



**WORLD CLASS SUSTAINABILITY**



# GREEN CIRCLES

## World class sustainability

**A climate neutral HEINEKEN brewery, a sustainable economy, and a pleasant living environment in the Zoeterwoude region. These are the ambitions that Green Circles is working towards.**

Green Circles is an initiative of HEINEKEN Netherlands, the Provincial Government of South Holland, and Alterra Wageningen UR. With the natural environment as starting point, we aim to realise our ambitions by implementing programmes around the themes energy, water, raw materials, mobility, and the living environment.

But the Green Circles collaboration doesn't end here. We connect diverse parties to the initiative and our goal is to set a world class example in the field of sustainable development.



provincie **HOLLAND**  
**ZUID**



## THE IMPACT OF COOPERATION

### THE MULTINATIONAL

HEINEKEN Netherlands is the economic driving force in the transition process. Based upon the ambition of the HEINEKEN Brewery Zoeterwoude to become climate neutral, new relationships are formed between the buyer and the supplier. This will visibly change the landscape in a sustainable way.

### THE GOVERNMENT

The Provincial Government South Holland is the representative of public interests, land use manager and regulator. The province works towards a sustainable living environment, a green economy, and a future-proof role for businesses in the region. As a connecting force, the provincial government encourages cooperation and ensures the coordination of private and public interests.

### SCIENCE

Alterra Wageningen UR is the source of knowledge and expertise regarding recycling, chain cooperation, and land use innovation. Green Circles offers opportunities for sharing knowledge with community partners and for further research.



# DREAM AND ACT

Think big and  
take small steps

In 2011 they met at the annual conference 'de middag van de blaarkop' (afternoon of the Blaarkop): Menko Wiersema from the Provincial Government of South Holland and Jan Kempers from HEINEKEN. They discussed a project set up by Paul Opdam (Alterra Wageningen UR) about the value of nature for fishers, farmers, the general public, and business, and Kempers realised that a shared dream would benefit all parties.

How dreaming of the greenest beer in the world coincided with dreams of a green and sustainable environment.

**Jan Kempers, manager sustainable development HEINEKEN Nederland Supply**

"It is our ambition at HEINEKEN Brewery Zoeterwoude to become one of the first climate-neutral companies. Within the vast HEINEKEN concern, the brewery is actually almost obliged to do so, not only due to the fact that it is one of the largest breweries in the world, but also because it is located in the concern's motherland. The brewery has everything required to play a leading role within the concern and to set an example in the business world for other companies of this scale.

Our vision is that only companies which take sustainable development seriously will survive the test of time. This initiative is part of HEINEKEN'S worldwide strategy: *Brewing a Better World*. We focus on six areas in which HEINEKEN can make a difference: sustainable water management, reducing the emission of greenhouse gasses, sustainable and honest buying, community involvement, safety, and responsible alcohol consumption.

Within this strategy I see Green Circles as a fantastic collaboration which enables us not only to realise our own ambitions, but also to promote other initiatives, ideas, and developments."



**Menko Wiersema, regional coordinator South Holland Province**

"The Province of South Holland must be a good area for living and working, and also for business and leisure purposes. We want to create space for economic growth and invest in improved mobility. In addition, we are working towards conservation and development of nature and leisure opportunities. A well-balanced use of space is an important factor.

As a regional government we have been creating natural surroundings and leisure areas for too long without really knowing what the general public was looking for in the natural environment. We have been considering landscape design from a limited perspective, missing the optimal and sustainable synergy between nature, living, and working. In this collaboration with HEINEKEN Netherlands and Alterra Wageningen UR, I think that the value of nature for the economy and the benefits for the living environment are united in a beautiful way."



**Paul Opdam, professor Alterra Wageningen UR**

"Green Circles establishes a transition in sustainable land use with a double purpose: making the brewing of beer greener and improving the quality of the living environment. With Green Circles, Alterra Wageningen can demonstrate the way in which ecosystems can contribute towards regional development. Ecosystems are services which are freely provided by nature but which at the same time represent economic value. We can develop new knowledge about cycles, chain collaborations, and land use innovations and share them with partners in the community.

Farmers, businesses, the general public - everybody has an interest in the ambitions of Green Circles. I foresee an energetic social network with the development of a climate-neutral brewery as a driving force."





# COOPERATION

## The critical factor

by Cees Anton de Vries, Origame

○ **If you really want to achieve something and you ask for help, you will receive help.**

○ **If you really want to achieve something and you find someone who wants to do the same, then you have a colleague or a competitor.**

○ **If you find someone who shares your dream and also values you for who you are, then you have the beginning of cooperation.**

The great thing about cooperation is: it is priceless (you can't buy it), it has no standard form (you can't contract it), and it can't be enforced (you can't impose it or instate it by power). Cooperation is always equal, symmetrical, and reciprocal and can't be planned, managed, or subsidised. Cooperation is most enjoyable, and most effective, when it takes place between people who are different to yourself. Cooperation actually makes 'difference' productive. Not as a goal in itself, but as the result of people doing their best. And once you have experienced cooperation, you know that it can be an important basis for safety, success, and innovation.



### Success begins by cooperation

In the long term, HEINEKEN will only be successful in the global market when every glass of beer contributes to a better world. But HEINEKEN can only become more sustainable when neighbours, suppliers, and organisations in the surrounding area work together with the company. Green Circles is about sustainability, energy, biodiversity, health-conscious products, water and natural cycles and above all about cooperation. Green Circles can provide employment, a sustainable landscape, and innovations in sectors such as agriculture, energy, and transport. A project on this scale begins with people learning to work together. People from HEINEKEN, the municipality, farming, the water board, the transport company, the regional province, environmental associations, and from universities; people in Zoeterwoude and Leiden.



### "I have a dream"

The seed of a collaboration is sown when one person with a dream gets the chance to tell others about it. The dream is further developed by talking about it and the dreamer starts taking the dream more seriously. This is the moment at which others stand up and say: "I have that dream too", or "I have another dream, but our dreams can strengthen each other". This unification of dreams is the foundation under Green Circles: people learn to listen to themselves and to others, and subsequently roll up their sleeves and start working together. Then, colleagues start recognising the added value and step by step a whole organisation follows.

For good beer, HEINEKEN already needs quality hop, clean barley, pure water, and renewable energy. To supply good beer in the future, HEINEKEN needs to collaborate with others: the critical factor within Green Circles.



# THE POWER OF NATURE

## Five themes

A sustainable society thrives on renewable energy sources and organises its material flows in cycles, comparable to a natural ecosystem. Ecosystem services are at the heart of Green Circles. In this way, nature is connected to private and public interests.

In order to create a truly sustainable region we have to work on diverse areas at the same time. The partnership concentrates on five themes.

### ENERGY

#### Promoting sustainable energy and reducing greenhouse gas emissions

HEINEKEN Brewery Zoeterwoude currently uses natural gas and electricity. Green Circles is researching the opportunities for renewable and climate-neutral energy sources such as wind energy and biogas.

### WATER

#### Ensuring sufficient good drinking water

The availability of sufficient clean drinking water in the future is a common interest within Green Circles. Working with parties which form the water chain, Green Circles aims to make water flows more efficient, introduce natural water purification, and reuse waste water.

### RAW MATERIALS

#### Completing raw material cycles

A future-proof economy deals with raw materials in a circular way. Green Circles is researching how the waste and by-products from the brewery, such as residual waste flow, spent grain, or phosphates, can be reintroduced into the cycle.

### MOBILITY

#### Making mobility and logistics more sustainable

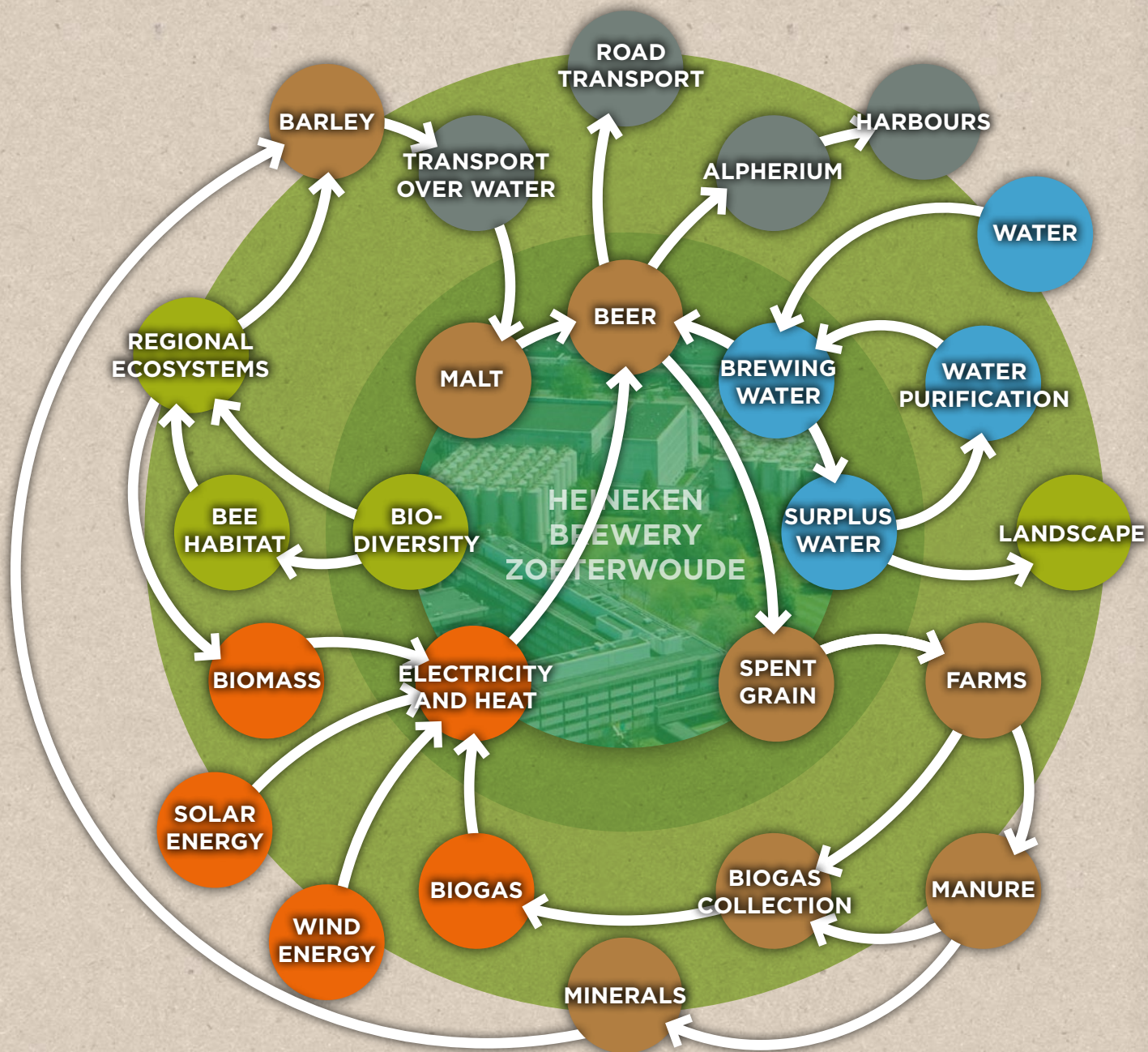
The brewery has an extensive logistics chain, both for the supply of ingredients and packaging and for the transportation of products worldwide. Green Circles aims to apply innovative solutions with regard to both flow of goods to and from the brewery and the brewery's accessibility for employees.

### LIVING ENVIRONMENT

#### Improving the living environment and strengthening biodiversity

Green Circles creates an environment in which living, working, and recreation are connected in an attractive way. Green Circles aims to make use of natural processes for the benefit of economic value-creation, sustainability, and quality of the living environment.





**Green Circles strives towards sustainable location management with the HEINEKEN Brewery Zoeterwoude as a driving force. There are many uncertainties in the project and the result of the collaboration depends on many factors. However, we don't shy away from formulating our ambitions in concrete terms. We set high standards, both for ourselves and other parties, and clearly demonstrate our mission. We measure our achievements, learn along the way, and are prepared to change our course of action when necessary.**

# AMBITIONS

Green Circles creates opportunities which we cannot ignore including increased quality of life in the region, and the more sustainable use of resources such as water, energy and raw materials; not only regional, but also by setting a wider example. Green Circles brings social community themes within hand's reach: the timespan is measured in months and not years.

## ENERGY

### Short term

- Four wind turbines on the brewery site.
- Feasibility studies for sustainable heating for the brewery.

### Long term

- HEINEKEN uses biomass from the landscape for its heating supply.
- Achieving policy change: from subsidies on energy products to subsidies on reducing greenhouse gas emissions in the area (peat oxidation).
- HEINEKEN and its surroundings share a source of sustainable heating.
- 50% of the businesses is climate neutral and connected to a local energy grid.

## WATER

### Short term

- Pilot project on a farm using a water purification method which enhances biodiversity; to be completed in 2016.

### Long term

- Organic purification systems serve multiple purposes (for example improving biodiversity and landscape perception, preventing salinisation, decreasing subsidence and CO2 emissions, contributing to the use of bio- energy in the region.)
- This results in a 15% reduction in the use of dune water for the production of beer.
- HEINEKEN acts as a catalyst for the improved protection of dune environments and groundwater.



## RAW MATERIALS

### Short term

- A pilot demonstrates that a digester can be beneficial to dairy farming and at the same time deliver biogas to the brewery. Digestate is used to complete the mineral cycle and reduce the use of artificial manure.
- Consumption of local products in the HEINEKEN canteens and the province.

### Long term

- From agriculture or other management areas, a fibre chain is realised for HEINEKEN's cardboard use.
- Growth of products (dairy, beer, meat, etc.) which are produced and consumed locally.
- Various examples, in which mineral cycles are completed by manures from the local area. In this way, the use of artificial manure is significantly reduced.

## MOBILITY

### Short term

- Research into the possibilities for a climate-neutral container shuttle between the brewery and Alpherium.
- Pilot for integrating green infrastructure with road and rail infrastructure.

### Long term

- Green Circles is a catalyst for sustainable human transport.
- An infrastructure has been realised for sustainable mobility, for example charging points for electric cars and boats and gas stations for sustainable fuel.

- De Gouwe is the most sustainable shipping route in the Netherlands in terms of use and design.
- Mobility exchanges reduce energy consumption (transport from road to water or railway).
- The Heineken beer shipping containers are transported in a climate-neutral way to the Rotterdam harbour.

## LIVING ENVIRONMENT

### Short term

- The HEINEKEN brewery is a leading example of biodiversity on a business site.
- More bee habitats in de region

### Long term

- In 2016, 75% of all land owners in the bee habitat actually participate in land management and design.
- 50% of all dairy farmers take measures which contribute towards a more beautiful landscape and added biodiversity.
- The green-blue infrastructure of the landscape will have increased by 20% in 2020.
- The value of the landscape is improved in terms of usage and perception for inhabitants and visitors (for example by more leisure access and green-blue infrastructure which improves the identity of the landscape).

## IMAGE AND APPEAL

### Long term

- Green Circles is a source of inspiration outside of the province.
- 'Wijk en Wouden' organises guided tours and demonstrations about the transition to sustainability.
- International scientific congress about transitions to sustainable land use in a government- business- science collaboration.
- 75% of all farmers provide, alongside food, one or more ecosystem services by way of goal-orientated management.
- Children at elementary schools in the region are taught about sustainable landscape use with Green Circles as an example.
- The majority of the general public knows about the value of ecosystem services.
- The general public invests more time and effort in a sustainable environment, for example by gardening with biodiversity in mind or through construction and maintenance of green-blue infrastructure.

## HEINEKEN AS A DRIVING FORCE

### Long term

- HEINEKEN has inspired other companies towards a Green Circle approach.
- Green Circles results benefit the brand name and reputation of HEINEKEN.
- 50% of the Dutch population recognises HEINEKEN as a sustainable brewer.

## TRANSFERABLE KNOWLEDGE

### Long term

- **Result:** A concrete example of how a multinational has contributed to local biodiversity and the living environment by investing in circular and green economics.
- **Chain:** Concrete examples of successful production chains.
- **Process:** New knowledge about the way in which businesses can be influential in the transition to sustainability.
- **Method:** An internationally innovative approach: creating a future-proof economy and living environment by uniting parties with landscape services.



# DRIVING TRANSITION

## Changing from a scientific perspective

by Paul Opdam,  
professor Alterra Wageningen UR

**The essence of Green Circles is cooperation, for the purpose of which we make use of social Networks. How can a multinational such as HEINEKEN become a catalyst in a sustainable transition? How can the unique collaboration between provincial government, business, and knowledge institute create the conditions in which their role as driving force can become fully effective? With the Green Circles projects we discover the extent of the possibilities. In doing so, we make use of recent scientific insights about adaptive governance and management processes in social-ecological networks.**

### **The benefits of ecosystem services**

Together with others, Green Circles is developing a future vision for sustainable land use. New networks are being organised that experiment with transition processes. Landscape services (a type of ecosystem service) is the central concept in which the interaction between humans and nature plays a key role. The expectation is that certain parties can strengthen their services using adapted landscape management, which in turn will benefit other parties. For example, when the council mows the grass, this not only benefits the council budget, but also benefits landscape services such as nature appreciation (inhabitants enjoy their living environment).

Landscape services are a potential driving force or the transition to sustainability. Within Green Circles we are researching the way in which we can further develop this transition based on 'supply and demand'. Scientifically this is a new subject on the border between landscape ecology, urban planning, and management science.



### **The practical test: the bee habitat**

In the bee habitat project we have discovered the way in which a Green Circles network can be constructed around a common urgency to strengthen a landscape service, in this case 'pollination'.

Key factors in building this network were: the concept, the work process, and knowledge. The concept 'bee habitat' was definite. It was concrete enough to be able to connect it to a common goal and open enough to provide space for diverse interests and values. Based upon the shared urgency to improve the living environment, the focus of the work process was based upon creating concrete solutions. The knowledge which was contributed consisted of design regulations for taking effective measures in the landscape. These were formulated so that participants could use

them within their own possibilities, and in this way translate their shared problem into a solution matching their own target group. The design regulations also promote working together: the building blocks of a bee habitat are large (10 hectare feeding habitat within 1 km<sup>2</sup>) and this area can generally only be realised in cooperation with the neighbours.

The social-ecological network around the bee habitat (including the brewery site) which now includes 30 parties is being further developed as a Green Circles network with a wider mission: biodiversity and the living environment. Bridges are being built with other Green Circles networks, such as the network 'water'. Shallow banks with flowering plants which purify the surface water, increase biodiversity. In this way the Green Circles networks connect together.

"I would like to describe the role of scientific knowledge in these processes as social-ecological innovation. Innovation precedes the transition process. By sharing knowledge we can help parties within a given area to perceive and treat the landscape in a different way. This is a two-way relationship: using knowledge to bring about change (*science for impact*) and at the same time reflecting on and learning about the process, which in turn enriches science (*impact for science*)."

**Eveliëne Steingröver**  
Senior researcher of ecological networks  
Alterra Wageningen UR





# WORKING IN NETWORKS

Green Circles unites parties in the region by turning good ideas into real projects. We achieve better, faster results by approaching tasks together.

"We each play our cards based upon common goals. Who plays which card is not based upon positions, but upon who has the most beautiful card."

**Ron van der Helm**  
Managing director  
Living Environment  
and Management  
South Holland  
Province



"Green Circles is an example of 'a golden triangle' in which we work together in equal terms with government and business, without losing sight of social requirements or criteria."

**Louise Fresco**  
President of the  
Executive Board  
Wageningen UR



"Green Circles must become a worldwide example of cooperation with our partners."

**Willem de Jonge**  
Senior Director  
HEINEKEN  
Netherlands Supply



"My dream: making the largest brewery in Europe climate-neutral."

**Martin Pozsgay**  
Brewery Director  
Zoeterwoude



"Green Circles is a pioneering example in which a business uses sustainability to improve its own production process. That this can actually be implemented ensures broad support for the plan."

**Kees Slingerland**  
General Director of the  
Environmental  
Sciences Group  
Wageningen UR



"What we learn in the collaboration with HEINEKEN we can apply when working together with other businesses in the area."

**Hans Schouffoer**  
Management member  
Rijnland water board



"Instead of working with the usual parties, I find it interesting to see what HEINEKEN can signify."

**Mirja Baneke**  
Consultant  
drinking water  
supply and  
water  
management  
at Dunea



"By combining initiatives, we join areas together to make one regional bee habitat."

**Laila Driessen**  
Mayor  
Leiderdorp



"Transition to sustainability has to be facilitated. We can help each other to achieve this."

**Mariëlle van Dijk**  
Project manager  
sustainable development  
Port of Rotterdam Authority



"When you work on something together, the effect is larger than when you work alone."

**Maya van der Steenhoven**  
Manager Warmte  
Koude Bureau  
Zuid-Holland



"We are working on a bee-friendly modernisation of our public-private space."

**Henk Prins**  
Chair of the  
association BIZ  
Grote Polder Zoeterwoude

"Due to the cooperative, many opportunities arise to do things better."

**Chris Versteegh**  
Senior  
Technologist  
HEINEKEN  
Netherlands  
Supply



"In Green Circles many parties who can actually make decisions meet. In this way you can quickly make concrete steps."

**Joost Wesselingh**  
Dairy farmer  
Die Barle Farms





# South Holland is bubbling with energy

## BIOGAS, SURPLUS HEAT, AND OTHER ENERGY SOURCES

**HEINEKEN is searching for renewable alternatives to natural gas and electricity in order to make the business more sustainable. In 2014, research was conducted into producing biogas from the landscape around the brewery in Zoeterwoude. The brewery requires 20 million m<sup>3</sup> of biogas in order to make the heating systems climate-neutral. But is that achievable?**

**Annemieke Smit**, senior researcher Nature and Society at Alterra Wageningen UR: "We wanted to know: How much biomass is needed? How much is there in the province? Is there a match? In South Holland there are many dairy farms that produce manure. However, in order to obtain enough energy during fermentation, you also have to add materials such as grass, waste leaves from arable farming, or aquatic plants. Enough biomass is growing, but this is for a complete market. The fact that it is growing doesn't automatically mean that it's available. Above all, only spent grain, manure, and grass are suitable for producing energy, but it is actually better to use spent grain and grass for feeding purposes than for making biogas. That gives a much higher value usage."

In addition, it appears that most farmers are not actually interested in the digester. It requires high investment, obtaining digestate costs a lot of money, and good fermentation is a skilled process. Smit: "The circle around biogas is beautiful, but due to the low gas prices at the moment and other above mentioned reasons, it is not cost effective. Fortunately, our research has given thinking in terms of cycles a boost. Now we know that we won't make it by using biomass alone, HEINEKEN can also explore other routes for sustainable heating."



### An alternative route

For the possible acquisition or supply of energy, HEINEKEN is exploring an alternative route with Warmte Koude Bureau Zuid-Holland. Managing director **Maya van der Steenhoven**: "The program agency is a public-private collaboration between 25 parties. The goal is: in 2020, 14% of the buildings and greenhouses in South Holland will be heated using sustainable heat. Think about geothermal energy, surplus heat from industry, or bio heat."

The agency researches the supply and demand of warm and cold energy flows on a regional scale. Who has extra, who needs more?



"Our mission: in 2020 14% of the buildings and greenhouses in South Holland will be heated by sustainable heat."

**Maya van der Steenhoven**  
Managing director  
Warmte Koude  
Bureau Zuid-Holland

"We meet with HEINEKEN to explore what we can signify for each other. HEINEKEN already has its own complete water system, but they could also probably join a larger system. Can we use the surplus water from HEINEKEN for warming the city of Leiden? Or if we create a heating pipeline from Rotterdam to Leiden, would it be advisable for HEINEKEN to connect to it? We know what is happening in the world of heating and who could play an interesting role in which part of the process. Now we are making connections between parties who could be of relevance to one another."

"It is better to use spent grain and grass for feeding purposes than for fermentation into biogas. That gives a much higher value usage."

**Annemieke Smit**  
Senior researcher  
Alterra  
Wageningen UR





# No good beer without good water

## WATER RELIABILITY AND WATER SAVING

**93% of beer is made up of water. The availability of good (drinking) water is therefore an essential requirement for the HEINEKEN Brewery in Zoeterwoude. But climate change is having an impact on the size and quality of the water supply, meaning that larger strategic water reserves are increasingly important assets. Green Circles wants to strengthen cooperation in the world of water, not only for breweries, but in the interests of the whole society.**

**Chris Versteegh**, Senior Technologist at HEINEKEN Netherlands Supply:  
“We are meeting with a diverse group of stakeholders including Oasen, Dunea, Rijnland Water Board, and CLM. We are researching the ways in which we can benefit one another in organising sustainable water cycles. For example, what can we do with the surplus warmth from our waste water? We are considering concepts in which we can combine water purification, water storage, and nature development. With the Rijnland water board we are researching how we can use nutrition in surplus water to benefit the landscape by creating a wetland.”

The Green Circles water cycle turns ideas into opportunities, and the possibilities which are ripe for becoming a project are subsequently further developed. “We are also looking into alternative sources for drinking water. Oasen is working on the possibility for pumping up brackish water and in this way using deep water as a resource. Fresh water can be made from brackish water, which can be reintroduced into the system. When you extract salt water, the fresh water level rises, which is also beneficial. There are many ideas for what we can do with water.”



WATER

### Planting seeds

All the drinking water that HEINEKEN uses comes from Dunea. **Mirja Baneke**, consultant drinking water supply and water management at Dunea: “We have two main tasks: producing clean and safe drinking water and the management of natural resources. The second mainly takes place in the dune area where our water exploitation takes place: areas with very special flora and fauna. We are keen to take part in the discussion about working together in the field of water and nature.”

“I see the inventory of interests, ambitions and opportunities for working together towards sustainability as a huge gain.”

**Mirja Baneke**  
Consultant  
drinking water supply  
and water  
management  
at Dunea

We want to further develop ideas which we can use to make our drinking water supply and natural resource management more sustainable and which also serves other community goals. Green Circles has now selected a number of opportunities and cooperatives from a long list to turn into projects. “At Dunea we have not yet started an actual project but I see the inventory of interests, ambitions, and opportunities for working together towards sustainability as a huge gain. We are now planting the seeds which will eventually grow into opportunities for real projects.”

“We are researching the way in which we can benefit one another in organising sustainable water cycles and how we can turn opportunities into projects.”

**Chris Versteegh**  
Senior  
Technologist  
HEINEKEN  
Netherlands Supply



# Enriching the landscape with waste water

CYCLES CLOSE WHEREVER POSSIBLE

Green Circles is researching raw material use at the HEINEKEN brewery in Zoeterwoude. What can be done with waste products from HEINEKEN, such as waste water containing phosphate? Where can sustainable energy flows be used? Green Circles works together closely with partners in the region; from the Rijnland water board to the farmers in the Groene Hart.

## Completing cycles

The Rijnland water board and HEINEKEN Netherlands worked together frequently in 2014. Both parties share a common interest in the maintenance of the future fresh water supply in South Holland. **Hans Schouffoer**, management member of the water board: "Water is extremely important in the cycle because in order to produce food (and also for making beer) we need clean, fresh water. The water board ensures plenty of clean water, also in the future. Together with HEINEKEN, we are investigating ways to purify the water which is left behind after the brewing process and reintroduce it back into Rijnland's water sewerage system. This process water is full of nutrients. We are researching how this, in turn, can be used for agriculture and for increasing biodiversity. In this way we can complete the cycle.

## Purification ditch

Green Circles and the water board are also creating environmentally friendly shallow banks. This helps the purification process and water storage and provides the ditches with varying sides. This year, a purification ditch is being created on the farm belonging to dairy farmer **Joost Wesselingh**, from Die Barle Farms. Waste water from the milking installations will no longer disappear down the drain but will be purified in the ditch. Wesselingh: "In this way the quality of the manure will be improved and when the waste water returns to the natural environment it will have

been 100% purified. It is, however, difficult to get a project like this started. Thanks to Green Circles we work together with the Rijnland water board, the biologists at Alterra Wageningen UR, the technologists at HEINEKEN, and the policy makers in the province. The cooperative shares much combined knowledge. Green Circles is made up of people who can make decisions, meaning that steps can be taken quickly. The purification ditch is based on a good scientific foundation, improving the chances for success. The project will be able to serve as an example for the province and further afield."

"We complete the cycle by investigating ways in which we can use nutrients from waste water for agriculture".

**Hans Schouffoer**  
Management member  
Rijnland water board



"The purification ditch is based on a good scientific foundation, improving the chances for success".

**Joost Wesselingh**  
Dairy farmer  
Die Barle Farms



RAW MATERIALS





# Viewing the logistics chain through green-coloured glasses

REALISING CLIMATE NEUTRAL TRANSPORT FLOWS

MOBILITY

A great many lorries come and go at the brewery in Zoeterwoude. Lorries full of raw materials for the brewing process, on their way to clients in the Netherlands or to the harbour for distribution around the world. One of the ways in which HEINEKEN can achieve its sustainability goals is by investigating this logistics chain. HEINEKEN Netherlands continuously works with the advisory committee *Green Distribution* towards the ambition of realising energy saving, climate-neutral transportation.

**Maarten van Veluw**, project manager logistics HEINEKEN Netherlands Supply: "There are two important steps to be made concerning transport that is used by HEINEKEN. Firstly, we can reduce energy use by changing the method of transport: for example from road transport to water or railway. In addition, we can organise a transition from fossil fuels to renewable fuels with small scale alternative energy supplies."

**Sustainable transport flows HEINEKEN**  
Van Veluw: "Since 2010, the transshipment terminal Alpherium in Alphen aan den Rijn has been in operation, with HEINEKEN as its largest client. We transport the export production of the brewery in Zoeterwoude by water to the harbours of Rotterdam and Antwerp. This saves six million lorry kilometres per year. Other examples in the field of sustainability are using longer vehicles (LHVs), importing malt by ship, and using electric lorries in urban areas. At the end of 2013, the idea was born to investigate the use of combined electrical

transport (based on renewable energy such as wind energy) between Zoeterwoude and Alphen aan den Rijn. In this way we can realise a huge long-term reduction in fuel consumption. At present, there are nine parties involved and we are researching the possibilities in close collaboration with the Province of the South of Holland."

## The global hub of Europe

The Port of Rotterdam Authority has great ambitions when it comes to making the supply chain sustainable. The Port of Rotterdam must become the global hub of Europe for containers, fuel, and energy flows in 2030.

**Mariëlle van Dijk**, project manager sustainable development Port of Rotterdam Authority: "One of the ambitions in our policy towards 2030 is that we make the logistics chains and transport junctions in the hinterland more efficient and sustainable. An innovative Green Circle Network formed by important suppliers (such as HEINEKEN), transporters and transshipment terminals, can help us achieve our mission towards sustainability. As Allard Castelijns, our director-general, says: "I believe in coalitions of the willing: groups of business and social organisations which work together in clusters, develop a joint vision for the future, and have the courage to act based upon a dot on the horizon." That is exactly what Green Circles is all about."

"The mobility activities within Green Circles match our ambition to make the logistic chain more sustainable."

**Mariëlle van Dijk**  
Project manager sustainable development  
Port of Rotterdam Authority

"Thanks to Alpherium we can transport the export production from the brewery over water to the harbours. This saves six million lorry kilometres per year."  
**Maarten van Veluw**  
Project manager logistics  
HEINEKEN  
Nederland Supply





# Nature at work

## BEES AND BIODIVERSITY

**Green Circles is working towards a clean, pleasant living environment in which the economy utilises natural resources without damaging them. Biodiversity is of great importance in order for nature to be able to do her work properly. Green Circles started creating *bee habitats*. Areas are designed and managed in a different way giving pollinating insects better chances for collecting honey and for overwintering. HEINEKEN began by creating a bee habitat around the brewery, after which the leisure area Bentwoud in Zoetermeer followed. Now Leiderdorp, Leiden, Zoeterwoude, and the Zuid-Hollands Landschap are designing bee-friendly areas such as the Bijenhoff in the Oostvlietpolder and a bee-friendly zone in the Munnikenpolder in Leiderdorp.**

### A wealth of plants

‘Stichting Land van Wijk en Wouden’ has been involved in the foundation of the Green Circles bee habitat form the start and is now the frontrunner. Managing chair and mayor of Leiderdorp, **Laila Driessen**: “Wild bees are especially vulnerable; they don’t have a beekeeper looking after them and some species are very selective about foraging. When two plant species which the bees depend upon have a bad year, this immediately deals a serious blow to the bee population.” Driessen highlights



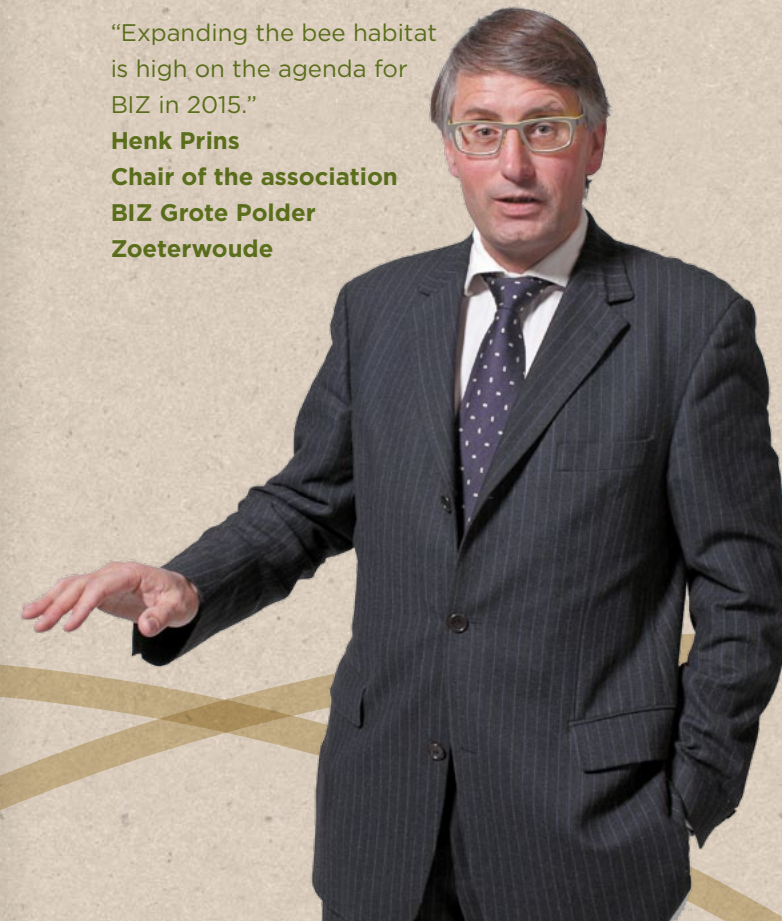
“By connecting initiatives we create a bee ribbon by which we improve the chances of survival for bees and other insects which forage for flowers.”

**Laila Driessen**  
Mayor  
Leiderdorp

the importance of combining initiatives and is dedicated to this cause. “Due to the fact that diverse parties ranging from beekeepers, organic farmers, Naturalis/KEI, Zuid Hollands Landschap to the BIZ Grote Polder Zoetewoude are committed to a different method of natural area design and management, the diversity of plant species can be increased. Smaller zones are also relevant. They connect the various areas and by doing so create a larger regional bee habitat.”

“Expanding the bee habitat is high on the agenda for BIZ in 2015.”

**Henk Prins**  
Chair of the association  
BIZ Grote Polder  
Zoeterwoude



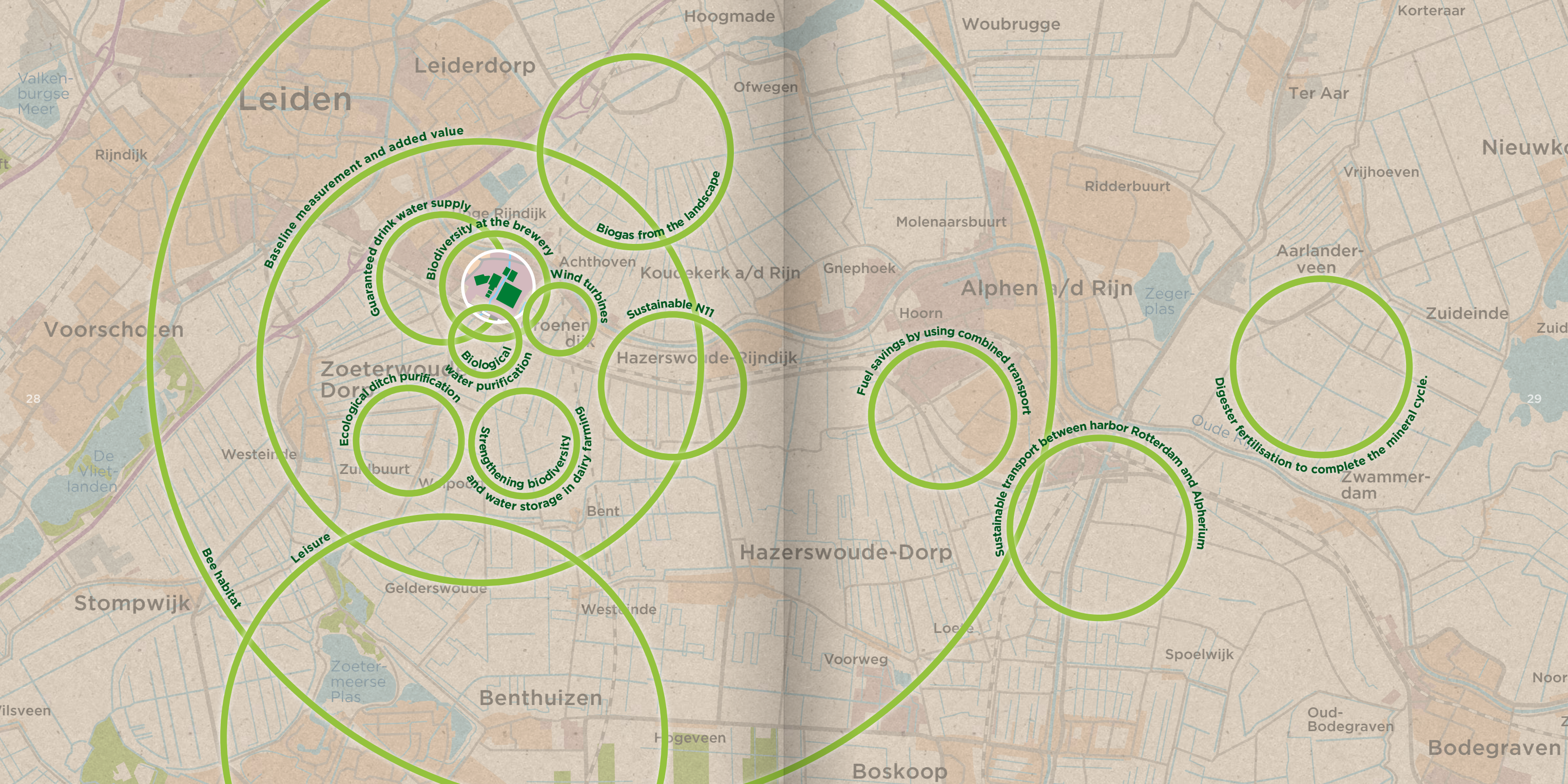
### Working with business

Chair of the association BIZ Grote Polder Zoeterwoude **Henk Prins**: “80% of all public land belongs to the council and 20% to business. Businesses can make a great contribution to biodiversity by turning their sites into bee habitats. We have made an agreement with the council to maintain and design public and private green spaces together; the so-called multi-purpose areas and council grounds. HEINEKEN is already acting in a green way. Prins: “We are now considering creating a vast bee-friendly network covering the area from the brewery to the Grote Polder and on to Leiderdorp. For this reason, we recently planted 100 meters of bulbs. This project is high on the agenda for 2015. All parties have good intentions. If this project succeeds, we will have already achieved a lot.”



**LIVING  
ENVIRONMENT**








## Green Circles has been made possible by:

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