

Almere 2.0: From Garden City to Green City

Almere is considered the most successful New Town in the Netherlands. The city is only a few decades old, boasts over 200,000 inhabitants and is still growing as part of the Amsterdam Metropolitan Area. Building upon its garden city-inspired development patterns, the municipality is capitalising on the Floriade 2022 horticultural expo it will soon be hosting to explore what “growing green cities” can look like.

Located in the [Flevoland](#) Polder, Almere was created to supply housing for the urban expansion of Amsterdam and the [Randstad](#) area in the 1970s. The goal was to prevent existing cities to expand, so as to preserve the “[Green Heart](#)”, a large green and nature area within the Randstad circle.

The initial master plan for Almere drew inspiration from the [Garden City Concept](#), developed by the English sociologist [Sir Ebenezer Howard](#). This revolutionary model for development created in 1898 assumes a harmonious relationship between city and countryside. The city of Almere was therefore designed as a number of semi-separate nuclei, each with its own neighbourhoods, facilities and identity, connected through shared infrastructure and a common city centre. These districts are separated by stretches of water and extensive green areas (parks, woodlands, agricultural land). According to the University of Wageningen’s Municipal Greenspace Benchmark, Almere has over 100% more green space per inhabitants than other Dutch cities of a similar size. Another striking feature is the system of separate traffic flows – with separated bicycle paths and bus lanes.

30 years after first residents started to move in (1976), Almere became yet again the focus point for solving housing problems for the growing population of the Randstad as well as offering space for businesses. In 2006, the Dutch Government set the target for Almere to double its population by 2030. With a new expansion that would add up to 60,000 new dwellings and 100,000 new jobs, the city faced new challenges, which required visionary strategic planning once again.

There was a debate regarding how best to shape this new phase of growth so as to position Almere more prominently amongst the Netherlands’ main cities. Should a more traditional, continuous built form be preferred to the garden city approach? *“Almere wanted to play with the big kids, and the City Council wasn’t sure it could do so if it remained designed as a collection of villages enshrined in a ‘countryside-like’ setting”* explains Ria van Dijk, Senior Urban Planner at the Municipality of Almere. In the end, it was found that Almere’s landscape-rich development patterns remained a key asset for its growth, providing an abundance of space and opportunities for contact with nature which many contemporary city dwellers crave. *“Almere is located next to two of the largest cities in The Netherlands: Amsterdam and Utrecht; together with Rotterdam and The Hague, they make the country’s four big cities, which have been the main cities in the Netherlands for as long as we can remember”,* further explains Ria van Dijk. *“We cannot compete in facilities with them, but we can compete with an abundance of green surroundings. For example: there is only market for one opera house in the Netherlands, maybe two. It would make no sense to also want to have one in Almere... So for (cultural) facilities, we cannot make a difference in number or amount, but we can make a difference in quality and surroundings. Our cultural facilities make use of the green surroundings: we have two theatre companies which have their main stage in the green-blue settings of Almere. [Vis a Vis](#) for example is located near the beach of Almere Poort. Its open air stage is surrounded by water and woodlands, which gives it a very unique atmosphere”.*

The Covid-19 pandemic has further reinforced this shift: what used to be perceived as dull in comparison with city centre living has now become highly desirable. Along with this shift in perception has also come the interest of making Almere’s extensive green space (largely

dominated by simple grass areas) more productive for those living nearby. Almere's extensive grass areas are largely the by-product of the systematic separation of different traffic flows. Contemporary design now favours the co-location of bike paths, bus lanes and traffic lanes open to cars in one single mobility corridor, so as to generate less "left-over" space in the public realm.

The municipality hired the architecture firm MVRDV to develop [Almere 2.0](#), a vision for Almere's extension. Released in 2009, this plan consists of a loose framework for growth structured around four major development areas, each with their own character, logic and identity: Almere IJ-land, a new island off the coast in the IJ-lake, Almere Pampus, a neighbourhood focused on the lake and open to experimental housing, Almere Centre, an extended city centre surrounding the central lake, and Oosterwold, an area devoted to more rural and organic urbanism. This framework remains true to the garden city ethos, with a strong commitment to maintaining distinct districts separated from each other by green and blue spaces. It also incorporates the idea of ensuring these green spaces provide a range of benefits. This approach was translated in zoning terms, with housing and business developments not allowed within the areas designated as part of the "green and blue structure", unless it can be demonstrated that such developments can add to its ecological or amenity value.

Almere also worked with MVRDV to develop a [proposal to host Floriade 2022](#), the World Horticultural Expo – a bid that proved successful with The Nederlandse Tuinbouwraad (NTR), the Floriade 2022 organising body, and which gained approval of AIPH. The MVRDV plan for Almere's Floriade 2022 is therefore not a temporary expo site but a blueprint and set of principles for a green extension of Almere's existing city centre to be developed from the hosting site.

Almere Floriade 2022 is set to take place on a square shaped 64-hectare peninsula located along the lake, across from Almere's existing city centre, within a vast area that belonged to Almere's designated network of green and blue space. Due to its extensive size, and its proximity to both the city centre and the A6 motorway, the site had previously been earmarked as a potential location for a green development. "*The Floriade 2022 provided a great opportunity to deliver an extra green city development in this location, in that way justifying building in the green-blue network*" explains Ria van Dijk. The masterplan aims for the expo and the legacy city centre extension to showcase an exemplar integration of plants and ecological principles with dense development – thereby illustrating the Floriade 2022's theme of "[growing green cities](#)".

The masterplan is based on a grid pattern that divides the site into 192 developable plots of 1,500 square meters surface area on average. Each plot incorporates a four-meter wide strip along its perimeter that is dedicated to plantings that will outlive the expo. This long-term, structural planting is referred to as the "Green City Arboretum" and is being designed as a plant collection. Each plot, or group of plots is assigned a letter, in an alphabetical arrangement. The botanical name of all new trees or shrubs used across the site starts with the letter assigned to the plot they grow in. "*The trees species used really follow the alphabet, even the second letter of the name and the first initial of the variety*" explains Niek Roozen the landscape architect in charge of the detailing and implementation of the masterplan. "*For perennials and ornamental grasses, we didn't as strictly follow this. In the "A" area, we use only plants starting with the letter A, but we mix them – this provides us with the flexibility we need for colour combinations, suitable plant heights groupings and of course the expo-level*".

To identify suitable species and varieties "*we started with the botanical name list of all the plants, called the Green Book, which features 70,000 names*", explains Niek Roozen. "*Among these, approximately 30,000 are grown in nurseries. We removed from this the*

species that were unsuitable to the climate and soil found onsite. We considered whether the remaining plants were grown in enough quantities by Dutch growers. And finally, we considered the four themes of the Floriade 2020: Food, Energy, Biodiversity and Health – and we asked: would the plants contribute to these starting points? This is how we ended up with about 2,000 botanical names to use on the site .”

The food theme is showcased throughout the Green City Arboretum with the inclusion of orchards. Health was tackled by ensuring all new housing provided on site will have extensive restorative views on greenery. Close attention was also paid to create colourful plant combinations: with early flowering plants for late winter through to bright berries in late fall. The energy theme was addressed via the contribution street trees can make to creating a pleasant micro-climate, through providing enough shade and ventilation. Biodiversity was enhanced not only by using a wide range of varieties of plants (600 different trees and around 1,400 different varieties of shrubs, perennials, ornamental grasses, annuals and flower bulbs), but also by prioritising varieties that are attractive to butterflies, bees and birds.

Most of the newly planted trees found in the arboretum are being donated by Dutch nurseries, which see the project as a fantastic advertisement for the sector. The arboretum will showcase the extensive, yet often untapped range of species choice available to designers for sites exhibiting similar conditions to those found in Almere, while also giving to see overtime plant growth habits and mature shape. Planting started in Autumn 2018, so that trees have established by the time of the expo and provide a lush structural landscape for the subsequent legacy developments.

Future development encroachments upon the perimeter arboretum plantings are allowed as long as they are compensated for by incorporating on the façade or roof of the building the plants that were planned for the arboretum in this location.

A few changes were made to the masterplan when the project entered its detailing and implementation phase. One of them was to integrate as much as possible of the existing natural features found on the Floriade site: trees, land and water. As is usually done in The Netherlands, where most land has been reclaimed over the sea and lakes, the original version of the masterplan envisioned that most of the water found onsite would be filled up. *“We decided to keep the land as it was, trees, water, not levelling up the ground but keeping the existing variations in ground levels, the soils etc. and make good use of what was already there. Not whipping everything off and starting with new land. We have so much new land on the outskirts that it didn’t make sense not using the existing qualities of this location”*, explains Ria van Dijk. *“We can’t create a green city if we do not use these assets as a starting point”* further adds Niek Roozen. The decision to keep as much of the existing mature trees as possible, including a small woodland much-loved by Almere’s residents, was key in building support for the project. *“Up until this change took place, a lot of local people were opposed to the plan”*, recalls Ria van Dijk. All trees were mapped, with all mature specimen identified for retention, with a margin of negotiable removal initially set at 5%. This was increased to 9% to provide the developer the flexibility needed to make the project viable within the agreed budget.

These efforts to enshrine future developments in a plant-rich public realm are now expected to yield one of the most successful dimensions of the legacy plan for the Floriade 2020. *“The City Council was concerned about risks”*, explains Ria van Dijk, *“it didn’t want to work with multiple developers because it feared it would lead to chaos, and ultimately failure to deliver. It believed it would be safer to work with only one developer for the whole site”*. This seemingly simple process turned out to have a significant drawback: as the project progressed, despite initially endorsing the deliverability of the whole legacy programme, the developer grew weary of its viability. As only limited extra resources could be found to

subsidy the project, the decision was made to scale back the range of innovations to be delivered to focus primarily on public space and infrastructure. For example, all streets will be using highly reflective surface treatments, so as to help reduce the urban heat island. Paving patterns will be designed to incorporate vegetated, permeable boulders facilitating water infiltration into the ground so that all street runoffs will be managed via sustainable drainage techniques. Inclusion was also carefully considered, through the integration of textured paving throughout, so as to facilitate navigation for blind and visually impaired users. 80% of the bridges to be built on site will be re-using repurposed construction materials or plant-based renewable supplies...

Arrangements for the long-term management and maintenance of the green city arboretum have also proven contentious. It was estimated that it would cost 300,000 Euros a year to maintain, ie about 2,7 Euros per square meter. In its effort to mitigate against risk, the City Council did not want to endorse responsibility for management. Instead, the arboretum is being treated as private land, and a not-for-profit management company will be set up for its upkeep. *"The downside of this arrangement is that the City is relinquishing control of the arboretum"* explains Ria van Dijk, *"however, it has been agreed that this approach will be subject to a review after ten years, giving the municipality and local residents the possibility to re-evaluate this choice later on, with the possibility for the arboretum to come under public management if it proves not work this way"*.

Further information:

Delivery partner:

- Client (project sponsors): [Municipality of Almere](#), [NTR](#) (Dutch Horticultural Council) and [Floriade Almere 2022 B.V.](#)
- Masterplan Floriade [MVRDV](#) and the Municipality of Almere
- Development plan Floriade: [MVRDV](#) and Ria van Dijk (urban planner), Christiaan Pfeiffer (landscape architect) and Martijn Oxener (urban planner) of the Municipality of Almere
- Landscape Architect of the Green City Arboretum:
Niek Roozen, [Niek Roozen Landscape Ltd](#)
Christiaan Pfeiffer, landscape architect, Municipality of Almere,
Jaap Smit, dendrology, Municipality of Almere

Funding mechanisms:

Green City Arboretum: 3,500,000 Euros, which were covered by the Municipality of Almere and the Dutch growers.

Plants in numbers:

- 2,500 new trees
- 90,000 shrubs
- 180,000 perennials, grasses and sedges
And many flower bulbs

Over 150 nurseries are involved.

Further reading:

- Growing a Green City principles – by William McDonough
https://floriade.almere.nl/fileadmin/files/floriade/BL_I-1_The_GGC_Principles.pdf
- Growing Green Cities – Floriade 2022

www.thisismere.com/living/future/floriade

- Video: Floriade 2022 overview
www.youtube.com/watch?v=Jnj1VR_zjY0&feature=emb_title
- Video: Floriade 2022 Growing Green Cities – principles and themes explained
www.youtube.com/watch?v=G-mjCiRGKBM