**DE-TOX**

**BROWNFIELD DECONTAMINATION, LOS ANGELES**

**HISTORY**
Taylor Yards went through a diverse history. At first a huge pigeon farm took site and established its large stables on the land. Then the Taylor Mill Company bought the land and used it for its mills and storages from where they delivered feed to the farmers around the area. After that the Southern Pacific Railways occupied the land and developed their biggest transfer site of goods in California.

**LOCATION**
The Taylor Yards are situated in the north between Mount Washington and the Elysian Hills and form an important entry door into Los Angeles. Nestled like an island in between the significant streams through the valley, in particular the river, the rail and the highway, the yard is shaped by meandering processes.

**POLLUTION**
Through all these layers of time, Taylor Yard became extremely polluted by lead and arsenic. That's why the site is still abandoned and not possible to use until nowadays. Engineers are currently investigating the toxic soil by drilling countless holes into the ground.

**CLEANING METHODS**
We propose five different methods or possible steps to clean up Taylor Yard. Removing the toxic soil, cleaning it up on site, withdrawing the poisons by plants, washing and filtering it with water or cover it completely with concrete.

**ARCHITECTURE**
We use steel sheet piles, corrugated iron and other cheap and normed materials out of farmer catalogues for our light and sustainable constructions such as shown in the section of the loading station at the bottom.

**BUILDINGS AND OUTPUT**
First needed are an expandable water purification system that uses the pectin produced by prickly pears, a pigeon farm that fertilizes the area and an operation center as well as the office and a cafeteria. After one year of farming the bioethanol plant will be added and connected to the railways, a gasoline station to use the power generated with the not yet eatable pears and mustard seeds and a butcher's.

After 20 years the harvest will be totally usable and that leads to the final stage of expansion on the factory site which now utilizes the plants completely. Taylor yards are going to produce gasoline, oil, clean water, sugar, mustard, pectin, meat and several further products during the following 50 years of cleaning up until the site opens up for further programs.

**WITHDRAWAL**
Arsenic will be taken out of the soil by prickly pears, lead will be detracted by brown mustard. These plants are buffering harmful substances in their leaves and fruits are perfectly adapted to the Californian climate. At the beginning the harvest is going to be used for bioethanol as an economical and environmental supportive solution. After 20 years, the fruits and seeds are going to be usable for plant specific benefits, such as juice and sugar out of the pears and oil and mustards out of the brown mustard.

**PERFORMANCE AND COMPATIBILITY**
We suppose to clean Taylor Yard during the next 70 years. Therefore a combination of leaving the existing concrete covers, displacing half of the soil as a removal method and withdrawing the arsenic and lead by plants will be the most efficient, economical and ecological procedure.

**CONCEPT MODELS**
We use concept models for visualizing the different methods and steps of cleaning up Taylor Yard. These models demonstrate the process of cleaning the toxic soil by plants, withdrawing the poisons by plants and the re-use of the area for different purposes.

**Beverly Hills**
Santa Monica bay
Los Angeles river

**Taylor Yard, Gated & Abandoned**

1909
1957
2021
2044
2085

**DECONTAMINATION**
A steel sheet pile wall dividing the whole length of the site will separate the upper soil contaminated by lead that will be abraded and deposited on only one side of the wall from the lower soil contaminated by arsenic. This enables much easier farming and faster cleaning during 70 years. Within this new landscape the old foundations will remain as relics of the past and form a middle level on which the necessary buildings will take place. Ramps will connect the different fields and form connections upon the most significant paths on Taylor Yard.

**CLEAN SOIL**

**Concept models**

**price water energy years**

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