

## CASE STUDY



Adler and Allan Tiree fuel station install:  
Helping a remote island community  
transition their energy requirements



## The challenge

The Isle of Tiree is a remote island off the coast of Scotland, a four-hour ferry ride away from the mainland, with a population of 653 people.

In 2021 Adler and Allan was contracted to erect a self-service community fuel station, with all related infrastructure and drainage required to operate. It would be an unmanned re-fuelling station, the first of its kind on the island.

Previously there were two pumps managed by a couple who are retiring which would have removed any source of fuel from the island.



## The solution

Working with local contractors Adler and Allan decommissioned the existing fuel infrastructure before installing two underground tanks, two fuel pumps, an interceptor, sustainable urban drainage, parking bays, above ground fuel infrastructure, gas oil tanks, control kiosks, and a tanker delivery stand.

The old fuel tanks were used for separate functions, 1 for a heating system and 1 for train fuelling, however, they kept them half full which encouraged microbial contamination. One larger tank for heating and fuelling means the throughput is much higher, limiting the incidence of contamination, reducing the maintenance requirement.

We also built a fuel pipe under the track to create two fuelling arms to fuel up on either side of the train. This simple, yet innovative solution reduces the chance of injuries, ensuring the safety of Network Rail operators, while alleviating wear from the fuel hose being dragged on ground which can lead to costly repairs or replacements.

We installed a higher spec pump at 300l pm instead of 200l pm meaning trains are re-fuelled up 50% faster.

The existing bund was scanned to ensure it could contain the weight and 150,000l volume of the new tanks. This was found to be the case, so no work was required.

The new tanks and assets will have a lifespan of 20 years if properly maintained.



## What we did

The work required deep excavations five metres below ground level and the installation of a dewatering system to reduce the water table level and to keep water out of the excavation.

### Civil engineering

Our civil engineering teams constructed a steel cage for the fuel tank and interceptor base and installed the anchor points. They then lifted and installed the tanks and secured them down to the anchor points using straps before surrounding the tanks in concrete. Slab area levels were raised with formation work for the edgings and kerbs. They also installed bunds around all overground tanks to protect the environment.

### Fuel Infrastructure Services

Our fuel infrastructure services and hazardous electrical teams then installed and connected all fuel lines, ducting, pump frames, pumps, above ground tanks and the kiosk.

### Drainage

Our drainage experts installed drainage which runs from the tanker slab through the interceptor and exits through the soakaway.

### Environmental Consultancy

Our environmental consultancy teams replaced topsoil and seeded the landscape area before installing bee mounds at the back of the site to boost biodiversity.



## The value to the community

This project has been a lifeline for the community, allowing them to continue to access fuel on the island. The self-service nature of the fuel station will allow residents and business owners to fuel the vehicles at any time of the day or night which will allow businesses on the island to operate much more efficiently.

The project has transformed an aging infrastructure into an energy infrastructure ready for the future.