



The

CDSG Newsletter

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The Coast Defense Study Group, Inc. — Special 2022

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2022 FSG & CDSG SPECIAL TOUR to DENMARK and SWEDEN

By *Norman Clark and Lars Hansson*

The Coast Defense Study Group (CDSG) and Fortress Study Group (FSG) successfully ran another joint tour (similar to our joint tour to the defenses of Switzerland in 2018) to fortifications in Denmark and Sweden from May 22 to June 7, 2022. Key to this tour was Lars Hansson (through his Bunker Tours company) as without his leadership and logistics management this tour would never have occurred. The tour was a gigantic logistical puzzle that went very well, and the few problems arose naturally but Lars successfully solved them. Only two visits had to be cancelled while 73 sites were visited. Lars prepared a quick tour metric summary to give you an idea of the very large scope of this tour:

CDSG and FSG Bunkertour Denmark Sweden 2022

Number of steps: 181,806 steps

Time in field: 185 hours

Number of site visits: 73

Number of nights: 18

Number of hotels: 13

Booked lunches/dinners: 15

Number of flights: 3

Number of water taxis/ferries: 25

Number of kilometers of car/minibus: 2,840 km

Number of km of train/tram: 240 km

Number of km of chartered bus: 536 km

Lars summed up this tour by saying *"I dare say that such an extensive journey has never before been made in Sweden – and will probably never be repeated – and that there are not many who would dare to embark on this massive work and have the contacts needed to cope with this. The event can be seen as the result of my 20 years of experience in military history events and tours of Swedish fortification history."*

This tour's genesis came from Charles Blackwood of the FSG and Terry McGovern of the CDSG challenging Lars to plan a tour visiting as many of the preserved Swedish defenses as possible in the shortest duration possible. For 18 days, participants came and went, some were present all the time, at most the group was 24 people and at least six people. Lars told us this tour was by far his biggest to date and required two years of planning to arrange permissions, transport, and lodging. Everything for the tour was booked for 2021 but had to be cancelled due to the pandemic, so Lars then had to rebook the tour for 2022.

The tour was divided into four parts – a pre-tour of two days in Denmark, the main tour for FSG starting in Copenhagen and ending at Arlanda, the CDSG tour starting in Nyköping and ending in Luleå and an extra end of two days in Gothenburg. The dates spiked backwards from visits to Gothenburg on National Day, June 6th (allowing us to see the annual firing of Fort Oscar II's coast artillery), which set the tour start for May 22. The tour reports are in two parts – part one written by Norman Clark (FSG tour segment) and part two by Lars Hansson (CDSG tour segment). Due to the length we will run these reports over two *CDSG Newsletters*.

Overall map of tour is on Page 21

Part 1: 22-30 May 2022

By *Norman Clark*

It had finally happened, I was going on a holiday with, hopefully, Covid put behind me. The last FSG trip had been to Greece 2019, so it almost felt strange going to an airport. Worry not, as things soon returned to normal. My connecting flight to Amsterdam was an hour late, I missed the connection to Copenhagen and so spend the night in Amsterdam Schiphol airport. You will be unsurprised to hear I was at the gate for the flight next morning at 04.00 – not missing that one! The day started at 08.45 in Copenhagen, and I found our minibuses on time and met with fellow travellers, FSG and CDSG – the trip had begun.

Sunday 22 May

The overall Tour was organised and run by *Lars Hansson* of *bunkertours*; the next two days were an optional extra he had arranged.

We travelled in two minibuses with Lars driving one and the other by one of us to our first stop at **Stevns Fort**, about one hour's drive south of Copenhagen and situated on the coast covering the east channel to Copenhagen. The fort was built between 1952 and 1953 and its initial armament was a pair of twin 15cm guns which had formed the secondary armament of the German battlecruiser *Gneisenau*. It had been damaged in the 'Channel dash' and was taken to be repaired in Kiel but an air-raid detonated ammunition onboard and the hulk was stripped.



The Gneisenau Turret

In 1957 the fort added a further 12.7cm gun to fire illuminating rounds, replaced in the 1960s by a further 15cm gun. Along with the surface works for the site about 1.6km of tunnels connected stores, services, accommodation, and a control cen-

tre. There were also six twin 40mm anti-aircraft guns. The AA defences went through a number of changes with both 20mm and 40mm pieces, there being 18 guns in 1997 though by then the site had gone through a major change. In the late 1970s the gun site was closed, and the fort took on a new role as a Hawk battery. This was a radar guided low to medium height surface to air missile and Stevns Fort retains, as well as some of the guns, the Hawk missiles and associated radars. In 2000 the site closed and was converted into a cold war museum. As well as looking at the *Gneisenau* turret we were taken on a guided tour through the site and the tunnels. It was a pleasant day and Lars had collected drinks, non-alcoholic of course, and sandwiches. There was a fair amount of mayonnaise on these and I merely wish to say some coped better than others – you know who you are.



Some of the 1.6km of tunnels

Back to our transport and on to **Masnedø Fort** which has a triangular ground plan surrounded by an earthen dry ditch and was built between 1912 and 1915.

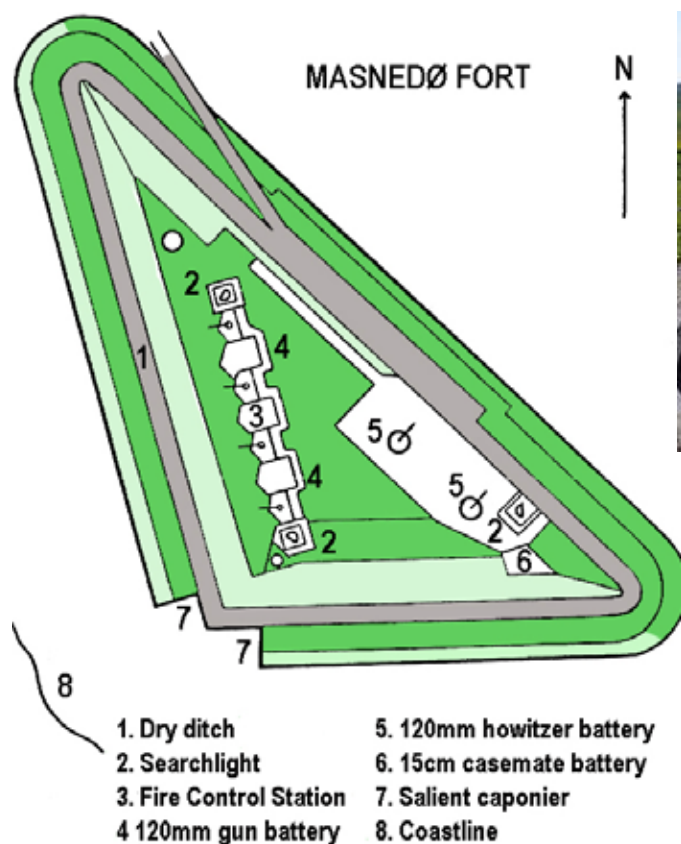
The original armament comprised 2 x 15cm m/1888 guns in the left face (dismounted in 1937) and 4 x 120mm m/1912 guns on the right face. This was augmented by 2 x 120mm howitzers m/1914 in turrets on the roof and 2 x 37mm flanking guns.

The 120mm guns were moved by the Germans in 1940 and replaced by more modern 127mm guns. The fort remained active with the Danish navy until 1951 when it was converted to a mine storage facility and remained as such until the fort was

closed in 1973. We were able to wander all over the site but sadly the fort itself was locked.



Nike and Hawk missiles on site



In the evening we visited Maribo Museum, a private collection of Danish military equipment and uniforms. An impressive range of material, it was only as we went round that the guide/curator told us it was his private collection.



Masnedø Fort, 120mm gun line and FC Station

Monday 23 May

We travelled west to meet our ferry to cross over to Langeland – Long Island – and to drive to **Langelands Fort**. Ferries and water taxis were to be a theme, even more so in Sweden and it meant Lars had to deal with a timetable more strict than perhaps normal for, as they say, ‘time and tide wait for no man’, even the FSG.

The fort was opened in 1953 and was placed to control the



Twin 40mm Bofors AA; right upper, one of the 150mm gun

minefields in the Langelands Belt, which we had just crossed. It remained in active service until 1973 but after the collapse of the Soviet Union was mothballed in 1993 becoming a cold war museum. This is a very large site, and we were released after arriving to look around. The site has good access with roads for pedestrian access around all the important points. The fort mounted four 150mm Skoda guns as well as two anti-aircraft batteries with 40mm guns and additional mobile AA weapons. Also here were the control, storage and generator sites. The guns are mounted in single turrets and there is access to rooms below the turret from where the guns were served. Each of the turrets has now had these rooms converted to exhibition space where cold war themes such as propaganda are examined. Also on site is the Danish submarine *Springeren* – *The Knight*. This is one of the



‘Springeren’ and torpedo tubes

Delfinen or Dolphin class coastal submarines meant to operate in the Baltic. In service from 1964 till 1990, it had 4 torpedo tubes and was the first Danish submarine not to have a deck gun. You can walk from front to rear, and it reminds you that tall people shouldn't join the submarine service. This was also one of the last submarines in Danish service as in 2005 it was decided to no longer have submarines in the Danish navy.

Close by are a number of large hangars, one containing the Danish ship *Asko* built in 1941 as a minesweeper and used by the Germans as such when it participated in the clearing of German minefields after the war, becoming MHV 81, the designation MHV being naval home guard. Alongside it is a display of various naval mines. Other buildings contain a Polish MIG-23 Flogger-B, a Danish F-35 *Draken* and a British Ferret alongside a large display on the Warsaw Pact plans to invade Denmark using forces from Poland.

Again, dictated by ferry times we left and returned to Copenhagen, with time to call at **Mosedø Fort (below)**.



This was a coastal battery but also the left wing of what was known as the *Tune Line*, and its biggest concrete structure.

Planned in 1908 it was completed in 1916 with 6 x 12cm howitzers originally in two batteries N and S of the fort and a secondary armament of 4 x 75mm QF's (below, Lars Hansson).



Close-in defence used 8mm Madsens and 37mm Hotchkiss.

We then drove to the **Kongelundfortet Battery** located almost at the end of Copenhagen airport's main runway. Built 1910 – 1914 as an artillery battery to cover the offshore minefields it was armed with 15cm guns.

The site is rectangular and surrounded by a wet ditch. Like many other forts it has been built over when in 1959 it was converted to serve as a radar station for Nike and Hawk missiles which were located elsewhere. This results in some strange elevated concrete platforms stuck on top of the central redoubt (below).



Finally, we called in at **Dragør Fort** constructed on an artificial island and completed by 1915 (below). Built with a massive armament of 4 x 35.5cm howitzers; 4x17cm howitzers; 4 x 120mm QF and 2 x 75mm QF plus 1x47mm and a number of machine guns, it covered minefields and was built to prevent ships closing the coast to bombard Copenhagen. During the cold war 40mm AA guns were installed and in the 1980s two 76mm guns. However, remodelling and the installation of communication towers among other works have meant that only the 17cm



Dragør Fort



A pair of 17cm howitzer emplacements

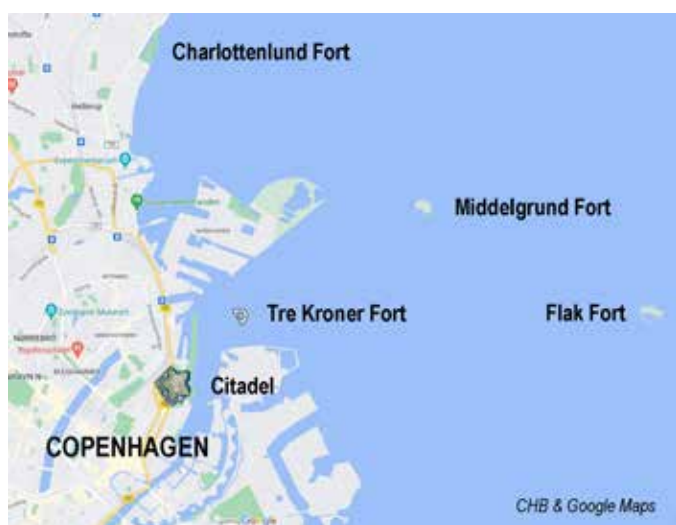
and a pair of the 75mm gun emplacements remain intact. The fort has been converted to a hotel and restaurant and is home to The Big Mermaid Statue.

These last three batteries were not part of our planned itinerary but when we made good time Lars had added them in – excellent.

At our hotel we found the rest of the Tour party of FSG and CDSG members.

Tuesday 24 May

Our first visit planned for this morning was **Charlottenlund Fort**; though the forecast was for rain and wind we appeared to miss it. The coach was due at 09.00 but now the world butted in – the coach didn't leave at all; the company had forgotten us and so we had to wait before it arrived. We now ran into the Copenhagen rush hour which added even more time and so we had to cancel the visit as we needed to meet our water taxi to visit the three sea forts.



Charlottenlund Fort has 12 x 29cm (1910) howitzers mounted

And so, we set off for **Flakfortet** the furthest out of the three we would visit, all to protect Copenhagen from naval bombardments and all on artificial islands. We motored past the Danish submarine *Seal* on display, and after dropping off what looked like a school trip at Middelgrund Fort we landed at Flak Fort for a guided tour. Our guide explained that Flak in this instance had no connection to antiaircraft guns.

Flak is the Danish term for a low sandbar often just below the water surface and it was taken advantage of as the foundation of the artificial island, hence its name.



One of the three paired 21cm gun positions

Built between 1910 and 1914 it was initially armed with 4 x 29 cm m/1910 howitzers: 6 x 21 cm m/1913 guns and 4 x 75mm QF guns. This was augmented with 2 x 47mm anti-balloon guns, another 75mm and a number of machine guns and searchlights. In the 1950s German 150mm guns brought from elsewhere were installed in place of any existing armament, along with 40mm Bofors AA pieces. It continued in military use until 1957.



Flak Fort

In 1965 it was decided to mount a Hawk battery on Middelgrundsfortet and while works were carried on there to mount them, from 1965-68 they were stored at Flak Fort.

In 1975 the fort was leased to the Copenhagen Sailing Association, but this unfortunately led to widespread vandalism due to the easy and uncontrolled access. In 2001 the ministry of defence sold the island with conditions as to its future care, maintenance and public access. The fort still has several features in the former barracks though any armaments left when the fort was sold.

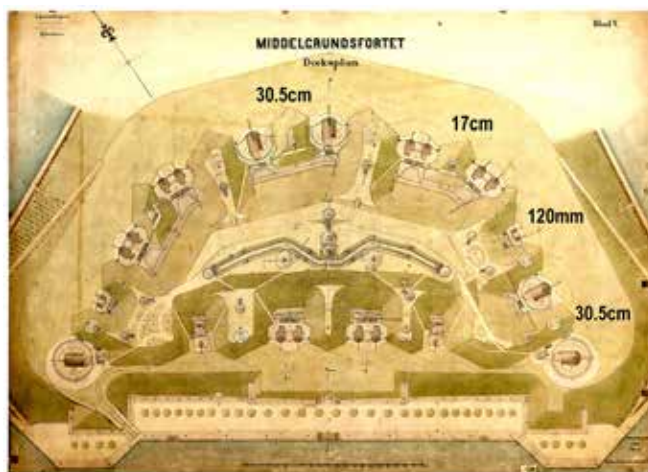
One item is a restored generator, one of a number which had provided the power for the island.

We now retired to the café for a coffee. Some of us enquired about the cakes but were told they were for a pre-booked party. It turned out *we* were the pre-booked party and after apologies we had a light lunch, coffee and those cakes. That said, not all of us. Some had asked before and then went off and as usual several had too many photos to take and so missed out. That left a few of us with the terrible dilemma of what to do with the excess cakes – yes, you're right, silly question, we just had a few more.



Restored Generator

When Flakfortet was built it was the second largest artificial island in the world; we now sailed over to **Middelgrundsfortet** built between 1890 and 1894 when *it* was the largest artificial island in the world.



333 Drawing from 6 November 1895, most recently corrected in April 1904 (National Archives)

Also known as the Youth Island this has been adapted to house youth organisations and the island was fairly full, so when looking about, we needed to bear in mind people were staying here.

Originally armed with 5 x 30.5cm and 17 x 17cm howitzers as well as 6 x 120mm and 7 x 47mm guns none of these remain



30.5cm gun, 1948

Above and left; from the book 'Middelgrundsfortet 1890-2019' by Peter Thorning Christensen and Tom Wismann



Middelgrundsfortet: above, the gorge & radar platforms. Below: positions for two pairs of 17cm guns. (CHB)





A 'nest' of gun pits, 30.5 and two 40mm Bofors AA

and many emplacements are partly built over by the structures to support the Hawk battery noted above. The island remained in military hands till sold in 2002 though it had ceased to be used by the military by 1984. We were able to wander over all of the surface and allowing for the 'occupiers', the nearly two miles of underground corridors and associated rooms.

We now boarded a 'RIB' for a fast - very fast - passage over to **Tre Kroner Fort**, another artificial island fortress. The original was a few hundred meters away when this fort was started in 1713 when three old ships-of-the-line were sunk here. One was the *Trekroner*, the Three Crowns, and from it the fort took its name. Construction started in 1787 and it played a part in both the British naval attacks on Copenhagen in 1801 and 1807. In 1885 the fort was remodelled using concrete over the existing brick and stone. Between 1900 and 1915 the fort had 14 x 29cm and 2 x 24cm howitzers; 6 x 17cm; 11 x 15cm and 8 x 47mm guns. This was altered to 2 x 24 cm; 6 x 17cm and 7 x 15cm as well as additional AA guns. Two of the 15cm Krupp guns remain. Abandoned, it was sold to the Copenhagen harbour authority in 1934. Part used as a barrack by the Germans during WW2 and as a POW camp, after the war it fell into disuse until 1984 when it opened to the public. The fort has had work done to it to restore many of the 18thC buildings and works are continuing.

We crossed back to Copenhagen, being dropped off near the Little Mermaid statue from where we individually made our way back to the hotel. I and a couple of others walked back through the **Citadel** or *Kastellet*, still a military post, from where on to the underground and back to the airport hotel. Our day finished with a pre-arranged evening meal, and so ready for tomorrow and the crossing over to Sweden.



Fire Control Station



Two 15cm Krupp guns in NW battery (CHB)



Tre Kroner Fort dock, traverses and citadel



Tre Kronor



Inside the Kastellet (CB)

Wednesday 25 May

Our hotel was literally across the road from the airport terminal building which also contained the railway station and so it was a 5-minute walk to our platform and the train to Ronneby station in Sweden. The journey took us over the Bridge now linking Denmark and Sweden, ancient enemies. At Ronneby we boarded our bus and travelled south to a causeway which crossed over an open stretch of water brushing against the small, fortified island that is **Västra Hästholmen**.



The fortress has been closed to visitors, so we were one of the first groups in almost ten years to officially go beyond the fence. The buildings present a bizarre mass containing just about every type of construction you might imagine.

The 17thC walls are topped by irregular shaped blocks covered by almost black bitumen-like surfacing. Dated from around 1679 it was built to protect the approaches to the Karlskrona harbour, an important naval base, from the west. Until the 1860s the fort



1889 plan, from Tour Guide



had open emplacements with 12 to 16 guns but in 1871 a new stone-built arc-shaped building was added, mounting 24cm and 12cm guns in eight batteries, with a controlled mine station which was added in 1878. In 1891 the armament was: Line I - 2 x 24cm m/1869 and 3 x 23cm; Line II - 1 x 23cm and 1 x 57mm; Line III - 2 x 12cm m/1873 and 2 x 57mm; Line IV - 2 x 24cm m/1869; Line V - 2 x 17cm m/1869; Line VI - 2 x 24cm m/1869 and 2 x 27cm m/1869; Line VII - 2 x 17cm m/1869. In addition, there were a number of MGs for close-in defence. Between 1903 and 1910 extensive modernisation was carried out with new artillery and new designations. VH1 (Line III) 3 x 57mm m/1899 Bofors; VH2 (Line VI) 4 x 12cm m/1903 Bofors – these guns are preserved on site.



The surface was as much a wonderland of shapes and undulating surfaces with observation points, MG posts, turrets, and musketry walls, a fascinating site (above).



Interior of 12cm turret (Maurice Gehlen)



Four 12cm guns

Other changes were VH4 (Line VII) 4 x 57mm m/1895; VH6 2 x 25mm machineguns; VH9 (Line I) 2 x 57mm m/1899; VH10 1 x 25mm MG; VH11 2 x 15cm m/1883.

After 1925 all but VH1 and VH2 were dismantled, VH1 remaining active to 1964 and VH2 to 1969. Anti-aircraft guns were added before WW2 when the 57mm battery was dismantled; the army added 40mm m/36 Bofors guns to protect the mine line, later adding a tank turret m/74.

The site is overgrown, and interiors show a lot of water penetration. Lighting had been provided for us in the form of ropes of light giving a strangely fairy-tale appearance. It was possible to get around much of the interior though it was left to us as to how much we trusted rusted ladders into turrets or engine rooms, helped a little by finding a layout plan showing proposed renovation works.

We now travelled on, making an extra stop at **Oscarsvarn**, a fort built after the disastrous battle of Poltava in 1709 and renewed fears of a Danish attack on the naval base at nearby Karlskrona. The fort covered the road bridge and a canal.

It is worth taking time to consider Swedish defences generally. The dilemma was that sites such as Karlskrona and Stockholm were coastal, though often accessed through a myriad of islands and so defences generally covered sea routes to these targets. But not all channels were suitable and as ships grew, and their draughts, where these forts were put also had to change. It was also the case that Sweden changed in size and so Stockholm for instance was either well away from an enemy or on the front line. When Sweden extended over most of the Baltic coast the front line was beyond the current Baltic states into Russia, but after Poltava it was outside Stockholm's archipelago.

The fort is now surrounded by modern roads, junctions, railway lines and a canal so there was some footwork through undergrowth to the central casemate. The site was taken over by the local municipality in 1973 and is somewhat lost, though they have put up some orientation boards. From here it was on to our hotel in **Karlskrona**.



After dropping off luggage Lars led a group out past the naval museum – more of that later – to **Bastion Kungshall** located on the small island of Stumholmen, accessed by a bridge. Karlskrona was founded in 1680 and this was one of the bastions built to protect it. It remained in the hands of the navy till the 1970s.

In the 1990s, along with many residential buildings, the excellent naval museum was built. This we visited on our way back; it contained, as such buildings do, the devil's work – a book shop – to which many of our party fell victim.



Naval Museum: 25.4 cm Bofors m/94C, No 6, made at Bofors in 1899, the carriage made by Swedish company Finspongs styckebruk in 1898. Placed in the aft turret on 1st class pansarbåt (Coastal defence ship) Niord it was Bofors' first attempt at a heavy gun and also the last made for the navy with forged steel.

The ship also had a front turret as did her sister ships Oden and Thor but they had m/94A and /94B guns made by French company Canet. Niord was in service 1899 to 1944 and ended her career as a 'guinea pig' for explosive devices. (Thanks to Lars Hansson for information).



Kungsholm Fort, early and late periods (Maurice Gehlen)



Thursday 26 May Aspö Island

Leaving Karlskrona in our water taxi we headed off to **Kungsholms Fort**. However, when nearly there the boat slowed to a stop and then headed off to the island of Aspö – what's happening? We found out when we landed. The navy occupies Kungsholms and had refused entry, even though it had been arranged, it was to turn out that our permission to land hadn't got to them – neither Lars nor the local tourist board were best pleased. Nor us – just tantalising glimpses of some of the many batteries and guns.



diers in more comfortable quarters than the fort itself. From here the bridge connects to the fort and our guide took us round the fort and interior, good timing as that was when the rain started. On the first floor a vaulted corridor runs the whole length of the donjon providing accommodation as well as access to gun positions covering the bridge and landward side. The outer walls connect the bastions where cannon would have covered the seaward channel. These walls enclose a small area within which there is a small commander's house, looking rather incongruous. There is a small, neat museum within the fort.

We now moved further inland to the **Mobile Coastal Artillery Museum** which shows a wide range of artillery pieces as well as



Drottningkärs Castle from SE (Maurice Gehlen)

There had to be some thinking on his feet, but Lars had a contact on the Island and he got us into **Drottningkärs Castle**. This was close to our landing point so just a short walk. The castle site just offshore is connected by a timber bridge and forms part of the various defensive works constructed after the creation of the naval base at Karlskrona and was completed in the last decade of the 17thC.

The rectangular fortification has four corner bastions with a massive granite donjon, a casemated barracks.

The fort was on a war footing at various times between 1710 to 1811 but in 1865, when the new *Ellenabben* fort was built on the island, it was taken off the active list. The fort can be said to start on shore where the builders realised its weakness was a land-based assault and so, starting in the 1730s a series of outer works were built where a central ravelin was located surrounded by lunettes, a caponier and outer glacis. Later the caponier was converted to provide accommodation for the garrison's bombard-



the associated command and control equipment, much of it from the disbanded coastal artillery regiment KA2. The museum is in two large sheds with a number of the larger pieces outdoors.



Close to the museum there are the remains of **Battery Aspöberg**, in the form of a large concrete gun pit, for the 30.5cm howitzer battery that was here. The museum is very impressive, and we were guided round by one of the volunteers who keep it going.



Next to **Ellenabbens Fort**. As noted above this was created to replace the fort at Drottningkärs and was completed in 1904 and manned by Regiment KA2. The fort is formed of a long, 150m block, surrounded by a dry ditch, on top of which are the fort's guns.

It was originally armed with 3 x 25cm guns m/85, whose origins are British 10-in BL guns, taken from Swedish armoured ships. These remained until 1936, but there were also 2 x 57mm m/89 guns which remained in service until 1959, though the fort was still used for exercises till the 1970s. Lars had managed to get keys, so we didn't need to climb the unclimbable fence.

The exterior was easily accessed and the turrets for the two later guns remain, but the interior was different. Partially put off by my failing torch the interior was flooded throughout the parts I looked at and I did not explore lower levels.



Inside the fort: railway and 57mm gun (Maurice Gehlen)

Nearby is **Ellenabbens Battery** built in 1972 and armed with 3 x 7.5cm m/57 guns, only discontinued in 2000. Only the turrets show but beside one of them we uncovered a hatch to which Lars had the keys, with a push of a button the hydraulic hatch opened revealing a ladder down to the magazine and lower levels. We needed no invitation.

Below ground there was accommodation for the crews, as well as ammunition storage and handling and access to the turrets - a really fascinating visit. We almost beat that when we all exited the site and the hydraulics that closed the door didn't work -





something had fused and the key holder – who had gone back on the boat – had to be recalled.

The radar/control station was a substantial underground site accessed by a sloped roadway. Further in, a large chamber had been carved out of the granite and within it the facility was built. This was one of many bunkers built on this island, the most fortified in Sweden. The bunker was on four levels with the main measuring station with radar and TV/laser rangefinder.

As we hadn't been to Kungsholms Fort we had time to visit the former radar station and then **Jutudden** (1940) and **Hyttorna** batteries. Both had been armed with 57mm guns, the sites remain and can easily be reached on foot, but Jutudden in particular is fairly overgrown and the works, like large concrete pillars are not open.

Hyttorna 57mm battery (CHB)



Godnatt Artillery Tower (1862), en route for Karlskrona (CHB)

Friday 27 May

Today was to be a day on the bus. We walked to the bus station and as we did Lars pointed out the signage that indicated an underground nuclear shelter for the population. These were built throughout the country to give some protection to the population. From here we travelled to Kalmar where we changed onto the bus which would take us to Nyköping.

Here we picked up our transport for the rest of the tour and took the opportunity to visit **Nyköping Castle**.



Until the 16thC it was the second capital of Sweden. A medieval building, it was burnt down, along with the town, in 1665 and wasn't rebuilt; to add insult to injury some of the stonework was used to build the modern Stockholm castle.



Femore Fort, Battery Oxelösund followed; the battery was one of a series built during the 1960s and 1970s, this one being completed in 1964, the third out of a total of 30 built in the Cold War. The site extends to some 3,300m² and is connected by a 450m-long tunnel and was armed with 3 x 7.5cm m/57 guns.



7.5cm m/57 gun (CHB)



Loading tray (CHB)

The site was closed in 1997 and was scheduled to be demolished in 2003 but a local group took it over and it opened as a museum in the same year.

The volunteers treated us to a fine meal in the fort, so ending the day.

Saturday 28 May

A long drive to the Ankarudden ferry took us over to **Landsort**, the last island before the open waters of the Baltic, with major waterways on either side. In the 1930s it was decided to create a line of guns further out in the archipelago, the 'Sea Band Line'. Three 15.2cm m/98 guns were moved from Vaxholm forming the first battery in a line which would stretch to the north of Arholma. The three guns and control bunker were situated close to the lighthouse on the southern tip of the island.



The battery was modernised during the cold war with new radar and range finders but by the 1960s it was old fashioned. There was a 7.5cm m/57 in an inlet to the west and other batteries to the east. In 1977 it was decided to replace these defences with a modern ERSTA system. Six of these were ordered for various sites on the coast – Landsort is the only one remaining. The modern battery was of 3 x 12cm m/70 guns along with associated control bunkers, with modern radar and measuring equipment, an AA gun and close-in defence weapons. The battery was decommissioned at the turn of the century.



Landsort Battery 12cm/m70 turret (CHB) and magazine



9.4-in is said to be the largest preserved gun in Sweden

We drove up through an abandoned camp site to the lighthouse and made our way to the guns. As usual these had been blasted into granite 'bulges'. They were like ice with a thin mix of lichen and dew. I slid down close to a drop but was outdone by one of our group who came hurtling past and luckily stopped himself before he too would have gone off the edge.

From here we took a boat to the nature reserve that is **Järflotta** island. Dating from 1942 this was the location for a battery, one of a number built in WW2, comprising 3 x 24cm Bofors MO6 naval guns, which were active until the 1970s. It was decommissioned in the 1990s but the gun we visited is preserved as a protected historical building and at 9.4-in is said to be the largest preserved gun in Sweden.

We got a bit lost on the way back to the boat but a phone call brought Lars to our rescue.

Back to the hotel we all went and out that night for a pre-ordered meal, rounding off my adventurous day.

Sunday 29 May

A chain-link ferry took us to **Vaxholm Fortress**, which occupies the whole of a small island just offshore with some sort of fortification having been present since 1548, to control the sea route to Stockholm. The fort was located on the western strait separating



Vaxholm island from Rindö Island. The eastern sea passage on the other side of Rindö was also fortified, and we visited it later. These two formed the main practical sea routes to Stockholm as the increased draughts of naval vessels ruled out other accesses; artificial methods were used to reduce water depth elsewhere by building underwater walls or simply dumping rubble. The first work at Vaxholm was a wooden blockhouse, later replaced by an artillery tower. The fort was unsuccessfully attacked by the Danes in 1612 and the Russians in 1719. The strategic situation changed in 1809 when Sweden lost Finland to Russia and the defences here became more important. Most of what can be seen today is the result of extensive works carried out between 1833 - 1863 when all the previous works were cleared and most of the island was enclosed in a large triangular area with outer walls faced in granite and the internal area creating a parade ground.



Model in museum (CHB)

Later additions extended the fort and improved the harbour and the walls covering it. Increasing draught meant this passage became too shallow for major naval vessels and the increased power of naval armament doomed the fort. In 1872 in a trial a Swedish monitor with 24cm rifled guns penetrated the walls after only three rounds. The major defences now concentrated on the eastern side of Rindö island.

Vaxholm fortress is a popular tourist attraction and there is accommodation in the fort as well as a café and other facilities. The walls, courtyard and exterior of the fort have a large number of guns mounted which show the range of armaments employed by Sweden. There is also a large display of sea mines. Within the fort is an excellent museum of which we had a guided tour, with a history of the fort, illustrated with numerous models, as well as an overview of the Vaxholm Line which at the turn of the last century had some 24 batteries. At its height between 1890 and 1916 Vaxholm fortress had one battery of 4 x 57mm m/1895 guns, two batteries of 4 x 57mm m/1899-1900 guns as well as 5 x 23mm m/1854 and 20 x 23cm m/1890 guns.

From Vaxholm we took the ferry over to Rindö, across it and took another ferry to visit the **Fredriksborg Fort**.

As noted above this is on the Oxdjupet seaway on the eastern side of Rindö Island. It was one of the sea routes to Stockholm but as ship sizes increased so too did its importance leading to the decline of Vaxholm. This is now the main route to Stockholm. The first fort was built in 1710, a redoubt on the shore with 4 x 24-pdr guns. The waterway had been partially blocked and people encouraged to dump stone to make it shallower, but it



Fredericksborg Fort (CHB)



Fredericksborg Fort (CHB)



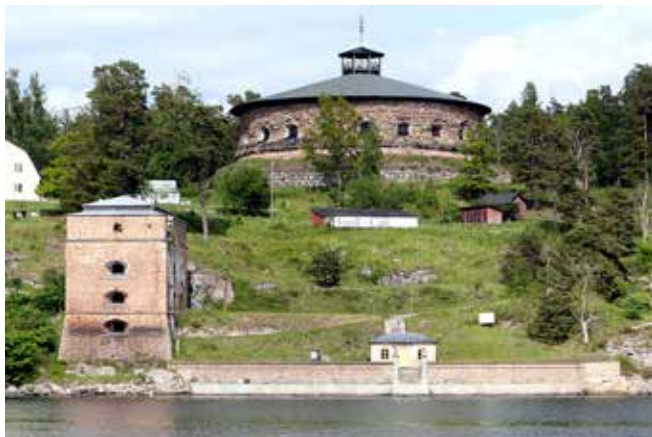
was soon realised that the other sea passages were inherently too shallow and the waterway here had to be cleared of the obstacles. Following a Russian attack aimed at capturing eastern Sweden, a new four-floor fortified tower was erected with 40 guns to protect the redoubt and the strait. The fort was abandoned during the 1740s in a more peaceful period and large amounts of the exterior sandstone were robbed to repair Vaxholm Fortress and the Oscar-Fredriksborg fort across the waterway leaving the fort a rather sad spectacle. The interior is reached over a wooden walkway bridging a dry ditch into a large open space forming a circle around a central stairway which gives access to a similar first floor and observation cupola on the roof with excellent views.

The tower's open floors form gun decks. The ground floor is an impressive arched space.

Below the fort at the landing stage is a further gun tower though other parts including a second tower were demolished when the fort was abandoned.



Gun Tower (CHB)



Gun Tower and Fort from Oscar-Fredriksborg Fort (CHB)

A brief diversion took us to **Battery No 7** (right) where the steel fire control cupola could be seen with the remains of two emplacements.



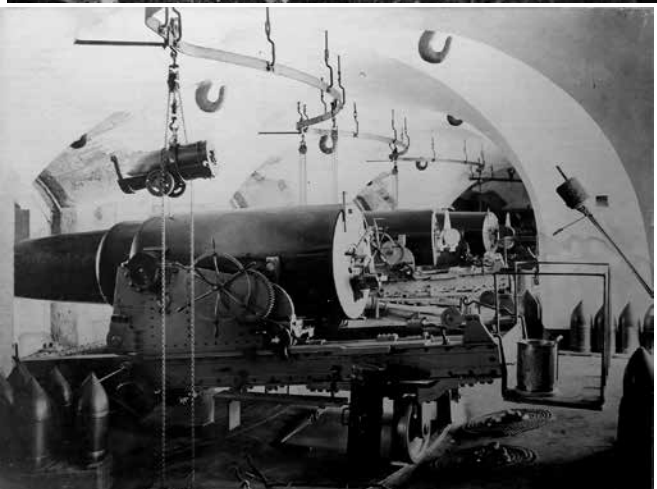
We now retired to the restaurant for an excellent lunch before catching the ferry over to what might be called its sister fort on the other side of the Oxidjupet.



Map of the Vaxholm Defence Line (1895-1903) with older positions marked with red circles. (Tour Guide &CHB)



This is **Oskar-Fredriksborg Fort**, Sweden's first attempt to build a modern low-profile fort, constructed between 1870 and 1877. It has upper and lower-level batteries connected by a tunnel which saw the first use of dynamite. The main guns were 24cm with the lower battery close to the water line and clad in Sheffield steel, a significant part of the fort's total cost. The sunken upper battery can fire on the channel while being unobserved from distant threats. When completed the lower batteries were O1 – 3 x 24cm m/1879 guns in a flanking battery; O2 – 2 x 24cm m/1870 and 1 x 24cm m/1873 guns and O3 – 3 x 24cm m/1892 guns. The upper batteries were O4 – 4 x 5cm m/1892



24cm guns in the armoured Frontal Battery, and a 24cm disappearing gun in the Upper Battery. Photographs taken at the Vaxholm Fortress Museum (CHB)



guns; O5 – 4 x 12cm m/1870 guns; O6 – 3 x 24cm m/1896 on disappearing carriages; O7 – 4 x 8cm m/1881 guns; O8 – 3 x 8cm m/1881-93 guns. As with many such forts it ceased to be used after the Cold war and in 2002 was designated as a national monument.

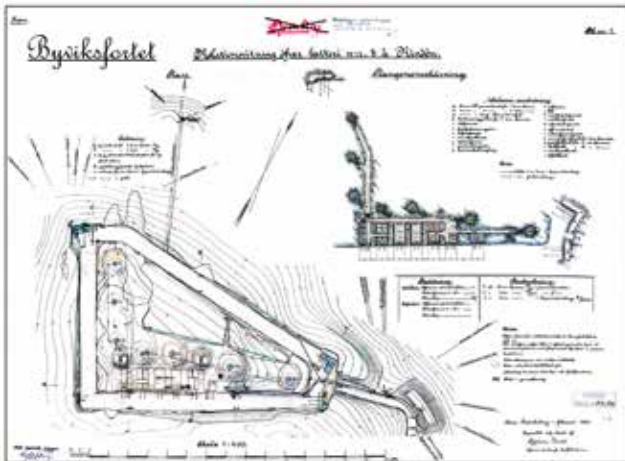
These two forts are only a part of the fortifications and a number of batteries of the Vaxholm Line surround them, dug into bed rock and surrounded by a dry moat. We visited the **Byviksfortet** on Rindö Island, which was a heavy battery of four 12cm guns and a light battery of three 57mm, all in turrets. One of the former guns is now preserved at Vaxholm fortress. Also, there were the 20th and 21st batteries which had 24cm howitzers, again with one preserved at Vaxholm. There were also a number of infantry batteries armed with machine guns.



Frontal Battery today (CHB)



Byviksfortet ditch (CHB)



On the way back to the ferry we added a visit to the **Rindö Redoubt**. Erected between 1858 and 1863 it was with so many other works built to protect one of the sea routes and is almost within sight of the Vaxholm Fortress. The redoubt comprises a casemated battery with two wings which form a courtyard. The redoubt is surrounded by a ditch covered by two caponiers thought to be the first time caponiers were built in Sweden. The most interesting feature, though only part remains is the anti-infantry defences around the fort constructed by setting up a solid field of upright razor-sharp granite pieces. The fort was obsolete by the 1890s but was retained as a store until the mid-1940s though already designated as a historical site in 1935.



Rock Field, Rindö Redoubt (CHB)



Upper Battery today (CHB)

Monday 30 May – Siarö Fortress

Sadly, our last full day of the tour. Again, it was onto a boat to travel further up the channel which was guarded in its lower reaches by the forts we visited yesterday, in this case the **Siarö Fortress** (1916), part of the outer Vaxholm Line, located on a small mid channel island. A long internal tunnel connects the various parts but the rock here is porous which made the interior so damp that troops did not occupy the fort in peacetime.

It has two 15.2cm ex-naval turrets with convoluted concrete infantry trenches surrounding the guns, with firing steps, and beyond that a barbed wire belt. The fort also controlled a minefield, protected by four 57mm guns. Two of these remain mounted on carriages which can be moved into underground shelters where



The fighting face of Rindö Redoubt (Maurice Gehlen and CHB)



Siarö Fortress



two 15.2cm ex-naval turrets (CHB)



Internal Tunnel



trenches

we also found a mobile searchlight. After being decommissioned in the 1960s the fort was abandoned until restoration started in the 1990s.



57mm gun, searchlight in its den (CHB)

From the mainland we travelled further north, leaving the port of Rävsnäs to travel to **Arholma Battery**, via a quick stop-off at a 152mm turret on **Lindö Island**. Arholma Island was the furthest north we would go, looking out over the Baltic.

During the Cold War it was decided that Sweden's coastal defences be modernised and two heavy batteries of 15.2cm guns, on order from Bofors to Thailand, were seized and mounted on the islands of Gotland and Hemsö. In the 1950s modern rapid-fire guns were needed, which became the 10.5cm m/50 system with a fully automatic loading system allowing a firing rate of 40 rounds per minute.



Arholma Battery, via a quick stop-off at a 152mm turret on Lindö Island (CHB)



10.5cm m/50 system automatic loading system (CHB)

Three batteries were ordered, with the one at Arholma, not in place till 1968. All were of two guns with AA protection, though only one of the guns is here, along with a Bofors 40mm m/48. The equipment continued to be updated until the batteries were taken out of service at the end of the 1990s, opening to the public in 2008. We had a guided tour around the site, and then they let us loose. Most interesting was the access to the turret and the optics which looked out over the sea.

While we were here to see guns (*see also front cover*) it would be churlish not to mention that the island has a visitor centre which put on a substantial barbeque for us. Man cannot live by concrete alone!

It certainly rounded off a marvellous day enhanced by the perfect weather. But all good things must end and so we travelled back to our airport hotel.

Tuesday 31 May

Here the tour separated with most of FSG heading off to various parts while our CDSG colleagues prepared to travel further north to fortress Boden, to be covered in **Part 2**

However, I could not leave this article without commenting on the good company I had enjoyed as well as meeting up again with several friends I had not seen for a while. A special thanks too, to all those volunteers who keep many of the sites we visited open, and particularly to **Lars** who had organised a very special tour and who coped magnificently with the inevitable problems, one of which I helped provide.

Notes: More can be found on Stockholm's and Karlskrona's defences in *FORT 45* and *Casemates 111* and *115*. Photographs by author unless otherwise credited. CHB is Charles Blackwood



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FGG and CDSG Special Tour to Denmark and Sweden

Part 2: 31 May to 7 June 2022

By Norman Clark and Lars Hansson

The Coast Defense Study Group (CDSG) and Fortress Study Group (FSG) successfully ran another joint tour to fortifications in Denmark and Sweden from May 22 to June 7, 2022, similar to our joint tour to the defenses of Switzerland in 2018. Key to this tour was Lars Hansson (through his BunkerTours company) as without his leadership and logistics management this tour would never have occurred. The tour was a gigantic logistical puzzle that went very well, and the few problems arose naturally but Lars successfully solved them. Only two visits had to be cancelled while 73 sites were visited.

The tour was divided into four parts – a pre-tour of two days in Denmark, the main tour for FSG starting in Copenhagen and ending at Arlanda, the CDSG tour starting in Nyköping and ending in Luleå and an extra end of two days in Gothenburg. The dates spiked backwards from visits to Gothenburg on National Day, June 6th (allowing us to see the annual firing of Fort Oscar II's coast artillery), which set the tour start for May 22. The tour reports are in two parts – part one written by Norman Clark (FSG tour segment) and part two by Lars Hansson (CDSG tour segment). Due the length we will run these reports over two CDSG Newsletters.

Part one was printed in the last *CDSG Newsletter* (November 2022).

Most of the FSG members returned home on May 31st and the CDSG portion of the tour to the Northern Swedish defenses begun from our hotel near to the Arlanda Airport (Stockholm). The following is daily summary of sites visited.

31 May 2022 Tuesday

9,817 steps and 13 hours

Four rental cars full of CDSG tour members left our hotel at the Arlanda Airport at 8am to head north. After two hours, we rolled through the zoo and amusement park gates at Furuvik and were guided all the way out to Furuskär where we parked on top of **the Cold War coastal artillery battery GE3** (Gävle 3) with its three 7.5cm guns. Here the short tunnel system has been restored and was shown to us by a hired guide. We got our own time to explore in the fog and drizzle. The day was going to be a long drive, so it was just as well we continued north as soon as everyone was done.

Break for lunch (*the first of many Circle-K gas stations we would visit*) and a quick check-in at a hotel in Sundsvall before we headed out to Spikarna where the owner of Storholmen Island provided water transport for us out to **Battery Sundsvall 1** (SL 1) with three 15.2cm/98-50E guns.

The sea was very active, so our tour members were damp when we reached the private island. Here we had the whole big underground facility to ourselves throughout the evening. Those who started outdoors by visiting the northern ex-navy

guns were treated to in a thunderstorm, so they were totally soaked, while others took shelter in the 1km long tunnel system. When the battery was taken out of service only the ammunition, rangefinders, and radar was removed before sealing the tunnels. When the private owners opened the tunnel system, they found items ranging from secret documents to mouldy bedding. Only in 2019 did the fortifications authorities learn of this oversight and returned to clean out the battery complex.

During the evening burgers were served and we were all ashore again a bit after 8pm and half an hour later at the hotel after a long and good day of traveling and exploring.



Part of Battery GE3.



GE3 radar antenna.



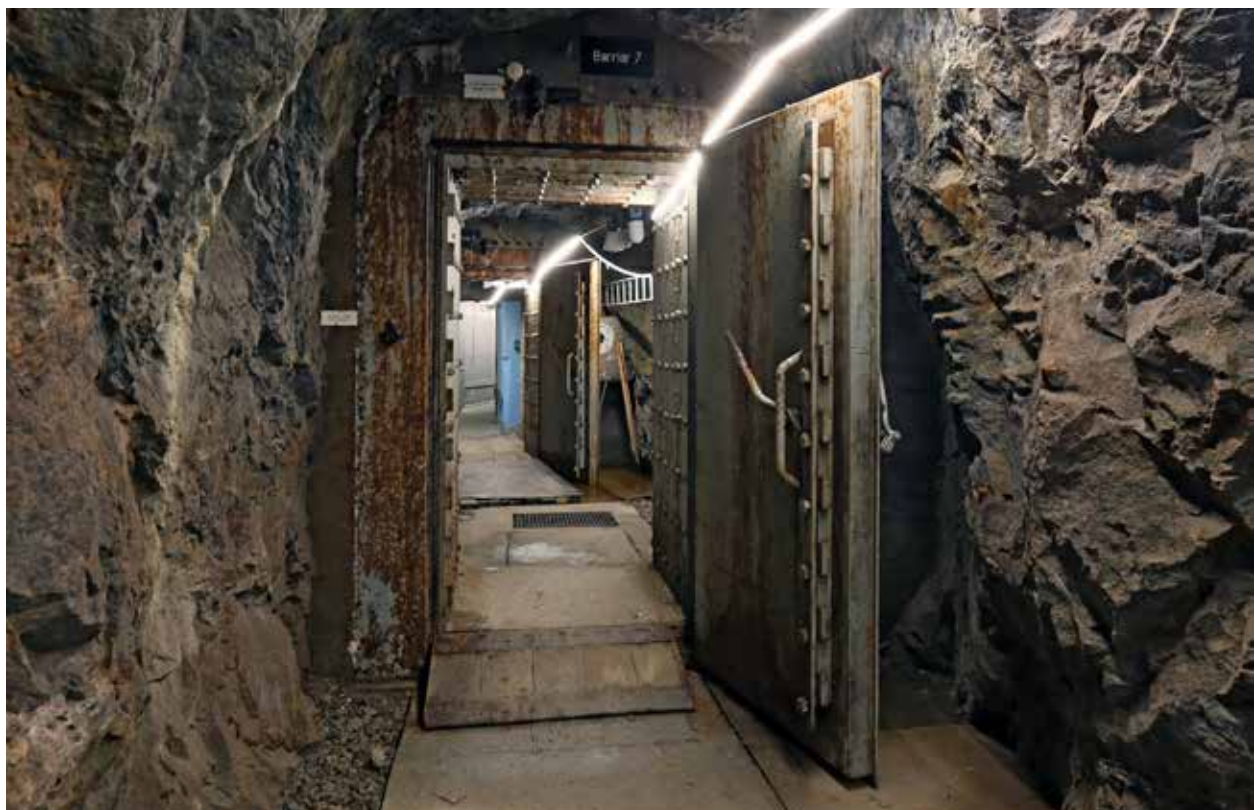
Inside GE3 support tunnel.



Part of Storholmen SL1, former exit to the sea.



Storholmen inside SL1 15.2cm turret.



Storholmen SL1 underground tunnel system.

1 June 2022 Wednesday

11,600 steps and 14 hours

The day began at half past nine with an hour's drive to the ferry over to Hemsö, where five more Swedes were waiting to join the tour.

Yesterday's rain meant that it was a blanket fog, which made it difficult to get an overview of the Hemsö Fortress and **Storråberget's Battery** with its three 15.2 cm m/51 twin turrets. These turrets were made for export to Thailand, but they were confiscated by Sweden during WW2.

The battery has a huge tunnel system which connects the three turrets, command centres, power plants, barrack, messes, and observations posts. We split up and those who wanted to, went on a guided tour, but it was also possible to walk around independently.

The battery is complete with all its gear and is now a national trust but leased out to a private operator. We had lunch in the specially built new restaurant and then we went into the mountain's tunnels again until about 2 p.m.

We then travelled across the island to **Kläffsön** where the Arte 719 measuring station (radar based fire control) is preserved and which we visited for another hour.

This is the only surviving type in Sweden and is only reached through a vertical ladder of about three meters to enter the four-story bunker.

After that site visit, we travelled to **Battery Havstoudd** with its three 7.5 cm m/57 single turrets for our overnight accommodation in the underground barracks.

A unique addition to the battery is the integrated controlled mine station with a periscope and radar covering the local mine-



Guide Christer in the restaurant, telling a part of the Hemsö Fortress history.



Main generator in Storråberget .



Part of the Plan for Storråberget's Battery



Internal blast door in Storåberget .

field. Some of the tour members had single/double rooms while others used the three level bunks.

After exploring the battery both inside and out, we returned to Storåberget for a delicious three-course dinner. Back in Battery Havstoudd for the night, we had free access to the entire facility all night long, and some tour members took advantage of unlimited time to explore and photograph the battery's details.



Twin 15.2cm Turret from inside.



One of the Twin 15.2cm Turrets.



15.2cm magazine.



Arte 724 observation post in Storåberget .



Part of a weather protection for an AA 40 mm.



Optical eye observation post Kläffsön.



Plan for the Arte 719 post.



Guard Dog still on duty!



3rd gun turret at Havstoudd.



One emergency exit at Havstoudd.

2 June 2022 Thursday

6,510 steps and 11 hours.

After breakfast in Havstoudd, we began the long journey north to Luleå and Boden. No wonder the day had the least steps as nearly 350 miles were logged during the drive.

We made a short stop before the ferry at **Härnösand radio station bunker** and **Battery Nordanö (57mm guns)**.

With stops about every other hour, we arrived at hotels in Luleå around 17:30 where some of tour members could not forgo an evening trip to Boden with dinner in town. Boden Fästning is a fortress consisting of several major and minor forts

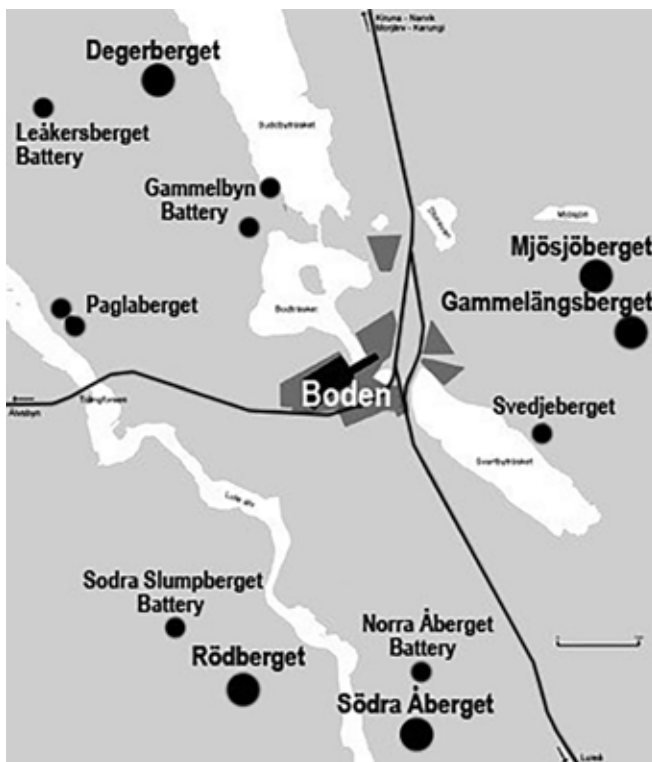
and fortifications surrounding the city of Boden, Norrbotten, in northern Sweden.



Our bunks at Havstoudd.



Härnösand radio station bunker.



Location of Boden

The fortress was originally intended to stop or delay attacks from the east or coastal assaults, which at the time of construction meant Russian attacks launched from Finland.

It was primarily the expansion of the railway network in Norrland, a consequence of the rising importance of the northern iron ore fields, that led to the increased strategic value of northern Sweden and the construction of the fortress. Although the main forts were finished in 1908, many of the supporting fortifications were not completed until the start of the WW1. Improvements were also continuously made during, and between, both World Wars.

Boden Fortress is made up of five primary self-supporting forts excavated out of the bedrock in five mountains surrounding Boden: Degerberget, Mjösjöberget, Gammelängsberget, Södra Åberget and Rödberget.

Eight fortified secondary artillery positions were constructed between the forts to give flanking support and to cover areas not in range of the main forts' artillery. In addition, 40 bunkers for infantry, along with dugouts and other fortifications, were built to cover even more terrain. During WW2, anti-tank gun emplacements and additional bunkers and shelters were built, and tens of kilometres of dragon's teeth were placed around the fortress and the city itself.

Owing to the end of the Cold War and the reduction of the threat from the Soviet Union, Boden Fortress became less important to the defence of Sweden and began to be decommissioned.

The last fort of the complex was decommissioned in 1998 and is now used as a tourist attraction. All five forts as well as some of the supporting structures have been declared historic buildings, to be preserved for the future.



Battery Nordenö 57 mm.



Norra Åbergsfästet

Unfortunately, the weather was very rainy and the visits to the bed-rock forts at **Södra Åberget** (4x12cm m/99, 4x8.4cm m/47, 4x57mm m/07) and **Noora Åbergsfästet** (4x8.4cm m/47) were wet events.

The weather was better when we visited the impressive sand storage mountain and former defended electrical substation. We then drove back to Luleå and our hotel.



Södra Åbergsfortet in rain.

3 June 2022 Friday

12,463 steps and 10 hours.

A full day in Boden started with the bed-rock fort **Rödbergsfortet** (4x12cm m/24, 4x8.4cm m/94-04, 8x57mm m/07).

With our guide Mats, we first went to tour the “**Satellite**” work which has two 12cm m/24 single gun turrets in bunkers.



Satellite battery's 12cm turret at Rödbergsfortet.

On the way back to the main fort, we visited a protected searchlight position and several artillery weapons on display.

We explored the whole of Rödberget, including flanking galleries and communication passages there as well as the latrines, and back for a hot lunch inside the fort.

The rest of the afternoon was spent in the Boden fortress, first was a **korvfortet** or “**sausage bunker**” on the way down from Rödberget followed by a **svedjebergsbatteriet** that was built in the bed-rock with six positions (8.4cm m/94 and 7.5cm m/17), the **Défense Museum** (modern museum telling the military history

of Boden), the rock-fort **Mjösjöfortet** (4x15cm fstaub m/06, 4x8.4cm m/94-04, 8x57mm m/07), the supporting **Mjösjöbatteriet** and the rock-fort **Gammelängsfortet** (4x12cm m/99, 4x8.4cm m/94-04, 8x57mm m/07) as well as the southern **Gammelby Battery** before returning to Luleå for dinner and our hotel.



Protected searchlight at Rödbergsfortet.



7.5cm m/17 gun in a svedjebergsbatteriet.



Rödbergsfortet.



Rödbergsfortet barracks.



Rödbergsfortet officer's mess.



Access to the 12cm Turret at Rödbergsfortet.



Korvfortet or "sausage" bunker as part of road defence.



On the top of Rödbergsfortet with 12cm turrets.



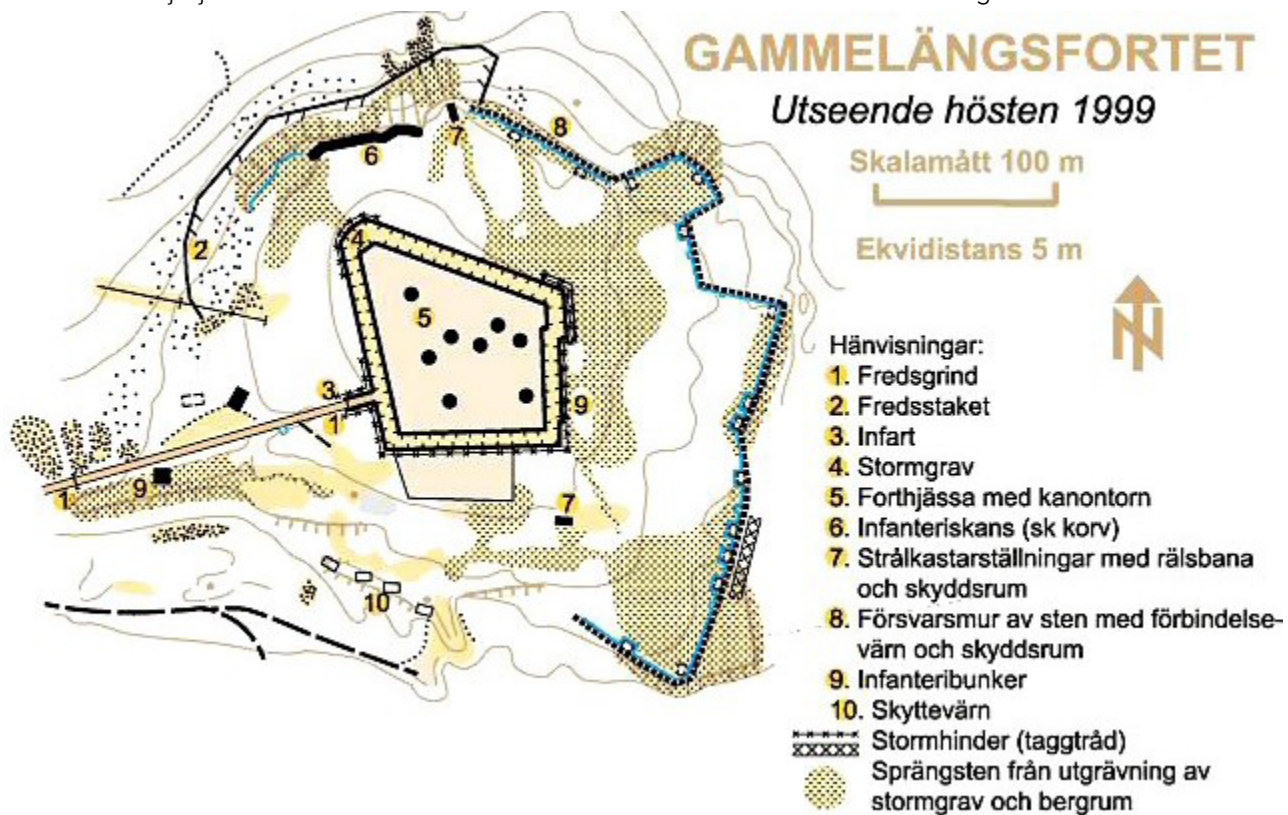
Mjösjöfortet.



Mjösjöfortet main entrance.



Gammelängsfortet ditch.





Inside Gammelängsfortet 12cm M/99 turret.

4 June 2022 Saturday
9,822 steps and 11 hours.

We checked out of the hotel in Luleå and spent a few more hours in the Boden Fortress with a visit to the fortress' **Radiobunkern** and **Ballonghallen**.



Boden Fortress Radio Bunker, just south of Degerberget Fort, was used for the first radio broadcast in Swedish history.



Ballonghallen, A wooden building, it was finished in 1914 and is the only one of its kind in Sweden.



Gammelängsfortet main corridor.

The last defences we visited before heading north towards Vuollerim was **Leåkersfästet Battery** (10x8.4cm m/94) with its companion defensive work to shelter infantry (161 men).

We were sorry to leave the impressive Boden Fortress as there were many more defensive sites that we had not time to visit.

We headed north along the Luleå River, which during the Cold War formed the second Swedish defence line after the Finnish-Swedish border. This is the third river crossing for an invader but the border river, Torneå, is too shallow and easy to cross even for tanks, so the first strong defence line was set up 50 km to the west at the River Kalix and the second at the River Luleå, a further 70 km away. Both these rivers are wider, deeper and have higher banks making them impossible to ford.

The Swedish Road network was designed early for defensive purposes with good, straight and wide roads with numerous bridges in parallel going north-south. The road network going east-west consisted of winding, narrow roads with only a handful of bridges over the two rivers. Gun batteries and strongholds were located at all bridges and hydropower dams. All bridges were also prepared for demolition and road banks had tunnels underneath for explosives.

The Luleå Line is from Luleå up to Jokkmokk, while the Kalix Line is from Kalix up to Mikkelirova.

Of the five batteries from Harads to Vuollerim, only the twin turret (15.2cm guns) at **Bomyrberget** is preserved. It is positioned on top of the local ski slope and the turret is disguised as a small cabin.

Preserved as a national trust site, it became as a museum known as **Victoriafortet** after HMS Victoria that provided the guns. It was run as a museum for a couple of years but for the last three years it hasn't been open to the public.

Fortunately, we had keys from FortV in Boden, so we were able to spend a few hours in the battery before we switched off the lights and locked the doors again. We took the time to make a touristy detour – of only 20 minutes up to the **Arctic Circle**, where there was a memorial to the circle so we could step over the line and back many times.



Leåkersfästet, main gun line with movable shields.

The travel time to the **Kamlunge Battery** (2x15.2cm m/12-66) took over two hours due to an accident that sent us onto an alternative road that turned out paved but particularly bumpy. Bonus, at least, was a moose sighting for our tour members to photo.



Leåkersfästet, infantry part.



Bomyrberget, 15.2cm from HMS Drottning Victoria.



Arctic Circle - polar circle.



Bomyrberget, fake house over the 15.2cm turret.



Häggmansberget 15.2cm gun.



Häggmansberget 15.2cm.



A Stridsvagen M41 turret used as strongpoint

At around 17:30 we exited the cars up on Häggmansberget for the two preserved 15.2cm guns. The staff from the **Kalix Riverside Inn** met us with coffee and buns before we started exploring this battery that is in the middle of nowhere (even for northern Sweden).

Once we arrived at the Kalix Riverside Inn for the night, we began to inspect the large military vehicle park and **Kalixlinjens Museum** before dinner in the Inn's restaurant down by the river.



Bomyrberget, 15.2cm from inside turret.



Häggmansberget 15.2cm inside turret.



Kalixlinjens Museum, fixed tank turret display.

This night, a few miles south of the Arctic Circle, was too bright for some participants who did not sleep very well as it never gets dark this time of year.



Kalixlinjens Museum, inside the museum.

5 June 2022 Sunday

6,055 steps and 15 hours

Our last day in Northern Sweden started with visit to the Töre harbor, where on display was a **fixed tank turret m/74** and the **submarine Spiggen 2** in a local museum before we continued with the same guide to **Siknäsfortet**.

On the way out on the Siknäs peninsula, we finally caught sight of a lonely reindeer, which became the only one seen during the tour.

The fortress at the Siknas peninsula was built as a defence of Töre harbour, the most northern deep-water harbour in Sweden, and to delay an enemy advance toward Boden. The fortress was the biggest and most modern of the more than 3,000 defence objects of the Kalix Line. The four Siknas turrets were built 1953-1960 and are situated at the Siknas peninsula ranging from 62-67 meters above sea level.



Kalix Riverside Inn Dining Room.

They had a garrison of 322 soldiers and each turret was equipped with twin 15.2cm m/03 guns from the broken up armoured cruiser Fylgia.

The four turrets were grouped into two batteries. Built of reinforced concrete with three or four floors, the entire structure rests on springs, free from the rock walls, to reduce shock waves from bombardment. Each turret had its own command centre, loading and ammunition rooms, barracks, kitchen and canteen, power rooms, toilets, and showers.



Inside Siknäsfortet twin gun turret.



Siknäsfortet twin 15.2cm turret.

Also, these structures were protected against nuclear, biological, and chemical weapons. The last military exercise was carried out in 1990 and the batteries were placed out of service in 1992 (turrets 3 and 4) and in 1998 (turrets 1 and 2).

The Fortification Board's (FORTV) disposed of turrets 3 and 4 in 2003. The ground was levelled and once again planted. In 2005, the FORTV sent a request to the Board of National Monuments suggesting turrets 1 and 2 as national monuments but in 2008 the government decided not to preserve them because of the costs, instead it was decided that the remains of the fortress could be transferred to a new owner and be used as a museum. During 2011-12 the FORTV renovated the inside of turret 1 and it was opened to the public.

We attempted to just do a quick guided tour of the facility and then a free tour, but the guide wanted to do it his way which meant that our group relatively quickly disappeared from the guided tour.

Our last site visit was to a former **PJ-21 altitude radar station** on the Siknäs peninsula before we headed back towards Gammelstad for refuelling and the drive to Luleå Airport. At the airport, we returned our rental cars and tour members started their travel home or continued to the Gothenburg add-on tour.

The flight time from Luleå Airport to the Gothenburg Airport via the Arlanda Airport is usually about 3.5 hours, but not this day! It took almost 10 hours with SAS. Our first flight failed to take off due to an A/C problem and the second took an extra hour to load the plane. By then we had missed our connection in Stockholm, so they sent us from Stockholm to Copenhagen, where we had to get another plane to Gothenburg. We then had to walk to our hotel and roust out the hotel staff to let us in.

A very long day carrying our luggage!



National Day - The Swedes ready for the Russians Gå På!

6 June 2022 Monday

14,288 steps and 8 hours

This day was Sweden's National Day with heritage sites open to the public all around Sweden.

Our goal was to be at **Oscar II Fort Gothenburg** at 11 am when the fort opened to the public.

We first regrouped from our airport hotel to a hotel near the central railroad station, then the majority took the tram out to Långedrag and the fort.

Built between 1903 and 1907, the fort was named after the then king of Sweden (and until 1905 also king of Norway). When built, Oscar II was well ahead of its time, it had hot-air heating, electricity and inside toilets when many of the local population had none. At the time of construction there were no reliable



Part of Götiska Battery, 57 mm.



Command post for Götiska Battery.

roads from nearby Gothenburg and so a dock and narrow-gauge railway were built for the building materials and armaments to be shipped in. The location was chosen to provide a commanding position over the sea approaches to Gothenburg.

The design used the massive granite bedrock to provide superb protection for the garrison, services, and armaments, surrounded by a huge dry moat with daunting counterscarps and caponiers. The main firepower was in armour-plated turrets or within the moat on 'disappearing' mounts.

The vast quantities of granite excavated during construction were used to create false reefs in the estuary to funnel shipping (friendly and potentially hostile) through a narrow navigable channel. The main body of the fortress consisted of two 24cm m/04 guns mounted on disappearing carriages and 15cm gun turrets and 57mm light guns in turrets.

The fort encompasses space for 300 people and consists of several hundred metres of walkways with offices, barracks, powerplants, messes and stores. The fort's armament was completed



24cm guns at Oscar II Fort.



Oscar II fort, stairs to 15.2cm turret.



Oscar II Fort, 15.2cm turret.

in 1907. In addition to naval mines placed around the flanks, there was also a light battery, the Götiska batteriet ("Geatish Battery") with four 57mm guns in casemates.

Arrangements had made for our entry into the fort where hundreds of visitors were exploring, while various groups had tables and tents set up selling food to recruiting for the Swedish military.

Firing of the **Götiska battery's** four 57mm guns was followed by a special tour in the gun casemates for our group. Before the shooting with 15.2cm, we were given access to the inside of one of their turrets that was not shown to the public so we could photograph in the gun in peace. We also got good seats for the firing of the 24cm pieces and finally we had access to one of the 57mm turrets.

On the way home, we jumped off the tram for a visit to **Skansen Kronan** which is a masonry gun tower built in 1698 for 23 cannons.

Our final tour dinner was at an all-you-can-eat Chinese restaurant before returning to the hotel.

7 June 2022 Tuesday

7,309 steps and 4 hours

After breakfast, some of us took the tram to the **Skanserb Lejonet**, which is masonry artillery tower completed in 1692 so we could view the exterior.



Group Photo for FSG/CDSG Special Tour to Denmark/Sweden – Taken at Ellenabbens Battery, Aspo.

The tower is privately owned, as well as the saluting battery before we visited the **Maritiman**, which is a floating maritime museum on the Göta Älv, in Gothenburg.

The museum's collection comprises 19 vessels, the oldest being HSwMS Sölve from 1875.

The two vessels we focused on were the HSwMS Småland, Halland class destroyer and HSwMS Nordkaparen, Draken- class submarine.

Again, changing weather, ranging from sun to pouring rain. After lunch everyone departed on different trains towards home and the grand tour was over!

Majority of photos credited to Lars Hansonn

Note from Terry McGovern: *"I am sure that Lars Hansson went home and said he would never do this tour again as the logistics of the tour were taxing as well as dealing with all the needs of FSG and CDSG tour members. We owe Lars and his family (yes, they were involved in making the tour work) many thanks for his leadership and steady hand on the tour."*

Attending all or part of the FSG and CDSG Tour were Kenneth Estes, Genevieve Perrin, Ian Wolfe, Mariusz Jachimowicz, Terry McGovern, Alana McGovern, Barrie Eden, Chris Foss, Norman Clark, Alan Fyson, Maurice Gehlen, Rolf Thöndel, Craig Dyson, Julie Dyson, Charles Woodman, Charles Blackwood, Tim Wellburn, Lars Hansson, Pingo Olofsson, and a bunch of Swedes and Norwegians (at various times).



Skansen Lejonet with salute battery.



HMS Småland. Forward 12 cm and 57 mm guns.

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Submission deadlines are the first of the month in February, May, August, and November of each calendar year. All rights are reserved. Comments on business matters should be addressed directly to the Chairman of the Board of Directors.

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