



english

A defensive tool

Relief maps are scale-models of fortified sites, made from 1668 onwards on the initiative of **Louvois**, Louis XIV's Minister of War. These strategic tools provided an accurate representation of towns and the surrounding countryside within artillery range. They thus made it possible to plan changes to military fortifications or to simulate sieges.

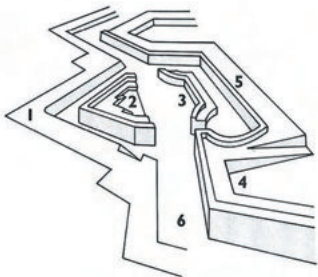
This set of relief maps, which became the royal collection, was then expanded as the territory conquered by Louis XIV and Louis XV increased. It was used for the **defence of the territory** on the frontiers of the kingdom as well as in the former French possessions.



Belle-Ile-en-Mer (18th century)

Kept in the Tuileries, and then in the Grande Galerie at the Louvre, in 1777 the relief maps were moved to the attics of Les Invalides. They were then almost all restored. The making of relief maps resumed during the revolutionary period and under Napoleon I. The practice ended only after the war of 1870 when the construction of bastioned fortifications ceased.

The collection now comprises 100 relief maps on a 1/600 scale, models of fortifications and relief maps created in response to advances in artillery techniques. It was classified as a historic monument in 1927. The museum was created in 1943.



- 1 - covered way
- 2 - half-moon
- 3 - tenail
- 4 - bastion
- 5 - curtain wall
- 6 - ditch

* Bastioned fortification

A defensive structure composed of ramparts, compacted earth held in place by a facing wall, laid out in a polygon, the projecting sections of which are called bastions.

Irreplaceable documents

Relief maps are part of the **history of fortifications**. They make it possible to trace changes in the way towns were defended in the face of advances in artillery techniques, from the Middle Ages to the last thirty years of the 19th century.

Villefranche-de-Conflent, Perpignan and Antibes, models of which were made in the 17th and 18th centuries, have retained part of their mediaeval city walls with their tall towers. When powerful iron cannon balls appeared in 1480, round towers were gradually abandoned in favour of **bastions** which had no blind spots. Imposing cannon towers were constructed from the late 15th century, as at Mont-Saint-Michel and the Château d'If. At Blaye, in the 16th century, the mediaeval towers were half demolished and camouflaged behind massive earthworks to resist enemy fire and accommodate artillery pieces. The result of these experiments was the bastioned fortification*, perfected in France by Vauban in the 17th century. The precision with which these relief maps were made, makes them a valuable source of information about the **history of urban development and the changing landscape**, before the major transformations brought about by the industrial revolution. Looking at them from above, the nature of the **urban fabric and rural buildings and infrastructure** is revealed.

* The **Scale** is 1/600, i.e. one *piéd* [= 13 inches] per hundred *toises* [1 *toise* = 6'9" ft]



The same techniques were once used for restoring the models. Today, the original parts are conserved as much as possible and cleaned by laser, and the new museum will ensure that the models are better conserved by installing air-conditioning and providing limited lighting.

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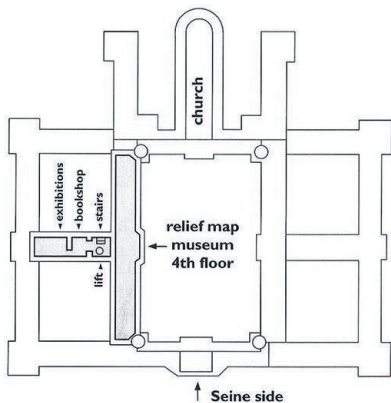
Construction and restoration

At first made on the site, from 1750 the relief maps were made in a single workshop at Mézières, which was moved at the same as the collection to Les Invalides in 1777.

The **techniques** and **scale*** used were gradually standardised.

These models are large scale jigsaws, consisting of wooden tables, the upper part of which are sculpted and modelled to recreate the contours, then coated with fine sand and silk. The trees are made of interwoven silk chenille and iron wire.

Water is painted. The buildings are small pieces of carved wood covered with printed or painted paper.



First proposed in 1986 and begun in 1995, the **museum renovations** will be carried out in four phases. The part now open contains models of sites along the Channel, Atlantic and Mediterranean coasts.

The Channel

Some of the Channel fortifications date from the Middle Ages, as is shown by the model of **Mont-Saint-Michel ·1·**. These defences against England and Holland were completed in the second half of the 17th century. The fort at **La Conchée ·2·** is a fine example of a fortress built on a rocky island to prevent the enemy gaining access to the port of Saint-Malo. It was not until the First Empire period that the great military port of Cherbourg was completed, whose defences were strengthened in the second half of the 19th century by works such as the **Chavagnac fort ·3·**.

The Atlantic coast

The fortification of the Atlantic coast was part of a policy introduced from 1661 by Colbert to provide protection for the area's military arsenals and ports, and for the main commercial ports. The model of the citadel at **Belle-Ile ·4·** shows the site after the final works completed by Vauban between 1680 and 1705 to create additional defences for the Morbihan gulf and access to Lorient.



Saint-Martin-de-Ré (1701)

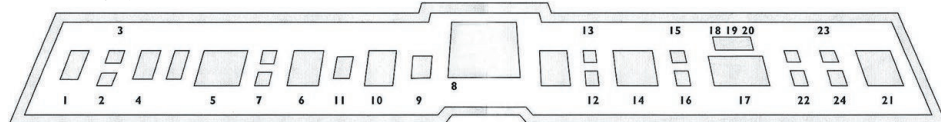


Le Mont Saint-Michel (end of 17th century)



Perpignan (1686)

2 & 3 - temporarily in stockroom



The model of the fortifications in Aunis are reminiscent of the defensive network constructed on the islands of **Ré ·5·**, **Oléron ·6·** and **Aix ·7·** and added to under Louis XIV to cover the military port of Rochefort, founded by Colbert at the bottom of the Charente estuary.

In Aquitaine, surveillance of the coast was provided by the port of **Bayonne ·8·**, reinforced without interruption until the 19th century. The port of Bordeaux was also protected - after the construction of the **Château-Trompette ·9·**, a symbol of the victorious royal power of the Fronde, **Blaye ·10·**, **Fort Pâté ·11·** and Fort Médoc formed a barricade on the Gironde estuary. The relief maps of the Atlantic coast, except for those of **Bayonne ·8·** and **Fort de la Rade ·7·** were made between 1700 and 1705 during the same campaign, and show the importance of the maritime frontier at the beginning of the War of Spanish Succession from 1701 to 1713.

The Pyrenees

The relief maps conserved show the results of the major landscaping work carried out from 1679 on Vauban's orders, after the war between France and Spain which had demonstrated the vulnerability of the Pyrenean frontier. Fortified towns and villages or independent forts stood side by side, like the **Fort Lagarde ·12·** and **Fort les Bains ·13·** on the frontier at **Perpignan ·14·** and beyond.



Saint-Tropez (1716)

The Mediterranean

This trading area of prime importance has always been particularly threatened. The relief maps of the Mediterranean coast offer an overview of the works carried out from the time of François I to that of Louis XV to defend the coast of Provence. The major ports were gradually reinforced, like Marseille with the **Château d'If ·15·** constructed under François I, then **Fort Saint-Nicolas ·16·** in the 17th century, **Toulon ·17·** with the **forts of Lamalgue ·20·**, **des Pomets ·19·** and **Artigue ·20·**, and **Antibes ·21·**. As territory was won, the Genoese fortifications were re-used: **Saint-Tropez ·22·** after 1672, and **Calvi ·23·** after 1768. The **Iles de Lérins ·24·**, strategic sites, were fortified.

For further information:

LE MUSÉE DES
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Isabelle Warmoes
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ACTES DU COLLOQUE
INTERNATIONAL SUR
LES PLANS-RELIEFS AU
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Sedes 1993

LES PLANS EN RELIEF
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LES PLANS EN RELIEF
revue *Monuments
historiques*
CNPiHS décembre 1986,
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