

## What to do with the Lutkemeerpolder?

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## **Abstract**

Cities are expanding rapidly which comes with a demand for more space. At the same time the climate crisis is becoming more and more of a political theme. To adapt to these challenges the city came up with the policy 'Amsterdam Circulair. We analyzed this policy, scrutinizing its main three themes and extracting the key points of all three themes. Subsequently, we used this policy and its main three themes to assess whether the Lutkemeerpolder as a business center or as urban agricultural ground was more compatible with the policy. After thorough comparison our findings were that the Lutkemeerpolder as agricultural ground was most compatible with the policy. Although the Lutkemeerpolder is now scheduled to be developed as a business center. However, it is still important to question whether this business center is still a good choice.

## **Background**

In today's age cities are rapidly expanding. Amsterdam is no exception; the city is quickly expanding in terms of citizens and in terms of territory. There are plenty of benefits involved with a city expanding of course, such as more job opportunities, more tourism and so on. Although this all sounds very appealing, an expanding city also has downsides. Naturally, an expanding city needs more space to provide the required space for new inhabitants. As to be expected, this demand for more space brings with it conflicts.

However, the expanding city and the demand for space that goes with it is not the only problem the government of Amsterdam is facing. As we all know, climate change wreaks havoc across the world, and threatens our existence as a species. With the severity of this crisis becoming clearer, the crisis and its solutions are also being increasingly prioritized on the political agenda.

The increasing importance of the climate crisis on the political agenda manifests itself in the term circularity. Put simply, The term circularity and being a circular city means wasting as little resources as possible. This means that a product, service or resource is renewed and regenerated instead of thrown away, as we do now (1). The municipality of Amsterdam acknowledges this need for circularity and has made circularity its key value in the new policy on the development of the city.

## Problem definition

We are studying the case of the Lutkemeerpolder. This is a piece of land in Amsterdam Nieuw-West. The Lutkemeerpolder has 43 acres of very fertile soil which is very suitable for agricultural use. However there is a conflict between two parties that both want to put the land to a different use.

On one side there is the municipality of Amsterdam, who have made a destination plan all the way back in 2003, to use the land commercially. On the other side of the conflict there is 'Voedselpark Amsterdam' which is an organization that wants to develop the Lutkmeerpolder as urban agricultural ground, supplying the residents of Amsterdam with healthy locally produced food.

At present, a contract between the municipality of Amsterdam-which has transferred its powers and responsibilities in GEM (Schiphol Area Development Company) Lutkemeer-and SADC (Schiphol Area Development Company) stipulates that the blue area will be developed as a business park.

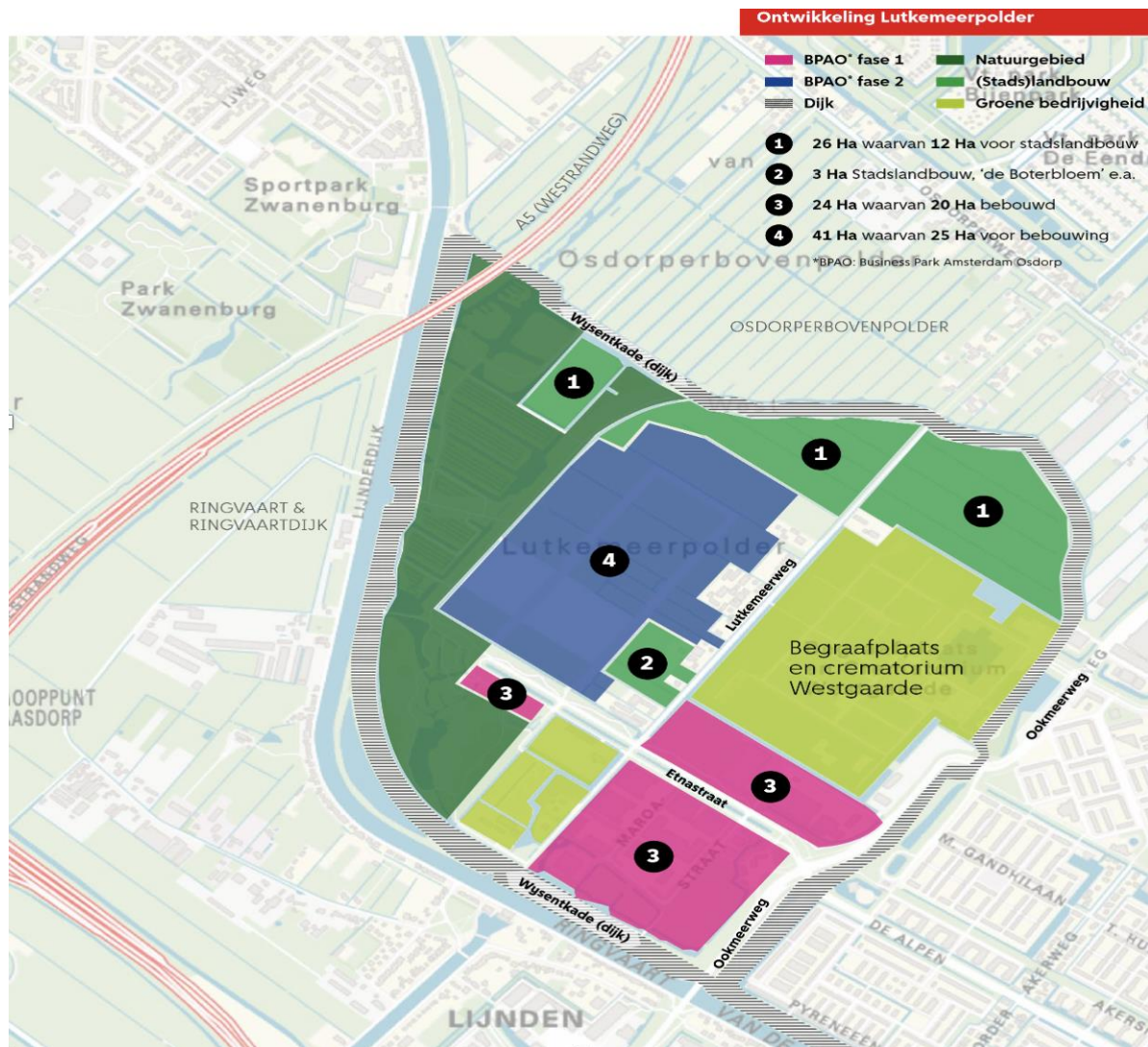


Figure 1: Map of Lutkmeerpolder

De Boterbloem together with Stadsgroenteboer en PLUK are using 3 acres of agricultural land. Together with the already 3 acres in use of urban agricultural land there'll be 12 acres available for development of urban agriculture. There is in the Lutkemeerpolder while the remaining 41 acres are being prepared for the business park (called Business Park Osdorp). In the picture it is the blue area.

With the decision for the usage of the land already being made a long time ago, it is hard to reverse the decisions that were made. However, our purpose is not to change the decisions that were made. It's to assess whether there is a problem with the compatibility between the decisions that have been made regarding the Lutkemeerpolder and the recently released policy of the government of Amsterdam, namely 'Circulair Amsterdam'(4).

## **Definitions and Aim**

### *Aim*

Our main question in this research is: What is- considering Amsterdam Circulair - the most suited in the Lutkemeerpolder, a circular business park (5) (a combination of product development and distribution) or a location for development for urban agriculture?

Our aim with this research is to determine whether the development of urban agriculture around the Luktemeerpolder or the development of a business park best fits the policy plans developed by the government of Amsterdam called 'Amsterdam Circulair' (The policy).

### *Definitions*

Before it is possible to answer the question it's necessary to define what urban agriculture is. The form of urban agriculture in our case is a professional urban food production and food processing on the outskirts of the city of Amsterdam. This idea of urban agricultural food production can contribute to a sustainable and liveable city and possibly reduce the urban footprint. In our case the urban agriculture can also link local urban food production to social goals, such as relaxation, social cohesion, and educational opportunities.<sup>1</sup>

Another concept that has a key role in the document 'Amsterdam Circulair' is concept of broad prosperity. Broad prosperity is often seen as a more comprehensive and equitable goal than simply pursuing economic growth. The GDP (Gross Domestic Product) focuses solely on material aspects of our society. How much the society consumes, produces, and how much money is overall earned from this. Broad prosperity investigates what is important for a good quality of life. This also includes material prosperity, but ultimately for people it is intangible things that determine whether they are happy. This includes the quality of relationships, health, and a pleasant living environment.

## **The approach/method**

To conduct our research our main source has been the recently released policy document by the government of Amsterdam called Amsterdam Circulair. This document covers areas regarding the circular development of the city. We also conducted an interview with an employee of the municipality of Amsterdam who knew more about the conflict going on in the Lutkemeerpolder.

With our two main sources of information stated, it is important to describe what we did with these sources. As stated, before the recently released policy document, named 'Amsterdam Circulair', was our most important source of information. The policy consists of three main themes, namely: Food and organic residual streams, consumption goods and built

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environment. Subsequently we analyzed these main themes and extracted the main points that were made per theme. The interview with Lucie Snoeker was valuable to get a better understanding of the conflict, this better understanding gave us the ability to narrow our research down and formulate a research question.

The next step in our research was to use the sources we analyzed to answer our research question. To do this, we looked at the main points of every theme and subsequently assessed (application) whether the business park or the agricultural land was more compatible with the main points of the theme. We did this for all three themes.

## **Analyzing Amsterdam Circulair**

### *Theme one: Food and organic residual flows*

The first theme in which the municipality sees opportunities to exert influence and achieve results is focused on food and organic residual flows. This theme focuses on promoting short food chains, healthy and sustainable food consumption, and high-quality processing of organic residual flows (4). In the research we delve deeper into short food chains and sustainable food consumption because of their relevance. This category is closely linked to the policy Amsterdam's Food Strategy, which is incorporated in Amsterdam Circulair. With this food strategy, the municipality of Amsterdam is committed to a change towards a healthy, sustainable and social food system.

#### *Short food chains*

The municipality of Amsterdam has the ambition to initiate a change in the system in which they strive for a robust regional food system that is in line with the Amsterdam Food Strategy (4). The main points are promoting sustainable food chains and encouraging urban agriculture. Sustainable food chains are key to initiating positive change. This requires better coordination of regional food production with regional needs. An important aspect of this is encouraging circular agriculture and closing the local nutrient cycle, which requires an active role from the municipality according to the policy. If the use of artificial fertilizers is reduced and importing feed and fertilizers is avoided, this, together with nature-inclusive land use, urban agriculture, and circular agriculture, will contribute to reducing climate change.

Urban agriculture is part of a green city and is an important part of the sustainable food system in Amsterdam (4). The focus is not only on harvesting and growing food in or near the city but has also a big social function. In this way, urban agriculture promotes awareness, education, participation, and connection within a community. In addition, education ensures that Amsterdam residents develop knowledge about food production, and this creates more appreciation for their food, which results in less food waste.

The municipality of Amsterdam has drawn up three directions for action. The first is to stimulate food production in the city (4). The municipality wants to promote food production within the city. In the city, the emphasis is mainly on the social function of urban agriculture. In addition, the municipality supports the participation of Amsterdam residents, knowledge institutions and companies in the sustainable regional production of food. The second direction of action is purchasing regionally produced food. These regionally produced products are then stimulated by the municipality through direct financial support. This also supports local producers. Thirdly, encouraging cooperation between sustainable chain parties. The aim of this collaboration is to promote the consumption of regionally produced food. This requires the development of an action plan from the municipality and chain parties, such as producers, distributors, and sellers. Part of this involves providing information and finding or developing markets, such as schools and hospitals. Also, business models to finance the possible additional cost.

### *Healthy and sustainable food consumption*

The municipality of Amsterdam strives for healthy and sustainable food (4). It is recognized that there is currently a great deal of pressure on the environment. The solution is adjustments in our eating habits and initiatives when it comes to food production. Amsterdam has already set goals and, according to the policy, these can result in a reduction of the ecological footprint of our food supply by 2030. The policy attaches importance to education to help Amsterdam residents change their food patterns. For example, it is advocated that balanced sustainable nutrition should be implemented in the curriculum of students. Moreover, initiatives that promote sustainable food consumption can not only prevent food waste, but also improve the health of Amsterdam residents.

Reducing food waste and promoting a healthier diet contributes to more efficient use of agricultural land (4). This in turn contributes to reducing greenhouse gas emissions, soil degradation, biodiversity loss and nutrient shortages and surpluses. There is a shared responsibility, where the municipality can help create awareness and a healthier food environment.

The municipality's first line of action is to change the eating habits of Amsterdam residents (4). The Municipality of Amsterdam and their chain partners work together to increase awareness through campaigns and other strategies, so that healthy and sustainable food receives more attention in order to encourage Amsterdam residents to consume healthier and more sustainably. The municipality also wants to focus on reducing food waste and wants to combat food waste by targeting specific sectors and specific groups of Amsterdam residents. They want to discourage food waste by once again using awareness and "economic instruments". They also want to distribute food surpluses to Amsterdam residents who need it. Finally, the municipality wants to support all kinds of initiatives from society that focus on combating food waste and encouraging a more sustainable and healthier diet.

### *Application*

The municipality's ambition to develop a robust and sustainable food system through short food chains is completely in line with the Voedselpark Amsterdam. The developers of the Voedselpark Amsterdam have the vision to achieve the shortest possible food chain (6). A network of local collection points and food collectives ensures the shortest possible chain from farm to plate. The municipality of Amsterdam has the ambition to stimulate circular agriculture, according to 'Amsterdam Circulair'. The aim of Voedsel Park Amsterdam is to develop organic and nature-inclusive circular agriculture. Food is produced within the boundaries of nature and with respect for nature, climate and the environment. For example, no artificial fertilizers or pesticides are used, and soil life is fed with organic material and fertilizers. With the aim of stimulating maximum biodiversity. In addition, the municipality can realize their next ambition to stimulate regionally produced products and food, as the Voedselpark Amsterdam food park will produce hundreds of kilos of fruit and vegetables for Amsterdam residents every week (4).

Voedselpark Amsterdam also stimulates educational programs in the Lutkemeerpolder through the involvement of youth and parents with school gardens and educational projects (6). For example, they want to provide education about sustainable food through collaboration with schools, self-harvest initiatives and harvest festivals. They also want to make food production visible and understandable by organizing courses and workshops. This promotes awareness of food production and that corresponds with what the municipality of Amsterdam wants to achieve.

The educational program directly promotes awareness of food consumption through the involvement of youth and parents. The educational program encourages Amsterdam residents to consume more sustainably and healthily and therefore also indirectly contributes to reducing food waste according to the policy. This corresponds to the ambitions of the municipality to change the way Amsterdam residents eat, to give initiatives against food waste and food production a place in the city. Because Voedsel Park Amsterdam makes people aware of where their food comes from and provides education about sustainable food production, this contributes to the municipality achieving its policy goals for healthier and more sustainable food consumption.

A business center is not at all in line with the theme Food and organic residual flows. The ambitions for a greener city regarding urban agriculture and education and awareness around food consumption cannot be realized through a business center. A business center would damage the last piece of unsprayed fertile land around the city and would also not fulfill the social function of urban agriculture. The components of awareness, education and connection cannot be pursued by a business center. Even a green and sustainable business center will hardly contribute to the municipality's ambition to change the eating patterns of Amsterdam residents and to combat food waste. The ambition of more efficient food production is also difficult to achieve due to the unsuitable logistics hub (7). Finally, a food park with a focus on urban agriculture and healthy and sustainable food seems much more in line with the Amsterdam Circular policy than a business center.

### *Theme two: Consumer goods*

#### *Reducing consumerism of the municipality*

The municipality aims to initiate a shift towards circular consumerism. By reducing its own consumption, the municipality wants to set an example (4).

The second value chain of Circulair Amsterdam is therefore referred to as consumer goods, an emphasis on sharing, repairing, using, and processing discarded products in a circular manner. Waste collection, previously outsourced, is now again the responsibility of the municipality of Amsterdam. The city has taken on the task of organizing waste processing once again.

The city also aims to enhance its waste processing while promoting economical practices that involve conscious and lesser consumption (4). Additionally, the city seeks collaboration with producers and suppliers to either repair or repurpose discarded products. To effectively reduce the municipality's own consumption, the municipality considers it imperative to opt for used, repaired, or easily repairable products during their own purchases. When buying products, it is important to fairly consider their economic, environmental, and social impact. For instance, this could also involve considering responsible forestry when procuring furniture for its premises. This way of thinking is clearly connected to the principle of broad prosperity. The municipality aims to decrease its ecological impact by implementing a circular system for procurement, usage, and reutilization. Additionally, the municipality intends to establish producer responsibility in order to promote circular utilization of products beyond their usefulness. Amsterdam Circular intends to have a favorable impact on employment while avoiding exacerbation of climate change and air pollution.

#### *Utilizing its existing resources*

Amsterdam also aims to practice frugality not only by reducing consumption like mentioned above but also by utilizing its existing resources more efficiently in a circular manner (4). It plans to achieve this goal by encouraging activities like clothing exchange, shared use, local craft centers, and local repair shops that promote frugality within the city. By supporting these initiatives, the city is also developing the infrastructure that facilitates the circular reuse of products. Promoting circular initiatives also increases work opportunities,

allows the people of Amsterdam to meet with each other and so also fulfills a social function. The social inequality in Amsterdam's population will be decreasing by making sustainable consumption more reachable for low-income earners.

#### *Product process*

The municipality's third and final objective is to process products- in particular clothing- that have reached the end of their useful life in a high-quality manner to maximize the value of the raw materials (4). By effectively collecting waste at local level and advising local producers to avoid chemical components in making their product, the municipality can more easily reduce its ecological footprint through reusing the raw- non-chemical- materials in discarded products. This approach of implementing a high-quality waste disposal leads to a reduction in chemical pollution while also promoting employment and education. This way of thinking is once again aligning with the concept of broad prosperity.

#### *Application consumer goods*

The City of Amsterdam's aim to modify its consumer behavior and sustainably manage products while maximizing their afterlife is apparent from Amsterdam Circular (4). As urban agriculture lacks facilities to develop/reuse sustainable consumer goods, this part concentrates on evaluating the aptness of a business park in the Lutkmeerpolder.

It can be argued that the City of Amsterdam could exercise control over the goods traded and manufactured within the business park. In a destination plan, the municipality can influence the initial businesses by granting or withholding permits to certain (non- circular) companies. However, it is significant to note that the municipality's influence is limited to the first companies that settle in the Lutkmeerpolder (*interview with employee of municipality department Grond en Ontwikkeling*). If the initial business moves, for any reason, the municipality loses parts of its control over the type of company that will settle in the area. There will be, or may be, uncertainty about the quality of the (consumer) goods produced and/or distributed and whether the building materials are reusable. This is a major disadvantage. To comply with 'Amsterdam Circulair' it is crucial to implement a strategy to ensure the quality of goods produced and materials used by the companies in the industrial estate. It can be determined to some extent what kind of businesses will come, but not necessarily who will come, particularly in later stages of business park. Also the construction of a business park does not contribute with developing a circular infrastructure.

#### *Theme three: Build environment.*

As stated, the city of Amsterdam is expanding rapidly. With this expansion comes a bigger demand for housing. Furthermore, with an expanding city not only the demand for housing rises, but also the demand for products, services and resources (*interview with employee of municipality department Grond en Ontwikkeling*). To address this increasing demand, the government of Amsterdam focusses on circularity in the built environment (4). Built environment is defined as all areas, all buildings and the public space. The criteria that need to ensure the circularity of the built environment are not very clear yet, however the government has developed a few values on which they want to base the further guidelines to ensure the circularity of the built environment.

One of the most important criteria for built environment is to limit the usage of primary resources when constructing new buildings (4). This means that the usage of eco-friendly materials, for example biobased materials or recycled materials, are supported by the new policy. When assessing whether a project fits the guidelines of the policy, the government will also look at what happens when the building cannot fulfill its purpose anymore. Will the building just be torn down? Or is it possible for the building to be used as something



different? Is the building easy to remove or will it cost lots of resources and therefore emit more carbon dioxide? These types of questions are taken into consideration when deciding on which projects get a license for construction. This is a tool for the government of Amsterdam to limit the usage of primary resources.

#### *Application build environment*

In the theme Build environment the focus lays on building with recycled materials or eco-based materials, another criteria is that the building can serve another purpose when it can't be used as intended anymore. The developers of the business park (SADC) are claiming to tick all these boxes, as it will be adjusted to the current ecosystem and will make use of circular materials (5). Owing to this fact, the business center could be best compatible with the theme build environment.

#### **Discussion**

In conclusion, the Lutkemeerpolder as urban agricultural ground is probably the most compatible with the policy Amsterdam Circulair. This conclusion becomes clear when viewing the results of applications, we did for each of the three themes. But not only these results support the development of agricultural land. Urban agricultural land also makes more sense when taking the message the policy wants to convey into account. The policy is all about changing our way of thinking and making radical changes. Choosing the development of urban agricultural land, which in Amsterdam is a new phenomenon, over a business park is more in line with this train of thought. Also the development of urban agriculture in the Lutkemeerpolder is more in line with definition of broad prosperity used in Amsterdam Circulair, because Voedselpark Amsterdam could as noted have a positive influence on a wide aspect of factors.

However, it is important to note that the decision to utilize the Lutkemeerpolder as a business center has already been made by the government of Amsterdam. The government also states that reversing the decision will cost 98 million euros and therefore is very complicated. At the same time it is questionable to keep decisions in place that are contrary to policies that are made to be a guideline on decision making.

Furthermore, like stated before, it is not impossible to reverse the decision, it is just very costly and difficult. This being the case, it begs the question whether the current destination plan of the Lutkemeerpolder is justified.

Moreover, turning over the decision could be a milestone in combatting the climate crisis. It would mark a new way of thinking about nature which could be beneficial in further decision making on city development.

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