

# Huis te Warmelo

The story of international co-operation to identify the 40 gun frigate in the Gulf of Finland

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The Kalbådagrund gunship wreck was found in 2002 by Finnish Maritime Administration during hydrographical surveys. She lays at the bottom of the Gulf of Finland (Suomenlahti), off the town of Porvoo. The Finnish Maritime Administration provided a report with multibeam sonar image of the target to the Finnish Heritage Agency in 2004.

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In 2016 maritime archaeological surveys were undertaken at the Kalbådagrund gunship wreck site in the Gulf of Finland by SubZone Oy in partnership with the Cultural Heritage Agency of the Netherlands and support from the City of Medemblik. The purpose of the research was to confirm the identification of the shipwreck that has register number 2381 in the Finnish Heritage Agency's Registry of Ancient Monuments and to compile the proper documentation of shipwreck site using only non-destructive methods like filming and photographing. Detailed documentation of the wreck site by videography was conducted to make 3D photogrammetry models of the whole wreck and parts of it. Video data was also used for perception of details.

Earlier archival research conducted by Subzone Oy in 2015, showed that the wreck is not Russian nor Swedish. The size of the wreck and the number of guns, as well as the location all together did not match to Russian or Swedish man-of-war that had sunk in the end of 17th century or during 18th century.

One of the North Holland Admiralty warships, Huis te Warmelo, sunk at Kalbådagrund in 1715. The archival material of Huis te Warmelo, studied and collected by historian Peter Swart, was compared to the data collected during the research. The measurements, building style, guns, gun carriages, structures of the ship and location supported the assumption that the wreck is Huis te Warmelo.

The Finnish Heritage Agency started process to create a protection zone around the wreck site in 2017. The wreck will be the fifth historical wreck site with a specific protection zone in Finland.

The aim of this article is to present initial results of archaeological fieldwork, introduce the historical context and compare of wreck site and historical data.

## **THE BEGINNING OF THE IDENTIFICATION OF WRECK**

In 2014 SubZone measured and documented the wreck site by video, calculated the cannons and made some other basic observations. It became clear that this was a warship, 35 m long, from its shape built around 1700 and with 17 cannons on the upper deck and about the same amount on the lower gun deck. After that, Immi Wallin and Kari Hyttinen started to study the literature regarding the warships in Baltic Sea in the late 17th century and early 18th century. Together with Marcus Hjulhammar, associated professor of Baltic maritime history at Helsinki University, they went through the archives in Sweden.

In September 2014 Wallin contacted Maili Roio from the Estonian Heritage Board and asked if they had any markings of an early 18th century 40 gun frigate that sunk off Porvoo in Gulf of Finland. Unfortunately, Roio didn't

find any information about the cannon ship. In January 2015, Wallin and Hyttinen went to St. Petersburg and visited the Poltava shipyard, where they are building a replica of the Poltava, a ship from Tsar Peter the Great's fleet. Wallin and Hyttinen made contact with the Russian historians who were experts of the Russian fleet in 1700–1725. In the summer of 2015, after extensive research, it was clear that the wreck was neither Russian nor Swedish. Wallin's conclusion was that the wreck may have been well of another provenance.

In November 2015 historian Peter Swart, specialized in the history of the West Frisian Admiralty, studied a sea map in the Maritime Museum Rotterdam. On this map, drawn by mapmaker Abraham Maas dated between 1716–1726, then in St Petersburg, indicated due west of the island of Hogland (Gogland) a note 'Hier is het Noord-Hollands oorlogsschip op gebleven 1715' translation: Here the North Holland warship was left. This clearly indicated the loss of a North Holland war ship. In this year the admiralty of West Frisia (North Holland) lost only one ship in the Baltics, the 125 feet long frigate named 'Huis te Warmelo.'

County archaeologist for Medemblik, Michiel Bartels, was asked to investigate if such a vessel was probably found in the Gulf of Finland. Bartels inquired with Estonian colleague Erki Russow who directly contacted Roio if they know anything about such a wreck. Roio understood immediately that the lost Dutch war ship was most probably the wreck Wallin studied in 2014 and she had the question forwarded to Wallin. Now the information of the ship and the wreck met each other.

## HISTORICAL BACKGROUND

The Dutch war ship Huis te Warmelo was built in Medemblik by order of the Admiralty of West Frisia and the Northern Quarter, one of the five admiralties that organized and man-

aged the Dutch naval fleet in the 17<sup>th</sup> and 18<sup>th</sup> century. The keel was laid in the autumn of 1708 and the ship was launched in the following year. The activities of the West Frisian admiralty in Medemblik were supervised by officials from Hoorn and Enkhuizen. The frigate Huis te Warmelo was one of five new men-of-war, that had been built by the Admiralty of West Frisia and the Northern Quarter in 1708.

The new ships were built in two batches. The assignment for building the Huis te Warmelo, a ship of the second batch, was tendered on the 1<sup>st</sup> of October in Enkhuizen. Public tenders for building new warships were common practice in West Frisia. The contract to build Huis te Warmelo was granted to Cornelis Blaauwevlag, an Enkhuizen-based shipbuilder for a bid of 29.500 guilders. The tender only included the construction of the hull, not the rigging, and a few weeks later the admiralty of Amsterdam approved the delivery of the masts for the new ship.

The launch of the ship probably took place in the summer of 1709. The Blaauwevlag's work was inspected on the 17<sup>th</sup> of September 1709. With the exception of some small imperfections the ship met the admiralty's requirements (Swart 2005, 2016). The size of Dutch warships was constrained above all by the shallow waters off the Dutch coast and in the approaches to the republic's harbours. This also dictated hull form: Dutch ships were flatter –bottomed, and thus had a shallower draught, than their contemporaries in other countries (Bender 2014, 36). The length of Huis te Warmelo was 125 feet (35 meters), the width 35 ¼ feet (10 meters) and carried 40-44 guns<sup>1</sup>.

Huis te Warmelo is the name of an estate in the Dutch province of Overijssel, the residence of Joan Albert Gabriel Sloet – a member of the board of the West Frisian admiralty, representing Overijssel<sup>2</sup>.

## LAST VOYAGE

For more than 300 years the Baltic Sea region exported massive quantities of cereals to the west. The Baltic trade called in Holland *moed-ernegotie* (mother of all trades). The nickname dates from the 17<sup>th</sup> century<sup>3</sup>.

In times of troubles the merchant ships had to be protected by warships. To minimize the risk being caught by the enemy, they mostly sailed in convoys, organized by Admiralties. During the Great Northern War (1700–1721) which made the Baltic particularly unsafe, for example, on average Dutch shipmasters made only one voyage to the Baltic annually, while normally their average was more likely to have been two voyages<sup>4</sup>. The shipping season on the Baltic lasted from March to the end of October.

The British and Dutch joint expedition of which *Huis te Warmelo* was part of 1715 had two purposes, an official one to convoy merchantmen beyond the Sound into the east Baltic, thus attempting to break the Swedish blockade, and a clandestine one to assist the last campaign against the Swedes blockade in the south Baltic<sup>5</sup>. The highest ranking officers of the combined fleet were the British admiral John Norris and rear-admiral Lucas de Veth of the Admiralty of Amsterdam.

On the 1<sup>st</sup> of June 1715, 12 Dutch men-of-war left the Roads of Texel, and set sail for the Baltic Sea. The frigate *Huis te Warmelo* was among these ships and their mission was to steer a convoy of 200 Dutch merchant vessels through the war zone and safely back home<sup>6</sup>. Admiral John Norris sailed from the Nore in England on 18 May in command of 18 men-of-war shepherding at first 60 merchantmen from London and the southern ports, 25 more joined from northern ports, Hull and Newcastle particularly, when he was off southern Norway. The Dutch convoy was already at the Sound when Norris arrived on 10 June<sup>7</sup>.

The joint fleet-with-convoy sailed on 17

June from Copenhagen. With a fair breeze the fleet passed Bornholm two days later and reached Danzig on the 24<sup>th</sup>. At Danzig the 13 ships bound for that port were dropped off, and the convoy went on north along the east Baltic coast detaching 24 ships for Königsberg, then 123 for Riga, together with 4 warships. 27 Dutch ships were left at Reval.

The remainder of the convoy, 18 Dutch and 36 British ships, were for St Petersburg. These included the 10 ships that were to collect 1, 200 tons of hemp ordered for the Navy Board in London. The last stage from Reval to St. Petersburg was most difficult due to the shallow water and rock-strewn beyond the Island of Hogland. The convoy was escorted by 5 British warships as far as Hogland, then the 4 larger ships returned to the fleet at Reval. The British frigate *Mermaid* escorted the merchant ships to St. Petersburg.<sup>8</sup> According to the logbook of the *Mermaid*, the convoy was escorted by 2 Dutch and 3 British warships as far as Hogland<sup>9</sup>.

On the 5<sup>th</sup> of August four warships sailed to rendezvous at Hogland. They anchored at the east side of the island on the 6<sup>th</sup> of August and waited for the Saint Petersburg ships to arrive. The *Mermaid* and the merchant ships reached Hogland on the 24<sup>th</sup> of August. The ships log show that a very strong northeast wind was blowing and that heavy rainfall caused bad visibility. Just after midnight things went terribly wrong for *Huis te Warmelo*. About 40 nautical miles from Hogland the frigate hit a submerged rock and sank shortly afterwards. A distress call of three gunshots was heard, but not understood by the British warships. The men on the sinking ship had to rescue themselves. Only 75 of the 200 crew members survived and were picked up by British merchant vessels<sup>10</sup>.

*Huis te Warmelo* was commanded by captain François de Groot from Alkmaar. Both of his lieutenants were from Medemblik, along with the chief clerk, the chief boatswain and



Location of wreck Huis te Warmelo. Map: Google Map, Maili Roio.

the chief gunner. Half of the 200 crew members were either from Alkmaar or Medemblik<sup>11</sup>.

## ENVIRONMENT AND CONDITION

The wreck lays at the bottom of the Gulf of Finland (Suomenlahti), south of the town of Porvoo and southeast of Helsinki. The wreck is located in Finnish territorial waters west of Kalbådagrund lighthouse. The average depth of Gulf of Finland is relatively shallow 38 meters with the maximum of 100 meters. The maximum depth around the wreck site is 62 meters below sea level.

The gulf water has very low salinity – between 0.2 and 5.8 ‰ at the surface and 0.3–8.5 ‰ near the bottom. The average water temperature is close to 0 °C in winter; in summer, it is 15–17 °C at the surface and 2–3 °C at the bottom. The gulf is usually frozen from late November to late April; the freezing starts in the east and gradually proceeds to the west. Complete freezing is usually reached by late

January, and it might not occur in mild winters<sup>12</sup>. The ship sank in cold (+4 Celsius), relatively clear, brackish water where water movements are low.

The timber of the wreck observed to be in remarkably good condition. The ship proved to be a very well kept warship showing no damage from battle, fire or shipworm. The hull, decks, masts and armament are still present. The fore mast up to the first extension is still standing upright. The main mast and mizzen are fallen to the port side of the wreck. The lower gun deck has the cannons in place and lot of artefacts are visible in situ. This includes stone wares, boxes, plates etc.

The wreck is partly buried in the seabed, which has provided excellent conditions for preservation. Two deck levels are above the floor surface. The wreck is in the sediment up to the hull's waterline on the starboard side and up to the upper (main) gun deck on the port side. The bowsprit has tilted down so, that the front end of it is inside the sediment. The beakhead has fallen to the seabed and the figurehead is partly under it.



The whole stern up to wing transom is in place. The aft castell has collapsed behind the stern and most of it is inside the sediment. The stern post, rudder and tiller are in place. The starboard outer side planks have fallen to the seabed.

Unfortunately, the wreck has been looted during summer 2011: dishes laying on the seabed behind the wreck have disappeared. Between Subzone's dive to the wreck site in 2014 and Subzone's first research dive in 2016, damage to at least two cannons had occurred. Someone had scratched the cannons probably trying to find markings.

The second known looting took place in July 2016. The group of divers visited the wreck site and one diver had lifted a jug from the wreck during a photographing session without Finnish Heritage Agency's permission, but taken immediately to the Agency. A jug belongs now to the collection of the Maritime Museum of Finland. According to diver the jug was on the deck, under a fallen plank, only partly visible.

## SITE PLAN

The wreck site was documented by side scan sonar to find out the extent of the site. Side scan sonar (sss) data acquisition was conducted in May 2016. The overall wreckage area is approximately 50 m x 50 m. There were no anomalies visible in the side scan sonar data in 200 meter radius outside the wreckage area.

The site lies on a flat clay/ sandy seabed with mud a top layer in 62 meters depth. The site is oriented approximately north-south.

The side scan sonar data shows that the wreck's debris field is restricted near the wreckage. On the starboard side of the wreck the visible structures outside the wreck itself are very close to the side of the wreck. On the port side of the wreck are the fallen main mast and mizzen.

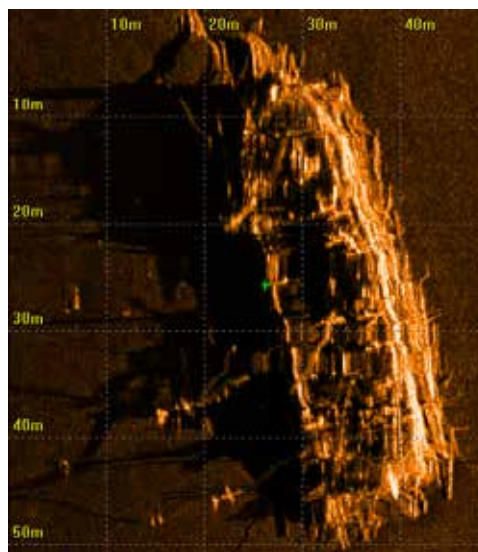
## COMPARISON OF WRECK SITE AND HISTORICAL DATA

### Location of wreck

On an 18th century nautical chart in the collection of the Maritime Museum in Rotterdam were in the middle of the Gulf of Finland words "Here the North Holland man-of-war was lost 1715". The only man-of-war that could fit this description is the frigate *Huis te Warmelo*.

The name of the shallow on the Dutch map is *Nannings Rutzen*. The report from British man-of-war, *Mermaid*, that participated the same convoy as *Huis te Warmelo*, is telling that about 40 NM from *Hogland* the Dutch frigate hit a submerged rock and sunk shortly afterwards<sup>13</sup>. The name *Nannings Rutzen* is not known in other maps, but the location is the same as *Kalbådagrund* location. Distance from *Hogland* to *Kalbådagrund* is 40 NM.

There is only two known warships lost near of *Kalbådagrund* during the 18th Century. The other one was *Vyborg* that belonged to Peter



Side scan sonar image of the wreck site. Image: Immi Wallin.



The location of the sunken man-of-war on the nautical chart about 1720 (S.0429(08)).

the Great's Baltic Sea fleet. Vyborg, Riga and Esperans, under vice-admiral C. Cruys, got stuck on Kalbådagrund on 22<sup>nd</sup> of July 1713 while chasing three Swedish battleships Ösel, Estland and Verden under commodore Raab. The Riga and Esperans were got off, but the Vyborg had to be burned. The Vyborg had 50 cannons<sup>14</sup>. The wreck of Vyborg is known on the Kalbådagrund shallow and some of her cannons have been raised in 1960'ties. Because the Vyborg was burned by Russians when they were force to leave her on the shallow, the wreck is deteriorated.

Peter the Great's diary is mentioning the Dutch man-of-war loss. Dutch escort ship named Waramlou sunk after hitting the same shallow where Vyborg grounded in 1713 and that 70 men were rescued to other ships<sup>15</sup>.

At Dutch National Archives, a received letter concerning Russia from the 6th of September 1715 states that the Dutch man-of-war hit the same shallow as the Russian man-of-war two years earlier<sup>16</sup>.

The location of the wreck corresponds with the historical data of the location where Huis te Warmelo hit the shallow when coming from Hogland and drifted to South-West with the

wind from North-East. The wreck is located 1,1 NM from Kalbådagrund to the West. The bearing from the shallow to the wreck is 243-273 degrees depending where on the shallow the ship hit it. The logbook of British man-of-war Assistance, that participated the convoy, tells that the wind was from North-North-East and North-East<sup>17</sup>.

## Dimensions

The assignment to building Huis te Warmelo was tendered on the 1<sup>st</sup> of October 1708 in Enkhuizen. The conditions and specifications of the 1708-tender have been preserved. The tender contains detailed information about the measurements of the ship. The tender only included the construction of the hull, not the rigging<sup>18</sup>.

The main measurements were the length and the number of cannons. The unit foot was Amsterdam foot, that is 28.3133 cm. Length from stem to stern 125 feet (35.4 m), width within her hull on the front third part 35 ¼ feet (10 m), height in the hold 15 feet (4.2 m).

Most of the dimensions are not visible on the wreck. For example, the dimensions of



Cannon on the starboard side near the fore mast. Video frame capture: Kari Hyttinen.

the keels. One clear structure, that is visible, is the wing transom. The tender specification gives the length for the wing transom 24.5 feet (6.94 m).

Length of the wreck from outer side of the stem to top of the outer side of the rudder 36.8 meters. We have not measured the thickness of the rudder and stem. The tape measure made some vertical bends because of the collapsed aft castle and rigging on the aft part of the wreck. If we take out the rudder and the bends, the measurement is very near the length mentioned in the tender; 35,4 meters.

The wing transom was also measured with tape measure and the length is 7 meters. In the tender the length of the wing transom is 6.94 meters.

## Cannons

According to specifications for building Huis te Warmelo the ship was carrying 40 to 44 guns. There are 17 cannons on the upper deck visible and probably rest of the cannons among collapsed aft castle and other structures as well as on the lower gun deck. All observed cannons are made of iron.

The cannon carriages are very likely Dutch type of carriages because the structure of the bottom and sides are made out of one piece<sup>19</sup>.

## Capstan and timber heads

According to specifications for building Huis te Warmelo - large English capstan [spil, kaapstander] with 10 half holes, an upper English capstan with 8 half holes<sup>20</sup>.



The upper part of the capstan behind the foremast with 8 holes. Video frame capture: Kari Hyttinen.



The timber heads are mostly octagonal. The octagonal timberheads seem to be peculiar to the Dutch<sup>21</sup>.

## Anchors

A ship carried several anchors, for example the bower, which was the largest; the sheet anchor, somewhat smaller; the streamer, smaller again; and the kedje, the smallest<sup>22</sup>.

There are five anchors with two arms and wooden stocks at least in the wreck site: two on the reeling on port side one on the deck on port side, one on the bottom on starboard side and one inside the wreck.

## Pumps

The pumps were made of elm. They were bored out accurately through the heartwood, then tarred and served with canvas and rope to prevent leakages due to drying out. On the steering stand there were two pumps near the mizzenmast and one near the main mast<sup>23</sup>.



Intact pump with the handle behind the main mast. Video frame capture: Immi Wallin.

## Ship decorations

The figure head is a lion that is located on the sea bottom in front of the bow partly under the beakhead. The decorated beakhead is lying on the bottom in front of the bow. The lion rested on the lower spur of the beakhead. The figure head is in good condition and almost whole.

The Dutch figure head 17th century seems to have always been the national lion, issuant from beneath the head rails, or between the cheeks, and beginning his upward progress which was eventually to be checked by his contact with the spiral of the main rail. In their own ships the Dutch used no other figure head until about 1720, but with the alteration in the shape of the head – the position of the lion became somewhat more upright. In ships built for their own use the Dutch did not adopt the platform for the figure, because there was no need for it<sup>24</sup>.

The aft castell has collapsed behind the stern and most of it and decorations are inside



Figure head. Video frame capture: Kari Hyttinen



Stern statue. Video frame capture: Ivan Borovikov.

the sediments. On the bottom behind the stern is visible one stern statue.

The Dutch war ship Zantvoort was built in same year and by same admiralty than Huis te Warmelo. Most probably the stern decoration of Huis te Warmelo is similar to drawing of Zantvoort<sup>25</sup>.

## CONCLUSION

In conclusion, can assume that the 18<sup>th</sup> century shipwreck found at Kalbådagrund is the wreck of Dutch man-of-war Huis te Warmelo.

### 1. Location of the wreck.

The location of the wreck corresponds with the historical data of the location where Huis te Warmelo hit the shallow when coming from Hogland and drifted to SouthWest with the wind from North-East. The wreck is located 1,1 NM from Kalbådagrund to the West.

### 2. Type of ship.

Huis te Warmelo was a frigate. The type of shipwreck was known before the identification.

### 3. Date of wreckage

The artefactual material from Huis te Warmelo wreck allows to establish possible time of wreckage. Based on Frechen stoneware jug the shipwreck is dated to 1675-1725. Huis te Warmelo sank in 1715.

### 4. Dimension

According to archival material the length from stem to stern was 35.4 m and the length of the wing transom is 6,94 meters. Length of the wreck from outer side of the stem to top of the outer side of the rudder 36.8 meters. The measurement is very near the length mentioned in the tender; 35,4 meters. The wing transom was also measured with tape measure and the length is 7 meters.

## 5. Cannons

According to specifications for building Huis te Warmelo the ship was carrying 40 to 44 guns. There are 17 cannons on the upper deck visible and probably rest of the cannons among collapsed aftcastle and other structures as well as on the lower gun deck. The cannon carriages are very likely Dutch type of carriages because the structure of the bottom and sides are made out of one piece

## 6. Structures of the ships

There are many concurrences in archival material: the capstan, timber heads and ship decorations.

The wreck, that has register number 2381 in the Finnish Heritage Agency's Registry of Ancient Monuments and located 1 nautical mile West of Kalbådagrund, is the wreck of the North Holland Admiralty warship, Huis te Warmelo.

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## ENDNOTES

- 1 Swart 2016.
- 2 Ibid.
- 3 Tielhof 2002.
- 4 Tielhof 2002, 214.
- 5 Aldridge 2009, 63.
- 6 Swart 2016.
- 7 Grainger 2014, 83.
- 8 Grainger 2014, 82–85.
- 9 Swart 2016.
- 10 Swart 2016.
- 11 Ibid.
- 12 Grönvall 1997.
- 13 ADM 52/236.
- 14 Bridge 1899.
- 15 Lukoshkov, Andrei, verbal information 2016.
- 16 Archives States General 7367.
- 17 ADM 52/128.
- 18 Swart 2016; Admiralty Archives: 3256.
- 19 Brinck, Nico, e-mail to Michiel Bartels, 19.01.2016.
- 20 Admiralty Archives 3256.
- 21 Laughton 2013, 256.
- 22 Hoving 2012, 169.
- 23 Hoving 2012, 153–154.
- 24 Laughton 2013, 69.
- 25 See Swart 2017.

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