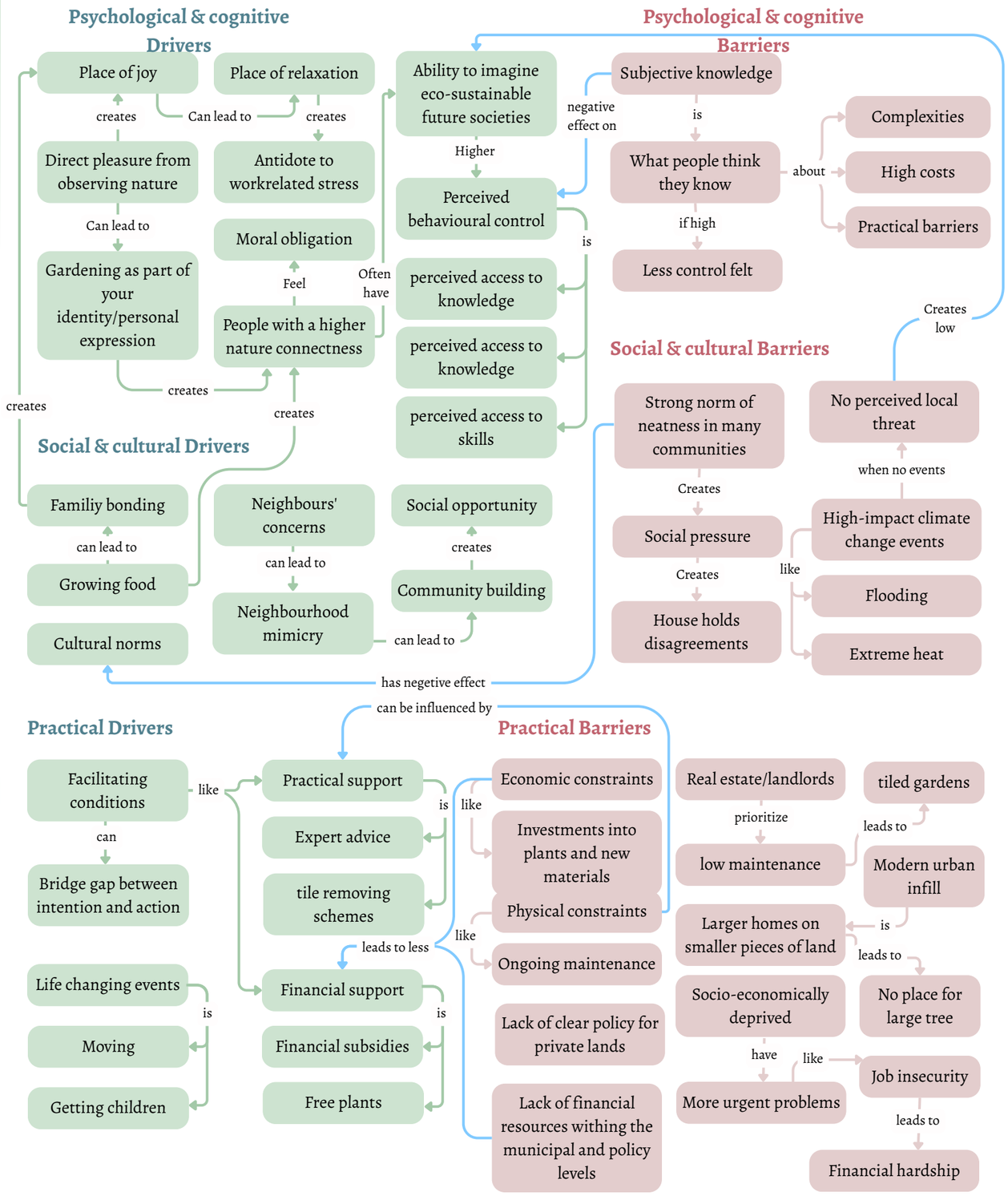


Figure 10: Visual interpretation of literature review on drivers and barriers

3.1.2 Door-to-door surveys with residents

The literature review is based on drivers and barriers from citizens around the world. As the graduation project focuses on citizens in Delft, it is important to understand their drivers and barriers as well. Therefore, 22 door-to-door surveys were conducted in 2 neighbourhoods in Delft: Afrikabuurt-West and Voordijkshoorn. Given the small sample size, findings should be interpreted as indicative rather than statistically representative; they serve to enrich the literature review findings within the Delft setting.

Drivers

The surveys have been coded with ATLAS.ti. First, all drivers and barriers have been given a codename. Afterwards, these codes have been put together in code categories. These categories are presented in Table 1. The themes nature, joy, green garden usefulness and practical drivers arose. Joy was found to be one of the biggest drivers of green private gardens. The drivers that fall under nature were also quite commonly mentioned during the interviews, such as biodiversity, sustainability, and a sense of nature. People talked mostly about the birds a green garden attracts: ”to look at more birds” (Interview, Appendix B). Other drivers that came forward are shown in Figure 11.

Neighbourhoods compared

The biggest difference between the neighbourhoods is that 'nature' is mentioned twice as often as 'driver' in the neighbourhood of Voordijkshoorn. This neighbourhood also has a larger number of highly educated residents. This aligns with the literature about highly educated people being more driven by nature to green their gardens. Another interesting difference is that the Afrikabuurt-West is more motivated by practical drivers, like being retired or just having extra time.

Barriers

Across all neighbourhoods, the following themes emerged regarding barriers: practicalities, skills, paved function, and green-related problems; see Table 2. The most commonly named barrier is garden maintenance, which falls under the theme of practicalities. After maintenance, cost was the most frequently cited barrier across both neighbourhoods. This also relates to maintenance, which people suggest costs a lot of money as well.

Other important barriers are related to the paved function. People want to have a paved place to sit in their garden, a paved place for children to play and for older people, a paved path for walkers and mobility scooters.

Neighbourhoods compared

The biggest difference arises at the barrier theme of practicalities. More specifically, money and time are increasingly named as drivers for residents from the Afrikabuurt-West compared to Voordijkshoorn. This could be because the Afrikabuurt-West is less wealthy than Voordijkshoorn (AlleCijfers.nl, 2025). Additionally, the lack of gardening skills and the need for a paved place came forward in the Afrikabuurt-West.

Table 1: Driver themes

Drivers	Afrikabuurt-West	Voordijkshoorn	Total times said
Nature	5	10	15
Joy	4	2	6
Green garden usefulness	2	2	4
Practical drivers	3	1	4

Table 2: Barriers themes

Barriers	Afrikabuurt-West	Voordijkshoorn	Total times said
Practicalities	10	6	16
Skills	4	1	5
Paved function	3	1	4
Green related problems	0	2	2

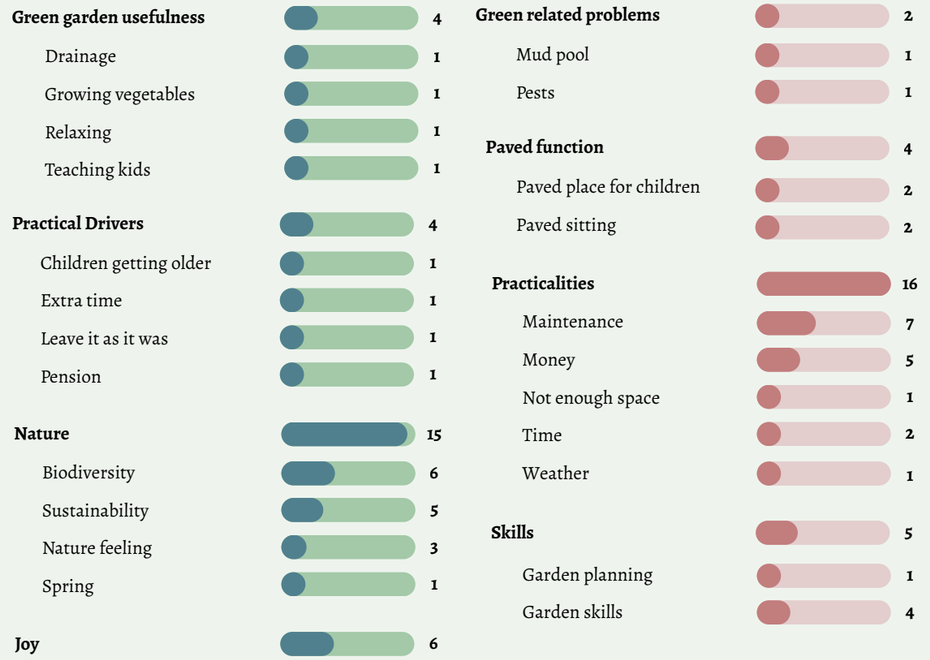


Figure 11: Driver and Barriers interviews

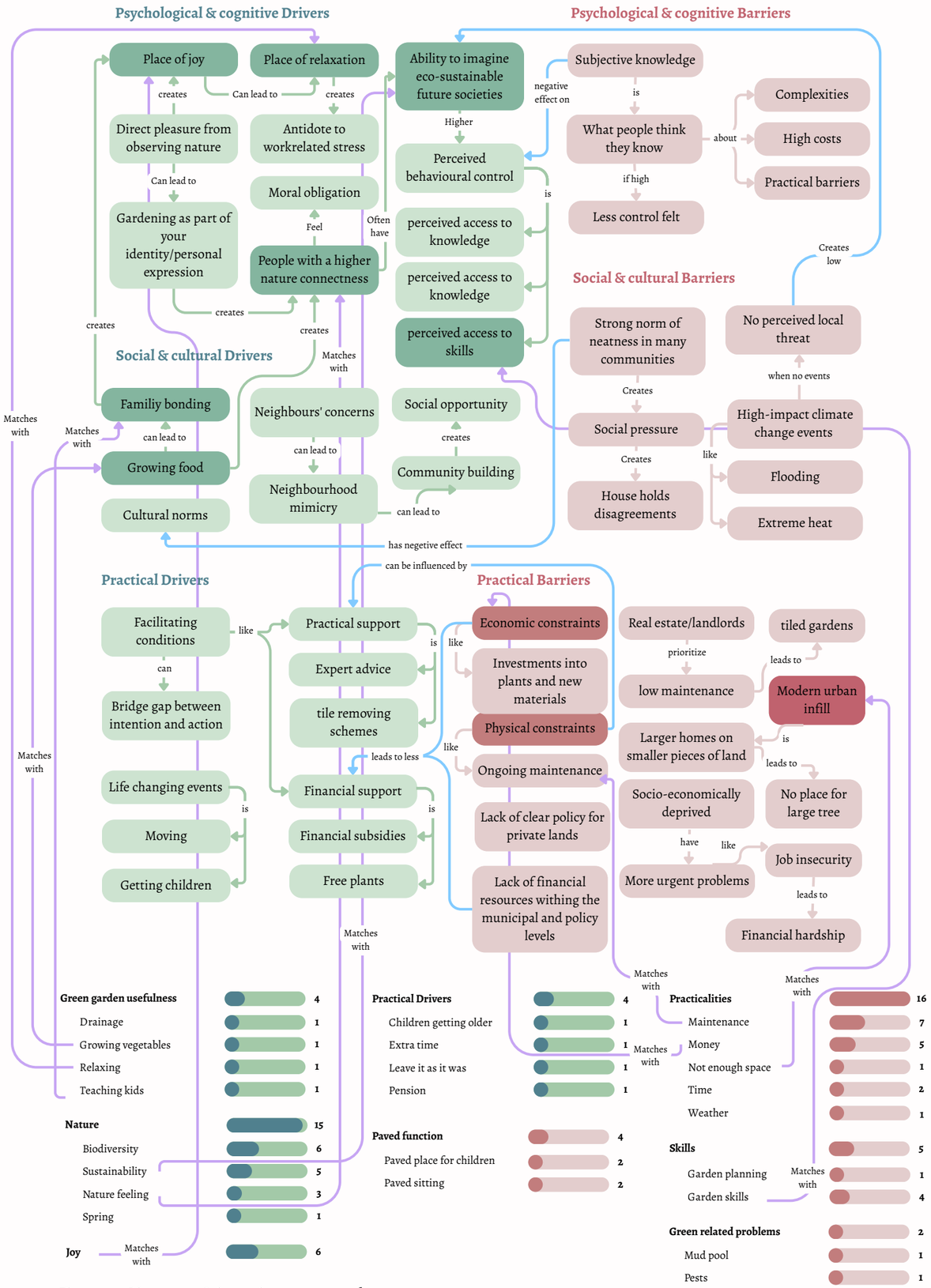


Figure 12: Literature & interviews compared

3.1.3 Conclusion

Taken together, the literature review and the survey findings converge on a shared set of core drivers and barriers, while also revealing context-specific factors unique to the Delft neighbourhoods. See the Figure 12, for a visual representation of this comparison. The drivers growing vegetables, relaxing and teaching kids, sustainability, nature feeling and joy match with the findings of the literature review. Additionally, the barriers of maintenance, money, not enough space, and garden skills match the literature.

There are also some factors mentioned in the interviews that have not come up in the literature review, such as drainage and the fact that vegetation makes a garden better prepared for heavy rainfall. Another driver that is not mentioned is biodiversity, while during the interviews, this was the most named driver. People like the insects and animals in their garden, like butterflies and birds. For barriers, it is the paved function that emerged from the interviews; people often don't know, or don't want to, green the place where they are sitting or where the children play.

Concluding the final strategy should address both the internationally identified barriers such as maintenance, cost, lack of skills and the locally specific ones such as paved function and biodiversity. In this way it draws on the full range of drivers relevant to each neighbourhood.

3.2 Municipal instruments and strategies

Current municipal policy instruments and strategies of municipalites that encourage garden greening are highlighted in this section.

3.2.1 The municipality of Delft

The municipality is responsible for managing public space in Delft. To tackle climate change, they implemented climate adaptation policies. For greening private spaces, there are no rules, as at the moment nothing can be forced surrounding a private space (Diny Tubbing, personal communication, 2026). Only for new builds: there are some rules; according to the climate adaptation policy, 50% of the new-build plot must be green.

However, the municipality needs to comply with regulations such as the European Nature Restoration Law, which requires that by 2030, there is no net loss of urban green space compared to 2024 (Werklandschappen, 2026). As private gardens in Delft fall under urban green space, it is important to manage their vegetation differently. Therefore, the municipality tries to encourage citizens through communication (Klaartje van Etten, personal communication, 2026). Furthermore, they have a performance role and stimulate citizen initiatives. Additionally, they deploy the sustainability centre "de Papaver" to influence residents in the surrounding area regarding sustainability. The role of the municipality as commissioning party is:

- Defining the framework of the assignment;
- Facilitator regarding permits and communication;
- Financing;
- Ensuring alignment with other activities, such as sewer replacement works;
- (Periodic) coordination with the programme manager;
- Point of contact for the programme manager and the climate buddies community on municipal policy and related issues.

Klimaatmaat

Klimaatmaat is a separate department of the sustainability centre that focuses on increasing vegetation in Delft neighbourhoods. Their role involves:

- Being responsible for developing the programme plan, the strategy, and the implementation;
- Recruiting and supervising Green Coaches;
- Monitoring objectives and results;
- Monitoring finances, exploring new collaboration opportunities to green private land; For example, schools, companies, project developers/real estate developers, or residents in new housing developments (De Klimaatmaat, 2023)

The actions of the Klimaatmaat can be divided into the categories: communication, participation, financial support and practical support (Meerjarenplan de Klimaatmaat, 2023).

Communication

They have a **website** where they communicate the need for greening, garden opportunities, their actions and introduce the climate buddies. Additionally, they distribute **flyers** and communicate **mouth-to-mouth** through volunteers in several neighbourhoods. During the NK tile removal, they communicate with citizens by **giving a talk** in the library.

Participation

To involve residents, several actions are taken. For example, they organise a **competition** for the greenest neighbourhood. Additionally, they organise the **NK tile removal** in Delft, where residents are encouraged to remove tiles in their gardens. Furthermore, they organise **workshops, talks and gatherings**. Climate buddies are assigned to involve their neighbours in greening their neighbourhood.

Financial support

Financial support for citizens' **initiatives** to green their neighbourhoods. Like the competition prize money between €2500 and €7500. For individual initiatives, there is financial support during the **NK tile removal** (5 Saturdays per year). Participants can get free plants in exchange for their garden tiles. They get a **plant voucher** of€2.50 per 2 tiles, with a maximum of €12.50

Practical support

Klimaatmaat facilitates **knowledge**. They have partners who can give **free garden plans**. On their website, they have several **examples of green gardens** and the effect of different vegetation. Additionally, they have some examples of green gardening in their own garden at the **sustainability centre.** Furthermore, the **climate buddies** provide practical support in the neighbourhoods. During the NK tile removal, Klimaatmaat offers a **tile taxi**.

3.2.2 Other municipalities

To gain more insights into how other municipalities are tackling the greening of private gardens, their policies have been researched. A deductive qualitative content analysis combined with a cross-case comparison was conducted. Municipal policy documents, websites and programme descriptions from Delft, Rotterdam, The Hague, Amsterdam and Groningen were analysed using predefined categories: communication, participation, financial support, practical support and regulation (Hsieh & Shannon, 2005; Yin, 2018). See Figure 15.

They have been selected for this study because they are all cities experiencing the urban heat island effect; see Figure 13. Rotterdam & The Hague have been chosen as they are both close to Delft. Additionally, Amsterdam and Groningen have been chosen as they are known to actively tackle climate change.

The municipality of Amsterdam has developed a climate adaptation strategy aimed at addressing heat stress, drought, and flooding, while also increasing green spaces in the city (Municipality of Amsterdam, n.d.) Groningen has positioned

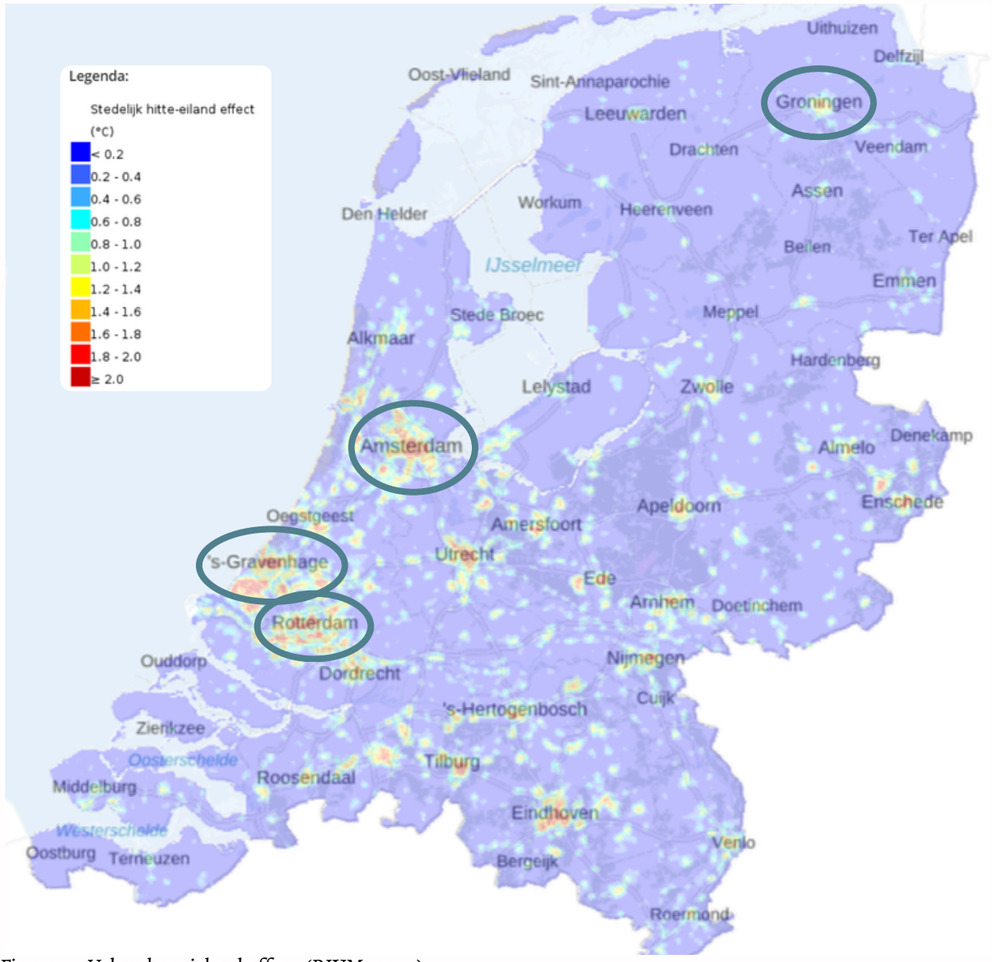


Figure 13: Urban heat island effect (RIVM, 2022)

itself as a leading city in climate adaptation, organising initiatives such as a dedicated Climate Adaptation Year and collaborating with international organisations to accelerate climate action (Climate initiatives Northern Netherlands, 2020)

Policies compared

Communication

All municipalities have a sustainability organisation that is pursuing a policy to green the city. Those organisations can be seen as mediators between residents and the municipality. These organisations all have websites where they communicate the importance of greening, showcase green garden examples, and detail their projects. Some municipalities also communicate benefits and examples of green gardening on their websites, such as the municipalities of Groningen (Gemeente Groningen, z.d.) and Rotterdam (Gemeente Rotterdam, z.d.). Others refer to the sustainability organisations. Additionally, all organisations and municipalities use flyers as an additional communication channel, see next page for an overview of these flyers. Most of these campaigns/pamphlets tackle one of the motivations for greening, see Figure 14. None of the reviewed campaigns addresses all motivational factors simultaneously. Integrating multiple factors like garden examples including budget, impact, biodiversity, water resistance and heat resistance could be valuable.

Furthermore, Delft and The Hague have physical spaces where residents can visit for questions and information. Amsterdam has a mobile communication space, the Weather Bar (Weerproof, n.d.). With this bar, they stand in several locations, such as festivals, to inform people about greening. The organisation Duurzaam Groningen even has its own radio rubric (Duurzaam Groningen, 2026).

Participation

The municipalities and organisations have several similar participation strategies. They all participate in the NK tile removal and provide a tile taxi for residents to gather the removed tiles. NK tile removal is a competition between several municipalities in the Netherlands. The municipality that gathers the most tiles wins this NK (NK Tegelwippen, z.d.). Another similar strategy to promote residents' initiatives is organising local competitions for the greenest neighbourhood (Duurzaam Den Haag, 2026). What separates Delft from the others is the climate buddies community, where volunteers help their neighbours go green on several levels. However, there are some organisations that also have some volunteers, but as a community, like the climate buddies (De Klimaatmaat, z.d.). To increase participation, Rotterdam has established a Climate Citizens Panel (Gemeente Rotterdam, 2024).

Financial support

The financial support for individual residents from the municipalities differs somewhat. Delft only provides plants for tiles during the NK tile removal, which is 5 times a year. Klimaatmaat offers plant vouchers of€2.50per 2 tiles, up to a maximum of €12.50 (Klimaatmaat Delft, n.d.). The municipalities of Rotterdam, Amsterdam, and Groningen offer a standard subsidy for swapping tiles for plants, per m² of tiles removed. The Hague offers a subsidy covering 50% of the cost of surrounding greening gardens (Gemeente Den Haag, z.d.). Additionally, via Steenbreek, they also offer 1 plant per 10 tiles.

Most of these campaigns/pamphlets tackle one of the motivations for greening. For example low maintenance or biodiversity. **Instead of tackling multiple motivational factors in one flyer or brochure.**

Figure 14: Campaigns and pamphlets

Rotterdam and Groningen have some additional subsidies. Rotterdam offers extra money if the plant, bush or tree is on their biodiversity list. Furthermore, they offer a subsidy of €10 per m² for vertically growing greenery (Gemeente Rotterdam, 2023). Groningen offers additional subsidies for greening outside walls and planting trees (Gemeente Groningen, n.d).

Practical support
All sustainability organisations facilitate knowledge on their website. For example, information on greening private gardens and their benefits. Additionally, all municipalities participate in the NK tile removal and help remove tiles, collect tiles with the tile taxi, provide free plants and help make garden plans. Furthermore, the municipality of The Hague applies a tree policy where they hand out trees to residents, with a total of 2500 trees (Gemeente Den Haag, z.d.). Hereby, 2500 households got a tree in their gardens. These are around 0,91% of all households in The Hague (AlleCijfers.nl, n.d.). Klimaatmaat Delft has climate buddies that help residents in practical ways, for example, applying for a subsidy, garden advice, and help with gardening (De Klimaatmaat, z.d.). Amsterdam has the organisation Buurtgroen 020, where volunteers offer several services regarding greening gardens, such as providing workshops (Buurtgroen020, z.d.). Furthermore, in Groningen, you have Stichting Straatboer. This is an organisation that provides practical support only for social rental houses (Straatboer, z.d.). They use 2nd hand plants from the Straatboerderij in Zwolle. This farm, where people can donate their plants, bushes and trees (Straatboer, z.d.).

Regulation
There is not much regulation regarding greening private gardens. However, for new builds, there are some rules. In Delft, 50% of the garden must be covered in green (personal communication, Klaartje van Etten, 2026). Additionally, all municipalities apply the national rainwater regulation. For example, in Rotterdam, a minimum of 50mm rainwater storage should be applied for new builds (Gemeente Rotterdam, z.d.). This can be achieved by increasing vegetation or by installing water-permeable paving.

Flyering through the Netherlands
Almost all municipalities and sustainability organisations in the Netherlands use flyering as one of their communication channels for greening private gardens. Some of these flyers have been researched. These flyers mostly cover a single type of motivation or trigger for greening private gardens. For example, biodiversity, water resistance, heat resistance, impact or budget. The one that covers more is the flyer for Arnhem Klimaat Bestendig.

They made a pamphlet with several garden plans, including several options for vegetation. In total, they have 6 examples of gardens, like a lush & natural garden or a sleek and modern garden (Arhem Klimaatbestendig, n.d.).

3.2.3 Conclusion

Regarding the flyer communication strategy, it could be useful for Delft to implement a pamphlet combining several motivational triggers, as in the garden plan examples from Arnhem Klimaatbestendig (n.d.). However, they miss the factors of price indication and its effects on biodiversity, water resistance and heat resistance. It could strengthen the pamphlet's effect to incorporate these as well. Additionally, a radio rubric or a pop-up information station for festivals could be a nice addition to Klimaatmaat's communication strategy.

To increase citizen participation, it could be valuable for the municipality of Delft to implement a climate citizens panel like Rotterdam. Furthermore, could the financial support in Delft be increased if more funds were available to set up a climate subsidy for individual cases, with a fixed amount per m² of tile removed for swapping tiles for plants? Now, only during the Nk tile wiping, a small amount up to €12.50 per household is made available by Klimaatmaat. The impact of this subsidy could be increased when the biodiversity list is applied, as Rotterdam is doing.

Furthermore, to increase practical support, the municipality of Delft and Klimaatmaat could consider setting up a project like Straatboer, in which a 2nd plant farm is used to provide social rental housing with plants, bushes, or trees. Lastly, regarding the regulation, it could be considered whether there is a possibility to set rules not only for new builds but for all houses.

Pop-up station

Radio rubric

Citizens panel

Motivational flyer

2nd hand plant farm

Climate subsidy

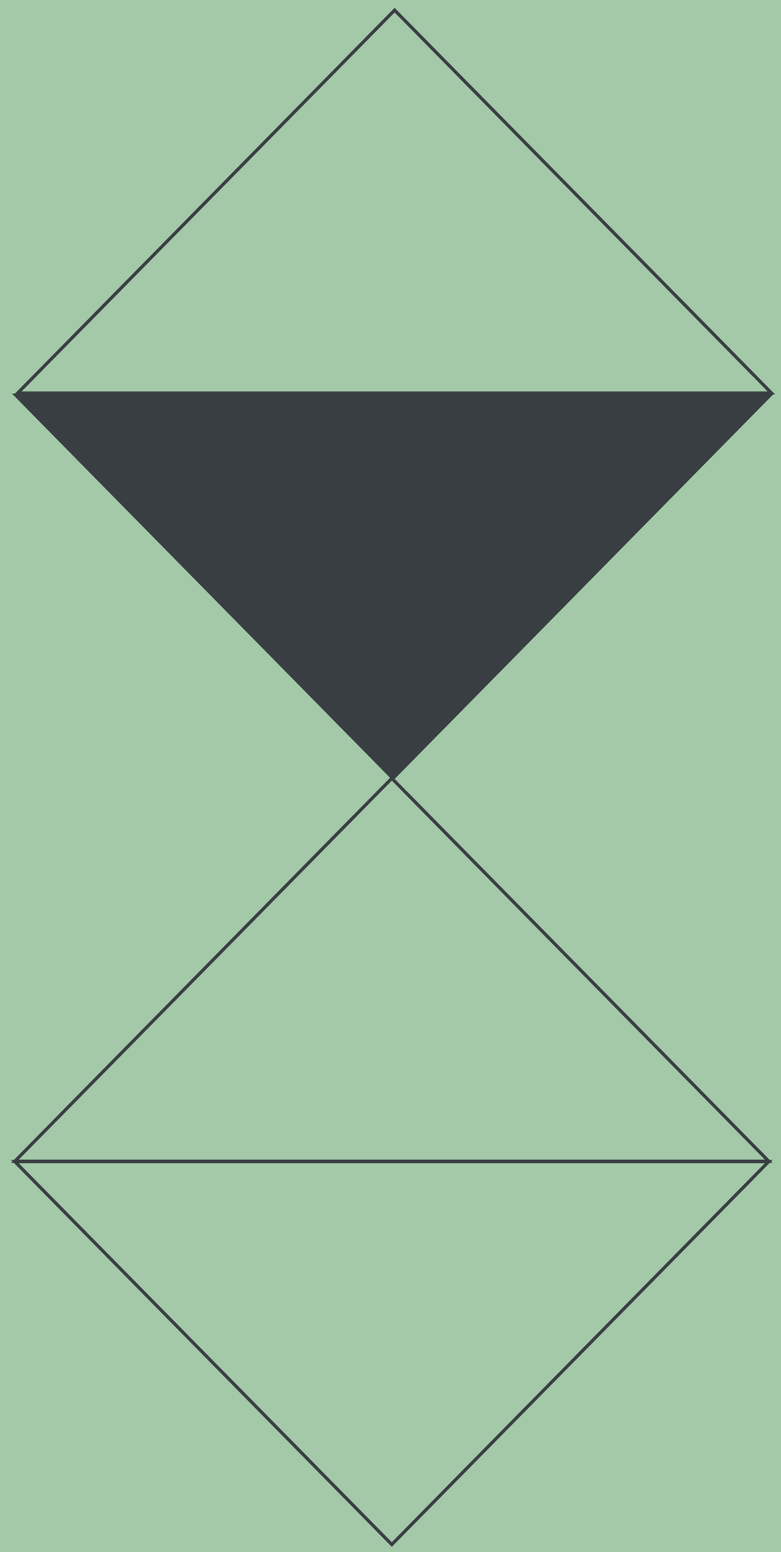
Policies categorised

	Delft	Rotterdam	The Hague	Amsterdam	Groningen
Communication	*Klimaatmaat* **Sustainability organisation** Website Sustainability centre Campaigns Flyering	*Rotterdams weerwoord* **Sustainability organisation** Website campaigns	*Duurzaam Den Haag* **Sustainability organisation** Website Contact centre Campaigns	*Amsterdam weerproof* **Sustainability organisation** Website weather "bar" Campaigns	*Duurzaam Groningen* **Sustainability organisation** Website Radio Campaigns
Participation	**Klimaatmaat** NK tile removing Climate budies Workshops Green cafe Competitions	**Municipality & weerwoord** NK tile removing Neighbourhood initiatives Citizen panel	**Duurzaam den Haag** NK tile removing Workshops Neighbourhood teams Competition	**Amsterdam weerproof** NK tile removing Neighbourhood initiatives Workshops	**Municipality & Duurzaam Groningen** NK tile removing Neighbourhood initiatives Tiny forest Edible community gardens
Financial support	**Municipality** Subsidy monumental trees **Klimaatmaat** Financial support for citizen initiatives NK tile removing: Free plants for tiles 5 times a year €2,50 per 2 tiles	**Municipality** Subsidy climate adaption: increasing vegatation €10 per m² €1 per plant/herb €2 per shrub/bush €2 per tree vertically growing greenery €10 per m²	**Municipality** Subsidy rainwater: vegetation for tiles max 50% of the costs **Steenbreek** free plants for tiles 1 plant per 10 tiles	**Municipality** Subsidy green: vegetation for tiles €15 per m² Monumental trees max 50% of the costs	**Municipality** Subsidy climate: vegetation for tiles €10 per m² Green outside walls €20 per m² Planting trees €50 per tree
Practical support	**Klimaatmaat** Facilitating knowledge Climate budies NK tile removing Help removing tiles Tile taxi Garden advice	**Weerwoord** Facilitating knowledge NK tile removing 7 times a year Tile taxi Garden advice	**Municipality** Tree policy 1 tree per household **Duurzaam den Haag** NK tile removing Facilitating knowledge	**Amsterdam weerproof** Facilitating knowledge Buurtgroen 020 Physical help NK tile removing Tile taxi Garden advice	**Duurzaam Groningen** Facilitating knowledge NK tile removing **Stichting Straatboer** rental only Practical help 2nd hand plants straatboederij
Regulation	**New builds** 50% of garden must be covered in green Rainwater regulation	**New builds** Rainwater regulation 50 mm water storage per m²	**New builds** Rainwater regulation	**New builds** Rainwater regulation 60 mm water storage per m²	**New builds** Rainwater regulation

Figure 15: Policies and strategies categorised (Buurtgroen020, n.d.; City of Amsterdam, n.d.; Climate Initiative Northern Netherlands, n.d.; De Klimaatmaat, 2023; De Klimaatmaat n.d.; Duurzaam Den Haag, 2026; Gemeente Den Haag, n.d.-a; Gemeente Den Haag, n.d.-b; Gemeente Groningen, n.d.-a; Gemeente Groningen, n.d.-b; Gemeente Rotterdam, 2023; Gemeente Rotterdam, 2024; Gemeente Rotterdam, n.d.-a; Gemeente Rotterdam, n.d. -b; NK tegelwippen, n.d.; Straatboer, n.d-a; Straatboer, n.d.-b)

DEFINE

During the define phase the third research question will be tackled. There will be defined how existing municipal policy instruments and strategies align with the identified drivers and barriers of garden owners. Additionally the design goal is defined.



3.3. Drivers and barriers compared to municipal instruments

There are several connections between the drivers and barriers of garden owners and policy instruments and strategies currently deployed by municipalities. This chapter highlights the drivers and barriers identified in section 3.1 that come back in the policy instruments identified in section 3.2 and the significant gaps.

3.3.1 Alignment with identified drivers and barriers

Several municipal instruments directly support the drivers that encourage residents to green their gardens.

Nature
Campaigns around all the reviewed municipalities communicate the environmental benefits of greening to the citizens, such as biodiversity, climate adaptation and sustainability. This aligns with identified drivers of nature, biodiversity and sustainability. In this way they also overcome the identified barrier of lack of awareness.

Delft communicates these drivers through Klimaatmaat, workshops, climate buddies and its sustainability centre. Groningen and Rotterdam communicate biodiversity even stronger by connecting it to financial incentives such as a biodiversity plant list used for an increased amount of subsidy. Amsterdam communicates these drivers through their pop up station the weather bar.

Social influence
Another identified driver is social influence such as neighbourhood mimicry, community building. Initiatives from municipalities like NK tegelwippen, neighbourhood competitions, workshops and other community events support this driver.

Delft operates with climate buddies, residents that help their neighbours green on several aspects. Rotterdam has a climate citizens panel to increase the involvement of residents. The rest of the reviewed municipalities mostly focus on workshops, neighbourhood initiatives and competitions to align with this driver.

Practical support
Some strategies from the municipalities aim a improve their perceived behavioural control by providing workshops and information to improve the barriers of lack of gardens skills and knowledge. Additionally, some policy instruments focus on providing other practical

support. For example, Delft offers practical support through climate buddies and workshops. Amsterdam and The Hague also provides workshops through Buurtgroen020. Groningen provides support in greening front gardens with Straatboer. Additionally all municipalities offer a tile taxi during the NK tile removal.

Financial support
Previous research has shown that the cost of greening is a strong barrier, while financial support is a strong driver for greening private gardens. There is some financial support across the municipalities. Delft has the least financial support as they only provide plant voucher during the NK tile removal with a maximum of €12.50 per household. Other municipalities offer a subsidy for exchanging tiles for greenery.

3.3.2 Gaps between resident's need and municipal instruments

Concluding, there are some overlaps in the identified drivers and barriers and the municipal instruments however there are still some room for improvement.

Maintenance
The barrier of maintenance remains largely unaddressed in policy instruments and strategies. They do support the creation of more green in private gardens in several ways, however support for the maintenance afterwards mostly remains absent.

Gardens functionalities
Residents mentioned the barrier of paved function several times, like paved areas for sitting and children to play. Most of the campaign focus on greening and leave out other possibilities for these areas. However Klimaatmaat provides some information about permeable paving.

Emotional motivation
The drivers of joy and relaxation are not often used in campaigns. Most of the campaigns focus more on the climate adaptation and biodiversity.

Communication
Lots of flyers and campaigns, workshops focus on one specific motivational factor. It could be useful to combine several drivers in one campaign to reach a broader audience. Further could be taken in to account which way of commincation is the most effective in the opportunity neighbourhoods in Delft. During interviews in the Afrikabuurt-West, residents were asked which communication source they preferred for information on greening their gardens. More than 30% answered "other"; see Figure 16. Most of these residents said they did not want to be contacted about greening their private gardens, and some said they would look for information themselves. However, 68% still preferred green garden communication. The sources: social media, website and flyer/brochure are all preferred by around 20 %. The neighbourhood app is the least preferred.

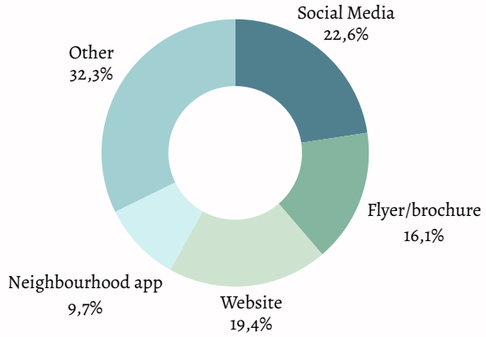


Figure 16: Preferred communication source

Limited regulation
Lastly, there is limited regulation on the amount of green in private gardens. There are only rules for rainwater regulation or new builds from municipalities. While residents can be motivated by rules.

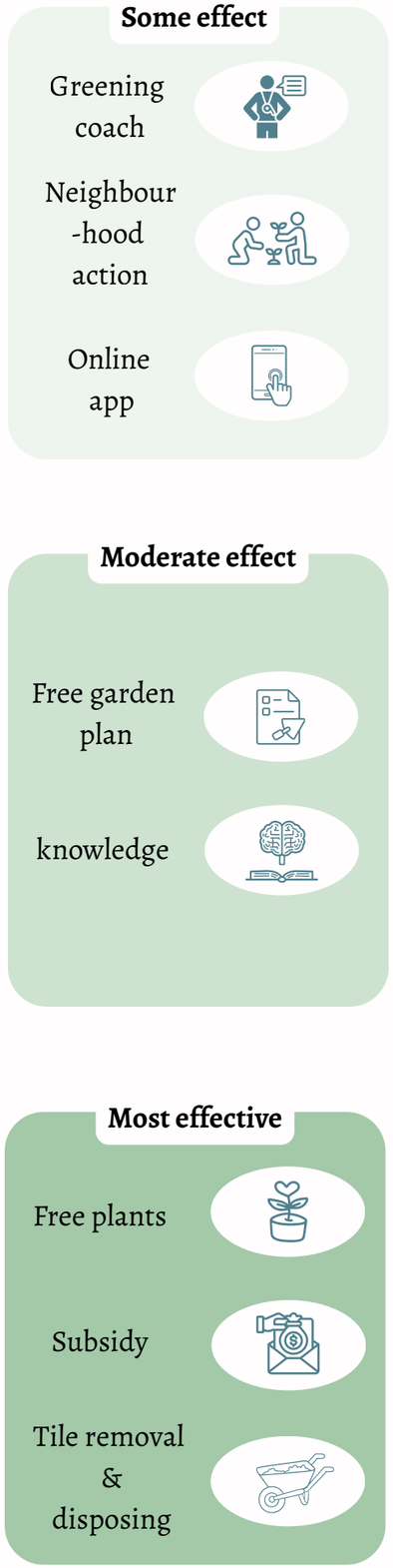
3.3.3 Conclusion

To design a strategy that enhances vegetation in private gardens, it is important to consider the drivers, barriers and current policy research. Delft's policy instruments apply several of the identified barriers and drivers in their strategies, however every driver or barrier can be even more integrated to increase the effectiveness. Furthermore, some drivers

and barriers rarely are taken into account like: maintenance, garden functionalities, emotional motivations, communication and regulation. It is important to incorporated these as well into future strategies.

Additionally Bos & Keuchenius (2024) conducted a behavioural analysis for greening gardens, where the effectiveness of several strategies have been reviewed. This research can be taken into account as well during the ideation phase. The results showed that providing free plants and flowers that are easy to maintain, getting a subsidy for greening your garden, and physical help with removing and disposing of tiles and sand are measures that best encourage action.

Additionally, providing free assistance in creating a garden plan and providing more knowledge about different types of greenery and which plants suit the garden could get some people to take action as well. Lastly someone, like a coach to guide residents through the entire process and who knows how everything should be done, a collective neighborhood initiative where residents replace tiles with greenery together with others in the street and an online app that guides residents through all the steps in the process of greening my garden have a bit less effect on residents taken action, however still a big percentage is likely to be stimulated by these measures.



3.4 Design goal

From the literature review, it became clear there is a gap in the literature between the intention and the action of greening gardens. It is important to take this into account when designing a strategy that aims to green private gardens in Delft. Therefore, the overarching design goal of this project is:

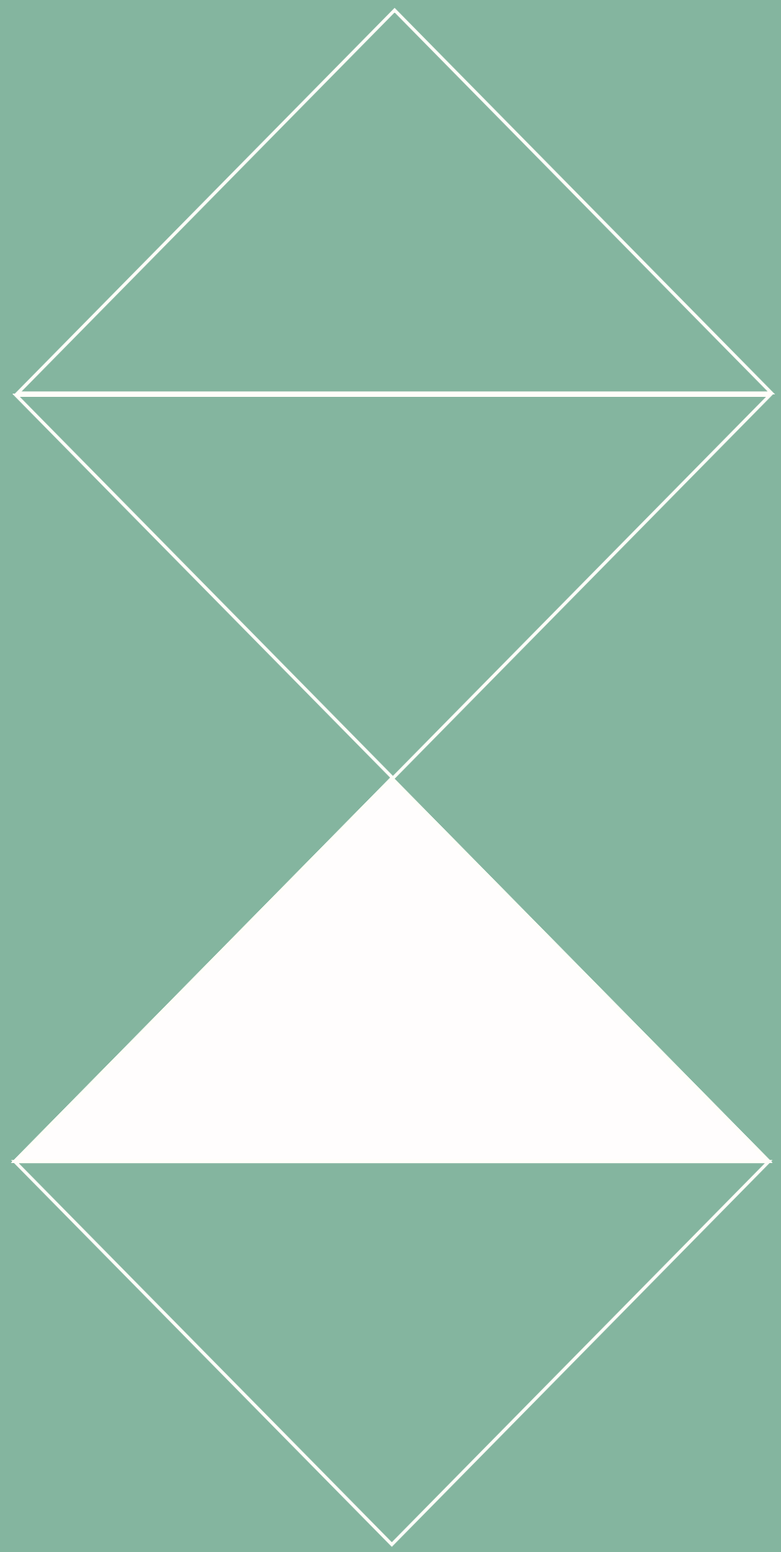
Designing a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens.

The approach to bridge this intention-action gap is by applying the gained knowledge of behaviour change models, drivers, barriers and policy instruments into a strategy.

The following section follows the development of this strategy.

DEVELOP

During the develop phase a start to answer research question four will be made. Ideas will be developed with the previous research in mind to design a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens.



Based on the insights from the previous chapter, various idea directions will be discussed in this chapter. Requirements and choices are drawn up. Furthermore, these ideas have been tested by residents of Delft, the municipality, and Klimaatmaat. The results will be discussed, and a choice will be made for an idea direction.

4

Ideation

4.1 Mapping idea directions

Designing a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens is the goal of this project. To gain background knowledge for designing the strategy drivers, barriers of garden owners and policies instruments have been researched. The insights from this researched can be applied in the develop phase of the double diamond, were a wide range of ideas are generated.

4.1.1 Most important insights from research

The most important insights are summarised below to keep them in mind during the ideation.

The COM-B model suggests that any given behaviour is driven by opportunity, motivation, and capability (Moxon et al., 2023; Niess et al., 2026). Therefore, it is useful to incorporate these 3 factors into one intervention that intends to achieve the action of greening. The Theory of Planned Behaviour, another behaviour change model, suggests that behavioural intention is the most immediate predictor of actual behaviour (Martens et al., 2025). This intention is shaped by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991).

Additionally, external support mechanisms increase the chances of bridging the gap from intention to action (Martens et al., 2025; Jacqmarcq et al., 2024). Therefore, it would be valuable to move further with an intervention that provides financial or practical support to residents. Another strong motivator includes growing food. People who grow vegetables in their gardens usually spend more time in their gardens and develop a stronger emotional connection with nature (Collard et al., 2026).

From the interview, it became clear that the neighbourhood Voordijkshoorn is more motivated by doing something good for the environment. The Afrikabuurt-West is held back the most by the costs of greening a garden. Lastly, both of the neighbourhoods are held back by the maintenance a green garden brings. During the interviews, it was also found that residents of these neighbourhoods prefer a website or brochure as a communication method for surrounding greening. Furthermore, could it be useful to highlight in the intervention that a green garden brings you joy and relaxation?

From the behavioural analysis for greening gardens conducted by Bos & Keuchenius (2024), it became clear that residents are most eager to take action when free plants are provided or when a subsidy or help with tile removal & disposing. Additionally, providing free garden plans and knowledge can have an effect.

4.1.2 List of requirements and wishes

From these important insights, the list of requirements can be made.

Behavioural requirements
COM-B model:

- The strategy creates the *opportunity* to green for garden owners.
- The strategy creates *motivation* to green for garden owners.
- The strategy creates the *capability* to green for garden owners.

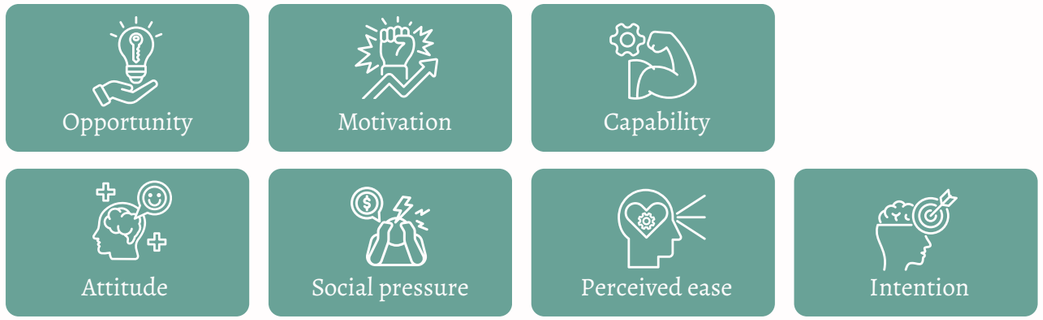
Theory of planned behaviour:

- The strategy changes garden owners *Attitude* towards greening their gardens.
- The strategy plays into *perceivedsocial pressure*.
- The strategy creates a high *perceivedease* of greening gardens.
- The strategy creates the *intention* of garden owners to green their gardens.

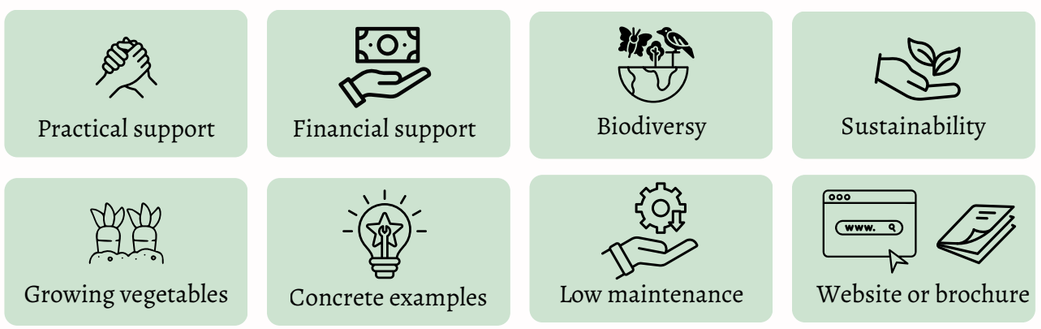
Wishes based on motivational factors

- The strategy creates *practical support.*
- The strategy creates *financial support.*
- The strategy involves promoting *biodiversity.*
- The strategy involves promoting the *sustainability* of a green garden.
- The strategy involves promoting g*rowing vegetables.*
- The strategy involves *concrete examples*
- The strategy creates *low maintenance* garden opportunities.
- Communication of strategy through *website or brochure*.

Requirements



Wishes



4.1.3 Ideation

With the requirements, wishes and research in mind, I started the ideation. Taylor's structured free association method is used for this initial concept generation. This method is an individual variant of brainstorming in which a word, number, object, or condition is noted. In this case, it was greening private gardens. Then every thought that comes to mind is written down, see Figure 17. Afterwards, in section 4.1.4 the associations that seem to solve the design problem are made to concrete strategies directions (Roozenburg & Eekels, 2015).

Figure 17: Ideation

Table 3 presents the role each stakeholder played in each idea direction. For each idea direction several stakeholders are involved for example for, financing, managing, promoting, volunteering or executing the strategy.

Table 3: Roles of stakeholders

Idea directions	Residents	Klimaatmaat	Municipality	Volunteers
Brochure with garden plans	Reading the brochure	Spreading the brochures	Financing	
Examples in parks	Walking through the example parks	Making the example gardens	Managing and financing	
Seed paper flyers	Reading the flyers and planting the seed paper.	Spreading and producing	Financing	
Plant farm	• Bringing their second hand plants to the farm • Buying plants from the farm	Managing the plant farm	Financing	Volunteers are needed to run the plant farm.
Mini plant farms	• Planting plants in their neighbour-hood • Using other plants in their	Managing the mini plant farms.	Financing	Volunteers in the neighbourhoods are needed to run the mini plant farms in their neighbourhood.
Green subsidy	Applying for the subsidy	Promoting the subsidyin the neighbourhoods	Financing and providing on website.	

layered map of idea directions

The ideas gained from the Taylor's Structured Free Association method are grouped based on similarities in purpose and contribution to create an overview and compare the ideas. From these similarities 3 overarching groups emerged and were mapped: Community-based greening, accessibility and information & engagement (Figure 18, layer one: ideas).

These ideas are linked to which stakeholders plays a role in the idea (Figure 19, layer two: stakeholders). Including the stakeholders into the map helped to clarify the ideas on who needs to be incorporated and why.
Finally, these ideas are coupled to several motivational factors that were identified in previous research. These motivational factors help with evaluation the ideas, see Figure 20: Layer three drivers.

Layer one: Ideas

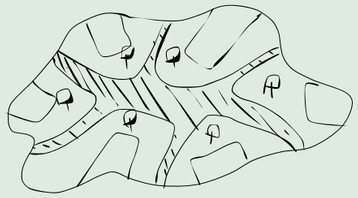
Community based greening

3+30+300 rule → so lots of parks in the neighbourhoods

Mini plant farms in every neighbourhood

Just like the old days. Low green fences, so you can easily talk with your neighbours in the garden.

Greening with your neighbours



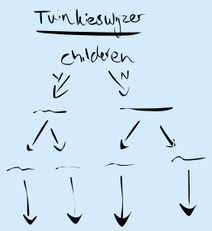
Whole garden examples → just like at the brochure but then in real life

Examples in parks

Like ikea example homes

To easily choose which garden plan page fits you

Decision flow chart

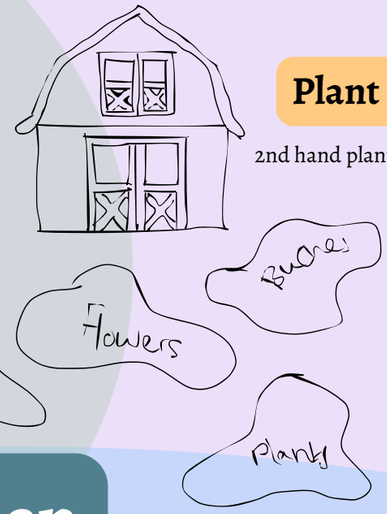


Green subsidy posters

Accessibility

Green subsidy

- Plants per m² removed tiles
- Vertical green



Plant farm

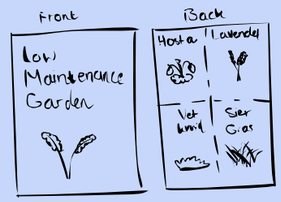
2nd hand plants farm in Delft

Biodiversity list

How to green private gardens?

- less water needed
- less pruning

Low maintenance garden flyers



Explanation which plants grow well next to each other

Seed paper flyers

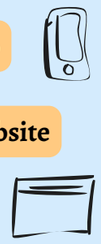
Greening campaign

When the weather is sunny (March, april, june)

Eatable garden flyers

App

Website



Brochure with gardens plans

(including impact and costs)

- Garden for children
- Neat green garden
- Eatable garden
- Low maintenance garden
- Butterfly garden

Information & Engagement

Figure 18: layer one

Layer two: stakeholders

How to green private gardens?

Community based greening

3+30+300 rule → so lots of parks in the neighbourhoods

Mini plant farms in every neighbourhood

For

In parks like abwoutse park & Delftse Hout → Just like the houses at ikea, example gardens

Afrikabuurt-West
Moderate education Level

For

Just like the old days. Low green fences, so you can easily talk with your neighbours in the garden.

Greening with your neighbours

For

Whole garden examples → just like at the brochure but then in real life

For

Voordijkshoorn
High education Level

Managed by

Delft
Municipality

work at

Volunteers

Accessibility

Green subsidy

by

Delft
Municipality

used for

Green subsidy posters

Promoting the new subsidy with QR codes

Managed by

financed by

Plant farm

2nd hand plants farm in Delft

For

Afrikabuurt-West
Moderate education Level

work at

Klimaatmaat

For

Trees

Flowers

Bushes

Plants

Biodiversity list

For

- Plants per m² removed tiles
- Vertical green

Afrikabuurt-West
Moderate education Level

Voordijkshoorn
High education Level

Klimaatmaat

For

Information & Engagement

Examples in parks

Like ikea example homes

For

Afrikabuurt-West
Moderate education Level

For

Voordijkshoorn
High education Level

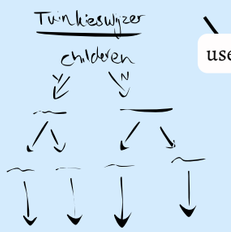
For

Klimaatmaat

To easily choose which garden plan page fits you

Decision flow chart

used for



App

Website

managed by

Klimaatmaat

Brochure with gardens plans

(including impact and costs)

- Garden for children
- Neat green garden
- Eatable garden
- Low maintenance garden
- Butterfly garden

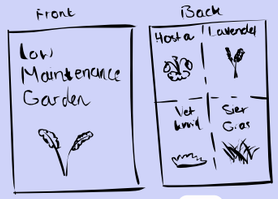
promoted

Klimaatmaat

made by

- less water needed
- less pruning

Low maintenance garden flyers



like

Explanation which plants grow well next to each other

For

Afrikabuurt-West
Moderate education Level

For

Seed paper flyers

With

Greening campaign

by

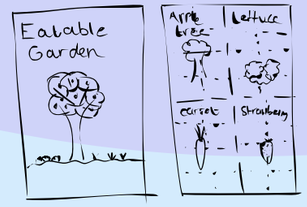
When the weather is sunny (March, april, june)

Delft
Municipality

For

Klimaatmaat

made by



Eatable garden flyers

Figure 19: layer two

How to green private gardens?

Layer three: drivers

Community based greening

3+30+300 rule → so lots of parks in the neighbourhoods

Mini plant farms in every neighbourhood

For

Afrikabuurt-West
Moderate education Level

In parks like abwoutse park & Delftse Hout → Just like the houses at ikea, example gardens

For

Just like the old days. Low green fences, so you can easily talk with your neighbours in the garden.

Sustainability driver

For

Voordijkshoorn
High education Level

Managed by

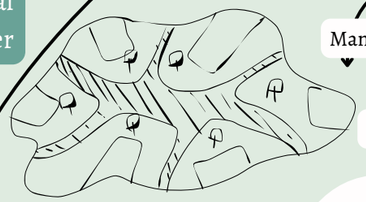
Volunteers

work at

Social driver

Greening with your neighbours

For



Whole garden examples → just like at the brochure but then in real life

Managed by

Delft
Municipality

Promoted by

Klimaatmaat

Accessibility

Green subsidy

by

Delft
Municipality

Green subsidy posters

Promoting the new subsidy with QR codes

Managed by

used for

financed by

Plant farm

2nd hand plants farm in Delft

Financial support

For

Afrikabuurt-West
Moderate education Level

work at

Klimaatmaat

Financial support

For

- Plants per m² removed tiles
- Vertical green

Biodiversity list

Biodiversity driver

Afrikabuurt-West
Moderate education Level

Voordijkshoorn
High education Level

Examples in parks

Concrete examples

Like ikea example homes

For

Afrikabuurt-West
Moderate education Level

For

Voordijkshoorn
High education Level

For

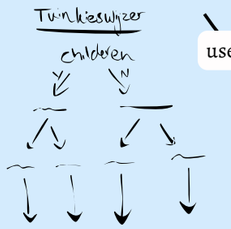
Klimaatmaat

Information & Engagement

To easily choose which garden plan page fits you

Decision flow chart

used for



managed by

Klimaatmaat

Concrete examples

App

Website

For

Afrikabuurt-West
Moderate education Level

For

Voordijkshoorn
High education Level

For

Klimaatmaat

Maintenance & Time saving

Sustainability driver

Biodiversity driver

Brochure with gardens plans

(including impact and costs)

- Garden for children
- Neat green garden
- Eatable garden
- Low maintenance garden
- Butterfly garden

made by

promoted

Klimaatmaat

Practical support

Maintenance & Time saving

Sustainability driver

- less water needed
- less pruning

Low maintenance garden flyers

Concrete examples

like

Explanation which plants grow well next to each other

For

Afrikabuurt-West
Moderate education Level

For families

Growing vegetables

Eatable garden flyers

For

Klimaatmaat

made by

Seed paper flyers

With

Greening campaign

When the weather is sunny (March, april, june)

by

Delft
Municipality

Figure 20: layer three

4.1.4 Concrete strategy directions

In this section, the strategy elements gathered from the brainstorm will be explained.

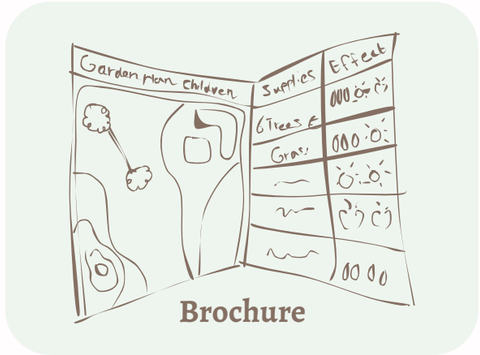
Brochure with garden plans

An overview of garden plans, including the impact of several vegetation types, maintenance levels, and expenses. To make sure it fits many residents, the brochure will include, for example:

- Garden for children
- Eatable garden
- Low-maintenance garden
- Garden full of shadow
- Neat green garden
- Butterfly garden
- Birds garden

For every garden, the steps to set up and maintain it will be explained. This could refer to where to buy specific vegetation or where to get it for free. The same idea as the brochure could be applied to a website or app.

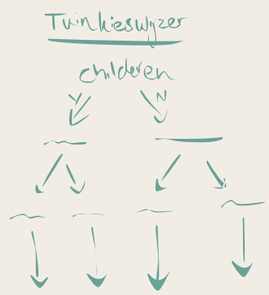
This idea direction is based on the following motivational factors: sustainability, maintenance & time-saving, biodiversity, growing vegetables, and providing concrete examples. The brochure would be for residents from both the Afrikabuurt-West and Voordijkshoorn. Both have around 20% low-educated residents, according to literature these are motivated by concrete examples. additionally there are many motivating factors that could motivate the other residents and let them take action. To realise the brochure Klimaatmaat can promote and make the brochures. The brochures should be financed by the municipality.



Brochure

Decision flow chart

To easily choose which garden plan fits, you can be sent to the right page in the brochure with a decision flowchart. For example, if you have small kids, you will end up with garden plans including children's playgrounds. The same motivators and actors apply to the flow chart as to the brochure.



Flow chart

Examples in parks

This idea direction is about providing example gardens, like those in the brochure, but in real life, in parks in Delft, just like the example houses at Ikea. In this way, residents can really see what their garden could look like and get inspired. It is inspired by the same motivation factors as the brochure. To realise this idea, the municipality will play an important role, as it manages public green spaces. Klimaatmaat could help design the example gardens.

Example gardens

Seed paper flyers

A green campaign during the months of March through June, when seeds can be planted with seed paper flyers. To reach a broad public, the campaign could focus on several motivational factors, such as growing your own vegetables or creating a low-maintenance garden. As the flyers are made from seed paper, free plants are provided, which aligns with the financial driver. The campaign should be financed by the municipality.

Eatable garden flyers

One of the factors that motivates residents is growing their own food and teaching it to children. You could also refer to the rising supermarket prices, so it is cheaper to grow your own vegetables. The flyer should include 4 different types of seed, with instructions on how and where to plant them.

Low maintenance garden flyers

The Afrikabuurt-West and Voordijkshoorn residents are both held back by maintenance. This low-maintenance seed paper flyer addresses this barrier by offering free seeds of low-maintenance plants. There will be instructions on how and where to plant them, and what the low-maintenance look will be like.

Eatable garden

Low maintenance garden

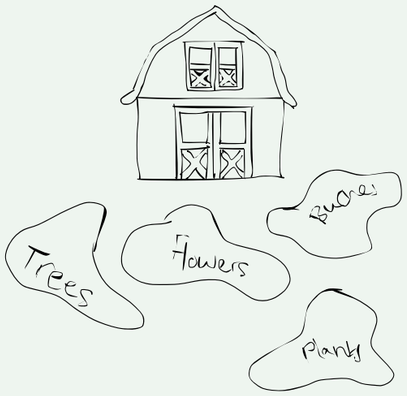
Plant farm

Another idea direction is to implement a 2nd hand plant farm in Delft, just like the one in Zwolle from Straatboer. Residents, garden centres and businesses can donate plants, bushes and trees. These 2nd-hand plants could then be used by people with less money to green their gardens, like in the Afrikabuurt-West. The farm should be financed by the municipality and managed by the Klimaatmaat. To run the farm, volunteers could help just like a 2nd hand stores. The biggest motivation factor would be the financial driver.

Mini farm

An idea is to use a small version of the 2nd-hand plant farm, but then have one in every neighbourhood, in its park. This could be run by volunteers in the neighbourhoods; in this way, you also create small communities in every neighbourhood. These communities

could help motivate residents in their neighbourhoods. This idea is primarily based on social and financial drivers.



2nd hand plant farm

Green subsidy

Green subsidy
As research has shown, people are more likely to take action when a subsidy is available; it is smart to play into this. A green subsidy for plants per m2 removed tiles and vertical green could be applied by the municipality of Delft. To ensure plants, bushes, and trees with greater impact are planted, the subsidy could include a biodiversity list, as in the municipality of Rotterdam. Instead of Rotterdam providing extra subsidies for vegetation on the biodiversity list, Delft could provide only subsidies for vegetation from this list. To promote it, the municipality and Klimaat could promote the new subsidy, for example, with posters throughout the city. This idea direction is based on the financial and biodiversity drivers and is mostly aimed at the Afrikabuurt-West. However, some residents from the neighbourhood Voordijkshoorn are also motivated by financial compensation.

4.2 Choosing idea direction

To choose which idea to work out further, residents of the neighbourhoods Afrikabuurt-West and the Voordijkshoorn are interviewed. Additionally, the ideas are scored by the Klimaatmaat and the municipality.

4.2.1 Interviewing residents with a survey

To test whether the ideas could bring behaviour change into action, the COM-B model has been chosen as a basis for the survey, as this model is a bit simpler than the theory of planned behaviour, which makes the COM-B model better for idea directions that are not concrete yet. They scored the factors capability, opportunity and motivation for every idea direction on a 5 point likert-scale. Additionally, the residents have been asked which motivational factors they are motivated by per idea. For the interview, I went to both neighbourhoods to ask 10 people in total to fill in a survey scoring ideas that aim to green private gardens. The survey involved drawings of each idea direction and a small description of 2-3 sentences. If they did not understand, they could ask me questions.

Findings COM-B questions
The participants scored the idea directions for opportunity, motivation and capability with strongly disagree to strongly agree, see Table 4.

Opportunity created through the idea direction
According to 80% of participants, the seed paper flyer will create the opportunity to green their gardens for them. For the rest of the idea directions, they create opportunity for around 50-60% of the participants.

Motivation created through the idea direction
According to 80% of participants, the seed paper flyer will create motivation for them. The next best-scored idea for creating motivation is the example parks; 60% said they would be motivated by this idea. Additionally, 50% were motivated by the brochure. For the rest of the ideas, 40% or less were motivated to go green.

Capability created through the idea direction
According to 80% of participants, the seed paper flyer will create the capability to go green for them. 50% of the participants thought the ideas: example park, brochure and green subsidy will create the capability to go green. The plant farms and mini plant farms create capability for only 20 to 30%.

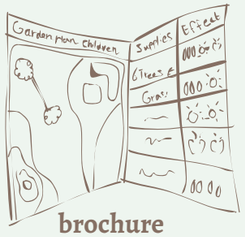
Combined scores
When combining the opportunity, motivation and capability scores, the seed paper flyers score the best. The second, third, and fourth best scores are quite close for the example parks, the brochure and the subsidy. The plant farm and mini plant farm scored last. The
participants scored the idea directions for opportunity, motivation and capability from strongly disagree to strongly agree.

Table 4: Overview scored ideas by residents with COM-B model

Idea directions	Creates opportunity	Creates motivation	Creates capability	Total score
Brochure with garden plans	• 40 % Agree • 20 % Strongly Agree **Total (60% agree)**	• 40 % Agree • 10 % Strongly Agree **Total (50% agree)**	• 20 % Agree • 30% Strongly Agree **Total (50% agree)**	160%
Examples in parks	• 40 % Agree • 20 % Strongly Agree **Total (60% agree)**	• 40 % Agree • 20 % Strongly Agree **Total (60% agree)**	• 30% Agree • 20% Strongly Agree **Total (50% agree)**	170%
Seed paper flyers	• 40 % Agree • 40% Strongly Agree **Total (80% agree)**	• 50 % Agree • 30% Strongly Agree **Total (80% agree)**	• 50% Agree • 30% Strongly Agree **Total (80% agree)**	240%
Plant farm	• 50% Agree • 10 % Strongly Agree **Total (60% agree)**	• 30% Agree • 0% Strongly Agree **Total (30% agree)**	• 20 % Agree • 0 % Strongly Agree **Total (20% agree)**	110%
Mini plant farms	• 40 % Agree • 10 % Strongly Agree **Total (50% agree)**	• 10 % Agree • 10 % Strongly Agree **Total (20% agree)**	• 20 % Agree • 10 % Strongly Agree **Total (30% agree)**	100%
Green subsidy	• 50 % Agree • 10 % Strongly Agree **Total (60% agree)**	• 30 % Agree • 10 % Strongly Agree **Total (40% agree)**	• 40 % Agree • 10 % Strongly Agree **Total (50% agree)**	150%

Findings Motivational factors

10 Participants scored which motivational factors motivated them for each idea direction. The motivational factor of biodiversity and sustainability scored high with all the ideas. In total, the most motivational factors motivated the participants for the ideas: The brochure, the example gardens and the green subsidy.



brochure

Biodiversity	6	
Sustainability	5	
Low maintenance	4	Total Motivational score: 24
Financial support	0	
Practical support	4	
Growing vegetables	3	
Concrete examples	2	

Example gardens

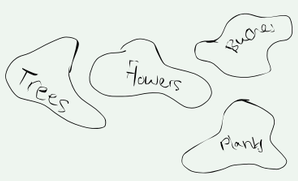
Biodiversity	6	
Sustainability	4	
Low maintenance	3	Total Motivational Score: 24
Financial support	0	
Practical support	3	
Growing vegetables	2	
Concrete examples	6	

Seed paper flyers

Biodiversity	7	
Sustainability	4	
Low maintenance	3	Total Motivational Score: 22
Financial support	0	
Practical support	3	
Growing vegetables	4	
Concrete examples	1	

Plant farm

Biodiversity	7	
Sustainability	5	
Low maintenance	2	Total Motivational Score: 23
Financial support	0	
Practical support	1	
Growing vegetables	5	
Concrete examples	3	



Mini plant farms

Biodiversity	7	
Sustainability	6	
Low maintenance	2	Total Motivational Score: 19
Financial support	0	
Practical support	1	
Growing vegetables	2	
Concrete examples	1	

Green subsidy

Biodiversity	6	
Sustainability	5	
Low maintenance	2	Total Motivational Score: 24
Financial support	2	
Practical support	3	
Growing vegetables	4	
Concrete examples	2	

4.2.2 Municipality & Klimaatmaat scoring ideas

In addition to the residents surveys, the municipality and the Klimaatmaat have been asked to score the ideas on their supposed feasibility and supposed effect. These factors have been chosen to be scored by them as both parties have experience in setting up strategies and campaigns surrounding promoting sustainability in the city. See Table 5 & 6 for their scores.

Municipality (Advisor climate adaptation)

The advisor climate adaptation from the municipality scored the brochure and mini plant farms the highest. For the mini plant farm, she remarked that these should be protected as they are in public space and easily destroyed. However, there could be a possibility created to work together with schools, churches or the local neighbourhood house to protect these gardens. For the brochure, she remarked that it could be nice to add a choice method with several criteria, like the flow chart.

The rest of the ideas are scored with a minimum of one "slight" supposed feasibility or supposed effect. For example, the seed paper flyers have a low supposed effect, as Klaartje van Etten suggests; the risks of failure are too big with snails and insects destroying the young plants. There is a big chance that this could work discouragingly. However, for the green subsidy she mentioned: "Subsidies are tricky because they require an administrative decision and solid bureaucratic preparation. So feasibility is low, but the effect is quite good, I think." (Klaartje van Etten, Personal communication).

Klimaatmaat (Project leader)

Annie Breeuwsma, the project leader of the Klimaatmaat, scored the idea direction of the brochure the highest. However, they gave the remark that it should not be too lengthy, as this can discourage residents as well; it should be simple and visual. Think about the people who are less literate as well.

For the example gardens, they mentioned that this already exists on a small scale; however, these are always removed after some time. They scored the seed paper flyers as having the lowest supposed effect. For the plant farms, they could be feasible and have some effect. However, at this time, the Klimaatmaat has already talked to the organisation of Straatboer and decided that a plant farm in this form for residents will not be the focus for the moment.
Additionally, they mentioned their biggest preference goes to the green subsidy, despite the low feasibility. They said a concrete proposal would be useful. It is a concrete tool for residents.

Table 5: Idea directions Scored by the municipality

Factors	**Brochure with garden plans**	Example gardens	Seed paper flyers	Plant farm	**Mini plant farms**	Green subsidy
Supposed Feasibility						
Supposed effect on residents greening private gardens						

Table 6: Idea directions Scored by the Klimaatmaat

Factors	**Brochure with garden plans**	Example gardens	Seed paper flyers	Plant farm	Mini plant farms	Green subsidy
Feasibility						
Supposed effect on residents greening private gardens						

Slight

Moderate

Strong

4.2.3 Chosen strategy direction

The seed paper flyers were scored the best by the residents according to the COM-B model. Additionally, the example gardens, brochure, and subsidy scored quite close to each other. When looking at the motivational factors, these 3 scored the highest. Additionally, the seed paper flyers scored well as well. However the seed paper flyers were deprioritised because expert evaluators highlighted a significant risk of plant failure due to pests, which could discourage rather than motivate residents. Expert feasibility judgements therefore took precedence over resident COM-B scores in the final decision.

Furthermore, Klimaatmaat and the municipality scored the brochure as the best idea direction, with a high perceived feasibility and a moderate perceived effect. Additionally, they both think a subsidy would have a strong effect.

As the residents, the municipality of Delft and the Klimaatmaat all scored the brochure quite high on several factors, which made me choose this idea. However, the greatest chance of moving residents to action arises when practical and financial support are combined. For the practical support, the brochure with concrete garden plans will be worked out, but the financial support is missing in this direction. According to Bos & Keuchenius (2024), free plants, a subsidy or support with tile removal have the biggest effect on residents. Free plants are provided by the plant farms, and the seed paper flyer and the green subsidy directions cover the subsidy. From these, the Klimaatmaat and the municipality thought the green subsidy would have the highest effect. However, the feasibility is low due to its complexity. Still, both parties mentioned it would be interesting to design a concrete proposal for the green subsidy.

Therefore, it would be interesting to combine the brochure with the green subsidy, where plants from an impact/biodiversity list from the subsidy would come back in concrete garden plans in the brochure. In this way, the practical support and financial support are combined into one strategy with the goal of bridging the gap between garden owners' motivation and intention and the real action of greening their gardens.

Green subsidy

+

Brochure

DELIVER

During the deliver phase research question four will be tackled. The chosen strategy direction will be presented. It is aiming at increasing vegetation in private gardens in Delft by bridging the intention-action gap of garden owners regarding greening their gardens. Additionally the strategy will be validated by residents and experts. Concluding all four research questions will be answered.

In this chapter, the chosen strategy is presented. The strategy including the campaign More Life in Your Garden comprises several elements. The campaign is supported by a brochure with garden plans and a green subsidy.

5

Final strategy

5.1 Strategy: Campaign More Life in Your Garden

Based on previous research presented in the last chapters the strategy has been designed. The strategy consists out of two main elements as shown. A brochure with garden plans and a green subsidy. These are presented as one campaign: More Life in Your Garden. The direction and name of this campaign is based on one of the most named drivers by residents: Biodiversity. To design the elements of this strategy, research has been done towards garden design and municipal subsidies. See Appendix J, for the findings of this exploration.

In this chapter the final strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens is presented. Additionally, its elements will be presented. The brochure is worked out in detail. For the green subsidy I provide an initial outline that could be further developed and refined by the municipality at a later stage.

To gain a better understanding of the overarching campaign, the 5W1H method is applied, see Figure 21. This method comprises 6 questions about the strategy: What?, Why?, Who?, Where?, When? and How? (Su, 2014).

WHAT?

Campaign: More Life in Your Garden?

The strategy comprises a strategy with two main elements presented in a campaign. One of the elements is the brochure. The brochure will be distributed through the neighbourhoods of Delft. The brochure consists of concrete garden plans, instructions and information about the other element of the strategy: the green subsidy. Additionally, there will be posts with information about the campaign on platforms like LinkedIn, Instagram and the websites of the municipality and the Klimaatmaat to notify as many people as possible. In this way, you also get the people who don't want physical brochures in their mailbox.

WHY?

Heat stress

Delft experiences heat stress due to the tiled areas of the city. Greening the city helps decrease this heat stress. The municipality of Delft is already greening the city on municipal grounds; however, a lot of paved areas are private gardens. Therefore, the campaign is to get people to green their gardens and contribute to decreasing the heat stress in the city.

WHO?

Residents of Delft with a private garden

The main focus lies on the neighbourhoods whose private gardens are mostly paved. However, you cannott exclude the other neighbourhoods, as that would not be fair for the subsidy and every greened garden leads to a greener Delft with less heat stress.

Klimaatmaat

The organisation Klimaatmaat can distribute the brochure in the neighbourhoods, as their focus also lies on greening for residents. In addition to the brochure, they offer:

- More information on their website;

- Bring you in contact with gardeners, organise garden design sessions and workshops;
- Between March 21 and October 31 they can help with the tile removal;
- Other practical support by the

WHERE

Neighbourhoods in Delft with gardens

The brochure will be distributed through the neighbourhoods in Delft and the subsidy will be published online.

WHEN

February

At the end of February during the spring break, first things start to grow, and people start to sit in their gardens again. This is the month the campaign will launch; in this way, people have a long time to start greening the year of the launch. Most vegetation will be planted in the spring and summer, and trees can be planted in the autumn.

HOW?

Behavioural change

Bridging the intention-action gap of garden owners regarding greeing their gardens, by applying the identified motivational factors and behaviour models: COM-B and the theory of planned behaviour.

- COM-B: By creating opportunity, motivation and capability.
  - **Opportunity:** The subsidy and garden plans offer concrete tools to green
  - **Motivation**: By offering practical support, financial support and additional motivational factors. With the most important being the biodiversity driver. That is why the campaign is communicated as More Life in Your Garden. Other important motivational drivers come back in the garden plans.
  - **Capability**: Providing concrete instructions to green your garden
- Theory of Planned Behaviour: Attitude, perceived social pressure, perceived ease of greening creates intention.
  - **Changing attitude**: by letting residents see a green garden can be low maintenance, neat and by playing into their motivational factors. Together with the financial compensation, which makes it less expensive to green.
  - **Perceived norm:** When more people start to green in paved neighbourhoods, the social pressure on the rest of the neighbourhood can rise.
  - **Perceived behavioural control**: By giving simple, concrete instructions in the brochure and subsidy.

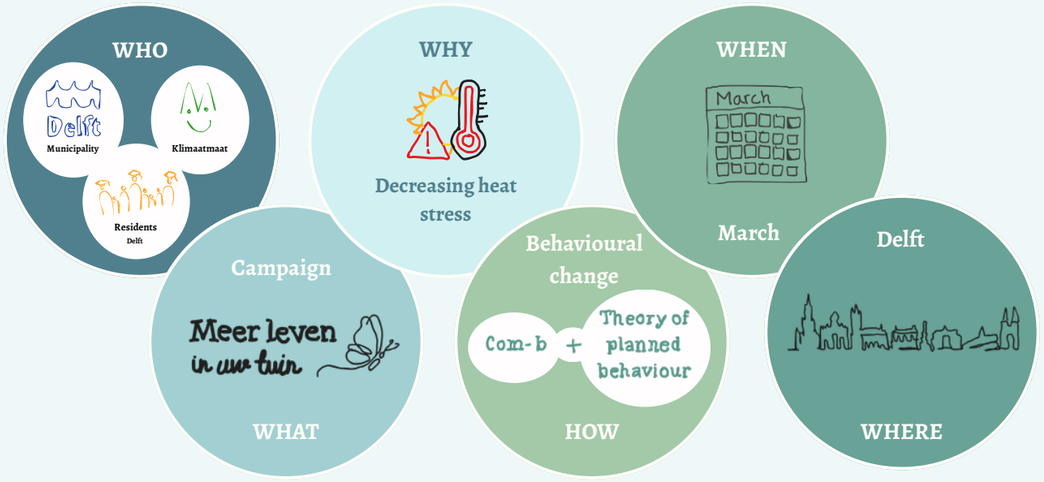


Figure 21: 5W1H framework

5.1.2 Design rationale

Concluding, the campaign: 'More Life in Your Garden', developed using motivational factors, COM-B and the Theory of Planned Behaviour, aims to contribute to greener neighbourhoods in Delft and, in the longer term, aims to reduce urban heat stress (see Figure 22.

5.1.3 Implementation roadmap

To achieve this design rationale several steps need to be taken. These steps are visualised in a roadmap, see Figure 23. Between September 2026 and December 2028, Klimaatmaat and the Municipality of Delft finalise the campaign by optimising the garden plans, preparing communication materials, and developing the green subsidy. During the same time, between January and February 2028, the campaign elements are prepared for launch. This involves printing the brochure and publishing campaign information on the online platforms of both organisations.

The campaign is launched at the end of February 2028 during the spring break, the start of the new gardening season. The brochure will be distributed in the neighbourhoods in Delft and on online platforms. Additionally the green subsidy will be introduced. During months that follow (March–October 2028), residents can apply for the subsidy and implement the garden plans, resulting in the first greened gardens in Delft.

From 2028 onwards, the campaign aims to create a reinforcing social effect, whereby increasing numbers of green gardens encourage neighbours to participate through perceived social norms. In the long term, an increase in private garden vegetation is expected to contribute to greener neighbourhoods, enhanced biodiversity, improved rainwater infiltration, and a reduction in urban heat stress throughout Delft.

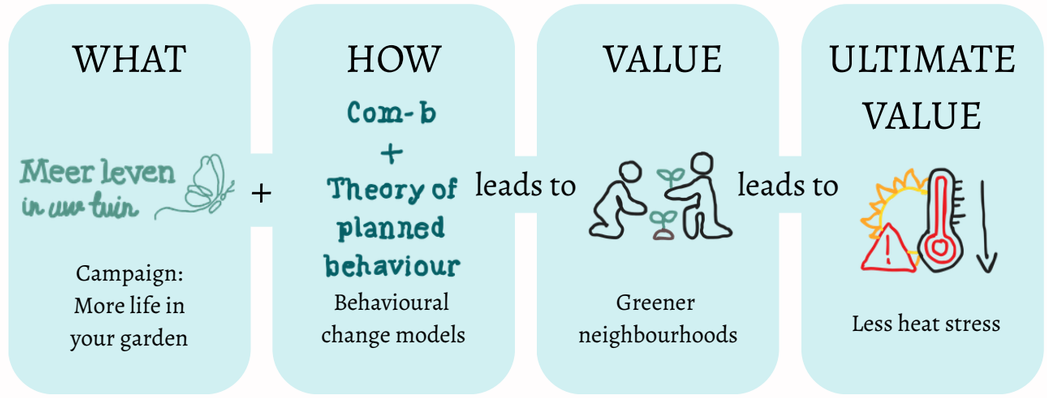


Figure 22: Design rationale

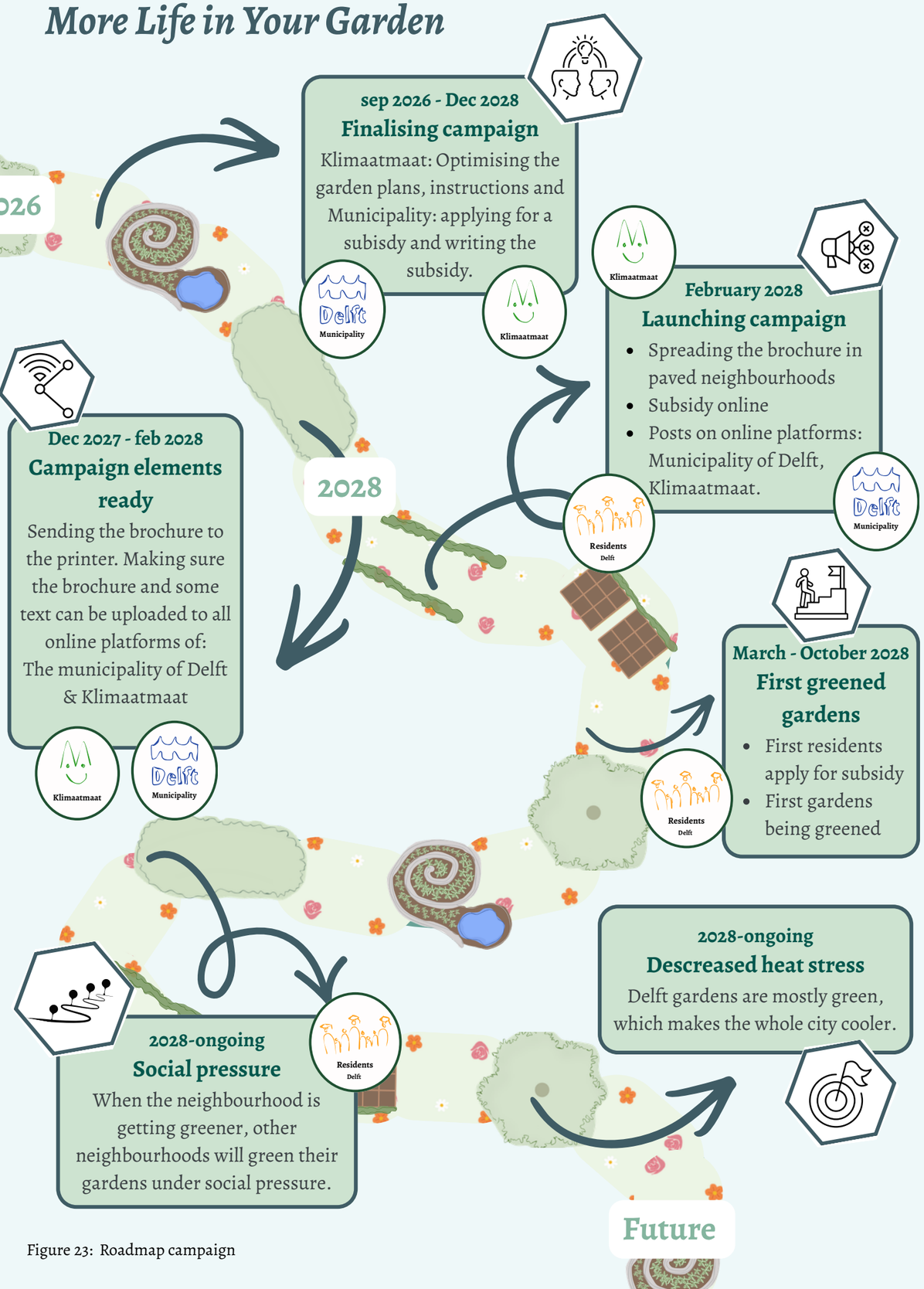


Figure 23: Roadmap campaign

5.2 Green subsidy

The following subsections elaborate the two main elements of the campaign, starting with the green subsidy. The initialoutline for the subsidy has been made. Presented by its goal, target group, criteria, subsidy amount, plant list and procedure.

5.2.1 Goal

The goal of the subsidy is for residents to replace paving with greenery and thus contribute to reducing heat stress in the city. With a focus on greenery that:

- increases biodiversity in the city
- allows rainwater to infiltrate better
- combats heat stress in the city
- is relatively easy to implement and low-maintenance.

Therefore, the green subsidy should encourage people to purchase organic and native vegetation. Furthermore, it should encourage residents to plant at least one tree in their garden, because trees contribute significantly to better rainwater infiltration and combat heat stress.

Therefore, I decided to compile a subsidy plant list featuring native vegetation. To motivate residents to choose from this list.

5.2.2 Target group

The subsidy will be targeted at the most paved neighbourhoods; however, it will be available for every household in the municipality that has a garden.

5.2.3 Subsidy Amount

The subsidy will be for replacing tiles with biological and native vegetation. Additionally, there will be a subsidy available for vertical green. This can be planted against a wall or fence. The amounts per type of vegetation are calculated to cover around 80% of the costs per type.

Subsidy per vegetatitation type

To determine the subsidy amount, the average prices per type of vegetation among organic growers were considered. See Appendix E for the complete list of subsidised plants.

It was decided to use 80% of the average costs per category for the subsidy. This is an amount that allows people with less money to spend to choose cheaper vegetation, ensuring that the entire cost of the greening falls within the subsidy. Others with slightly more to spend could opt for the more expensive options, where a significant portion of the costs will still be covered by the subsidy. See Table 7, for the calculated subsidy amount and figure 24 for the final subsidy amount per vegetation type.

Costs for municipality

The costs for the municipality are estimated and should be considered indicative. If approximately 10% of Delft households with a garden were to apply (around 1,820 households greening 10 m2 each), the total cost to the municipality would be roughly €364,000 (see Appendix K for the full calculation).

5.2.4 Criteria

The following criteria have been set for the

Table 7: Green subsidy calcultated

Elements	Average amount per piece (€)	~ Amount of vegetation per m2 (young vegetation)	m2 amount (€)	80% of the m2 amount (€)	Rounded to five
Trees	30	-	-	24	**per piece €25**
Bushes	12	2	24	19	**per m2 €20**
Climbing plants	14	-	-	11	**per piece €10**
Plants	5	5	25	20	**per m2 €20**

Figure 24: Amount per vegetation

subsidy based on criteria of the other reviewed municipalities, see Appendix J:

- Keep the garden green for at least 5 years.
- Take before-and-after photos of their greened garden.
- At least 10 m2 of tiles should be exchanged for vegetation from the plant list (it is possible to ask for a subsidy with neighbours to reach this amount)

m² requirements

Green subsidies often have a minimum square meter requirement that must be greened to qualify for the subsidy; for the municipality of Rotterdam (Gemeente Rotterdam, 2023) and Groningen (Gemeente Groningen, n.d-a) it is 20m² , for Amsterdam it is 10m² This minimum is to motivate people to green a larger part of their garden; additionally, this results in a higher amount for which they can apply for a subsidy, which in turn lowers the threshold for applying for a subsidy. For this subsidy, I have chosen 10 m² because I do not want to set the threshold too high.

5.2.5 Plantlist

Below will the elements of the plantlist described and explained why several choices have been made. The whole list can be found in Appendix E.

Native plants

The list will primarily contain native plants as they are best suited to promoting biodiversity. However, all plants must be purchased from an organic grower, as many other plants contain pesticides that can be toxic to insects, birds, and other animals.

Selection from steenbreek biodiversity list

To make the list, a biodiverse vegetation list from Steenbreek was used (Stichting Steenbreek et al., z.d.). From this list, all plants suitable for a garden were selected; larger trees, for example, were excluded. Furthermore, all native vegetation was included, as well as vegetation that provides abundant nectar or has a long flowering period. Furthermore, there are also a few plants that grow in the shade; these are often non-native, but they are better than stones because they contribute to the infiltration of rainwater into the garden.

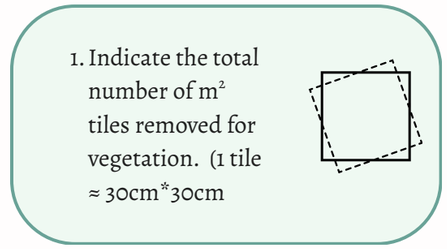
Vegetation types

The list will include trees, shrubs, climbing plants, plants, and bulbs. Seeds for grass, flowers, vegetables, fruit, and herbs will not be included in the subsidy list because these seeds are all quite inexpensive. However, when sown, this does count towards meeting the minimum requirement of replacing 10 m² of tiles with greenery, allowing you to apply for a subsidy for the other vegetation.

5.2.6 Application procedure

To apply for the subsidy, several steps need to be taken. To see which steps are appropriatethere has been looked at what other municipalities have as their procedures for applying for a green subsidy. Next to this text, the chosen steps are shown.

Some municipalities prefer a drawing of the garden plan and before and after photos. Which is a bit redundant. To minimise the work for both the municipality and the residents I chose to only apply the before and after photos. The rest of the steps overlap with other municipalities, only the plant list is an additional step. However, this list contributes to greater biodiversty in private gardens.

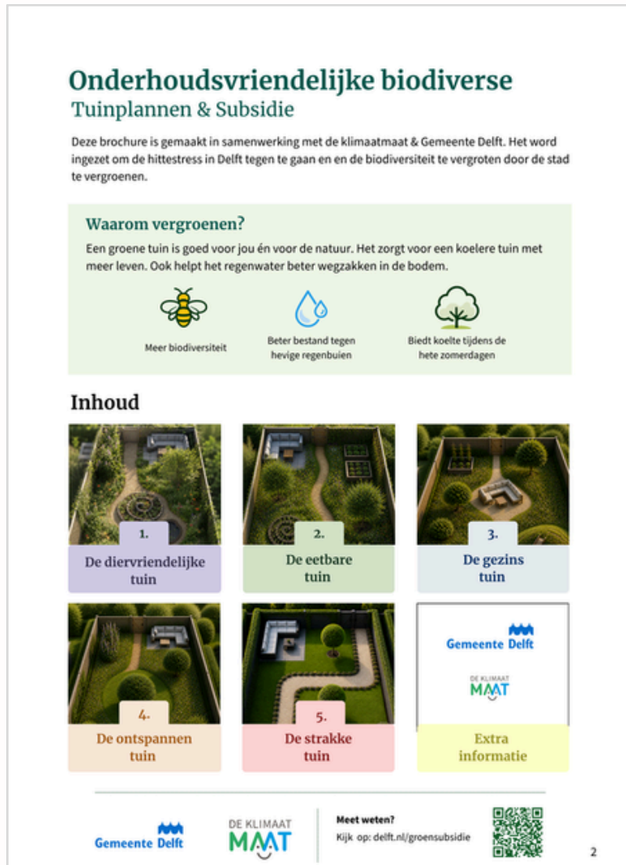


5.3 Brochure with garden plans

The other element of the campaign is the brochure consisting of five concrete garden plans, each accompanied by explanations of all design elements. All plans are designed to be relatively low-maintenance and to support urban biodiversity. The choice of the 5 garden plans stems from the various barriers and drivers people experience regarding greening their gardens; see chapter 3. Each garden plan includes a short introduction and the specific garden components. All garden plans measure 5 by 9 metres, approximately the average garden size of the gardens in Voordijkshoorn & Afrikabuurt-West (GoogleMaps, 2026). Following this, you will find explanations on how to implement the various elements of the garden plans. In this way, residents are provided with concrete tools. At the end of the brochure, the subsidy plant list will be provided.

5.3.1 Introduction brochure

On the first page of the brochure, it is mentioned that it is made by Klimaatmaat & the Municipality of Delft. Next, it explains why you need to green. On the next page, the Green subsidy is introduced. Lastly, there is a piece about biological vegetation, why it is important and where to buy it.

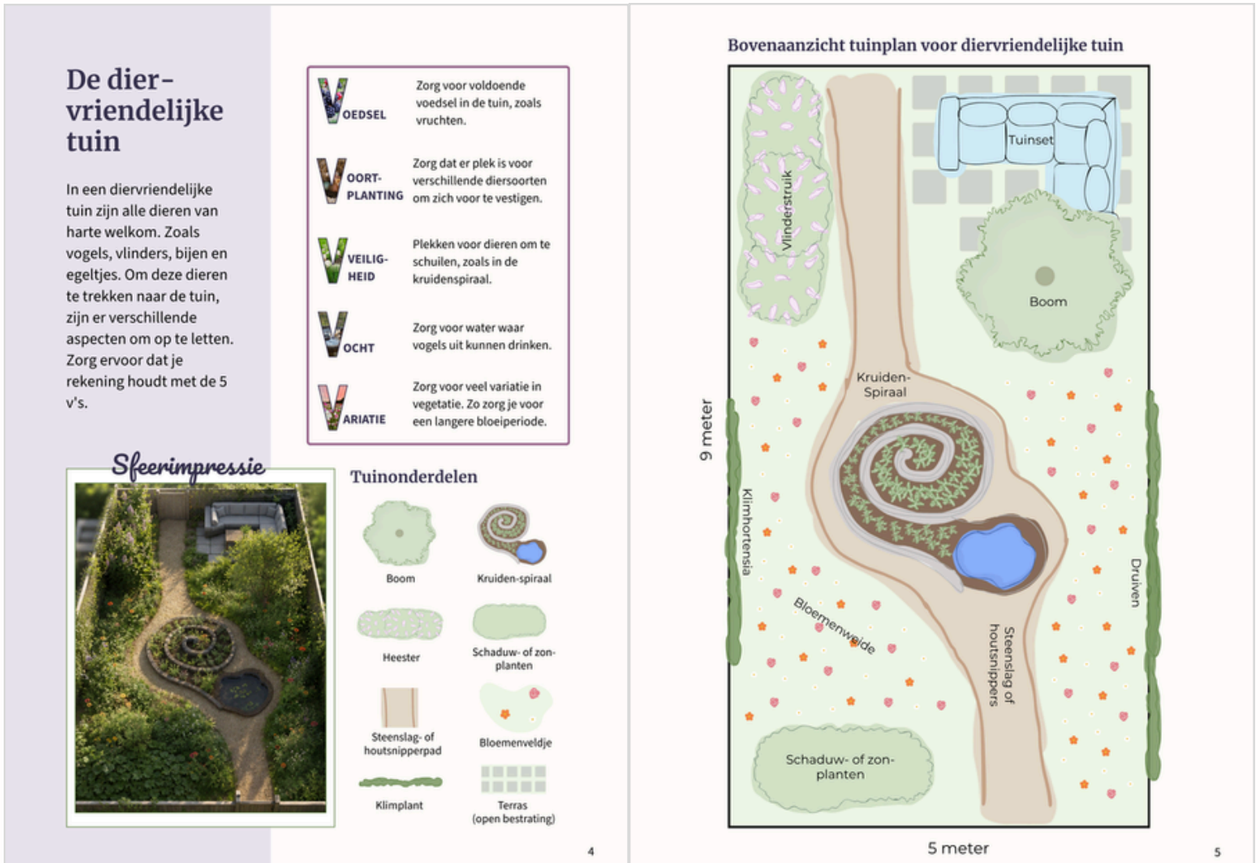


5.3.2 Diervriendelijke tuin (Biodiverse garden)

The "diervriendelijke tuin" is based on the residents' driver biodiversity. It is a garden for residents who like to have butterflies, birds and bees in their garden. For these animals and insects, it is important that the 5 V's are followed. These are food, reproduction, safety, water, and variation. The food is provided by the plants, flowers, trees, and herb spiral. Water for birds and shelter for insects is provided by the herb spiral as well. Variation in blooming periods is created by applying different flowers and plants.

Instructions pages

These pages explain what steps to take to plant the elements from the "diervriendelijke tuin" garden plan. Every garden plan has these 2 pages with elements from their garden plan. In this one, there are instructions for planting trees, plants, bushes, a flower field, a grass field and an herb spiral. Further, there is some information about permeable paving and a reminder to pay attention to whether your garden lies in the shadow or sun. Additionally, all plants used in the plan are put in a table with their blooming period, place in the garden and planting time.



De dier-vriendelijke tuin

In een diervriendelijke tuin zijn alle dieren van harte welkom. Zoals vogels, vlinders, bijen en egeltjes. Om deze dieren te trekken naar de tuin, zijn er verschillende aspecten om op te letten. Zorg ervoor dat je rekening houdt met de 5 v's.

VOEDSEL — Zorg voor voldoende voedsel in de tuin, zoals vruchten.

VOORT-PLANTING — Zorg dat er plek is voor verschillende diersoorten om zich voor te vestigen.

VEILIG-HEID — Plekken voor dieren om te schuilen, zoals in de kruidenspiraal.

VOCHT — Zorg voor water waar vogels uit kunnen drinken.

VARIATIE — Zorg voor veel variatie in vegetatie. Zo zorg je voor een langere bloeiperiode.

Sfeerimpressie

Tuinonderdelen

Bovenaanzicht tuinplan voor diervriendelijke tuin

Hoe voeren we dit plan uit?

Instructies

Bomen, planten & struiken

Instructies:

1. Graaf een ruim plantgat
2x de breedte en diepte van de wortelkluit (voor planten 1 cm diepte onder de wortels)
2. Meng de compost of bodemverbeteraar met de grond.
Bij zware kleigrond meng je fijn grind of grof zand mee.
3. Bescherm de wortels (bomen/struiken)
Dek ze af en dompel ze onderwater net voor het planten.
4. Plaats de boom
Gaas en jute NIET verwijderen. Pot wel.
5. Grond terug scheppen
Eerst ⅓ van de gemixte grond, daarna boom/plant/struik recht zetten en verder aanvullen
6. Boompaal plaatsen (alleen voor boom)
Op de windkant. Voor de helft in de grond plaatsen. De boomband in een 8 vorm aanbrengen op circa 5 cm onder de kop van de paal.

Bloemenveld/Gazon

Instructies:

1. Met stokjes en touw bepaal je de omtrek van je veld.
2. Spit de bomen om met spade (30cm).
3. Bemest het gazon.
4. Maak met een hark de grond vlak.
5. Zaai graszaad (en bloemen).

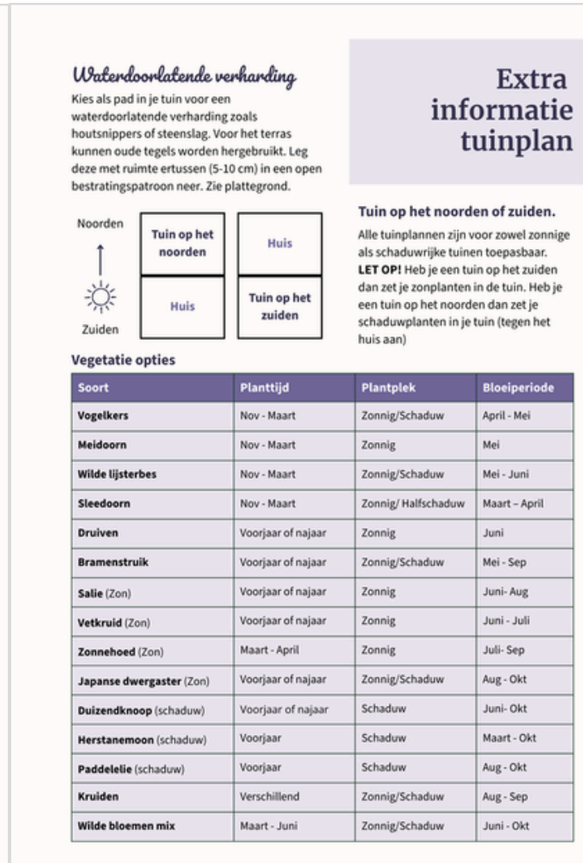
Het grasveld maai je regelmatig, een bloemrijk grasveld 1 tot 2 keer per jaar.

Kruiden spiraal

Door de spiraalvorm en het hoogteverschil ontstaan er verschillende microklimaatjes: droog, vochtig, zonnig en schaduw. Hierdoor kan je verschillende kruiden kan planten.

Instructies:

1. Stapel oude stenen met enkele ruimte ertussen (als schuilplaats voor de dieren) in de vorm van een spiraal, zie foto.
2. Vul de spiraal met aarde
3. Zaai kruiden op basis van de microklimaatjes.



Waterdoorlatende verharding

Kies als pad in je tuin voor een waterdoorlatende verharding zoals houtsnippers of steenslag. Voor het terras kunnen oude tegels worden hergebruikt. Leg deze met ruimte ertussen (5-10 cm) in een open bestratingspatroon neer. Zie plattegrond.

Extra informatie tuinplan

Tuin op het noorden of zuiden.

Alle tuinplannen zijn voor zowel zonnige als schaduwrijke tuinen toepasbaar.
LET OP! Heb je een tuin op het zuiden dan zet je zonplanten in de tuin. Heb je een tuin op het noorden dan zet je schaduwplanten in je tuin (tegen het huis aan)

Vegetatie opties

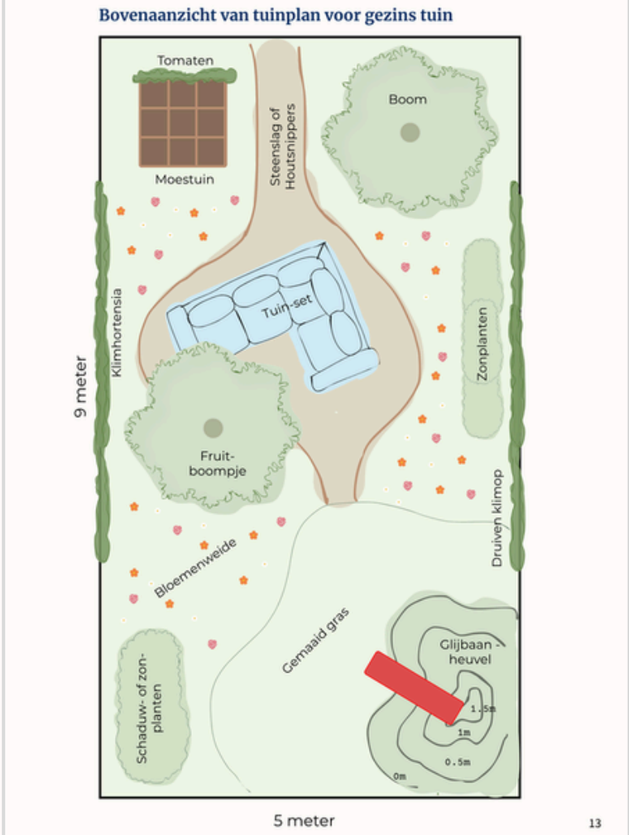
Soort	Planttijd	Plantplek	Bloeiperiode
Vogelkers	Nov - Maart	Zonnig/Schaduw	April - Mei
Meidoorn	Nov - Maart	Zonnig	Mei
Wilde lijsterbes	Nov - Maart	Zonnig/Schaduw	Mei - Juni
Sleedoorn	Nov - Maart	Zonnig/ Halfschaduw	Maart – April
Druiven	Voorjaar of najaar	Zonnig	Juni
Bramenstruik	Voorjaar of najaar	Zonnig/Schaduw	Mei - Sep
Salie (Zon)	Voorjaar of najaar	Zonnig	Juni- Aug
Vetkruid (Zon)	Voorjaar of najaar	Zonnig	Juni - Juli
Zonnehoed (Zon)	Maart - April	Zonnig	Juli- Sep
Japanse dwergaster (Zon)	Voorjaar of najaar	Zonnig/Schaduw	Aug - Okt
Duizendknoop (schaduw)	Voorjaar of najaar	Schaduw	Juni- Okt
Herstanemoon (schaduw)	Voorjaar	Schaduw	Maart - Okt
Paddelelie (schaduw)	Voorjaar	Schaduw	Aug - Okt
Kruiden	Verschillend	Zonnig/Schaduw	Aug - Sep
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

5.3.3 Eetbare tuin (Eatable garden)

The "eetbare tuin" is based on the driver that people are motivated to grow their own food. In this garden are vegetable gardens, 2 fruit trees, a herb spiral, fruit climbers, and some additional plants. Furthermore, it explains how to make the vegetable garden boxes. For the instruction pages, see the whole brochure in Appendix F

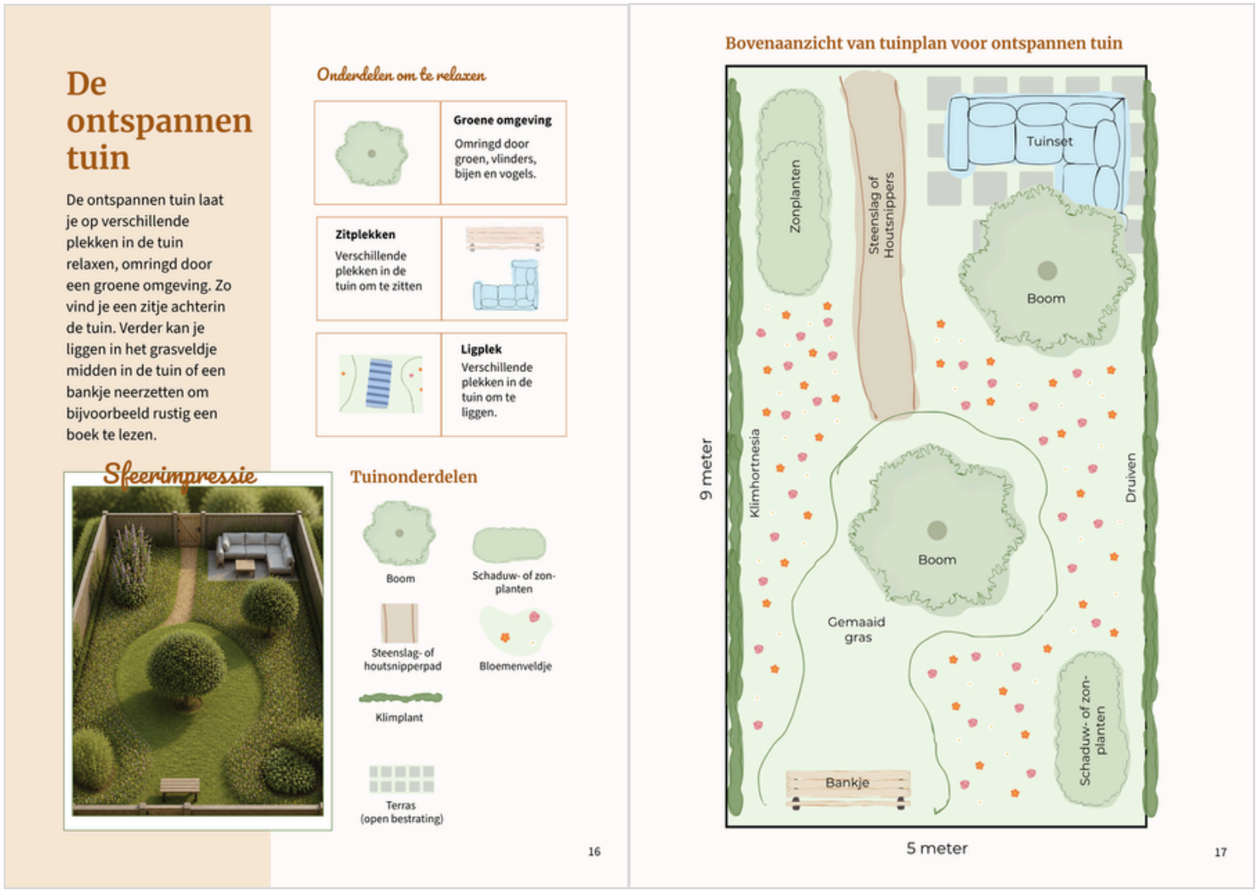
5.3.4 Gezinstuin (family garden)

The "gezinstuin" is based on the residents' motivation to have a place for children to play in their garden. This garden has a small hill for children to play on and some elements for growing food for the children's education, like the vegetable garden, fruit tree and grapes. The seating area is placed in the middle so the parents can sit while their children play around them. For the instructions pages, see Appendix F.



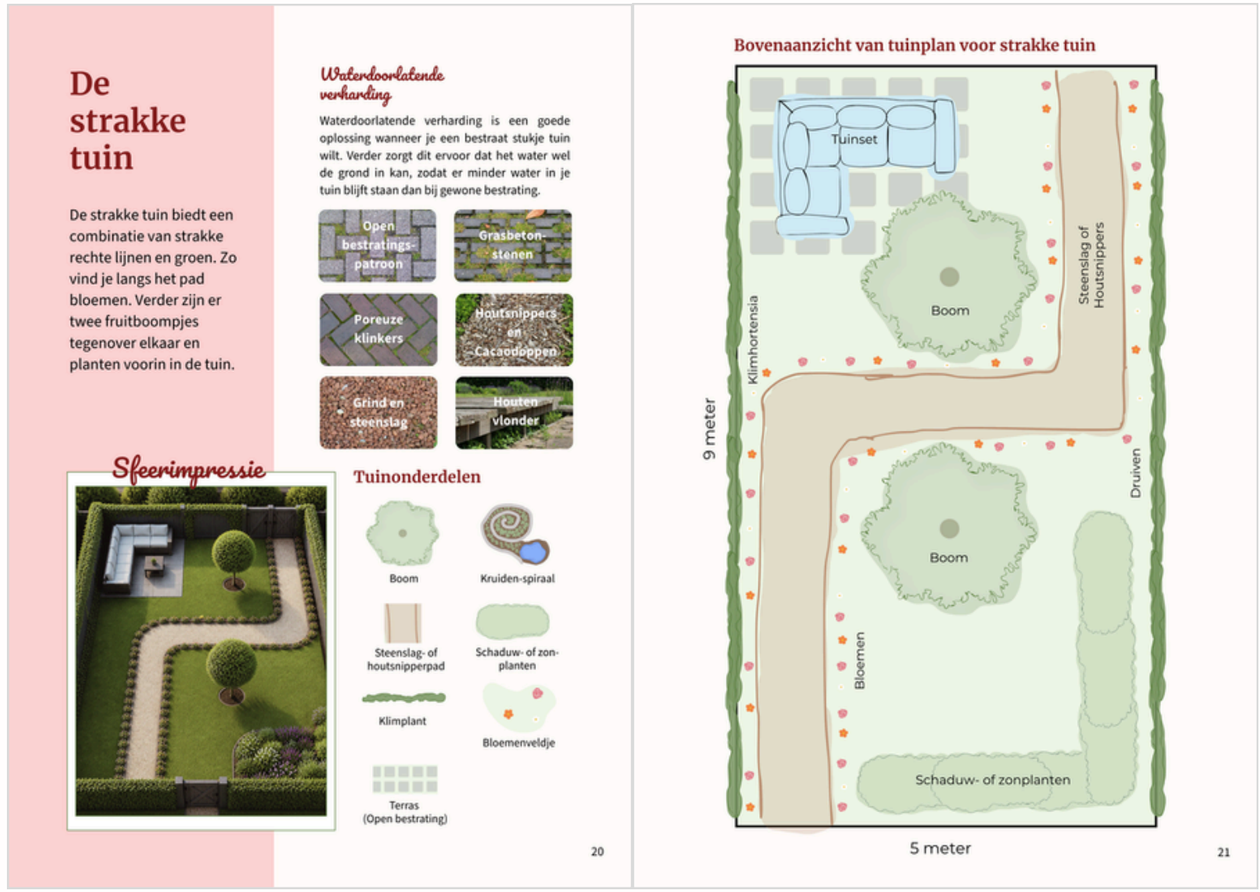
5.3.5 Ontspannen tuin (Relaxing garden)

The "ontspannen tuin" is based on the idea of relaxing in a garden. In this garden, there are several places to relax. There is a seating area in the corner, a grass field in the middle and an additional bench could be placed at the other end of the garden. Further, you can find a lot of green in this garden to provide a calm atmosphere. For the instruction pages, see Appendix F.



5.3.6 Strakke tuin (Sleek garden)

The "strakke tuin" is for people who like a neat and sleek garden. This garden achieves its character through straight path lines and a symmetrical layout. Further, there is a more in-depth explanation of the permeable paving options. This is based on the assumption from residents that a neat garden is tiled; by using permeable paving, they can have paving that is better for the heat in the garden and the city. For the instruction pages, see Appendix F.



5.3.7 Wet and dry gardens

Sometimes, the plants do not seem to grow. When this is the case it could be the garden is too wet or too dry for those plants. Therefore this page provides additional information on what plants to plant is those situations.

Wat als het niet werkt?

Soms groeien planten niet zoals je wilt. Door de juiste plant op de juiste plek te zetten, geef je ze de beste kans om te groeien.

Natte tuin

Wanneer je een erg natte tuin hebt kan het zijn dat niet alle planten even goed groeien. Hieronder vind je een lijst met planten die het goed doen met een natte ondergrond.

Hartelelie | Vrouwenmantel | Daglelie | Tongskruid

Dubbelloof varen | Kattenstaart | Wederik | Pluimspireae

Droge tuin

Wanneer je een erg droge tuin hebt kan het zijn dat niet alle planten even goed groeien. Hieronder vind je een lijst met planten die het goed doen met een natte ondergrond.

Vetkruid | Vetkruid | Vetkruid | Rozemarijn

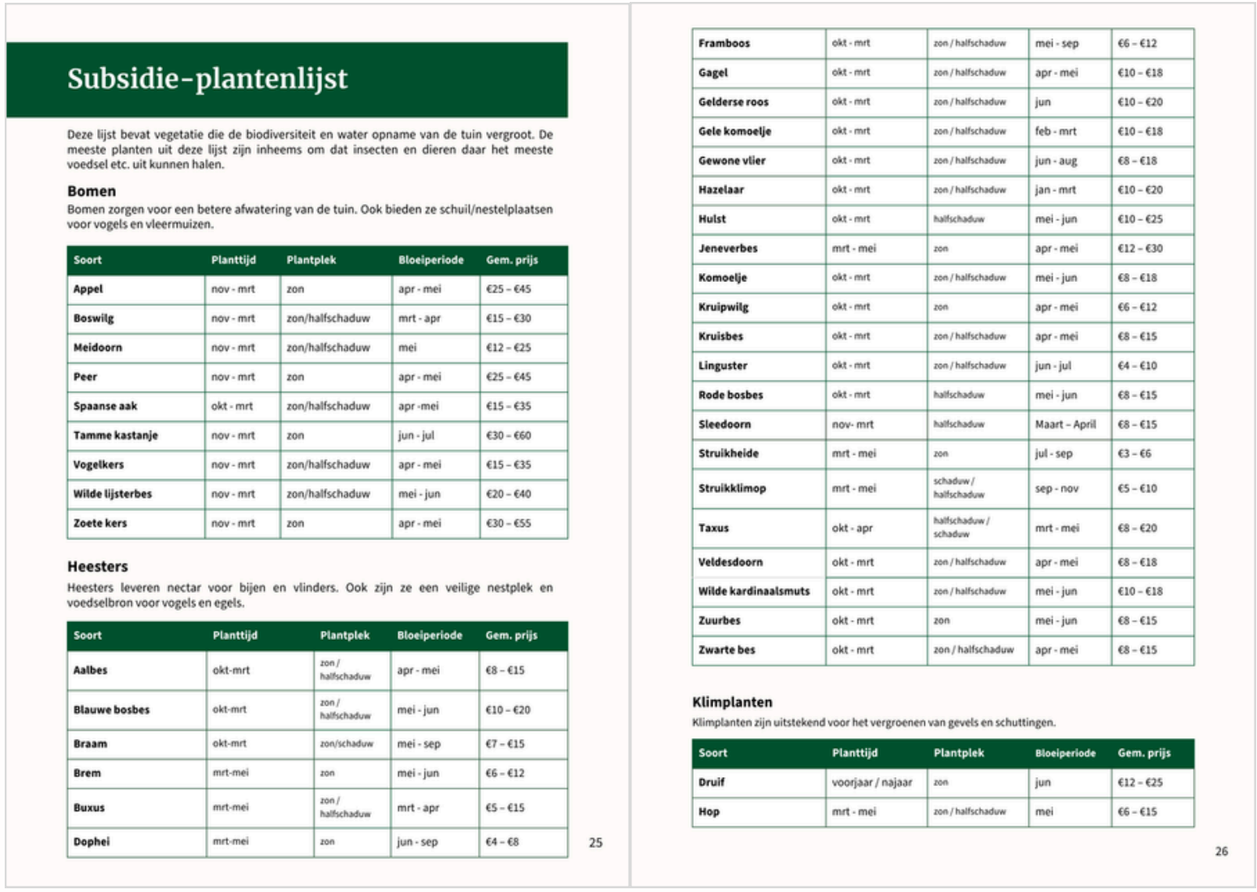
Sedum spathulifolium 'Cape Blanco' | Sedum cauticola 'Lidakense' | Sedum cauticola 'Lidakense'

Schoenlappersplant | Vetkruid | Vetkruid | Vetkruid

Sedum 'Carl' | Sedum 'Makinoi' | Sedum album 'Coral Carpet'

5.3.7 Plantlist

At the end of the brochure, the subsidy plant list can be found. These are the plants residents can choose from when greening their gardens. See the whole plant list in Appendix F.



Subsidie-plantenlijst

Deze lijst bevat vegetatie die de biodiversiteit en water opname van de tuin vergroot. De meeste planten uit deze lijst zijn inheems om dat insecten en dieren daar het meeste voedsel etc. uit kunnen halen.

Bomen

Bomen zorgen voor een betere afwatering van de tuin. Ook bieden ze schuil/nestelplaatsen voor vogels en vleermuizen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Appel	nov - mrt	zon	apr - mei	€25 – €45
Boswilg	nov - mrt	zon/halfschaduw	mrt - apr	€15 – €30
Meidoorn	nov - mrt	zon/halfschaduw	mei	€12 – €25
Peer	nov - mrt	zon	apr - mei	€25 – €45
Spaanse aak	okt - mrt	zon/halfschaduw	apr -mei	€15 – €35
Tamme kastanje	nov - mrt	zon	jun - jul	€30 – €60
Vogelkers	nov - mrt	zon/halfschaduw	apr - mei	€15 – €35
Wilde lijsterbes	nov - mrt	zon/halfschaduw	mei - jun	€20 – €40
Zoete kers	nov - mrt	zon	apr - mei	€30 – €55

Heesters

Heesters leveren nectar voor bijen en vlinders. Ook zijn ze een veilige nestplek en voedselbron voor vogels en egels.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Aalbes	okt-mrt	zon / halfschaduw	apr - mei	€8 – €15
Blauwe bosbes	okt-mrt	zon / halfschaduw	mei - jun	€10 – €20
Braam	okt-mrt	zon/schaduw	mei - sep	€7 – €15
Brem	mrt-mei	zon	mei - jun	€6 – €12
Buxus	mrt-mei	zon / halfschaduw	mrt - apr	€5 – €15
Dophei	mrt-mei	zon	jun - sep	€4 – €8

Framboos	okt - mrt	zon / halfschaduw	mei - sep	€6 – €12
Gagel	okt - mrt	zon / halfschaduw	apr - mei	€10 – €18
Gelderse roos	okt - mrt	zon / halfschaduw	jun	€10 – €20
Gele komoelje	okt - mrt	zon / halfschaduw	feb - mrt	€10 – €18
Gewone vlier	okt - mrt	zon / halfschaduw	jun - aug	€8 – €18
Hazelaar	okt - mrt	zon / halfschaduw	jan - mrt	€10 – €20
Hulst	okt - mrt	halfschaduw	mei - jun	€10 – €25
Jeneverbes	mrt - mei	zon	apr - mei	€12 – €30
Komoelje	okt - mrt	zon / halfschaduw	mei - jun	€8 – €18
Kruipwilg	okt - mrt	zon	apr - mei	€6 – €12
Kruisbes	okt - mrt	zon / halfschaduw	apr - mei	€8 – €15
Linguster	okt - mrt	zon / halfschaduw	jun - jul	€4 – €10
Rode bosbes	okt - mrt	halfschaduw	mei - jun	€8 – €15
Sleedoorn	nov- mrt	halfschaduw	Maart – April	€8 – €15
Struikheide	mrt - mei	zon	jul - sep	€3 – €6
Struikklimop	mrt - mei	schaduw / halfschaduw	sep - nov	€5 – €10
Taxus	okt - apr	halfschaduw / schaduw	mrt - mei	€8 – €20
Veldesdoorn	okt - mrt	zon / halfschaduw	apr - mei	€8 – €18
Wilde kardinaalsmuts	okt - mrt	zon / halfschaduw	mei - jun	€10 – €18
Zuurbes	okt - mrt	zon	mei - jun	€8 – €15
Zwarte bes	okt - mrt	zon / halfschaduw	apr - mei	€8 – €15

Klimplanten

Klimplanten zijn uitstekend voor het vergroenen van gevels en schuttingen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Druif	voorjaar / najaar	zon	jun	€12 – €25
Hop	mrt - mei	zon / halfschaduw	mei	€6 – €15

5.3.8 Extra information

On the last page, reference is made to the municipality of Delft for the green subsidy. For extra information about gardening and practical support, refer to Klimaatmaat and the sustainability centre De Papaver.

Extra informatie

Subsidie

Voor meer informatie over de subsidie kunt u terecht bij de gemeente Delft. Op deze website staan alle eisen die gelden voor de groen subsidie. Ook kunt u daar een plantenlijst vinden met alle vegetatie die onder deze subsidie valt. LET OP! U kunt alleen subsidie krijgen voor planten die bij een biologische teler of een tuincentrum worden gekocht die geen bestrijdingsmiddelen gebruiken.

https://www.delft.nl/groensubsidie-gemeente-delft

Gemeente Delft

Informatie over tuinieren

Voor meer informatie over hoe verschillende onderdelen van de tuinplannen uit te voeren zijn of andere vragen over tuinieren kunt u terecht bij Klimaatmaat. Dit kan via de website of op hun locatie in Duurzaamheidscenturm de Papaver.

https://klimaatmaatdelft.nl/maatregelen/

Duurzaamheidscentrum De Papaver
Korftlaan 6
2616 LJ Delft

DE KLIMAAT MAAT

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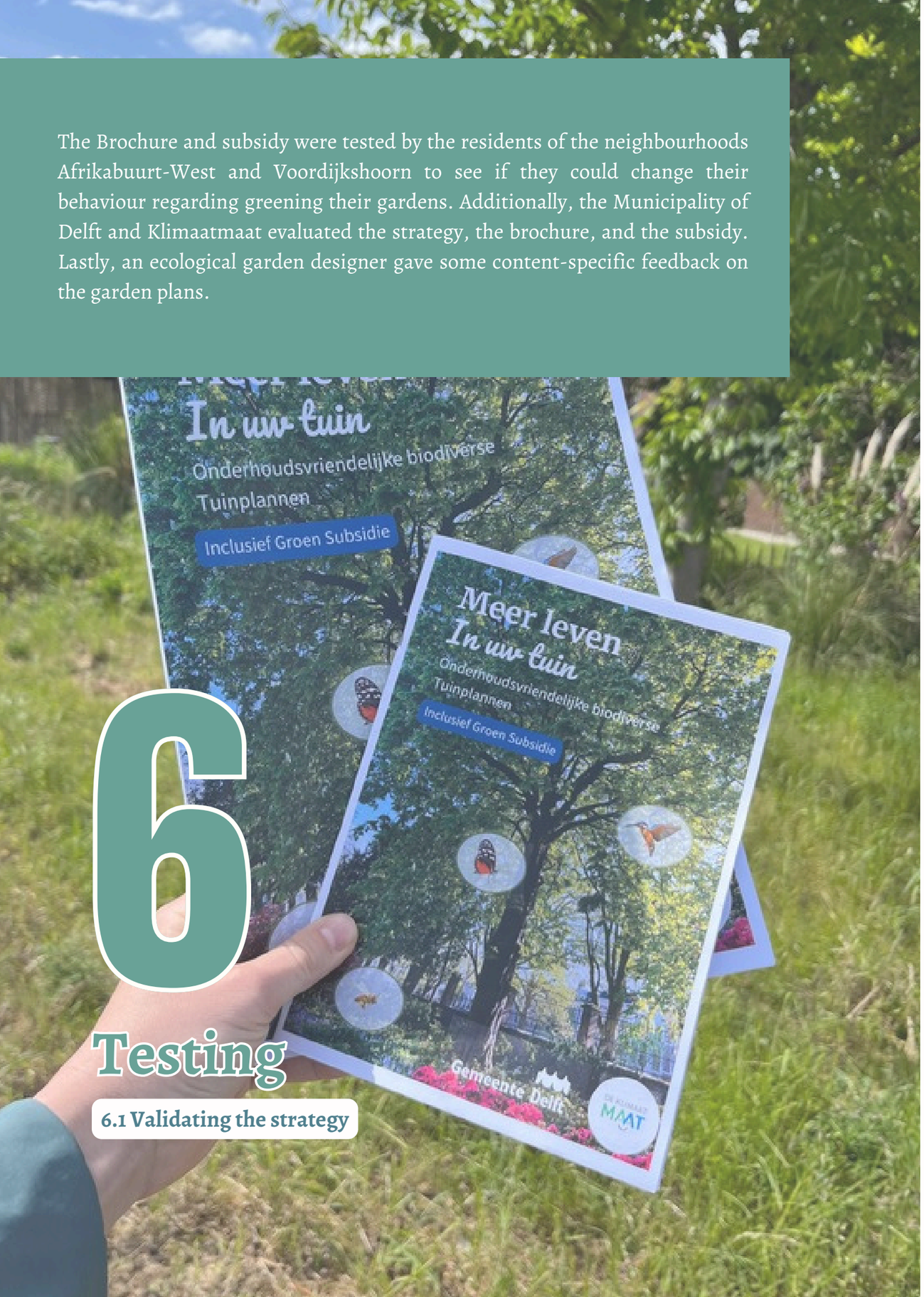

The Brochure and subsidy were tested by the residents of the neighbourhoods Afrikabuurt-West and Voordijkshoorn to see if they could change their behaviour regarding greening their gardens. Additionally, the Municipality of Delft and Klimaatmaat evaluated the strategy, the brochure, and the subsidy. Lastly, an ecological garden designer gave some content-specific feedback on the garden plans.

6 Testing

6.1 Validating the strategy

6.1 Validating the strategy

To test whether the brochure and subsidy could change the behaviour of garden owners to green their gardens, a theory of planned behaviour questionnaire was set up. This questionnaire tests the theory's major constructs: attitude, perceived norm, perceived behavioural control, and intention, with seven-point bipolar adjective scales (Ajzen, 2006). See Appendix G, for the full questionnaire.

First, the behaviour of greening gardens is defined by switching tiles for green for at least 10m² within a year. This can be done alone or with neighbours. 20 people in total, from the neighbourhoods Afrikabuurt-West and Voordijkshoorn, have taken the questionnaire. See Table 8 for the results.

6.1.1 Results resident interviews

The results show the combination of the brochure with subsidy leads to a slightly positive intention of greening, with a score of 4.38/7. The attitude (5,82/7) & perceived behavioural control (5,38) were scored quite high. This means the participants find greening their gardens with the help of the brochure and subsidy good and pleasant. Additionally, this means that they overall thought they would be able to follow the instructions of the brochure and apply for a subsidy. Furthermore, the participants scored the perceived norm (4,58/7) slightly positive, which means they slightly think their neighbours would find it good if they green their gardens and expect their neighbours to green their gardens with the brochure.

Difference in neighbourhoods
The biggest difference in the neighbourhoods was the intention scores. Afrikabuurt-West has a neutral intention of 3.4/7. While Voordijkshoorn has a high intention of 5,35/7 of greening their garden due to the brochure and subsidy.

Brochure
To see if the scores differ for the brochure and subsidy, they have been calculated as well. For the brochure, the perceived behavioural control score (5,8/7) and attitude (5,81/7) are high as well. For attitude, it was also tested whether they thought the brochure was low in maintenance (5.2/7) and biodiverse (5,8), overall they mostly agreed with both these statements. Both the perceived norm (4,85/7) and intention (4,5/7) were scored slightly positively.

Difference in neighbourhoods
For the brochure, the biggest difference in scores within neighbourhoods was the intention scores. Afrikabuurt-West has a neutral intention of 3.6/7. While Voordijkshoorn has a higher intention of 5/7 of greening their garden due to the brochure. Additionally, there is a difference in the perceived behavioural control. Voordijkshoorn scored this a bit higher than Afrikabuurt-West as well.

Subsidy
For the subsidy, the scores for high attitude (5,83/7) and perceived norm (5,45/7) were the highest. The perceived control of the subsidy

(4,95/7) was quite lower than with the brochure (5,8/7). This means people are more able to handle the instructions for the garden plans than applying for a subsidy. The intention of applying the subsidy is slightly positive.

Difference in neighbourhoods
The biggest difference in neighbourhoods is for the subsidy, as well as the intention to green. The Afrikabuurt-West scored the intention slightly negative (3,2/7), while Voordijkshoorn scored the intention to apply for a subsidy within one year high. There is also a difference in the perceived behavioural control; Voordijkshoorn (5,2/7) has a high perceived behavioural control, while Afrikabuurt-West (4,2/7) only has a slightly positive perceived behavioural control. The attitude towards greening of Voordijkshoorn residents (6/7) is also higher than the attitude of Afrikabuurt-West residents (5,65/7).

Table 8: Results theory of planned behaviour questionnaire

Elements	Attitude	Perceived norm	Perceived behavioural control	Intention	Overal score
brochure & subsidie	5,82	4,85	5,38	4,38	5,1
brochure & subsidie Afrikabuurt-West	5,82	4,95	5,15	3,4	4,83
brochure & subsidie Voordijkshoorn	5,82	4,75	5,6	5,35	5,38
Brochure both Neighbourhoods	5,81	4,85	5,8	4,3	5,19
Brochure Afrikabuurt-West	5,9	4,95	5,6	3,6	5,01
Brochure Voordijkshoorn	5,73	4,75	6	5	5,37
Subsidy both neigbhourhoods	5,83	5,45	4,95	4,45	5,17
Subsidy Afrikabuurt-West	5,65	5,5	4,7	3,2	4,76
Subsidy Voordijkshoorn	6	5,4	5,2	5,7	5,58

Additional questions

Some additional questions were asked in the questionnaire to test the details of the brochure.

Preferred brochure size
The participants have been asked if they prefer an a4 sized or a5 sized brochure. The results showed no clear preference between the two formats (see Figure 19).

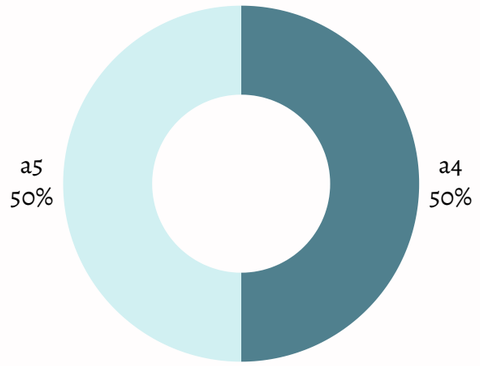

Figure 19: Preferred brochure size

Order of Preferred garden plans
Additionally the participants arranged the garden plans in order: the garden plan they would implement first at 1, and the garden plan you would implement last at 5. The results show the people prefer the "ontspannen tuin" and "Diervriendelijke tuin". The "Strakke tuin" is Preferred the least, see Figure 20.

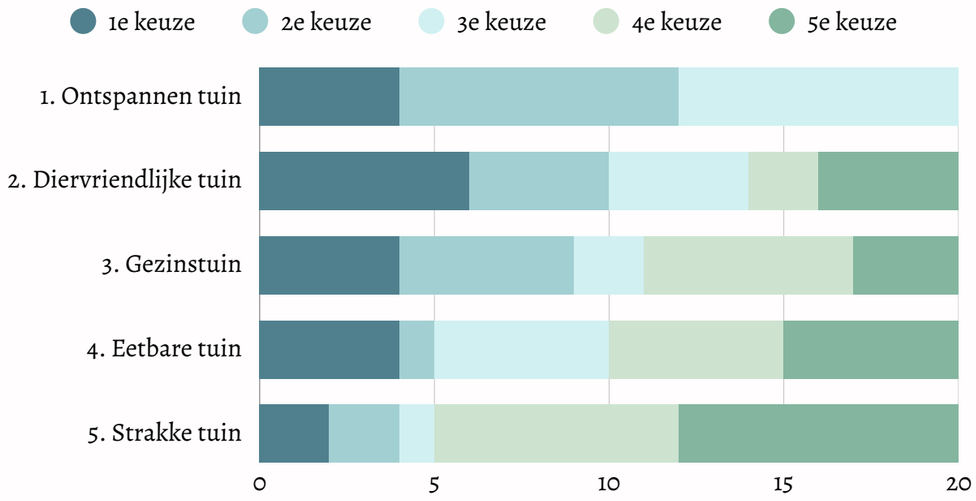

Figure 20 : order of garden plans

Residents first choices

The residents have been asked to explain why they chose a specific garden plan as their first choice. See Figure 21 for the coded categories and codes (Atlas.ti) from the interviews. The "ontspannen tuin" has been chosen mostly because people want to relax in their garden. For the "diervriendelijke tuin" luring birds & insects and biodiversity are the drivers. For the "gezinstuin", children are the main reason. The "eetbare tuin" is mostly chosen because you can eat from the garden. For the "strakke tuin", reasons named are a neat garden, a sleek garden and minimal maintenance.

Additional comments

The participants gave several additional comments on the brochure and subsidy; see the Figure 22 for a coded overview. Most comments were made about the brochure, adding several extra elements like a shed, a low-maintenance garden plan, an extra garden size option, extra practical tips and more examples of garden plans. Additionally, there was a tip to add a photo platform where you can upload your greened garden and see other gardens as well. A technical tip was to use thicker paper. Furthermore, some said that they would prefer the subsidy to be a bit higher. Lastly, as a top resident mentioned, it is a clear brochure.

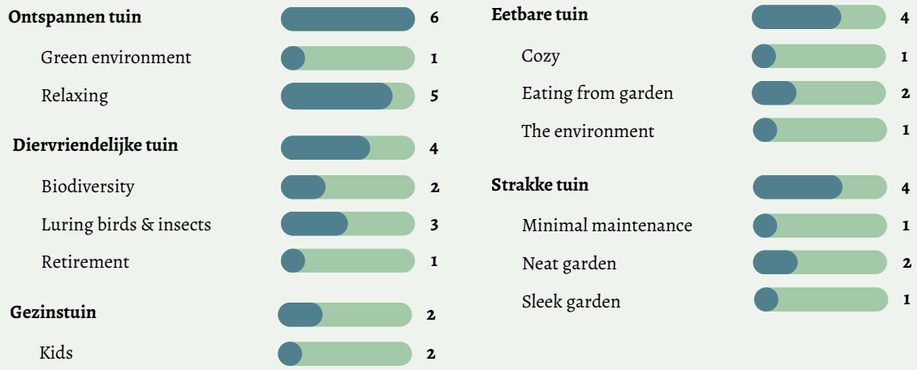

Figure 21: Residents first choices

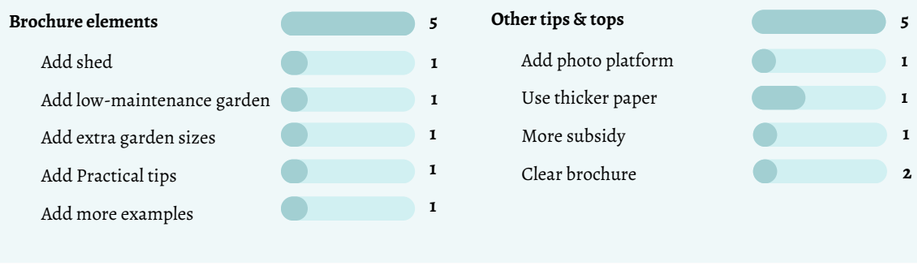

Figure 22: additional comments

6.1.2 Evaluation experts

Feasability

The urban ecologist and climate adaptation advisor of the Municipality of Delft were asked to score the strategy, subsidy and brochure on feasibility. The project leader of Klimaatmaat scored the brochure on its feasibility. Both the municipality and Klimaatmaat scored the feasibility of the brochure quite high. The subsidy scored a 7 by the municipality of Delft; however, at this moment there is no money for this subsidy (K. van Etten & D. Tubbing, personal communication, 2026). The strategy as a whole scored lower because of this as well. The strategy and subsidy did not get a negative score despite the lack of money because there is a big urge for greening private gardens in Delft because of the EU law the municipality needs to obey.

Feasibilityscored by municipality

Feasibilityscored by Klimaatmaat

Other insights

Brochure content improvements

The municipality and Klimaat gave feedback on the strategy, the brochure and the subsidy. Their answers are coded into themes with Atlas.ti; see Appendix H. Most comments were about the content of the brochure. The biodiversity of the garden plans can be increased, as well as the climate adaptation. Water storage can be added to the plans for both these aspects. Furthermore, the safety for birds and hedgehogs could be improved by adding birdhouses and wild corners with branches and natural compost. Furthermore, there could be some bigger trees to increase biodiversity and shade.

Klimaatmaat mentioned furthermore that there could be some plans for smaller gardens. Additionally, there are some garden design details to play into the feeling of garden owners, for example, adding symbols of biodiversity, climate adaptation and experience.

Size and readability

For the size, the municipality prefers A5 because it is cheaper and more sustainable. People who can't read it can zoom in on the online version. Furthermore, they mentioned that they like the current flow of the brochure, as it reads nicely.

Subsidy

Practicalities

The municipality mentioned that 10 m2 would probably be too little for the subsidy, as it is a lot of work to review the subsidy. More m2 would be more feasible. Additionally, because of the workload, they suggest working with the plant list as an example instead of a criterion. The criteria could then be that the subsidy is only for biological plants.

Other subsidy

The Klimaatmaat suggested looking into whether it is possible to get a subsidy in another way, as it could be valuable for residents. For example, with a subsidy at the provincial level, such as in South Holland.

Strategy

For the strategy, they suggest starting the campaign at the beginning of March, as people often need some time to think before really greening their gardens. This way, they are still on time to plant the first vegetation types in the spring and summer. Klimaatmaat mentioned that for future application of the strategy, the brochure is more feasible than the subsidy because of the shortage of money. Furthermore, the municipality mentioned that the brochure could stand on its own, while the subsidy would need the brochure.

Communication

For more practical support, they could refer to the actions of Klimaatmaat, as their focus is on helping residents green their gardens. Furthermore, Klimaatmaat thinks that spreading the brochure would connect well with their current work and is a nice way to reach residents.

Tips from Ecological garden designer

The ecological garden designer gave tips per garden plan. These tips have been coded into code categories with ATLAS.ti; see Figure 23. Additionally, she gave some overall tips, like that most people have a shed in their garden, grass should be planted in the sun, and field flowers can be planted in the shade as well. Lastly, she added that there could be a bit more variety in vegetation in the garden plans.

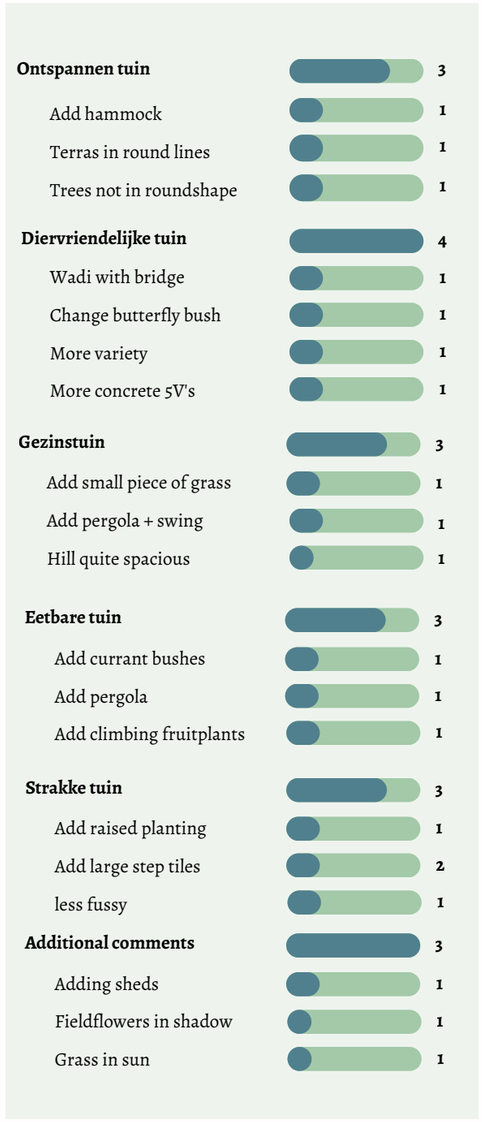

Figure 23: Garden designer's tips

This chapter presents the conclusions of this research and reflects on the developed strategy. First, the four research questions are answered and the extent to which the design goal has been achieved is discussed. Subsequently, the findings are interpreted in relation to existing literature and the practical context of greening private gardens in Delft. The limitations of the research are then addressed. Finally, recommendations are provided for future research.

7 Conclusion

7.1 Discussion

The design goal of this project is: Designing a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens. This question was guided by investigating how drivers and barriers of garden owners and municipal policy instruments can be integrated into a strategy that increases vegetation in private gardens in Delft. This resulted in the campaign: More Life in Your Garden, based on the behavioural change model: COM-B (Moxon et al., 2023; Niess et al., 2026). The campaign creates opportunity, motivation, and capability by offering two concrete tools: the garden plan brochure and the green subsidy. To test if this strategy aims to bridge the intention-action gap, it has been tested against the theory of planned behaviour (Martens et al., 2025). Additionally it has been validated by experts on several aspects, including feasibility.

Desirability

The desirability is tested through residents attitude and perceived norm and intention towards greening their private gardens due to the campaign.

The results show that the attitude towards greening is high due to the brochure and subsidy (5.82/7). This means that residents consider greening with the help of the brochure and subsidy to be "good and pleasant". Furthermore, the perceived norm is slightly positive (4.58/7). For attitude and perceived norm, the difference in scores between the two neighbourhoods is minimal. However, there is a striking difference between the two neighbourhoods regarding the intention to take action in response to the brochure and subsidy. The Afrika-buurt has a neutral intention (3.4/7), while the Voordijkshoorn has a high intention (5.35/7). This finding is consistent with the findings of Stobbelaar et al. (2021). Literature suggests that socioeconomic factors such as education and income can influence the motivation to green. The residents of Afrikabuurt-West earn less and have a lower level of education than those of the Voordijkshoorn. This could suggest that the subsidy is too low, as one of the participants from this neighbourhood indicated. One participant from Afrikabuurt-West scored their intention 1/7, which may represent an outlier. However, removing this score did not substantially change the neighbourhood mean, which remained below the neutral midpoint of 4/7 (see Appendix G). This confirms that the campaign's limited effectiveness in Afrikabuurt-West is not an artefact of a single extreme response.

Feasability

The Municipality of Delft and Klimaatmaat have assessed the feasibility of the strategy, brochure, and subsidy.

The brochure received the highest score, averaging 8/10. The municipality rated the subsidy 7/10 if funding were available. It would receive a higher feasibility rating if the plant list were not mandatory, but used as inspiration instead. Furthermore, the municipality considers the minimum of 10m² of greening required for the subsidy to be too low due to the work and costs involved. However, no funds are currently

available, which is why they also gave the feasibility of the entire strategy a 6. The municipality does consider it strategic to launch the campaign in March. Additionally, they state that the brochure could be produced without the subsidy, but the subsidy is not feasible without it. This is because, once the subsidy becomes available, people will also need practical support to take action. For residents, applying for the subsidy and carrying out the greening using the instructions is feasible. They scored the perceived behavioural control average at 5.8/7.

Viability
The viability of the strategy is driven by the European Nature Restoration Act. This act obligates the Municipality of Delft to preserve and expand urban greenery. The campaign More Life in Your Garden could contribute a great deal to this. However, there is currently insufficient funding within the Municipality of Delft to develop the subsidy. Perhaps funds will become available at a later stage. For now, Klimaatmaat also estimates that the likelihood of proceeding with the brochure rather than the subsidy, or a combination of both, is highest. However, Klimaatmaat indicated that there might be a possibility of a provincial subsidy.

7.1.1 Limitations

This study has some limitations that should be taken into account when interpreting the findings. The test of whether the campaign could induce behavioural change was conducted with 20 people from two neighbourhoods in Delft. This means the results should be interpreted as indicative rather than statistically representative. To make the test results more reliable, I would recommend a larger number of participants.

7.1.2 Contribution to literature

Previous studies have identified a range of drivers and barriers influencing garden greening behaviour, however this research combined these into one overview of multipleidentified drivers and barriers. Additionally, this research demonstrate how these drivers and barriers can be translated into a behavioural strategy using the COM-B model and the Theory of Planned Behaviour. Concluding the findings of this research contribute to a better understanding of how behavioural theories can be applied in the context of private garden greening and climate adaptation.

7.2 Conclusion

This research aimed to design a strategy that bridges the intention-action gap of garden owners regarding greening their gardens. With an overarching goal of decreasing the heat stress in Delft. To achieve this, four research questions were addressed.

RQ1: Which drivers and barriers influence private garden owner's behaviour regarding garden greening?

The results from the systematicliterature review and resident surveys showed that residents are motivated to green their gardens through factors like, biodiversity, the joy and relaxation a green garden brings, sustainability. Biodiversity was scored the highest by the residents in Delft. However the results also showed several barriers that withheld residents from greening such as high maintenance, costs, lack of time and not having the knowledge or skills to green. These barriers are contributing to the identified intention-action gap, where residents do like the idea of greening but do not necessarily take action.

RQ2: What municipal policy instruments and strategies are currently employed in major Dutch municipalities to encourage garden greening?

At the moment most Dutch municipalities use several instruments and strategies which they deploy to sustainability organisations. These strategies aim to stimulate their residents to green. They organise several activities and initiatives like workshops, subsidies, free plants, awareness campaigns and tile taxis. The municipality of Delft has deployed the Klimaatmaat, a sustainable organisation in Delft to motivate the residents to green. They have, for example, climate buddies: volunteers who provide knowledge and practical support to residents of Delft.

RQ3: How do existing municipal policy instruments and strategies align with the identified drivers and barriers of garden owners?

The analysis in chapter 3.3 showed that Delft's policy instruments apply several of the identified barriers and drivers in their strategies, however every driver or barrier can be even more integrated to increase the effectiveness. Furthermore, some drivers and barriers rarely are taken into account like: maintenance, garden functionalities, emotional motivations, communication and regulation.

RQ4: How can drivers and barriers of garden owners and policy instruments be integrated into a strategy that aims to increase vegetation in private gardens in Delft?

Drivers, barriers, and municipal instruments can be integrated by combining practical guidance, financial support, and motivational benefits into a strategy. By addressing the barriers of lack of knowledge, skills, and inspiration, while activating drivers such as biodiversity and relaxation resulted in the campaign More Life in Your Garden, consisting of a brochure with five concrete garden plans and a green subsidy. The brochure increases

residents' capability and opportunity by providing clear instructions and examples, while the subsidy reduces financial barriers and creates opportunities for action. Together, these elements address the capability, opportunity, and motivation required for behavioural change.

The design goal

Designing a strategy that aims to bridge the intention-action gap of garden owners regarding greening their gardens.

The overall goal of this research has been tested with the Theory of planned behaviour model. The results showed the campaign " More Life in Your Garden ", consisting of the brochure and subsidy, appears to score largely positively on the factors leading to behavioural change according to the theory of planned behaviour. For instance, Afrikabuurt-West and Voordijkshoorn scored their attitude towards greening through the brochure and subsidy at 5.82/7 and their perceived behavioural control at 5.38/7. However, the intention itself is only slightly positive (4.38/7). There is also a significant difference between neighbourhoods; in Afrikabuurt-West, the intention to green through the brochure and subsidy is neutral, while Voordijkshoorn has a high intention to green (5.35). These results indicate that the campaign 'More Life in Your Garden' achieves a slight overall bridging of the intention-action gap when data from both neighbourhoods are combined (4.38/7). However, this effect is substantially stronger in Voordijkshoorn (5.35/7) than in Afrikabuurt-West (3.4/7), where the intention remains neutral. It can therefore be indicated that the strategy is more effective in higher-income, higher-education neighbourhoods.

7.3 Recommendations

Future research could test the proposed strategy on a larger scale. For example in all paved neighbourhoodsin Delft, to see it could bridge the intention-action gap of multiple residents.

Furthermore, for the strategy to reach its full potential, some form of financial support system is essential. The possibility of a provincial subsidy could be explored from the Province of South Holland. As the financial support combined with practical support is supposed to have the most effect. However, when this is not possible, spreading the brochure on its own has still effect on bridging the intention-action gap as shown in the results.

Additionally, future iterations of the strategy should explore ways to make the campaign more effective in lower-income neighbourhoods, for example by increasing the subsidy amount or partnering with community organisations already active in Afrikabuurt-West.

Lastly, to improve the brochure extra elements such as sheds and rain barrels could be added to a subsequent iteration of the brochure; this was suggested by both the residents and the ecological garden designer. The biodiversity of the garden plans could also be increased. In the plans could be for example, bird houses to provide a place to take shelter in the gardens. As a final suggestion to increase the climate adaption of the garden plans, more sources of water can be added to the garden plans.

7.4 Reflection

This graduation project has contributed both to my development as a designer and to my personal growth. At the start of this academic year, I was still very uncertain about what kind of job I wanted after graduation and what topic I wanted to focus on for my graduation project.

Despite these doubts, I started by taking small steps towards defining my graduation subject. By continuously reflecting on what interested me most, I gradually narrowed my focus from sustainability and social design to heat stress and ultimately the greening of private gardens. I chose private gardens because they are one of the most difficult spaces to influence by the municipality. Looking back, I am proud that I was able to define my own graduation project and bring together stakeholders such as the Municipality of Delft and Klimaatmaat.

However, several things changed along the way. Due to my interest in systemic design, I initially chose this approach to design an strategy for greening private gardens. I had enjoyed working with this approach during previous courses. At the beginning of the project, I focused on mapping the different elements and relationships within the context of private garden greening.

However, I struggled to fully translate these insights into a systemic design approach. Looking back, my approach became more strategic than systemic, as I focused on making strategic decisions that guided the development of the final intervention. Although this was different from my initial intention, I believe the approach I took ultimately helped me achieve my project goals.

Another area of development concerns my visualisation skills. Throughout the SPD master's programme, I did not have to draw very often. For this project, however, I consciously decided to incorporate more visualisation into my work. I created sketches during the ideation phase and used drawings in elements such as the stakeholder map. Although I am satisfied with these efforts, I believe the visual quality of the project could have been stronger. For example, the brochure could have benefited from more professional illustrations and a stronger visual identity. Improving my drawing and visualisation skills is something I would like to focus on before or during my future career. In addition, I would like to further develop my Adobe Illustrator skills so that I can rely less on Canva in future projects.

One other area of development is my writing. I realised that I make more spelling and grammar mistakes than I had expected. Looking back, I could have dedicated more time to reviewing and improving my writing throughout the project rather than mainly focusing on it at the end.

Furthermore, I only made minor adjustments to the brochure after the final round of testing. I would have liked to improve the brochure more but, improving the report by adding more structure, clarifying the methodology, reconnecting the research questions to the narrative, and

correcting grammar and spelling mistakes was a bit more ime-consuming then I had thought. However, I think the improvements made the narrative of my project stronger and I am proud of the final outcome: a strategy consisting of the campaign More Life in Your Garden, including both the brochure and the green subsidy concept.

Throughout this project, I also developed skills that I would like to take with me into my future career. One of these is communication. Through interviews, surveys, workshops, and meetings with stakeholders, I became more confident in communicating with different types of people. I also discovered that I am able to translate complex information into visual overviews and frameworks, such as the literature review map. This is a skill I would like to continue developing.

Another important learning outcome is the growth of my independence. At the start of this project, one of my learning goals was:

"I aim to develop greater independence by conducting a project on my own and confidently making decisions throughout the process."

I believe I achieved this goal. First, by defining my own project and bringing together the necessary stakeholders. Second, conducting interviews with residents by ringing doorbells was initially outside my comfort zone, as I am naturally quite introverted. However, by repeating this several times throughout the project, I became much more confident in approaching people and engaging in conversations.

Finally, this project helped me better understand the type of work I would like to do in the future. Through my graduation project, I discovered that I enjoy projects that combine research, strategy, and social impact. In the future, I would like to pursue a career in social design or strategic design within a sustainability-focused organisation. I hope to contribute positively to society and the environment by applying a design approach.

7.5 AI statement

I used Artificial intelligence (AI) tools to check my grammar, spelling, text flow and for AI image generation.

I used the following prompts:

- Can you check for grammar and spelling for the following part?
- Do you have a recommendation to make the flow of the text smoother?
- Can you give me recommendations on how to structure this section?

For the visual renderings of the five garden plans AI image generation was used. Each plan was first developed by me as a hand-drawn top-view sketch. Afterwards, an AI tool was used to make these sketches into realistic-looking pictures.

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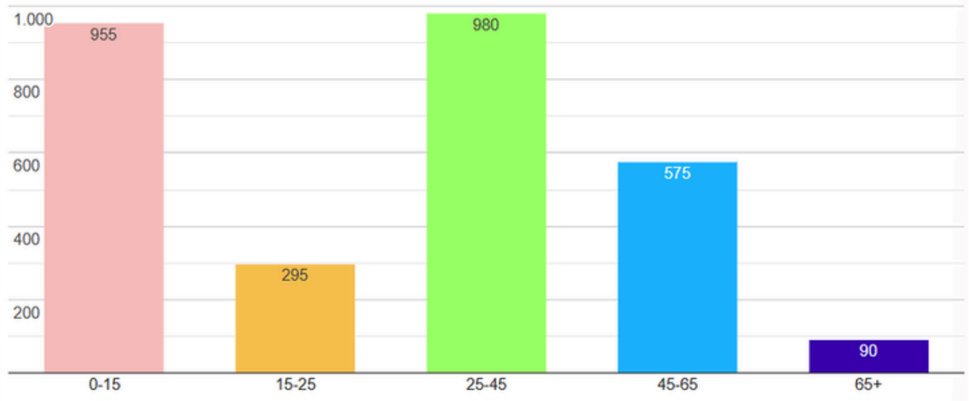
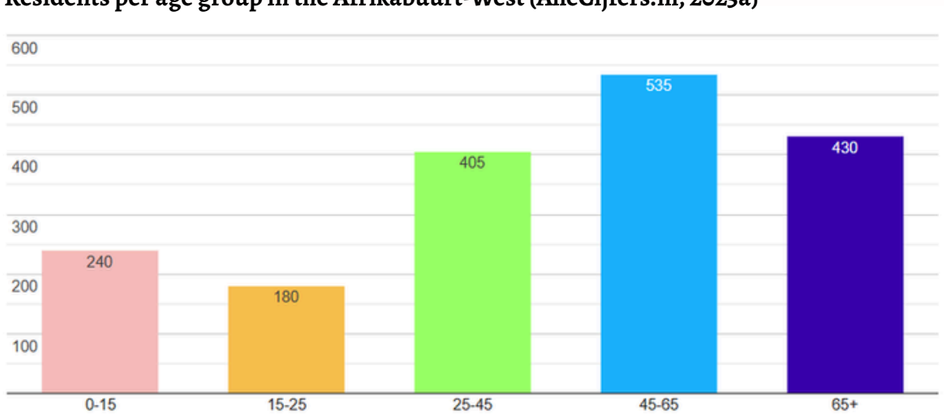
9 Appendix

A. Figures on differences in oppportunity neighbourhoods

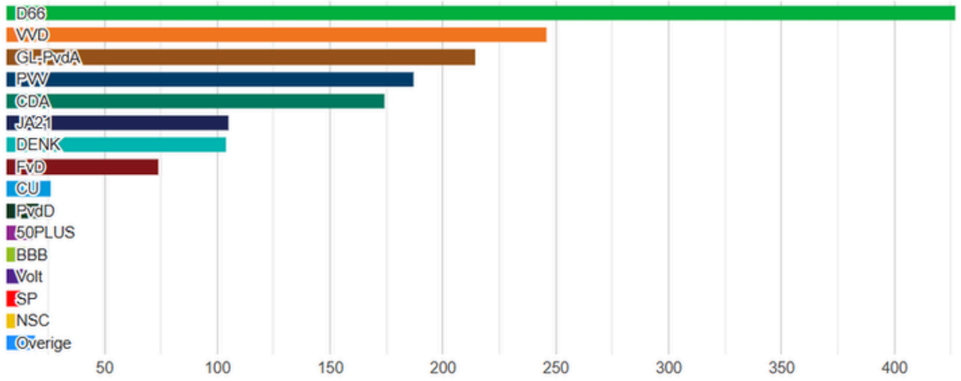
Residents per age group in Voordijkshoorn (AlleCijfers.nl, 2025b)



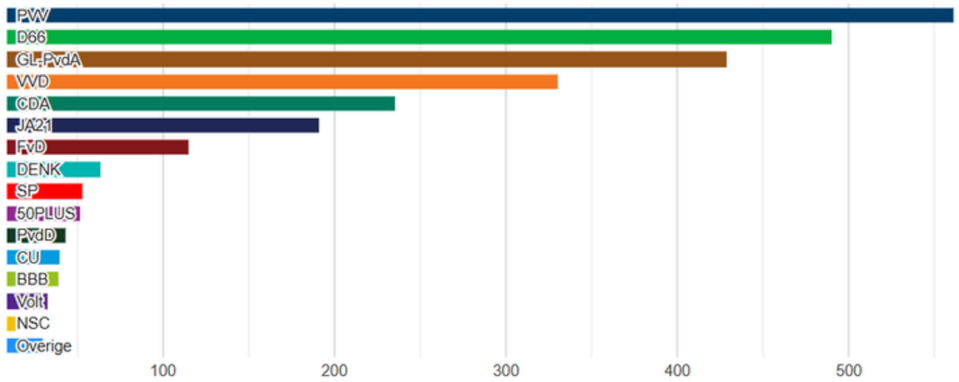
Residents per age group in the Afrikabuurt-West (AlleCijfers.nl, 2025a)



Voting behaviour Voordijkshoorn (AlleCijfers.nl, 2025)



Voting behaviour Afrikabuurt-West (AlleCijfers.nl, 2025)



B. Survey interview on Drivers & Barriers

ID	Neigbourhood	Age group	Garden size
7	Afrikabuurt west	50-75 jaar	20-50 m²
8	Afrikabuurt west	35-50 jaar	50-80 m²
9	Afrikabuurt west	50-75 jaar	20-50 m²
10	Afrikabuurt west	35-50 jaar	50-80 m²
11	Afrikabuurt west	18-35 jaar	50-80 m²
12	Afrikabuurt west	18-35 jaar	20-50 m²
13	Afrikabuurt west	50-75 jaar	50-80 m²
14	Afrikabuurt west	35-50 jaar	20-50 m²
15	Afrikabuurt west	50-75 jaar	20-50 m²
16	Afrikabuurt west	18-35 jaar	20-50 m²
17	Afrikabuurt west	50-75 jaar	50-80 m²
18	Den Hoorn	35-50 jaar	> 80 m²

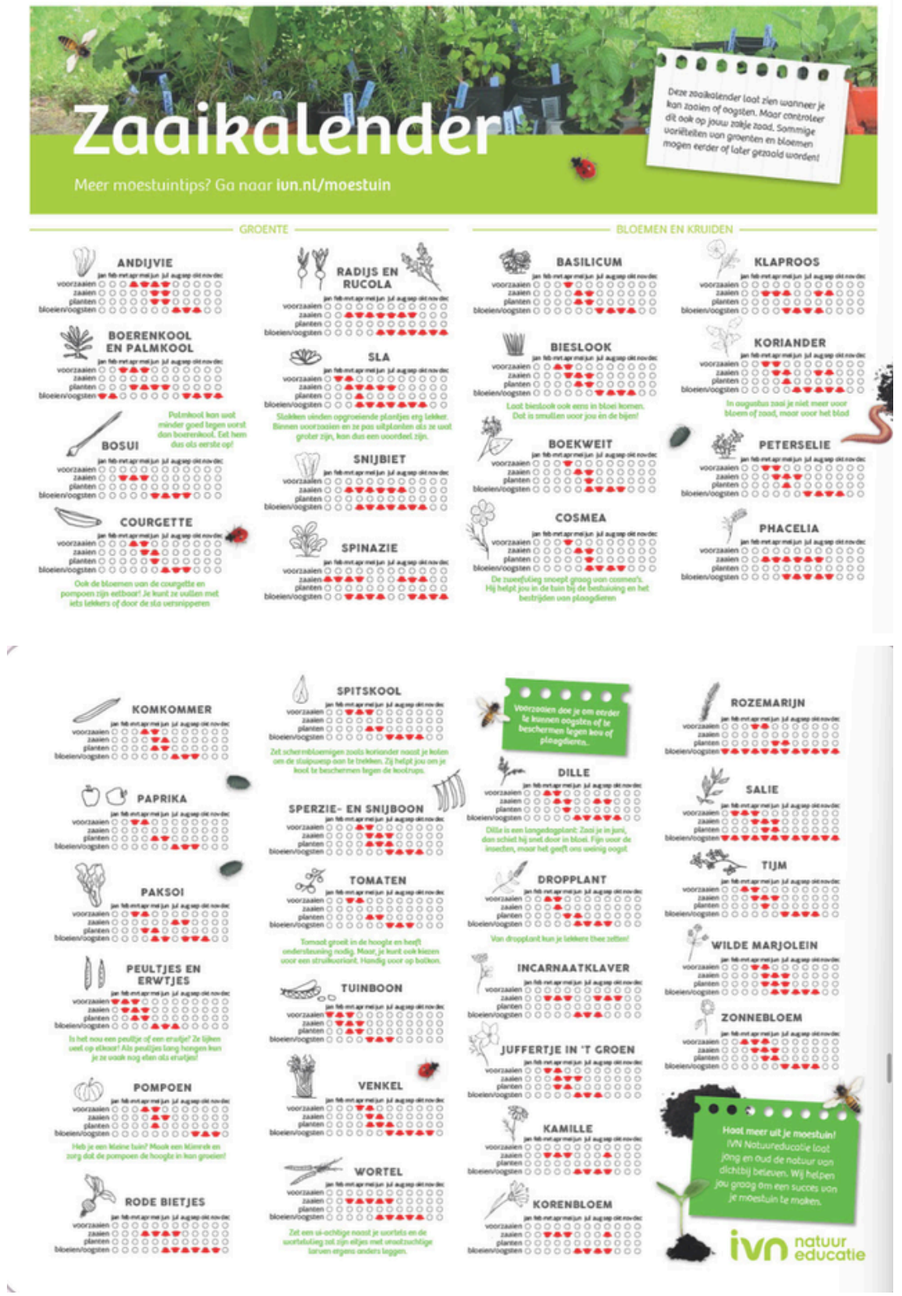
19	Den Hoorn	18-35 jaar	> 80 m²	Koopwoning	> 15 jaar	Met partner	Meer groen dan steen
20	Den Hoorn	35-50 jaar	> 80 m²	Koopwoning	5-15 jaar	Met partner en kind(eren)	Meer steen dan groen
21	Den Hoorn	50-75 jaar	> 80 m²	Koopwoning	> 15 jaar	Met partner	Meer steen dan groen
22	Den Hoorn	18-35 jaar	20-50 m²	Huurwoning (vrije sector)	2-5 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
23	Den Hoorn	35-50 jaar	20-50 m²	Huurwoning (vrije sector)	2-5 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
24	Den Hoorn	35-50 jaar	20-50 m²	Koopwoning	5-15 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
25	Den Hoorn	35-50 jaar	< 20 m²	Huurwoning (sociale huur)	> 15 jaar	Alleen	Voornamelijk tegels (>75% steen)
26	Den Hoorn	50-75 jaar	> 80 m²	Koopwoning	> 15 jaar	Alleen	Meer groen dan steen
27	Den Hoorn	50-75 jaar	20-50 m²	Koopwoning	> 15 jaar	Alleen	Voornamelijk tegels (>75% steen)
28	Den Hoorn	50-75 jaar	20-50 m²	Koopwoning	> 15 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
				Koopwoning	> 15 jaar	Met partner	Voornamelijk tegels (>75% steen)
				Koopwoning	5-15 jaar	Met partner en kind(eren)	Meer groen dan steen

Koopwoning	2-5 jaar	Met partner en kind(eren)	Meer steen dan groen
Koopwoning	< 2 jaar	Met partner en kind(eren)	Meer groen dan steen
Koopwoning	5-15 jaar	Met partner en kind(eren)	Bijna volledig groen
Koopwoning	5-15 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
Koopwoning	5-15 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
Koopwoning	< 2 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)
Koopwoning	< 2 jaar	Met partner en kind(eren)	Meer steen dan groen
Koopwoning	2-5 jaar	Met partner en kind(eren)	Meer groen dan steen
Koopwoning	5-15 jaar	Met partner en kind(eren)	Meer groen dan steen
Huurwoning (sociale huur)	5-15 jaar	Met partner en kind(eren)	Voornamelijk tegels (>75% steen)

Drivers	Barriers	Preference for source	Addional notes
Om dat we houden van de beestjes, man met pensioen. Bezig ,et bladafval	Verhardingen voor terras. Tuin is een soort verlemgstuk vam je woonkamer.	Buurt app/groeps app;Website ;Fysieke folder/brief;	meer groen direct aan de voorkant. Gefeltuintjes
Ik vind groen wel leuk.	Duur, veel werk.	Website ;Folder waar je mee naar de website gaat. ;	Je hebt een heel plan nodig voor het geheel van je tuin. Dan is het makkelijker om te zeggen we doen het niet,
Mijn boom is mijn alles vooral de noten boom. Mooi. Fijn om naar te kijkem	Ook lekker in het zonnetje willen zitten. Zitplekje bestraat	Social media;	Veel meer wateroverlast. Ook nog veel plannen om verder te vergroenen
Vooral tijd. Nu ook vies weer. In het voorjaar ook meer aantrekkelijk.	Tijd en geld. Kinderen. Glijbaantje voetballen.	Fysieke folder/brief;Website ;Via de folder naar website ;	
Planten bak, maar het groeit niet	Niet echt groene handjes en tijd.	Social media;	
Meer vogels te kunnen bekijken	Geld	Social media;Website ;Fysieke folder/brief;	N.a
Geld	Omdat er meer tuin meubelen im staam	Geen interesse;	Nee
Zo was het en laten het lekker groeien	De hoeveelheid werk. Maar beetje broen is wel beter	Social media;	
Geen	Onderhoud.	Geen ;	
Wel lekker om in de tuin te zitten. Voor relaxen	Onderhoud. Onkruid.	Geen interesse;	
Vind het wel gezellig.	Geen groene vingers. Daarom voor tegels gekozen.	Social media;	
Ik mis de vrolijkheid, meer kleur en hoogte verschil. Vogels.	Veel onderhoud, maar voor mij is het een bewuste keuze	Fysieke folder/brief;	Vaak als je een bron op je afkomt. Is het vaak beperkt. Mischien dat een soort overzicht met voorbeelden wel handig zou zijn. Design en schets van boven af.

Gezelligheid van insecten. Vogels te lokken.	Praktisch, geen modderboel. Geen groene vingers. Ratten,door vogelvoer. Praktisch voor kinderen	Social media;	Voor het huis, gras gemaaid alle plantjes. Meer groen inde wijk.
Duurzaamheid. Diversiteit in de tuin.	Kosten.	Website ;	Gekeken voor groendak, maar dan is het groepsproje t hoe meer hoe goedkoper. Meer individuele aanbieding
Gras wat eruit. Terug naar inheems. Duurzaam. Kinderen worden ouderen.	Nee	Online ;Buurt app/groeps app;	Er is nog veel te weinig in de buurt. Tuin zo onderhouds vriendelijk denk dat groen juist makkelijk is. Klei in de grond. Veel nat, groen zou moeten helpen.
Helemaal niet	Het weer, klimaat. 9 maanden van het jaar slecht weer. Zitten bijna niet in ce tuin. Dan vaak in nederkand. Veel onderhoud en dan in de kou	Social media;Geen interesse ;	.
Natuur en beter voor klimaat	Kinderen die graag willen spelen im de tuin	Website ;	
		Buurt app/groeps app;	
Fun hobby, i am trying to learn. Like to grow vegatsbles. Fun to teach the kids	If i have more soil. The wind. Struggle what works	Fysieke folder/brief;	Important for kids to learn. Grow your own food, plants.
Kleur, planten flora fauna	Geen	Geen informatie ;	
Voor de natuur, klimaat	Is groen genoeg	Geen interesse ;	
Geen	Geen	Geen interesse ;	Geen

C. Sowing calender



D. Survey interview on idea directions

ID	In welke buurt woont u?	De Boerderij tuin zou kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De Boerderij tuin zou mij motiveren om mijn tuin te vergroenen
1	Voordijkshoorn	Eens	Eens
2	Voordijkshoorn	Eens	Neutraal
3	Voordijkshoorn	Eens	Neutraal
4	Voordijkshoorn	Oneens	Oneens
5	Voordijkshoorn	Sterk mee eens	Neutraal
6	De Afrikabuurt-west	Neutraal	Neutraal
7	De Afrikabuurt-west	Oneens	Oneens
8	De Afrikabuurt-west	Oneens	Sterk mee oneens
9	De Afrikabuurt-west	Eens	Eens
10	De Afrikabuurt-west	Eens	Eens

De Boerderij tuin zou mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Boerderij tuin? (Meerdere antwoorden mogelijk)	De mini boerderij tuintjes zouden kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De mini boerderij tuintjes zouden mij motiveren om mijn tuin te vergroenen
Eens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;	Eens	Neutraal
Neutraal	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;	Eens	Neutraal
Neutraal	Groeien van groenten en fruit;Concrete tuin voorbeelden;	Eens	Neutraal
Oneens	Bijdragen aan een duurzamer Delft;	Oneens	Oneens
Neutraal	Bijdragen aan een duurzamer Delft;Meer vogels, vlinders en bijen in de tuin;Concrete tuin voorbeelden;Groeien van groenten en fruit;	Neutraal	Neutraal
Neutraal	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;	Neutraal	Neutraal
Oneens	Weinig onderhoud;	Oneens	Oneens
Sterk mee oneens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;	Sterk mee oneens	Sterk mee oneens
Neutraal	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Groeien van groenten en fruit;	Sterk mee eens	Sterk mee eens
Eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Praktische hulp;Concrete tuin voorbeelden;	Eens	Eens

De mini Boerderij tuintjes zouden mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Mini boerderij tuintjes? (Meerdere antwoorden mogelijk)	De brochure zou kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De brochure zou mij motiveren om mijn tuin te vergroenen
Eens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;	Eens	Eens
Neutraal	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;	Sterk mee eens	Eens
Neutraal	Bijdragen aan een duurzamer Delft;Groeien van groenten en fruit;	Eens	Neutraal
Oneens	Bijdragen aan een duurzamer Delft;	Eens	Eens
Neutraal	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Concrete tuin voorbeelden;	Neutraal	Neutraal
Neutraal	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;	Neutraal	Neutraal
Oneens	Weinig onderhoud;	Oneens	Oneens
Sterk mee oneens	Meer vogels, vlinders en bijen in de tuin;	Sterk mee oneens	Sterk mee oneens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;	Sterk mee eens	Sterk mee eens
Eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Praktische hulp;Concrete tuin voorbeelden;	Eens	Eens

De brochure zou mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Brochure? (Meerdere antwoorden mogelijk)	De voorbeeldtuinen zou kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De voorbeeldtuinen zou mij motiveren om mijn tuin te vergroenen
Oneens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;	Oneens	Oneens
Sterk mee eens	Bijdragen aan een duurzamer Delft;Praktische hulp;Concrete tuin voorbeelden;	Eens	Eens
Neutraal	Bijdragen aan een duurzamer Delft;Weinig onderhoud;Praktische hulp;	Eens	Eens
Eens	Bijdragen aan een duurzamer Delft;	Eens	Eens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Groeien van groenten en fruit;Concrete tuin voorbeelden;	Sterk mee eens	Sterk mee eens
Neutraal	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;Praktische hulp;	Neutraal	Neutraal
Oneens	Weinig onderhoud;	Oneens	Oneens
Sterk mee oneens	Meer vogels, vlinders en bijen in de tuin;	Oneens	Oneens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;	Sterk mee eens	Sterk mee eens
Eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Weinig onderhoud;Praktische hulp;Groeien van groenten en fruit;	Eens	Eens

De voorbeeldtuinen zou mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Voorbeeld tuinen? (Meerdere antwoorden mogelijk)	De folders zou kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De folders zou mij motiveren om mijn tuin te vergroenen
Oneens	Meer vogels, vlinders en bijen in de tuin;	Sterk mee eens	Eens
Eens	Concrete tuin voorbeelden;Praktische hulp;	Sterk mee eens	Sterk mee eens
Neutraal	Praktische hulp;Bijdragen aan een duurzamer Delft;Concrete tuin voorbeelden;	Eens	Eens
Eens	Bijdragen aan een duurzamer Delft;	Eens	Eens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Concrete tuin voorbeelden;	Sterk mee eens	Sterk mee eens
Neutraal	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;Concrete tuin voorbeelden;	Eens	Eens
Oneens	Weinig onderhoud;	Oneens	Oneens
Oneens	Meer vogels, vlinders en bijen in de tuin;	Sterk mee oneens	Sterk mee oneens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;Concrete tuin voorbeelden;	Sterk mee eens	Sterk mee eens
Eens	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;Bijdragen aan een duurzamer Delft;Praktische hulp;Groeien van groenten en fruit;Concrete tuin voorbeelden;	Eens	Eens

De folders zou mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Folders? (Meerdere antwoorden mogelijk)	De groen subsidie zou kansen of mogelijkheden creëren om mijn tuin te vergroenen.	De groen subsidie zou mij motiveren om mijn tuin te vergroenen
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;	Eens	Eens
Eens	Praktische hulp;Groeien van groenten en fruit;	Eens	Neutraal
Eens	Bijdragen aan een duurzamer Delft;Meer vogels, vlinders en bijen in de tuin;	Eens	Neutraal
Eens	Bijdragen aan een duurzamer Delft;	Eens	Eens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Praktische hulp;Groeien van groenten en fruit;Concrete tuin voorbeelden;	Neutraal	Neutraal
Eens	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;	Eens	Eens
Oneens	Weinig onderhoud;	Oneens	Oneens
Sterk mee oneens	Meer vogels, vlinders en bijen in de tuin;	Sterk mee oneens	Sterk mee oneens
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Groeien van groenten en fruit;Bijdragen aan een duurzamer Delft;	Sterk mee eens	Sterk mee eens
Eens	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;Praktische hulp;	Neutraal	Neutraal

De groen subsidie zou mij helpen het vergroenen van mijn tuin echt uit te voeren.	Welke factoren die u kunnen motiveren komen naar voren in het idee van de Groen subsidie? (Meerdere antwoorden mogelijk)
Neutraal	Meer vogels, vlinders en bijen in de tuin;
Eens	Praktische hulp;
Neutraal	Bijdragen aan een duurzamer Delft;Praktische hulp;Groeien van groenten en fruit;
Eens	Bijdragen aan een duurzamer Delft;
Neutraal	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Financiële compensatie;Groeien van groenten en fruit;Concrete tuin voorbeelden;
Eens	Meer vogels, vlinders en bijen in de tuin;Weinig onderhoud;
Oneens	Weinig onderhoud;
Sterk mee oneens	Meer vogels, vlinders en bijen in de tuin;
Sterk mee eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Groeien van groenten en fruit;
Eens	Meer vogels, vlinders en bijen in de tuin;Bijdragen aan een duurzamer Delft;Praktische hulp;Groeien van groenten en fruit;Financiële compensatie;

E. Subsidie-plant list

Bomen

Bomen zorgen voor een betere afwatering van de tuin. Ook bieden ze schuil/nestelplaatsen voor vogels en vleermuizen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Appel	nov - mrt	zon	apr - mei	€25 – €45
Boswilg			mrt - apr	€15 – €30
Meidoorn			mei	€12 – €25
Peer	nov - mrt	zon	apr - mei	€25 – €45
Spaanse aak			apr -mei	€15 – €35
Tamme kastanje			jun - jul	€30 – €60
Vogelkers			apr - mei	€15 – €35
Wilde lijsterbes			mei - jun	€20 – €40
Zoete kers	nov - mrt	zon	apr - mei	€30 – €55

Heesters

Heesters leveren nectar voor bijen en vlinders. Ook zijn ze een veilige nestplek en voedselbron voor vogels en egels.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Aalbes			apr - mei	€8 – €15
Blauwe bosbes			mei - jun	€10 – €20
Braam			mei - sep	€7 – €15
Brem			mei - jun	€6 – €12
Buxus			mrt - apr	€5 – €15
Dophei			jun - sep	€4 – €8
Framboos			mei - sep	€6 – €12
Gagel			apr - mei	€10 – €18
Gelderse roos			jun	€10 – €20
Gele komoelje			feb - mrt	€10 – €18
Gewone vlier			jun - aug	€8 – €18
Hazelaar			jan - mrt	€10 – €20
Hulst			mei - jun	€10 – €25
Jeneverbes			apr - mei	€12 – €30
Komoelje			mei - jun	€8 – €18
Kruipwilg			apr - mei	€6 – €12
Kruisbes			apr - mei	€8 – €15
Linguster			jun - jul	€4 – €10
Rode bosbes			mei - jun	€8 – €15
Struikheide			jul - sep	€3 – €6
Struikklimop			sep - nov	€5 – €10
Taxus			mrt - mei	€8 – €20
Veldesdoorn			apr - mei	€8 – €18
Vlinderstruik	mrt - mei	zon	jul -sep	€8 – €18
Wilde kardinaalsmuts			mei - jun	€10 – €18
Zuurbes			mei - jun	€8 – €15
Zwarte bes			apr - mei	€8 – €15

Klimplanten

Klimplanten zijn uitstekend voor het vergroenen van gevels en schuttingen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Druif	voorjaar / najaar	zon	jun	€12 – €25
Hop			mei	€6 – €15

Klimhortensia			jun	€15 – €30
Klimop			-	€4 – €10
Wilde kamperfoelie			jun - sep	€8 – €18

Planten en bolgewassen

Planten produceren voedsel voor insecten en dieren.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Adderwortel			mei - jul	€3 – €6
Beklierde kogeldistel			jul - aug	€4 – €8
Beemdkroon			jun - sep	€3 – €6
Beemdooievaarsbek			jun - jul	€4 – €7
Bieslook	mrt - aug	zon / schaduw	mei - jun	€2 – €5
Boerenwormkruid			jul - sep	€3 – €6
Bosaarbei			mei - jun	€3 – €6
Blauwe zeedistel			jun - jul	€4 – €8
Daslook			apr - mei	€3 – €6
Duizendknoop	voorjaar/najaar	schaduw	jun - okt	€4 – €8
Echte guldenroede			jul -sep	€3 – €6
Echte valeriaan			jun - jul	€3 – €7
Geel duizendblad			jul - sep	€3 – €6
Gele kamille			jun - sep	€3 – €6
Gevlekte dovenetel			apr - sep	€3 – €6
Gevlekt longkruid			mrt - apr	€4 – €8
Gewone brunel			mei - sep	€3 – €6
Gewone rolklaver			jun - sep	€3 – €6
Grasklokje			jun -aug	€3 – €6
Grote centaurie			jun - aug	€3 – €7
Grote/gewone engelwortel			jun - aug	€4 – €8
Gewone smeerwortel			apr -sep	€3 – €6
Herfstanemoon	voorjaar	schaduw	mrt - okt	€4 – €9
Holwortel			mrt - mei	€3 – €6
Hondsdraf			apr - mei	€3 – €5
Ijzerhard			jun - okt	€3 – €7
Japanse dwergaster	voorjaar / najaar	zon / schaduw	aug - okt	€4 – €8
Kattenstaart			jun - sep	€4 – €8
Kivietsbloem			apr - mei	€1 – €3 per bol
Knoopkruid			jun - sep	€3 – €6
Koninginnekruid			jul - sep	€4 – €8
Krokus	aug - sep	zon /halfschaduw	feb - apr	€1– €3 per bol
Kruipend zenegroen			apr - jun	€3 – €6
Lamsoor			jul - sep	€4 – €8
Magriet			mei - aug	€3 – €6
Moerasandoorn			jul - aug	€4 – €8
Moerasspiraea			jun - sep	€4 – €8
Muskuskaasjeskruid			jun - sep	€3 – €7
Muurbloem			apr - jun	€3 – €6
Paddelelie	voorjaar	schaduw	aug - okt	€5 – €10
Pijpenstrootje			jul - sep	€4 – €8
Rode spoorbloem			mei - jul	€3 – €7
Sint-janskruid			jun - sep	€3 – €7
Salie	voorjaar / najaar	zon	jun - aug	€3 – €7

Sneeuwklokje	najaar	halfschaduw	feb - mrt	€1– €3 per bol
Smalbladig wilgenroosje			jul - sep	€3 – €6
Stinkende ballote			jun - sep	€3 – €6
Tuinasperge			mei - jun	€4 – €10
Tulpen	sep - dec	zon	feb - apr	€1– €3 per bol
Venkel			jul - okt	€3 – €6
Vetkruid	voorjaar / najaar	zon	jun - jul	€3 – €6
Vingerhelmbloem			mrt - mei	€3 – €6
Watermunt			jul -sep	€3 – €6
Watergentiaan			jul - sep	€5 – €12
Wilde cichorei			jul - aug	€3 – €6
Wilde hyacint			apr - mei	€1 – €3 per bol
Wild kattenkruid			jun - sep	€3 – €7
Zeekool			mei - jun	€5 – €10
Zonnehoed	mrt - apr	zon	jul - okt	€4 – €8
Zwanenbloem			jun - sep	€4 – €8
Zwarte toorts			jun - sep	€3 – €7

F. Brochure


Meer leven
in uw tuin
Onderhoudsvriendelijke biodiverse
Tuinplannen
Inclusief Groen Subsidie
Gemeente Delft
DE KLIMAAT
MAAT

Onderhoudsvriendelijke biodiverse
Tuinplannen & Subsidie

Deze brochure is gemaakt in samenwerking met de klimaatmaat & Gemeente Delft. Het word ingezet om de hittestress in Delft tegen te gaan en en de biodiversiteit te vergroten door de stad te vergroenen.

Waarom vergroenen?

Een groene tuin is goed voor jou én voor de natuur. Het zorgt voor een koelere tuin met meer leven. Ook helpt het regenwater beter wegzakken in de bodem.

Meer biodiversiteit

Beter bestand tegen hevige regenbuien

Biedt koelte tijdens de hete zomerdagen

Inhoud

Gemeente Delft

DE KLIMAAT MAAT

Meet weten?
Kijk op: delft.nl/groensubsidie

Hoe kan ik mijn tuin vergroenen?

Deze brochure helpt je om jouw tuin groener, koeler en biodiverser te maken. Ontdek vijf inspirerende tuinontwerpen en lees hoe je gebruik kunt maken van de Delftse groensubsidie.

Groen subsidie

De Groen subsidie is voor huishoudens met tuinen uit Delft. De subsidie geldt voor particuliere tuinen bij het vervangen van tegels door biologische groen en het aanleggen van verticaal biologisch groen van de subsidie-plantenlijst. Zie blz. voor de planten lijst.

Planten en bloemen
€20 per m²

Struiken
€20 per m²

Verticaal groen
€10 per klimplant

Bomen
€25 per boom

Er moet minimaal 10 m² worden vergroend.

Kies altijd voor biologische planten

Let op! Veel tuincentra maken gebruik van bestrijdingsmiddelen zoals Insecticiden die meteen of na langere tijd dodelijk kunnen zijn voor insecten. Zorg daarom dat u biologische planten gebruikt bij het vergroenen van jouw tuin. Biologische planten kunt je herkennen aan EU-logo voor biologische productie.

Biologische telers en tuincentra:

- Ninabel
- De Helianth
- De Hessenhof
- Schoutens kruiden
- Kwerkerij Depends
- De Warande
- Bloemerij
- Kwekerij Buitenkweek
- Duurzaamheidscentrum De papaver (De papvershop)
- Intratuin locaties hebben een selectie biologische planten
- Sprinklr (online)
- De bolster (zaden)
- De Cruydthoek (Zaden)
- Vreeken zaden (Zaden)

De dier-vriendelijke tuin

In een diervriendelijke tuin zijn alle dieren van harte welkom. Zoals vogels, vlinders, bijen en egeltjes. Om deze dieren te trekken naar de tuin, zijn er verschillende aspecten om op te letten. Zorg ervoor dat je rekening houdt met de 5 v's.

VOEDSEL — Zorg voor voldoende voedsel in de tuin, zoals vruchten.

VOORT-PLANTING — Zorg dat er plek is voor verschillende diersoorten om zich voor te vestigen.

VEILIG-HEID — Plekken voor dieren om te schuilen, zoals in de kruidenspiraal.

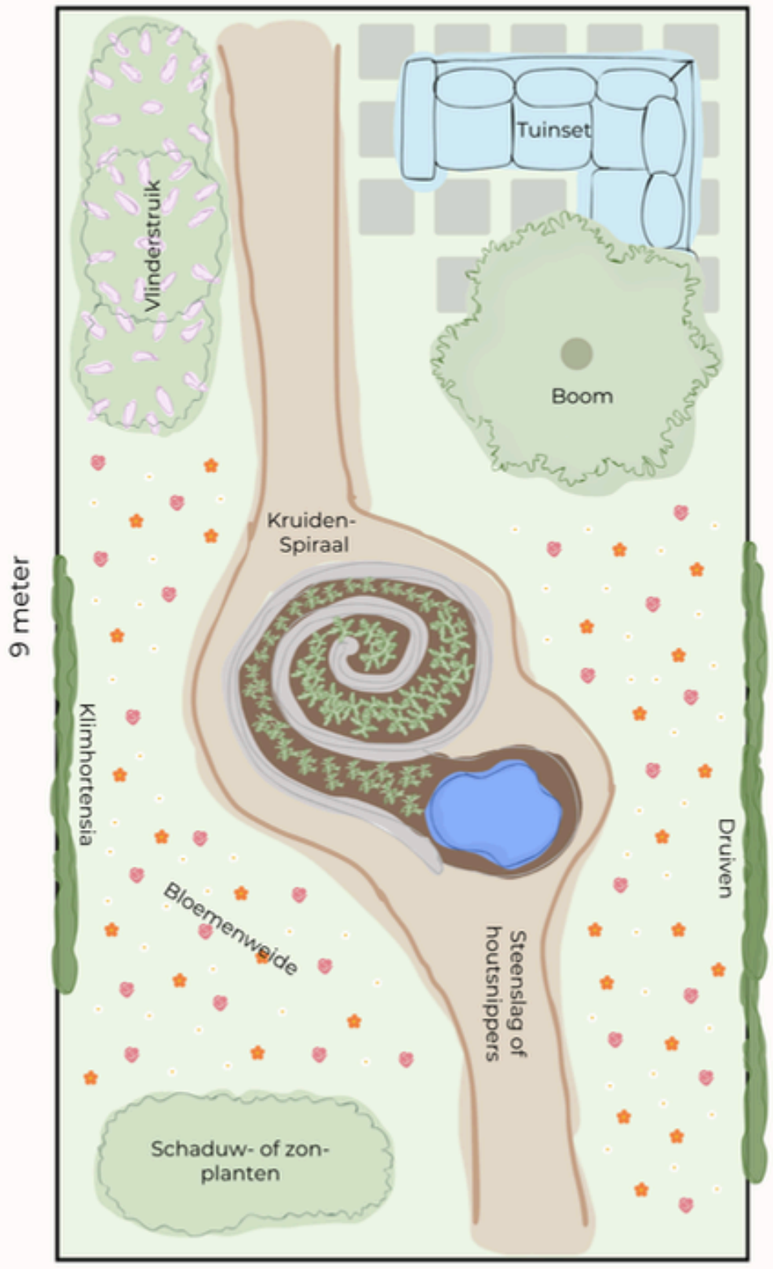
VOCHT — Zorg voor water waar vogels uit kunnen drinken.

VARIATIE — Zorg voor veel variatie in vegetatie. Zo zorg je voor een langere bloeiperiode.

Sfeerimpressie

Tuinonderdelen

Bovenaanzicht tuinplan voor diervriendelijke tuin



Hoe voeren we dit plan uit?

Instructies

Bomen, planten & struiken

Instructies:

1. Graaf een ruim plantgat
2x de breedte en diepte van de wortelkluit (voor planten 1 cm diepte onder de wortels)

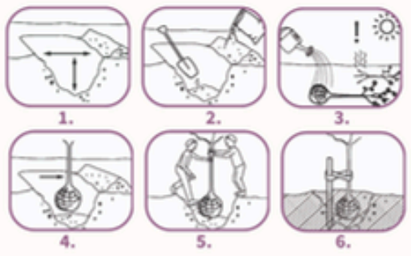
2. Meng de compost of bodemverbeteraar met de grond.
Bij zware kleigrond meng je fijn grind of grof zand mee.

3. Bescherm de wortels (bomen/struiken)
Dek ze af en dompel ze onderwater net voor het planten.

4. Plaats de boom
Gaas en jute NIET verwijderen. Pot wel.

5. Grond terug scheppen
Eerst ⅓ van de gemixte grond, daarna boom/plant/struik recht zetten en verder aanvullen

6. Boompaal plaatsen (alleen voor boom)
Op de windkant. Voor de helft in de grond plaatsen. De boomband in een 8 vorm aanbrengen op circa 5 cm onder de kop van de paal.

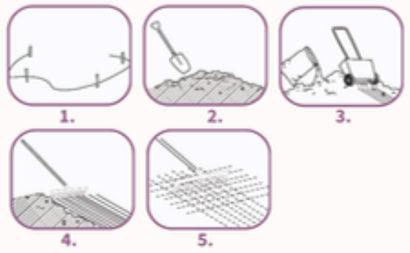


Bloemenveld/Gazon

Instructies:

1. Met stokjes en touw bepaal je de omtrek van je veld.
2. Spit de bomen om met spade (30cm).
3. Bemest het gazon.
4. Maak met een hark de grond vlak.
5. Zaai graszaad (en bloemen).

Het grasveld maai je regelmatig, een bloemrijk grasveld 1 tot 2 keer per jaar.



Kruiden spiraal

Door de spiraalvorm en het hoogteverschil ontstaan er verschillende microklimaatjes: droog, vochtig, zonnig en schaduw. Hierdoor kan je verschillende kruiden kan planten.

Instructies:

1. Stapel oude stenen met enkele ruimte ertussen (als schuilplaats voor de dieren) in de vorm van een spiraal, zie foto.
2. Vul de spiraal met aarde
3. Zaai kruiden op basis van de microklimaatjes.

Waterdoorlatende verharding

Kies als pad in je tuin voor een waterdoorlatende verharding zoals houtsnippers of steenslag. Voor het terras kunnen oude tegels worden hergebruikt. Leg deze met ruimte ertussen (5-10 cm) in een open bestratingspatroon neer. Zie plattegrond.

Extra informatie tuinplan

Tuin op het noorden of zuiden.

Alle tuinplannen zijn voor zowel zonnige als schaduwrijke tuinen toepasbaar.
LET OP! Heb je een tuin op het zuiden dan zet je zonplanten in de tuin. Heb je een tuin op het noorden dan zet je schaduwplanten in je tuin (tegen het huis aan)

Vegetatie opties

Soort	Planttijd	Plantplek	Bloeiperiode
Vogelkers	Nov - Maart	Zonnig/Schaduw	April - Mei
Meidoorn	Nov - Maart	Zonnig	Mei
Wilde lijsterbes	Nov - Maart	Zonnig/Schaduw	Mei - Juni
Sleedoorn	Nov - Maart	Zonnig/ Halfschaduw	Maart – April
Druiven	Voorjaar of najaar	Zonnig	Juni
Bramenstruik	Voorjaar of najaar	Zonnig/Schaduw	Mei - Sep
Salie (Zon)	Voorjaar of najaar	Zonnig	Juni- Aug
Vetkruid (Zon)	Voorjaar of najaar	Zonnig	Juni - Juli
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Herstanemoon (schaduw)	Voorjaar	Schaduw	Maart - Okt
Paddelelie (schaduw)	Voorjaar	Schaduw	Aug - Okt
Kruiden	Verschillend	Zonnig/Schaduw	Aug - Sep
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

De eetbare tuin

In de eetbare tuin verbouw je je eigen groente en fruit. Fruit kan groeit op verschillende plekken in je tuin. Zo kan je druiven aan de schutting groeien en appels en peren in de fruitboompjes laten groeien. Ook kan je groenten en fruit kweken in een moestuinbak.

Sfeerimpressie

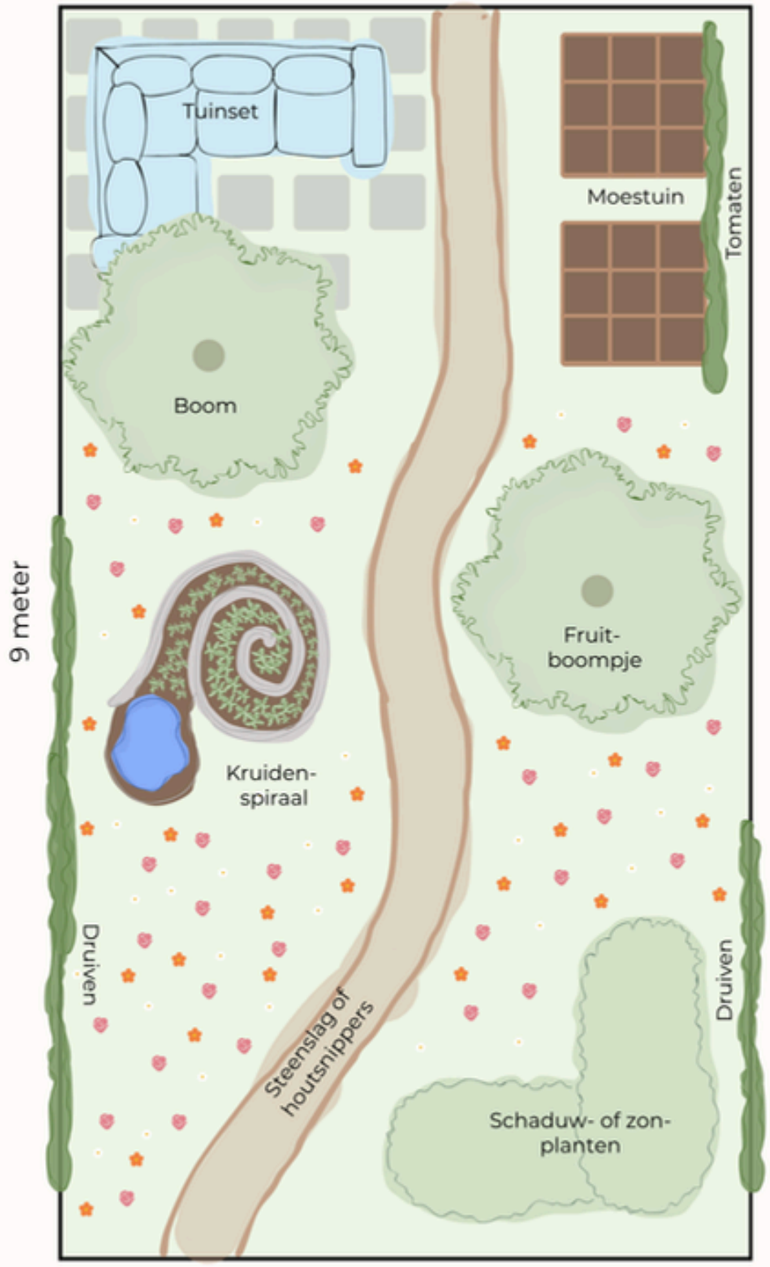
Moestuinbak

Instructies:

1. Maak een moestuinbak van hout (1x1 meter).
2. Maak aparte vakjes van 30 x 30 cm.
3. Vul de bak met bemeste aarde.
4. Zaai verschillende zaadjes in de verschillende vakjes. Plaats klimplanten en breedgroeiende planten achterin, zodat ze later het zonlicht voor de lagere gewassen niet blokkeren. Zie voorbeeld.
5. Geef regelmatig water.

Tuinonderdelen

Bovenaanzicht van tuinplan voor de eetbare tuin



Hoe voeren we dit tuinplan uit?

Instructies

Bomen, planten & struiken

Instructies:

1. Graaf een ruim plantgat
2x de breedte en diepte van de wortelkluit (voor planten 1 cm diepte onder de wortels)

2. Meng de compost of bodemverbeteraar met de grond.
Bij zware kleigrond meng je fijn grind of grof zand mee.

3. Bescherm de wortels (bomen/struiken)
Dek ze af en dompel ze onderwater net voor het planten.

4. Plaats de boom
Gaas en jute NIET verwijderen. Pot wel.

5. Grond terug scheppen
Eerst ⅓ van de gemixte grond, daarna boom/plant/struik recht zetten en verder aanvullen

6. Boompaal plaatsen (alleen voor boom)
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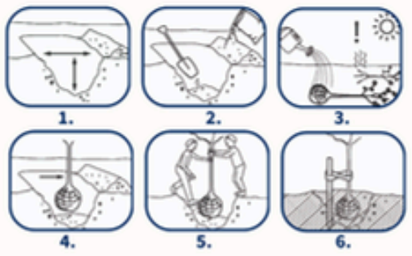

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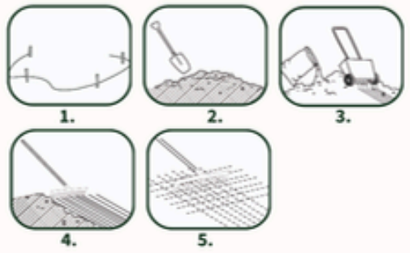

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Vegetatie opties

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Paddelelie (schaduw)	Voorjaar	Schaduw	Aug - Okt
Groente en fruit zaadjes	Verschillend	Zonnnig	Verschillend
Kruiden	Verschillend	Zonnig/Schaduw	Aug - Sep
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

De gezins tuin

De gezinstuin biedt kinderen de mogelijkheid om te spelen en te ontdekken in hun eigen tuin. Zo kunnen ze zelf groente en fruit laten groeien en kunnen ze spelen op het grasveldje en de glijbaanheuvel. Verder biedt deze tuin een centrale zitplek om te relaxen voor het hele gezin.

Sfeerimpressie

Glijbaanheuvel

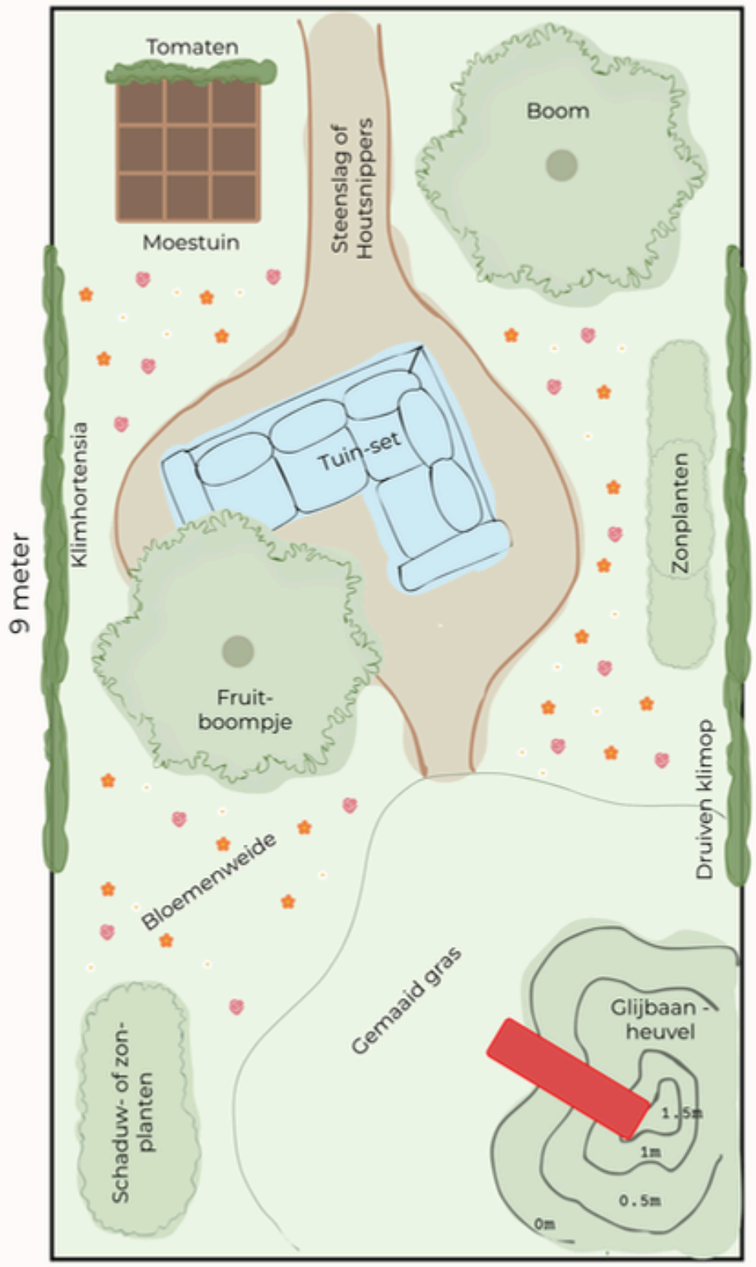
Instructies:

1. Kies een plek met een straal van minimaal 2 m.
2. Stort veel aarde op deze plek.
3. Maak de heuvel 0.5 m tot 1.5 m hoog. Zie voorbeeld.

1. Zorg dat de hellingshoek van de heuvel tussen de 32 en 36 graden is.
2. Druk de aarde goed aan.
3. Plaats de glijbaan. Zorg dat de bovenkant van de glijbaan stevig in de grond verankerd is.
4. Zaai gras en plant eventueel wat planten of bloemen op de heuvel.

Tuinonderdelen

Bovenaanzicht van tuinplan voor gezins tuin



Hoe voeren we dit tuiplan uit?

Instructies

Bomen, planten & struiken

Instructies:

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2x de breedte en diepte van de wortelkluit (voor planten 1 cm diepte onder de wortels)

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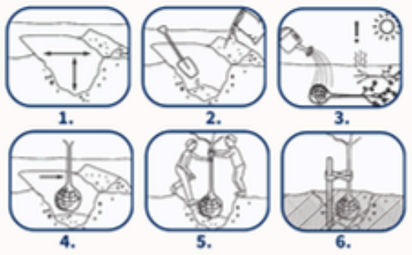

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Instructies:

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4. Maak met een hark de grond vlak.
5. Zaai graszaad (en bloemen).

Het grasveld maai je regelmatig, een bloemrijk grasveld 1 tot 2 keer per jaar.

Moestuin

Instructies:

1. Maak een moestuinbak van hout (1mx1m).
2. Maak aparte vakjes van 30 cm bij 30 cm.
3. Vul de bak met bemeste aarde.
4. Zaai verschillende zaadjes in de vakjes.
5. Geef regelmatig water.

Plaats klimplanten en breedgroeiende planten achterin, zodat ze later het zonlicht voor de lagere gewassen niet blokkeren. Zie voorbeeld.

Waterdoorlatende verharding

Kies als pad in je tuin voor een waterdoorlatende verharding zoals houtsnippers of steenslag. Voor het terras kunnen oude tegels worden hergebruikt. Leg deze met ruimte ertussen (5-10 cm) in een open bestratingspatroon neer. Zie plattegrond.

Extra informatie Tuinplan

Tuin op het noorden of zuiden.

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Vegetatie opties

Soort	Planttijd	Plantplek	Bloeiperiode
Vogelkers	Nov - Maart	Zonnig/Schaduw	April - Mei
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Groente en fruit zaadjes	Verschillend	Zonnnig	Verschillend
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

De ontspannen tuin

De ontspannen tuin laat je op verschillende plekken in de tuin relaxen, omringd door een groene omgeving. Zo vind je een zitje achterin de tuin. Verder kan je liggen in het grasveldje midden in de tuin of een bankje neerzetten om bijvoorbeeld rustig een boek te lezen.

Sfeerimpressie

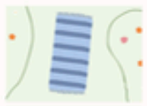
Onderdelen om te relaxen

Groene omgeving

Omringd door groen, vlinders, bijen en vogels.

Zitplekken

Verschillende plekken in de tuin om te zitten



Ligplek

Verschillende plekken in de tuin om te liggen.

Tuinonderdelen

Boom

Schaduw- of zon-planten

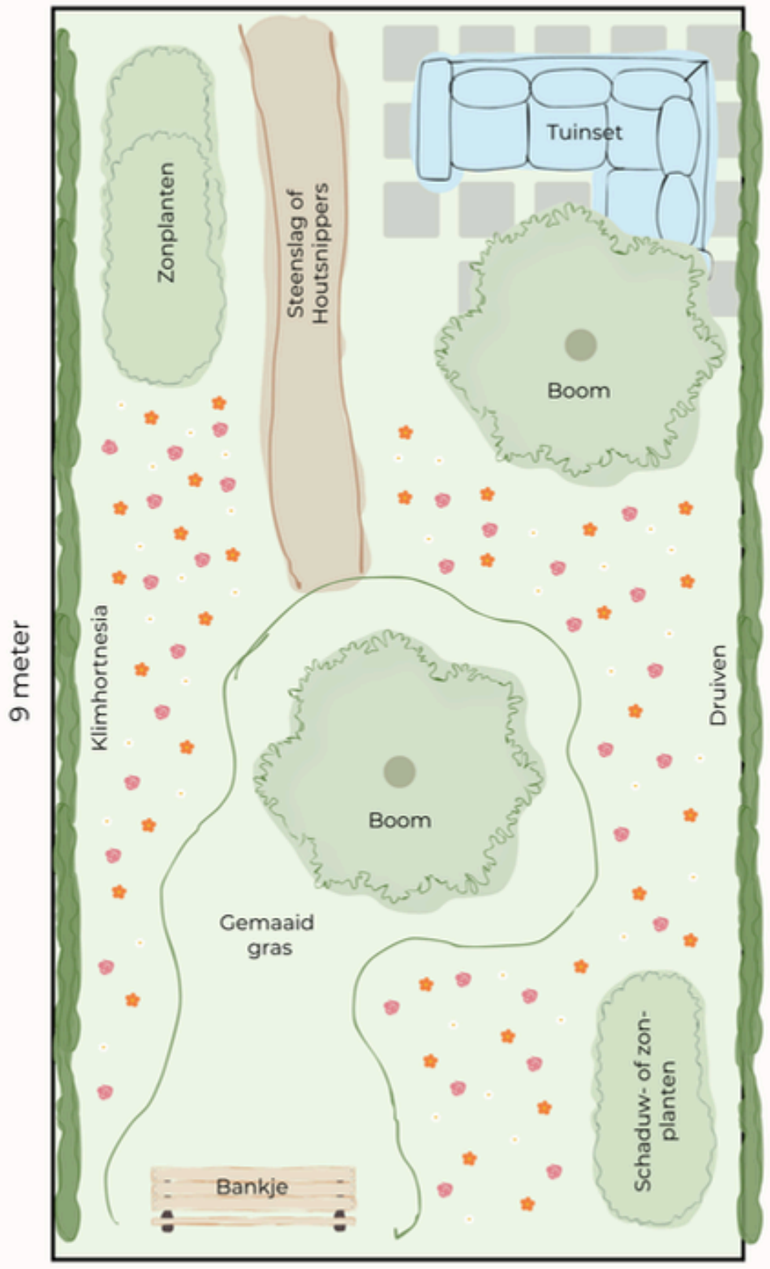
Steenslag- of houtsnipperpad

Bloemenveldje

Klimplant

Terras (open bestrating)

Bovenaanzicht van tuinplan voor ontspannen tuin



Hoe voeren we dit tuiplan uit?

Instructies

Bomen, planten & struiken

Instructies:

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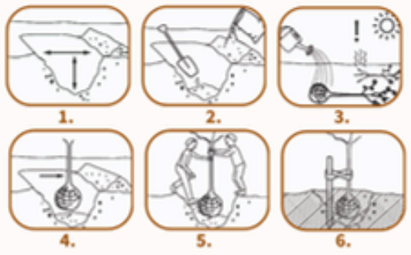

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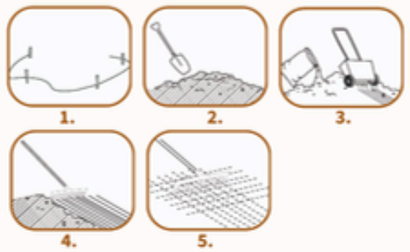

Onderplanting

Onderplanting zijn planten die je aanbrengt onder bomen of heesters.

Onder bomen die niet het hele jaar groen zijn, kun je bloembollen planten die al vroeg bloeien. Je kan bijvoorbeeld kiezen voor verwilderingsbollen; die bloeien meerdere jaren achter elkaar.

Verwilderingsbollen


Sneeuwklokjes


Krokus


Tulpen


Bieslook

Waterdoorlatende verharding

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Vegetatie opties

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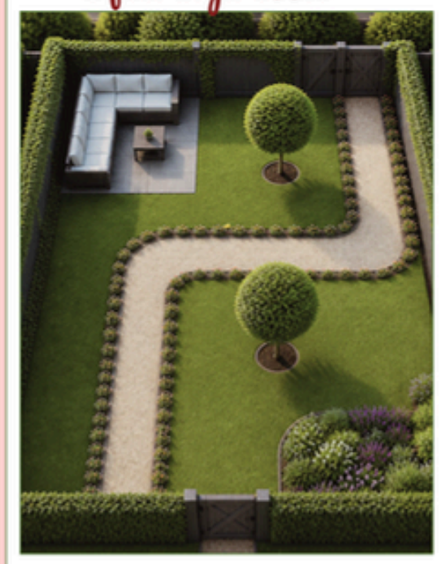
Sneeuwklokjes	Najaar	Halfschaduw	Jan - April
Krokus	Aug - Sep	Zonnig/halfschaduw	Feb - April
Tulpen	Sep- Dec	Zonnig	Maart- mei
Biesloook	Maart - augustus	Zonnig/Schaduw	Maart - Okt
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

De strakke tuin

De strakke tuin biedt een combinatie van strakke rechte lijnen en groen. Zo vind je langs het pad bloemen. Verder zijn er twee fruitboompjes tegenover elkaar en planten voorin de tuin.

Sfeerimpressie

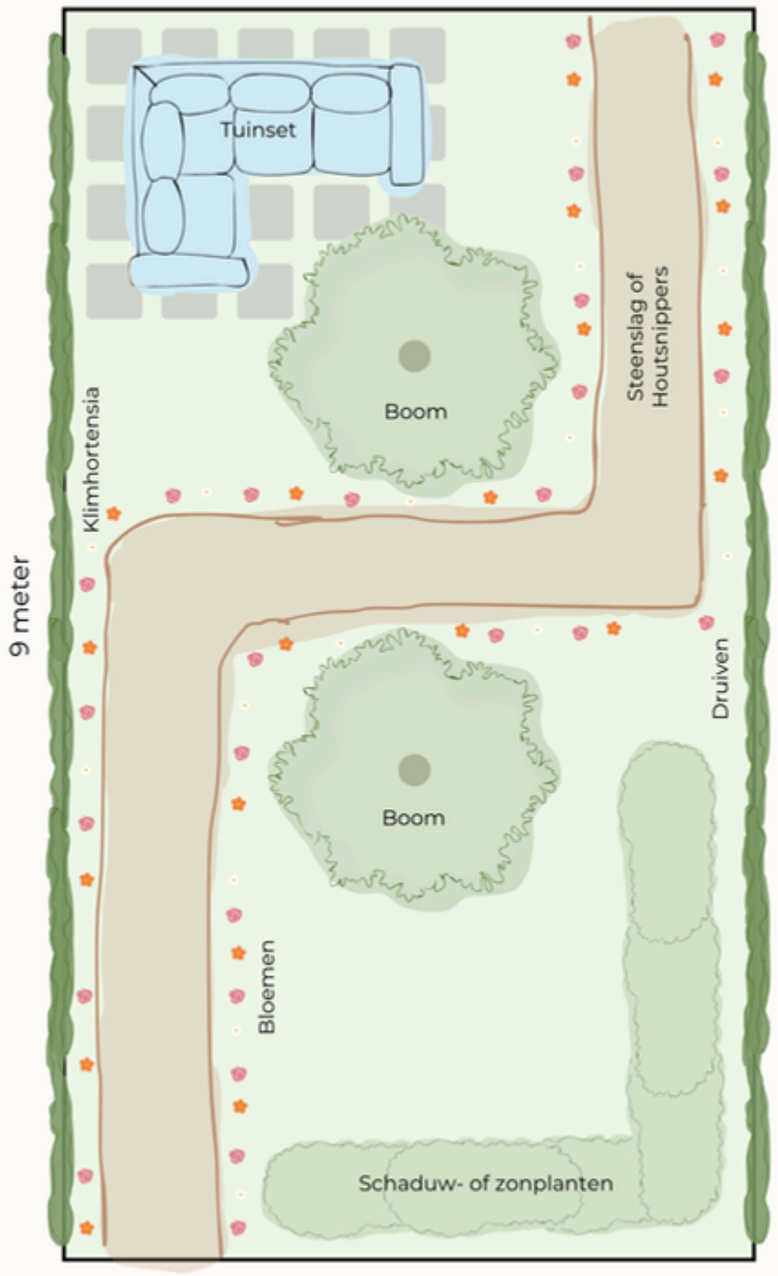


Waterdoorlatende verharding

Waterdoorlatende verharding is een goede oplossing wanneer je een bestraat stukje tuin wilt. Verder zorgt dit ervoor dat het water wel de grond in kan, zodat er minder water in je tuin blijft staan dan bij gewone bestrating.

Tuinonderdelen

Bovenaanzicht van tuinplan voor strakke tuin



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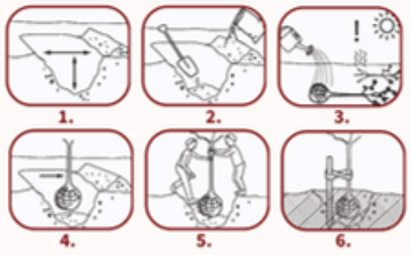

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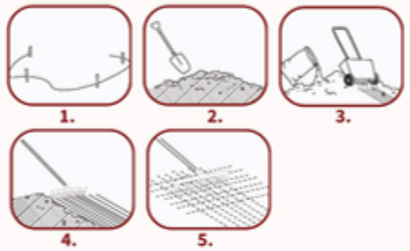

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Bij bomen die niet het hele jaar groen zijn kun je bloembollen planten die al vroeg bloeien zodat de zon nog door de bomen komt. Je kan bijvoorbeeld kiezen voor verwilderingsbollen die meerdere jaren achter elkaar bloeien.

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Zonplanten	Schaduwplanten
Salie	Duizendknoop
Vetkruid	Herfstanemoon
Zonnehoed	Herfstanemoon

Vegetatie opties

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Wilde lijsterbes	Nov - Maart	Zonnig/Schaduw	Mei - Juni
Druivenstruik	Voorjaar of najaar	Zonnig	Juni
Bramenstruik	Voorjaar of najaar	Zonnig/Schaduw	Mei - Sep
Salie (Zon)	Voorjaar of najaar	Zonnig	Juni- Aug
Vetkruid (Zon)	Voorjaar of najaar	Zonnig	Juni - Juli
Zonnehoed (Zon)	Maart - April	Zonnig	Juli - Sep
Japanse dwergaster (Zon)	Voorjaar of najaar	Zonnig/Schaduw	Aug - Okt
Duizendknoop (schaduw)	Voorjaar of najaar	Schaduw	Juni- Okt
Herfstanemoon (schaduw)	Voorjaar	Schaduw	Maart - Okt
Paddelelie (schaduw)	Voorjaar	Schaduw	Aug - Okt
Sneeuwklokjes	Najaar	Halfschaduw	Jan - April
Krokus	Aug - Sep	Zonnig/halfschaduw	Feb - April
Tulpen	Sep- Dec	Zonnig	Maart- mei
Bieslook	Maart - augustus	Zonnig/Schaduw	Maart - Okt
Wilde bloemen mix	Maart - Juni	Zonnig/Schaduw	Juni - Okt

Onderhoudsvriendelijke biodiverse
Tuinplannen & Subsidie

Deze brochure is gemaakt in samenwerking met de klimaatmaat & Gemeente Delft. Het word ingezet om de hittestress in Delft tegen te gaan en en de biodiversiteit te vergroten door de stad te vergroenen.

Waarom vergroenen?

Een groene tuin is goed voor jou én voor de natuur. Het zorgt voor een koelere tuin met meer leven. Ook helpt het regenwater beter wegzakken in de bodem.

Meer biodiversiteit

Beter bestand tegen hevige regenbuien

Biedt koelte tijdens de hete zomerdagen

Inhoud

Gemeente Delft

DE KLIMAAT MAAT

Meet weten?
Kijk op: delft.nl/groensubsidie

Subsidie-plantenlijst

Deze lijst bevat vegetatie die de biodiversiteit en water opname van de tuin vergroot. De meeste planten uit deze lijst zijn inheems om dat insecten en dieren daar het meeste voedsel etc. uit kunnen halen.

Bomen

Bomen zorgen voor een betere afwatering van de tuin. Ook bieden ze schuil/nestelplaatsen voor vogels en vleermuizen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Appel	nov - mrt	zon	apr - mei	€25 – €45
Boswilg	nov - mrt	zon/halfschaduw	mrt - apr	€15 – €30
Meidoorn	nov - mrt	zon/halfschaduw	mei	€12 – €25
Peer	nov - mrt	zon	apr - mei	€25 – €45
Spaanse aak	okt - mrt	zon/halfschaduw	apr -mei	€15 – €35
Tamme kastanje	nov - mrt	zon	jun - jul	€30 – €60
Vogelkers	nov - mrt	zon/halfschaduw	apr - mei	€15 – €35
Wilde lijsterbes	nov - mrt	zon/halfschaduw	mei - jun	€20 – €40
Zoete kers	nov - mrt	zon	apr - mei	€30 – €55

Heesters

Heesters leveren nectar voor bijen en vlinders. Ook zijn ze een veilige nestplek en voedselbron voor vogels en egels.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Aalbes	okt-mrt	zon / halfschaduw	apr - mei	€8 – €15
Blauwe bosbes	okt-mrt	zon / halfschaduw	mei - jun	€10 – €20
Braam	okt-mrt	zon/schaduw	mei - sep	€7 – €15
Brem	mrt-mei	zon	mei - jun	€6 – €12
Buxus	mrt-mei	zon / halfschaduw	mrt - apr	€5 – €15
Dophei	mrt-mei	zon	jun - sep	€4 – €8

Framboos	okt - mrt	zon / halfschaduw	mei - sep	€6 – €12
Gagel	okt - mrt	zon / halfschaduw	apr - mei	€10 – €18
Gelderse roos	okt - mrt	zon / halfschaduw	jun	€10 – €20
Gele komoelje	okt - mrt	zon / halfschaduw	feb - mrt	€10 – €18
Gewone vlier	okt - mrt	zon / halfschaduw	jun - aug	€8 – €18
Hazelaar	okt - mrt	zon / halfschaduw	jan - mrt	€10 – €20
Hulst	okt - mrt	halfschaduw	mei - jun	€10 – €25
Jeneverbes	mrt - mei	zon	apr - mei	€12 – €30
Komoelje	okt - mrt	zon / halfschaduw	mei - jun	€8 – €18
Kruipwilg	okt - mrt	zon	apr - mei	€6 – €12
Kruisbes	okt - mrt	zon / halfschaduw	apr - mei	€8 – €15
Linguster	okt - mrt	zon / halfschaduw	jun - jul	€4 – €10
Rode bosbes	okt - mrt	halfschaduw	mei - jun	€8 – €15
Sleedoorn	nov- mrt	halfschaduw	Maart – April	€8 – €15
Struikheide	mrt - mei	zon	jul - sep	€3 – €6
Struikklimop	mrt - mei	schaduw / halfschaduw	sep - nov	€5 – €10
Taxus	okt - apr	halfschaduw / schaduw	mrt - mei	€8 – €20
Veldesdoorn	okt - mrt	zon / halfschaduw	apr - mei	€8 – €18
Wilde kardinaalsmuts	okt - mrt	zon / halfschaduw	mei - jun	€10 – €18
Zuurbes	okt - mrt	zon	mei - jun	€8 – €15
Zwarte bes	okt - mrt	zon / halfschaduw	apr - mei	€8 – €15

Klimplanten

Klimplanten zijn uitstekend voor het vergroenen van gevels en schuttingen.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Druif	voorjaar / najaar	zon	jun	€12 – €25
Hop	mrt - mei	zon / halfschaduw	mei	€6 – €15

Klimhortensia	okt - apr	schaduw / halfschaduw	jun	€15 – €30
Klimop	mrt - mei	zon / halfschaduw	-	€4 – €10
Wilde kamperfoelie	okt - apr	zon / halfschaduw	jun - sep	€8 – €18

Planten en bolgewassen

Planten produceren voedsel voor insecten en dieren.

Soort	Planttijd	Plantplek	Bloeiperiode	Gem. prijs
Adderwortel	voorjaar / najaar	zon / halfschaduw	mei - jul	€3 – €6
Beklierde kogeldistel	voorjaar	zon	jul - aug	€4 – €8
Beemdkroon	voorjaar	zon	jun - sep	€3 – €6
Beemdooievaarsbek	voorjaar / najaar	zon / schaduw	jun - jul	€4 – €7
Bieslook	mrt - aug	zon / schaduw	mei - jun	€2 – €5
Boerenwormkruid	voorjaar	zon	jul - sep	€3 – €6
Bosaarbei	voorjaar / najaar	halfschaduw	mei - jun	€3 – €6
Blauwe zeedistel	voorjaar / najaar	zon	jun - jul	€4 – €8
Daslook	najaar / voorjaar	schaduw / halfschaduw	apr - mei	€3 – €6
Duizendknoop	voorjaar/najaar	schaduw	jun - okt	€4 – €8
Echte guldenroede	voorjaar	zon	jul -sep	€3 – €6
Echte valeriaan	voorjaar	zon / halfschaduw	jun - jul	€3 – €7
Geel duizendblad	voorjaar	zon	jul - sep	€3 – €6
Gele kamille	voorjaar	zon	jun - sep	€3 – €6
Gevlekte dovenetel	voorjaar / najaar	schaduw / halfschaduw	apr - sep	€3 – €6
Gevlekt longkruid	voorjaar / najaar	schaduw / halfschaduw	mrt - apr	€4 – €8
Gewone brunel	voorjaar	zon / halfschaduw	mei - sep	€3 – €6
Gewone rolklaver	voorjaar	zon	jun - sep	€3 – €6
Grasklokje	voorjaar	zon / halfschaduw	jun -aug	€3 – €6

Grote centaurie	voorjaar	zon	jun - aug	€3 – €7
Grote/gewone engelwortel	voorjaar	halfschaduw	jun - aug	€4 – €8
Gewone smeerwortel	voorjaar	zon / schaduw	apr -sep	€3 – €6
Herfstanemoon	voorjaar	schaduw	mrt - okt	€4 – €9
Holwortel	najaar	schaduw / halfschaduw	mrt - mei	€3 – €6
Hondsdraf	voorjaar / najaar	schaduw / halfschaduw	apr - mei	€3 – €5
Ijzerhard	voorjaar	zon	jun - okt	€3 – €7
Japanse dwergaster	voorjaar / najaar	zon / schaduw	aug - okt	€4 – €8
Kattenstaart	voorjaar	zon / halfschaduw	jun - sep	€4 – €8
Kivietsbloem	najaar	halfschaduw	apr - mei	€1 – €3 per bol
Knoopkruid	voorjaar	zon	jun - sep	€3 – €6
Koninginnekruid	voorjaar	zon /halfschaduw	jul - sep	€4 – €8
Krokus	aug - sep	zon /halfschaduw	feb - apr	€1– €3 per bol
Kruipend zenegroen	voorjaar / najaar	schaduw / halfschaduw	apr - jun	€3 – €6
Lamsoor	voorjaar	zon	jul - sep	€4 – €8
Magriet	voorjaar	zon	mei - aug	€3 – €6
Moerasandoorn	voorjaar	zon /halfschaduw	jul - aug	€4 – €8
Moerasspiraea	voorjaar	zon /halfschaduw	jun - sep	€4 – €8
Muskuskaasjeskruid	voorjaar	zon	jun - sep	€3 – €7
Muurbloem	voorjaar	zon	apr - jun	€3 – €6
Paddelelie	voorjaar	schaduw	aug - okt	€5 – €10
Pijpenstrootje	voorjaar	zon /halfschaduw	jul - sep	€4 – €8
Rode spoorbloem	voorjaar	zon	mei - jul	€3 – €7
Sint-janskruid	voorjaar	zon	jun - sep	€3 – €7
Salie	voorjaar / najaar	zon	jun - aug	€3 – €7

Sneeuwklokje	najaar	halfschaduw	feb - mrt	€1– €3 per bol
Smalbladig wilgenroosje	voorjaar	zon	jul - sep	€3 – €6
Stinkende ballote	voorjaar	zon	jun - sep	€3 – €6
Tuinasperge	voorjaar	zon	mei - jun	€4 – €10
Tulpen	sep - dec	zon	feb - apr	€1– €3 per bol
Venkel	voorjaar	zon	jul - okt	€3 – €6
Vetkruid	voorjaar / najaar	zon	jun - jul	€3 – €6
Vingerhelmbloem	voorjaar / najaar	schaduw / halfschaduw	mrt - mei	€3 – €6
Watermunt	voorjaar	zon / halfschaduw	jul -sep	€3 – €6
Watergentiaan	voorjaar	zon	jul - sep	€5 – €12
Wilde cichorei	voorjaar	zon	jul - aug	€3 – €6
Wilde hyacint	najaar	halfschaduw	apr - mei	€1 – €3 per bol
Wild kattenkruid	voorjaar	zon	jun - sep	€3 – €7
Zeekool	voorjaar	zon	mei - jun	€5 – €10
Zonnehoed	mrt - apr	zon	jul - okt	€4 – €8
Zwanenbloem	voorjaar	zon	jun - sep	€4 – €8
Zwarte toorts	voorjaar	zon	jun - sep	€3 – €7

Extra informatie

Subsidie

Voor meer informatie over de subsidie kunt u terecht bij de gemeente Delft. Op deze website staan alle eisen die gelden voor de groen subsidie. Ook kunt u daar een plantenlijst vinden met alle vegetatie die onder deze subsidie valt. LET OP! U kunt alleen subsidie krijgen voor planten die bij een biologische teler of een tuincentrum worden gekocht die geen bestrijdingsmiddelen gebruiken.

https://www.delft.nl/groensubsidie-gemeente-delft

Gemeente Delft

Informatie over tuinieren

Voor meer informatie over hoe verschillende onderdelen van de tuinplannen uit te voeren zijn of andere vragen over tuinieren kunt u terecht bij Klimaatmaat. Dit kan via de website of op hun locatie in Duurzaamheidscentrum de Papaver.

https://klimaatmaatdelft.nl/maatregelen/

Duurzaamheidscentrum De Papaver
Korftlaan 6
2616 LJ Delft

DE KLIMAAT MAAT

G. Tests results for the brochure & subsidy

ID	In welke buurt woont u?	Welk formaat brochure vindt u fijner?	Het vergroenen van mijn tuin met behulp van een van de tuinplannen in deze brochure vind ik: Onprettig (1) Prettig (7)
1	Voordijkshoorn	A4	5
2	Voordijkshoorn	A5	7
3	Voordijkshoorn	A5	6
4	Voordijkshoorn	A4	7
5	Voordijkshoorn	A4	6
6	Voordijkshoorn	A5	6
7	Voordijkshoorn	A5	4
8	Voordijkshoorn	A4	6
9	Voordijkshoorn	A4	6
10	Voordijkshoorn	A5	6
11	De Afrikabuurt-west	A4	7
12	De Afrikabuurt-west	A5	7
13	De Afrikabuurt-west	A4	4
14	De Afrikabuurt-west	A4	7
15	De Afrikabuurt-west	A5	5
16	De Afrikabuurt-west	A5	6
17	De Afrikabuurt-west	A5	7

18	De Afrikabuurt-west	A4	7
19	De Afrikabuurt-west	A5	7
20	De Afrikabuurt-west	A4	5
Average			6,05
Afrikabuurt-west			6,2
Voordijkshoorn			5,9

	Attidute	Perceived norm	Preceived behavioural control
brohcure + subsidie	5,82	4,85	5,38
brohcure + subsidie Afrikabuurt-west	5,82	4,95	5,15
brohcure + subsidie Voordijkshoorn	5,82	4,75	5,60
Brochure both Neighbourhoods	5,81	4,85	5,80
Brochure Afrikabuurt-west	5,90	4,95	5,60
Brochure Voordijkshoorn	5,73	4,75	6,00
Subsidy both neigbhourhoods	5,83	5,45	4,95
Subsidy Afrikabuurt-west	5,65	5,50	4,70
Subsidy Voordijkshoorn	6,00	5,40	5,20

Het vergroenen van mijn tuin met behulp van een van de tuinplannen in deze brochure vind ik: Slecht (1) Goed (7)	Het vergroenen van mijn tuin met behulp van de groen subsidie vind ik: Onprettig (1) Prettig (7)	Het vergroenen van mijn tuin met behulp van de groen subsidie vind ik: Slecht (1) Goed (7)	De bewering in de brochure dat de tuinplannen onderhoudsvriendelijk zijn vind ik: Onwaarschijnlijk (1) Waarschijnlijk (7)
7	7	7	5
7	7	7	7
6	7	7	5
7	5	5	4
6	6	6	6
7	7	7	3
4	1	1	6

6	6	6	5
6	7	7	6
6	7	7	6
7	7	7	7
4	3	1	5
7	7	7	6
6	7	7	5
6	5	5	6
7	7	7	4

7	5	5	6
7	4	1	1
7	7	7	4
6,35	5,95	5,7	5,2
6,5	5,9	5,4	5,1
6,2	6	6	5,3

Intention	Overal score
4,38	5,10
3,40	4,83
5,35	5,38
4,30	5,19
3,60	5,01
5,00	5,37
4,45	5,17
3,20	4,76
5,70	5,58

De bewering in de brochure dat deze tuinenplannen biodivers zijn, vind ik: Onwaarschijnlijk (1) Waarschijnlijk (7)	De meeste mensen in mijn buurt die belangrijk voor mij zijn, zouden het goed vinden als ik mijn tuin vergroen: Niet mee eens (1) Mee eens (7)	Van andere bewoners in mijn buurt verwacht ik dat zij hun tuin zouden gaan vergroenen door de brochure: Niet mee eens (1) Mee eens (7)	Ik heb er vertrouwen in dat ik zelf mijn tuin kan vergroenen met de instructies uit de brochure: Niet mee eens (1) Mee eens (7)
5	4	4	5
6	7	5	7
5	6	3	5
4	4	3	7
6	7	5	6
6	6	4	7
6	6	4	5
6	6	4	7
5	7	6	6
6	1	1	5
7	7	5	7
5	4	5	7
5	4	3	5
7	5	7	2
5	6	4	6
6	6	4	6
6	7	4	6

6	6	4	6
6	4	3	6
5	6	5	5
5,65	5,45	4,25	5,8
5,8	5,5	4,4	5,6
5,5	5,4	4,1	6

Ik heb er vertrouwen in dat ik alleen of samen met mijn buren in staat ben de groen subsidie aan te vragen door minimaal 10 m² tegels te vervangen door groen: Niet mee eens (1) Mee eens (7)	Als de brochure uitgebracht zou zijn ben ik van plan om binnen een jaar mijn tuin te vergroenen: Onwaarschijnlijk (1)Waarschijnlijk (7)	Ik zou binnen een jaar van plan zijn om gebruik te maken van de groen subsidie: Onwaarschijnlijk (1) Waarschijnlijk (7)	Welk aspect van de brochure zou u het meeste motiveren om te vergroenen?
4	5	4	De Tuinplannen
7	7	7	De combinatie van beide
6	6	6	De combinatie van beide
7	7	7	De combinatie van beide
5	6	6	De combinatie van beide
5	1	7	De Tuinplannen
3	4	1	De Tuinplannen

6	6	6	De combinatie van beide
7	4	6	De combinatie van beide
2	4	7	De combinatie van beide
4	1	1	De Tuinplannen
7	7	6	De combinatie van beide
4	4	4	De Tuinplannen
5	5	1	De Tuinplannen
6	6	7	De combinatie van beide
7	4	4	De Tuinplannen
4	1	1	De Tuinplannen

4	4	6	De Subsidie
1	1	1	De Tuinplannen
5	3	1	De combinatie van beide
4,95	4,3	4,45	
4,7	3,6	3,2	
5,2	5	5,7	

Zou u de tuinplannen op volgorde kunnen zetten. Op 1 het tuinplan die u als eerst zou toepassen en op 5 het tuinplan dat u als laatst zou toepassen?	Waarom spreekt dit tuinplan u het meeste aan?	Heeft u nog tips om de brochure te verbeteren?
De Strakke Tuin;De Ontspannen Tuin;De Eetbare Tuin;De Diervriendelijke Tuin;De Gezins Tuin;	Ik houd van strak en netjes in combinatie met groen.	Misschien verschillende grootte tuinen, maar dat wordt misschien wel veel.
De Gezins Tuin;De Ontspannen Tuin;De Diervriendelijke Tuin;De Strakke Tuin;De Eetbare Tuin;	Fijne brochure, duidelijk	Geen
De Diervriendelijke Tuin;De Ontspannen Tuin;De Gezins Tuin;De Eetbare Tuin;De Strakke Tuin;	Ik ben op zoek naar mogelijkheden om meer vogels en insecten in de tuin te krijgen	Nee
De Eetbare Tuin;De Diervriendelijke Tuin;De Ontspannen Tuin;De Gezins Tuin;De Strakke Tuin;	Omdat ik met het koken gebruik en gezellig vind.	Iets waar je fotos kan uploaden van je tuin wat je hebt veranderd.
De Diervriendelijke Tuin;De Ontspannen Tuin;De Eetbare Tuin;De Gezins Tuin;De Strakke Tuin;	Heel erg voorstander van meer biodiversiteit, daar hadden we jaren eerder mee moeten beginnen met zijn allen en de gemeenten kunnen daar aan bijdragen	Geen tips
De Gezins Tuin;De Ontspannen Tuin;De Strakke Tuin;De Eetbare Tuin;De Diervriendelijke Tuin;	Goede richtinggeving in welke stappen ik kan nemen	Meer voorbeelden
De Eetbare Tuin;De Diervriendelijke Tuin;De Ontspannen Tuin;De Gezins Tuin;De Strakke Tuin;	We eten uit de tuin	Nop
De Diervriendelijke Tuin;De Eetbare Tuin;De Ontspannen Tuin;De Strakke Tuin;De Gezins Tuin;	Dieren in tuin is motiverend en inspirerend	Neen
De Gezins Tuin;De Diervriendelijke Tuin;De Ontspannen Tuin;De Eetbare Tuin;De Strakke Tuin;	Gezin met 3 kinderen en gastouderopvang	Nee
De Eetbare Tuin;De Gezins Tuin;De Ontspannen Tuin;De Strakke Tuin;De Diervriendelijke Tuin;	Het mileu	Nee
De Diervriendelijke Tuin;De Ontspannen Tuin;De Gezins Tuin;De Eetbare Tuin;De Strakke Tuin;	Zuinig zijn met bijen en vlinders.	Nee.
De Ontspannen Tuin;De Strakke Tuin;De Eetbare Tuin;De Gezins Tuin;De Diervriendelijke Tuin;	Tuin is om te ontspannen	Houd rekening in de plannen dat er vaak een schuurtje staat. En geef praktische tips
De Gezins Tuin;De Ontspannen Tuin;De Diervriendelijke Tuin;De Strakke Tuin;De Eetbare Tuin;	Omdat ik graag ontspan in de tuin	Nee
De Diervriendelijke Tuin;De Gezins Tuin;De Ontspannen Tuin;De Eetbare Tuin;De Strakke Tuin;	Aow	Nee
De Strakke Tuin;De Gezins Tuin;De Ontspannen Tuin;De Diervriendelijke Tuin;De Eetbare Tuin;	Ik hou van strakke inrichting en minimaal onderhoud	Onderhoudsvrije tuin optie toevoegen
De Diervriendelijke Tuin;De Ontspannen Tuin;De Eetbare Tuin;De Gezins Tuin;De Strakke Tuin;	Ik heb zelf een hond en hou van dieren.	Iets dikker papier
De Ontspannen Tuin;De Strakke Tuin;De Eetbare Tuin;De Gezins Tuin;De Diervriendelijke Tuin;	Hoe je je erbij voelt.	Nee.

De Eetbare Tuin;De Diervriendelijke Tuin;De Ontspannen Tuin;De Strakke Tuin;De Gezins Tuin;	Het geeft een duidelijk richting.	Nee
De Ontspannen Tuin;De Gezins Tuin;De Diervriendelijke Tuin;De Strakke Tuin;De Eetbare Tuin;	Omdat ik dat belangrijk vindt in deze drukke maatschappij	Nee
De Ontspannen Tuin;De Gezins Tuin;De Diervriendelijke Tuin;De Strakke Tuin;De Eetbare Tuin;	Tuin zitten om te ontspannen maar ook natuurlijk oogt.	Subsidie mag iets hoger zijn.

H. Feedback Municipality of Delft & Klimaatmaat (Coded)

Show codes in group **Additional comments**

Name	Grounded	Density	Groups	Created by	Modified by
Content improvements br...	28	2	[Brochure]	Joukje Harkema	Joukje Hark
Brochure size	1	0	[Additional comments] [Brochure]	Joukje Harkema	Joukje Hark
General feedback	2	0	[Additional comments]	Joukje Harkema	Joukje Hark
Strong & promising app...	2	0	[Additional comments]	Joukje Harkema	Joukje Hark
providing good to tool for...	1	0	[Additional comments]	Joukje Harkema	Joukje Hark

Show codes in group **Brochure**

Name	Grounded	Density	Groups	Created by	Modified by
Content improvements br...	28	2	[Brochure]	Joukje Harkema	Joukje Hark
Adding more water	2	0	[Brochure]	Joukje Harkema	Joukje Hark
Adding shed	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Brochure design	6	0	[Brochure]	Joukje Harkema	Joukje Hark
Brochure size	1	0	[Additional comments] [Brochure]	Joukje Harkema	Joukje Hark
Butterfly bush not native	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Climate adaptation	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Duizendknoop not low...	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Grapes are not easy to...	1	0	[Brochure]	Joukje Harkema	Joukje Hark
gutter	1	0	[Brochure]	Joukje Harkema	Joukje Hark
More paving	1	0	[Brochure]	Joukje Harkema	Joukje Hark
native vegetation	1	0	[Brochure]	Joukje Harkema	Joukje Hark
plantlist brochure	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Plants instead of flowerf...	1	0	[Brochure]	Joukje Harkema	Joukje Hark
playing into feeling	1	0	[Brochure]	Joukje Harkema	Joukje Hark
pond	1	0	[Brochure]	Joukje Harkema	Joukje Hark
schadow garden plan	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Smaller sized gardens	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Tree with a bigger crown	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Waterstorage	2	0	[Brochure]	Joukje Harkema	Joukje Hark
Feasability brochure	2	0	[Brochure]	Joukje Harkema	Joukje Hark
Increasing biodiversity	8	2	[Brochure] [Strategy]	Joukje Harkema	Joukje Hark
Explaining biodiversity i...	1	1	[Brochure]	Joukje Harkema	Joukje Hark
Increasing biodiversity (2)	2	0	[Brochure]	Joukje Harkema	Joukje Hark
Increasing safety	0	1	[Brochure]	Joukje Harkema	Joukje Hark
More variaty	4	0	[Brochure]	Joukje Harkema	Joukje Hark
nesting boxes	1	0	[Brochure]	Joukje Harkema	Joukje Hark
Targetgroup brochure	2	0	[Brochure]	Joukje Harkema	Joukje Hark

Show codes in group **Strategy**

Name	Grounded	Density	Groups	Created by	Modified by
Communication.	8	0	[Strategy]	Joukje Harkema	Joukje Hark
communication	1	0	[Strategy]	Joukje Harkema	Joukje Hark
Distribution of the broc...	6	0	[Strategy]	Joukje Harkema	Joukje Hark
Klimaatmaat	1	0	[Strategy]	Joukje Harkema	Joukje Hark
Content improvements br...	28	2	[Brochure]	Joukje Harkema	Joukje Hark
Rolls withing strategy	0	0	[Strategy]	Joukje Harkema	Joukje Hark
Feasbility strategy	1	0	[Strategy]	Joukje Harkema	Joukje Hark
Future application	1	0	[Strategy]	Joukje Harkema	Joukje Hark
Increasing biodiversity	8	2	[Brochure] [Strategy]	Joukje Harkema	Joukje Hark
plant list online and in bro...	1	0	[Strategy]	Joukje Harkema	Joukje Hark
pressure from EU law	1	0	[Strategy]	Joukje Harkema	Joukje Hark
Subsidy start of march	1	0	[Strategy]	Joukje Harkema	Joukje Hark

Show codes in group **Subsidy**

Name	Grounded	Density	Groups	Created by	Modified by
Feasability subsidy	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
No money available for su...	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
practicalities	5	0	[Subsidy]	Joukje Harkema	Joukje Hark
m^2 greening	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
m^2 greening higher	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
Only biological vegetati...	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
Plant list	2	0	[Subsidy]	Joukje Harkema	Joukje Hark
Plantlist as example	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
Procedure subsidy	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
Subsidy from Zuidholland	1	0	[Subsidy]	Joukje Harkema	Joukje Hark
Targetgroup subsidy	2	0	[Subsidy]	Joukje Harkema	Joukje Hark

I. Results testing strategy outlier compared

Results without outlier

	Attidute	Perceived norm	Preceived behavioural control	Intention	Overal score
brohcure + subsidie	5,89	4,92	5,47	4,55	5,21
brohcure + subsidie Afrikabuurt-west	5,98	5,11	5,33	3,67	5,02
brohcure + subsidie Voordijkshoorn	5,82	4,75	5,60	5,35	5,38
Brochure both Neighbourhoods	5,84	4,92	5,79	4,47	5,26
Brochure Afrikabuurt-west	5,97	5,11	5,56	3,89	5,13
Brochure Voordijkshoorn	5,73	4,75	6,00	5,00	5,37
Subsidy both neigbhourhoods	6,00	5,53	5,16	4,63	5,33
Subsidy Afrikabuurt-west	6,00	5,67	5,11	3,44	5,06
Subsidy Voordijkshoorn	6,00	5,40	5,20	5,70	5,58

Results with outlier

	Attidute	Perceived norm	Preceived behavioural control	Intention	Overal score
brohcure + subsidie	5,82	4,85	5,38	4,38	5,10
brohcure + subsidie Afrikabuurt-west	5,82	4,95	5,15	3,40	4,83
brohcure + subsidie Voordijkshoorn	5,82	4,75	5,60	5,35	5,38
Brochure both Neighbourhoods	5,81	4,85	5,80	4,30	5,19
Brochure Afrikabuurt-west	5,90	4,95	5,60	3,60	5,01
Brochure Voordijkshoorn	5,73	4,75	6,00	5,00	5,37
Subsidy both neigbhourhoods	5,83	5,45	4,95	4,45	5,17
Subsidy Afrikabuurt-west	5,65	5,50	4,70	3,20	4,76
Subsidy Voordijkshoorn	6,00	5,40	5,20	5,70	5,58

J. Building blocks for the strategy

The building blocks, such as knowledge about plants, trees, and climbing plants, will be discussed. Furthermore, subsidy schemes from other municipalities will be discussed, and the criteria for the plant list will be established.

Building blocks for final strategy

To design the subsidy and brochure, several building blocks are needed, such as information about gardening and guidance on how to write a policy for a subsidy. Furthermore, it is important to choose garden plans that will attract residents of the Afrikabuurt-West and the Voordijkshoorn. Therefore, it is important to take into account the drivers and barriers of these residents.

Drivers:

- Biodiversity
- Sustainability
- Growing vegetables
- Place of joy/relaxation

Barriers:

- Paved place for children (no mud pool)
- Paved sitting
- maintenance
- Money
- Skills (so a garden plan that is simple to implement)
- Green garden is perceived not neat

A variety of garden plans targeting different drivers or barriers can be used to appeal to as many residents as possible. As one of the most named drivers for green was biodiversity, and the barrier was maintenance. It is smart to play into this. The subsidy and brochure could be marketed as low-maintenance biodiverse gardens.

For the subsidy, it can be ensured that it only includes vegetation with high biodiversity scores. For the brochure, could this translate to all garden plans being low-maintenance, and vegetation coming from the biodiverse plant list of the subsid. To make sure the garden plans have an optimal effect on the water drainage and heat in the gardens, it is important to put a tree in every plan, as those have a lot of effect (Klimaatmaat, n.d).

To stimulate biodiversity in gardens, it is important to mostly use native vegetation, as animals are adapted to the trees and plants that naturally occur in the Netherlands.

Building blocks brochure

A garden can be made by several "building blocks", like trees, grass fields, healthy ground and water passing pavement.

Trees

Planting trees in your garden can have several benefits. For example, if you have a tree with leaf loss in the fall, you have it in the winter sun and during the hotter days in the summer, in the shade. The shadow also reduces the drying of the garden ground. Next ot that, the tree cools the garden through evaporation. The air temperature near an average-sized tree can be 2-5 degrees celcius cooler than its surrounding environment. (Klimaatmaat, n.d.) The perceived temperature can be even 10 degrees lower.

Furthermore, do the trees provide a living source of food for insects, bees and birds, so trees are very important for the biodiversity in the garden and ensure better drainage in the garden. There are lots of trees that are a good fit for a private garden; it is important to look at the garden's conditions. Different trees grow well in different environments (Kimaatmaat, n.d.). According to the ecological garden designer Marian van den Beitel (Personal communication, 2026). For a low-maintenance and biodiverse garden, fruit trees are the best fit, like apple, pear, and plum. They stay quite small; they first have blooms and later provide fruit for the garden owners and the animals living in the

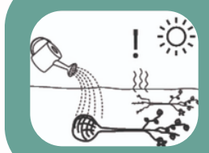
U*nder planting*

Choose the right underplanting. For example, flower bulbs provide blooms in early spring and have already finished flowering by the time the tree develops its leaves. They require healthy ground and water-permeable pavement.

Instructions

1. Dig a spacious planting hole
Dig a hole one and a half to twice the width and depth of the root ball. Loosen the bottom of the planting hole well

2. Improve the soil
Mix 40 litres of compost or soil conditioner into the excavated soil. In heavy clay soil, also mix in some fine gravel or coarse sand. Place a thick layer back into the planting hole.



13. Protect the roots
Ensure that the roots do not dry out. Cover them while digging and submerge them in water just before planting.

4. Place the tree
Place the tree at the correct height, which is the same height as it stood at the nursery. Do NOT remove the netting and burlap.

5. Shovelling back the soil
Fill the hole with 1/3 of the soil with compost back in, press down with your foot, straighten the tree, and fill the rest in.

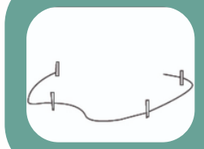
6. Installing tree stakes
Start with a stake on the windward side, usually the South-West. Drive it halfway into the ground so that the trees are secured at knee height. Apply the tree tie in a Figure-eight pattern approximately 5 cm below the top of the stake. Remove the stakes after 2 growing seasons.

Grass field

A piece of grass in your garden serves as a place to relax and for the children to play. Additionally, the grass field makes it easier for rainwater to seep into the ground.

A normal grass field costs some maintenance, like mowing the lawn weekly. The low-maintenance option is to go for a flower grass field. This field of flowers is better for biodiversity as well. In this way, both could make room for a place to play and a place for the bees, caterpillars, and butterflies. A flower field should only be mowed once or twice a year. (Klimaatmaat, n.d.).

Instructions



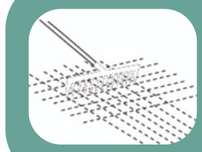
1. Preparation
Define the perimeter of your lawn using stakes and string.

2. Dig up the soil
Dig up the soil 30 cm with a spade. Remove plant roots and stones.

3. Improve the soil
You determine the acidity level with a do-it-yourself soil analysis (available at garden centers). Is your soil too acidic? Then add lime. Is your soil too alkaline? Then add garden peat and improve the structure with a soil conditioner.Let it rest for a week or two. Fertilize the soil with lawn fertilizer, as the lawn needs nutrients to grow.

4. Level the ground
Smooth the surface with a rake. Press down lightly and thoroughly wet the soil before sowing.

5. Choose grass seed.
Ask an employee at the garden center what the options are.



6. Sowing
Sow half of the grass seed lengthwise and the other half across it. Rake the seeds into the soil, no deeper than 1.5 cm. Water sufficiently and evenly during the germination period. Do not start mowing until the grass is 8 – 10 cm long and do not mow too short.

Plants

All vegetation plays a role in the infiltration capacity of the garden ground. To stimulate biodiversity in a garden, it is important to plant several types of vegetation. For example, flowers have different blooming periods; therefore, it is important to include flowers in your garden that bloom at different times (Klimaatmaat, n.d). This is beneficial for garden owners and for bees, birds, butterflies, and other insects. As insects are attracted to lots of different vegetation, there are more in those gardens, which in turn attract more birds that eat those insects. Additionally, it is useful to plant single-flowered species in the garden, as they are more resistant to diseases and pests.

For example:

Single-flowered dahlias
Enkelbloemige dahlias

Columbine
Rassen van de akelei cosmea

Cone flower
Zonnehoed (rudbeckia)

Poppy
Klaproos

Corn flower
Korenbloem

Daisies
Madeliefjes

Lungwort
Longkruid (pulmanaria)

Mock orange
Boerenjasmijn

Wild and simple roses
Wide- en eenvoudige rozen

Dandelion
Paardebloem

Sunflowers
Zonnebloem

Furthermore, some vegetation grows better in a dry garden and some in a wet garden. Therefore, it is important to take this into account when making a garden plan (Klimaatmaat, n.d).

Dry garden

If the garden is dry often, vegetation that doesn't need a lot of water can be planted. Vereniging Gemeenten voor Duurzame Ontwikkeling et al. (n.d) made a pamphlet with examples of plants that grow well in a dry garden. Additionally, they mentioned the months the plants bloom and their growing size. Below are the plants shown.

Stonecrop
Vetkruid

Sedum spathulifolium
'Cape Blanco'

Stonecrop
Vetkruid

Sedum cauticola
'Lidakense'

Stonecrop
Vetkruid

Sedum Kamtschaticum
'Immergrün'

Rosemary
Rozemarijn

Rosmarinus officinalis

Elephant ears
Schoenlappersplant

Bergenia cordifolia

Stonecrop
Vetkruid

Sedum
'Carl'

Stonecrop
Vetkruid

Sedum Makinoi

Stonecrop
Vetkruid

Sedum album
'Coral Carpet'

wet garden

For a wet garden, it is important to make use of plants that grow well in such an environment. These are mostly plants that are easy to maintain and are not really susceptible to diseases. Vereniging Gemeenten voor Duurzame Ontwikkeling et al. (n.d) gave the following examples:

Hosta
Hartelelie

Hosta tardiana
'Halcyon'

Lady's mantle
Vrouwenmantel

Alchemilla mollis

Daylily
Daglelie

Hemerocallis
'Stella d'oro'

Oxford ragwort
Tongkruiskruid

Ligularia przewalkii

Hard fern
Dubbelloof varen

Blechum spicant

Purple loosestrife
Kattenstaart

Lythrum salicaria
'Robin'

loosestrife
Wederik

Lysimachia clethroides

false spirea
Pluimspireae

Astible
'Fanal'

Sunny garden

If the garden gets a lot of sun, plants often grow well. For example, colourful flowers grow well in the sun. Vereniging Gemeenten voor Duurzame Ontwikkeling et al. (n.d) gave the following examples:

Lavender
Lavendel

Lavandula angustifolia
'Hidcote'

Catmint
Kattenkruid

Nepeta x faassenii
'Walkers's Low'

Anise hyssop
Dropplant

Agastache
'Blue Fortune'

Sage
Salie

Salvia nemorosa
'Ostfriesland'

Siberian edelweiss
Siberische Edelweiss

Anaphalis triplinervis

Purple coneflower
Roze Zonnehoud

Echinacea purpurea
'Magnus'

Aster
Aster

Aster ageratoides
'Asran'

China aster
Zomeraster

Kalimeris incisa

Shadow garden

There are also plants that grow well in an environment with more shade. When there is a maximum of 2 hours a day of sun, the garden can be named shadow-rich. Vereniging Gemeenten voor Duurzame Ontwikkeling et al. (n.d) gave the following examples:

Hosta
Hartelelie

Hosta
'Night Before Christmas'

Toad lily
Paddenlelie

Tricytis hirta

Needle fern
Naaldvaren

Polystichum setiferum
'Herrenhausen'

Japanese anemone
Herfstanemoon

Anemone
'Konigin Charlotte'

Knotweed
Duizenknoop

Presicaria amplexicaulis

Coral bells
Purperklokje

Heuchera
'Purple petticoats'

Autumn fern
Herfstvaren

Dryopteris erythosora

Japanese anemone
Herstanemoon

Anemone Pamina

Planting plants

Instructions for planting these plants are shown below (Vereniging Gemeenten voor Duurzame Ontwikkeling et al., n.d.).

1. Dig a spacious planting hole
Dig a spacious hole, twice as wide and 1 cm deeper than the plant's root ball. Leave sufficient space, as the plants will grow considerably.

3. Remove the pot
Remove the pot by gently squeezing. Do not pull too hard on the plant's stems. Submerge the root ball in a bucket of water.

2. Mix the soil
Mix the excavated soil with soil conditioner. Note: Never plant directly in the soil conditioner; always mix it thoroughly with the soil.

4. Shovelling back the soil
Place the root ball in the ground, fill the hole with the mixed soil, and press down lightly. Water. Is it dry in the week after planting? Water your plants regularly.

Hedges and ivy

Hedges

As a property boundary, there are options such as a fence or a hedge. Hedges and shrubs provide shelter and food for many birds and insects. Furthermore, they have deep roots, which makes them less affected by prolonged drought. Additionally, hedges and shrubs are cheaper than a wooden fence (Klimaatmaat, n.d).

Privet
Liguster

Barberry
Berberis

Dog Rose
Hondsroos

Sweet briar
Elegentier

Elder
Vlier

Blackberry
Braam

Rowan
Lijsterbes

Spindle tree
Kardinaalsmuts

Hornbeam
Haagbeuk

Climbers
If there is already a wooden fence in the garden, climbers can be used to green the property boundary. Additionally, climbers can also be grown against an outside wall. In summer, it helps prevent the house from heating up, while in winter, it provides insulation and helps reduce heat loss. For a wooden fence, climbers such as Parthenocissus tricuspidata (Boston ivy) and evergreen ivy, such as Hedera helix, are often used. For climbers on walls, fruit-bearing species can be chosen; these provide more food for both insects and birds, as well as the garden owners. To maintain these, it is important to give the ivy water during periods of drought.

Additionally, there are different sorts of climbers:

- Self-clinging climbers
  - These have suction pads or aerial roots which they use to attach themselves.
    - Examples: Hydrangea and ivy

- Twining climbers
  - These climbers have main stems or side stems that twist around other plants or wires. These always need a structure to support them.
    - Example: wisteria

- Tendril climber
  - These wrap around a supported structure as well. They have thin threat-like organs.
    - Examples: Boston ivy and clematis

- Scramblers
  - These climbers use hooks or thorns to lean on and cling to support
    - Examples: Climbing roses and winter jasmine.

Vegetable garden

A vegetable garden has many benefits for water filtration, biodiversity, and garden owners. For example, children often find it interesting to see a seed grow into a plant that grows food. A vegetable garden needs to be planted in a sunny spot.

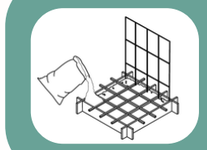
If you are starting a vegetable garden for the first time, it is best to start small, for example, with 1 or 2 m2. A 1 m2 vegetable garden can be made from 4 wooden planks 25cm high and a sack of fertilised garden soil (Klimaatmaat, n.d.). In the vegetable garden, plants such as tomato, lettuce, Rocket, green beans, Herbs, Beetroot, radish, carrot, spinach, and corn salad can be planted. These sorts all have several different sowing periods. For the whole sowing calendar, see Appendix C.

Vegetables and fruits also come in different sizes. It is important to plant the low plants at the front, the middle high plants in the middle, and the higher plants at the back (IVN, n.d)

Instructions for making a one square meter vegetable garden:

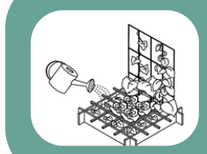
1. Choose a spot
Select a bright spot where there is at least 6 hours of sunlight per day. You can buy a raised garden bed, but you can also make one yourself. Or you can simply stretch some wire. Ensure that your sections are approximately 30 centimetres wide.

2. Create a garden plan
In the raised garden bed, sow and plant in squares. Place climbing plants and broad plants in the back sections so that the plants do not later obstruct the sunlight for the lower crops.



3. Fertilise the soil
Good soil is very important for a rich and healthy harvest in your raised garden bed. Good, fertile soil ensures that plant roots grow well.

4. Plant your vegetables and herbs
Sow a seed as deep as the seed is large. With most plants, you can do this around the month of May. You can also pre-sow seeds indoors first. You can also plant cuttings.



5. Maintenance
Water regularly. Keep an eye on whether you need to fertilise; this is often necessary after 2 months! Enjoy the harvest!

Herb spiral
To grow multiple herbs close to each other, a herb spiral can be built. It is often made using old garden tiles or stones. Due to the difference in height and the spiral shape, various microenvironments are created: dry (at the top), moist (at the bottom), sunny (at the top, facing south), and shaded (lower down, out of direct sunlight). A water source could be added at the bottom of the spiral to make sure the herb gets enough water. Additionally, the birds can drink from the water (Permacultuur Nederland, n.d). The gaps between the tiles provide shelter for insects, salamanders, and mason bees. See Figure 17 for an example of an herb spriral.

Figure 17: Example of herb spiral (Permacultuur Nederland, n.d)

Stacked wall
Another way to provide shelter for these animals is to build a small stacked wall using old garden tiles, see Figure 18. It is also possible to grow vegetation on this wall, such as moss, ferns, succulents, and wild herbs.

Figure 18: Example of a stacked wall (Klimaatmaat, n.d)

Healthy soil
To grow vegetation in a garden, it is important that the soil is healthy. Healthy soil is rich in humus. This can be achieved by mixing well-decomposed plant material into the soil, for example, compost or soil improvers. Humus adds nutrients to the soil and is able to retain many times its own weight in water (Klimaatmaat, n.d.)

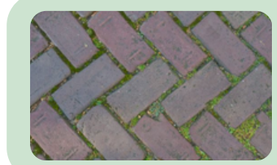
Therefore, an easy way to create humus-rich soil is to leave your leaves and plant residues in the garden.

Permeable paving
For some parts of a garden, people prefer paved surfaces, for example, for a terrace or garden paths. To prevent the garden from flooding on rainy days, it is possible to use permeable paving. There are several options for permeable paving, as can be seen below (Klimaatmaat, n.d.)

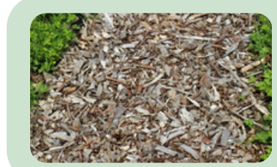
Open Paving pattern
An open paving can be created with standard pavers, but laying them in an open pattern with wide joints. In between the tiles, low ground cover or grass can be grown.

Grass concrete pavers
Grass concrete pavers are a form of open paving. Where the tiles are missing pieces, grass and low ground cover can be grown.

Porous concrete pavers
Porous pavers have a granular structure with many pores, which makes them water and air-permeable.



Woodchips, bark and cocoa shells
These are the most sustainable options. However, they need a bit more maintenance as they need to be replenished almost yearly.



Gravel, crushed stone, shells and lava stone
These sorts allow rainwater to pass through easily. Additionally, the installation is easy, and the maintenance is quite low, only a bit of raking and levelling now and then. Growth of weeds can be limited through laying a permeable weed control fabric under the gravel.

Wooden decking
Lastly, a wooden decking can be applied. For this decking, a permeable weed control fabric is advised as well. It is better to use only wood with an FSC label and not use tropical hardwood.

Building blocks Subsidy

Procedure

To see what steps need to be taken to apply for a subsidy, we look at what other municipalities have for their green subsidies.

Municipality of Amsterdam (City of Amsterdam., n.d.)

1. Go to the subsidy webpage
2. Log in with DigD
3. Upload documents:
    a. plan of the activities
    b. Estimated costs
    c. Receipts of costs of manhours and matarials with clear taxes
    d. Copy of bankpass or bankstatement
4. Send form

Municipality of Rotterdam (Gemeente Rotterdam, 2023)

1. Fill in subsidyform.
2. Upload the following documents:
    a. Short description of elements and costs of the project
    b. gardenplan with the old and new situation
    c. Before and after photo's
    d. Aproval of landlord if applicable
3. Fill in plant list.
4. Apply for subsidy with Digd.

Municipality of Groningen (Gemeente Groningen, n.d.-a)

1. Upload the estimated costs or receipts of the activities
2. Upload the bankstatement or a copy
3. Upload a drawing of the current and/or new situation
4. Apply for subsidy

Municipality of the Hague (Gemeente Den Haag, n.d.-a)

1. Check the Criteria
2. Check if you first need to take actions before getting the subsidy
3. Upload the following documents:
    a. Before and after photos
    b. Design or sketch of the actions
    c. Receipt of costs
4. Fill in the aplication form
5. Apply for subsidy

Chosen procedure

With the procedures of the other municipalities in mind, I have chosen the following steps to minimise the work of the residents & Municipality:

1. Indicate the total number of m^2 tiles removed for vegetation.
2. Fill in the plant list (number of m^2 or items per vegetation type.
3. Upload Before & After photos of the greened garden.
4. Upload invoices or receipts for the purchased vegetation.
5. Apply for the subsidy using DigiD.

did not incorporate the sketch or garden design, as this is a lot of work for the residents and for the municipality to check. Therefore, I chose to only incorporate the before & after photos in the steps.

Amount of years the garden needs to stay green

Some municipalities also have the criteria that the garden needs to stay green for at least a number of years. For Amsterdam, this is 5 years (Gemeente Amsterdam, 2026). I think this is a nice addition to the subsidy, as this makes sure the garden stays green as well.

K. subsidy cost calculation

Estimation:

1 garden 10m^2 greened:

- 2 trees (2m^2) in the wildflower meadow
- 2m^2 shrub
- 4m^2 wildflower meadow (no subsidy is often only something like 15 euros)
- 4m^2 plants
- 2 climbing plants

100% subsidy for this garden:

- 2 trees 60 euros
- 2 m^2 shrubs 50 euros
- 4 m^2 flower meadow 0 euros
- 4 m^2 plants 80 euros
- 2 climbing plants 30 euros

= 220 euros for 1 garden

80% subsidy

- 2 trees 60 euros
- 2 m^2 shrubs 40 euros
- 4 m^2 flower meadow 0 euros
- 4 m^2 plants 80 euros
- 2 climbing plants 20 euros

= 200 euros for 1 garden

Total households with a garden in Delft

= 13,533 + 3,558 + 634 + 471 = 18,196

Assuming 10% of households apply and each greens 10 m2 (about one-fifth of the average garden), approximately 1,820 gardens would be greened.

Total costs

would then be: 363,920 euros for the municipality of Delft.