

Lundy Island North Lighthouse Refurbishment



PROJECT SCOPE

REDS Group recently secured the contract for the Lundy North Re-Engineering (Civil Phase) 2019.

Modernisation was required to bring the historic North Lighthouse back to its original function after 28 years, and to "return the light to the lantern" from its position outside the main structure. The project involved an extensive list of different requirements including civil engineering, refurbishment and decorating tasks, all of which were carried out under extreme conditions in a difficult location and to a very tight schedule.



PROJECT CASE STUDY

PROJECT WORKS

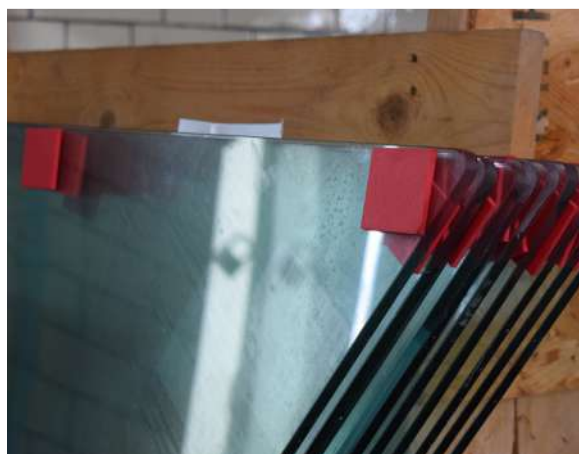
Of the 68 lighthouses that Trinity House own and maintain, Lundy North Lighthouse is considered one of the most logistically challenged. Owing to Lundy's remote location, meticulous planning was required to move tools, equipment and materials to the project location.

Every item or provision that could be needed for the three-month task, down to the very last nut and bolt, had to be planned and procured in advance, which included weighing and packaging everything to meet flight weight criteria for helicopter transfers. This also necessitated sourcing mechanical equipment that could be stripped down for adherence to weight restrictions.

Once packaged and readied, the Trinity tender THV Galatea was loaded at the Trinity House depot in Swansea. With Galatea in position in the Bristol Channel off Lundy North, helicopter flights brought the kit ashore ready for the work to begin. This involved REDS and Trinity field operations teams working within constraints to ensure the transfers had the minimum impact on the SSSI, SAC & MCZ site at the north end of the island.

With no running water, electricity or other welfare facilities at the site, generators, fuel tanks and fuel to run the project were flown in, as well as other vital provisions including over a tonne of bottled water. Although in an extreme location, the site was carefully secured to protect the area's many visitors and tourists. Once again The REDS Group environmental team were on hand to advise at every stage of the project in order to minimise impact on the island's varied wildlife and ecosystem.

Over eight tonnes of glass media was flown out to blast and remove all leaded paint surfaces, although some surfaces required a more delicate approach. These areas needed to be stripped by hand, which, along with removing all redundant fixtures and fittings, was a time-consuming task. Many historic features were exposed in the blasting work, and will now be included as finishing touches to the refurbishment.



PROJECT CASE STUDY

PROJECT WORKS CONTINUED

Civil engineering tasks included installing a new foul drainage system and drilling a lightning protection system into the solid granite foundations. The refurbishment and decorating tasks included lime plastering all walls in the former accommodation block (using over two tonnes of lime mortar) and installing new day facilities, including a flushing toilet and a wash basin, so that future maintenance teams can have modern amenities. Since there was no running water, one of the tasks was to install a UV water filtration system which was fed from rainwater harvesting tanks. Finally, the whole interior of the lighthouse was repainted to meet Trinity's exacting standards.

The repeat process of demobilising all tools and equipment also included segregating, identifying, bagging and weighing all generated waste for compliance with IATA and IMDG regulations. Everything was then loaded into special bags for helicopter transfer back to THV Galetea for rehabilitation and disposal at Swansea Docks.

PROJECT TIMEFRAMES

REDS Group were required to comply with rigorous timeframes in the fulfillment of the task.

The first two weeks involved the securing of the site, the removal of various redundant external features, the installation of lightning protection and the removal of lead paint and various redundant features from the accommodation and the engine room.

The following four weeks required work on the tower, WC and dayroom including the removal of redundant features and lead paint and the installation of new facilities.

For the remaining five weeks the team carried out work on the lantern and completed jobs on the stairs, service room, tower base, dayroom, WC and corridor, before carrying out pack-up and demobilisation via helicopter lifts and freight from Lundy South ferry port.



PROJECT CASE STUDY

PROJECT RESULT

REDS Group, on the strength of this assignment, were nominated by Trinity House for the Contractor Of The Year Award and continue to enjoy an ongoing working relationship.

Through the diligence and skill of REDS Group personnel and project management, the North Lighthouse project has been a great success and has become one of REDS' showcase operations.

The expert knowledge, superior problem-solving skills and extraordinary adaptability of the REDS Group team members provided this unique project with an in-depth understanding of what was required, allowing the work to be carried out to a high standard and to exceptionally high safety standards.

