



Plantage

‘Plantages’: this word, originally from the countryside, has been adopted to describe urban and community vegetable gardens made available to residents of several neighbourhoods in Lausanne.



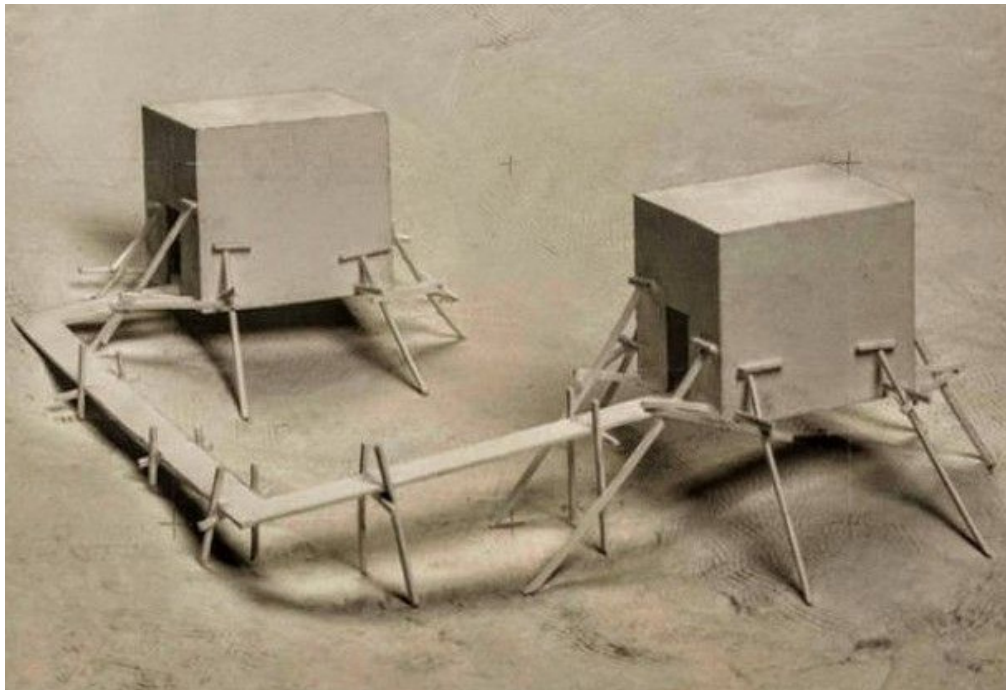
Dioxines

A highly potent poison, a chlorinated derivative produced in organic chemistry from ethylene derivatives. Ingesting dioxins, even in very small quantities, can cause health problems, including reduced fertility, birth defects and an increased risk of cancer, among others. This element is specially absorbed by cucurbit.



Soseki kiso

A Japanese stone foundation involves placing wooden pillars or posts on individual, often large, foundation stones that are set on a base of earth and smaller stones. This method, known as Soseki Kiso. The wooden pillar is shaped to fit the stone precisely, and the system also helps with drainage and prevents moisture absorption into the wood.



Greenhouse-based bioremediation

System that provides a controlled and contained environment for the biological breakdown of dioxins in contaminated soil. Inside the greenhouse, soil is placed over an impermeable layer to prevent leaching into the ground. The setup includes aeration, irrigation, and drainage systems that regulate oxygen, moisture, and temperature while the enclosure maintains stable conditions for microbial and plant activity. Within this system, anaerobic zones promote bacterial dechlorination of dioxins, and aerobic zones near the surface or around plant roots enhance further oxidation and detoxification. The greenhouse allows year-round operation, safe monitoring, and improved biological performance, making it an effective small-scale or pilot solution for soil remediation.

Allan Wexler, Breaking Ground
Series of sculptures, 2011-2014.

Tree nursery

is a specialized and managed site where young plants are grown for future transplantation. This process includes sowing seeds, caring for and maintaining the seedlings, and adapting them to outdoor weather conditions. The types and purposes of the nurseries are various, from commercial biomass production, to land rehabilitation and forest conservation, to research fields, to local capacity building and livelihood enhancement. For the nursery to be efficient, a few key factors are crucial. First of all, the substrate, in which the plant will grow, needs to be high-quality and adapted to each type of plant. A proper irrigation system needs to be installed to avoid both water stress or waterlogging. Pest and disease control is an essential implement to avoid any negative effect on the plants development. Some nurseries grow the plants in eco-friendly degradable bags in order to reduce the volume of soil needed and also to make the transplant easier, as the roots are retained in a defined space. The intact root system greatly reduces transplant shock and allows for trees to establish faster in the landscape.



Balled-and-Burlapped trees,
picture from Anthony Tieuli.



Rainwater collection

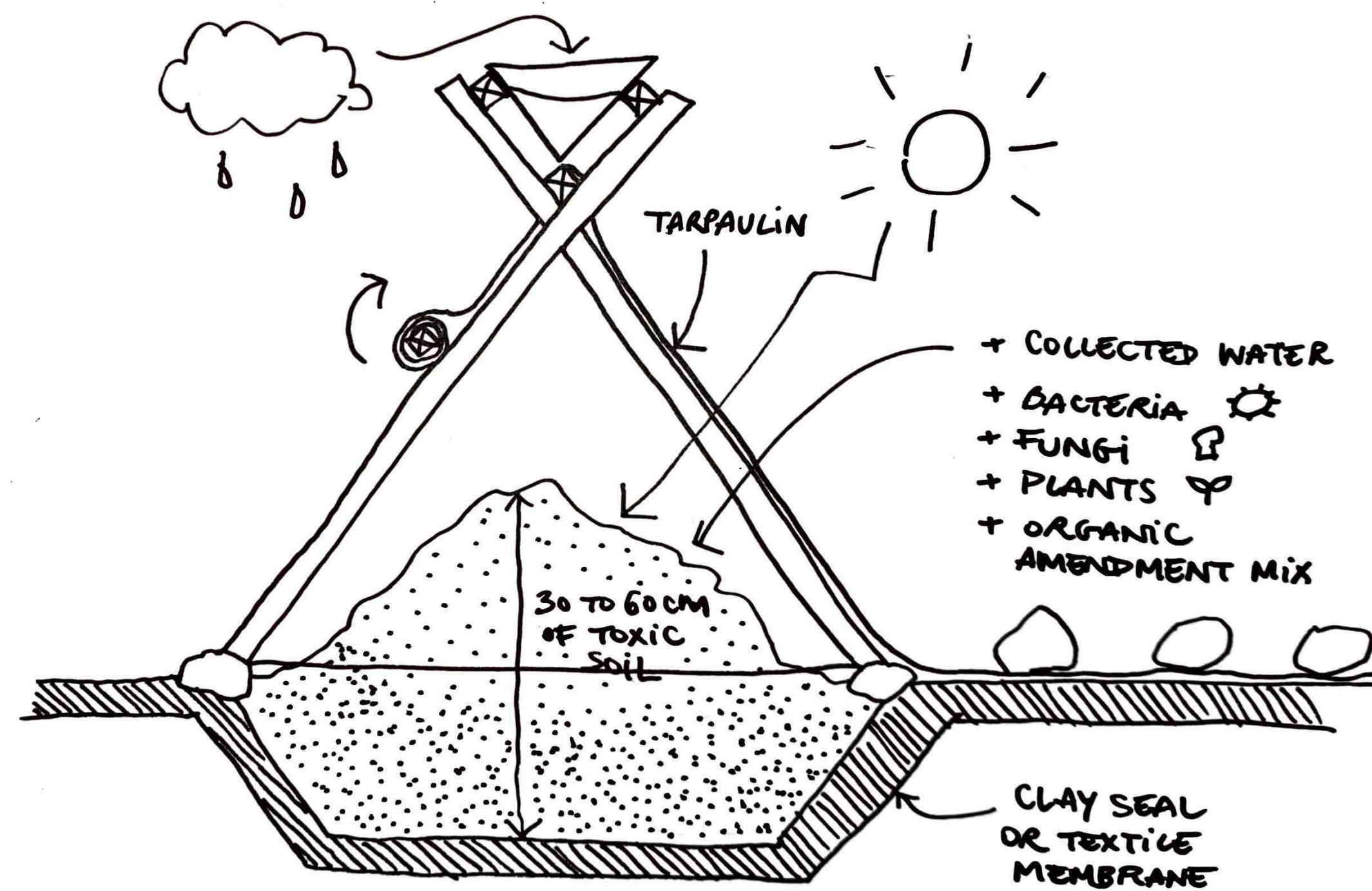
Using rainwater for plants is beneficial because it is naturally free from harsh chemicals (like chlorine/fluoride) and limescale minerals in tap water. The proposed system offer rainwater collection and distribution (using gravity) directly at the residents’ balconies, encouraging the use of their outdoor space for food production, away from the dioxins-polluted soil of the communal garden.

Retention pond

Water management strategy intended to mitigate stormwater runoff and offer a primary treatment. They usually consist of 1) a permanent pool (1.2 – 2m deep) which will remain wet throughout the year, 2) a temporary storage volume for flood attenuation and 3) a shallow area along the edge of the permanent pool to support wetland planting, providing space for aquatic biodiversity. Usually, 4) a sedimentation forebay is placed to promote pollutant removal at the inlet, but such a part is not necessary in the case of rainwater collection.

Shipping container composting

Decomposition of organic matter using various bacteria, fungi and insects in an upcycled shipping container. Equipped with a negative and positive air intake, the container creates an optimal aerobic environment for the thermophilic (> 40°C) phase of composting. A final curing phase is then needed for long-term stabilization, creating a mature and stable product known as humus.



Dominique Savio Nursery,
Wire basket culture.

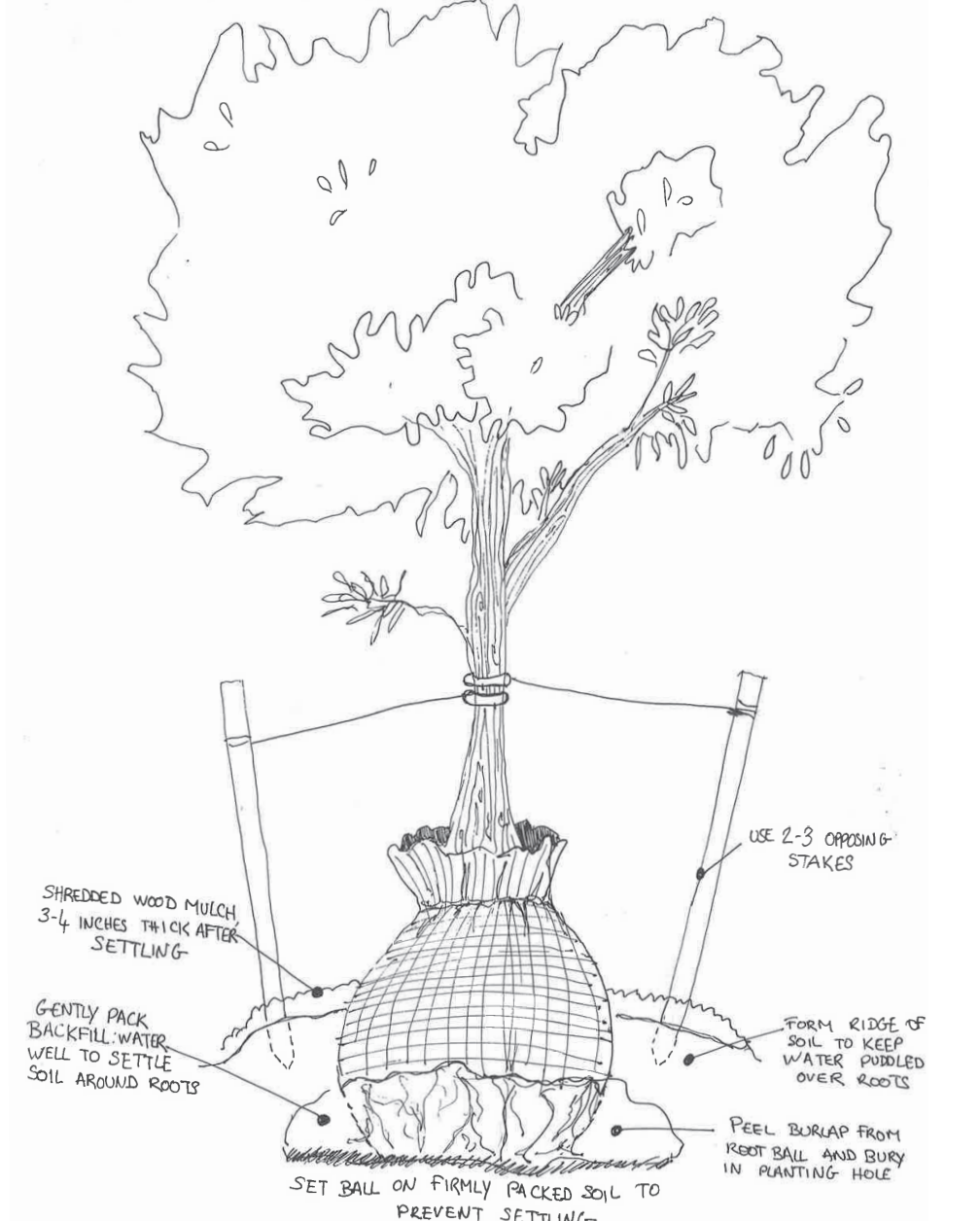


Diagram adapted from university of Minnesota
« Planting ball and burlapped trees » 2021.

