



RUB

RUHR-UNIVERSITÄT BOCHUM

FUTURE VISION

Nature for Nature

Chapters

1. **Nature for Nature**
2. **Nature reserves**
3. **Ecological corridors**
4. **Housing situation**
5. **Green Houses**
6. **Traffic**

Nature for Nature

- **More space for natural areas and biodiversity**
- **Compact urban development**
- **Protected natural habitats**
- **Rewilding is promoted**
- **Ecological corridors connect natural areas**

Map for the Nature for Nature future Vision

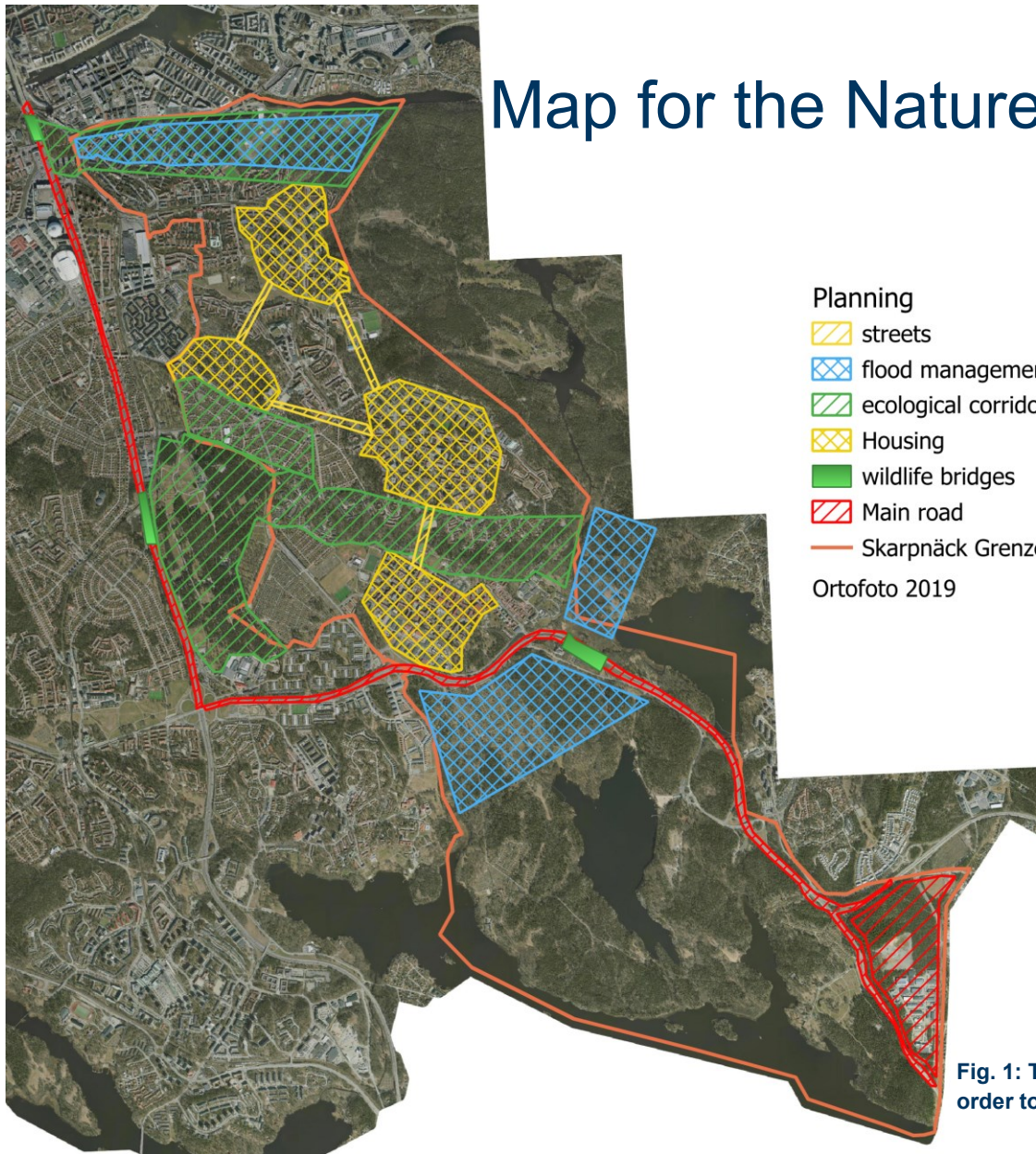


Fig. 1: This Map shows possible changes for the Skarpnäck District in order to create a Nature for Nature Future.

Nature Reserves

More space for natural Areas:

- **Preserve** and **expand** given Nature Reserves (Nackar, Flaten)
- Create **new** Nature Reserves
 - Parks (**Rewilding**)

Education on biodiversity

- Courses

Community work (Nature Care)



Fig. 2: Nackareservatet, utsikt över Källtorpssjön (Holger.Ellgaard 2015)

(Mansur et al. 2022; Hilty et al. 2020; Gencer et al. 2018; Maes et al. 2020)

Nature Reserves

- Biodiversity
- Reducing Flooding Risk
- Heat Reduction and fresh air
- Value of Nature (Experiencing wildlife)
- Strengthening community



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Ecological Corridors

- Connecting Nature reserves with each other (minimum 50 - 100 m) (LANUV)
- **Surrounding** the urban infrastructure
- Different natural habitats
 - Forest- and Shrubland
 - Wetlands; Greenlands
 - Streams (natural flow)



Fig. 3: Ningbo Eastern New Town Ecological Corridor | Turenscape (Holmes 2020)

(Mansur et al. 2022; Hilty et al. 2020; Gencer et al. 2018; Maes et al. 2020)

Ecological Corridors

- Reduced flooding Risk
- Proximity to nature
- Biodiversity
- Heat Reduction and fresh air



Fig. 3: Ningbo Eastern New Town Ecological Corridor | Turenscape (Holmes 2020)

(Mansur et al. 2022; Hilty et al. 2020; Gencer et al. 2018; Maes et al. 2020)

Housing Situation

- Building new Houses for at least 18000 new residents and relocating Residents in important environmental areas
- Mix of compact and open High rise Built types
- Buildings are interconnected

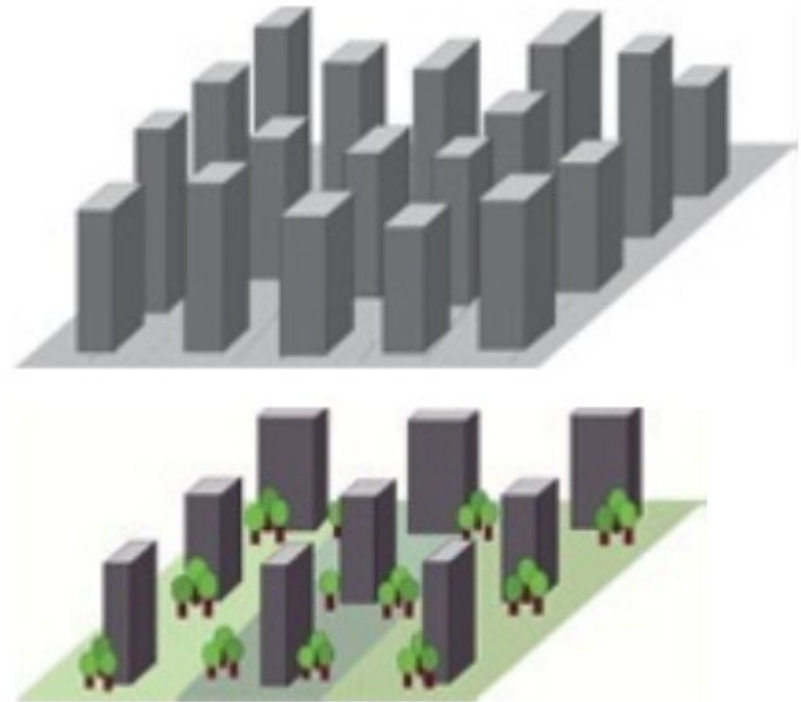


Fig. 4: Dense and open High rise (Stewart,Oke 2012)

(Mansur et al. 2022; Stewart et al. 2012)

Housing Situation

- More space for residents
- More space for Nature reserves
- Social cohesion
- Space for parks in the more open high rise parts

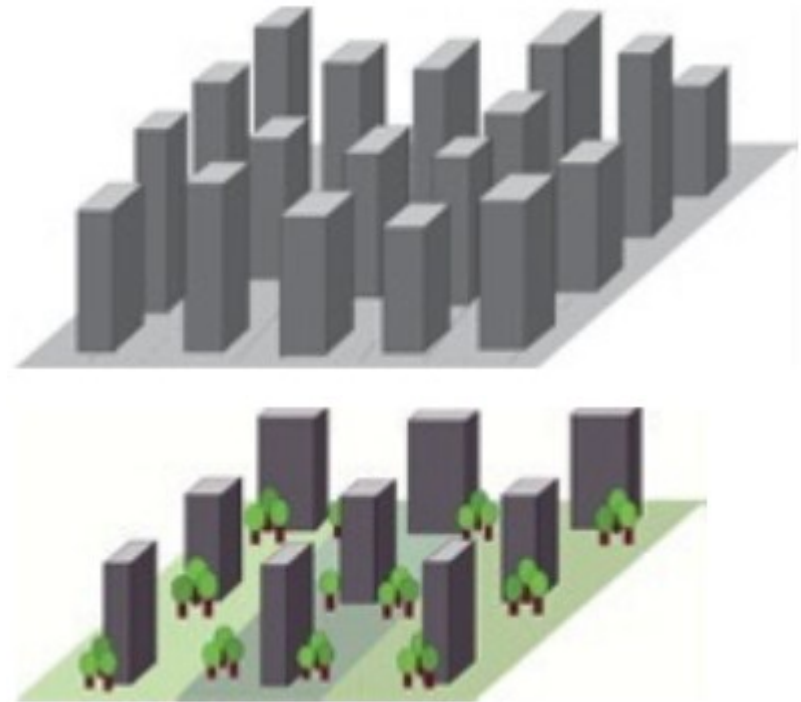
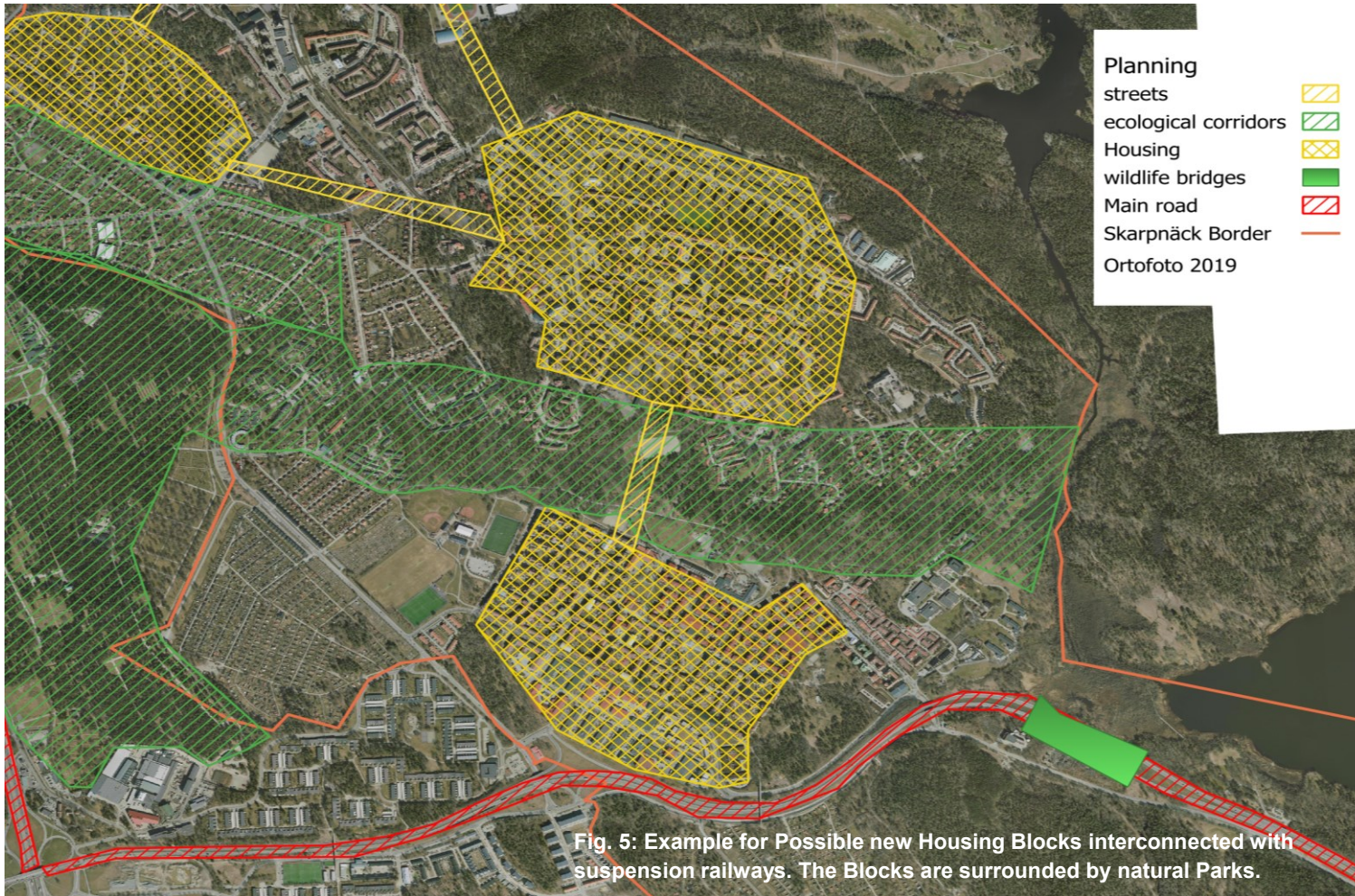


Fig. 4: Dense and open High rise (Stewart,Oke 2012)

(Mansur et al. 2022; Stewart et al. 2012)

Housing Situation



Green Houses

- Gardens on the roofs Greenery along the facade
- Mix of trees, shrubs and other plants
- Opportunity for Bee hives and other wildlife (Birds, etc.)
- Natural parks throughout the city



Fig. 6: Tours de Cedres, Lausanne (Hochpaterre.de)

Green Houses

- UHI-Effect will be reduced
- Biodiversity
- Social cohesion
- Space for parks in the more open high rise parts



Fig. 6: Tours de Cedres, Lausanne (Hochpaterre.de)

Traffic

our goals:

- decrease in private car use
- more efficient transportation
- reduction of paved traffic areas



Fig. 7: Streets in Skarpnäck. (own illustration in ArcGIS Pro)

How?

- less streets
- just a few to connect the different centers
- where roads are urgently needed, there should be wildlife bridges
- combining sidewalks, bike lanes, and public transit within green corridors.



Fig. 8: wildlife bridge in Kallhäll, Stockholm (RailUK 2017)



Fig. 9: sidewalks and public transportation integrated within green Corridors (RTM 2018)

The effect of removing particularly large roads:

- UHI:** the UHI effect can be mitigated, as less heat will be accumulated
- flood risk:** reduce flooding by allowing better water absorption into the ground.
- biodiversity:** removing large roads reconnects green areas, waterbodies, and biotopes, improving habitat connectivity.
- social cohesion:** overcome the sense of distance

(Stockholms stad (n. d.))
(Henninger & Weber 2019)
(Heinrich & Hergt 1998)

Literature

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