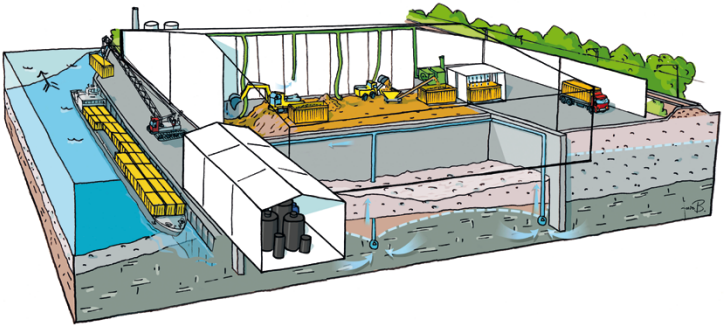


**KESSLER
GRUBE**

Remediation of the area 1/3-North-West of
the Kesslergrube landfill in Grenzach-Wyhlen
by Roche Pharma AG

Objective, Facts & Figures, Activities



1. Preparatory actions

The actions performed by Roche prior to the Kesslergrube landfill remediation included site clearance, the establishment of working/staging areas, installation of a pit enclosure, construction of a bypass road for the closed Salzländerweg and the construction of a temporary pier at the Rhine river.

2. Enclosure as a containment

The excavation area will be enclosed by an airtight, sound-insulated building in order to protect the environment against harmful emissions. This enclosure will prevent any direct contact between surface water and waste. A 1,400 m² exhaust treatment system will be used to remove contaminants from the waste air. Two temporary, multi-stage wastewater treatment plants will be installed to handle the contaminated groundwater and general site wastewater.

3. Excavations

The tent enclosure will provide a protective barrier during the excavations. The work will extend into the groundwater-bearing soil. Where necessary, the waste will be pretreated prior to its removal from the enclosure in special airtight, reinforced containers.

4. Removal from the site

The contaminated soil will be transported off-site by trucks, rail or ships in special airtight, reinforced containers.

5. Thermal treatment

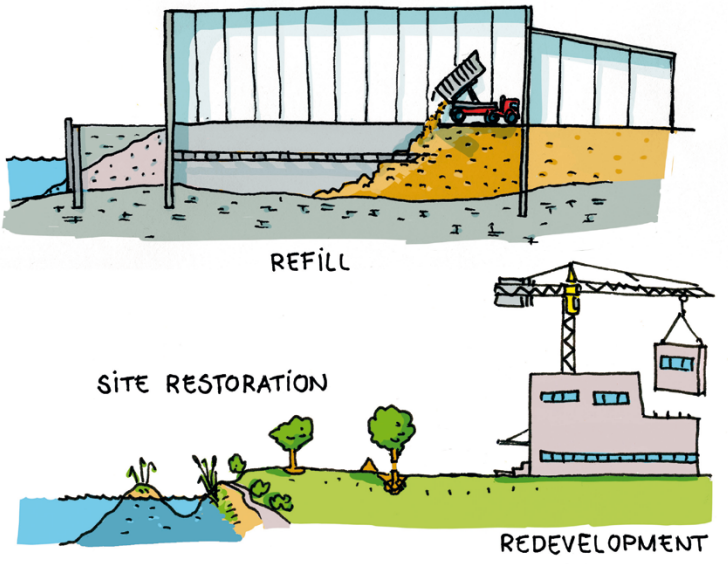
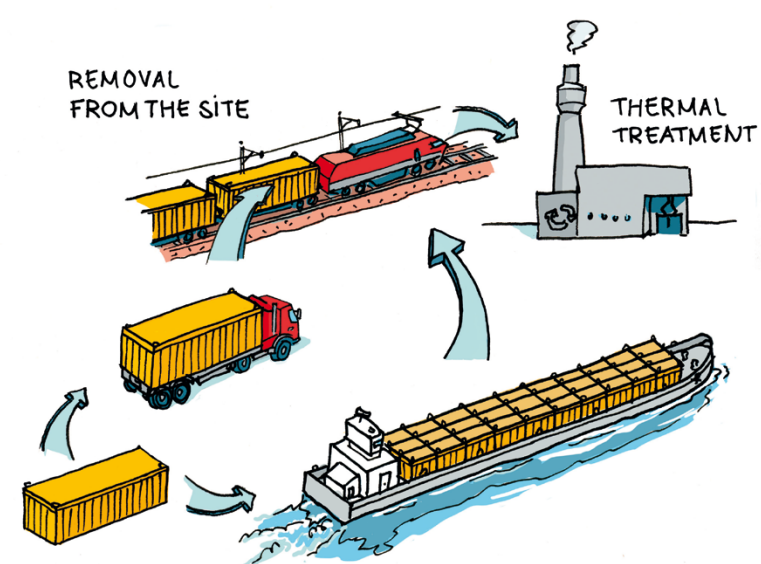
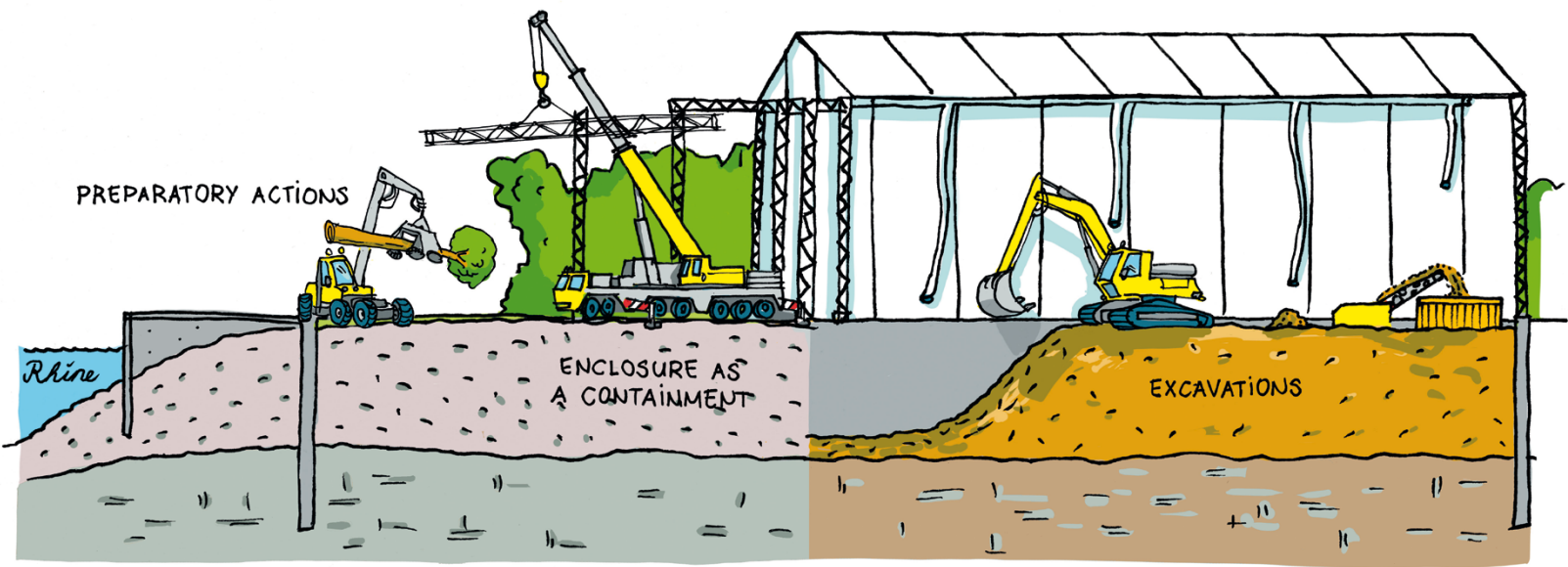
The waste will be processed at dedicated thermal soil treatment or hazardous waste incineration plants.

6. Refill

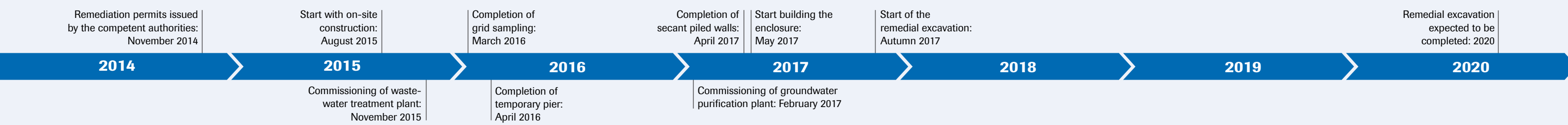
Once the excavation will be completed, area 1/3-NW will be refilled with clean gravel, soil and topsoil. The clean refill material will be delivered by trucks or ships.

7. Site restoration

The final stage of the remediation effort will include a high-profile site restoration plan for the waterfront at the Rhine river. Remedial excavation is expected to be completed in 2020.



Area 1/3-NW remediation schedule



Kesslergrube landfill

The Kesslergrube landfill includes several former gravel pits in Grenzach-Wyhlen, which were filled with domestic, construction and chemical/pharmaceutical waste until 1976.

Objectives of Area 1/3-NW remediation

Roche Pharma AG (Roche) will completely excavate the western part of the Kesslergrube landfill (Area 1 including the north-western section of Zone 3) and ensure thermal disposal of all excavated soil materials. The project is being implemented in close consultation with the municipality of Grenzach-Wyhlen and the competent authorities, Landratsamt Lörrach (district office) and Regierungspräsidium Freiburg (district administrative authority).

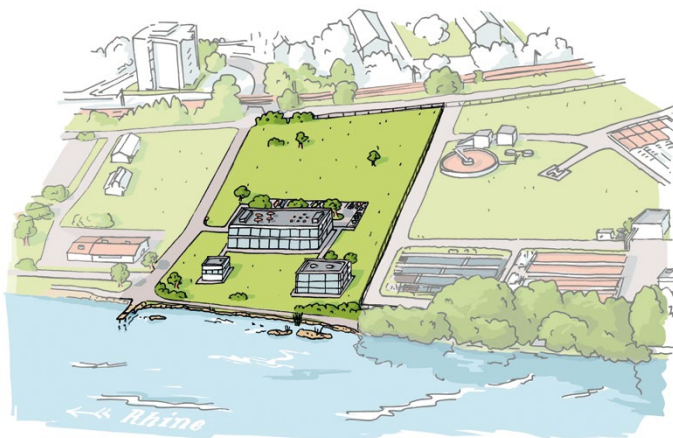
- Roche strives to eliminate as much of the existing soil and groundwater contamination as possible.
- The remediation strategy follows a sustainable, eco-efficient procedure, giving proper attention to the protection of both residents and the environment.
- The protection of residents and the environment are Roche's main concern.
- Once the clean-up has been completed, the remediated area will be ready for a commercial/industrial re-use.
- The competent authority, Lörrach Landratsamt, approved Roche's remediation project on November 14, 2014. Remedial excavation is expected to be completed in 2020.

Kesslergrube landfill facts & figures

Total area:	52,000 m²
Fill layer thickness:	up to 13.2 m (average 6 m)
Total landfill volume:	approx. 310,000 m³
Cost of the initial technical investigation:	approx. EUR 1.5 million

Area 1/3-NW facts & figures

Total affected area:	approx. 14,000 m²
Excavation volume:	approx. 180,000 m³
Spoil quantity:	approx. 315,000 t (incl. approx. 15,000 t of mixed chemical wastes)
Remediation cost estimate as at detailed planning stage (June 2015):	approx. EUR 239 million
Cost of technical investigation:	EUR 3.2 million



Commercial/industrial re-use of the site after remediation

Contact

Media relations and contact office

Phone: +49 7624 14-2700

perimeter1@kesslergrube.de

Further information:

www.kesslergrube.de/perimeter1