

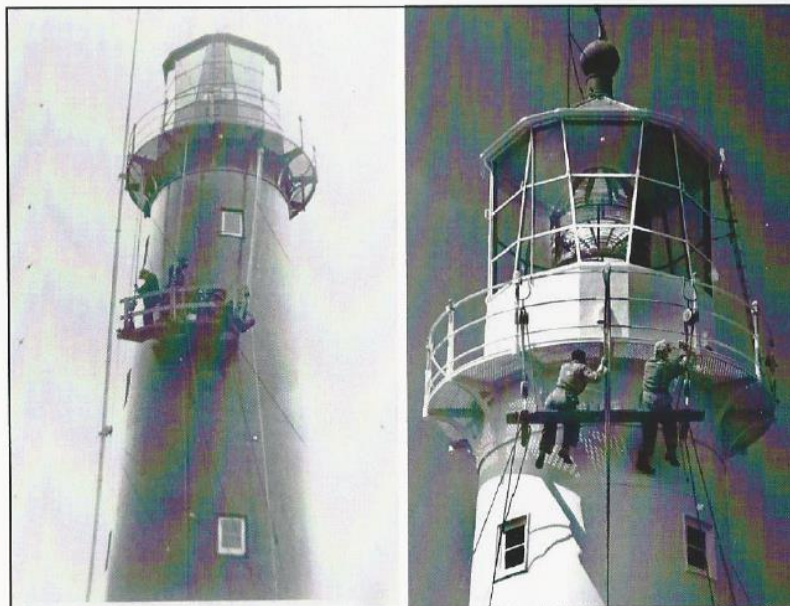


# The Tiritiri Lighthouse

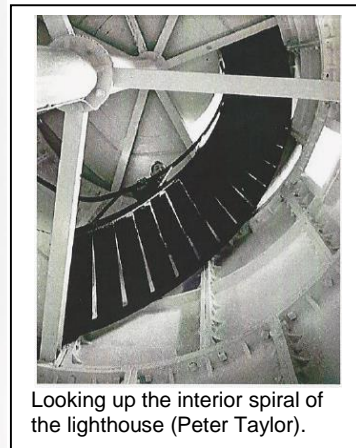
1865 – 2015



The lighthouse compound on Tiritiri Matangi Island is the best preserved and most easily accessible in New Zealand. Listed as a Category 1 historic place, it comprises the tower itself, three keeper's houses, a workshop, three foghorns and a signal tower. The Tiritiri lighthouse was the third to be built in New Zealand and is the oldest still in operation. It was first lit on 1 January, 1865, when Auckland had a population of 12,500 and steam was overtaking sail on the busy waters of the Hauraki Gulf.



RED AND WHITE: We are so used to seeing the Tiritiri lighthouse as a 'tall white tower' that it is a shock to realise the tower was dark red for over half of its life. Sadly, we have no colour photograph of the red lighthouse, but the photo-shopped image on the cover (by Geoff Beals) is our best guess at its colour. From left: The lighthouse circa 1935 being painted red (Auckland Star); the tower gets a coat of white paint from Joe Conlon and Henry Philips in 1964 (Peter Taylor).



Looking up the interior spiral of the lighthouse (Peter Taylor).

**THE TOWER:** The prefabricated cast iron tower (designed by Maclean & Stillman and manufactured by Simpson & Co) and the light (Chance Bros) came from England in the sailing ship *Queen of the Deep*. Twelve bullocks hauled the 75 tons of material up the island. Construction workers lived in the two newly-built keepers' cottages.

**The Light:** the second order dioptric light used a Fresnel lens with thick glass prisms to focus the relatively weak light from an oil lamp. It was initially fixed, not flashing as it is today, so the light shown in all directions. Within an hour of the light being lit the barque *Meteor* had sighted it from 26 miles out. The lamp initially burned canola oil but was progressively upgraded to paraffin, pressurised kerosene in 1916, an automatic acetylene lamp in the 1920s and electricity in 1955. In 1882 a red glass panel was fitted over a portion of the light beam to warn shipping to avoid Flat Rock near Kawau Island. Today the light is automated and solar powered.

### Focus Questions

- Tiritiri lighthouse is what category? \_\_\_\_\_
- How did the prefabricated tower arrive and then be transported up the Island? \_\_\_\_\_
- \_\_\_\_\_
- The year the Tiritiri light was first lit? \_\_\_\_\_
- How many were built prior to the Tiritiri lighthouse? \_\_\_\_\_
- In 1935 the colour of the lighthouse was? \_\_\_\_\_
- The first type of lens used in the Tiritiri lighthouse was? \_\_\_\_\_
- What helped focus the light beam out to a distance of 26 miles? \_\_\_\_\_
- How did the first light beam differ from what happens today? \_\_\_\_\_

## Match up the following columns

### Column A

1864  
Fresnel Lens  
Canola oil  
Today light is  
Lighthouse compound  
1935  
Twelve bullocks  
1865 population of Auckland  
Tiritiri lighthouse  
Barque *Meteor*

### Column B

first oil used for light  
hauled 75 tonnes of material  
red lighthouse  
12 500  
oldest in operation  
sighted Tiritiri light 26 miles out  
Tiritiri lighthouse built  
lighthouse, cottages, foghorns  
solar powered  
thick glass prisms

## Find the following words in the word find

ACETYLENE  
AUTOMATED  
BULLOCKS  
CANOLA  
COTTAGES  
DIOPTIC  
ELECTRICITY  
FOGHORNS  
FRESNEL  
KEROSENE  
LENS  
PARAFFIN  
PRISMS  
SHIP  
SIGNALS  
SOLAR  
TIRITIRI  
TOWER

Q	B	T	O	W	E	R	U	N	S	I	S	A	D	E
E	U	Q	E	U	O	S	M	O	H	O	U	P	Y	X
D	L	P	A	R	A	F	F	I	N	T	L	Q	E	L
L	L	E	A	H	F	Q	X	P	O	Q	U	A	H	A
E	O	S	C	P	E	H	S	M	Q	Y	V	Y	R	T
N	C	M	E	T	M	Z	A	L	O	K	F	Y	Q	U
S	K	S	T	R	R	T	I	R	I	T	I	R	I	T
E	S	I	Y	K	E	I	S	S	C	U	C	N	V	N
G	B	R	L	D	E	H	C	N	L	I	F	A	K	C
A	Q	P	E	X	I	R	N	I	R	A	L	P	B	J
T	B	J	N	P	W	R	O	T	T	O	N	H	R	H
T	R	U	E	U	F	E	P	S	N	Y	H	G	P	S
O	Q	Y	Q	V	W	O	J	A	E	E	H	G	I	R
C	X	Y	Y	Z	I	I	C	D	I	N	G	Q	O	S
W	D	B	U	D	U	M	L	E	N	S	E	R	F	F

## Study the timeline and test yourself

### Lighthouse Timeline

1841 NZ Government assumes ownership of Tiri as a lighthouse reserve  
1864 Lighthouse and two keepers' cottages built  
1865 Lighthouse first illuminated 1 January 1865, burning colza (canola) oil  
1879 Lighthouse converted to paraffin oil  
1898 'Morse House' built. Telegraphic line to Waiwera.  
1912 Signal Station built or modified for Auckland Harbour Board (AHB), two signalmen and two keepers in residence  
1912 Chief Signalman's (Principal Keeper's) house built and 'The Fourth House' brought from Grey's Ave Auckland.  
1916 Light converted to incandescent kerosene burner 22/2/1916  
1918 Present two keepers' houses built and Slaughter's Gun Cotton Fog Signal installed.  
1925 Lighthouse automated with a flashing acetylene light, 30/4/1925. Island under AHB administration – three signalmen. Keepers withdrawn  
1935 Diaphonic foghorn and radio beacon (navigational aid) installed  
1939 Royal NZ Naval Reservists arrive  
1940 Port War Signal Station (PWSS) built near lighthouse  
1941 Army Fortress Observation Post (FOP) built  
1942 PWSS building moved to centre of island  
1945 AHB returns after the War (three signalmen)  
1947 AHB closes signal station 1/7/1947. Lighthouse keepers return. Tower painted white  
1950s Workshop and engine shed built for three 10/2 Lister diesel generators  
1955 Diesel generator installed. Electricity powers the light  
1954–c1970 Fred Ladd and Bruce Packer operate Tourist Air Travel Ltd  
c1955 Principal Keeper's house demolished  
1957 Radio beacon deactivated  
1962 Lenses on lighthouse adjusted, making existing light brighter  
1963 Relieving keepers' quarters ('The Bach') built.  
1965 Davis Marine Light (11 million candlepower (cp) illuminated 12/3/1965  
1967 Underwater cable from Whangaparaoa to Hobbs Beach. Mains power  
1975 Lighthouse staff reduced to one keeper  
1984 Light automated with quartz iodine light (1.6 million cp) and electronic foghorn installed  
1984 Last keeper (Ray Walter) withdrawn  
1989 Mains power lost when cable fails for third time; light reverts to diesel generator  
1990 Lighthouse solar-powered, automated and demanned  
1991 New generator installed. Power part solar, part diesel. Light 300,000 cp  
1995 Lighthouse closed to public 4/5/1995  
1998 New wharf built  
2002 Lighthouse boosted to 1.2 million cp