

Rehabilitation

Environmental barrier built using the Trenchmix® process

LÈGE CAP-FERRET

GIRONDE - FRANCE



Partial containment of the Lège Cap-Ferret engineered landfill centre by a concrete soil barrier built using the Trenchmix® process



Overall view of construction site

Having shut down the Lège Cap-Ferret waste storage centre, COBAN (the community of local authorities of the Arcachon Nord basin) went on to implement a programme for the rehabilitation of the site.

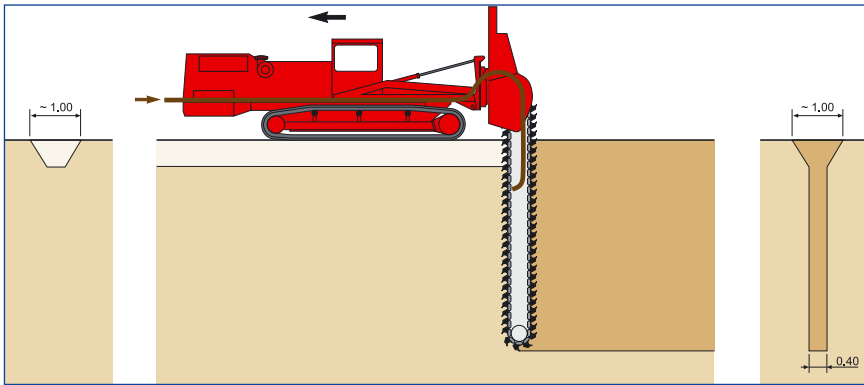
Its location at less than 1km from the Arcachon basin, meant that protection of hydraulic resources was given top priority.

The work decided upon included a 10m deep impervious

CONTRACTING AUTHORITY:	COBAN
PROJECT MANAGED BY:	SCETAURROUTE
BUILT BY:	IKOS - SOL ENVIRONMENT GROUP
DATE WORK CARRIED OUT:	MARCH - APRIL 2006 (2 MONTHS' DURATION)

QUANTITY COMPLETED:

460ml at 10m depth, equal to 4,600m²



Trenchmix® operating principle



Barrier using soil mixing built with the Trenchmix® trencher

barrier in conjunction with an installed system of pumping wells which was linked with major works involving waste re-profiling and covering the site. It was the Ikos-Sol Environment group that executed the barrier-well batch.

The building of the barrier specified at a depth of 10m involved an original variant which consisted of a proposal to build a soil concrete barrier using the Trenchmix® process instead of a traditional grout barrier.

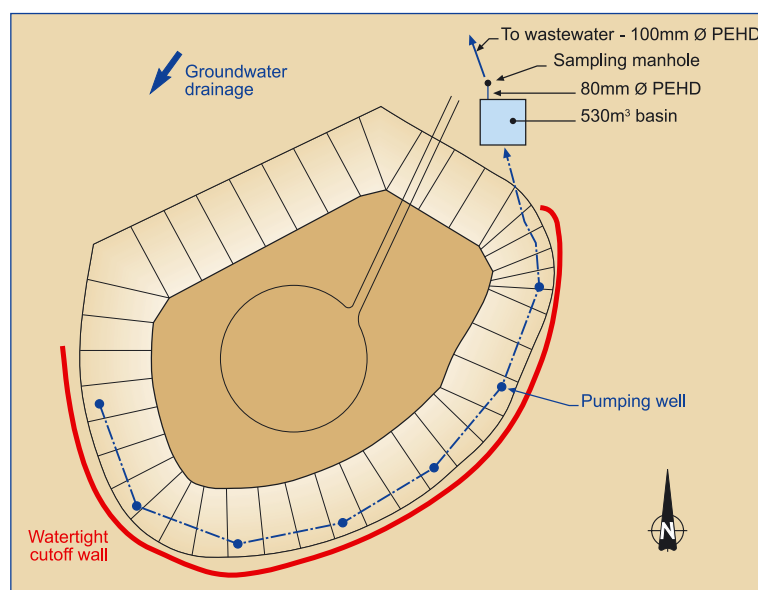
This depth of 10m is still the maximum achieved to date with Trenchmix®.

Trenchmix® technology consists of cutting out the soil and mixing this soil in situ without removing the spoil due to the design of the chain that enables the direction of rotation of the blade to be reversed.

The binder (a bentonite-cement mixture in this instance) is fed in either in dry form (the binder deposited ahead in a trench) or in wet form as was the case on this job.

The required permeability, below 10^{-8} m/s, was achieved without difficulty.

The mechanical performance of the trencher enables high outputs to be achieved in soils that have been cleared in advance of obstacles that might impede chain trenching. Moreover, this process keeps the amount of spoil down to a minimum, which is of considerable benefit in cases of soil contamination, as was the case at Lège.



Waste dome ringed by the impervious barrier and associated pumping wells