

SKANSKA

**Restoring one of the nation's
favourite tourist attractions**



Restoring one of the nation's favourite tourist attractions



Blackpool Tower was opened to the public on 14th May 1894, so has just turned 125 years old. Inspired by the Eiffel Tower in Paris, Blackpool Tower is 518 feet (158 metres) tall. It is a world-famous, hugely popular tourist attraction, visited by around 650,000 people every year.

The tower's design is widely acknowledged as being ahead of its time. As a writer for the BBC noted: "In heavy winds the building will gently sway; what a magnificent Victorian engineering masterpiece." It is the only Grade I listed building in Blackpool.

In March 2010, it was announced that Blackpool Council had bought Blackpool Tower. In 2018, the council announced an open tender process to appoint a suitably experienced contractor to carry out external structural repairs to the tower, followed by ongoing planned maintenance.

Pendrich Height Services Ltd, part of Premier Technical Services Group PLC (PTSG), was appointed as the main contractor, after scoring highly in the tender process. Pendrich is a tall buildings specialist, with nearly half a century of experience.

The company has diversified its service offering from traditional cloth caps and steeplejack techniques into a modern, high-tech engineering company, providing height work solutions to a vast array of structures.

Based in Edinburgh but operating all over the UK, Pendrich has become a critical part of PTSG's Building Access Specialist Ltd. division since its acquisition by the Group in 2015. On this project at Blackpool Tower, the team has formed a close working relationship with Merlin, which operates the tower on behalf of the council.

Initial contract

The contract between PTSG Building Access Specialists Ltd (Pendrich) and Blackpool Council is in two parts: Phase I was to perform vital structural repairs over a period of three months, beginning in January 2019 with completion at the end of March.

Restoring one of the nation's favourite tourist attractions

There were two main elements to the repair work. The first was the replacement and renewal of structural steelwork at the base of the tower. This involved closing the tower to for periods of time to the visiting public.

There were two main considerations that PTSG had to keep in mind at all times:

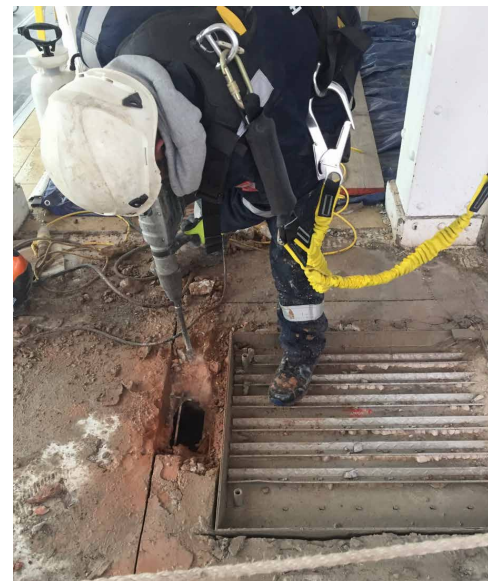
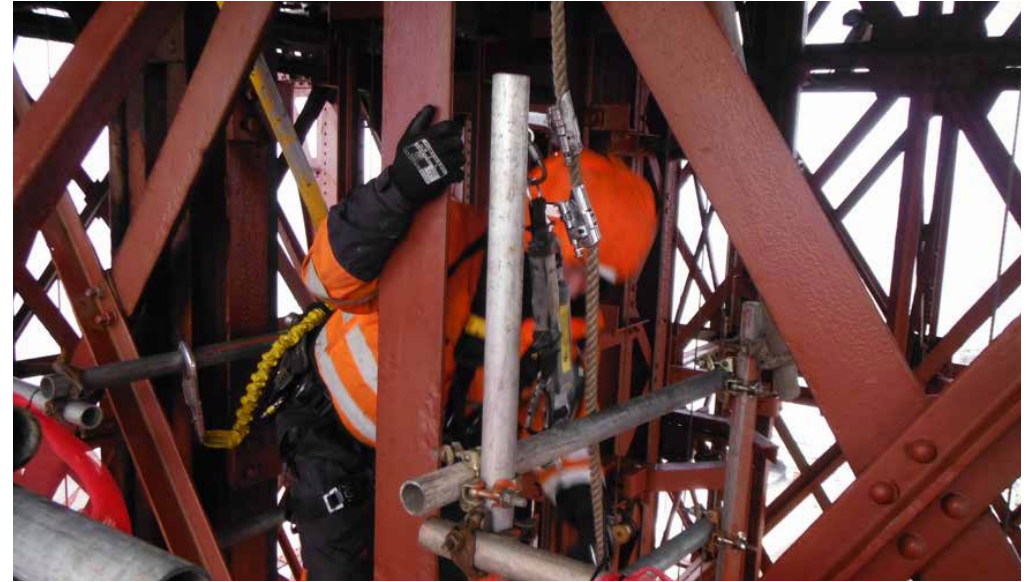
1. All work was safety-critical due to the age of the tower.
2. As Blackpool Tower is a Grade I listed building, all work performed had to be approved by the heritage committee prior to being undertaken. Any parts of the structure that were renewed had to be replaced with like-for-like materials.

This was the first time some of the tower's steel had been renewed or replaced, and crucial sections had corroded over its 125-year life span. During the three-month package of repairs, PTSG's team towards the end of Phase I was on site 24 hours a day for a full week to ensure crucial deadlines were being met with and that the works were carried out un-interrupted due to the significance of the work to the overall structural integrity of the tower. PTSG is acting as the main contractor under the CDM Regulations.

The second major part of the Phase I was the replacement of a concrete floor at 380 feet up the tower. PTSG's engineers first demolished and removed the existing concrete floor before installing new steel supports and finally laying the new section of concrete. This element of works was highly safety-critical as the lifts were out of commission due to the works carried out in the lift pit area by PTSG. This meant that the team had to install a temporary cradle system to transport men and material to the 380-foot deck level. This put a strain on the overall time required to complete the job; however, PTSG injected extra man power to ensure that the deadline for the project completion was not compromised.

Maintenance contract

Phase II of the contract between PTSG Building Access Specialists Ltd (Pendrich) and Blackpool Council is to provide ongoing maintenance work for up to four years, with the contract being renewed after each one-year period.



‘This was the first time some of the tower's steel had been renewed or replaced, and crucial sections had corroded over its 125-year life span’

Restoring one of the nation's favourite tourist attractions



Phase II of the contract has dovetailed with the first, with engineers already beginning the most urgent maintenance work. PTSG Building Access Specialists Ltd. has drawn up a schedule of maintenance work for 2019.

The Phase II of the project will involve:

- Replacement of an open staircase that will in the future be used for the customer experience, if individuals want to walk along the parameters of the towers on to the staircase while being latched on safely. The existing staircase does not comply with regulations and is not in a condition to be used by customers.
- Replacement of access ladders that are only used for emergency escape purposes or by the maintenance crew whilst working on the tower. The current ladders will be replaced like-for-like by PTSG upon further instructions from Blackpool Council.

All the above works are planned for 2019. Looking ahead, PTSG's engineers will be working to replace part of one of the tower's two lift shafts in 2020. The tower's two lifts go to a floor 17m above ground. From there, the lifts carry passengers to an observation platform 146m up. The lifts were originally designed to be operated by gas engines, each with two cylinders. The engines have since been replaced by electric motors.

The Council, Merlin and ARUP have shown great confidence in PTSG's management and engineers alike

PTSG Building Access Specialists (Pendrich) and The Blackpool Council have in a very short period of time built a strong partnership where constant communication is ongoing with regard to the programme of works and priorities of repairs to be carried out. The Council, Merlin and ARUP have shown great confidence in PTSG's management and engineers alike and put their trust into future maintenance works.

PTSG is set to be a constant presence in Blackpool over the next four years, carrying out specialist maintenance and repair work to ensure this historic Grade I listed structure remains in first class operational order for the public to enjoy for years to come.