

The road to a sustainable work landscape



ACT Beyond
logistics

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Program bureau ACT
PO Box 75700
1118 ZT Schiphol
The Netherlands
T +31 (0)20 20 666 40
F + 31 (0)20 20 666 49
info@actbeyondlogistics.nl
www.actbeyondlogistics.nl

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ACT Beyond Logistics. The road to a sustainable work landscape

IN THE NEAR FUTURE, ANYONE APPROACHING AMSTERDAM AIRPORT SCHIPHOL ON THE A4 MOTORWAY OR BY TRAIN FROM THE SOUTH, OR A FLIGHT PREPARING TO LAND ON THE 06-24 RUNWAY WILL BE ABLE TO CATCH A GLIMPSE OF THE AMSTERDAM CONNECTING TRADE (ACT) LOGISTICS BUSINESS PARKS. THE ZONE IS BEING DEVELOPED INTO A NEW WORK AREA SET TO OFFER A GREAT DEAL MORE THAN THE 'TRADITIONAL' BUSINESS PARKS FOUND ALONGSIDE SO MANY MOTORWAYS IN THE NETHERLANDS. ACT IS DESIGNED TO SERVE AS A SUSTAINABLE WORK LANDSCAPE, OFFERING AN ATTRACTIVE ENVIRONMENT FOR BUSINESSES AND THEIR EMPLOYEES AS WELL AS AN INTERESTING PROSPECT FOR LOCAL RESIDENTS AND THE INHABITANTS OF HOOFDDORP. THE AREA IS DESIGNED TO FIT IN WITH ITS SURROUNDINGS AND WILL CONTINUE TO OFFER A HIGH LEVEL OF QUALITY AND VALUE 50 YEARS FROM NOW AND BEYOND. ALL PLANNING PROCEDURES ARE BASED AROUND THE PRINCIPLE OF SUSTAINABILITY. THIS BROCHURE PROVIDES FURTHER DETAILS ON HOW WE AIM TO REALISE THIS AMBITION.



Allow us to (re)introduce ourselves: ACT Beyond Logistics

ACT builds upon the ambitions set out by the Municipality of Haarlemmermeer, the Province of North-Holland, Schiphol Group, AM and Schiphol Area Development Company in the 2006 document Integral Vision on the A4 Work City.

This document outlines the strategy for developing the logistics business parks around Amsterdam Airport Schiphol into an airport-related logistics and service location that ranks amongst the European top three. As the name A4 Work City suggests, ambitions

extend far beyond the development of a traditional business park. The amenities offered by a traditional facility would not be sufficient to gain a competitive edge over other European airport areas. In order to do so, we will have to offer permanent added value for businesses, visitors and local residents alike.

The aforementioned parties have set out the requirements for such added value in the innovative ACT concept. The concept is based on three key values: sustainability, accessibility via multiple modes of transport (multimodality) and an area that offers

more than a logistics hub alone (beyond logistics). The latter aspect will require an attractively designed physical space as well as non-physical elements such as services, the ability to attract labour, safety and efficient customs processing. The concept also links 'traditional' logistics companies to related businesses offering added value (marketing, R&D, education). The ACT concept successfully combines all these aspects, bringing together cargo flows, people and expertise.



FROM ACT MASTERPLAN TO CONCRETE IMPLEMENTATION PLANS

The ACT Masterplan was drawn up in June of 2008. The plan sets out a high level of ambition in terms of liveability, accessibility and economic development. The objective is to maintain a solid balance between these three aspects in order to create Europe's most sustainable and innovative business

park. The entire ACT area is subdivided into four ACT locations: Schiphol South East, Schiphol Logistics Park, A4 Zone West and the Geniepark. The first three areas will offer innovative business locations in the area of logistics while the Geniepark will take on the form of a park-like environment that is built around the Defence Line of Amsterdam World Heritage Site and embedded in ample greenery and water features.

Schiphol South East and Schiphol Logistics Park are already being allocated, with the other two locations set to follow. However, the design of all four locations will be elaborated on the basis of ACT's sustainability guidance. During the coming period this guidance will be translated into concrete implementation and development plans. This brochure provides further details on our approach to the key aspect of 'sustainability'.

BASED ON SUSTAINABILITY, INSPIRED BY CRADLE TO CRADLE

In the past, the aspect of sustainability did not come into play before the actual construction of office buildings in a business park. Efforts in this area were generally focused on the use of sustainable materials and the conservation of energy. Although these are good first steps, a truly significant sustainability effort will require an entirely different approach. An approach in which the principle of sustainability is applied to

development of the entire area from the very start of development planning. This is the approach ACT will be proposing for its locations; an approach designed to stand the test of time. With the (further) development of the various ACT areas at hand, our ambitions in the area of sustainability will now have to be elaborated in further detail. Our approach should leave room for investors, businesses and developers to incorporate the aspect of sustainability into their own plans and projects as effectively as possible. The ACT sustainability guidance has

been elaborated into clear-cut, concrete targets, criteria and measures, on the basis of the three key themes outlined below. This elaboration effort was both based around and inspired by the Cradle to Cradle (C2C) principle. C2C represents an internationally supported approach based around a cyclical model. For example, waste is regarded as the start of a new cycle rather than an end-product.

The three ACT sustainability themes: space, energy, water & raw materials and mobility & accessibility

My vision on ACT sustainability...

Jaap Bond, member of the Provincial Executive of the Province of North-Holland



'An increasing number of national and international companies want their location and business environment to reflect a sustainable image. They are keen to demonstrate their commitment

to corporate social responsibility. ACT can play an important role in this regard. The area's multimodal accessibility is a genuine core quality. However, that also goes for the effort to embed the existing landscape in area development plans. For example, the Defense Line of Amsterdam will be incorporated into a

new park. This will help make the area more attractive to employees, visitors and local residents, adding economic worth and thus broader significance to existing cultural and landscape values.

As a province, our involvement in development planning extends to a broad range of aspects. For example, we make sure that the companies establishing offices here are exclusively from aviation-related sectors; we want to ensure that the scarce space around the airport is used as effectively as possible. However, our participation in the ACT Cockpit – the executive body that decides on area planning issues – reflects our increased commitment to

area development. We have a 'helicopter view' of the entire area, which allows us to provide useful input on new concepts, such as the potential to transport goods by high-speed train. We are also working to build connections to adjacent areas. For example, we could gain a great deal in terms of sustainability by linking ACT to the Aalsmeer Greenport. We bring together the relevant parties in order to create optimal added value through collaboration. As a result, overall investment in the area is greater than the sum of its parts.'



Within the ACT locations high end green areas will arise between logistics activities. Employees and visitors can recreate here, but the space can also be used for power generation or water purification.

Theme one: organising space in a sustainable manner

We aspire to organise the space within the four ACT locations in such a way that actions taken at the present time will not have any negative impact on future generations. Preferably, these actions should also have no negative impact on the direct or nearby environment, or the location itself. In short: new, liveable space, now and in the future. In concrete terms, we are aiming to develop a healthy environment in which economic vitality is supported through sustainable measures. ACT is also seeking to make a positive contribution to its surrounding area, through measures such as:

- the creation of a robust greenery and water structure at an early stage, which doubles as a pleasant recreation area;
- the separate construction of roads and greenery areas;
- the creation of functional clusters, in order to ensure safety and reduce annoyance and allow for the interchange of energy, raw materials and rain water;
- the separation of traffic functionality (heavy goods traffic, passenger travel, slow traffic and safe recreational areas);
- a connection (or potential to establish such a connection in the future) with a new water main system for the entire polder and larger greenery structures in and outside Haarlemmermeer;
- the creation of additional facilities for employees and visitors;
- ensuring that the area is designed in such a way that the space can be used for other purposes over the course of time. For example, distribution buildings can be redeveloped into smaller office buildings. In the longer term, the complex could even be redeveloped into office space or residential locations. This is possible due to the permanent greenery and water features and adaptability of the infrastructure/buildings;
- the use of building roofs in the production of greenery, food and energy.

Theme two: the conservation of energy, water & raw materials

One thing is certain: water and energy prices are set to rise in the years to come. Raw materials will also become increasingly scarce. This will require a different approach to our energy and water supply. We will also have to develop a new way of dealing with raw materials, waste and residual flows. ACT aims to apply the cyclical C2C principle on a much larger scale and at a much earlier stage – during development of the very first concepts for area development. ACT has defined a clear set of ambitions: by 2040, ACT aims to be entirely self-sufficient in terms of energy and water supply, without

producing any waste. This can be achieved through a broad range of measures:

- buildings are constructed in a compact manner, using a minimum of raw materials. The materials used in construction are from non-depletable or reused sources;
- all energy is generated locally, eliminating the need for a connection to the gas mains. The buildings are self-sufficient and will actually generate a surplus of energy over time;
- water features are used to collect water and purify it by means of algae cultivation, and

- feature islands with solar energy centres;
- all networks for water, heat, cold and residual flows are installed underground, creating sufficient space aboveground for a natural use of available land;
- rainwater and purified (grey) water from buildings is incorporated into a water cycle. As a result, drink water usage will be reduced, and the need for a waste (sewage) and rainwater drainage system will be eliminated.

My vision on ACT sustainability...

Managing Director of KLM Cargo, Michael Wisbrun



'Aviation is an indispensable part of our modern world. It allows for global connections, keeps economies running and creates a great deal of employment. However, both citizens and companies feel air travel

should be as clean and environmentally-friendly as possible. KLM is working hard to minimise its own environmental footprint, an area in which it seeks to lead the industry. For example, Air France-KLM Cargo is the first major airline to offer its customers insight into the amount of carbon used in air cargo transport and provides them with the opportunity to compensate their

carbon footprint. We are currently leading the Dow Jones Sustainability Index for our sector for the fifth year running. This is undoubtedly a clear indication of our progress. We can see a great deal of potential for innovation in terms of broader sustainability throughout the logistical chain. However, this will require an integral approach in which we work together to create new solutions on the basis of a shared vision. This vision must be based on the three 'I's: Infrastructure, an Integral approach and the Integrity of processes. Our collaboration within ACT helps us to develop and market Schiphol and its surrounding area as a powerful and sustainable logistical hub. This logistical business park is truly state-of-the-art

in terms of sustainability. We have managed to keep a clear focus on the area's accessibility; a key concern in terms of the Cargo product. For example, we are currently developing a concept for cargo transportation by high speed train. A multimodal hub incorporating rail transport will help increase the overall level of sustainability. We expect to see the market make use of the benefits offered by train travel. This will help reduce the number of kilometres per truck, helping to make the hub more sustainable and efficient. Concepts of this nature clearly show that sustainability and competitive strength can be complementary rather than opposing forces.'



Accessibility, by car as well as by public transportation, is an important aspect of the ACT development plans.

Theme three: innovative concepts for mobility & accessibility

The concept of multimodality plays a key role in ensuring accessibility and liveability. The objective is to create an area that is easily accessible by car, public transport and bicycle. ACT aims to increase the use of public transport and bicycles without restricting car traffic. After all, a logistical centre has to be easily accessible by road. However, the availability of alternative modes of transport can help stimulate car owners to travel to the area in other – more sustainable – ways. The following concrete actions are currently being taken or assessed in this regard:

- the construction of a new public transport hub to the south of A4 Zone West. Ideally, the definitive solution will feature a combination of train and metro transport (involving an extension of the metro line from Schiphol-Centre to Hoofddorp via this southerly ACT hub);
- connecting ACT to the Zuidtangent's High-End Public Transport (HOV) network;
- establishing a good connection with the Schiphol bus network and regional Haarlemmermeer bus network;
- building centralised parking facilities for passenger cars wherever possible, allowing passengers to transfer to public transport and bicycle travel in an effective manner;
- creating supplementary facilities at the central parking location (biodiesel stations, a charging station for electrical cars, a supermarket, et cetera);
- the improvement of bicycle routes.



The ACT locations, that are not yet being allocated, can be used for temporary activities such as energy- and food production or as a location for an information centre, dedicated to the development of the area.

The development strategy: from blueprint to flex-plan

Change is the only constant. In other words: it can be difficult to plan ahead in a rapidly changing world. The development of ACT will span a period of decades; for example, the completion of the A4 Zone West sub-area is scheduled for 2030. By this time, the logistical sector will be very different from the way it is today. This is why there is no point in drawing up detailed plans for the design of the four ACT areas. A blueprint would merely prove restrictive. It is also important to keep in mind that technology – especially in the area of sustainability – develops and changes at a rapid pace. What is currently regarded as ambitious or innovative may be commonplace or even obsolete in a few years time. This is why ACT's development strategy is designed to be both *flexible* and *future-proof*. Due to the dynamic nature of the logistics sector, users may relocate to another building every 5 or 10 years. On the other hand, buildings now have a much longer lifespan. Take the example of the *Genie dyke*, a feature of the Defence Line of Amsterdam: the dyke has existed for over

a hundred years and has proven capable of adapting to changing times and requirements. Amongst other factors, ACT's approach is based on a clear distinction between robust greenery/

water features designed to stand the test of time and the flexibility of the various development areas.

The added value of a sustainably designed area

A sustainably designed area that retains its quality over the long term will yield demonstrable added value for owners, users, developers and local residents. This added value is expressed in various areas:

- **energy:** the reduction or elimination of energy consumption or even a net yield (resulting in the sale of energy and profits);
- **land use:** dual use of available land (multi-functionality);
- **liveability:** a green, attractive environment enhances liveability and helps attract new employees;
- **accessibility:** the area is easily accessible due to a wealth of interconnected transport systems;
- **image:** companies that actively embrace the principle of sustainability will be eager to work in a sustainable environment. A business location in the ACT area will help further improve their image;
- **Platinum+:** the realisation of ACT's area-level ambitions will help real estate developers achieve high scores on international sustainability rankings such as LEED and BREEAM.



The Geniepark, shaped around the the Defense Line of Amsterdam, combines history with room for recreation, which make it the green heart of ACT. An important impulse for the liveability of the ACT area.

Feasibility: high-potential combinations and a far-sighted approach

The development of ACT is feasible in terms of technical aspects and spatial design, and is based on viable sustainability ambitions. Plans have been designed to take into account rising fuel prices and other developments in the global economy. The phased completion of the various ACT locations will allow for the introduction of new technologies that are financially viable at the time. Feasibility can also be further improved by combining various measures in an intelligent manner. Our focus will be on:

- linking the World Heritage status of the Defense Line of Amsterdam (cultural and historical values) to a recreational park, water purification, tollbooths and a transition from

- car traffic to public transport;
- bundling cables and pipes within the green-blue landscape structure, ensuring that maintenance efforts do not cause disruptions for users in the inner areas;
- designating a 200-metre strip along the A4 (not for development purposes) for various purposes, including water storage and energy production;
- creating 'robust' greenery and water features at an early stage, in order to stimulate the liveability and vitality of the area and its plant and wildlife from the very start;
- the temporary designation of undeveloped areas for other purposes (energy production, nature, culture). This will help make the area

- more vibrant and lively;
- creating green user areas and recreational areas. For example, office buildings and their restaurants will be linked to greenery and water features and screened off from traffic zones.

Feasibility can be further improved by linking the development of the ACT area to development efforts in its environs. The ACT Masterplan specifies these 'harmonisation projects', such as the PrimAviera greenhouse zone and Park 21. By effectively combining these developments, we can ensure that the sum total of our investments (and thus the value of ACT) is greater than its individual components.



My vision on ACT sustainability...

Paul Bos, local entrepreneur and initiator of Bouwland-Urgenda



'My farm is located in Aalsmeerderbrug, right next to the ACT area. Sustainability has played a key role in our business for a long time now. My parents applied organic farming methods – even though

they didn't use that term at the time – because they felt strongly about using fertiliser and pesticides. I remember thinking their approach was hopelessly old-fashioned, until I returned to the farm ten years ago and realised it could be effectively combined with modern sustainability ambitions. Creating cycles, conserving raw materials, using sheep as 'woolly lawnmowers', supplying locally-produced food: it's all part

of the same principle. A few years ago, I also started organising meetings for entrepreneurs and other local parties in order to help speed up the effort to improve the sustainability of the Schiphol region.

One thing led to another, and I'm currently helping ACT to develop its plans for the area. I would like to see a focus on the area's existing values, and ensure that they are incorporated into the ACT development wherever possible. These values are rooted in the area's physical qualities as well as its history. It's all about the human factor. Some farmers have been working here all their lives, and it's important to take that into account. Don't bulldoze their farms and the old trees on their land; incorporate them into your plans. It's not too late

yet, we can still do it. Better yet, build one or two new farms within the ACT area and allow us to supply its users with products or new services. Alternatively, you could allow us to make temporary use of the zones that haven't yet been developed in order to keep the area lively and vibrant. I'm committed to this idea of interconnection and cross-pollination, and ACT is listening to my suggestions. As we work together, it is becoming increasingly clear that sustainability is all about creating "win-win-situations", for the economy, people and the natural environment. It's definitely "beyond logistics", in the same way as my own farm looks beyond the normal boundaries of the agricultural sector.'



The parties: public and private participation, embedment in the surrounding area

ACT constitutes an alliance of six individual parties, working together to design a work landscape with a total area of 250 hectares. The initiative is certainly unique. From the public sector, the Municipality of Haarlemmermeer, the Province of North-Holland and The Rijnland District Water Control Board are taking part in development planning. The private sector is represented by Schiphol Group, AM and Schiphol Area Development Company, who will be helping to develop and finance the project. These six parties each bring their own expertise and experience in the area of long-term area development to

the table. We are also working to incorporate ACT's social environment in development planning wherever possible. In addition to creating support for the project, this effort is also aimed at generating creative ideas which can then be incorporated into the development plans. Local parties are familiar with the environment and the location's unique qualities, and have access to local networks. As a result, they can serve as a source of unexpected opportunities and new insights. For example, the draft version of ACT's sustainability guidance was presented to Bouwland-Urgenda, a sustainability &

innovation network for the Haarlemmermeer region and Schiphol. The network unites pioneers, trailblazers and freethinkers working to rapidly develop the region into a 'sustainable testing ground'. Their responses to the guidance were incorporated into the definitive version, and this creative form of collaboration is set to continue in the future.

In the next step towards finalising the guidance, we will be making work agreements which are recorded in a covenant between the ACT business parks and the Municipality of Haarlemmermeer and The Rijnland District Water Control Board.



Mixed Sources

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