



# The War Tourist

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## The mighty **GUNS** at HANSTHOLM and KRISTIANSAND

### New TWT layout

As you will notice, the TWT has a new layout. "Again!", you'll probably say; "-three issues, three different layouts; why can't this guy make up his mind?"

Fair question, and perhaps we will get there eventually, but for the time being, I am keen on experimenting. The TWT is still in its early infancy, and as with any toddler, new and exciting things happen almost every day ;-)

One thing is fairly sure, the **Coat-of-Arms** or Crest you see in the upper left corner is here to stay (or so I think ;-). We'll need some sort of logo to signal that; "Hey, here is the TWT. Cool..!"

The issue you have in front of you is **also special** in the sense that it concerns itself entirely with one topic, namely the two mighty fortresses that guarded the entrance to the Skagerrak. I have been wanting to do this article for a long time, so... here we go! Enjoy...



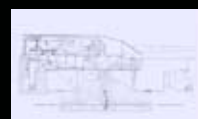
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Portrait: Field Marshal Erwin Rommel, courtesy Wikipedia (Deutsches Bundesarchiv, for non-commercial use).

# Rommel, the mason of the Atlantic Wall

Erwin Johannes Eugen Rommel was born in Heidenheim, Germany, near Ulm, in the state of Württemberg on November 15, 1891. His father was a Protestant headmaster of the secondary school at Aalen. The Rommels had three more children, two sons, Karl and Gerhard, and a daughter, Helene. Little Erwin had to his own account a happy childhood. He was interested in mechanics and engineering, and at the age of fourteen, he built a full-scale, operational glider together with a friend. This technical aptitude steered young Erwin towards becoming an engineer, but at his father's insistence, he joined a local Infantry Regiment in 1910 as an officer cadet and proceeded to the Officer Cadet School in Danzig.

In 1911, while still a Cadet, Rommel met 17-year-old Lucia Maria Mollin who was to become his wife. Graduating in November 1911 he was commissioned as a Lieutenant on January 1912 and four years later, in 1916, he married Lucie (her pet name). In 1928 the couple had their only child, a son, Manfred, who would later become the **Lord Mayor of Stuttgart** (1974-96).

## World War One

Rommel, now serving in the elite Alpen Korps (Mountain Corps), saw action in France, as well as in Romania and Italy during the Great War. He soon gained a reputation for quick tactical decisions and for taking advantage of enemy perplexity following an attack. Three times on the stretcher with battlefield wounds, he was awarded the Iron Cross twice; First and Second Class, but industrious Erwin also managed to gain the highest medal Prussia could muster; the Pour le Mérite – not the everyday decoration for a mere lieutenant. The high award – presented to him by the Emperor himself - came as a result of the capture of 150 Italian officers, 7,000 men and 81 pieces of artillery at the fortress of **Mount Matajur**, Slovenia.

After the war Rommel became an instructor at the Dresden Infantry School from and the War Academy in Potsdam from 1929 to 1938. During that period he published what was originally his war diary. Titled; "Infanterie greift an" (Infantry Attacks), this quickly became a highly regarded military textbook, and attracted the attention of Adolf Hitler.

Rommel, now a colonel, was appointed commandant of the War Academy at the Theresian Military Academy in 1938. He wrote a second handbook; "Panzer greift an" (The Tank in Attack), a book that even renowned US Panzer Ace, George Patton, read and acclaimed. After a relatively brief period at the school, Rommel was handpicked to take command of Adolf Hitler's personal protection battalion (Führer Begleitbataillon). During this period he met Joseph Goebbels, the Reich's minister of propaganda, who would become a fanatical admirer of Rommel, tirelessly exploiting the model soldier's victories in the propaganda after the outbreak of WW2.

## World War Two

After the Polish surrender, Rommel returned to Berlin to organise the Führer's victory parade, taking part himself as a member of Hitler's entourage. Rommel then used his good relationship with Hitler to gain command of the 7th Panzer Division. During the invasion of France and the Low Countries in 1940, Rommel showed considerable skill as a panzer commander, wading high-speed through the bewildered enemy. His division was thus nicknamed "Gespenster-Divisionen" (Ghost Division), due to its speed and surprise; 7th Panzer e.g. captured the vital port of Cherbourg on June 19th. Although often misappropriating the supplies of neighboring divisions, in order to keep up the pace (and thus angering his superiors), the fame gained by Rommel during

the campaign made a court martial (as considered by Hoth), or even a reprimand, impossible. It was, however, primarily during his service in Africa that Rommel achieved the nimbus of an outstanding – almost invincible – tank commander, earning him the flamboyant nickname he is remembered by; The Desert Fox.

## Rommel in Normandy

Recalled to Germany by Hitler before the final disaster in Africa



could taint his image, Rommel idled for a period. He was finally given command of a newly formed Army Group B, assigned to defend Northern Italy, but after General Albert Kesselring assumed sole Italian command late November 43, Rommel moved the Army Group to Normandy, France, where an Allied invasion had long been expected. Following an inspection tour along the entire Atlantic coast and finding it little more than a mere garden fence full of holes, he was utterly dismayed and wrote a critical report to Hitler, who in turn put Rommel in charge of the repairs.

Throughout the winter of 1943 and the early months of 44, he worked tirelessly on this, knowing that the boasting charades of Dr. Goebbels about an impregnable **Atlantic Wall** would not fend off an invasion on their own, and that when invasion came, the German forces could not hope to match the overwhelming weight of arms presented by the Allied. His simple conclusion was that the only option with any hope of success would be to deny the invaders establishing a bridgehead at all,

crushing them on the beaches during attempted landfall. With that in mind, the Normandy beach became his "Hauptkampflinie" – the main battle line - and fortifications and obstacles were designed and erected to support that tactic. His boyhood engineering skills came in handy as he toiled to make the best out of sparse resources, and e.g. his infamous "**Rommel's asparagus**" should prove themselves deadly to many Allied soldiers during D-Day.

To the question of tank support, Rommel argued, that due to overwhelming dominance by the Allied in the air, tank forces should be split up in smaller units and dwell in heavily fortified positions as close to the coast as possible. As the Allied onslaught began, they would not have to move far in long, vulnerable columns. Gerd von Rundstedt, his superior, on his part feared that the overwhelming firepower of the Royal Navy would destroy any shelter no matter how well built. He believed that the few tanks available should be formed into large units inland, allowing the Allies to overextend their forces into France before the panzer cut them off from their supply lines. Hitler, whose "intuition" told him, that the landings would take place at Pas de Calais, vacillated, and ended up by placing the tanks somewhere in the middle, where they were of little use to either plan.

## D-Day

As it turned out, Rommel was right and the invasion did take place on the beaches of Normandy. Allowed to secure a beachhead within hours due to lack of efficient resistance,

the Allied rapidly advanced inland and after a few days were unstoppable for the insufficient and overstretched German forces.

On his way back from a meeting with Hitler in his forward HQ on July 17th 1944, Rommel's staff car was strafed by an RCAF fighter, and the Field Marshal was hospitalized with severe head injuries. While recovering, he on several occasions rather bluntly expressed his dismay with the Führer and the way he was waging the war; a carelessness that later should prove fatal, as it was overheard and reported by local Nazis.

Following the failed plot against Adolf Hitler only three days after Rommel's incident, a widespread investigation was conducted to identify the instigators and supporters. Some of the coup ringleaders' documentation mentioned Rommel as a potential supporter and an acceptable military leader take charge after a successful coup. No evidence linked Rommel to the plot, nor that he had been contacted by any of the plot ringleaders, but in the paranoid Führer entourage, suspicion was more than enough.

On October 14th Rommel was approached by generals Meisel & Burgdorf, delivering the death sentence and conveniently bringing the necessary poison vial. As a national hero, Rommel was to be spared the humiliation of a public trial and granted a hero's funeral – provided he took the offered cyanide post haste. Despite the heroic offer from his Aide de Champ, Captain Aldinger, that they could try to shoot their way out, Rommel immediately realized that the race was over and he had to comply with his Führer's command. He kissed Lucie goodbye, hugged his 16-year old son Manfred and drove off in his callers car.

Ten minutes later, the Field Marshal was dead.

**Sources:** "Rommel in Normandy", Friederich Ruge, 1979 "Erwin Rommel", Wikipedia ([Link](#))

**Background:** Rommel in Africa, courtesy Wikipedia Commons

**Above:** Rommel in Normandy, courtesy LIFE Magazine (non-commercial use)

## A word from the editor...

The February issue of The War Tourist, which you have in front of you, turned out to be a special or "Theme Issue" as mentioned on the front. As you will note, all the usual stuff; the editorial, details, E&OE, rating system\*, website of the month, news etc. has been left out to cater for the lengthy article on Hanstholm and Kristiansand.

Furthermore, the article on Rommel came as an afterthought and consequently delayed the publishing. Reason for this is that I aim to write a series of articles on Danish coastal batteries while traveling the west coast this summer and thus found it appropriate to start with a few words about the "mason" or architect behind this epic structure.

Anyway, here you have your TWT. Hope you are happy with it, and if so; pass the good news (and the link) on to your friends ;-)

## Not a member yet..?



**The War Tourist Group on facebook and plaxo** are rendezvous points for the seasoned devotee of battlefield sightseeing and touring the great fortifications throughout

history, focusing on the two World Wars. It is a place for war history cadres to meet, and to share photos, data and links to places of interest. "Knowledge not shared is lost" as the saying goes, so discussions should thrive here, for mutual benefit.

Members receive the TWT Magazine in their mailbox six times per annum and are encouraged to **contribute** with their own articles and photos.

# The Skagerrak gatekeepers

Following the **invasion of Norway and Denmark** on April 9<sup>th</sup> 1940, it was important for the occupiers rapidly to seal off the entrance to internal waters between the two countries, primarily to protect the transport of troops and material to Norway. As a bonus, this denial of access to allied naval forces would later, in conjunction with the subsequent conquest of Russian territory, also render the Baltic a German inland sea.

Thus, in the wee hours on the invasion day, the Kriegsmarine saturated the Skagerrak with mines and only a day later, a mobile battery placed at Hanstholm provided artillery coverage to a narrow passageway in the minefield for German warships and submarines bound for high-sea. In May this makeshift solution was replaced by a permanent 17 cm battery, later to be known as Hansted 1, reaching some 20 kilometers off the Danish coast.

However, in spite of these efforts an intermezzo unfolded in April 1940 as three French torpedo boats managed to penetrate the barrier and engage in a skirmish with German naval forces. Although actual damage was minimal, the incident added weight to the Führer's wishes for heavy batteries to be placed on either side of the narrow strait, capable of effectively fending off even major enemy vessels.

As the onslaught on Russia in June 1941 failed to deliver the expected quick victory, war in the east progressed, and in 1942, with USA engaged in the war, the tide turned in disfavor of the Wehrmacht on all major battlefields. Hitler – now facing the dreaded two-front war on the European mainland he once



Stretching from Norway to the Pyrenees; Hitler's Atlantic Wall

swore to avoid – became even more adamant in reinforcing the garden fence of Fortress Europe. Issuing **Führerweisung 40** in March 1942 and the order for the "15.000 bunker program", the **Atlantic Wall** (so baptized by Goebbels) was born. Although somewhat oversold in Nazi propaganda as an impenetrable 5000 kilometer long wall of concrete and steel, bristling with artillery and manned by crack SS troops (a far cry from the truth), this "wall" was in some



Secondary armament twin turret (150 mm) from the Gneisenau. Now at Stevnsfortet

places a formidable obstacle and a deterrence to any attacker.

Also the west coast of the Jutland peninsula, mainland of the small Danish nation, received its generous share of concrete in the shape of thousands of bunkers, counting gun emplacements, radar bunkers, ammunition- and crew compartments, storage bunkers, command bunkers, field hospitals; you name it. Most of them remain visible to this day. The crucial entrance to the Skagerrak was subject to special attention, requiring two mighty fortresses to be erected at Hanstholm in Denmark and outside Kristiansand in Norway. These locations were chosen for their proximity; at this point the Skagerrak is just some 118 km wide.

## Battleships on land

Germany had never really been Britain's peer on the waves and the further demise of her naval power through the loss of her greatest battleships; the Graf Spee (December 1939), the Sharnhorst (December 1943), the Gneisenau (February 1942), and most notably, from a propaganda point of view, the mighty Bismarck (May 1941), rendered Hitler disappointed and

convinced him, that the era of the battleship was coming to an end (in which he was right), losing ground to aircraft carriers, of which Germany had none. Consequently, feeling that their impressive armament was more effectively employed in coastal defense, he, in 1943, ordered all major fleet units "paid off" and the focus shifted to submarine warfare. Several guns that were originally ordered for upgrading of lighter battleships, as well as entire turrets cannibalized from decommissioned ships, hereafter entered service in this land-based role.

A number of locations in Denmark were initially appointed to receive heavy batteries, including



Hanstholm, the tiny island of Laesoe in the Kattegat, Blaavand near Esbjerg and the island of Bornholm in the Baltic. As it turned out, Laesoe was given up, but gun emplacements in the form of huge bunkers were built at Blaavand and on Bornholm. However, in the end only Hanstholm was ever to receive guns and become operational.

At this site construction of the four 3000 square meter gun



emplacements commenced in the fall of 1940 and was completed in 1941. Originally designed for 40.6 cm (16 inch) guns, 38 cm (15 inch) pieces were eventually decided upon and installed in the spring of 1941. Guns no. 3 and 4 were test-fired in May 1941 and no. 1 and 2 in August. Thus, with a slight delay to schedule, the battery was pronounced serviceable in the fall of 1941. Covering more than nine

square kilometers and comprising 450+ bunkers, this was to become the largest fortified area in Northern Europe.

At Moevik, west of Kristiansand, the battery had to be carved into solid rock, a backbreaking job that was carried out by workers from Norway, Denmark and Germany. In 1942, they were joined by Russian slave laborers. Four gun emplacements were commissioned for this battery too, but only three guns were ever installed. Two of the guns were pronounced serviceable in May 1942, the third in November. The fourth gun, however, was to be installed in a huge casemate that took a long time to build. Most parts were installed by late 1944, but the 110 ton barrel, while being transported on the vessel Porto Alegre, was sunk February 1945 in the Kattegat by a British fighter.



Huge "cathedral" bunker at Moevik. Note people in yellow vests inside the bunker.

Left: Regelbau 671 gun bunker at Hirtshals. Above: The Tirpitz with elevated guns. Courtesy: Wikipedia Commons



## How big is a 15 inch gun really? Well, you're looking one in the eye right now...

The background photo is the muzzle of the remaining 15 inch gun at Mövik outside Kristiansand in scale 1:1

The guns installed were originally produced to upgrade the 28 cm (11 inch) battle cruisers Scharnhorst and Gneisenau. As they were never installed on the ships, actual turrets were not produced and entering service as land-based artillery, special "land turrets" were designed. Most notably, these turrets had very modest armor (50 mm) offering protection only to splinters and small caliber fire and with limited automation of the munitions transport and loading system.

800 kilogram shell might result in damages, even collapses. However nothing dramatically happened and for future test firing it was considered sufficient if residents opened up their windows. Batterie Vara at Moevik, situated some eight kilometers outside Kristiansand, did not have that problem.

the protruding point where the peninsula of Jutland curves inwards, creating the Vigsoe Bight, whereas today it has become synonymous with the town itself.

In 1940, this fishing village, home to some 800 farmers and fishermen, was known as Hansted. With the arrival of large garrisons from Wehrmacht and Kriegsmarine, its population grew by the thousands and life changed forever for the rural community. Initially coexistence was practiced with reasonable ease, judging from **a local journalist's diary**; the villagers went about their business like before and the invaders reportedly behaved courteously and tried to mollify the locals with sports arrangements and the like. However, the mere presence of a large contingent of foreign troops and up to two thousand Danish workers obviously did have a shattering impact on this small society that had developed almost entirely from organic growth the past couple of centuries; school rooms commandeered, access roads cut off, massive quartering of troops, farm land expropriated etc., and – symbolic for the situation one might say – the lighthouse shut down.

**Construction work commences**  
From the outset and throughout



Above: Abandoned cement mixer at Kristiansand Kanonmuseum

April, large quantities of weapons and material were transported from Thisted to Hansted, so it must have seemed obvious to everyone that something major was going to happen here. The tension apparently softened somewhat during the month of May as the German fear of British countermeasures faded, and much of the troops and weaponry was retracted again during the summer, but activity climbed again in the fall as huge truckloads of gravel, sand and cement filled the road from Thisted to Hanstholm, clearly indicating that preparations for massive construction works were taken. The journalist had an opportunity to accompany the local Mayor to the building site, where he counted 22 heavy cement mixers in action and estimated some 800 workers employed. Also, he was awestruck to see 15 meter deep holes excavated for the heavy gun platforms and the amount of reinforced concrete used. From the same source we know, that the first gun barrel arrived on April 11<sup>th</sup> 1941 and two more on April 23<sup>rd</sup>, a fact hard to conceal as the 21 meter, 110 ton barrels had to be transported through Thisted on large 24 wheel block trucks.

Mid December 1940, North and West Jutland was declared a war zone and freedom of movement heavily restricted. Traveling entertainers and salesmen could no

longer do business, workers could not go looking for employment and there were rumors of a curfew running; life in Hansted certainly had changed, and not for the better.

The winter 1940-41 was cold and snowy and on several occasions, work on the fortifications, especially pouring of concrete, had to be postponed. A considerable workforce was applied to clear the road Thisted-Hanstholm as well as the work site itself for snow. As winter yielded, work on the fortifications was reassumed, culminating with the test firing of the first two 38 cm guns in May. Work continued over the summer, but came to an end in August 41 where heavy equipment again could be observed on the highway, just going the other way. Rumor had it, that it was shipped to Norway.

### Deportation

One year later, in November 1942, and coinciding with a sudden OKW order to stop the construction work on Hanstholm harbor and clear the building site for all scaffolding and machinery, the relative calm was over for the people of Hansted as it was decided to evacuate (or rather; deport) the entire population. The reason was the German desire to make Hanstholm a secluded military facility, with full right of disposal over town dwellings and freed of any obligation to feed the villagers in case of a siege. Even the church was closed and reopened only on special occasions e.g. at funerals where the spouse of the departed was already interred at the cemetery.

The families had a few weeks to find relocation, which some did in the town of Hirtshals whilst the majority had to move into hastily erected barracks in nearby settlement of Raehr, where many remained for the duration of the war.

Life in these refugee camps was demanding; little room, poor facilities, shabby workmanship of the barracks and no work for the men. All in all, the Hansted families to some extent suffered social downfall but also – reportedly – experienced a new solidarity with neighbors. Post-war, the dismantling of German installations, the clean-up and mine sweeping made it 1946 before the residents could return to their now ravaged town. In the end, only some 500 out of originally more than 800 returned.

### The areas today

Hanstholm today is a thriving community with more than 3000 residents. After much continued debate, the harbor was eventually finished in 1967 and is today one of the most important fishing and transport centers in Denmark.

The huge guns were dismantled and cut up for scrap in the early 1950ties and the whole area abandoned and left to itself.

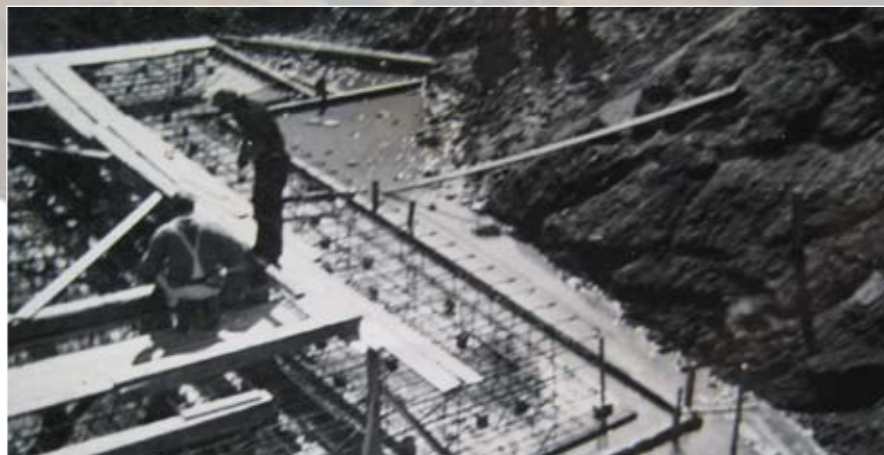
The **Museumscenter Hanstholm** is beyond comparison the most comprehensive and well presented of its kind in Denmark. Besides the impressive, fully refurbished 3000 square meter exhibition bunker, the area comprises a variety of bunkers of most known Regelbau types, many already accessible to the public and more being unearthed every year. The original munitions train used to transport the mighty shells is available for a joyride that will take you through the typical west coast landscape as well as the two-storey ammunition bunkers, and the documentation center is a well of information for the war tourist.

On the Norwegian side, the **Kristiansand Kanonmuseum** (Gun museum of Kristiansand) can brag of one complete (and allegedly functioning) gun turret, and a huge sheltered gun emplacement standing 15 meters tall surrounded by the beautiful Norwegian nature. On Sundays, the mighty gun is



Both batteries in action, the Skagerrak strait between Norway and Denmark could be taken under radar-guided fire in a distance up to 55 kilometers off the coast, thus covering the major distance between the two countries - at this narrow point some 118 kilometers. That left an eight kilometer wide zone in the middle to be protected by mine fields, not an easy task as this stretch of water runs deep – some 700 meters at the deepest.

**Life in the village of Hansted during occupation**  
In the Stone Age, sea level was several meters higher than today, and Hanstholm was at that time one of many small islands ("holm" meaning islet) later to become the undulating part of the coast as it appears today. From the earliest days and up to the time of the German occupation, the name Hanstholm thus referred to



Top: The remaining 38 cm gun turret at Mövik, Kristiansand.  
Right: Bunker construction at 10. Batterie, Hirtshals.  
Photo courtesy of Tonny B. Jensen, Hirtshals

operated, turning and elevated (but not fired).

A really successful trip should embrace both locations - which has become a little more impractical since the Hanstholm - Kristiansand ferry stopped. Today you will have to go via Hirtshals. Accommodation can be found at all price levels in Hanstholm, from the modest, but clean and affordable **Soemandshjem** (Sailor's Home) to the more exclusive **Montra Hotel**.

**Sources:**

- "The evacuation of Hansted", Jens Andersen on [www.museumscenterhanstholm.dk](http://www.museumscenterhanstholm.dk) ([Link](#))
- "Krigsdagbog" (War Dairy), Clemmen Brunsgaard, 1995, in Danish ([PDF Link](#))
- "Hanstholmfæstningen" (Fortress Hanstholm), Bent B. Anthonisen, 1985, Danish/German



# Museumscenter Hanstholm



The distance between the two batteris was some 120 kilometers. As the maximum range of the 38 cm guns was some 55 kilometers - and the accuracy at maximum range was rather poor (+/- 400 meter), the central part of the Skagerrak was protected by a large minefield. Thus the area that the guns should protect was narrowed down to a 10-20 km strip along each coast.

**Factbox**  
**Place:** Museumscenter Hanstholm, Hanstholm, Denmark  
**Phone:** +45 97 96 17 36  
**E-mail:** MCHkanon@post8.tele.dk  
**Web:** <http://www.museumscenterhanstholm.dk>  
**Opening days:** February-September.  
**Opening hours:** See website  
**Admission:** Open Air Museum is free. Museum: See website  
**Bus from Thisted:** Route 23. Itinerary: here  
**Required gear:** Flashlight, head lamp, sturdy shoes or boots. Use caution in derelict bunkers! Helmet is advisable.  
**RATING:** ♥♥♥♥♥

## Visiting Museumscenter Hanstholm

In Denmark, post-war efforts to demolish the heavy bunkers along the west coast largely turned out futile and thus the country is something of a bunker-heaven today. With 450+ concrete installations, Hanstholm is an excellent example of this.

Notably are the four large Sonderkonstruktion (Special construction) S75/80, which



once supported the 38 cm guns, although the guns themselves are long gone. Initially it was contemplated whether these mighty weapons could find post-war use in Danish coastal defense, now facing eastwards as the political scenario had changed, but eventually, in the early 1950ties, the idea was abandoned.

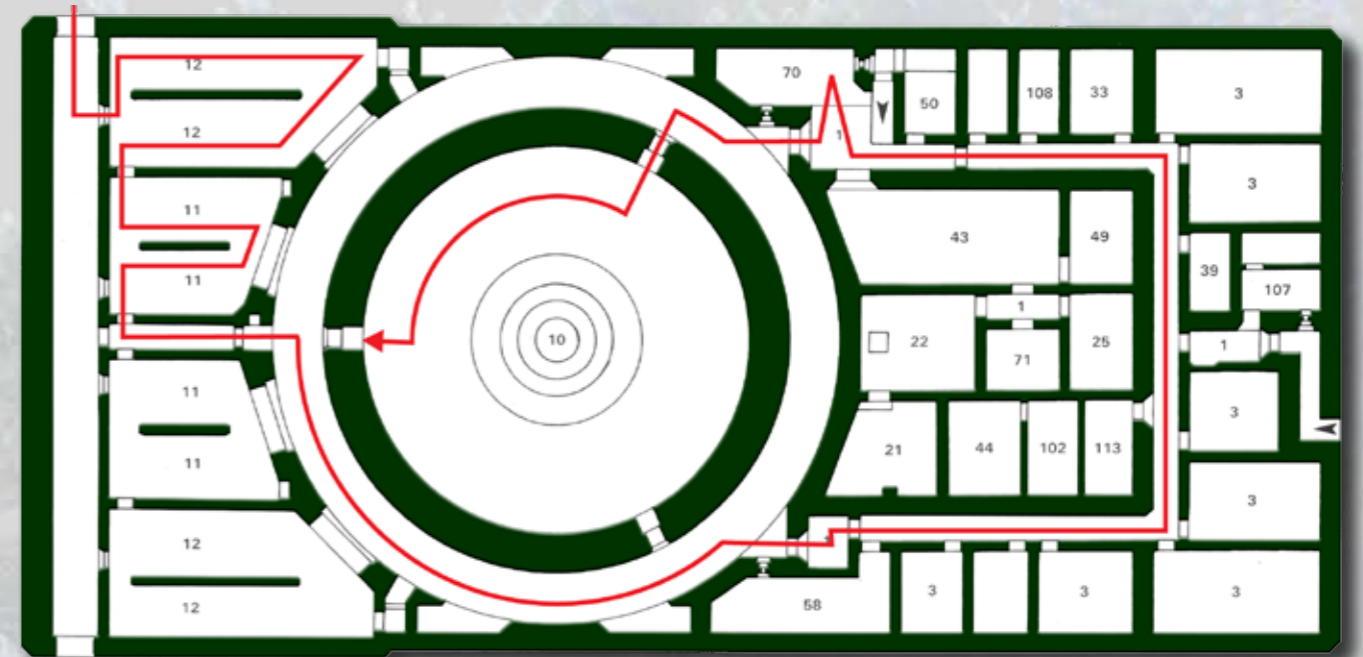
Arriving to Museumscenter Hanstholm the first thing that meets the eye is the huge 21 meter barrel of a "Bismarck" gun. The four guns at Hanstholm as well

- Top:** The 20 meter long, 380 mm barrel of the Bismarck-class battleships.
- Above:** A scale model of the gun.
- Right:** German Flak-Vierling.

as three of those waiting in vane for installation at Oksby were cut to scrap after the war, leaving only one surviving barrel at the Royal Danish Arsenal Museum in Copenhagen. In 2005 it was transported to Hanstholm and now stands as a landmark at the museum center. In the museum lobby a large scale model gives you some impression of how a gun pit looked when the guns were still in place. The lobby also has also an information counter with a Shoppe (books & gifts) and an indoor rest area where you can bring a food hamper.

## Guns a plenty

Having paid your admission, the museum, which is built on top of and partly in conjunction



Regelbau S75/80 bunker. Drawing courtesy of Rudi Rolf. See "German bunkers in Denmark" by Jens Andersen & Rudi Rolf, p. 57 for full legend

with the 3000 square meter gun emplacement, is yours to roam, and there is a lot to see. Several guns are on display in the museum itself, e.g. one of the much used German "Flak-Vierling", a 20 mm AA gun with four barrels developed



by Mauser for the German Navy for use against low-altitude aircrafts. This effective gun was used extensively both on ships as well as in fortifications and was much feared for its firepower.

There is also a German 3.7 cm PAK (anti-tank gun), model 1934 and produced by the Skoda Works in Czechoslovakia. Proving ineffective against heavy enemy tanks, production of this gun was halted in 1941 in favor of more powerful weapons, e.g. the 7.5 PAK gun produced in more than 23.000 units from 1942 and onwards to the end of the War. Also the Russian 4.5 cm PAK which was captured in large quantities during Operation Barbarossa and thus saw service in the Wehrmacht is represented here. Several larger guns are displayed outside the museum, e.g. the famous 1931, long-barreled 122 mm Pushka, a Russian artillery piece easily recognizable on its vertical equilibrators, which was used in many locations along the Danish part of the Atlantic Wall.

Finally, to top off the gun section, the museum recently put a very well restored specimen on display; an automatic M19 mortar. This

- Top Left:** Charge room. Apparatus for loading. Fire-proof hatch in background.
- Left:** Shell room. Crane for shell transport.
- Right:** Trolley for ammo transport to lift.

remarkable weapon, capable of firing up to 120, 5 cm grenades per minute and thus saturating its surroundings, had been rusting in a bunker near Agger, subject to the elements for 60+ years. It was removed from its 39 ton armored dome and transported to the museum where volunteers have used a long time to restore it, but as one will see from the **photos on their website**, it's a job well done.

## Uniforms and stuff

In another section of the museum an array of hand guns along with various uniforms used by different branches of the German armed forces are on display.

## The bunker

As we descend from the museum into the bunker, temperature changes markedly. Summer or winter, a constant temperature of 8-10 degree Celsius is predominant here. Although this can be very blissful on a hot summer's day, do remember a sweater or you may find your visit somewhat chilly.



Upon our descending, we find ourselves in the ammunition delivery tunnel; note the narrow gauge railway tracks in the floor. Grenades and charge canisters were transported by train from surrounding ammunition bunkers. The gun bunker is really two units put together, the S75 ammunition storage and the S80 machine and operations facility with the gun pit in the middle.

First stop on our tour is in the charge rooms (12). The large gunpowder charges, wrapped in textile bags, were transported and kept in steel canisters prior to use, and once loaded the brass cartridges were delivered to the gun through a fire-proof hatch. The gun could shoot with various charges depending on the shell applied and the desired range.

Next is the shell rooms (11), holding an equal number (160) of shells. Two basic types were used; an 800 kg armor piercing shell and a 500 kg explosive shell. With the latter, a range of 55 km was achievable, though with a limited accuracy on max range (+/- 500 meters). Shell fuses were primed here and also the shells were delivered through a fire-proof hatch.

The charge and shell rooms were duplicated for safety reasons and could hold up to 160 shots total for the gun.

Leaving the S75 behind us we proceed into the ammunition isle encircling the gun pit. We will note



the trolley used to cart shells and charges to the ammunition elevator and recall that as this is a land turret, a paternoster conveyor and lift system as used in battleships is not applicable here.

As the gun turret itself has been removed, so has the ammo lift. We will take a closer look at this when we get to Kristiansand.

Across the gun pit we enter into the operations and maintenance section and the crew quarters. Each gun, and there were four of them, had a crew of some 90 people who lived, slept and ate in the self-sufficient



**Top:** Restored crew quarter with bunks. Yours truly with spouse resting their legs.  
**Above:** Amenities in the gun bunker.  
**Below:** A view of the gun pit from above.

bunker, that also had the necessary amenities to accommodate the troops.

First room on our right, just after the air lock is the heed (58). Next rooms (3) are crew quarters, some brought back to near-original looks with bunks and wooden furniture, and all are neatly painted in what must be original colors.

Making a left turn we are passing the original main entrance (1) half way down the corridor to our right. The other rooms to the right are more crew quarters, the Commandants room (39) and a guards' room (107). Turning left again we see more crew quarters, non-commissioned officers' room (33) and the sergeant's room (108) as we exit the living quarters.

Entering the air lock (1), a staircase leads up to another exit. Note the platform (in room 70), accessed by hand rungs, where a gun embrasure covers the entrance.

In the core of the bunker is the engine room with two diesel generators, pumps, cooling water, a well for freshwater, heating, ventilation etc. Here are also the showers (44). Post-war shortage of all kinds of building materials compelled local residents to pillage the room for ceramic tiles, taps, fixtures etc, but thorough restoration has now taken place.

Reentering the gun pit concludes this brief tour. Although the gun is missing, the sheer magnitude of the pit, not least the two meter high concrete pivot in the center, gives some idea of just how big the turret was.

For a full legend of the various rooms, please see the books by Rudi Rolf and Jens Andersen, all obtainable (and more) from the well supplied [Museum Shoppe](#).

A sketch of the gun and the original Krupp data sheet can be found on the website of [Museumscenter Hanstholm](#) ([Link](#))

**Sources:**  
"German Bunkers in Denmark", Jens Andersen & Rudi Rolf, 2006  
"Atlantic Wall Typology", Rudi Rolf, 1998  
"Fortress Hanstholm", Bent Båge Anthonisen, 1985

## Visiting Kristiansand Kanonmuseum

By and large the battery outside Kristiansand is comparable to that in Hanstholm, but there are also differences. Most notably of course is geography and geology. Norway is a mountainous country, tremendously beautiful but must be a builder's nightmare as there are very few flat and even surfaces. Thus whether you want to build a mere doghouse here or – in this case – a coastal battery, the answer is always the same; pickaxes and dynamite. On the positive side, your bunker will not be undermined by the waves and migrate into the sea as in so many places in Denmark.

Battery Vara (named after a general who died during construction), or Moevik Fort as it was named during its service in Norwegian Armed Forces, is situated on a peninsula stretching out some eight kilometers southwest of Kristiansand, in Vest-Agder county. From the fort there is a clear view over Skagerrak and reaching some 55 kilometers out, the guns of Vara were – in conjunction with those in Hanstholm – almost able to seal off the strait.

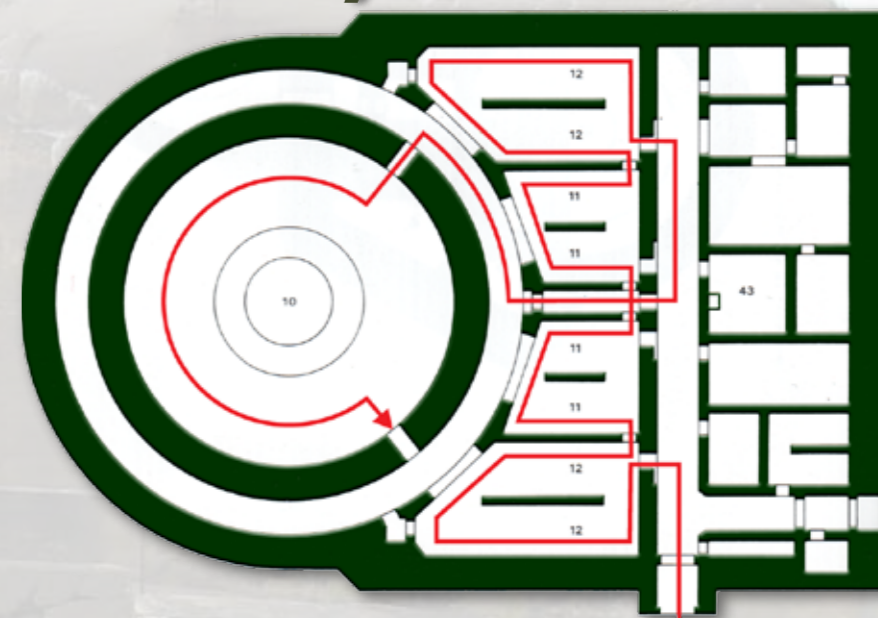
Like in Hanstholm, the battery was designed to comprise four 380 mm "Bismarck" guns, of which one was to be entombed in a giant bunker. The bunker was built, but the gun never installed as the vessel transporting the 110 ton barrel was attacked and sunk in the Kattegat by a British airplane.

Of the three remaining guns, two were scrapped in 1962 when Moevik Fort was finally decommissioned, and one remain in full operational state (well, almost, to the best of my knowledge, they have no ammo). The S169 bunker below it is now a museum.

### The bunker

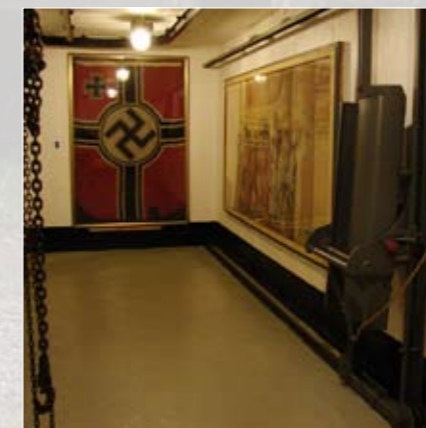
First thing that strikes you upon entering the bunker is the high preservation standard, right down to the wall paintings with solemn appeals; "Die Treue ist das Mark der Ehre" (Loyalty is the Badge of Honor) and stuff like that. There are many of them, and I don't know if

# Batterie Vara/Moevik



Regelbau S169 bunker. Drawing courtesy of Rudi Rolf. See "Atlantic Wall Typology" by Rudi Rolf, p. 26 for full legend

they are replicas, but if they are, it's a job well done! Right inside the entrance you will find the office where admission is paid. They also sell all kinds of WW2 stuff (even German infantry rifles) and the prices are very reasonable. You can also buy a soda or a beer and an ice-cream for the kids.



Turning left into the first charge room (12) you are met with a display of Nazi artifacts, e.g. they still have the flag that flew over the battery during the war, and various

gear. This exhibition continues through all charge and shell rooms, and I will not spoil your visit by meticulously going through it all, but limit myself to a few highlights and let the photos speak for themselves. [More photos here](#).

Firstly, they have the shells (empty, I hope), the cartridges and the hoisting gear – all in mint condition. It shows that this facility was in service until 1957 and thus avoided the pillaging and deterioration that so many Danish bunkers were subject to post-war.

Secondly, they have a lot of interesting gear, e.g. a four-meter stereoscopic rangefinder, the analog computer to calculate firing data, tools, weapons, uniforms and stuff. One particular interesting display is the two huge shells that line one of the door openings; one 380 mm from [Batterie Trondenes](#) at Harstad, Norway. This being the world's largest remaining WW2 naval gun

**Continued on page 15**



# The mighty Bismarck & Tirpitz

With the introduction of the **HMS Dreadnaught** in 1906, the era of the mighty battleships was literally jump-started. Sporting ten huge 12 inch guns in twin turrets with electrically transmitted target data information and powered by steam turbines, this juggernaut outgunned, outsmarted and outran all previous battleships, rendering them mere "pre-dreadnaughts" in a split second. A veritable arms race at sea started as every nation with self-respect had to have one or more of these juggernauts.

Wilhelm II from major naval engagements for the remainder of the war, which made it sort of a pyrrhic victory.

Following the 1919 Versailles peace treaty, Germany had to accept a number of harsh restrictions as to the manpower and military hardware of her armed forces. The victorious parties (especially France) were keen to hamstring the 1914 aggressor, held sole responsible for the Great War, and to deflate her future military capacity. Consequently, Germany

that the ships would be seized by the Royal Navy. For the next decade, German naval power was thus virtually non-existent.

However, as early as in 1932, one year prior to Hitler's rise to power, the German government announced that it would no longer honor the military restrictions imposed on them, as the Allied powers themselves had failed to initiate the military cut-backs, called for in a preamble to the treaty.

Three years later - in 1935 and following a period of treaty violations, including clandestine weapons design efforts and training of e.g. pilots in Russia - Adolf Hitler officially reintroduced conscription in Germany and set off a massive rearmament program, embracing both the banned tanks and airplanes as well as new, heavy battleships.

These efforts were expressed i.e. in the 11 inch battle cruisers Scharnhorst and Gneisenau (30.000+ tons), both launched in 1934, and the heavy 15 inch battleships Bismarck and Tirpitz with a displacement exceeding 50.000 tons, following in 1939. Even bigger ships, sporting 16 inch guns (40.6 cm), were on the drawing board, and temporarily the Führer's feverish mind contemplated giants with 20 inch guns (50.8 cm) until brought to his senses when informed by his engineers that it would require ships 300 meters long and weighing up to 120.000 tons - a size no existing German port could accommodate.

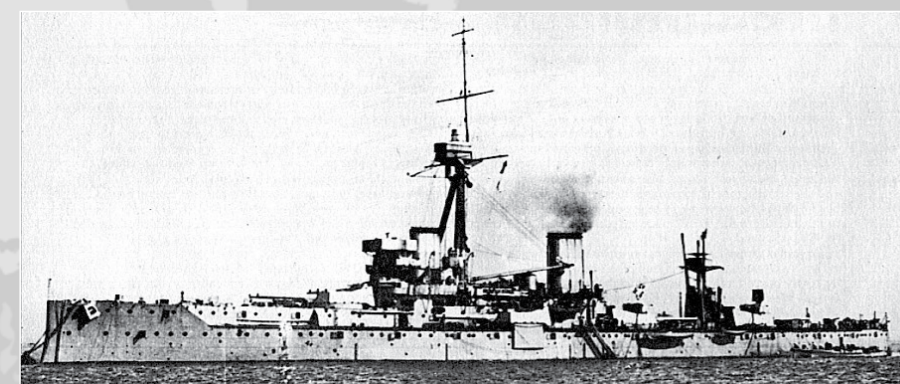
## Bismarck & Tirpitz

Both the **Bismarck** and the **Tirpitz** were launched in 1939 (14<sup>th</sup> February and 1<sup>st</sup> April respectively), but had very different operational careers although their demises had comparable elements; though they were the largest warships in the world at the time and considered almost impregnable, in the end they both had to yield to the airplane.

Specifications were comparable except for details. Both ships exceeded 820 feet in length, weighed more than 50.000 tons fully loaded and had a draft of

was not allowed to have an air force nor a panzer corps and the army-on-foot was restricted to only 100.000 troops with conscription abolished. As to the naval forces, Germany was allowed only six battleships and none with a displacement greater than 10.000 tons, and six cruisers of a mere 6000 tons plus twelve each of small destroyers and torpedo boats.

Imminent to the signing of the treaty, the bulk of the Imperial Kriegsmarine scuttled itself - while interred by the British at Scapa Flow - on June 21<sup>st</sup>, 1919 fearing



Especially Imperial Germany made strong efforts to cope with Britain, her old arch rival, and consequently embarked on an ambitious program to create a fleet of battleships that could match the British. At the outbreak of World War One, both sides could thus muster ships of 25.000 ton displacement, armed with 15 inch guns. The two fleets clashed only once during the war; at the battle of Jutland, in which both sides claimed victory. Fact is that the Imperial Navy *did* sink more Royal Navy ships than they lost themselves, but fear of risking his precious navy kept Emperor



30-33 feet depending on the load status. Twelve Wagner high-pressure boilers transferred 150.000 hp through three Blohm & Voss turbines to 15 foot propeller blades, and sent the vessels flying with water skiing speed; up to 35 mph. Range with full fuel tanks was almost 10.000 miles (at 21 mph).

Main armament consisted of eight 380 mm L47 SK-C/34 naval guns in twin turrets with a maximum range of 34 miles and secondary armament of sixteen 105 mm L65 SK-C/37. A number of 37 mm and 20 mm guns took care of air defense.

## Battle of the Denmark Strait

On May 19<sup>th</sup>, 1940, Bismarck left Gotenhafen (Gdynia), accompanied only by the heavy (8 inch) cruiser Prinz Eugen, in order to sneak out into the Atlantic Ocean where the couple was intended to prey on the convoys from the United States, so vital for the English war efforts.

The Royal Navy, on their part, was determined to intercept this menacing duo and thus fanned out their forces on the three possible escape routes.

On May 23<sup>rd</sup> the two rogues were spotted in the Denmark Strait by the radar-equipped, 8 inch cruisers HMS Suffolk and Norfolk. Fire was exchanged, but seriously outgunned the two Britons hastily withdrew out of range, shadowing the enemy while yelling for assistance over the radio.

As it came about, two worthy opponents were on the way; the **HMS Hood**, armed with 15 inch guns, and the 14 inch battleship, **Prince of Wales**. The "Mighty Hood", an elderly lady from 1920, was actually more of a battle cruiser than a battleship (the difference being that armor is sacrificed for speed), but she had been the pride of the Royal Navy since 1918. The Prince of Wales was a brand new

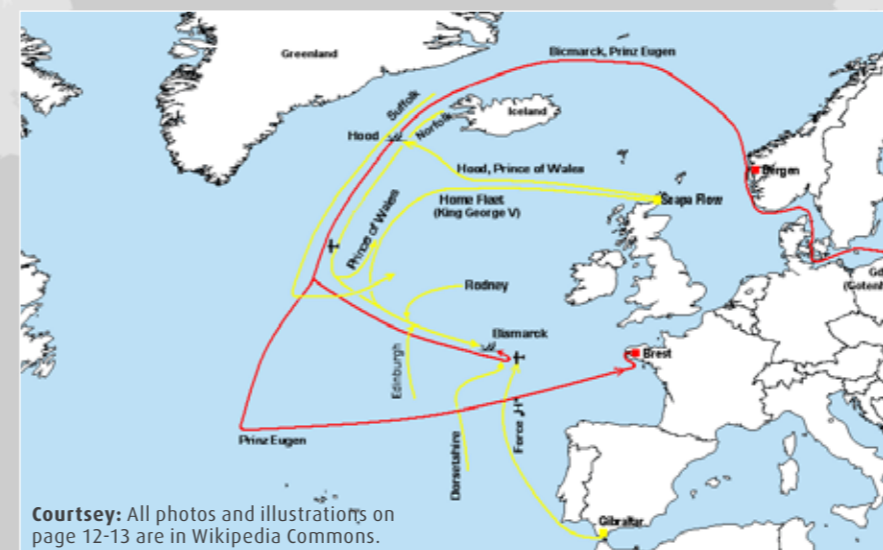
ship, commissioned on January 19<sup>th</sup> and barely completed from the shipyard. Manned with an inexperienced crew - and even civilian workers onboard, toiling with a malfunctioning ammunition conveyor system - she was really not yet fit to go head-to-head with a Bismarck-class battleship.

The fight was short as both capital ships fired at maximum range (25 km). After the exchange of a few salvos, a plunging 380 mm shell from Bismarck penetrated Hood's thin deck armor. It exploded in her magazines, splitting the ship in two and Hood sank in three minutes, leaving only **three survivors** out of 1418 hands. The Prince of Wales was hit seven times, and with several guns out of order and unable to bring the battle against a superior enemy to a successful conclusion, she withdrew and limped off while making smoke. However, also the Bismarck had taken hits, most seriously a blow to the hull underwater, causing the forward 1000 ton fuel tank to leak. This would later show crucial as the trail of oil was easy to spot from the air.

## Chase for the Bismarck

The loss of the Hood reverberated through the British nation and provoked Churchill's famous order; "Sink the Bismarck!" Every available unit was committed to the chase, including the aircraft carrier Victorious equipped with Swordfish biplanes. One of these managed to score a hit on May 24<sup>th</sup> but did not inflict serious damage. However, the violent evasive maneuvers taken by Bismarck during the fight did break up old wounds and eventually led to flooding of her bow, causing a fifty percent speed reduction.

For some time the German warship was under surveillance, but in the morning of May 25<sup>th</sup> she managed to shake off her pursuers, tricking them to search further north, and headed for sanctuary and repairs in Brest, where she would be protected by the Luftwaffe. The Bismarck was reacquired on May 26<sup>th</sup> when a Catalina spotted her oil slick and reported to the Admiralty. Out of range of her northern pursuers, the Royal Navy now



Courtesy: All photos and illustrations on page 12-13 are in Wikipedia Commons.

placed all their hopes on Force H, racing northwards from Gibraltar.

### Force H

Capital ship of Force H was the aircraft carrier Ark Royal, accompanied by the old battleship Renown and the cruiser Sheffield. Also Ark Royal was equipped with (almost obsolete) Fairy Swordfish biplanes and a sortie was launched in the evening of May 26<sup>th</sup>. Due to very poor weather conditions, the squadron by mistake attacked the Sheffield – which by odd chance turned out to be a blessing in disguise as the new magnetic warheads on the torpedoes malfunctioned. Returning to the carrier, the planes were thus fitted with old-fashioned contact warheads and on the next sortie almost in the dusk, one plane managed to score a hit in Bismarck's rudder. This would prove fatal for the German warship.

### Moving in for the kill

Unable to maneuver, the Bismarck had to sail in a large circle and await her executioners; the Renown and Sheffield and battleships King George V (14 inch) and Rodney (16 inch), joining the party from the west. At 8:47 in the morning, the combatants opened fire and only three quarters later, Bismarck's guns fell silent while fires had erupted all over the ship. However, as she was still flying her colors and no sign of surrender was seen, the giant was eventually torpedoed and sank at 10:39 in the morning. There were only **115 survivors**.

### The aftermath

The demise of the mighty Bismarck not only crippled the German Navy, but in a larger sense heralded the



end of the battleship as sovereign of the oceans. Brought to her knees by a flimsy wood and fabric kite, carrying the torpedo that jammed her rudder and left her unable to flee to safety under the Luftwaffe umbrella, the juggernaut thus fell pray to the new kid on the block; the aircraft carrier. As the British themselves were to recognize a couple of years later, when the powerful Prince of Wales and the battle hardened veteran Repulse were sunk by Japanese fighter-bombers, not even the toughest, well-armed battleships could match "the flying peril" that Churchill himself warned against in 1934.

As to Germany, the defeat of several large surface units early in the war, and the failure of the pocket battleships Lutzow and Admiral Scheer to engage the

allied convoy PQ17 in Operation Regenbogen (Operation Rainbow), enraged the German Führer and led to Admiral Raeders forced retirement early in 1943. Die-hard Nazi, Karl Dönitz, was appointed Grand Admiral and supreme commander of the German fleet. Dönitz, being a submariner himself, shifted the Kriegsmarine emphasis to U-boat war and the only surviving large battleship, the Tirpitz, was sent in exile in Norway where she too eventually was sunk by British bombers while anchored in Trondheim Fjord.

### Battleship guns in the Wall

However, at that time a number of massive guns were already produced, both 16 inch for the shelved H-Class juggernauts and some 15 inch barrels intended for upgrade of the lighter armament on the Sharnhorst and Gneisenau. These formidable guns were now re-commissioned as coastal artillery in France, in Norway and in Denmark.

- Batterie Lindemann (40.6)
- Batterie Todt (38)
- Hanstholm (4 x 38)
- Batterie Vara, (3 x 38)
- Batterie Trondenes I (4 x 40.6)
- Batterie Dietl, (3 x 40.6)

### Sources:

"Schlachtschiff Bismarck", Müllenheim-Rechberg, Burkard Freiherr von, 1999  
"Articles on Wikipedia" (Link), (Link)

**Above:** The sinking Bismarck seen from a British warship (Wikipedia Commons).

**Left:** The capsized Tirpitz in Trondheim fjord (US Gov. license free for non-commercial use).

### Got a story to tell?

If you have visited a place that you believe other war tourists could benefit from hearing about, you are encouraged to come forward and tell about it here in TWT.

The only condition is that it deals with the (war) history of Europe through the past 1000 years, and that it is apolitical and held in a civil tone with no prejudice to race, sex, creed or color.

Full credit will be given to author - name, photo and contact details if you like - but I cannot offer you any fee as this is a non-commercial magazine from which I make no profit myself.

Write to [dre@wartourist.eu](mailto:dre@wartourist.eu)

### Continued from page 11

on land, the shell weighs a stunning 1030 kg, equal to a small sedan.

Leaving the ammunition area and entering the gun pit, we immediately observe the difference from Hanstholm. The first thing we note is that the ammunition aisle is covered with 30 mm steel plates that open and closes to give access for the ammo hoist as the gun pivots. Thus it is pitch dark in there if it wasn't for the electric lights.



The ammo hoist itself protrudes from the turret down into the aisle and was fed by the trolleys we also saw at Hanstholm. One can imagine the toiling the crew must have had, and almost hear the sergeant yelling orders, as the gunners struggled to push the heavy laden trolleys to the hoist.

Continuing into the gun pit, the mighty turret looms above us. To be honest, the barrel looks kinda short from down here, but

remember that about two thirds of its length is concealed inside the turret. In contrast to i.e. the guns at Fortress Austratt near Trondheim, this is a so-called "land turret" with an overall armor thickness of only 50 mm, designed only to protect the crew against splinters and small arms fire. The concern we may have, knowing that this turret weighs in excess of 330 tons is soothingly countered by observing the massive concrete pivot supporting it. Another thing we notice is the duct collecting the used cartridges.

Returning to the bunker, we see the rooms adjacent to the ammo area. At the end of the corridor is the communications room, fully equipped, and the next few rooms are dedicated to air condition, water and fuel tanks and the generators providing power for the bunker. Finally we have the crew quarters,



**Left:** Ammo hoist.

**Middle:** Restored crew quarter with bunks.

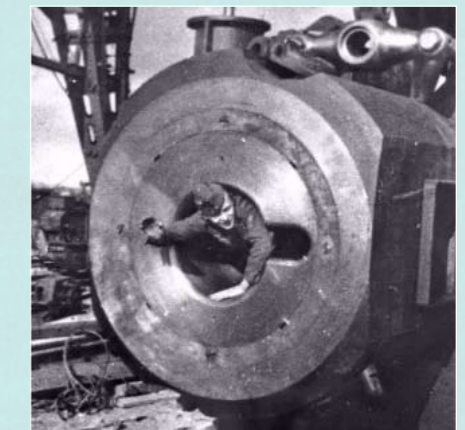
**Right:** The breech from the even bigger (16") Adolf gun at Trondenes. Courtesy of Harald Isachsen, The Adolf Gun, Trondenes.

**Below:** A full side view of the gun.

sufficient only for one shift though. In an emergency, where all 52 hands were needed in the bunker, hammocks were installed in the corridor.

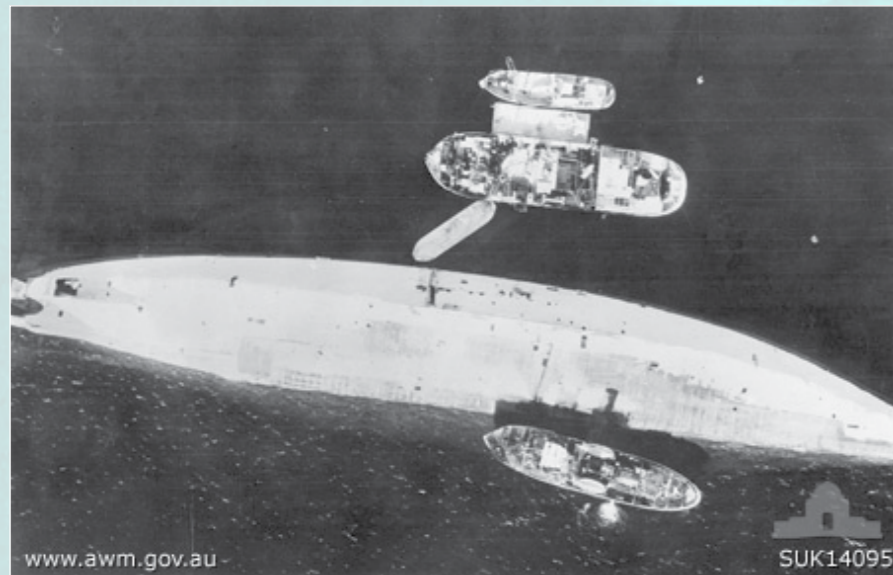
### The gun

This turret is BIG. Awesome, actually! Some 22-24 meters in length and perhaps 4-6 meters wide (if memory serves), and inside there is as much room as in a large lorry or van – that is, there would be if it wasn't for the enormous breech, the equilibrators, the handles and levers, gauges and meters, wiring and switches and all the other stuff taking up most of the space, but nonetheless you can easily move around in here. For techno-freaks there is a lot to look at, i.e. the breech, which is a Krupp



wedge-type. A not too hefty person will easily fit in here a fact that must have come in handy when the barrel needed maintenance.

(I didn't try it out though; my... my *shoulders* are too broad to fit ;-)



[www.awm.gov.au](http://www.awm.gov.au)

SUK14095







There is also an inner barrel lining here; a small caliber (127 mm) used for practice-firing to reduce wear and tear on the big barrel, which could only fire some 280 rounds before it was worn out. And if we descend down into the lower storey (!) of the turret, we see an AC-DC converter as the gun servos – originating from a battleship – ran on DC current.

### The “cathedral” bunker

This is basically the same type of bunker as the three others, but with a huge concrete embrasure to protect the gun from aerial attack. It was poured in 1942, but installation of the gun dragged on and was not completed by 1944, as the barrel was still in transit from Germany. On the night of February 22<sup>nd</sup> 1945, the vessel Porto Alegre, carrying the 110 ton barrel, was sunk in the Kattegat by the RAF and thus, this installation was not completed by the end of the war.

The bunker itself, however, is definitely worth a visit. Sitting there in the huge, church-like hall you feel a certain kind of awe, an acknowledgement of all the human toil and suffering it took to build this – and all for nothing. I was there on a rainy day in 2006 (one of several times) and the sound of pouring rain and drizzling water created an eerie, yet also melancholic and not all unpleasant, almost *philosophical* feeling within. Try it out, sometimes ;-)

**Upper left:** Inside view of the Moevik 15” turret. Gun breech is to the right.

**Upper right:** The view from the cathedral bunker - raising high above treetop level.

**Middle:** View from inside the big bunker.

**Lower left:** Yours truly at the opulent lunch on the ferry back to Hanstholm

Climbing on top of the bunker (there is a very secure spiral staircase), you have a fantastic view of the surroundings; not least the gun and the remaining two, derelict gun emplacements. These bunkers are inaccessible, but you can see the gun pits from above and the entrances.

### The area

The Norwegian nature is beautiful, and the area surrounding Vara/Moevik is no exception. For a Dane, used to live on a mere pancake,



the terrain with steep cliffs, partly covered in birch and pine is picked right out of a Tolkien tale. That in itself is a good reason to take a stroll in the area, but there is more to it. Here and there you will suddenly observe a well-hidden bunker, the grey concrete blending in excellently with the cliffs.

The museum homepage has it that 16 other, smaller guns protected the battery and that “numerous” bunkers are in the area. A map in



the museum bunker does point to some of the bunkers, but I will have to admit, that I have only seen a few of them so far. Not all are open on a daily basis, but ask the staff which ones it is possible to see.

When you are done, a pleasant rest area in front of the main entrance to the museum offers an opportunity to rest your legs and break out your picnic basket.

Enjoy your twin trip. We did ;-)

### Sources:

“Tyske Kystfort i Norge”, Jan Eigil Fjørtoft, 1982  
 “Atlantic Wall Typology”, Rudi Rolf, 1998



### Factbox

**Place:** Kristiansand Kanonmuseum, Krodden, Møvik, Kristiansand, Norway

**Phone:** +47 91 34 39 38

**E-mail:** post@kanonmuseet.no

**Web:** <http://www.kanonmuseet.no>

**Opening days:** See website

**Opening hours:** See website

**Admission:** Open Air Museum is free. Museum equals 10 Euro

**Bus from Kristiansand:** Route M1

**Recommended gear:** Flashlight, sturdy shoes or boots. Use caution in steep terrain and on the cliffs (very slippery when wet)!

**RATING:** ♥ ♥ ♥ ♥ ♥

### The guns at Hanstholm & Kristiansand

- 380 mm SK (Schnell-laden Kanone) type C/34eL50 in Schiessgerüst C/39 turrets.
- **Barrel length:** 19.6 meter
- **Barrel/breech weight:** 110 ton
- **Breech:** Krupp horizontal wedge (chamber modified for extra charge)
- **Shell:** 495 kg (HE), 800 kg (APHE)
- **Charge:** Up to 304.5 kg
- **Muzzle velocity:** 820 - 1050 m/sec.
- **Range:** Up to 55 km with 495 kg shell
- **Lining service life:** 286 rounds

• Thanks to Arild Andersen, Kristiansand and Harald Isachsen, Trondenes for providing technical data and photos.