



CASE STUDY

La Corbiere Lighthouse Project is a Huge Success



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Project Overview



Application
Lighthouse Upgrade Project



Product
SL-LED-324 Light source



Location
La Corbiere, Channel Islands



Date
2019



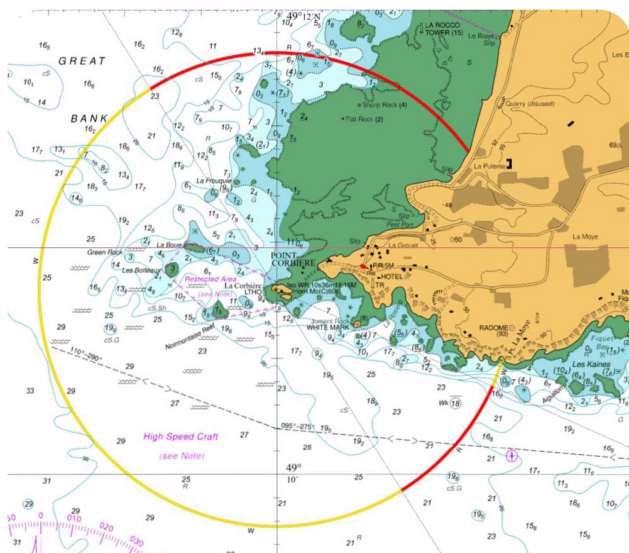
Background

La Corbiere Lighthouse is set on a tidal island out to sea, on the extreme south-western point of Jersey in St Brelade, Channel Islands. It was built in 1873, to aid in the safety of mariners after many ships came to grief on the treacherous coastline.

The original lamp installed at La Corbiere was a 3-wick burner. For over 100 years lighthouse keepers manned the tower to light the paraffin lamp and signal ship movements - first by flag, then Morse Code, then by radio and finally by telephone. The lighthouse was automated in 1974.

La Corbiere lighthouse is quite unique in that it is only accessible at low tide by a 300 metre causeway. The lighthouse is unmanned and rarely open to the public, but it is still one of the islands most popular and celebrated attractions. The area is picturesque and a delight for visitors that are drawn to the iconic structure of the lighthouse and the sandy beaches at low tide.

As high tide approaches a warning siren is sounded alerting visitors that it is time to return. The journey back to shore takes around 10 minutes.



Challenge

The outer structure of La Corbiere lighthouse has received regular maintenance, however the internal lantern room was in desperate need of an upgrade.

An on-site visit undertaken by the Sealite UK team in 2019 identified a number of issues. Formal recommendations were made to the Ports of Jersey who are responsible for the management and maintenance of the lighthouse. The concerns related to the condition of the 2nd order drum lens and inconsistency in colour and material of the red sectors. The mercury bath used to operate the current system was also an immediate safety concern.

The added challenge for this site was access to the lighthouse only during low tide meaning that timing was of critical importance. The lighthouse was subsequently closed to any further visitors until the scheduled work could be completed.

Solution

The recommendation made by Sealite included our scope of work and more general suggestions for the site. The Ports of Jersey accepted the full recommendations and following further site visits, the upgrade project commenced in October 2019. Alongside Sealite, specialised contractors were also commissioned to undertake the removal of hazardous mercury and asbestos that posed a health risk.

The SL-LED-324 light source and Universal Controller were selected for the lighthouse upgrade. Manufactured in our purpose built facility in Melbourne, Australia the Sealite team was able to supply, install and commission the most power efficient LED light source available on the market. The Ports of Jersey also chose to monitor the critical AtoN using GSM communications. This helps to ensure that any operational issues at the site can be identified and addressed swiftly by the managing port authority.

The lighthouse upgrade was carried out directly by our team of experts based in the United Kingdom, supported by the product team based in Australia.



The first task was to remove the original lamp from within the original lens. The new SL-LED light source was then fitted along with the Universal Light Controller. The project also included the supply and fitment of the six sector panels that were then aligned to the charted bearing lines and light sectors. Sealite personnel were on-site to observe the dismantling of the optic shutters and to provide guidance to specialised contractors on the mercury removal process.

The SL-LED-324 contains 36 energy efficient LEDs and is capable of exceeding 26NM, depending on the design of the existing optic lens. The site at La Corbiere required a range of 18NM and was successfully achieved using only 120W. The new light source operates at significantly less power and replaces the original lamp that was using a staggering 1000W!

Lighthouse authorities now have the option to upgrade their light whilst retaining the original optic lens. By doing this, the historical significance of the lighthouse remains and will continue to be a beautiful landmark for many years to come.

The replacement of older high maintenance lamps with an LED alternative provides greater efficiency and much whiter and brighter results. The maintenance intervals are also significantly reduced and offers a life span of around ten years. This compares to traditional lamps that require frequent maintenance and only last around twelve months.

La Corbiere lighthouse is identified as a category 1 asset, given its location on landfall. It was imperative that the Aids to Navigation was able to meet IALA's stringent availability guidelines of 99.98%. The redundancy feature built into the Sealite light source ensures that the light will never go out.



Outcome

Sealite was able to deliver this project within the required time frames for the Ports of Jersey. Their requirements were to modernise the lighthouse at La Corbiere by improving reliability, reducing power consumption and ensuring the site was safe for maintenance staff and visitors.



"We were impressed with Sealite's solution which provided a modern, reliable and efficient light source whilst remaining sympathetic to the lighthouse's heritage and significance as a local landmark, but most importantly to improve upon reliability and to continue its vital role in aiding the safety of navigation in Jersey's waters, as it has done for nearly 130 years."

Aaron Gavey MIMarEST

Head of Operations
Jersey Harbours

La Corbiere today has been restored to its former glory using Sealite's SL-LED-324 light source much to the joy of the port authorities, mariners and the wider public.

Sealite can also commission our SL-300 single and two tier long-range marine lanterns into lighthouse applications where the original lens cannot be retained.

For further information about this light source solution, visit the [product page](#) on our website.





All Sealite products are manufactured to exacting standards under strict quality control procedures. Sealite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader. By choosing Sealite you can rest assured you have chosen the very best.

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- ✓ ISO9001:2015
- ✓ Product Innovation
- ✓ Rapid Turnaround

SL_CASE_LA CORBIERE_A4_EN_V1

11 Industrial Drive
Somerville VIC 3912
AUSTRALIA
t +61(0)3 5977 6128
f +61(0)3 5977 6124

11 Pinbush Road
Lowestoft, Suffolk NR33 7NL
UNITED KINGDOM
t +44 (0) 1502 588 026
f +44 (0) 1502 588 047

61 Business Park Drive
Tilton, New Hampshire 03276
USA
t +1 (603) 737 1311
f +1 (603) 737 1320

8 Wilkie Road
#03-01, Wilkie Edge
SINGAPORE 22809
t +65 (0) 6829 2243
f +65 (0) 6829 2253

www.sealite.com
info@sealite.com

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