



Case Study

Asset Protection

DNO Substation



Before



After

The Project

Containing two 33Kv transformers in separate bays, the bulk of the sub-substation was built in the 1960s, with no bunding and no oil leak protection.

Adler & Allan was called in to bring the substation up to modern standards, to capture any potential leaks and create bunds fit for purpose.

The Solution

Adler & Allan used its Flexibund solution, which combines JBAR and Adalline 400 to provide a quick and effective way to contain any future spills, as well as protecting the environment.

Existing contaminated gravel was removed and replaced with a type 1 MOT base layer aggregate and fall was created towards a newly dug sump. GRP base plates were laid around the edges of the bund and thick Icapol tanking membrane was laid on the floor and heat sealed to the TX plinth and walls.

We then fitted JBAR around the doorway into the bund and across the back wall of the bund as this was not owned by the customer. We then sprayed Adalline 400 polyurea coating to completely seal the entire bund to ensure a water tight finish, and prevent any potential hydrocarbons from the transformers entering the environment.

Compared with a concrete bund, JBAR is far quicker to install, bought onto site in sections and simply fitted into place, rather than waiting for concrete to set. It is also very lightweight, at only 5mm thick. Made from GRP (Glass Reinforced Plastic) JBAR has no conductivity and is therefore ideal for the substation environment. JBAR in combination with extremely fast setting Adalline 400, which takes just 10 seconds to be touch proof and 24 hours for full cure, presents an extremely fast solution for bund upgrades.

To further prevent pollution, Adler & Allan's Boxsep2 was installed; an above-ground separator that will ensure oil is retained and prevented from entering the environment. Despite the use of an oil discriminating pump which removes water from the bund leaving oil behind, unfortunately pumps can fail allowing harmful hydrocarbons to enter the environment – Boxsep2 will prevent this from happening.



The Outcome

Demonstrating all of Adler & Allan's asset resilience solutions for substations, this was the first job ever completed for this DNO. Works were completed in under three-weeks and the customer was extremely happy with the outcome.

