TRINITY HOUSE PENLEE POINT Fog Station.

This article combines a record of conversations with past lighthouse keepers and their families who were stationed at Penlee with collected historical detail which record the station’s life and those who were stationed there.

RPHG is extremely grateful for the help given by John (PK) and Sheila Bell, Grace Thomas (widow of Hedley (PK) and Tony Ralph, son of William (PK) and for the assistance of Gerry Douglas-Sherwood, Archivist, Association of Lighthouse Keepers

The start of the story

No. 162.—ENGLAND, SOUTH COAST—PLYMOUTH APPROACH.

Penlee Point—Fog Horn Intended.

THE Trinity House, London, has given notice that, on 1st September, 1902, it is intended to establish a fog horn on Penlee Point, Plymouth Sound entrance, which will, during thick or foggy weather, give one blast of three and a half seconds duration every ten seconds.

Approximate position, lat. 50° 10' N., long. 4° 11' W.

Further notice will be given when this fog horn is established.

This Notice affects the following Admiralty Charts:—English Channel, Nos. 1598, 2675a; Eddystone to Portland, No. 2620; Approaches to Plymouth, No. 1267; Plymouth Sound, Nos. 1967, 30. Also, List of Lights, Part I, 1902, No. 21a; and Channel Pilot, Part I, 1900, page 108.

THE LONDON GAZETTE, MARCH 21, 1902.
So began the life of the station whose work extended over two world wars and for well over three quarters of a century until 1994 during which time, the role of the station extended to the support, maintenance and backup for both Plymouth Breakwater Lighthouse and the Eddystone lighthouse, 8 miles to the south.

The Times, Saturday, Jun 03, 1899; pg. 4
Penlee Machinery Room

Originally powered by air pressure,
(Gardner diesel compressor) then electric powered.
G.W.R. Scheme To Assist Navigation In Fog

The Times, Wednesday, Dec 18, 1929; Beam Wireless Station For Plymouth

Engine Room and Fog Signal Machinery. (1974) (Details from site visit)

Two Gardner 1L2 single-cylinder water-cooled diesel engines coupled to two Crompton generators sets of 2 ½ KW giving 100 volts. Each engine driving, by permanent drive ‘V’ belts, Reavell compressors of single-cylinder design and operating at 20 p.s.i. Electrical output controlled by a Crompton switchboard utilising knife-switches and manual rheostats.

Fog Signal

Twin reed type giving one 3 ½ second blast every ten seconds, via twin vertical resonators mounted on the engine room roof with horizontal bell-mouths facing south and southeast respectively. Sounding receivers of small capacity and operating at 10 p.s.i., the reeds being mounted direct. Two air storage receivers maintained at 20 p.s.i. Small diameter reduction valve. Single solenoid-operated actuating valve controlled by one of two T.H. pattern, electrically driven (1 r.p.m.), 3-cam code machines, operated by knife and toggle switches. Air pressure gauges mounted on south engine room wall. Two storage radiators and inside thermometer sited in engine room.
Fog Station 1984

Note: No engine exhausts or fog signal 'Bell Mouths'

VHF link to Eddystone 1974
Gardner engine,
Reavell compressor and reeds.
1974
Giant steps at Penlee to land the original 67 ton 13.5" gun in 1892
Missing in 2011 both overgrown - the paths from fog station to accommodation block, and to the searchlight installation.

From Commons Debates - 23 March 1904

Cost of Maintenance of Sirens at the Nash and Penlee Point

MR. CHARLES McARTHUR : To ask the President of the Board of Trade whether he will state the annual cost of maintaining the fog siren at the Nash and the reed horn signal at Penlee Point respectively, exclusive of wages.

(Answered by Mr. Gerald Balfour.) I am informed that the Nash fog signal was only established in December last, and the annual cost of maintenance must of course depend on the number of hours of fog experienced. This cost is estimated at about £86. **The annual expenditure on the Penlee Point fog signal for the twelve months ended 30th September last was £105.**

Note: about £6,500 in 2010 values

Personnel stationed at Penlee Fog station

ES = Entered Service; PK = Principal Keeper; AK = Assistant Keeper; SAK = Supernumerary Asst Keeper  OK = Occasional Keeper and LAK = Local Assistant Keeper
<table>
<thead>
<tr>
<th>NAME</th>
<th>RANK /DATES OF SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roach, F.</td>
<td>ES 1901, 1915</td>
</tr>
<tr>
<td>Le Gallais, Charles Henry</td>
<td>ES 1869 1902-10</td>
</tr>
<tr>
<td>Nicholas, David Glam</td>
<td>ES 1848 1906 - 1910</td>
</tr>
<tr>
<td>T.I. (Ivor) Humphreys</td>
<td>1945</td>
</tr>
<tr>
<td>N. Strevens</td>
<td>1945</td>
</tr>
<tr>
<td>Eddie Matthews</td>
<td>SAK 1950s  AK on return in 1960s - he was last keeper at the Lizard</td>
</tr>
<tr>
<td>Alec Symmonds</td>
<td>AK 1950s</td>
</tr>
<tr>
<td>(?) Benfield</td>
<td>AK 1960s</td>
</tr>
<tr>
<td>Charlie Hayward</td>
<td>PK 1960s</td>
</tr>
<tr>
<td>Stan Davies</td>
<td>PK 1960s</td>
</tr>
<tr>
<td>Bobby Punt</td>
<td>AK 1960s and 1970s</td>
</tr>
<tr>
<td>David Aldridge</td>
<td>AK 1960s</td>
</tr>
<tr>
<td>Dennis Price</td>
<td>AK 1972</td>
</tr>
<tr>
<td>Gerry Douglas-Sherwood</td>
<td>AK April 1974 to January 1975</td>
</tr>
<tr>
<td>Hedley Thomas</td>
<td>PK April 1974 to 1986</td>
</tr>
<tr>
<td>Richard Chaff</td>
<td>AK April 1974 to January 1975</td>
</tr>
<tr>
<td>Jim Losse</td>
<td>AK April 1974 to December 1974</td>
</tr>
<tr>
<td>Keith King</td>
<td>AK January 1975 - ?</td>
</tr>
<tr>
<td>Geoffrey Gould-Porter</td>
<td>OK April 1974 - ?</td>
</tr>
<tr>
<td>Ian Patterson</td>
<td>1975</td>
</tr>
<tr>
<td>Dave Price AK</td>
<td>1978</td>
</tr>
<tr>
<td>Ron Zeal</td>
<td>LAK 1980s</td>
</tr>
<tr>
<td>‘Mutton’ Jeffrey</td>
<td>LAK 1980s</td>
</tr>
<tr>
<td>‘Moby (’Dick’) Smith</td>
<td>LAK 1980s (of Bahai faith, buried sitting up in field at Rame)</td>
</tr>
<tr>
<td>Tim Benner</td>
<td>AK 1985 – 1989</td>
</tr>
<tr>
<td>A Elvers AK</td>
<td>1985</td>
</tr>
<tr>
<td>P. Hickley AK</td>
<td>1985</td>
</tr>
</tbody>
</table>
More details would be welcomed

Newspaper Cutting:

The (Singapore) Straits Times, 21 May 1929, Page 10
Image Courtesy of Peter Strevens

An explanation of the directional radio aid mentioned, follows:
Eddystone footnote: A gun was NOT the “only fog signal from the Eddystone”. The original Douglass Eddystone was fitted with two fog bells at gallery level. They were superseded by an explosive fog signal, otherwise known within the service as a ‘fog gun’. That, in turn, was eventually replaced with a Supertyfon compressed air fog signal.

Penlee Fog signal post WW2 with two AA searchlight emplacements and the larger hilltop installation visible

below is Queen Adelaide’s Grotto – an 18th century cave used as a watch house, enhanced with an arched stone building, built after Queen Adelaide’s visit, 1827.

The Queen having strong links with the Edgcumbe family thus:

Lady Emma Sophia Edgcumbe, l 1791 – 1872
daughter by 2nd marriage of Richard [Edgcumbe], 2nd Earl of Mount Edgcumbe, PC was

a Lady of the Bedchamber to Queen Adelaide 1830 – 49.

Ernest Augustus [Edgcumbe], 3rd Earl of Mount Edgcumbe 1797 – 1861 was

Vice-Chamberlain to Queen Adelaide 1831
Penlee Fog Station, accommodation block showing two Radio Direction Transmitting masts.

In the time before GPS, Radio Direction Finding (RDF) was a much used navigation tool – usually by uncertain navigators and fog bound mariners approaching a coast. A hand held or built-in radio unit was tuned to receive a specific wavelength. A group of up to six RDF stations would transmit, in turn identifying signals. The navigator would rotate his radio aerial and ascertain the direction of the weakest signal (the null) and so read from a compass the bearing (the direction of the transmitting station). It was then possible to scribe a line on the chart to confirm a position line. A second or third reading was required to give anything like an accurate position. The letters ‘PE’ and a ‘tuning signal’ were transmitted every 7 minutes from Penlee.

The concrete obelisk, lower right, formed the part of a hauling system whereby stores, materials and armaments were removed from vessels and lifted to the higher gun emplacements etc.
A Short Chronology of the present Eddystone Lighthouse

The current structure is the fifth lighthouse to be built on the site. (Winstanley, Winstanley’s rebuilt tower, Rudyerd, Smeaton and ‘Douglass.)

The fourth, ‘Smeaton’s Tower’ still stands today on Plymouth Hoe,
The fifth (Douglass) and largest, was completed in May 1882 still survives today.

(20 years prior to Penlee Fog Station build)
Electric power was introduced in 1959 increasing power to an intensity of 570,000 candela and a range of 24miles.
(Before telegraphy, Penlee would monitor Eddystone).

A helicopter landing pad was built on the top in October 1980 to enable crew relief and maintenance personnel to land and carry out inspections. (The helipad on Penlee Point allows shortest access)

In 1982 the lighthouse became fully automatic, bringing an end to 284 years of Keepers of the Eddystone Light. Prior to complete automation, control was (via the Penlee Point Signal Station by means of telemetry) (control of apparatus by radio waves).

Most recently, in August 1999, the electric light in the lantern began to be generated by solar panels. Today, the beam can be seen up to 17 miles away.

The tower is 49 metres (161 ft) high, and its white light flashes twice every 10 seconds. The light is visible to 22 nautical miles (41 km), In addition, a secondary fixed red light visible for 13miles over an arc of 17 degrees is displayed to indicate the dangerous Hand Deep shoal 3 ½ miles to the north west.

In poor visibility a fog signal gives 3 blasts every 60 seconds. (The Penlee station was responsible for ensuring these signals functioned correctly).

Nowadays, the helipad at the foot of the point is used to collect and return maintenance crews to the lighthouse. Occasionally landings on the ‘Stone’ are made by vessel.

Note: The Penlee lifeboat disaster occurred on 19 December 1981 and is often wrongly associated geographically with Penlee Point on the Rame Peninsula. Many donations arrived at the fog Station and were forwarded to the RNLI.
Retired Eddystone lighthouse keeper Harold Taylor in his memoirs:

'We also had fitted at this station a V.H.F. telephone, which was equally inefficient as at the Needles, because the authorities expected it to work over a greater distance than it was designed. Our base station was Penlee Fog Signal Station, about 11 miles away. We were ever grateful to the keepers of that station for their efforts to keeping contact with us when the equipment failed, by keeping relays depressed and supplying us with a service, when it was personal, not business.' (memories of 1962)

http://www.pasttimesproject.co.uk/lsl_browse.php?subsite=ll&story=354

A unique fishing technique? From 40 metres aloft on the lighthouse tower, fly your kite off downwind. From its tail, trail a fishing line which when the kite is steady, will remain in the water. Fresh fish for dinner? This is how off-watch keepers caught their dinner - sometimes!!!

From the newspapers 1994

Penlee Fog Station for sale to developers

A LIGHTHOUSE, a fog signal station and keepers’ houses and cottages are being sold by Trinity House, the august body that has organised navigation in British waters for more than a century. Penlee fog signal station, near Millbrook, Cornwall, offers more realistic prospects for use as a holiday hideout. Built in 1900, it consists of three flats located on cliffs overlooking south Devon, the English Channel, and the western entrance to Plymouth Sound. The only problem is that Trinity House is keeping the control room - and the fog signal. No reserve on this unique property

Monday, 5 September 1994

http://www.independent.co.uk/news/uk/lighthouse-keepers-demise
In 2010 the ‘estate agent’ recorded:

**Penlee Point** in PL10 comprises 3 homes. All of them are residential. The information provided below comes from Mouseprice.com, third-party data and the general public.

The most recent house purchase in **Penlee Point** was **The Old Signal House 2**, which sold for £405,000 on 17/03/2006. The most expensive transaction that has been recorded in **Penlee Point** is **The Old Signal House 1**. It sold for £450,000 on 14/10/2005.

There are 3 transactions that have been recorded in **Penlee Point** since the 1st of April 2000 by HM Land Registry.

Penlee Battery is now (2011) a nature reserve (home to the rare bee orchid and location of very rare dragonfly sighting). Constructed in c.1890 at the entrance to Plymouth Sound. The armaments were intended to engage ‘the enemy’ (who actually never arrived) long before they neared the channel to Plymouth and the all important naval dockyard.

The Battery itself was designed to be armed with two 6 inch BL Guns (mounted in 1892) and one 13.5 inch BL Gun. The 13.5 inch due to its size and it weighing 67 tons! was floated from Plymouth on a barge to the massive steps you see in the images above. The Barrel of the Gun was landed on the steps in 1882 where it sat for a year. It then took a week to be hauled up the hill using 40 horses and over 200 men! The Gun was finally mounted at Penlee battery in 1894 where apparently on its first firing, it cracked its foundations, to be replaced by six smaller guns then 9.2” guns (Dobinson) 1914

Renney Battery  Wembury, Devon, Built in 1905 as a twin to the Penlee battery on the Devon shore

Extensive anti aircraft installations were built during World War Two, most have been bulldozed.

Post war the army and marines used Penlee for ‘assault’ exercises (some from Pier Cellars), finally demolishing the searchlights by explosion in the early 1960s

Tony Ralph recalls mid 1960s gun practice taking place, with Bill Nicholls, father of Ivor and Ian acting as caretaker/warden at the Battery ‘remains’.

For sight of the Penlee Battery Firing Range Regulations and Bye-Laws use link on webpage: Archive/buildings

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A newspaper cutting reporting an ‘invasion’ exercise involving Penlee Battery in 1902

The Times, Thursday, Aug 07, 1902; pg. 9;
Plymouth Breakwater Lighthouse (monitored at Penlee Fog Station)

The lighthouse, on the western end, was designed by Messrs Walker and Burgess and built of the best white granite from Luxulyan in Cornwall. It was started on February 22nd 1841 and completed on November 9th 1843. Its height was 126 feet, of which 78 feet were above the top of the Breakwater. The lantern was 8 feet tall and it had 118 mirrors, making the light visible for 8 miles except during fog. It was first lit in June 1844.

Lights: 19m height a sectored white/red flash every 10 s, also a white light (2 s on, 2 s off) is shown over the entrance channel south westward from at a height of 12m. A half mile fog signal has replaced the bell.

http://www.pelangi.co.uk/gallery/Plymouth%20Breakwater/index.html

In 1879 the 32-cwt bell was removed from Start Point and transported down the coast to Plymouth where it was installed in the Breakwater Lighthouse. The bell was valued at £192 and new clockwork machinery was made at a cost of £95 with a further £90 spent on fittings. The original 7-cwt Breakwater Bell from 1845 was apparently extremely useful in fog — local pilots could navigate by it. This bell was one of the first to be modified after 1871 to produce the distinctive characteristic variations. It was removed to the Gunfleet Lighthouse when replaced by the bigger bell.

Ownership of the lighthouse on Plymouth Breakwater was passed from Trinity House to the Naval Dockyard in 1903 and the bell at the Breakwater was still in use until 1994 when it was replaced by an electric emitter. The Breakwater Light was automated many years ago and was later monitored from across the water at Penlee Fog Signal Station. Acetylene gas was used from 1920 as the illuminant. Prior to the recent modernisation the last major work on the automatic lighthouse was undertaken in the 1960s, when the bell was modified.

Note: bands on lighthouse and no Penlee Fog station, so card dates pre 1902

Lost sounds: the story of coast fog signals’ By Alan Renton

Plym
A simple form of fog detector was used to control the sounding of the fog bell. A beam of light from a projector sited on the northeast corner of the keepers’ dwelling at Penlee was constantly fired at a detector at the lighthouse. Any interruption of the beam through periods of obscurity would automatically actuate the bell.

QUEEN'S HARBOUR MASTER PLYMOUTH

NAVIGATION WARNINGS

No 40/11

PLYMNAVWARN 040/11

(PLYMOUTH BREAKWATER WESTERN HEAD FOG HORN)

1. THE PLYMOUTH BREAKWATER WESTERN HEAD FOG HORN (ALRS REF A0114) IS INOPERATIVE.
2. MARINERS ARE ADVISED ACCORDINGLY.
Lighthouse keepers at Penlee.

Penlee Fog station was considered a quiet posting, but welcome after the isolation of ‘rock’ postings. With no ‘light’ to maintain there was less work, with few steps to climb (there was still a walk between buildings) it was far less strenuous. It was a station without the isolation of say the Smalls LH, 17 miles off the Pembroke coast.

The station telephone number was MILLBROOK 460.

The station comprised two accommodation houses for the permanent keepers with a central accommodation unit for the single relief keeper posted in times of illness and holidays. Normally there were three keepers on duty in rota. A local resident was often the third hand, Ron Zeal who lived in the Square Cawsand was one such.

There were three levels of keeper, Supernumerary Assistant Keeper (SAK), Assistant Keeper (AK) and Principal Keeper (PK) (In addition, Local Assistant Keepers (LAK) were employed at Penlee). In 1961 a PK’s wage started at £4 a week.

A ‘ceremonial’ flagstaff, still in place, was used when Trinity House elders came for their annual inspection, district superintendents visited or when supply ships were in the offing. In addition a ‘red’ flag would be flown to indicate that firing practice was being carried out at HMS Cambridge, across the mouth of the Sound at Wembury and was displayed at upon a telephone request from the Duty Officer, HMS Cambridge. Because it constituted a maritime navigation warning, its display, strictly speaking, took precedence over the Trinity House ensign. A day was remembered when a formal inspection of Penlee Point FSS by a visiting committee of Elder Brethren took place just after Cambridge had phoned for the flag. Nothing was said nor remark given by the E.B.s.

On the road above the station, (Earls Drive) was the fuel store which was connected to the fog horn building. Also stored there was aviation fuel for helicopter use. Later, diesel for the ‘Stone’ would be transported in a under-slung bladder filled on the helipad, water was similarly moved. (Until 1962 Reynolds Tugs of Torpoint had completed the staff relief on the ‘Stone’ by sea. In the 1970s, Cory’s Tugs held the local boat contract for Penlee, the Breakwater and the Eddystone. The tug funnels bore a white diamond on a black band (?)

In calm conditions, the fishing vessel ‘Bosloe’ (owned by Tony Jago of Cawsand) often closed the ‘Stone’ and took orders for newspapers and groceries and was able to return the following day. Jock Garrett of Millbrook similarly obliged.

The Earl’s Drive would provide as challenging route into the local village. In the storms of the late 1980s, families were forced to stay in the local pub – the ‘Smugglers’ when trees fell and made the way home impassible. If the road were to be blocked overnight, then schoolchildren, who would daily be taxied to school, would find themselves with a surprise ‘study at home’ day. In the late 1950s the ‘rough’ track was tarmacked, There were few users - Charlie Acton drove his old orange van to deliver groceries etc and of course the red PO van being among the infrequent users of the lane.

Local schools had the three mile transport rule. Living at Penlee was less than three miles from Fourlanesend School, so Tony Ralph and others walked in the 1960s. The Ellis family children, (three boys and one girl) living at Penlee Battery found themselves over three miles from school, thus the taxi collected them daily.
In the 1950s toilets were by Elsan and late night ‘disposals’ were routine. Tilley lamps provided the light there being no water or electricity until much nearer the 1960s.

There were grounds to be maintained, path cleared, steps and railings painted. Gardner engines were to be kept running at all times prior to electrification thereafter monthly running was the order to ensure if called upon as backup - there would be no interruption to signals. These engines were originally ‘hot start’ engines which required the use of a blow torch to prepare the fuel for combustion in the piston chamber. All engines were gone by 1986.

Painting and maintenance of the fabric of the station was under contract to George Arnold of Millbrook.

As a fog station, visual watch was originally kept and before automation on-watch keepers were stationed in the fog signal building itself. The brasswork and engine were kept in ‘tip top’ condition, paraffin lights were tended with wicks and mantles replaced as required. With no TV or radio, reading became a means of passing the time between equipment and visibility checks.

The Eddystone, the Breakwater Lighthouse and the Draystone Buoy were used as visual ‘tell tales’ to prompt the start of the fog signal. If any ‘tell-tale’ became invisible, the horn was started. Latterly, a camera was used to sight the Eddystone which, if not seen was the cue to start fog signals. For a period in the 1980s an all hours light from the Breakwater Lighthouse (un-manned) was received at Penlee. When the light signal was not received, the fog signal started automatically

A typical Watch Rota revolved around a four day cycle, 3 days on, 1 day off as follows:

Day 1 4.00am - 1200 then 2000 - 2400
Day 2 1200 - 2000
Day 3 1200 - 1600
Day 4 Off

Post war shift patterns allowed for two months on duty followed by one month ashore for ‘rock’ keepers. In lighthouses, after the ‘un-social working conditions’ legislation was brought in, keepers then worked one month on, one month off – wages also increased at this time in view of the new shift-work patterns. Penlee as a shore station, entitled it’s keepers to annual leave and time off in lieu.

By a quirk of telemetry Penlee also monitored Hartland Point LH ensuring all was well there. (now all stations are controlled centrally at Harwich) with Eddystone like many stations relying on Solar Power with diesel generator backup).

In 1988 the fog signal ceased at Penlee, with Eddystone and the Plymouth Breakwater alone sounding fog signals and helping the navigator in poor visibility.
In 1992 the station closed with the full automation of the Eddystone

Mrs Smale who lived at what is now Henwood’s Cottage, was a scary sight to youngsters who ventured into the woods – especially later in the day. Renown for her ‘ghostly’ white dresses, she walked the woods and often scared and surprised youngsters playing there. Although it was never seen, it was suggested that there was a ghost at Penlee. Apparently in the times of a full complement of soldiers manning the Battery, one soldier fell over the cliffs and was rumoured to still frequent that area of the peninsula.

Hedley Thomas and wife Grace arrived at Penlee in 1970 after service in Northumberland at Longstone (of Grace Darling fame), Longships, Scillies, Whitby, and Holyhead.

John Bell, his wife, Sheila and family were posted to Penlee in 1986 and were to stay there until 1994 when he retired after 33 years service. His service certificate and medal can be seen below. He had previously been posted to Longships, Bishop Rock, The Smalls, and Trevose Head.

William Ralph was twice posted to Penlee in the 60s and in the 70s, his son Tony who helped with this articles lived at Penlee from the age of nine to nineteen and continues to live in Cawsand.

And why become a lighthouse keeper?
For the quiet, placid calmness
For the love of the sea, and the importance of the job in making the coasts safer for seafarers

John Bell retired after 33 year service

As a token of appreciation by Trinity House, specially struck medallions were awarded, in addition to certificates, to all keepers attending a special banquet at Trinity House in their honour to mark the final de-manning of all UK lighthouses.
RPHG is very grateful for the assistance of Gerry Douglas-Sherwood, Archivist, Association of Lighthouse Keepers for the supply of station information and illustrations. For further lighthouse information please contact him via:  http://www.alk.org.uk/