

POLLINATOR-FRIENDLY FOOD FOREST, DORTMUND



REGREEN
NATURE-BASED SOLUTIONS

Addressed SDGs:



Image: T.Mais Jafari

> OBJECTIVES

Like many cities, the neighbourhood of Huckarde in the City of Dortmund, Germany, is facing social, economic, and spatial challenges. A former mining and steel industry hub, the city district underwent an economic as well as demographic change with residents moving elsewhere. The pollinator-friendly food forest project aims at socially inclusive spaces that foster interaction between the citizens and shape local identity through gardening activities. This project is open for all, irrespective of age, nationality, education or other, often socially separating factors, and delivers a wide range of benefits for the residents and nature.

> DESCRIPTION

The local NGO *Die Urbanisten* supported the creation of a food forest on 3000 m² of cleared land, owned by the Catholic Church of St. Urbanus, in Huckarde. A food forest is a cultivated urban forest that predominantly consists of edible plants and fruit-bearing bushes and trees.

In collaboration with a local scouts group and church community, several raised beds and planting shelves were planned, built, and planted. The first step consisted of clearing unwanted shrubs and adding more soil layers. The first layer, which was put down, was a natural, permanent humus fertilizer, followed by a cardboard layer to prevent regrowing weeds. The top layer was made of a 20-30 cm thick layer of wood chips. The whole layer pack is supposed to decompose and compost into forest soil that mimics topsoil. Some areas were treated with acid fertiliser to form slightly acidic soil that is best for low pH preferring shrubs and bushes.

So far, 35 soft fruit bushes, such as raspberries, blackberries, gooseberries, and 20 wild fruit trees like rock pears, elderberry, and cherry have been planted. Simple maintenance consists of regularly replenishing the soil with fresh wood chips and pruning branches. Pruned branches are usually dropped unprocessed where cut, following a method called “chop and drop”. All of these measures increase soil biodiversity, and pollinator-friendly plants improve the type and abundance of insects, which also attract birds. Moreover, fruits produced by the planted trees provide food for both humans and animals like squirrels. Experience from other

projects showed that the habitat is populated after one season. However, the percentage of population increase is hard to estimate since establishing a new, fully functional bio-habitat balance takes many years.

A food forest serves many functions and thus provides various benefits: apart from increasing local biodiversity, a food forest enables regular social interaction and community cooperation by growing food, all of which may improve people's psychological well-being. It has the potential to transform the consuming community into conscious producers.

The planning, design, and implementation of the food forest was done in close cooperation between local partners of the EU-funded proGReg project and the local scouts. At first, ideas and hopes for this project were collected from the pastor of the church and the scouts, after which an expert facilitated the development of the concept of food forest and permaculture. The concept was then presented to the public at an information event and a series of workshops were launched in 2020. This collaborative approach created a feeling of personal involvement among people, which in turn motivated local residents to care for and maintain the food forest in the long term.

Planting the urban food forest was mainly financed by the proGReg project, whilst the church covered the remaining costs. The budget spent so far ranges around 3,000 €: most of the costs were for soil preparation, raised bed material, construction wood, seeds, plants as well as cardboard and wood chip material. An estimate for calculating the soil improvement measures was: 1 m³ of compost covers an area of 10 m² (with a 10 cm compost layer), representing a weight of 800-900 kg. However, costs could have been reduced even more by asking local arborists to dump wood chips on the site or by propagating plants by cuttings.

Subsequent to the food forest project, *Die Urbanisten*, the *South Westphalia University of Applied Sciences* and their partners also started a citizen-driven non-profit organisation called *Naturfelder* to motivate and activate people's interest in founding voluntary associations promoting biodiversity. Unlike the food forest, *Naturfelder* is site independent. *Naturfelder* associations encompass

activists and experts in the fields of agriculture, permaculture and wildlife, whose goal is to together procure and convert suitable plots of land into flower meadows and insect habitats. Focus here is on actively procuring land, qualifying it with experts and creating concepts for individual sites. These associations also secure financing for converting sites into flowering meadows, while giving participants a chance "to make this place their own". Two suggestions based on the combined experience with the food forest and *Naturfelder* are: 1) if you only have active people, apply the *Naturfelder* approach, and work on finding and establishing sites; 2) if you have only one space, start with a food forest and let that foster community.

> CHALLENGES

Finding suitable spaces for the implementation of this nature-based solution (NBS) in Dortmund proved challenging. Specifically, the very limited availability of publicly-owned properties made local stakeholders enter into lengthy negotiations about lease contracts with private land and property owners. This resulted in a lot of tedious work to secure suitable properties for the project, postponing the co-design phase for a while. With limited alternatives, the project lead contacted daycare centres and a local school in Huckarde to offer implementing these NBS with young children and students as educational and pedagogical work.

While good ideas are easy to develop, finding the right sites and establishing active, ongoing commitment among project members is often more difficult. The COVID situation had also an important impact on the project, since it was in the initial stages when the pandemic broke out. A series of workshops with local citizens had to be cancelled. It also caused delays in on-site delivery of planting materials and planting interventions in the area. Citizen participation in the co-design was also limited due to COVID-19.

> OPPORTUNITIES

Luckily, Die Urbanisten had permission from the church to use the space for the food forest without having to follow any administrative procedures, such as signing a lease contract. This made things easier and allowed a faster start.

One of the success factors of the project was communicating the food forest concept directly to the church community and conducting educational workshops on building small raised beds in the community centre's yard. This allowed taking all the wishes of the users into account. Compared with other areas, the process was relatively uncomplicated and unbureaucratic. Through many discussions and queries, all wishes could be anchored in the concept. The church community's main concern was that there would be much more work for the community and scouts. Dispelling these concerns resulted in trust building and enthusiasm at being involved in the project.

> LESSONS LEARNED

The actual on-the-groundwork for the project took place in 2020. It was carried out by a very small group from the church community, due to the pandemic, which did not allow organising larger events. Efficient organisation of volunteers and combining working days

on-site in the food forest with days on which workshops are held encourages more people to participate in the project.

It is also useful to learn how to best design a food forest in advance; consulting with local permaculturists is highly recommended. In the case of the local food forest project, contact with an umbrella association was first made at a later stage of the project. These types of organisations could support and be helpful in refining the concept and outlining a communication strategy - all highly recommended in the first stages of the project.

When having problems in identifying suitable spaces for a food forest, it is better to start a public campaign and communicate the main goals so that participants can identify spaces during the co-design process.

> INSPIRATION FOR OTHERS

A food forest can be designed and implemented at almost any scale. Even an area of 50 m² is sufficient to apply such an idea. The effort invested in the design of the food forest does vary depending on the desired goals and abilities of the implementers.

FURTHER INFORMATION

All fact sheets were produced from questionnaires and interviews conducted by the ICLEI team. Contact ICLEI Europe for more information or access Oppla: <https://oppla.eu/casestudy/21617> and <https://oppla.eu/casestudy/21240>

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LIVING LANDSCAPES IN EDINBURGH



Addressed SDGs:



> OBJECTIVES

The Edinburgh Living Landscape is a nature network that works to benefit both local people and wildlife and make the city of Edinburgh one of the most sustainable cities in Europe by 2050. The network's goal is to introduce nature across the city neighbourhoods and demonstrate that investment in natural capital makes economic sense while increases biodiversity and creates healthier urban ecosystems.

> DESCRIPTION

To achieve the above mentioned goal, Edinburgh Living Landscape aims to establish attractive, bio-rich meadows, shrub beds, and woodlands across the city, thus reinforcing and expanding existing green networks and reconnecting the people of Edinburgh to their natural environment. This project comprises a group of organisations, such as the following: Scottish Wildlife Trust, Royal Botanic Garden Edinburgh, Edinburgh & Lothians Greenspace Trust, University Of Edinburgh, NatureScot, Butterfly Conservation Trust, and Royal Society for the Protection of Birds Scotland, which work together to create a multi-scale network of green spaces.

The project made use of Geographic Information Systems to identify suitable areas in which to act. During the mapping process, potential locations for more naturalised grasslands were identified, always trying to get a spatial

balance across the city. The project involves interventions with the existing green estate through a mixture of seeding, bulb planting and relaxed grass cutting regimes. The majority of the locations are situated on aggressively managed grassland areas with strong cutting regimes every few weeks. The introduction of a properly maintained wildflower meadow allows the pollinator populations and other species of insects, birds and mammals to thrive.

Edinburgh Living Landscape (ELL) produces every two years a report on what has been achieved within that period. According to the [impact report from 2014-2017](#), in total there are 840 hectares of grass green spaces in the city, from which 12-13% have been transformed into biodiversity-rich living landscape grasslands. Other quantitative impacts include the creation of 74 new floral meadows and 0,52 ha of woodland habitats.

During those years, the University of Edinburgh carried out 221 meadow pollinator monitoring surveys at different sites and over a period of time to identify which specific species have been benefitting from the changes. The city council measured the extent of the area transformed for the report.

Since the start of the ELL, the council has had an ongoing public information strategy to ensure the citizens were aware of the changes made in local parks and green

spaces. The people engagement approach was delivered by using various tools that include Social media (ELL website, Twitter, Facebook, Blogs, and press releases), council seminars - training sessions, and production of materials for gardeners, council staff, and teachers. As an additional feedback mechanism, every year the city council sends a household survey across the whole city with various questions like: How happy are you with your local green spaces?

The positive formal feedback from ELL participants indicated that the work done by the project is motivating a shift in attitudes, improving participants' knowledge of wildlife habitat creation techniques, providing skills, and generating awareness. This increase in motivation also allowed all the participants to take measures in their gardens or encourage other citizens to act. The outcome was a greater demand in local communities for neighbourhood improvement support.

ELL is financed by the City of Edinburgh Council through its existing core budgets within the Parks & Greenspace Service. This funding comes from the Scottish Government, through aggregate external finance (AEF). It consists of three parts: revenue support grants, non-domestic rates, and income and specific grants. Additional income comes through the Council Tax, which the council itself sets. Some funding for projects has also been secured through the Scottish Wildlife Trust (SWT) and external grant awards from NatureScot.

> CHALLENGES

The main challenge was people's (general public and staff) perception towards "wild areas". People are used to areas being maintained differently, therefore many of them due to lack of knowledge do not understand what the project is trying to achieve with the new forms of landscape maintenance.

> OPPORTUNITIES

After initial scepticism and some opposition, there has been a broad acceptance and increased awareness towards the project activities. People appreciate the efforts made by the city council and the project. Their feedback is always very positive and often they demand more actions.

> LESSONS LEARNED

Ongoing public communications are key to the project becoming a success. Communication and explanation of landscape management changes to the wider public, elected members, and also the staff have proved crucial. Also, public engagement and consultations have to be

constant. Community engagement from Friends Groups, community groups, schools, and individuals has to be prioritised.

Training of the staff is another important factor to take into account in order to increase the green areas maintenance expertise.

> INSPIRATION FOR OTHERS

The aim has been to make Edinburgh an urban exemplar of a Living Landscape approach to landscape and green estate management across Scotland, the UK, and further afield. Any city that wants to introduce nature across their neighbourhoods can develop a similar green spaces network. Actions such as, maintenance of wildflower meadows and management of grassland areas' cutting regimes can be replicated in other metropolitan areas and receive very positive feedback from the general public, thanks to good communication and engagement strategies.

FURTHER INFORMATION

All fact sheets were produced from questionnaires and interviews conducted by the ICLEI team. Contact ICLEI Europe for more information or access Oppla: <https://oppla.eu/casestudy/21288>

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