SELB STEP BY STEP

A guide for a more inclusive and resilient city

Towards an ecological urbanism

In the current geological epoch of the Anthropocene, the boundaries between artificial and natural, the built and unbuilt environment, have blurred to become indistinguishable. Far from implying the rule of man over nature, we confront the paradox of dominating a planet beyond our control. The effects of climate change and its global scope are increasingly becoming undeniable. The floods that hit central Europe in the summer of 2021, especially Germany, are just one example of how urgent taking action is. As often happens with crises, those already vulnerable due to other factors (age, race, social and economic class, in the case of humans and endangered in terms of biodiversity) will suffer disproportionately the effects of climate change.

In this context, our proposal turns to ecological systems theory and landscape urbanism perspective to develop the spatial intervention tools to tackle this challenge. If social and environmental aspects are so closely interconnected, we need to learn from ecology about which conditions increase biodiversity and how habitats become resilient and thrive.

'Selb Step by Step' is a guide to take action in the built environment that proposes a vision for the short and long term future of Selb in relation to broader policies. The European Commission aims to achieve climate neutrality by 2050; it has set key targets to be met by 2030: 55% greenhouse gas emissions cut, 32% share for renewable energy, and 32.5% improvement in energy efficiency. Working in synchrony with the EU framework, this guide sets out three directions for Selb to follow in order to become a social-inclusive and climate-resilient town by 2050: Rewilding, Diversifying, and Decarbonising. To achieve them, it proposes and describes a list of tangible steps towards those objectives in the next decade. These steps are discreet spatial interventions with different scales and scopes that can be implemented progressively, both independently or in combination. Their impact can be measured and assessed through indicators, informing the following steps to achieve the targets best.

Selb's Horizon 2050

steps towards REWILDERING

Rewilding is defined as a progressive approach to conserving, restoring and managing natural processes and wilderness areas. It implies "enabling natural processes to shape land and sea, repair damaged ecosystems and restore degraded landscapes. Through rewilding, wildlife's natural rhythms create wilder, more biodiverse habitats."

As such, rewilding is one of the methods identified by the UN to achieve massive scale restoration of natural ecosystems and meet climate targets. The steps proposed by this guide in this direction focus on creating the right conditions for nature's self-management (by uncovering the Erkersreuther Bächlein river, by reducing active management of wildlife populations and by allowing natural forest regeneration), providing connectivity between natural areas (Selbbach riparian areas or the forest northeast of the cemetery) and protecting and reintroducing keystone species. Furthermore, rewilding contributes to individual and collective well-being -as the current pandemic has demonstrated- connecting with wild nature positively impacts mental and physical health.

The Erkersreuther Bächlein riverside path meets Obere Bergstrasse

steps towards DIVERSIFYING

Diversity refers to all the variety of life found in Selb, including the communities they form and the habitats in which they live. Biodiversity is essential for the resiliency of ecosystems for their intrinsic value and the ecosystem services and benefits it provides. However, diversity in our built environment needs to foster not only the diversity of natural species and habitats but also of different people in terms of age, socio-economic status, culture and race. The steps proposed in the guide attract heterogenous dwellers and visitors and keep those already established in three ways. First, by mixing various uses of ranging sizes within buildings and in neighbourhoods. Secondly, by ensuring affordability of housing, commercial, and cultural spaces. Finally, by contributing to a more welcoming public realm for as many agents and species as possible; care and well-being are the priority of all interventions.

Diversity and complexity are vital factors for urban resiliency. Thus, the proposed spatial interventions are meant to be future proof by ensuring flexibility and adaptability to tomorrow's uncertain challenges, uses, and users.

Vision for Lorenz-Hutschenreuther-Straße as a slow street
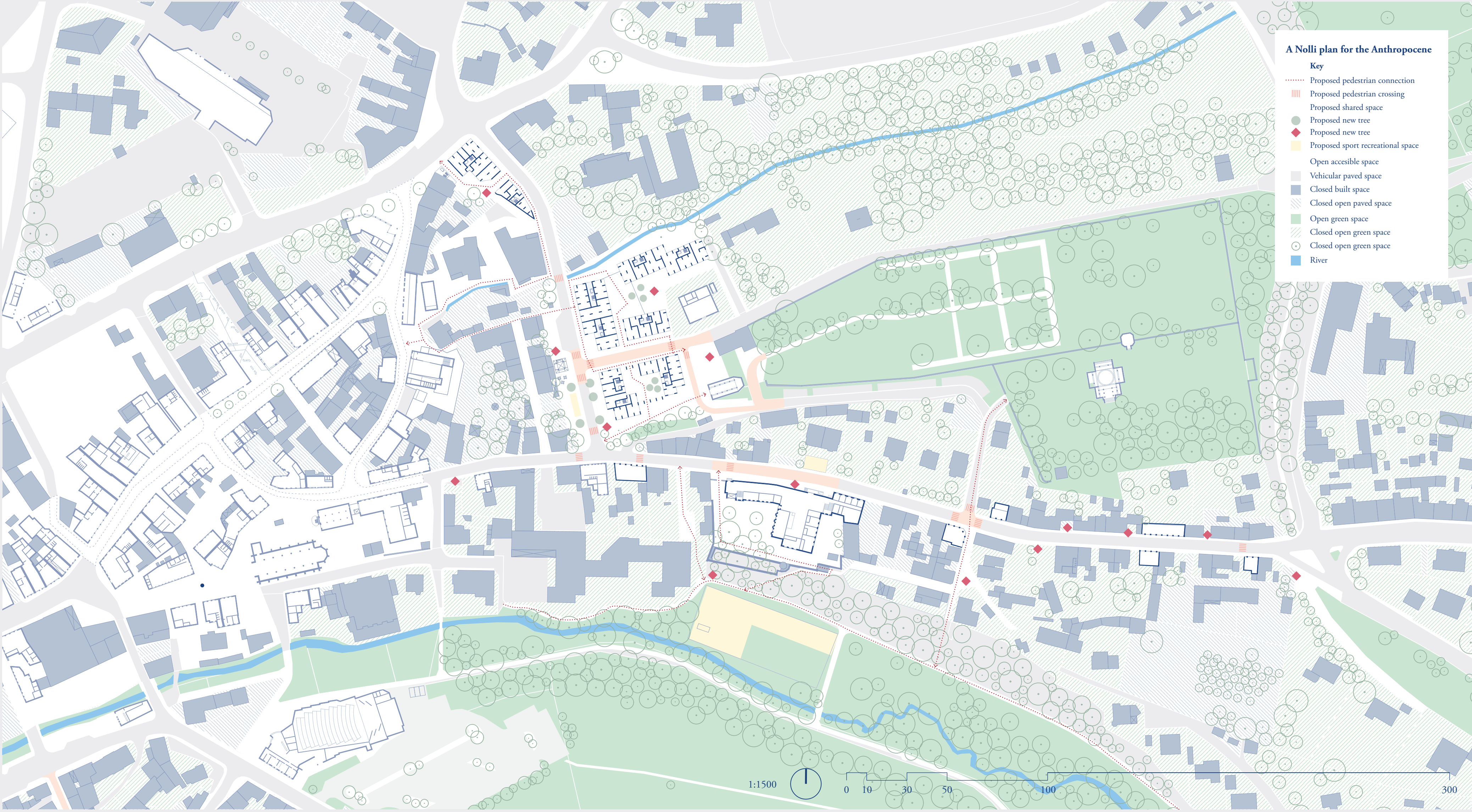
steps towards DECARBONISING

Decarbonisation refers "to the process of reducing 'carbon intensity', lowering the amount of greenhouse gas emissions produced by the burning of fossil fuels." The built environment contributes to nearly 40% of carbon emissions globally. The three primary sources of these emissions are mobility, operating buildings, and building materials; therefore, the steps proposed to focus on these three aspects. First, promoting non-polluting mobility such as pedestrian or active travel (like cycling) and operating energy-efficient electric public (and private) transport. Secondly, reducing energy consumption by making buildings more efficient (retrofit and newly built) and producing more clean energy than they consume through carbon-negative buildings. Finally, by using building materials with low embodied energy and tectonics that allow for demounting, and thus, reusing components, recycling materials, and reducing waste.

By working towards decarbonising our built environment, we can not only decrease emissions but also contribute to healthier and fairer communities.

New access to Gottesackerkirche from Lorenz-Hutschenreuther-Straße

## Selb's urban eocological networks *People and wildlife*

A Nolli plan for the Anthropocene

Key
- Proposed pedestrian connection
- Proposed pedestrian crossing
- Proposed shared space
- Proposed new tree
- Proposed new tree
- Proposed sport recreational space
- Open accessible space
- Vehicular paved space
- Closed built space
- Closed open paved space
- Open green space
- Closed open green space
- Closed open green space
- River

1:1500   0 10   30   50   100   300

Territorial strategies
for enhancing spatiotemporal connectivity of habitats in dynamic urban landscapes

NODES

A range in size and types of nodes of urban networks is essential to attract a diversity of actors across time (daily, weekly, and seasonally). Selb's town centre is a linear commercial node of human activity for the area. Singular buildings with public functions like the youth centre, the school or the elderly home act as nodes for specific groups. Large green and blue areas work as critical nodes hosting numerous vegetal and animal species.

The project proposes to progressively expand the existing network of nodes in the area between Obere Bergstrasse and Friedhofsplatz with a combination of linear commercial uses and singular cultural public uses. Multigenerational dwellings face communal courtyards with permeable grounds, vegetation and water ponds attract wildlife. Uncovering the Erkersreuther Bächlein river creates a fluvial linear park, acting as a new node for humans and non-humans alike.

Key
- Proposed new nodes
- Commercial node
- Civic Community node
- Green node
- Blue Node
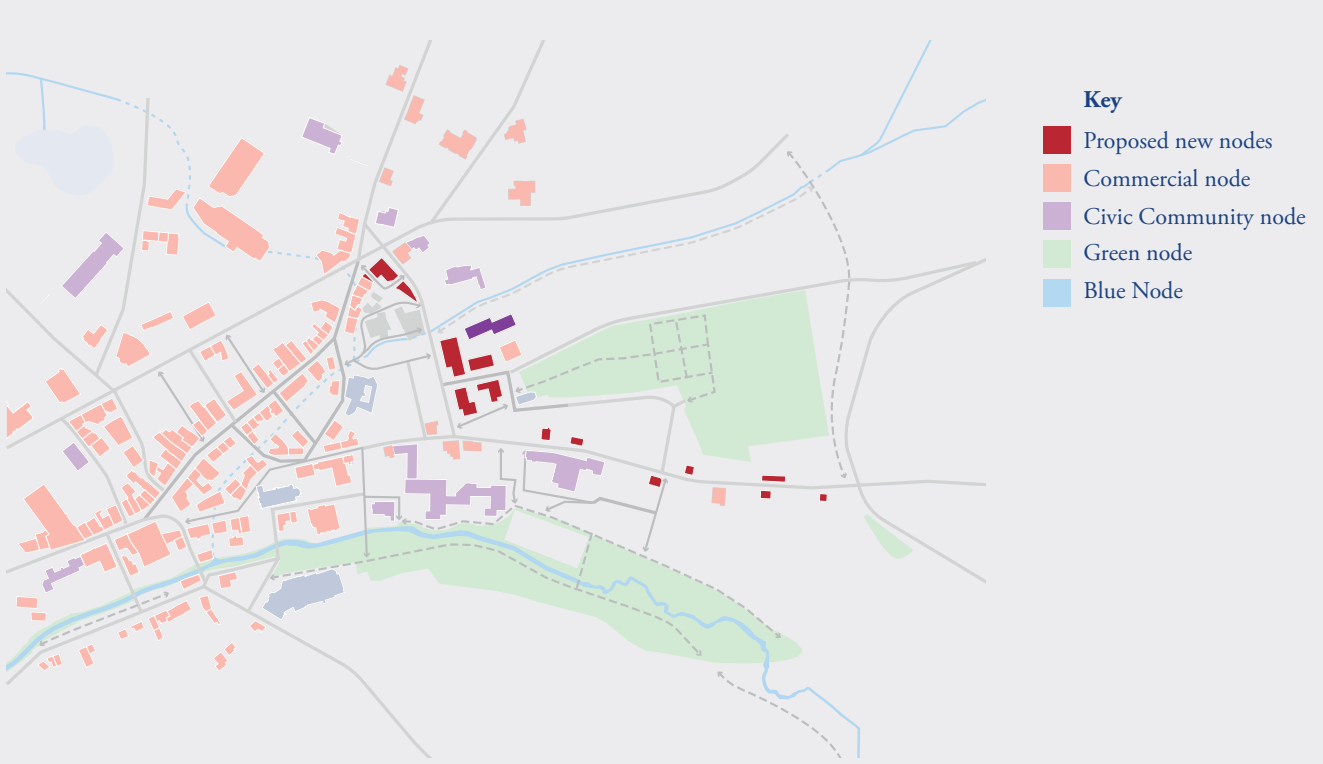
LINKS

Improving the connectivity between the various nodes is a crucial aspect that urban design can tackle to strengthen interaction and cohesion. Vehicular traffic and asphalt roads are the main current deterrents for people and species to dwell in or visit Selb. Therefore, all the steps proposed univocally promote walkability and low emissions mobility, such as cycling and public transport, resulting in a safer, barrier-free and pedestrian-friendly environment.

The proposal strengthens existing pedestrian, shared and permeable links in the town centre and proposes new ones connecting existing and new nodes. Pedestrian-only links traverse the proposed development in Obere Bergstrasse, and vehicular access is always through low speed, shared streets. The new fluvial park links the northeast neighbourhoods, and new pedestrian connections are opened between Lorenz-Hutschenreuther-Straße and the green and leisure infrastructure along Selbbach.

Key
- Proposed Pedestrain link
- Pedestrain link
- Shared link
- Natural trail link
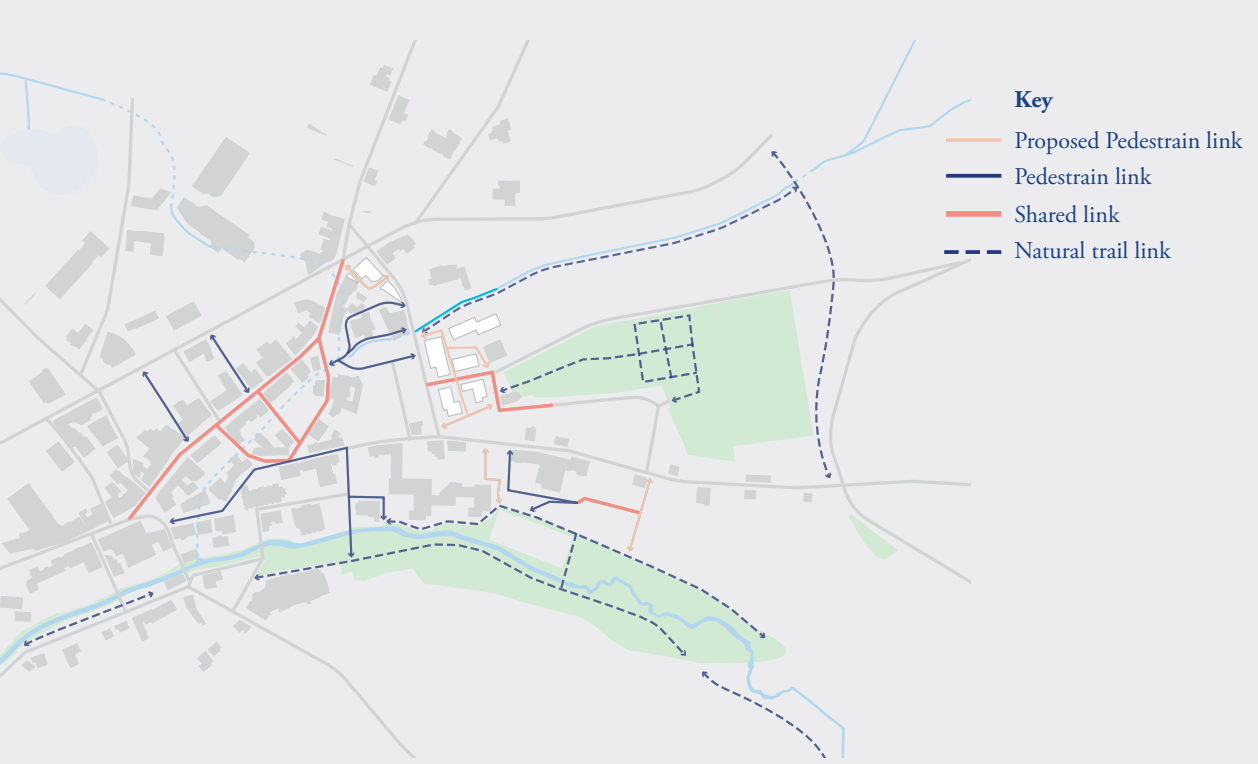
STEPPING STONES

Linear connections are not the only way to link nodes, nor are they enough to ensure that certain citizens - such as the elderly or those with reduced mobility- and species – for example, insects- feel welcomed and be able to move between destinations in their journey. We define stepping stones in our guide for Selb as small pocket spaces with amenities that offer refuge and a place to pause for them to travel across. Their size, location, and number determine the distance that actors can travel and thus are vital for achieving an inclusive city.

Through multiple and complementary steps, the project proposes a range of stepping stones -commercial uses, benches, drinking water, trees and vegetation, etc.- along both Obere Bergstrasse and Lorenz-Hutschenreuther-Straße. Similarly, paths of stepping stones with public amenities are proposed along the green and blue corridors connecting Selb with other urban and landscape centres. For example, we propose placing a bench or ledge every 100m along urban links to provide pause points every 500 steps for those with short step-length like elderly people.

Key
- Stepping stones for humans
- Green trail of stepping stones