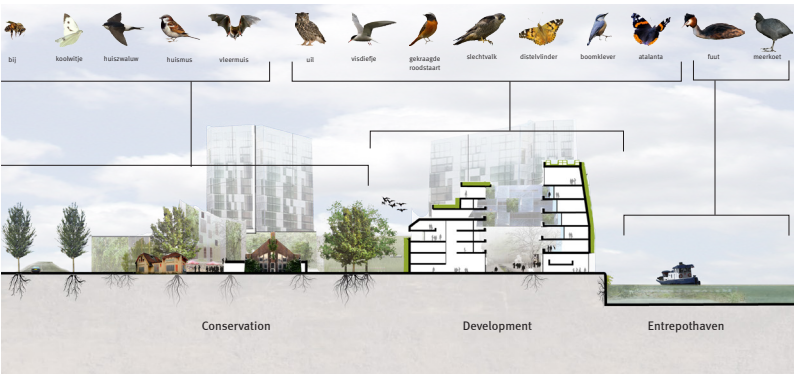


Building for Biodiversity



"Improving biodiversity improves the quality of life in the city for all species, including humans."

Prof. Dr. Helge Bruelheide, director German Centre for Integrative Biodiversity Research, in a meeting with Maike van Stiphout en Mathias Lehner in Halle.

Contents

Introduction	6
LAB-Team	8
Project description Summary	12
Proces	14
Planning	18
Public Review	23
Phase 1 Exchange	24
Phase 2 Research	32
Phase 3 Design	48
Practical information	50
Partners & stakeholders	51
Colophon	55

Introduction

The future of mankind is in the city. Today 50% of the population lives in cities but this increases to 75% by 2050. We will work and live there, we will also spend most of our time in cities. This is why thinking about the quality of life in the city is ever more important.

We are not the only ones who prefer to live in the city. Actually, we are not alone already. Accidentally or purposefully we have created homes and food for a lot of plants and animals. Some of them have been in the city for ages, and a growing number of them is migrating to the city very recently, just like people.



image DS and VenhoevenCS

If you took the city of Tokyo and turned it upside down and shook it you would be amazed at the animals that fall out: badgers, wolves, boa constrictors, crocodiles, ostriches, baboons, capybaras, wild boars, leopards, manatees, ruminants, in untold numbers. There is no doubt in my mind that that feral giraffes and feral hippos have been living in Tokyo for generations without seeing a soul: as Yann Martell puts it in his novel 'Life of Pi'.

With a background of decreasing biodiversity on a global scale Building for Biodiversity in the City is a hot topic. It might be more feasible to increase biodiversity in urban areas than to stop the decrease elsewhere.

The increase of biodiversity in the city can't be activated by proposals from the biologists, the designers nor the architects out of their own working field. It needs local knowledge and a global perspective. Thinking of biodiversity requires an interdisciplinary approach and an open mindset.

And exactly that is what the NextCity is about. And it is the topic on which we want to work with you within the project 'Building for Biodiversity'. You are part of a unique group that brings together just the diversity that it takes. With your own professional and cultural background, your interest in collaboration and interdisciplinary thinking you will as a group be able to come up with ideas and examples we have not heard about or have not been daring to think about. The NextCity starts right here!

LAB-Team

Researchers

- Maike van Stiphout (DS)
- Mathias Lehner (lehnergunther)

Organisation

- Yvonne Franquinet (ARCAM)
- Dave Wendt (ARCAM)
- Renske van Veen (DS)

Participants

Leiden University Faculty of Science Communication and Society

- Floor van der Klauw (Student Biology)
- Tom Nederstigt (Student Biology)
- Milan Oostwouder (Student Biology)
- Liselotte Rambonnet (Student Biology)
- Jesper Tijhuis (Student Biology)
- Janna Verwijs (Student Biology)
- Franciska Langstraat (Student Biology)

Supervision

- Prof. Dr. Jos van den Broek, Faculty of Science, Communication and Society
- Dr. Marco Roos, Senior Researcher Botany, Naturalis

Amsterdam Academy of Architecture

- Lourdes Barrios Ayala (Exchange Student Landscape Architecture Universidad Central de Venezuela Ubicacion, Bachelor Architecture)

- Imane Elkatrani (Exchange Student Landscape Architecture ENSP Marseille)
- Rick Groeneveld (Student Urbanism)
- Lucas Pissetti (Exchange Student Architecture, Universidad Caxias do Sul)
- Yuka Yoshida (Alumnus Landscape Architect)

Supervision

- Maïke van Stiphout

University of Amsterdam, School for Culture and History

- Anna van Gerve (Architectural Historian)

Supervision

- Dr. Petra Brouwer, Assistant Professor

Graduates Design Academy Eindhoven

- Bennie Meek (Designer and Researcher, Studio Meek)
- Vincent Wittenberg (Public Space Designer, Researcher)
- Isis Boot (Social Designer, Human Geographer)
- Anne van Strien (Social Designer, Human Geographer)

LAB-Team



Maike van Stiphout



Mathias Lehner



Yvonne Franquinet



Dave Wendt



Renske van Veen



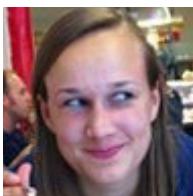
Petra Brouwer



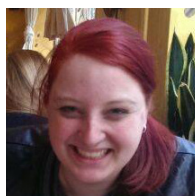
Jos van de Broek



Marco Roos



Floor van der Klauw



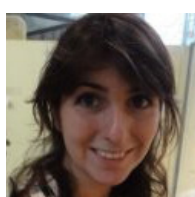
Franciska Langstraat



Tom Nederstigt



Milan Oostwouder



Liselotte Rambonnet



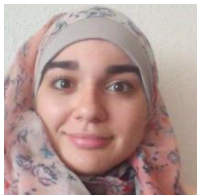
Jesper Tijhuis



Janna Verwijs



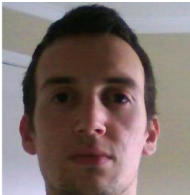
Lourdes B. Ayala



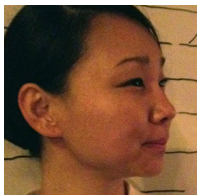
Imane Elkatrani



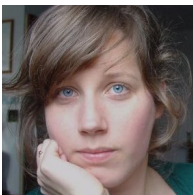
Rick Groeneveld



Lucas Pissetti



Yuka Yoshida



Anna van Gerve



Isis Boot



Bennie Meek



Anne van Strien



Vincent Wittenberg

Project Summary

Building for Biodiversity

On the initiative of Maike van Stiphout and Yvonne Franquinet a formation of partners is organising a series of activities entitled Building for Biodiversity, starting autumn 2014. This involves spatial design at all levels for a new kind of urban habitat which is suitable not only for humans but emphatically also for as much biodiversity as possible.

Landscape architect Maike van Stiphout and architect Mathias Lehner are the performers of this research that focuses on the Cruquius area. They work with Arcam to shape the lobby and spread the knowledge gained.

The project Building for Biodiversity investigates the possibility to grasp but even more so to improve and exploit biodiversity from the spatial disciplines, architecture, urban planning and landscape architecture. Pragmatic strategies and tangible results of biodiversity for densely populated urban areas in the Netherlands are being mapped in response to a concrete case in Amsterdam: the Cruquius area. With concrete examples, cost-benefit analysis and roadmaps for urban development, an urgent theme will be put on the map and aims to activate the involved stakeholders

Phases

The project is divided into four phases. Site-specific or site-wide accents alternate each other. The same applies to theoretical and practical, application-oriented accents:

1. Exchange

Pre-research abroad with analyses of appealing examples and their results

2. Research

Interdisciplinary research: knowledge from the disciplines architecture, landscape architecture, biology, history and design meets.

3. Workshop

Gained knowledge will be concentrated on the location. Concrete proposals and mindsets will be presented to the stakeholders of the Cruquius area.

4. Expo

The knowledge will be shared in two ways: through a symposium for professionals of the different disciplines and an exposition for a wider audience

Interim meetings will take place in the Cruquius area where new insights are being shared and the progress is reported. During these meetings, all the stakeholders and partners will be present and other users of the surrounding area will be invited.

Process

LAB-Teams

team 1

Anna van Gerve (Alumnus History UvA)
Imane Elkatrani (Student landscape architecture AvB)
Rick Groeneveld (Student Urbanism AvB)
Floor van der Klauw (Student Biology UL)
Tom Nederstigt (Student Biology UL)
Franciska Langstraat (Student Biology UL)

team 2

Bennie Meek (Alumnus DAE)
Vincent Wittenberg (Alumnus DAE)
Yuka Yoshida (Alumnus Landscape Architecture AvB)
Lourdes Barrios Ayala (Student Architecture AvB)
Liselotte Rambonnet (Student Biology UL)
Milan Oostwouder (Student Biology UL)

team 3

Iris Boot (Alumnus DAE)
Anne van Strien (Alumnus DAE)
Lucas Pissetti (Student Architecture AvB)
Janna Verwijs (Student Biology UL)
Jesper Tijhuis (Student Biology UL)

LAB-info

- LAB location: ARCAM, Prins Hendrikkade 600, 1011 VX Amsterdam
- LAB-opening hours 9.00 AM to 5.00 PM

Presence

- Biology students are required to be present from Monday to Friday
- Academy students are required to be present from Monday to Thursday
- Alumni are required to be present on Thursday
(Additional presence is encouraged)

Research

(from January 5 - March 26)

The research phase is 12 weeks in which 4 subjects will be discussed, every 3 weeks a new subject:

1. January 5 - 22 Principles
2. Jan 26 - Feb 12 Materialisation
3. Feb 16 - March 5 Context
4. March 8 - 26 Policy

Researching the 4 subjects the team members will use input from other countries, reflected on Amsterdam/ Cruquius area and think of how to give feedback to the owners, potential clients and people involved. At the end of every 3 weeks there will be a public review on Thursday.

(Info on the 4 subjects: page 32)

Inspirators

Every week: an inspirator/advisor/expert visits the teams
(Long list for visit or Skype).

Process

Blog

Every week each team is required to provide a research conclusion for a blog on nextcity.nl: a short tekst in English with an image. Deadline for the blog is Thursday afternoon. Please send the blog-input to: renske@dsla.nl

LAB library

If you want to buy a book for the LAB library, please let us know.

Dropbox

All the background information can be found in the dropbox. At the end of every three weeks the team members can put files in the dropbox, but only after making a selection of files. Important is: to respect the map structure in the dropbox and to mention sources in the filename.

Links

During the process please collect all the links you find and save them categorised in the Link-file in the dropbox in folder Reader.

Expert long list Thursdays

- Maria Lezzi (director Swiss Ministry of Spacial Development)
- Ortwin Renn (professor Sociology Environment and Technique University Stuttgart)
- Dr. Sonja Knapp (Helmholtz Institute for the Environment Halle)

- Prof Stefan Klotz (Helmholtz Institute for the Environment Halle)
- Prof Bruehlheide (director of Centre for Integrative Biodiversity Research Halle)
- Carol Williams (biologist author Designing for Biodiversity)
- Anneke Blokker (ecologist DRO-policy expert + bat expert)
- Els Corporaal (ecologist municipality in Cruquius area)
- Annemarie Noordermeer Amvest (developer, owner in Cruquius area)
- Jeroen Geurst (architect of new buildings Cruquius)
- Jip Louwe Kooijmans (Bird expert Vogelbescherming NL, author of Stadsvogels)
- Claud Biemans (expert plants, in Cruquius area)
- Frank Bruggeman (artist)
- Harold Appelo (ecologist at developer Heijmans)
- Ton Denters (Amsterdam and Hoogheemraadschap: HHNK, urban ecologist)
- Remco Daalder (DRO Amsterdam)
- Sandra Langendijk (DRO Amsterdam)
- Geert Timmermans (DRO Amsterdam)
- Femke Haccoû (DRO Amsterdam)
- Zef Hemel (DRO Amsterdam)
- Jurgen Hoogendoorn (DRO Amsterdam)
- Anouk de Wit (DRO Amsterdam)
- Planbureau voor de Leefomgeving
- Leonie Jansen (Platform 31, TEEB stad tool)
- Roel den Dikken programmaleider Groen Gemeente Eindhoven
- Bert Griffioen directeur vasteplantenbedrijf Wassenaar
- Gijs van Valkenhoef, bewoner Soesterkwartier (Duurzaam Soesterkwartier, voorzitter stichting Het Groene Spoor)

Planning

Week	Topic
1	Principles
2	
3	
4	Materialization
5	
6	
7	Context
8	
9	
10	Policy
11	
12	
13	Designing for Cruquius
	Building for Biodiversity

Activity**Date**

Research
Research

Public Review

22-jan

Research
Research

Public Review

12-feb

Research
Research

Public Review

5-mrt

Research
Research

Public Review

26-mrt

Workshop

30-mar - 4-apr

Exhibition

Planning

Time/participants	Monday	Tuesday
University of Leiden	present in lab	present in lab
Design Academy Eindhoven	working in own studio	working in own studio
Academy of Architecture	present in lab	present in lab
9:00-10:00 10:00-11:00 11:00-12:00	working in teams	working in teams
12:00-13:00		
13:00-14:00	lunch	lunch
14:00-15:00 15:00-16:00	working in teams	working in teams
16:00-17:00		

Wednesday	Thursday	Friday
present in lab	present in lab	present in lab
working in own studio	present in lab	working in own studio
present in lab	present in lab	absent (lessons)
working in teams	working in teams	working in teams
	inspirator	
lunch	collective lunch	lunch
working in teams	working in teams reviews	working in teams
	upload to blog	

Public Review

The research output is meant to stimulate developers, contractors and owners of buildings and land to increase building with nature. It should be that challenging and interesting that it will be applied tomorrow. We organise four public reviews showing and discussing the results of the four research topics with the owners, developers, the city employees and other people interested in our study. We discuss and improve the results and the research together thus ensuring that we are focusing on the real goal to find tools for building for biodiversity.

Phase 1: Exchange

Visits

In preparation for their role in supporting the research and design workshop Maike van Stiphout and Mathias Lehner will do an exchange research, powered by four visits.

The visits will be outside the Netherlands. It appears that countries abroad are relatively more developed in relation to nature inclusive design.

The aim of the visits is gathering information on diverse, complementary aspects of building natural inclusive. Alternately the visits concern policy issues, economic and financial snags, the historical influence of history and climate on urban biodiversity and the concrete measures that are within everyone's reach. As part of the exchange visits interviews will be conducted.

Based on the four visits and interviews, supplemented by the knowledge gained in this stage, a reader is composed for the benefit of the participants in the research project Phase 2: Research.

As an example the results of the *first visit* will be published in this reader. All the information on the four visits can be found in the Dropbox in the folder: *Phase 01 Exchange*



Exchange 1: Halle: Zentrum für Umweltforschung (UFZ)

Dr. Stefan Klotz: Head of the Department Community Ecology

www.ufz.de/index.php?de=14699



Dr. Sonja Knapp: Scientist Department of Community Ecology

www.ufz.de/index.php?de=7278



Exchange 2: Stuttgart: University of Stuttgart

Ortwin Renn: Professor of Sociology of Environment\ Technology

www.uni-stuttgart.de/soz/tu/mitarbeiter/renn.html
www.ortwin-renn.de/



Exchange 3: Zurich: Bundesamt für Umwelt (BAFU)

Gabriella Silvestri: Head of section Art und Lebensräume
www.bafu.admin.ch/org/organisation/10994/11003/index.html?lang=de



Exchange 4: London: UK Bat Conservation Trust (BCT)

Carol Williams: Biologist and head Scientific Projects
www.bats.org.uk/pages/bct_staff.html

Phase 1: Exchange

Introduction Halle

M. Lehner und M. Van Stiphout treffen sich im Gespräch mit S. Klotz und S. Knapp vom UFZ Halle. Letztere waren Autoren des Artikels “Änderungen in der funktionalen Zusammensetzung einer zentralen europäischen Stadtflora über drei Jahrhunderte.” Diese historische ökologische Forschung ist nicht mit der Stadtentwicklung von Halle verknüpft. Aufgabe des Besuchs ist es, ein Gespräch darüber zu führen, ob und wie die ökologische, städtebauliche und architektonische Stadtgestaltung gekoppelt werden können, oder sind, mit dem Ziel zuerkunden ob es Mechanismen zur Steuerung einer, Natur-inklusive Stadt’ zu destillieren gibt.

Questions Halle

1. Das Institut für Biologie / Geobotanie Halle hat die Zusammensetzung von Flora und Fauna seit dreihundert Jahren inventarisiert und hat somit eine einzigartige Sammlung von Daten. Was uns interessiert, ist die Art und Weise, worauf die Daten seit 300 Jahren aufgezeichnet wurden. Unsere Frage ist, was aufgezeichnet wird und wie. Sind die Umgebungsbedingungen festgelegt, wo die Pflanzen (und Tiere) gefunden wurden? Sind die Listen standardisiert, oder ändern sie sich über die Zeit? Werden Diagramme erstellt? Können wir ein Originaldokument bei unserem Besuch sehen?

2. Was sind die aktuellen Studien zur Biodiversität in der Stadt und wie wir das Thema der Invasoren, -der Arten, die sich in der Stadt niederlassen, aber von anderswo gekommen - behandelt? Gibt es Untersuchungen, bzw. ist es denkbar,

Phase 1: Exchange

dass ein eigenes Biotop in der Stadt entsteht mit seinen eigenen Spezies die sich von jenen in der umliegenden Landschaft unterscheiden durch ihre Fähigkeiten, die städtischen Faktoren wie Wärmestau, sehr nasse und sehr trockene Perioden, Gartentrends, (Haus)Tiernahrung (z.B. Sittichfutter) und Standortfaktoren (die U-Bahn-Maus) zu nutzen. Gibt es Grundsätze zu entdecken, die die Gestaltung einer Stadt für eine größere Biodiversität ermöglichen könnten? Hat der jüngste Trend der urbanen Landwirtschaft in diesem Sinne Bedeutung oder Effekte?

3. Sie stellen fest, dass sich viele Pflanzen durch Wind und Insekten verbreiten und vermehren. Ist die Beziehung zwischen der Entwicklung der Stadt und den Wohnorten dieser Arten untersucht? Ist Stadterneuerung in Verbindung mit der Erhöhung der biologischen Vielfalt möglich? Gibt es konkrete Beispiele in Halle, wo eine Veränderung der Stadt(struktur) einen positiven Effekt auf die Biodiversität hat?

4. Die Artenvielfalt wird auch durch Umweltverschmutzung beeinflusst. Was sind Bausteine in der Gestaltung der Stadt wodurch Abgase, Smog usw. keine oder positive Auswirkungen auf die anfälligen Arten wie z.B. Moose und Flechten etc. haben? Kann in der historischen Forschung eine Korrelation zwischen erhöhter Verschmutzung und Verringerung der Biodiversität gefunden werden, und welche Arten der Biodiversität betrifft das dann? Gibt es Dinge in der Gestaltung unserer Umwelt, die wir unterlassen sollten, um zu einer größeren Artenvielfalt kommen, wie Pestizide im Straßensand, und Gift gegen Schimmel und Verfärbungen der Fassaden?

Report Halle

Herr Muelheide – director of the institute of biodiversity

Botanic history of Halle:

The first flora of the world was written in Halle by Johannes Thal in 1544. This book not only registered the medicinal herbs but all species. Halle had since then many famous florists. One of them is Adelbert von Chamisso. The famous herbarium of Halle moved to Munster in the war and didn't come back to Halle.

Florists don't make maps

Later Halle had many other flora (1687,1720,1805,1840,1900,1950). The plants are always registered in prose text in the books. Florists don't make maps. They order the plants on their names and describe the finding places. The context of the plants is written down in words, we lack a map (see herbarium notation rules). The flora of Herr Klotz and Herr Stolle has descriptions of plants of the places they are found today and before. This data come from older books but don't cover all plants. Sometimes the old descriptions of places can't be traced back. Today many cities start making their own flora. So has Amsterdam and Rome. London has a flora covering the plants in the city of the last 25 years. This has been a very expensive research (Herr Muelheide).

A Danish Joachim Frederik Sho, Ellenberg physical geographer was the first man who didn't talk about plants as individuals but about plant communities, groups of plants living in the same landscape conditions.

Phase 1: Exchange

Today the amount of air pollution is measured on the hand of the growth of plants. So there are more data of places plants are found. Presence-absence data is used as words. Many plants disappeared when Halle's air got polluted by the many stoves on coals. The moment this changed plants came back from the nearby mountains of the Hartz with the western winds. Close by the institute is a tree that shows in its habitat the period of pollution (DDR period).

Urban ecologists of West Berlin

The invention of the urban ecology comes from Berlin (Klotz). In the times the city was isolated there was a lack of rural space. Those interested in botanics focussed on the “marginal grounds” and railway yards into the borders of the city. TU Berlin is the school from which ecologists went to other places like Darmstadt, Erfurt, Halle. In Berlin the leading professor since 1990 for urban ecology was Professor Michael Succow.

Invasive species

From 100 species every 10% settles and reproduces itself, and 10% turns into an invasive specie. The European Union demands from 2015 on that the member states prevent species to become invasive and eliminate the existing invasive species in their country. The racoon is such a species. It is impossible to get her out (Klotz). As soon as you start hunting them they reproduce more and more often. 4 racoons were introduced in Halle, now they live everywhere in Germany and perhaps also in Holland yet.

Time for renaissance

Those who want to make nature inclusive plans should be able to think in time (4th dimension). The town city movement is an example of building with nature. We did a step backwards after that. It's time for a renaissance because we were on the right way (Klotz).

Literature

The city biodiversity index of Peter Weena

Darmstadt institute for Wohnen und Umweltstad (institute who wants to bridge building and nature)

Interesting colleagues

Herr Norbert Muller, Fachhochschule Erfurt, research ecology and architecture
Juren Breuste, Salzburg, research ecology and architecture

Student tasks

mapping, planting geography: describing the plants on the conditions they are growing, in the cross section.

Phase 2: Research

LAB Programme

The exchange phase of the project Building for Biodiversity is followed by an interdisciplinary research, conducted by three research groups, a mixture of Biology students from Leiden University, students from the Academy of Architecture and alumni of Design Academy.

A student in History at the University of Amsterdam will examine the history of Cruquius as a transformation area. The possible knowledge of specific relied plants and animals in the area can be used in the workshop.

In the coming twelve weeks you will be working with your colleagues from different disciplines in the NextCity Biodiversity LAB. The period in the LAB is a time for collaborating, thinking, researching, designing, presenting and talking. The LAB is structured in 4 themes of 3 weeks each:

- | | | |
|------|------------------|----------------|
| I. | January 5 - 22 | Principles |
| II. | Jan 26 - Feb 12 | Materilisation |
| III. | Feb 16 - March 5 | Context |
| IV. | March 8 - 26 | Policy |

Each week there will be presentations and inspiring guests to listen and talk to. Please find the different phases, working methods and expected results of the Lab described below.

Phase 2: Research

I - Principles for building for biodiversity (week 2-4)

Week 2: Fieldwork

The Lab will start off with fieldwork at three Amsterdam projects to explore traces and principles of biodiversity in the city. You will visit recent, but very different urban neighbourhoods. Take pictures where you see biodiversity and describe the conditions where you find real traces (bird droppings under lamppost) and derived spores (mushroom that grows on dead grasshopper) etc.

Projects to be visited:

- Amsterdam IJburg (newly built up island next to a Natura 2000 reserve)
- GWL terrain (former Municipal Water Pipelines area)
- ODE (Oosterdokseiland, centrally located new high density neighbourhood)

Documentation and results:

Make an analysis of your photographs. Work with the cross section of the area you have been visiting: On which part of the section did you see biodiversity? Add annotations to the pictures: what are good and bad examples, what species, of what references can you think? Also think of future opportunities for biodiversity and of the opportunities that obviously have been missed.

Week 3: Desktop Research

Find documentation of examples that you know from your background or experience. Show them to your colleagues. Discuss foreign example projects such as the countries of the participants (Brazil, Venezuela, France, Japan), but also Germany and Switzerland. Use the links provided in the Dropbox.

Documentation and results:

Short 1 A4 pages summaries with text and images of foreign projects (use the format provided). Put additional information per country and project on the Dropbox.

Week 4: Compare

Look back on the three projects in Amsterdam and compare them with the foreign projects discussed. Use information on the principles of the Amsterdam projects (master plan, zoning, urban planning principles, ecological backgrounds, newspaper articles, interviews with designers and urban planners, etc.)

Results:

Illustrations and texts. Translate your findings into reprocessed and communicatively annotated photographs of the site visits and with a cross section. In addition store material on the Dropbox: Link collection per topic, pdf's found online and requested by Municipalities.

Phase 2: Research

II - Materialisation (week 5-7)

Week 5: Fieldwork

The topic materialisation will be kicked off by fieldwork and an introductory of the workshop location, Cruquius area. Fieldwork includes taking pictures of the area; which traces do you spot? Take pictures of parts of the buildings, the line between building and public spaces, facades, gutters, roofs, fences, docks etc. along the way to the lab from your hometown. Also, walking around the peninsula of Cruquius and check for traces of biodiversity.

Documentation and result:

Make an analysis of your photographs. Work with the cross section of the Cruquius area: On which part of the section did you see biodiversity? Add annotations to the pictures: what are good and bad examples, what species, of what references can you think? Also think of future opportunities for biodiversity and of the opportunities that obviously have been missed.

Week 6: Desktop research

The second week of this topic deals with detecting and collecting building parts fit for biodiversity from different countries and from the perspective of the designer, the biologist and the architect. What kind of building materials do you know, what permanent and temporary interventions can foster biodiversity?

Documentation and results:

Make a catalogue of possible building elements for houses, offices and industrial buildings and (public) urban space.

Make a 'passport' of one A4 sheet per building element (use the format provided); Show images of the loose element, and photographs of an application of the element. Mention project and site names where the element has been successfully applied. Include data and main dimensions of the element or product and where it can be ordered.

Week 7: Synthesis – NextNests

The third week is used for creative work. Come up with your own ideas for new products. Explain for which, animal or plant it is suitable. What is the size and what are the preconditions (North, South, high, low, etc) to make the element a success?

Results:

Illustrations of your NextNests, BioAmplifiers, Diversity Engines,... with text in the form of a fact sheet ('passport') including a sketch / rendering / model of the solution. Explain if the new building elements are permanent or temporary nest.

Phase 2: Research

III - Context (week 8-10)

Week 8: Fieldwork

You will visit three projects in the cities of the participating schools: Leiden, Eindhoven and Amsterdam. The local students within the group will be your guides. Explore the connections and the context of the sites. How is biodiversity enhanced by cleverly weaving a project into its surroundings?

Projects to be visited (basic information will be provided):

Leiden: Poelgeest, residential

Eindhoven: Hi-Tech Campus, educational

Amsterdam: IJburg, urban

Documentation and results:

Drawings and sketches on the scale of urban planning. How is the location connected to its surroundings, to nature and the rest of the city. What are inner networks of parks, green areas. What is the larger ecological network of the location within the region?

Week 9: Desktop Research

Compare the projects that you have visited with 5-10 foreign examples (each team member should bring in two inspiring references). Discuss the context, the biodiversity networks and connections to the surrounding environment suitable for fauna and flora,

Documentation and results:

Drawings and sketches on the scale of urban planning. How is the location connected to its surroundings, to nature and the city. What are inner networks of parks, green areas? What is the larger ecological network of the location within the region?

Week 10: Reflecting and summarising

Discuss and reflect the sites you have visited and the foreign projects you have studied. Try to classify the sites into categories: What type of neighbourhood is it? Is the location suitable for a certain group of plants or animals? Why is that? What makes a neighbourhood or location suitable for a particular spectrum of biodiversity? What are the principles within the organisation of site, networks and context? E.g. if you take a waterfront location: What options are there from the perspective of biodiversity? Or, alternatively, if the location is next to a park, what options are there?

Documentation and results:

Catalogue of the 10-15 locations divided in 3-5 categories. Produce a summary per project in the form of a 'context passport' per location on one A4 paper with a context illustration and a number of characteristics as bullet points (use the format provided).

Phase 2: Research

IV Policy (week 11-13)

Week 11: Reading

Text reading per discipline and discussion within the group. What do you discover when you look with 'biodiversity' binoculars at the policies and traditions within your discipline?

Academy Amsterdam students (architecture and landscape architecture): Study and discuss Spatial Regulations and the Building Code (in Dutch: Bouwbesluit). E.g. How did the demand of closing all gaps in façade work out for small animals? How did the nearby Natura 2020 area have consequences for IJburg?

Leiden students (biology): What can we learn from the environmental and habitat management and maintenance plans for public spaces as issued by municipalities? What can be achieved by acting and what by letting go? E.g. what does the notion of 'bird control' imply and how is that brought into practice? How is the notion of a well maintained, clean and tidy public space defined?

Design Academy Eindhoven (design): Discuss the performance, notion and expectation of building materials and public space. What is a green space and what should it perform for biodiversity? What do people expect from water in public space when it comes to biodiversity?

Documentation and results:

Summaries and bullet points highlighting your findings.

Week 12: Comparing

Study the Construction regulations and Building Codes from your home countries and compare the findings with the Dutch examples. What are cultural differences when it comes to the notion of 'nature' in the city? What are the cultural differences in status, beauty and policies when it comes to biodiversity?

Documentation and results:

Summaries and bullet points highlighting your findings.

Week 13: Creating

Think of new policies and incentives that propel biodiversity in the city. What could be a good example of stimulating legislation? How can policy lead to acceptance and support by the inhabitants? E.g. the Seoul (Korea) building code allows more floor space when you put trees in front of you house; in Switzerland the government subsidizes certain spatial interventions with an eye on biodiversity.

Think of the following themes:

- Flexibility in building materials (openings for animals, but ability to close them)
- Heterogeneity in urban weave (networks suitable for animals, plants, humans)
- Economic opportunities (and risks), development of biodiversity time

Result

Text with illustrations where supportive.

Phase 3: Workshop

Concluding Design Workshop on location (week 14)

After the research phase the LAB-team members will make concrete design proposals for a defined urban location: the Cruquius area in Amsterdam East, a business area being transformed to a mixed residential / work area. This specific location has been chosen because of the experimental way re-development is taken up, leaving room for special initiatives. Local government deliberately keeps a distance and does not use a master plan as normative, but only some relatively “game” rules. Developers like Amvest and smaller players such as building owners, can therefore largely determine the future character of the area. The development will be phased, this way we can respond to the changes in the market and users. The Cruquius Area is also interesting because it is a peninsula with both land and water ecology.

Workshop Programme

All participants will be working on location the entire week and there is continuous guidance from the tutors. The knowledge gained over the past 12 weeks is applied to the Cruquius area. The parties involved and also the Municipality are eager to learn of concrete proposals that can be realised directly.

Basics

The Municipal Map of Spatial Rules (Spelregelkaart Cruquius) indicates what is to be expected from new building activity. There are some owners of buildings who would like to (re) develop them in a biodiversity way and there are initiatives for new buildings. There is a public space with the principles already defined.

Designs

The knowledge developed over the past few weeks shall be applied upon designing new spatial and architectural solutions for an individually chosen cross section of the Cruquius area. For the parts of the area within that section designs are developed for public and private open space and for one or more buildings of parts of them.

Proposals must be applicable and focus on nature inclusive redevelopment. Which means an environment of great biological wealth, that offers space for humans, animals, plants and all living things.

Communication

Communication and information is a key factor when it comes to supporting biodiversity. Think also of communication solutions that can be introduced in the form of apps, websites etc. to activate and involve property owners, residents, and users of the area.

Results

Designs and proposal on paper, as models, digital images and prototypes, etc. The results are collected for the exhibition. Explanation and legend are in English language.

Maike van Stiphout and Mathias Lehner are the final directors of the research, with the input of the students and alumni, they make the final design conclusions.

Practical information

Email addresses

Maïke van Stiphout: maïke@dsla.nl

Mathias Lehner: mathias@legu.nl

Team 1

Anna van Gerve: annavangerve@gmail.com

Floor van der Klauw: mfvanderklauw@gmail.com

Imane Elkatrani: imane.elkatrani@hotmail.fr

Rick Groeneveld: RickGroeneveld1@gmail.com

Tom Nederstigt: tomnederstigt11@hotmail.com

Franciska Langstraat: Langstraatkf@outlook.com

Team 2

Bennie Meek: info@studiomeek.com

Liselotte Rambonet: liselotte@rambonnet.com

Lourdes Barrios Ayala: lourdesbarrios.arq@gmail.com

Milan Oostwouder: milanoostwouder@hotmail.com

Vincent Wittenberg: info@vincentwittenberg.com

Yuka Yoshida: yyoshida510@gmail.com

Team 3

Anne van Strien: anne_van_strien@hotmail.com

Isis Boot: isisboot@gmail.com

Janna Verwijs: janna.verwijs@gmail.com

Jesper Tijhuis: jespertijhuis@gmail.com

Lucas Pissetti: ninoust@hotmail.com

Working schedule

ma-vr 9.00 AM - 5.00 PM

Lunch

On Thursdays lunch is included. The other days please provide the lunches yourselves.

Partners & stakeholders

Partners

Maike van Stiphout – landscape architect (WUR)

Maike van Stiphout is director of the Amsterdam-based DS landscape architects since 1993. Since September 2014 she is Head of the Landscape Architecture Department at the Amsterdam Academy of Architecture. She wants to build a bridge between architects, landscape architects and experts from ecology and biology, but also, for example, manufacturers of building materials. Her mission is to enlarge the interest in including nature within spatial developments as the basis for a new building practice.

www.dsia.nl

Mathias Lehner – architect (TU Delft en Wenen)

Since 2004 architect Mathias Lehner is founding director of the multidisciplinary design office lehner gunther in Amsterdam. Mathias Lehner works within an international network and has special interest in the economic, communicative and social aspects of architecture. At the Royal Institute of Dutch Architects he heads the international program. With his Austrian background Mathias Lehner is familiar with current development in biodiversity in German speaking areas of Europe.

www.legu.nl

ARCAM Amsterdam Architecture Centre

As part of its program for 2014 and 2015 Arcam will organise a series of activities on designing for biodiversity. Arcam thereby seeks close cooperation with Maike van Stiphout and Mathias Lehner. In the final project phase Arcam organises various public activities to ensure that the outcomes and findings are made known to a wide audience. Additionally Arcam has taken a supporting and facilitating role in the project. Arcam acts as mediator: the institute brings together designers, developers and policymakers around the theme of designing for biodiversity. Already in Spring of 2014, Arcam launched initiatives to inform stakeholder groups about designing for biodiversity and in order to deal with possible resistance.

www.arcam.nl/en

Leiden University/ Naturalis Biodiversity Centre

The Faculty of Science, Communication and Society at Leiden University and Naturalis Biodiversity Centre are involved in the project as excellent experts when it comes to biodiversity, ecological 'wish lists' of the various life forms, scientifically reliable data and communication with stakeholders. For this party, Marco Roos (education coordinator, examiner and chief researcher for Tropical Plant Diversity, University of Leiden) is involved. In addition, Prof. Dr. J. van den Broek (Head of the Department Science, Communication and Society at Leiden University) is supervisor for transferring the knowledge and findings to residents, property owners, developers and users.

www.leiden.edu

Partners & stakeholders

Design Academy Eindhoven

The Design Academy is indirectly involved. Recently graduated designers of the Academy investigate the international status of the natural inclusive design and construction, and translate the information from the research process into products for the redevelopment plans including nature.

www.designacademy.nl

Amsterdam Academy of Architecture

The Master education for Architecture, Urban Design and Landscape Architects delivers five, interdisciplinary interested students who participate for 3 months on a full time basis in the project. The role of these students is similar to that of the alumni from Eindhoven: participation in the research and making spatial design proposals during the design week in phase 3. www.ahk.nl/en/architecture

University of Amsterdam

The Faculty of Architectural History brings in students that investigate the history of the Cruquius area. As a reminder to the former harbour and railway use the area boasts a number of rare plant species. The role of the students is to provide input for the design session. www.uva.nl/en/home

Stakeholders

City of Amsterdam – Local Municipality

The Eastern district government is closely involved and supports the research financially. www.oost.amsterdam.nl/wonen/projecten/oostelijk/cruquius

Amvest

The largest land owner in the Cruquius area is approached in order to develop outdoor space simultaneously with the proposed buildings and to participate in the project. The organizers of this project are in conversation with the architects at this moment. www.amvest.nl/project/cruquius-amsterdam-oost

Stichting Cruquius 2015

In the Stichting Cruquius 2015 a dozen owners within the Cruquius area united. They make joint agreements on the redevelopment, ensuring alignment and talk to the municipality about the implementation and operation of the spatial rules applied to the area. Stefan Bergsma is the coordinator of the foundation and will present a development project to the participants. Some owners have already proposed ideas for interventions including nature for their specific building. www.cruquius2015.nl

De Nieuwe Vaart

The board of Nieuwe Vaart has offered its building as a test case to develop solutions that contribute to the increase of biodiversity. They will receive concrete proposals from this project. About the implementation of the proposals no arrangements have been made so far. www.denieuwevaart.com

Colophon

Text: Maïke van Stiphout, Mathias Lehner

Editor: Renske van Veen

Design: Renske van Veen

©2015 Building for Biodiversity

Amsterdam, January 2, 2015

nextcity.nl

