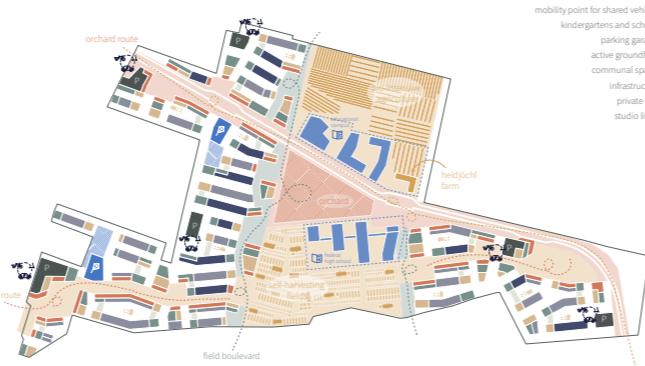
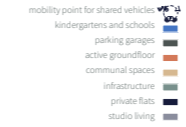


# Feldstadt am Heidjöchl

## Educational facilities and social life

Restraining urban development to the perimeter leaves a widely open field of 10 hectares with bio-intensive agriculture, self-harvesting areas, and a large orchard in the center. Raised garden beds and fruit trees also reappear throughout the network of streets and squares in the Feldstadt. The social infrastructure and learning facilities are spread throughout the district in proximity to public transport connectors. The educational campus of the city and the federal high school are located at the very heart of the district and encompass the central orchard. The fields and orchard are accessible to all inhabitants and provide both an educational and recreational environment. Members of the Heidjöchl Farm provide professional guidance to farming and are responsible for social, cultural and educational activities for inhabitants and pupils. It is associated to the city's educational campus.



## Buildings Types

In order to enable an urban development that takes climate protection through bio-based building construction into account, Feldstadt Heidjöchl defines the maximum height for each building type to the limits given by the Viennese fire protection regulations for bio-based materials. Linear Living Lines open up towards the central field, while slightly taller Community Houses provide collective spaces in direct adjacency to self-harvesting areas and fields. Four Shadow Catchers point to the site's main public spaces and lead to public transportation links.



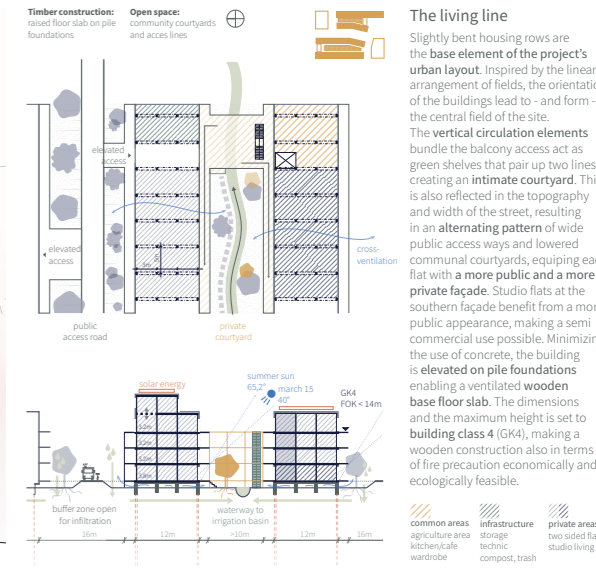
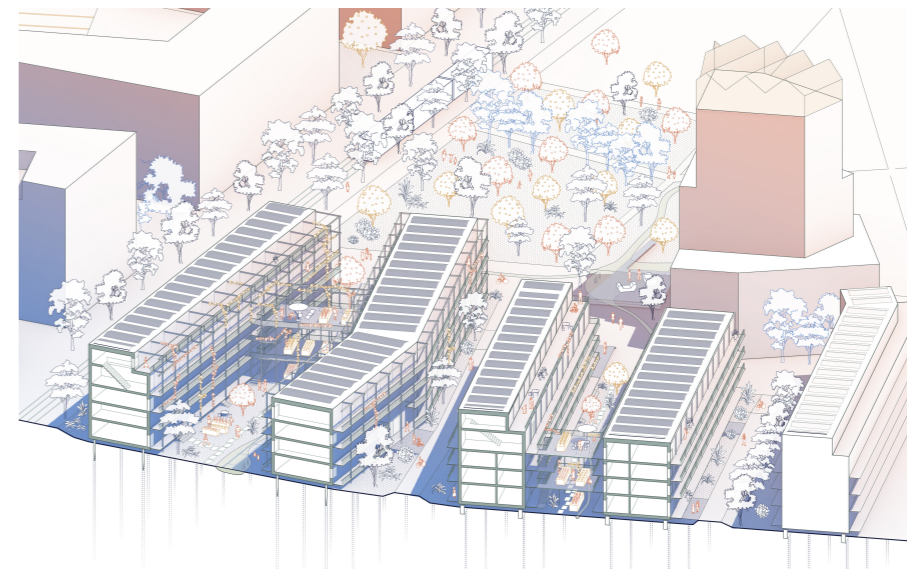
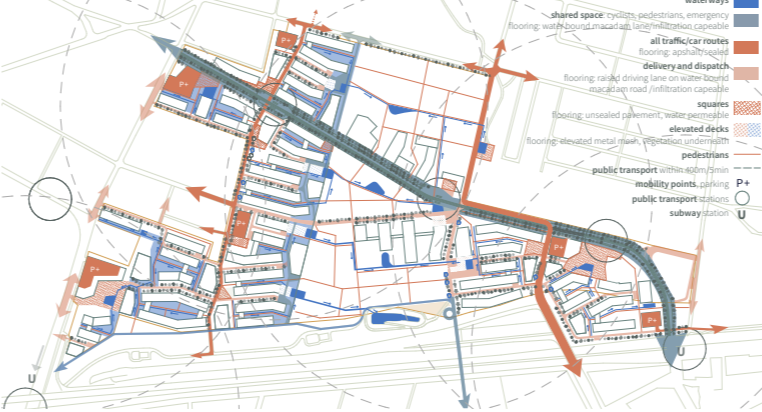
## Surface sealing and Energy Production

Three different building types correspond to a different treatment of the ground. While the Shadow Catchers have underground floors, the Community Houses are limited to a simple ground slab and the Living Lines are lifted off the ground on spot pile foundations. These pile foundations serve at the same time the geothermal probes (2200 probes) supplying the whole district with sustainable heating and cooling and thus creating an energy self-sufficient living quarter. The geothermal ring lines correspond to the proposed phasing zones and thus allow autonomous development of the individual areas. The reduction of sealed ground to an absolute minimum improves the water infiltration of the ground and cools the district through re-evaporation. PV roof area: 60.700 m<sup>2</sup> = energy harvest potential of 8700 kWp



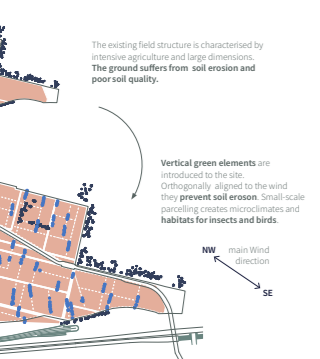
## Circulation and Soil management

The internal network prioritizes pedestrians and cyclists while only allowing punctual access for motorized vehicles. A clear hierarchy of accessibility is established between: all traffic, emergency & delivery, cyclists & pedestrians, and pedestrians only. A key goal of the project is to keep the sealed area to the minimum. Whereas only the two crossing roads are conventionally paved, other connection lines are either infiltration capable or water permeable. The alternating access pattern for the Living Line buildings allows a clear differentiation of private courtyards and access roads for delivery and emergency. These access roads are limited to an elevated drive lane with adjacent green strips open to filtration. Due to the elevation of the living lines infiltration water is gathered inside the communal courtyard, channeled and let along overflow basins for irrigation to infiltration basins in the fields. In this way, rainwater usage as well as protection from future heavy rain events is ensured.



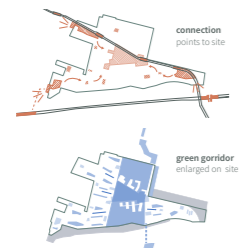
## Phase 0 Building the ground

Connecting people and agriculture is the underlying principle of the urban design proposal. Agriculture, as a central element of the development, will therefore be able to act as a point of attraction beyond the immediate surroundings and bring life to the district already before construction starts.



## Phases of Development

Continuing to build the city. The building process is phased in seven self-sufficient districts, growing from the well-connected sides to the central fields. In this way, the urban development remains flexible to the actual housing demand of the city and leaves a chance for less soil to be built upon. The contrast between the wide field and the dense district produces a differentiated urban experience with a diversity of places and microclimates.



## Climatic Urban Design

Climate adaptation considerations inform the height and orientation of buildings. Buildings are predominantly south-facing to allow for a simple shading of the summer sun and a deep insulation during winter. As the city will move to the humid subtropical climate zone by 2050, outdoor areas are increasingly in need of shade. The street widths are therefore consciously field narrow and lined with trees. Medium rise buildings as well as the Early Green tree lines in front of those alleys serve as wind barrier for cold winter winds. Tall buildings are conceived as sun- and wind catchers and placed in western adjacency to the major squares. Thereby the public space profits from the building's summer evening shade, the wind catchment of south-eastern summer winds and the blockage of westerly winter winds. The towers' stepped facade and ground floor podium alleviate the wind downdraft effect.

