



CASE STUDY

Navigation Safety Increased with New Aids to Navigation

Anguilla (British Overseas Territory), Eastern Caribbean Sea



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Project Overview



Application

Increase Navigation Safety at Main Ports



Product

- 1500mm Buoys (SL-B1500)
- 2-3NM Solar LED Marine Lanterns (SL-60) in Red and Green with GPS Synchronization



Location

Anguilla (British Overseas Territory), West Indies in the Caribbean Sea



Date

2020



Lightweight Sealite Buoys are easy to deploy and retrieve.

Background

The island tourist destination of Anguilla is located in the Eastern Caribbean. It is the most northerly of the leeward islands. The flat, sandy island is only 35 square miles and 3.5 mi (5 km) at its widest point. It is renowned for its beautiful beaches, crystal-blue water, and tropical weather. Anguilla's highest point is only 210 ft (64 m) above sea level. It has a population of approximately 15,000 inhabitants. The main island is surrounded by several small, uninhabited islets. Tourism is one of the main contributors to the island's economy.

North Atlantic hurricanes plague the Caribbean from June to November. These tropical storms deliver high winds, large waves, and storm surges. The resulting damage can have crippling effects on the island's economy. The tourism industry can be heavily impacted when a hurricane makes landfall on Anguilla. This is because tourist arrivals are negatively impacted before, during, and after the storm.

Challenge

Anguilla's hurricane and tropical storm casualties include aids to navigation (AtoNs). Over many years, floating AtoNs, including buoys and marine lanterns, have been lost. Other AtoNs detached from their moorings then floated away.

The risk was that some channels and port approaches were unmarked, posing a maritime safety risk to fishing and recreational vessels, cruise ships and their passengers, and most importantly, supply and cargo ships delivering food, water, and other essential supplies.

The Anguilla Maritime Administration is committed to maintaining rigorous levels of maritime safety for local and international vessels that call at its ports and harbours. Maintaining maritime safety is also required to ensure important economic drivers for the local economy are protected.



The SL-60 Solar LED Marine Lantern has a range of 2-3NM, a service life of 12+ years, and optional GPS sync.

Solution

The UK Government [through the Foreign & Commonwealth Office and the Maritime and Coastguard Agency administered funds through the Conflict, Stability and Security Programme] assisted the Ministry of Infrastructure, Communications, Utilities, Housing, and Tourism with the purchase and installation of new AtoNs at Road Bay, an active port for hundreds of fishing, pleasure, and cargo vessels.

Sealite worked with the Anguilla Maritime Administration to identify the best AtoN combination for Road Bay. Sealite's SL-B1500 Buoys combined with Sealite's SL-60 2-3 NM Solar LED Marine Lanterns were deployed to provide visual demarcation of Road Bay's main channel. Smaller pleasure and fishing boats can now identify the channel exclusion zone so large cargo vessels can approach without collision risk.

High traffic areas like Road Bay benefit from the stability of the SL-B1500's large float section. The rotational molding process used to produce all Sealite buoys ensures a uniform wall thickness for excellent strength and durability. UV stabilized polyethylene, with added IALA-compliant color, helps keep buoy color robust throughout its service life, even in areas with strong UV profiles like the Caribbean. Closed-cell polyurethane foam deters water ingress if the buoy is punctured from vessel impact. Internal, stainless steel bracing connects the SL-B1500's topside lifting ring and mooring eye for exceptional lifting strength on deployment or retrieval. Options include IALA compliant top marks, theft deterrent lantern cages, radar reflector, internal access hatch, and solar power supplies.

The SL-B1500 Buoys installed at Road Bay have unique detachment mechanisms at their mooring points. This will allow the Anguilla Maritime Administration to retrieve the buoys when major storms are forecasted, protecting their navigation assets.

SL-60 Solar Marine Lanterns were installed on the SL-B1500 Buoys. Their 2-3NM range ensures the buoys are visible at night and in foul weather. The lanterns are designed to be maintenance-free by utilizing energy-efficient, LED technology. LED life expectancy is 100,000+ hours. The SL-60s utilize a high grade, NiMH battery which is easily user-replaced.

GPS Synchronization was added to the SL-60 Marine Lanterns, allowing all lanterns to flash in unison. Unified flashing increases visibility for the Road Bay channel, enhancing safety for all vessels. With an expected life expectancy of 12 years, the SL-60 provides a low cost of ownership and excellent marine lantern value.

Outcome

The new Sealite AtoN solution has successfully enhanced the safety of navigation at Road Bay. The Anguilla Maritime Administration will soon be installing an identical marking solution at Blowing Point, a passenger port. Blowing Point offers daytime ferry service to the neighboring island of French Sint Maarten and Dutch Saint Maarten. Coral reefs border the channel, limiting ferries and tourist travel to daytime, fair-weather operation only.

The new AtoNs at both of ports will easily be retrieved and redeployed before and after hurricanes. Vessels will be able to safely navigate after major storms, delivering important supplies to residents and visitors. The new AtoNs at Road Bay and future installation at Blowing Point will help increase maritime safety at two of Anguilla's busy ports, adding value to the island's important maritime and tourism industries.



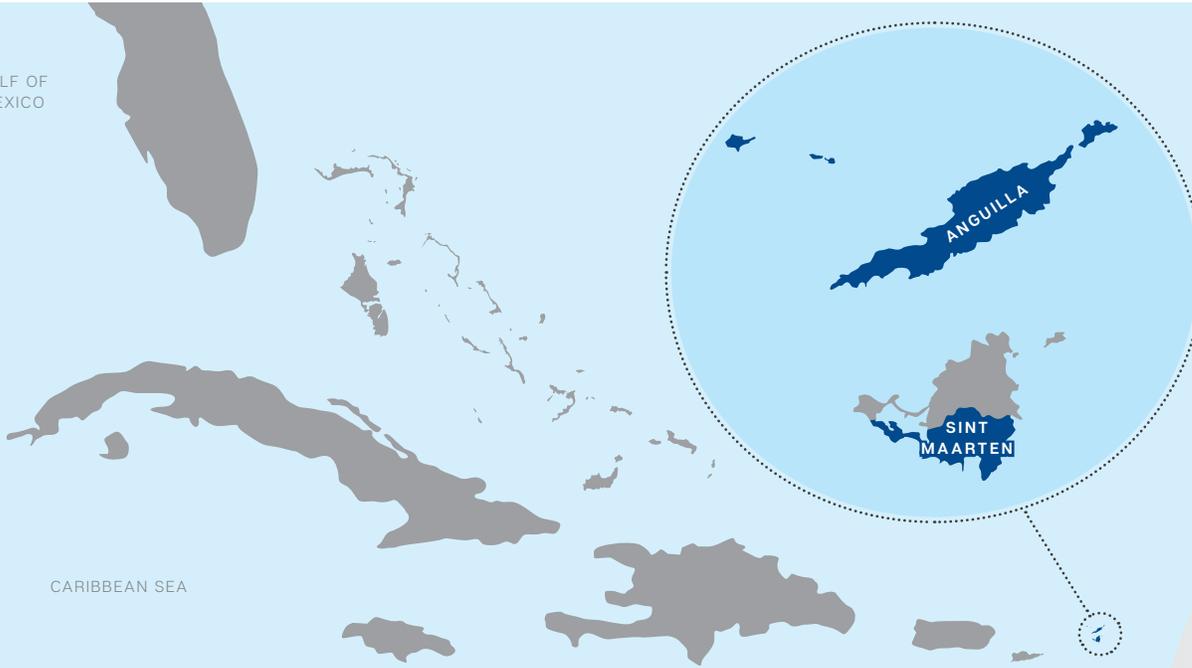
UV stabilized polyethylene used to manufacture Sealite's SL-B1500 Buoy will keep the color vibrant for optimal channel identification.

“Sealite Aids to Navigation delivered the maximum benefit and value for our AtoN requirements. Sealite assisted us with developing a suitable layout for our port navigation requirements and went above and beyond to meet our deadlines. We look forward to working with them for Anguilla’s future marking requirements.”

–Kendell Richardson
Quality Assurance and Compliance Manager
Ministry of Infrastructure, Communications, Utilities and Tourism



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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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