

# Kilmarnock Phase 1

**Client:** Scottish Power Energy Networks

**Location:** Kilmarnock, East Ayrshire

**Value:** £5m for 3 Phases

**Duration:** 66 weeks

## In Brief...

Barhale were engaged to provide civils work to facilitate upgrades to the existing Kilmarnock South Substation which could no longer provide sufficient capacity. The existing substation was located to the South of the town of Kilmarnock, East Ayrshire, and consisted of 400/275/132kv compounds. With Phase 1 completed, Phases 2 and 3 are due to take place towards the end of 2018 and through 2019.



Installation of foundations

## Technical Features...

Phase 1 of the works consisted of construction and installation of 360 reinforced concrete foundation bases and approximately 2000m of concrete cable trough. These foundations were for a variety of structures such as a new transformer bund and base, GIB structures, breakers, height restriction barriers and new fencing.

Barhale were also responsible for the construction of new access roads and associated kerbing, drainage from both existing buildings as well as ducting and associated chambers. The team also installed fibre optics chambers and ducting. Included in the project was the demolition of existing fencing and then the installation of 500m of new palisade fencing and 4 no. gates. Finally, the platforms were dressed with chippings.

## Benefits...

Barhale's stringent quality control ensured that there were no defects in any of the 360 bases. There was also continual interface with three other contractors on site through daily meetings to ensure effective and efficient progress.



Transformer bund and base

## Constraints...

The main constraint was that this project took place within a live substation. To mitigate risk, all work was monitored by qualified Standby Man. The risk of a live substation was furthered by significant amounts of live underground cables and other existing structures.

Due to the substation's proximity to the town of Kilmarnock, deliveries were restricted as trucks needed to go through the residential area. Dust prevention measures were also required during dry weather.

There were also a number of environmental constraints during this project. The team utilised silt netting to prevent pollution of a nearby waterway. This stream was monitored in 3 locations for both pH and ppm. Despite preventative measures such as scarecrows and electronic deterrents, oyster catchers nested on site and so work had to be carried out in consideration of these birds to ensure they remained unaffected.



New cable troughs adjacent to a transformer bund and base