

History of the sites



Relief map of Toulon

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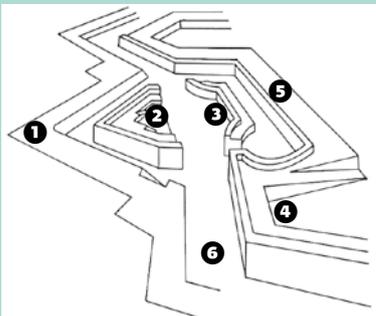
Irreplaceable documents

Relief maps comprise part of the **history of France, its borders and their defence, as well as of the history of fortifications**. They allow us to follow the development of towns faced with increasingly innovative artillery from the Middle Ages to the last third of the 19th century. Villefranche-de-Conflent, Perpignan and Antibes, models of which were made in the 17th and 18th centuries, have retained some of their medieval enclosures with high towers. After powerful cast-iron cannonballs appeared around 1480, round towers were gradually abandoned in favour of bastions, which had no blind spots. Imposing cannon towers were built in the late 15th century, at Mont-Saint-Michel and the Château d'If; in Blaye, in the 16th century, the medieval towers were levelled and hidden behind massive earthworks to resist enemy fire and accommodate artillery. These experiments led to the design of the **bastioned* fortification**, perfected in France by Vauban in the 17th century.

The precision of the relief maps makes them a valuable source of information about the **history of town planning and the landscape** before the great transformations brought about by the industrial revolution. When viewed from above, they reveal the nature of the **urban fabric** and the **buildings and infrastructure of the countryside** in the 18th and 19th centuries (farms, mills, transport routes, etc.).

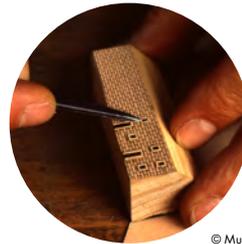
* Bastioned fortification

A defensive system made up of ramparts, compacted earth supported by a facing wall, with a polygonal plan, the projecting parts of which are called bastions.



- 1 covered walk
- 2 demilune
- 3 tenail
- 4 bastion
- 5 curtain wall
- 6 ditch

The techniques



Making the façades of the houses

© Musée des Plans-Reliefs

Construction and restoration

Initially made on site, the relief maps were made from 1750 in a single workshop in Mézières, which was transferred to Les Invalides in 1777 at the same time as the collection. **The techniques and scale*** were gradually standardised.

The models are large puzzles, made up of wooden tables, the upper part of which is sculpted and modelled to recreate the relief, then coated with fine sand and silk. The trees are made of intertwined silk chenille and iron wire. The bodies of water are painted. The buildings are carved from small blocks of wood covered with printed or painted paper. The same techniques were used in the past to restore the models. Today, the original elements are preserved as much as possible by being reglued and dusted. The models are maintained by controlling the temperature, humidity and lighting.

*The scale is 1:600, or 1 pied (French foot) per 100 toises.



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FURTHER READING

(IN FRENCH)

Le musée des Plans-Reliefs
Isabelle Warmoes
Éditions du Patrimoine, 2019

ACCESSIBILITY



MPR

Musée
des Plans-Reliefs



Musée des Plans-Reliefs

Hôtel national des Invalides
129, rue de Grenelle
75007 Paris

museedesplansreliefs.fr



History of the museum



Bust of Luis XIV
On loan from the Musée du Louvre
© GrandPalaisRMN/ Adrien Didierjean

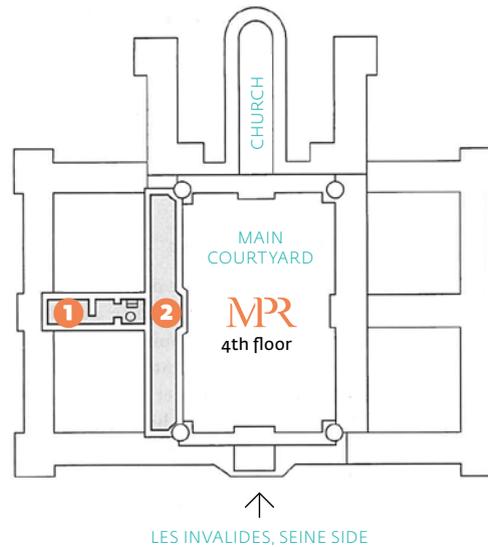


View of the Galerie des Plans-Reliefs at the Louvre
© BnF

Relief maps

Relief maps are the models of strongholds made for Louis XIV from 1668 on the initiative of Louvois, the king's war minister. Representations of towns and the surrounding countryside within artillery range, they were strategic tools used to plan changes to fortifications or simulate sieges. The royal collection of relief maps grew with the conquests of Louis XIV and Louis XV. It was used for the defence of the territory on the borders of the kingdom and the former French possessions. Kept in the Tuileries, then in the Grande Galerie of the Louvre, the relief maps were transferred to the attic of Les Invalides in 1777. Almost all of them were then restored. The production of relief maps resumed during the revolutionary period and under Napoleon I, then under Louis-Philippe and Napoleon III. It only came to an end after the Franco-Prussian War (1870–71), when the construction of bastioned fortifications ceased.

The collection now comprises ninety-seven 1:600-scale relief maps, models of fortification systems and relief maps produced in response to technological advances in artillery. It was listed as a historical monument in 1927. The museum was founded in 1943.

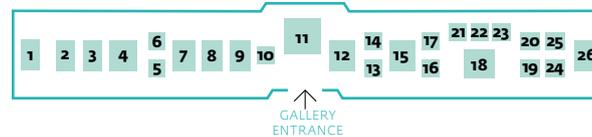


1 Temporary exhibition space

This space presents the introduction to the visit and the museum's temporary exhibition.

2 Permanent exhibition space

The part of the museum that is currently open contains models of Channel, Atlantic, Pyrenees and Mediterranean fortifications. In the spaces around the main courtyard of Les Invalides, the museum will exhibit relief maps of the Alps, northern France and eastern France in the future.



The Channel

Some of the Channel fortifications are a legacy of the Middle Ages, as shown by the model of **Mont-Saint-Michel [1]**, which dates from the late 17th century. A digital visitor experience, sponsored by Microsoft, puts it back into its broad context by comparing it to the site as it is today. Visitors are invited to discover this magical place from a historical and artistic point of view.

The Atlantic coastline

The defence of the Atlantic coastline was part of a policy implemented by Colbert in 1661 to ensure the protection of

arsenals and military ports, as well as the main trading ports. The model of the **Belle-Île citade [2]** shows the site after the final works carried out by Vauban, between 1680 and 1705, to complete the defence of the Gulf of Morbihan and the access to Lorient. The models of the Aunis fortifications are reminiscent of the defensive network built on the islands of **Ré [3 and 4]**, **Oléron [7]** and **Aix [5]** and completed under Louis XIV to cover the military port of Rochefort, founded by Colbert at the bottom of the Charente estuary.

In Aquitaine, coastal surveillance was ensured by the port of **Bayonne [11]**, which was regularly reinforced until the 19th century. The port of Bordeaux was also protected: after the construction of the **Château-Trompette [10]**, symbol of the victorious royal power during the Fronde, a defensive lock was installed on the Gironde, consisting of **Blaye [9]**, **Fort Pâté [8]** and Fort Médoc. The relief maps of the Atlantic coast, except for those of **Bayonne [11]** and **Fort de la Rade [5]**, were produced during the same campaign between 1700 and 1705 and depict the maritime frontier at the beginning of the War of the Spanish Succession (1701–13).

The Pyrenees

The surviving relief maps show the results of the major works carried out from 1679 at Vauban's request after the Franco-Spanish War, which had demonstrated the vulnerability of the Pyrenean frontier. Strongholds or forts were built in pairs, such as **Fort Lagarde [13]** and **Fort les Bains [14]**, from the border to **Perpignan [15]** and beyond.

Bayonne [11] and **Perpignan [15]** were two strategic cities straddling the Pyrenees against Spain.

The Mediterranean

This important trading area has always been subject to threat. The relief maps of the Mediterranean coastline provide an overview of the works to defend the coast of Provence carried out from the reign of François I to that of Louis XV. The major ports were gradually reinforced, including Marseille with the **Château d'If [17]** built during the reign of François I and then **Fort Saint-Nicolas [16]** in the 17th century, **Toulon [18]** with the **forts of Lamalgue [22]**, **Pomets [20]** and **Artigue [21]**, and **Antibes [26]**. As territories were conquered, Genoese fortifications were reused: **Saint-Tropez [19]** after 1672 and **Calvi [25]** after 1768. The strategic Îles de **Lérins [24]** were fortified.