

The Naval town of Karlskrona, Sweden – changes in continuity in a living world heritage.

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Abstrac. In 1998 Karlskrona became item no. 560 on UNESCO's list of irreplaceable World Heritage Site. In an international context, the city is of major importance, representing as it does an unrivalled illustration of how a fortified naval town and base from the seventeenth and eighteenth centuries was planned and established.

In the eighteenth century developments in Karlskrona in the fields of shipbuilding, architecture, town planning, military construction and engineering, attracted widespread notice and recognition from the continent.

For more than a century the distinctive architecture and specialised installations at the navy yard served as a hub of military technology and industry in the Baltic region. Both the naval base and the dockyard have been in continuous operation from the time they were first established until the present day.

Justification for inscription

Karlskrona is an exceptionally well preserved example on a European planned town which incorporates elements derived from earlier establishments in other countries and which was in its turn to serve as the model for subsequent towns with similar functions.

The history of the naval town has always been very close corresponding to the development of military and political decisions.

In the history of the town we can notice the following paradigmatic changes:

- 1680 - foundation and planning of the naval town
- 1990 – the process of demilitarisation
- 2005 – the process of remilitarisation

The Historic Background

Why Karlskrona was established

At the end of the 17th century Sweden was a major European power and had managed to acquire territory in parts of northern Germany and what is now Finland, Estonia and Latvia. The Baltic Sea provided the link that united the various parts of the kingdom. Danish attempts in the 1670's to regain lost provinces were successfully thwarted by King Karl XI (1655-97).

The Navy was the principal instrument by which Sweden could exert effective control of her new territories on the other side of the Baltic, and after years of deliberations it was finally decided to establish a new base for the Navy in the

eastern part of the Blekinge archipelago. Unlike Stockholm, this naval base was free from ice for large parts of the year, and furthermore would be able to assist the policy of Swedification in the former Danish provinces.

The rugged terrain of Trossö and the other nearby islands provided an extremely favourable location for a naval base. In addition, there was a narrow and deep fairway, which could easily be defended and sufficient room in which to construct a large protected dock.

Growth and expansion

In the late autumn of 1679, the King and his retinue stepped ashore on Trossö. Without delay the Kingdom's foremost shipwrights, architects, fortification engineers and builders began their labours. Streets, Squares and the various quarters of the future town were marked out, and in 1680 Karl XI granted a charter to Karlskrona. The whole undertaking was carried out with single-minded energy and determination.

In order to encourage trade and settlement in the new town, The King rescinded the charters of the neighbouring boroughs of Ronneby and Kristianopel and their burghers and tradesmen were more or less compelled to move to Karlskrona. Almost from the very beginning Karlskrona had a markedly International character. A considerable number of Germans, in particular tradesmen, took up residence in the town and experienced craftsmen were brought from the Finnish province of Österbotten and the Skeppshomen yard in Stockholm to work at the Navy Yard.

The naval city of Karlskrona attracted much attention from abroad and provided a model for a number of similar installations throughout Europe.

Models and ideals

It is probable that the planners of Karlskrona were influenced by the naval bases of Chatham in south-east England, established in 1547, of Rochefort on the French Atlantic coast from 1666 and of the arsenal in Venice. However, Karlskrona was not solely created to meet the needs of the military, for it is the architecture of the baroque with its wide streets and monumental buildings that dominates the town. Equally, the spacious Squares and the grid-net layout is clear evidence that the planners have striven to follow the classical ideals of Greece and Rome.

The Chapman era

When Gustav III (1746-92) took over power in 1771, the Navy Yard entered a new period of prosperity.

The first decades of the century had seen a change in the military balance in the Baltic. Russia had extended her borders to the Gulf of Finland where she established the future capital of Saint Petersburg and the naval base of Kronstadt, and in 1748 Sweden began to build the Sveaborg fortress outside Helsinki to protect her eastern frontiers. The Swedish Navy was reorganised in two parts, the Main Fleet based on Karlskrona and the Archipelago or Army Fleet, based in Stockholm and at Sveaborg.

A major problem was that warships had a relatively short working life, a difficulty the Navy tried to resolve by the construction of huge dry docks in which ships could be built, repaired or simply stored there during the winter months.

In 1782 a new era was ushered in at the Karlskrona Yard when Fredric Henric af Chaman was appointed Admiral Superintendent and commissioned to create a completely new fleet for Gustav III's coming war with, as it turned out, Russia. Chapman, who came from an English family had studied at French, Dutch and English shipyards and in Finland acquired a sound knowledge of the wood and timber needed in shipbuilding. Chapman brought new mathematical methods to ship design.

As Admiral Superintendent, Chapman reorganised the entire shipbuilding process at the dockyard. He introduced the principles of standardised production and the amazingly short time of three years saw the construction of no less than 10 ships of the line and 10 frigates. Until then it had taken several years to build but a single vessel.

In 1784 Carl August Ehrensvärd, was appointed C-in-C of the Karlskrona Naval Base. A man of letters, well versed in philosophy and art history, he had travelled to Italy where he had been inspired by the classical ideals of Greek and Roman architecture and together with Chapman he created several impressive buildings at the Navy Yard. These included the Plans and Ships' Models building, the Sculptors' workshop and the No. 1 Storehouse.

The Naval base

Apart from the harbour, the dockyard and the fortifications, the naval base includes various other buildings such as barracks, official residences, workshops and storehouses that have been built down the years. The workshops and storehouses were built on Stumholmen, and a Crown mill at Lyckeby outside Karlskrona.

The naval dockyard and harbour

The Karlskrona yard is one of the few dockyards in the world where it is still possible to see buildings and docks specifically designed for the construction of sailing warships. The most important of these buildings and installations are the Rope-walk, the Wasa Shed, the Polhem dock, the "Five finger" dock and the Old Mast Crane. Shipbuilding is still carried out in the western dockyard.

By the beginning of the eighteenth century, Karlskrona had become a centre of technical innovation. If the most striking of these installations is the Polhem dock, less eye-catching constructions at the yard such as the quays, slipways and dolphins are also worthy of note.

The Main Guardhouse.

Built in 1821-26, the neo-classical Main Guardhouse dominates the background to the Admiralty Plain, and is the only old building at the Naval base that faces towards the town itself. This was the main entrance into the base.

Today the building is used as an office.

The No. 1 Storehouse.

Designed by af Chapman and Ehrensvärd, this building is from the 1780's. In the winter months the warships were moored at nearby quays and their sails, cordage and various other equipment were stored here in accordance with a carefully organised procedure. The interior of the storehouse was so disposed that the fleet could be prepared for sea in the shortest possible time. The national architecture with few superfluous details reflects the practical nature of the building.

The building is still used as a storehouse.

The Ships' Models Room and Mustering Hall.

Designed by af Chapman, the Ships Models Room building is from the 1780's. A Royal decree from 1752 called for the establishment of a Models Room to house models of all the ships and constructions produced at the Yard. The Hall is housed on the upper floor of a handsome neo-classical extension, with a pediment bearing the monogram of Gustav III surrounded by flying pennants in the Swedish national colours of blue and yellow. The Mustering Hall is on the ground floor and was large enough to contain the assembled crew of an entire warship at the same time. The building is used as an office.

The Chapman Gate.

The rather theatrical Chapman Gate leads into the Yard Superintendent's residence. Designed by Chapman and erected in the 1780's, it was rebuilt in the Empire style in 1830. The fronton of the gate has been embellished with the stern ornament of the former ship of the line Vasa has been added to the terrace above the fronton. Still in use.

The Chapman residence.

The Admiral Superintendent's residence is from 1781-2. It resembles a typical Swedish manor house of the period and Chapman lived there until his death in 1808. The main building was the official residence of the Yard Superintendent until 1961, and thereafter of the Commanding Officer of the Naval Base.

The Sculptor's workshop.

The building in its present form dates from the 1780's when it became the workshop for the newly appointed sculptor to the Admiralty, Johan Törnström. A classical temple pediment has been superimposed onto a simple construction in red ochre and decorated with a grotesque grimacing mask carved by Törnström himself. Today the building has no use.

The Careening Wharf and Old Ships' Stocks.

These installations near the passage, from 1685-6, are among the oldest ones at the Yard. A ship was keeled over to one side so that her hull was exposed for cleaning and repair work. Of the two careening wharfs, the western one has been restored to its original condition. Today out of use.

Timber pens.

This was originally one of several pens in which shipbuilding timber was stored in water. It was in use until the latter part of the eighteenth century when timber was taken up on land for storage. The pens were later roofed over and used to house the Navy's small boats.

The western dockyard

The "Five finger" docks, erected in 1758-1856, were the result of Augustin Ehresvärd's proposal for the Navy's warships to be kept in roofed dry docks when not needed for active service. In 1757 plans were drawn up for the construction of a massive naval arsenal and 31 docks in Karlskrona. The docks, spread in a fan formation, were to include two berths and two large mast cranes, but in the end only the "Five finger" docks were built. Still in use.

The Old Mast Crane.

The mast crane was built to serve the Five finger docks and work on the construction was begun in 1803. The main structure of the 42 metres high cranes of brick and the top section of wood covered with copper sheeting. It was used to demast the ships before they were taken into dock and a team of 96 men working on our capstans was needed to draw up the heaviest loads. The crane machinery is still intact. Today out of use.

The island of Lindholmen and Söderstjärna

There are a number of o/d installations on Lindholmen that have been used for the construction, repair and fitting out of the Navy's warships. In 1910 Sweden's first wireless telegraphy station was erected on the island.

The Vasa Shed.

The Vasa Shed from 1763, originally known as the Great Ship Shed, was spacious enough to allow the construction of a 70-gun warship. This could take up to five years and in the eighteenth century the shipwrights recognised that during construction the hull and building materials had to be protected from the ravages of wind and rain. The shed is on a natural slope, which the designers were able to use to their advantage when planning the slipway. Summertime it is used as a concert hall

The Rope-walk.

The Rope-walk from the 1690's is one of the oldest buildings in Karlskrona and the longest wooden building in Sweden (300 metres, about 1,000 feet). All of the many types of ropes and cordage for the sailing Navy were made there and it was still in use at the beginning of the 1960's. At each end of the rope-walk there is a stone building in which raw materials were stored and prepared for the rope-maker. Today used as a museum.

The Polhem Dry Dock.

Hewn out of massive bedrock, the Polhem dry dock was built between 1716-24. It created considerable interest from abroad owing not the least to its remarkable feat of engineering. In tidal waters the ebb and flow of the tide was used to remarkable feat of engineering. In tidal waters the ebb and flow of the tide was used to fill and empty the docks but as the Baltic lacks tidal waters the Polhem

dock had to be pumped dry. It was inaugurated in 1724 and is still in use although the pump machinery is now driven by electricity. Still in use.

The “Finnish Church”.

On Söderstjärna, originally an island, this brick building was built for the treatment of cordage and ropes with tar and pitch at a safe distance from other buildings. Rebuild to a modern office.

The Stumholmen island

From the very beginning it was planned that the various units of product/and supply together with workshops and storehouses should be located to the eastern part of Karlskrona. The military installations on Stumholmen date from the eighteenth century to the 1950's. Up until the 1970's the Navy employed a considerable number of people on Stumholmen, but the whole district is now fully integrated into the civilian life of Karlskrona. Opened in 1997, the new Naval Museum on Stumholmen contains a comprehensive permanent collection and presents numerous temporary exhibitions relating to the history of the Navy and the dockyard.

The Naval Barracks from 1847 was used to house 500 or so of the seamen who had enlisted in the Swedish military tenure system. On each floor there was a spacious open room large enough for 250 ratings to hang their hammocks and the quarters were designed to resemble those on a warship, complete with scuppers, sloping floors of oak planking and sturdy mast-like pillars in the centre of the building. The building is now an Art Gallery.

The Coopers Storehouse was built in 1718 to house the enormous numbers of barrels that the Navy needed for its water and provisions. It is now the Operational Headquarters of the Swedish Coastguard.

The Crown bakery.

The three storey high bakery is from the 1730's. It was here that 'hardtack', the Navy's sea biscuits were made and the ships laden with rye flour from the Crown Mill could tie up at the nearby quay. In 1908 an extra floor was added to the building and it was used as a clothing storehouse. The present-day building has retained its somewhat severe appearance, and in 1990 was converted into residential apartments.

The Sloop and Longboat Shed is one of the most remarkable buildings in Karlskrona. Erected in the middle of the 1780's for the Navy's small craft, it is built on an incline that provides a natural slipway for the boats. The ingenious roof structure is made up of ten intersecting saddle-backed roofs that lead rainwater through converging channels and 16 drainpipes down into water butts. Boats are still stored in the building.

The Military Gaol from 1910-11 is extremely well preserved and was in use as a goal until the 1970's. 1990 converted into residential apartments.

The Kungshall bastion.

This site of the bastion was decided in the proposals drawn up in 1683 for the fortification of Karlskrona. The bastion itself was erected soon after. In 1787-92 a brining shed, storehouse and butchery were built at the bastion. Still a storehouse.

Hangars nos. 3 and 4.

Stumholmen was a seaplane base from 1914—49. Hangar no. 3 was erected in 1926 and no. 4, with the double-arched roof, in 1929 and are the last remaining hangars of wood in Sweden. The slipways of concrete or wood in front of the buildings were used to draw up the seaplanes from the water. Today used as garage and storehouse.

The Disinfection House, Quarantine hospital and Fumigation Shed were located on the former island of Laboratoriehölmén. A cannon foundry had originally been sited on the island. On its return from the Russian campaign of 1788-90, ship's fever, a form of typhus, swept through the Fleet, and claimed some 10,000 lives in Karlskrona. A temporary, later a permanent, hospital was erected on Laboratoriehölmén and was one of the first Cholera and Quarantine hospitals in Sweden. Today used as office.

Staff organisations, training establishments and barracks

From the very beginning training and education was carried out at the new naval base. The Boy Seaman Corps was established in 1685 to ensure a supply of qualified seamen for the regular navy and in the eighteenth and nineteenth centuries most of the Navy's Petty Officers and ratings had received their professional instruction in Karlskrona.

The Anckarstierna Boy Seamen Barracks.

The Anckarstierna barracks from the 1870's in use until 1939. From the beginning of the 1950's the building housed the Naval Museum in use until 1939. From the beginning of the 1950's the building housed the Naval Museum until it moved to Stumholmen in 1997. Today the former barracks are used as offices and by the Municipal Art College.

The Sparre buildings.

Rebuilt after the fire that ravaged the town in 1790, the present Sparre complex consists of four buildings surrounding a large parade ground. In the past, the buildings have been used as a barracks and thereafter to house administrative quarters, a drill hall, kitchen, baths and a laundry. The barracks building with the restrained neo-classical facade from 1889-91 when it was renovated. In 1989 the building is reused as an administrative building.

Fortifications

Both when the Naval base was first established and for many years thereafter, the construction of a network of fortifications was carried out. In 1680, in compliance with Erik Dahlberg's proposals for the defence of the main fairway into Karlskrona, work was begun on the Drottningsskär citadel and the Kungshölmén fortress. From the beginning it had proposed that the harbour and dockyard should be protected from attack from both land and sea by a girdle of fortifications.

Outer fortifications.

Situated off the island of Aspö, the Drottningsskär citadel was itself originally completed in the last decades of the seventeenth century and this well-preserved fortification from the Great Power period is one of the foremost of Sweden's historic military installations. A massive granite donjon houses the artillery, magazine and living quarters and the citadel's four bastions are all named after Queens of Sweden. At various periods from 1710 until 1811 the citadel was on a war footing with, at its height, a 250-strong garrison. In 1865 Drottningsskär was taken off the active list. Today used as a museum.

The **Kungsholm** fortress was an important active installation until the 1980's. Presently used as a training establishment, the fort has been manned for an unbroken period of more than 300 years. It was placed on a state of maximum readiness in the 1780's when Russian squadrons blockaded Karlskrona and again in 1801 when the Royal Navy was active in the Baltic. Although it never had to fire a shot in anger, the fortress was clearly an impressive deterrent to any presumptive intruder. The fortress consists of a number of structures such as the three storey Donjon with flanking towers, the North fortification erected on a redoubt from the 1680's, the Great magazine ventilated with an interior double shell of brick and the Little magazine which has 1.5 metre thick walls and heavy iron doors. The harbour is one of the most singular constructions in Karlskrona. Enclosed within a high, circular wall, it is from the 1830's. Kungsholmen at the end of a cruise continues until this day.

Inner fortifications

The fortified towers, or keeps, of Kurrholmen and Godnatt were built in 1857-63. This type of stronghold had existed in Europe since the Middle Ages and these two were the last such fortifications to be built in Sweden. Obsolete before they were completed, the towers had been overtaken by developments in artillery such as the rifled barrel, and could not withstand the onslaught of modern shellfire.

Several bastions were built to defend the town, dockyard and harbour, although the number actually constructed was considerably less than planned. The Kungshall Bastion from the middle of the 1680's, and the Aurora Bastion was completed in 1704. In the beginning of the 1750's quarters were built inside the bastion to house those merchant seamen who were contracted for temporary service in the Navy. In 1756 these quarters were taken over by the Naval Hospital.

The aim of the head of World Heritage of Karlskrona is to "Protect and develop an living world heritage."

During the last ten years the Swedish government has spent more than 25.000.000 Euros to preserve, renovate and rebuild listed buildings in the world heritage of Karlskrona.

In my power-point presentation I will discuss these difficulties more closely.