



As of 1 December 2022, there are 1628 navigation aids in Estonia, of which 55 are lighthouses, 235 are beacons, 33 are daybeacons and 1305 are navigation buoys.

# VILSANDI LIGHTHOUSE

Geographical coordinates: 58° 22.9722'N; 21° 48.7634'E.

The stone tower with a lantern room and balcony lies west of Saaremaa, on the northwest tip of Vilsandi Island. The navigation aid marks the shoals near Vilsandi Island and is a landmark to ships passing the western coast of Saaremaa.

## LIGHTHOUSE HISTORY AND INFORMATION

- It is not precisely known when the first lighthouse was constructed on Vilsandi, but there is no mention of it in A. Nagajev's 1751 sailing directions' terrain descriptions. The first historical record of an operational light navigation aid can be found in G. Sarõtšev's 1812 atlas: it was on the shore of Vanapaagialuse Cove, made of wood and had a metal basket that could be lifted with a winch, where wood or coal was burnt as a light source.
- In 1809, ~170 m south of the existing light aid, a stone lighthouse made of carbonate rock with wooden mezzanines and stairs was finished and is still there to this day.** In its lantern room there was a rotating light with ten hemp oil lamps and concave mirrors at a height of 110 feet (~34 m) above sea level that was visible from 16 nautical miles away. The device made a full rotation in the course of one minute. The lighthouse also had another rotating light. It was at a height of 86 feet (~26 m) above sea level and was only visible from the side facing the sea. The horizontal black strip on level with the bottom light helped the white lighthouse be seen during the day.
- The rotating lights were not warranted and in the years **1824-1828** the lighthouse was switched over to a fixed light.
- To differ from the Sõrve and Kõpu navigation aids, a back-up lighthouse on the shore of Vanapaagialuse Cove was built in the year **1824**, and so during the years **1824-1842** ships were guided by two lighthouses simultaneously.
- By 1842** the wooden lighthouse had depreciated so much that it was demolished. The stone tower built in its stead collapsed during construction and as a consequence, six workers lost their lives and more workers were seriously injured. Later, the plans for a back-up navigation aid were abandoned.
- In 1856 the southern lighthouse height was increased by 21 feet (~4.3 m)** and the lighthouse keeper's quarters as well as the lighthouse servants' quarters/guard booth were finished.
- In 1860** a dioptric Fresnel light device with prismatic glass was brought over from Kõpu Lighthouse and installed.
- In 1870** a new lighting device was installed, the optical part of which was manufactured in the Chance Brothers & Co factory in England. The white light situated ~40 m above sea level was visible from 13 nautical miles away. The 37-metre-high tower was painted white and the dome was painted red.
- In 1874** the Vilsandi rescue shed was built.
- In 1878** the lighthouse was switched over to kerosene lighting. Aside from the lighthouse, the light station also had living quarters, a sauna and a fuel store.
- In 1883** the Vilsandi light station was connected with Kuressaare via telegraph, which in **1895** was replaced with a phone.
- In 1918** acetylene lighting was taken into use.
- In 1927** an automatic mantle carbide lantern from the Swedish company AGA, the light of which would illuminate a distance of 18 nautical miles, was installed.
- In 1935** the white 360° light was divided into multiple white and red sectors.
- In 1972** the lighthouse switched over to permanent electricity and the lighting of the lighthouse switched over to electric power. The omnidirectional lantern ЭМН-500 of Soviet Union origin was installed, which had two light sectors: 18 nautical miles of white and 8 nautical miles of red.
- In 1994-1995** the lighting device was automated and the lighthouse was connected to a remote sensing system. The light intensity of the lantern was reduced to 12 nautical miles in the white sector and to 6 nautical miles in the red section.
- In 2007-2008** the lighthouse was renovated. In the process, the lantern room was restored and a Sabik LED sector lantern with a light intensity of 5000 cd and a total consumable power of 100 W was installed.
- Since 2016** an LED precision sector lantern with a maximum light intensity of **8500 cd** (one candela (cd) is equal to the light intensity of one lit candle) and a total consumable power of 120 W developed in Estonia has been in use. The lantern was designed as a tailor-made-design for the Vilsandi Lighthouse.
- With good weather, the lighthouse is visible from **25 km away**, but visibility from farther is limited by the curvature of the Earth. **Otherwise the light would reach even farther, nearly 40 km away.**
- In 2019** a full renovation of the lighthouse took place.
- Since 2021** the lighthouse has been open to visitors.
- 160 steps lead up to the balcony of the lighthouse.
- Vilsandi Lighthouse has been declared a protected national heritage site with the register number 27241.

### Sources:

Peeter Peetsalu „Merekultuurilugu”,  
Jaan Vali „Eesti tuletornide ajalugu”.

## NAVIGATION AID FACTS

Navigation aid number: 925

Surface elevation above sea level: 6.5 m

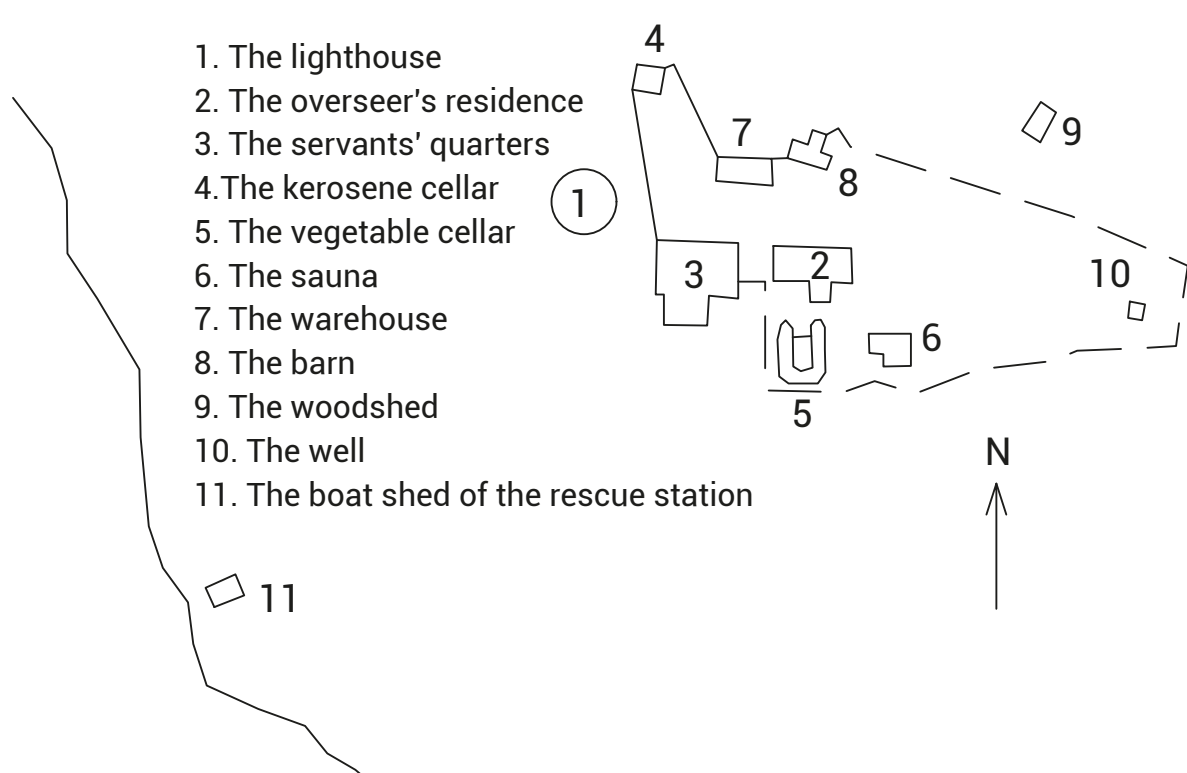
Aid elevation above surface elevation: 38.7 m

Light height above sea level: 42.3 m

Light characteristics: FFI (3) WR 15 s fixed and group flashing light

Flashing period description: 1+2+1+2+2+7=15

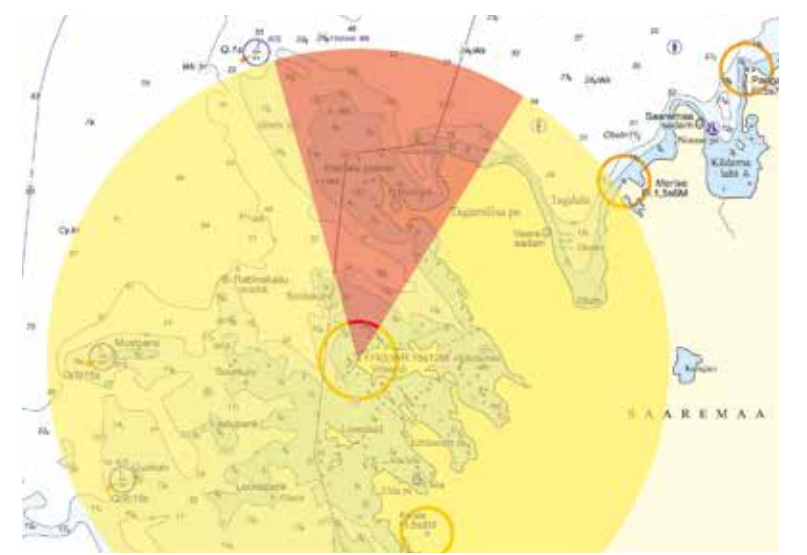
FFI (3) WR 15 s



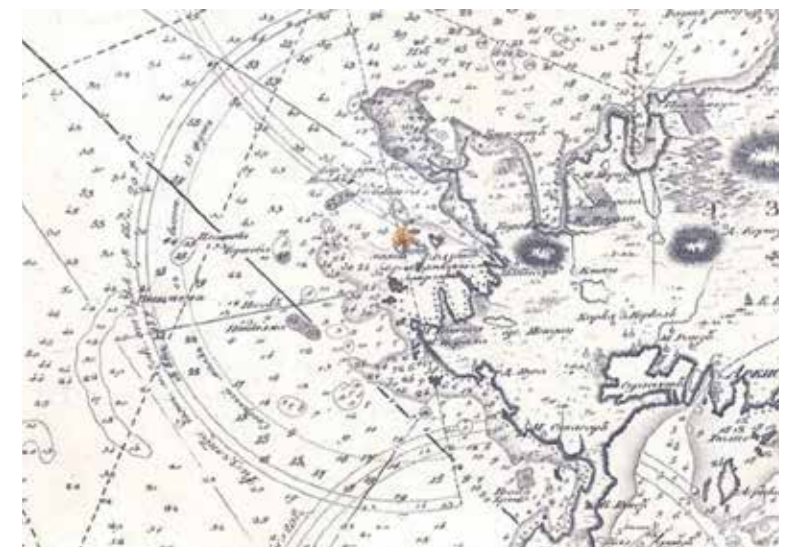
Vilsandi tulejaama hoonete asetus aastal 1918



Vilsandi Lighthouse stamp from the year 1999, designed by Roman Matkiewicz



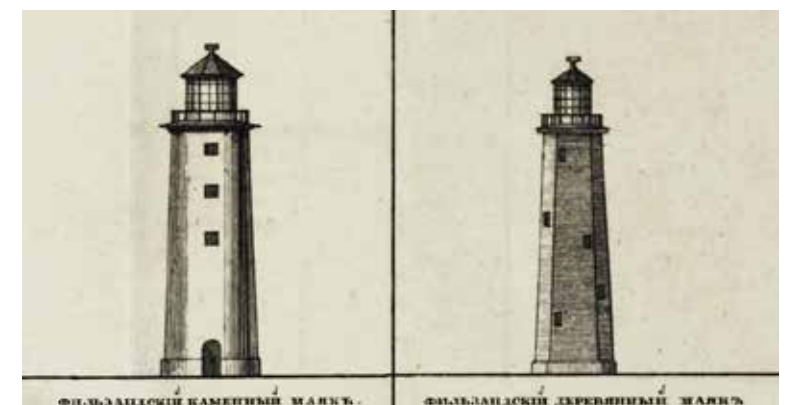
Extract from the map atlas "Eesti merekaardid" (Nautical Maps of Estonia) from the year 2022 with the lighting sector of the lighthouse



Extract from G.A. Sarõtšev's 1812 map atlas "Морской атлас всего Балтийского моря с Финским заливом и Каттегатом" (Marine Atlas of the entire Baltic Sea with the Gulf of Finland and Kattegat) shows the existence of the lighthouse on Vilsandi island



Lighthouse sketch from L.V. Spafarjev's map atlas "Атлас финского залива" (Atlas of the Gulf of Finland) from the year 1820



Stone and wood lighthouse sketches from the 1835 book "Описание маяков, башен и других предостерегательных для мореплавателей знаков Российской Империи" (Description of lighthouses, towers and other warning signs for sailors of the Russian Empire)



Extract from a 1862 nautical chart detailing the Gulf of Riga "Карта Рижского залива с Моон-Зундом" (Map of the Gulf of Riga with Moonsund Archipelago)



On the foreground: the Chance Brothers & Co lighting device installed in 1870. In the background: the modern Sabik light system lanterns. Photo from the year 2021, T. Vilu