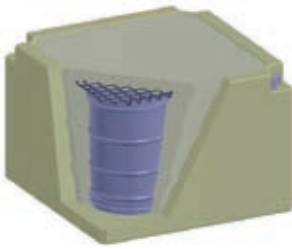


# The **concept** of surface disposal in Dessel for category A waste

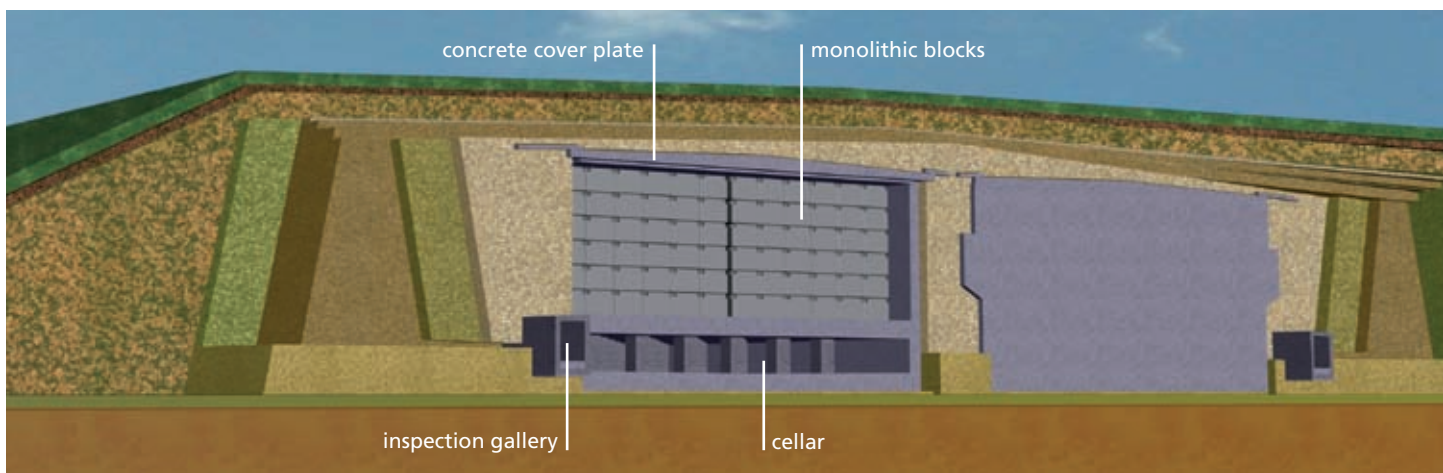
## Surface disposal

In surface disposal, the category A waste is contained and isolated in such a way that people and the environment are protected, both during the period of 200 to 300 years during which active supervision of the disposal is planned, and after this period. In contrast with temporary storage, our descendants must not need to intervene actively to guarantee safety after the closure of the disposal installation. Surface disposal is already being used in several places around the world, including in France, Spain and Japan. The category A waste will be disposed of in modules above ground in Dessel, where these modules are arranged so that they can be closed safely in the long run so that no further active intervention is necessary to guarantee safety. This is called 'surface disposal'.



## Several protective barriers

The waste is, whether or not first packed in 400 litre steel drums, placed in a concrete casing and filled up with cement mortar. The whole assembly is called a monolithic block. These monolithic blocks have two functions: to offer protection against the radioactive radiation and containment of the radioactive elements. The monolithic blocks containing the waste are placed in large concrete modules. In total, 40 disposal modules are sufficient to store all the category A waste. These disposal modules also isolate the waste from people and the environment. An accessible inspection space will be provided under the modules. In this space one can check the lower part of the modules with the naked eye and intervene if there should be any cracks or leaks. A network of pipes catches all of the water that might seep into the disposal installation. Sampling pipes are also positioned around the disposal site. Using this, the groundwater condition can be monitored.



**An integrated project** for the **surface disposal**  
in Dessel of the Belgian low and  
medium-level short-lived waste

**Together we can make it possible**

Each module is given a steel roof. This roof protects against the weather and the wind when filling the modules with waste. Future generations will decide when the roof structure will be replaced by a definitive protective covering. This protective covering consists of various materials, such as sand, clay, gravel, plants... It forms a kind of impermeable cover that must prevent rain water coming into contact with the concrete modules and the radioactive waste. It is possible to remove the monolithic blocks with the waste from the disposal installation during the period of 200 to 300 years.

### **How big will the disposal site be?**

After covering, the disposal site will look like two hills 20 meters high and together approximately 160 meters by 950 meters. Effort will be made to ensure that as little space is occupied as possible.

### **Where in Dessel?**

In the south west of the municipality is a nuclear zone. An investigation was carried out to determine if the area is suitable (foundation, groundwater,...). Finally, it was decided that the site would be located in the area south of the Europalaan, close to Belgoprocess and Belgonucleaire.



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