

ECS to upgrade major pumping station for Environment Agency

Following an extensive review of the flood risk management strategy for the Isle of Axholme, the Environment Agency has begun implementing the recommendations of the final report. One of the major pieces of infrastructure is the pumping station at Keadby, which will be renovated and updated by ECS Engineering Services.

Originally built in 1939 and situated on the outfall of three man-made rivers in North Lincolnshire, Keadby pumping station is a strategic water control asset that delivers flood resilience to the Axholme catchment. Over the years some improvements have been made, but much of the equipment on site is now considered as being beyond its expected service life and has been identified for a major asset refurbishment.

Having operated as a main contractor for the Environment Agency for many years, ECS has recently won the contract to improve the reliability and efficiency of the pumping station and will be delivering Phase 1 of the project, which is expected to last five years.

The scope of the project includes replacement of two of the diesel engines that power the water pumps with new units that are more reliable, efficient and matched to the performance of the pumps. In addition the gearboxes, located between the engines and the water pumps, will be remanufactured with new gears to provide the correct performance ratios.

The single electric drive motor at Keadby will also be replaced with a new, more efficient model that will be controlled by a variable speed drive. This will help to reduce energy consumption and match pump performance to the prevailing conditions. The gearbox on this motor will also be replaced to ensure optimum reliability and performance as the pump that it drives is the primary water control asset used throughout the year.

Further improvements will be made to the weed clearance equipment, which will be replaced with a more reliable arrangement that has already been proven on another Environment Agency pumping station in the area. Upgrades to the electrical system, SCADA control and telemetry will also be included, providing the Environment Agency with a greatly improved flood control asset and all achieved without affecting the ability of the station to maintain local water levels.