

Fair Isle North Lighthouse

Light Established

1892

Engineer

David A & Charles Stevenson

Position

Latitude 59° 33.2'N

Longitude 01° 36.5'W

Character

Flashing (2) White every 30 Secs

Elevation

80 metres

Candlepower

204,000

Nominal Range

22 miles

Structure

White tower 14 metres high. There are 37 steps to the top of tower.

Fog Horn

Horn (3) every 45 seconds

History

Fair Isle North Lighthouse is on a rocky promontory with the light 47 feet above ground level and 262 feet above spring tides. In the engine room were three Kelvin-Diesels, each of 88 bhp driving at 750 rpm, which supplied the Sentinel air compressors for the fog signals. Two sets were run, and the third was on standby. Each was thoroughly overhauled, one in turn per year. Also in the engine room was a 3½ kw Lister set which provided light to the keepers' houses. There was also a Turner and Stuart plant for charging the starting batteries of the K-D sets. The lens was a simple glass of four sections with two bulls eyes in each section. The character of the light was two flashes going out to sea in quick succession followed by a 30 second pause.

The original light was a paraffin lamp where the vaporiser was heated for ten minutes by a methylated torch, after which the valves on air and paraffin cylinders were opened. Air forces the paraffin to the lamp where it was vaporised. The paraffin cylinder was refilled by hand pump which used to bring

the air in its cylinder to the 3 gallon cylinder. The lamp was a 55mm Autoform which was first used on 1 November 1892. The range of the light was 22 Nautical miles.

The lamp was turned by a spur gearing mechanism - one revolution every two minutes - on a table moving on rollers. Turning was effected by a weight suspended by a wire rope which unwound from a grooved drum. When the weight reached the lower limit and the keeper began to rewind it, a retaining weight took over to keep the lens turning. If the normal lower limit was inadvertently exceeded, an alarm set off bells both inside and outside the lighthouse.

A well polished plate on the wall bore the inscription.

Group Flashing, Hyper-Radiant Light, Made by Barbier, Paris
James Dove & Co., Edinburgh, Stevenson, Civil Engineer, Edinburgh, David A Stevenson, Engineers to the Board, 1892

Due to a number of considerations, such as neighbouring aids, condition of buildings, social amenities, the Keepers were withdrawn from this station and an automatic light and fog signal established. The light has a character of Flashing (2) every 30 seconds and the fog signal three blasts of 1.5 seconds duration every 45 seconds. The light has a nominal range of 22 miles and the fog signal a usual range of 2 miles.

The existing lens, clock mechanism, etc was removed and a new aluminium floor installed at the level of the bottom of the glazing. On this new floor the new optical apparatus was mounted. This consisted of a gearless revolving pedestal manufactured by Pharos Marine Ltd of Brentford. This apparatus is operated from a 12 volt d.c. supply and is capable of revolving at very close speed limits. On top of this on an inertia ring, sealed beam lamps are mounted in two arrays to give the correct character. These lamps are operated from large capacity nickel cadmium batteries.

The fog signal is of Wallace & Tiernan Ltd manufacture and its operation is controlled by a back scatter fog detector (battery operated) supplied by Pharos Marine Ltd.

The batteries for operating both the light and fog signal are charged at regular intervals by either one of two generators housed in part of the existing engine rooms.

The operation of the light, fog signal, fog detector, etc is monitored and information on the operation of all the equipments is relayed over the public telephone network to Headquarters in Edinburgh.

On 28 March 1941 the dwelling houses were machine gunned by an enemy plane. Two bombs were also dropped but landed 60 yards south east of the tower and damage was confined to broken glass. The second main attack happened on 18 April 1941 when a single enemy plane machine gunned the buildings and dropped two HE bombs one of which registered a direct hit on the buildings situated 30 feet from the back wall of the dwelling houses. The outhouses, comprising store houses and closets were completely demolished and all contents destroyed, plus 24 feet of boundary wall which was also demolished.

Roderick Macaulay, Assistant Lightkeeper, walked 3 miles from North Lighthouse, where he and his daughter had a narrow escape in the former raid, through snowdrifts and gale-force winds to lend a hand in restoring the South Light to operational order, and returned in the dark to take his own regular watch at the North Light: he received the BEM for his outstanding services.

The Light was automated in 1983.