

ROGGEBOT



SITE ASSESSMENT
ESTATE ROGGEBOTSTAETE
November 2021

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- SITE ASSESSMENT ESTATE ROGGEBOTSTAETE -

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Project: Estate Roggebotstaete

In this spatial analysis of the Roggebotstaete estate, history, soil, water and biodiversity are described. The government frameworks for development are touched on and finally the spatial layout of the plot is analysed.



Ecological conditions

ELEVATION: The ground level is generally at NAP -0.75 m

CLIMATE: Cfb: Oceanic climate

SIZE: 52.96.39 hectares

ECO - REGION: Atlantic mixed forests

ANNUAL PRECIPITATION : average. 900 mm

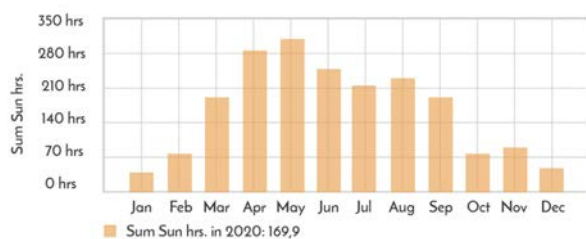
AVERAGE HIGHS: The warm season lasts 3.3 months, from 4 June to 13 September, with an average daily maximum temperature of more than 19°C. The warmest month of the year in Dronten is July, with an average maximum temperature of 21°C and a minimum temperature of 13°C.

AVERAGE LOWS: The cold season lasts 3.7 months, from November 19 to March 10, with an average daily maximum temperature of less than 8°C. The coldest month of the year in Dronten is January, with an average of 0°C and a maximum of 5°C.

WIND: SW, The wind usually comes from the south, from January 1 to January 15 and from September 30 to December 17, with a peak percentage of 40% on October 31. The wind usually comes from the west from January 15 to April 22; from 5 May to 30 September; and from December 17 to January 1 with a peak rate of 45% on July 3. And the wind most often comes from the east from April 28 to May 5, with a peak percentage of 27% on May 4.

PLANT HARDNESS ZONE: 8b

MONTHLY HOURS OF SUNSHINE



AVERAGE EXTREMES

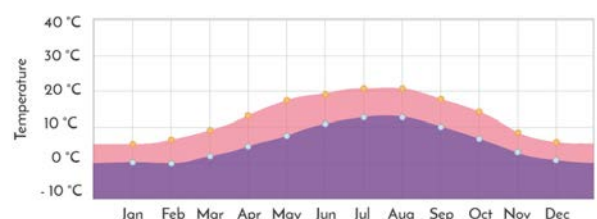
| | 2020 | Normal | Extremes | Value |
|-----------------------|------|--------|----------|-------|
| Frost Days | 0 | 8 | 20 jan | -1,6° |
| Frost Nights | 17 | 46 | 21 jan | -5,3° |
| Warm Days above > 20° | 107 | 76 | 25 jul | 22,5° |
| Warm Days above > 25° | 29 | 22 | 26 jul | 28,5° |
| Warm days above > 30° | 12 | 3 | 26 jul | 37,6° |

■ Annual Climatic Extremes

MONTHLY PRECIPITATION



AVERAGE ANNUAL TEMPERATURES





(Cultural) History Roggebotstaete

The Flevopolder

In 1957, Eastern Flevoland was drained and the design of the new polder could start. The Flevopolder was arranged differently than the earlier Zuiderzeepolders. It was not agriculture that was paramount, but a more multifunctional design that was adapted to the needs of the new era, with more attention to living, recreation, nature and aesthetics. It also had to be a less austere interior.

Roads were built with a slight kink and oblique plot boundaries were created. There also had to be room for future developments; plans served as a starting point not as an end goal. This characterized the introduction of the so-called 'open' process planning.

The main spatial structure of the polder, which is still easily recognizable, consists of several elements: main roads, canals and polder edges accentuated with plants. In the open agricultural areas there are green islands, the residential areas, with city and village groves and the farms with yard planting. To visually break through the endlessness of the polders, a strip of orchards has been laid out in the middle of the polder and various forest belts have been planted at the edges. The Roggebotzand in the northeast is one of them. The forest belts were given functions such as wood production, wind break, nature development and recreation. In the forest areas, walking, cycling and bridle paths were laid out.

The design of the Flevopolder is based on a separation of functions - working here live there, and separate spaces for recreation and nature development. The existing variation in the structure of the soil has been used to realize different landscapes. The more sandy soils along the edge lake are forested on a large scale and the agricultural land use is alternately arable and pasture farming. Based on this design philosophy, a start has been given for zoning in landscape types, in which large and small-scale landscapes alternate. This zoning in landscape types is still clearly visible.



(Cultural) History

Roggebotstaete

Origin of Roggebotstaete

The Roggebotstaete estate originated on the former nursery of the Rijksdienst voor IJsselmeerpolders. It is located on the southeast side of the Roggebotzand, a deciduous-coniferous forest of 800 hectares that is planted on a former sandbank and borders the Vossenmeer, a Natura 2000 area. In the 90s of the last century it was decided to divest half of the nursery, 52 ha, and to turn it into an ecological estate. Three-quarters of the site is part of the Natuur Netwerk Nederland (NNN).

Various interventions have been made to support nature development in the area. For example, part of the site has been taped off - that means that the nutrient-rich top layer has been removed - and two large puddles have been laid out plus a number of small pools. The area is under the influence of seepage water with a high PH value from the Vossemeer, so that many lime-loving species thrive there. The current vegetation consists of herb-rich and fauna-rich grasslands - partly sown and under hay management - thickets, tree meadows, a primeval field and forests. Due to the sandy soil and the buffering effect of the seepage from the Vossemeer, the area has a high natural potential for nature development.





(Cultural) History Roggebotstaete

Estate under development

Roggebotstaete is an estate in development. East Flevoland was withdrawn from the sea in the 20th century and arranged according to the ideas of the time, based on the separation of functions: agriculture, living, recreation and nature. Roggebotstaete was designed from the same idea: three mounds for habitation surrounded by the development of free nature.

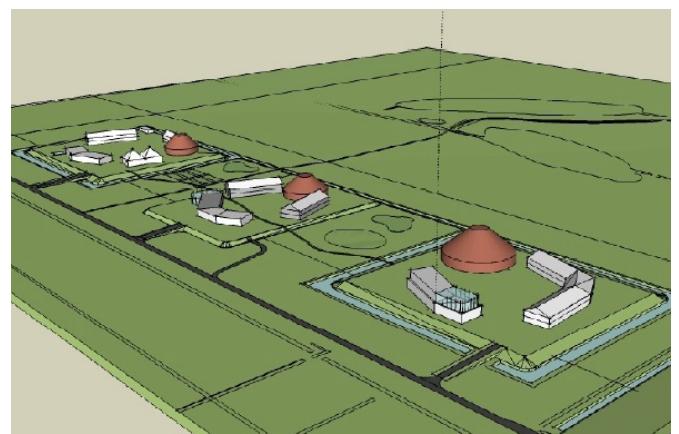
The design was executed but never fully matured. Certain functions, in particular housing, have not been realized. New functions - meeting spaces, a food forest - have replaced them. Roggebotstaete now houses a multitude of functions and activities that are connected by an ever-expanding network of paths. The area is publicly accessible.

CURRENT ASSIGNMENT

Now, in 2021, Roggebotstaete is on the threshold of a transition. There is a view on the development of the three mounds for living, recreation and a care function respectively. As a result, there is a need for a landscape framework in which the current functions find a place and new functions can develop integrally. The framework must form the basis for a robust green-blue structure that matches the landscape identity and character of the place.

Important starting points for new development are increasing biodiversity, increasing resilience to climate change and integrating recreational, educational and care functions and small-scale living.

The core goal of the Roggebotstaete Foundation is to develop an area where nature and human action are in balance, for now and in the future.



Zoning plan De Voorde (8080)





Opportunities and challenges for water management

Desiccation, salinization, drainage

Climate change causes rising sea levels, which among other things leads to salinization of the IJsselmeer (lake). This threatens our freshwater resources and the soil in the coastal area is also in danger of becoming increasingly salinized. In addition, the availability of fresh water is decreasing due to prolonged droughts. These developments require new visions on water level management in the polders. It is becoming increasingly important to retain fresh rain and seepage water better and not, as usual, to drain it as quickly as possible.

WATER STRUCTURE ROGGEBOTSTAETE

Via the Vossemeer (lake), seepage enters the Roggebotstaete site. The seepage has a high pH value and is sweet and clean; lime-loving species thrive on that.

Seepage in the area is discharged by the seepage ditch along the Vossemeerdijk. Across this is the original ditch pattern, which was dug at a distance of 200 meters. The ditches are in direct contact with the seepage ditch and the two puddles dug in 2005. The purpose of the lakes is to realize wet biotopes in addition to dry ones. There are no locks between the ditches, as in the Roggebotzand. The area was instead drained to enable the function of the former nursery. The drainage on the plots is regulated via irrigation pipes to the ditches that discharge the water on a more distant trip (larger ditch). The site suffers from both droughts and periods of flooding.

Roggebotstaete wants to achieve a number of nature goals. In a number of respects, this does not always relate to current water management. For regulating the water level, the estate depends on the Water Board.



Opportunities and challenges for water management

Water challenge for Roggebotstaete

The water system approach must be an integral part of the planning and in line with the water policy of the 21st century: retaining water, storing it and only then draining it. The water storage can be expanded in different ways. Examples include enlarging and deepening the lakes, constructing more pools, constructing a swimming or fishing pond and widening the ditches and realizing more nature-friendly banks or wadis. In addition to more water storage, this also results in an increase in nature and water quality.

The ditches within the estate generally harbour relatively little biodiversity. So there are opportunities to increase aquatic biodiversity. For example, if pools were built every 300 meters, the crested newt would have a better chance of surviving in the area. In the current ditches and pools there is no fish population; a special fish pond could be built.

The water features also give rise to various forms of recreation. The experience of the water can be increased by making the water more visible in the area. This can be done by removing reed collars, installing decking and constructing more walking paths along and over the water.

The ditches that surround the estate are maintained by external parties. In consultation with the Water Board, it must be investigated whether the water level management can be brought into line with the wishes of nature management and the future functions in the area. In addition, due to an increase in human use in the area, a solution must be sought for the purification of the waste water. There is no sewerage available.



SOIL

The soil on Roggebotstaete

The soil types in the Flevopolder are sand, sablon, clay and peat. On the estate, the soil consists mainly of calcareous flat-skin soils - a soil type that occurs on the young polders in North Holland, Zeeland and the Flevopolder.

The top layer of approximately 25 to 30 cm consists of the so-called Ramspol sand. This sand is quite coarse and the permeability is high. Under this sand cover there are scattered more or less thick clay lenses, which are poorly permeable and interfere with the infiltration of water into the soil. The average permeability increases from the dike in the direction of the trip – to the west. The ground level of the area slopes slightly from the southeast to the northwest.

The planting of the forests on the Roggebotzand was initially done on the sandy soils along the Randmeren, which are less suitable for agriculture. Because of the large scale on which this happened and because the soil is calcareous, the forests had the opportunity to grow into very valuable forest ecosystems. Over time, the forests were opened up for recreational use and have been able to develop into areas with special natural values. The soil quality formed a good basis for establishing a tree nursery on the current site of Roggebotstaete. All deciduous trees planted in Flevoland come from this former nursery.

With a new concept for the design of Roggebotstaete, it is logical to take into account the soil quality and soil conditions. Koch Eurolab's soil analysis provides a comprehensive analysis of the soil in the area and provides tools for the design.





Biodiversity

Miniature nature reserve

Roggebotstaete Estate is located as a miniature nature reserve of 52 hectares in the 800-hectare Roggebotzand that is known as a nature management type 'dry forest with production'.

On the estate, different biotopes can be distinguished: forest, field, ditch, pool and puddle biotopes. The linear elements: avenues, canals, hedges and verges are not referred to as separate biotopes, but are managed distinctively.

THE BIOTOPES

A number of forest groups are scattered throughout the area. The forests and groves are largely planted or they are remnants of the former nursery. They consist of many different types of trees, shrubs and plants in the undergrowth. In 2016, one of the forests was transformed into a food forest and in 2020 - as CO2 compensation for Rabobank - the orchard was planted. In 2021, another 600 trees were planted as part of the 'Plant a tree' campaign. Insect- and bee-friendly trees such as Elderberry, Yellow Dogwood, Medlar, Red Dogwood, Sweet Cherry, Bird Cherry and Dog Rose were chosen.

The field biotopes consist of a varied mixture of native grasses and herbs and are very species-rich. The height differences within the fields, here and there in the terrain, arise from the excavation of the top layer, and the gradual overflow to riparian and forest vegetation contribute to this in a positive way.

In the biotopes of the pools and in the edges of the ponds there are many species that are characteristic of flowery wet hay meadows such as cattail, bald Jonker and marsh clover. Petite fountain herb and the reed orchid indicate a nutrient-poor environment.



In general, the species richness is high, both in the riparian zone and in the water. In the ditches biotope it is different. A number of ditches have a low species richness. Most ditches are nutrient-rich and have very steep banks. Duckweed and fast-growing species are displacing other species.

MANAGEMENT OF THE BIOTOPES

The 2005 development plan has led to a great deal of biodiversity in a multitude of biotopes, each with its own specific requirements for maintenance. Some biotopes are under pressure due to increasing periods of drought or wetting; there species are in danger of disappearing. Other biotopes, on the other hand, require more and more management to prevent overgrowth by certain species. By constantly applying new knowledge in the field of nature management and agricultural methods, Roggebotstaete looks for a good balance between nature and land use.

FAUNA

The alternation of forest and open meadows makes Roggebotstaete an ideal area for roe deer, which are therefore in increasing numbers. Between mound 1 and mound 2 is a wildlife corridor that deer make intensive use of. Other animals that occur are pine martens, bats and a large number of species of water birds and meadow birds including the Red List species of bruise, grass elm and the cuckoo.

Various animals such as sheep, cows, pigs and bees were and are kept on the estate as managers of the landscape. This strengthens the ecosystem and is good for biodiversity. For example, grazing contributes more to soil life and the distribution of biodiversity than mowing with a mower. The cattle and sheep are used to graze the reeds. Pigs of the rare Mangalica breed roam freely in the piglet forest with the aim of making the soil healthy and fertile. The manure of the animals is good for soil life and attracts all kinds of insects - and therefore also birds.



In this way, various cycles are made possible. Animals also have a social and educational function: it is attractive to visitors and you show how nature and agriculture can be intertwined.

OPPORTUNITIES AND CHALLENGES FOR BIODIVERSITY

The aim of the Roggebotstaete Foundation is to develop an ecological estate with great biodiversity, food production and space for recreation. The terrain offers many opportunities for this. However, there are also challenges.

The forest groups are loosely spread over the terrain and there is little coherence to be discovered. They are very different from each other, even if we look at biodiversity.

Part of the forest area is monofunctional and has little to no undergrowth. There are also forest groups with a nutrient-rich forest floor with many blackberries, nettle and sticky herb in the undergrowth; the species richness may decrease due to dominance of these rugged species.

The chestnuts in the current driveway are not in optimal condition; they do not produce fruits. The question is whether this avenue fits in with an ecological estate. The food forest needs more maintenance, for which the budget is currently lacking. The question also arises whether the current location is the right place for a food forest; the bottom is actually too wet. A food forest with a mainly educational function would be better situated in the vicinity of other activities in the southwest edge.

Part of the open fields is increasingly occupied by dune reed and the Jacobs Crosswort is also becoming more and more common. It is necessary to investigate how these species can be reduced. The role of grazers can be used even better.

With good hay management, mowing and drainage, it is possible to retain the desired vegetation in the area.

The quality of the locks is more difficult to improve because they are in open connection with locks in the area. Consultation with the Water Board about other layout of the ditches or other water level management is necessary for this.



THE ESTATE MANAGEMENT PLAN

The estate management plan that is implemented at Roggebotstaete describes in detail how the various sub-areas should be managed. The aim is to increase biodiversity. A distinction is made between herb- and fauna-rich grassland, herb- or fauna-rich field, forests, avenues and (alder) hedges, water features and pools.

Some spatial interventions that, according to the management plan, can increase biodiversity have not yet been implemented. This involves creating more nature-friendly, so less steep banks at ditches and adding more variation to the forest edges by making notches, clearing trees and planting thorny species and insect-friendly plants.

Between mounds 1 and 2 there is a migration route for deer, among others. In the new development of the mounds it is of great importance to ensure an ecological interpretation in which the passage for deer is guaranteed.





The spatial analysis of the planning area

Infrastructure

In the north and west Roggebotstaete borders the Roggebotzand, a dense forest area. In the eastern edge it is bordered by alder hedges with the Vossemeerdijk behind it. A see-through has been made in the alder hedge to maintain the relationship with the dike. Along the entire southern edge runs the chestnut avenue that opens up the area, with an alder hedge behind it.

The Roggebotstaete estate, an almost square plot of 52 hectares, is located at the foot of the Vossemeerdijk. The entrance consists of a stately, spacious avenue with double rows of chestnuts. The avenue runs along the entire south side of the plot and ends in a cul-de-sac (parking loop). It is the only paved road in the area; the other paths are gravel paths, mown grass paths and elephant paths. On the chestnut avenue there are three rectangular shaped mounds with open tree meadows in between with Turkish hazel trees in a square grid. The artificial mounds are 1.80 meters above ground level and are covered with grass and various types of scrub. There are plans to develop the mounds, each with its own function; care, recreation and living.

In the current situation you can park at the beginning of the chestnut avenue - about 5 cars - and at the end of it where a parking loop is made in the grass.

Behind the mounds is a vast nature reserve. The main access is a gravel path that opens up the terrain in a north-south direction. This path is used by walkers and cyclists as well as cars (local traffic only). This main access has various functions, such as the vegetable garden, the Roggebotslot and the apiary. The plot is bordered on the west side by a gravel path bordered by red beech trees. This is a walking/cycling path. Both paths connect Roggebotstaete with the rest of the Roggebotzand. Mown footpaths connect various facilities – in particular the eastern pond and the food forest – with each other.

The three east-west running straight ditches can be crossed in a limited number of places on three north-south running paths - via divers. In 2020, an IVN bird nature route was developed. This path starts at the beginning of the chestnut avenue and forms a 3 km long route through the area.

FORESTS

Roggebotstaete is enclosed on the west and north side by the forests of the Roggebotzand.

Scattered in the area itself are various forests, groves and loose tree groups. Towards the northwest side of the plot, the forest character increases. Many paths are located on the edges of the forests and do not run through them. A number of loose tree groups are remnants of the old nursery, such as groups of lindens, acacias and Turkish hazels. In the northeast, a food forest was created in 2016. The oak forest on the northeast beach of the area refers most to a real forest feeling. There are also the pigs, of the Mangalica breed. Approximately in the middle of the area, at the main access at the junction with a ditch, there is a large linden tree against the edge of the forest. It is a tree with a story, it was found to be too crooked and therefore not used in the intended city planting. This could be a starting point for more special design.



WATER

Between the forests there are several open spaces. In two of them there are large ponds. The largest of these is directly adjacent to the oak forest. Due to the distance of the existing walking paths to the lake and the high reed vegetation, the water is not visible. This also applies to the other pond. Hidden on the east side are also a number of pools.

Three straight ditch corridors cut through the area from east to west and are connected to the seepage ditch along the Vossemeerdijk. Two ditches are in direct connection with the large ponds. Around mound 1 and mound 3 new ditches have been dug that are connected to an existing ditch. The new ditches are densely overgrown with reeds. Because the reeds are not well maintained, these ditches have become breeding grounds for mosquitoes.

The water in the area is not experienceable. The puddles and pools are not visible; the ditches impose a coercive rectilinear structure on the area. Depending on the desired functions, the layout of the water features in the area must be adjusted. With a view to future habitation of the mounds, consideration should be given to redesigning the water around the mounds, more recreationally and more experienceable.

BUILDINGS AND FACILITIES

In 2018, Roggebot Castle was built, a conference centre and workshop with various facilities, such as a kitchen for processing the products that the estate produces. The building is a striking benchmark in the plain on the west side, located on the edge of a hornbeam, ash forest. In the vicinity of the building are a orchard with old varieties and a meeting garden surrounded by a border of edible shrubs and a primeval field.

On terp 3 on the east side is The Greenhouse, a historic Belgian grape greenhouse. It is the oldest building of the Flevopolder and is used as a dinner, party, course room. The mound has been partly excavated and new earthen ramparts have been created as a spatial separation between the greenhouse and the various housing units on the mound. Between mounds 2 and 3, in the vicinity of The Greenhouse, is the vegetable garden. On mound 3 there are three movable tiny houses. On mound 1 there is a movable manager's house.



On the red beech avenue is the 'forest room', a place to stay with a fire pit and wood oven. Near the already mentioned striking linden is the bee garden in the edge of the forest.

THE FUTURE LAYOUT OF THE MOUNDS

The three mounds originated from the idea of developing Roggebotstaete as an estate. On the mounds, residential functions were planned with an image-defining building, as is also the case with estates on the Oude Land. Three residential buildings were allowed, each with a building volume of up to 3500m³ per mound. However, this idea was never realized due to lack of interest among investors.

In the meantime, several new plans have been reviewed and a zoning plan change has been implemented, making it possible to realize other functions than living on the terpen.

The wish of the Roggebotstaete Foundation is to arrange all three of the mounds differently. This concerns a care centre, recreational ecolodges for rental, and a mound with about 5 homes - tiny houses - including a manager's house.

The mounds are all accessible from the asphalted chestnut avenue.

This desired development will bring about more crowds in this southwestern part of the area.

Precisely because three-quarters of Roggebotstaete has the destination nature, it is important to fit the new functions as well as possible into these already existing 'busy' southwestern edges to prevent further spread of functions over the entire site.

A zoning of decreasing human presence, from southwest to northeast, is obvious.

Close to the buildings to be realized, on or in the vicinity of the mounds, places can be created where work can be done in different ways or relaxed in the middle of cultivated nature; think of themed, vegetable or herb gardens, but also more experienceable water such as a swimming or fish pond.

Away from the crowds, on the northeast border, places could be created where the peace, space, silence and darkness can be enjoyed. This can be done through minimal design, and sometimes also by doing nothing at all so that people can stay there without stimuli, gain strength, or do introspection. In short: good for the well-being of the healing human.

WHAT STANDS OUT

On the aerial photograph and topographic map we see a clear division of Roggebotstaete into elongated plots, separated from each other by lot ditches. In the area itself, this distinction is less noticeable. Apart from the first plot with the three mounds, the other plots are not visible, experience lacking, only by the limitation of the crossing of the ditches. It is interesting to investigate whether the old subdivision structure could be abandoned with a new design or whether it would have to be explicitly strengthened. There is something to be said for both options.

The focal points of use functions are located on the west and in the future mainly on the south side of the plot. To the northeast, the nature function increases. In contrast to the rest of the area, the south side with its rectangular shapes is sleekly designed.

In the nature reserve we do not see a main structure. There are few striking points or landmarks, which makes orientation difficult and the existing landscape elements are less on their own. The area is wide but not inviting. There is potentially a lot to enjoy but it is not readable and experienceable.



The area would benefit from more structure. This could be done, for example, in the form of avenue planting, a distinction between main routes and side paths, emphasizing focal points such as the 'crooked' linden.

The experience of the water features could also be increased by making them more accessible. This can be done with bridges, decking, removing the high reeds. A larger intervention would be to connect the two large water lakes with each other, giving it a central function in the nature reserve. This could also be a nice solution for water storage. With the excavated soil, a hill with a vantage point could possibly be realized.

The higher-lying bushes that date from the time of the nursery could be better accentuated by, for example, placing benches or works of art. It seems sensible to reflect on the spatial design with the aim of making the relationship between man and nature more cohesive.

CURRENT POLICY FRAMEWORKS

The programme of requirements of the stakeholders and the policy frameworks of the government and other external parties form the basis for the (current and) new design of Roggebotstaete.

ZONING PLAN

In 2009, bureau Oranjewoud made 'Plan de Voorde', for the then owner of Roggebotstaete.

On the basis of this plan, the zoning plan 'Landgoed Roggebotstaete – plan De Voorde (8080)' was adopted. It fitted in with the policy of the Province of Flevoland and the Municipality of Dronten (Strengthening the Vitality of the Rural Area and the Development Vision 2030). According to the current zoning plan, it is also possible to realize other functions than living on the mounds.

NATURE MANAGEMENT PLAN FLEVOLAND

On 1 January 2022, the new Flevoland Nature Management Plan will enter into force.

It distinguishes the different types of nature and landscape management. The Nature Management Plan determines where subsidy can be applied for Agroecology and landscape management. In addition, the nature management plan contains the goals for Agroecology and landscape management. The nature management plan is regularly revised due to social, ecological and policy developments. Roggebotstaete receives a subsidy based on the Flevoland Nature Management Plan to manage the estate according to the guidelines of the plan.

DRONTEN STRUCTURAL VISION 2030

"Roggebotstaete is located in a zone characterized by 'The green recreational zone: nature, forest and recreation on the border of water and land; for Dronten'ers and people "from outside"; from attraction to nature experience'. The outskirts of Dronten can be described as a relatively open space with largely an agricultural function. Roggebotstaete has a target image that is characterized by 'forests' that are part of the Natuur Netwerk Nederland. By better connecting the forests, the ecological function can be improved. As far as recreation is concerned, the plan area is located in a sub-area where the emphasis is on extensive day recreation such as walking and cycling."

FORESTRY COMMISSION

More than 5 hectares of land of Roggebotstaete is leased by the Forestry Commission. With the leasehold conditions, the quality of the landscape (such as peace, space, silence and darkness) is monitored, accessibility for everyone is guaranteed and the fragmentation of the areas is prevented. With effect from 1 January 2022, a revision of the leasehold right will take place and further agreements can be made if necessary.

NEW ESTATE FLEVOLAND PROVINCE

Roggebotstaete is a so-called 'New Estate'.

A new estate is at least 5 hectares in size, consists of at least 30% forest or natural terrain and forms an aesthetic unit. The use of the land must not disturb the cohesion of the estate and must not harm the natural beauty.

A (residential) building of allure is allowed per 5 hectares, with a limited number of homes per (residential) building.

At least 30% of the surface must be available for forest or nature. The estate must remain publicly accessible.

The province mainly sees opportunities for estates adjacent to existing forest and nature reserves. A good landscape integration is important here.



- UNITED DESIGNERS -
INTERNATIONAL

LITERATURE & SOURCES LIST

- Berkers Marieke e.a. - *Regio van de Toekomst/Flevoland, Nieuw casco voor de jonge polder* Uitgeverij Blauwe Kamer 2019
- Duijvestijn Lennard – *Landgoed & Proeftuin Roggebotstaete*, 2018
- Ente P. e.a – *De Bodem van Overijssel, de Noordoostpolder en Oostelijk Flevoland*, Stiboka, 1965
- Gemeente Dronten – *Bestemmingsplan landgoed Roggebotstaete – plan De Voorde (8080)* 2009
- Gemeente Dronten - *Stuctuurvisie Dronten 2030*
- Geurts A.J. - *De 'Groene IJsselmeerpolders -Inrichting van het landschap in Wieringermeer, Noordoostpolder, Oostelijk en Zuidelijk Flevoland*, Sociaal Historisch centrum voor Flevoland, 1997
- Goes Van der en Groot - *Landgoed Roggebotstaete, biotoop en flora inventarisatie*, 2009
- Horsten- van Santen Y. *Luisterrijk cultuurlandschap, Nico de Jonge landschapsarchitect*, Uitgeverij Blauwdruk 2021
- Rijksdienst IJsselmeerpolders - *Atlas voor Flevoland 1971, 5e jaargang*
- Koch Eurolab – *Laboratoriumanalyses*, 2018
- Kok T. – *Over de hydrologische toestand van het bosgebied in de sectie N in Oostelijk Flevoland*, Rijksdienst IJsselmeerpolders
- RIJP *Verslag van de afdeling beplantingen over de bosjaren 1968/69 t/m 1972/733*, Rijksdienst voor de IJsselmeerpolders, Lelystad 1976
- Vis J. *Flevoberichten No. 80 Rapporten en mededelingen inzake de droogmaking, ontginning en sociaal-economische opbouw der IJsselmeerpolders*, Rijksdienst voor de IJsselmeerpolders, Lelystad, 1971
- Vis J. - *Bijlagen behorende bij Flevobericht No. 8*

PHOTOGRAPHY:

- Private w. Kirkegaard and R. van Biesbergen
- Website Roggebotstaete & Instagram account Roggebotstaete
- Pag. 4, 5 - Attachments belonging to Flevobericht No. 8

VARIOUS INTERNET SITES WHERE:

- www.flevoland.nl
- www.dronten.nl
- www.topotijdreis.nl
- www.hetflevolandsarchief.nl
- www.roggebotstaete.nl
- www.gebiedsontwikkeling.nu
- www.soil4u.nl

EPILOOG

*"We are losing biodiversity worldwide at an alarming rate, and we need an abundance of different plants and animals,
for the health of the planet and our own.*

*Although the threat to biodiversity is an impending problem, clear solutions are available. The first is that people are better informed so that we
better understand why our operations need to be changed. Sustainable practices and general respect for other life forms can make a world of
difference in protecting all flora, fauna and other organisms that we share this planet.*

*One must also understand that the journey of regenerating land is a pact with patience, observation, taking losses and striving for the perfect
symbiotic relationships. Resilience and regeneration are not a given, they must be fed deliberately.*

We must therefore invest to deliver sustainable systems for all and the country's ability to live and increase.

We can restore abundance so that a resilient system is self-reliant, creative, inventive and sustainable.

The richness of life in line with a legacy of stewardship; which generations will admire and benefit from."



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Bedankt voor uw vertrouwen in onze diensten,
Met vriendelijke groeten,

Weruschka Kirkegaard en Rita van Biesbergen

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