



Productive E³
 Energy / Ecology / Economy
 producing socio-economic infrastructure

Storing Energy
 Pumped Storage Hydropower (PSH)
 with water based leisure activities

Producing Energy
 E³ Energy/ Ecology/ Economy Poles
 Solar panels
 Biogas
 Piezo Paths - Running tracks/ bike paths/
 BMX paths + skate park

Engaging Ecology
 Carbon Sequestration Tree Nursery (437 new trees)
 Carbon Sequestration E3 Poles
 Bird habitat in E3 Poles
 Community Gardens
 Animal Therapy

Engaging Human Scale
 Engaging the human scale through
 Mannheim's Quadratestadt
 historical city grid (approx. 65 x 200 m)

Engaging History
 Acknowledging site's history by
 tracing the American Spinelli
 Barracks' building footprints

**Existing Grounds
 + Urban Context**

Legend

- 1. Carbon Sequestration Tree Nursery + E³ Poles (White - 253; Type B; Bird Habitat Modules)
 Oak tree (129); London Plane tree (126); Chestnut trees (182)
- 2. Running Track + E³ Poles (Red - 184; Type D; Solar Modules)
- 3. BMX Track & Skate Park + E³ Poles (Pink - 149; Type D; Wind Modules Poles)
- 4. Pumped Storage Hydropower Pool+ E³ Poles (Pink - 45; Type D; Wind Modules Poles)
- 5. Community gardens + E³ Poles (Yellow - 82; Type B; Bird Habitat Modules)
- 6. Carbon Sequestration Tree Nursery + E³ Poles (Yellow - 81; Type B; Bird Habitat Modules)
- 7. Animal Therapy Zone + E³ Poles (44 - White - Type B; Bird Habitat Modules)
- 8. Cable car landing area
- 9. Tree walk + E³ Poles (included in "1" and "4")



Oak (Quercus)
 82 pounds of carbon sequestration per year
 These trees store the highest amount of carbon in both leaves and stems. The trees have an average height of 20 meters, and if you cut one down, it is possible to use its building material for flooring or roofs.



London Plane Tree (Platanus x Acerifolia)
 70 kg of carbon sequestration per year
 The trees can grow up to 18 meters tall, but they are mostly found in cities because of their tolerance for air pollution from the added benefit of being resistant to the cold and disease.



Chestnut (Castanea)
 60 pounds of carbon sequestration per year
 The Chestnut tree has a broad canopy that adds shade in addition to its carbon sequestration capabilities. These trees like to be out of the sun on heat days that will provide some shade for them.

Productive Frictions: E³ (Energy/ Ecology/ Economy)