

# The Austro-Hungarian defences in Venice (Австро-угорські укріплення в Венеції)

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Starting from the Middle Ages and with a continued series of progressive enlargements up to the beginning of the Twenty Century the city of Venice has been surrounded, or rather wrapped by an extraordinary complex of fortifications. Nowadays these sites, representative of a real anthology of the military architecture are around seventy, disseminated in an environment so much extraordinary that goes from the lagoon islands to the shores of Cavallino, Lido and Pellestrina, and to the system of the Entrenched Camp of Mestre.

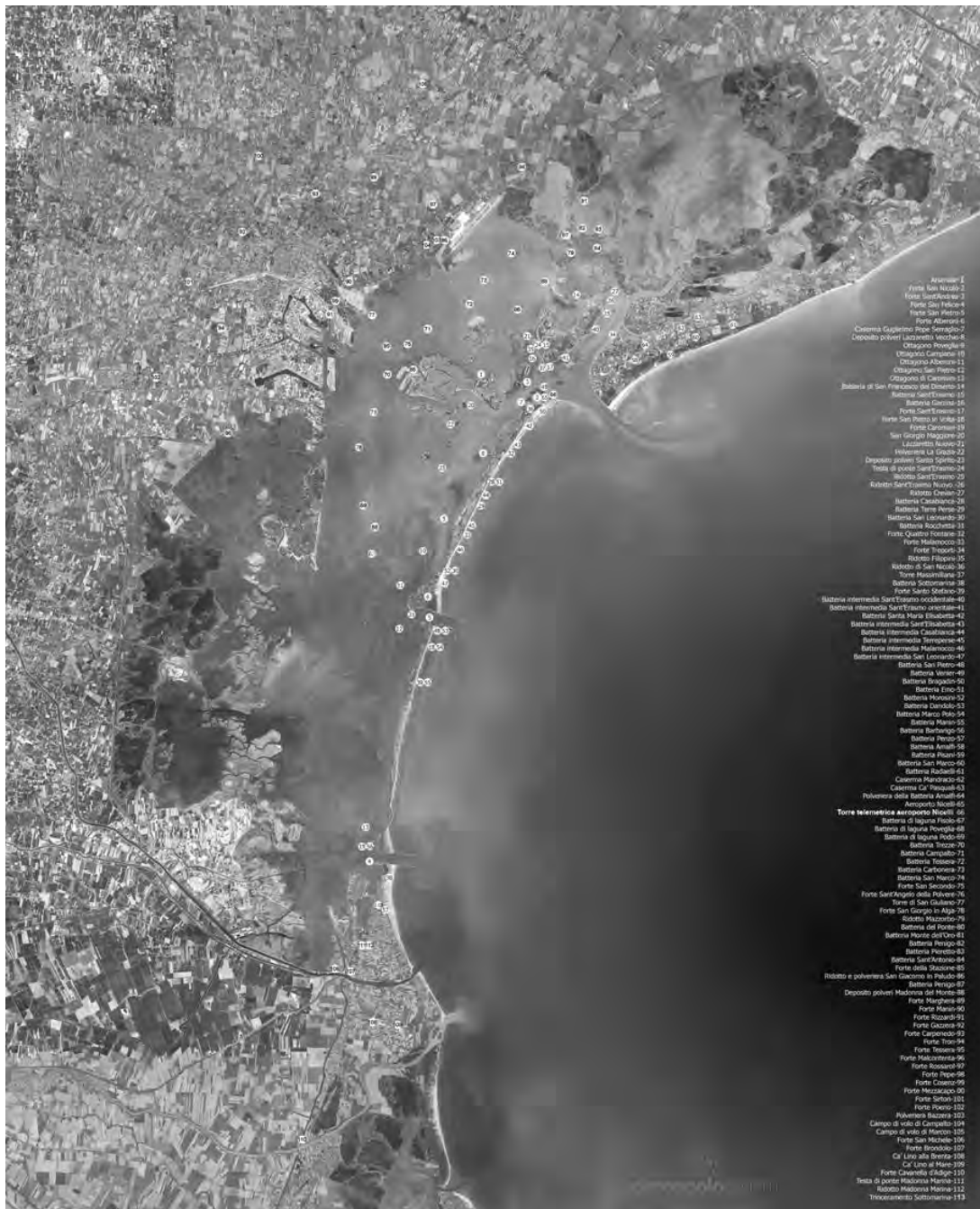


Fig. 1. The lagoon of Venice and the marked fortifications

The fall of the Republic of Venice and the subsequent French and Austrian governments have afterwards included the Venetian territory in a potential ring linked to the military architectures of the Middle Europa. The starting point is the building of the first fortified asset in the mainland bordering the lagoon for the defence of the city of Venice. The building of Forte Marghera starts in 1805 on the site of the old village of Marghera. It is a strategic area located at the border of the Venetian lagoon whereas the brackish waters of the lagoon meets with the low lands of the first mainland featured by a grid of small natural canals, salt-marsh and the mouth of spring waters. Until the construction of the fort the village of Marghera was featured to be the starting/arrival point to/from Venice. The military works changes the function use, but it does not change the peculiar environmental context.



Fig. 2. *Fort Mergherra – aerview*

The beginning of the construction of Forte Marghera dates back to 1805 when the Napoleonic troops take again an old French project that dates back to 1797. The fort is finished in 1814 and with it is completed the village of Marghera completely disappeared. Of the old village survives only the arcades of the sixteenth century of a bridge with three vaults in cooked-brick. The structure is articulated in three following defence lines separated by artificial canals fed by the water of the lagoon. The most external line is constituted by three lunettes separated by the second line of the fort by a first ditch. The second line is constituted by an island that enshrouds pincers the main body of the fort, in turn completely surrounded by the lagoon waters. The structure of the fort maintains its original structure with simple bastioned forts and few buildings in stone and bricks until the second half of the nineteenth century, undergoing in this period three sieges, of which the longest one lasted for almost a year between 1848-1849. Between the end of

the nineteenth century and the beginning of the twentieth century it start to disappear the primary defence function of the fort and it undergoes its progressive transformation into a warehouse and logistic centre. This will lead in the time to the progressive addition of several volumetric increasing of poor architectonic value, but of simple operational functionality (warehouses, offices workplaces, garages, sleeping places, services). The mix of all the above-mentioned elements provide nowadays to the fort an aspect very similar to a citadel.



Fig. 3. *Baracks of the Fort Mergherra*

Venice and Veneto Region have been under the dominion of the Habsburg Empire during the years 1797-1805 and 1814-1866. Until 1848 Venice and its Arsenal will be a strategic relevant strategic city for the Habsburg Empire where it grounds all its naval policy and maritime power that will be transferred to the city of Pula after the events of the 1848 and 1849 sieges. The Habsburg long presence in Venice and the military strategic relevance of the port has determined a relevant work of fortifications in the entire lagoon area and in particular in the coastal area, in the lagoon islands and the bordering line of the mainland. In different times the Venetian age fortifications were strengthen and also the French fortified assets, such as the case of Forte Marghera that was started before 1805 by the Austrians, followed by the French and completed by the Austrians.



Fig. 4. *Fort St. Erasmo*

Relevant Habsburg works of military assets are:

- The Austrian redoubt inside the fortress of San Nicolo built between 1848 and 1851
- Forte Vecchio at Tre Porti built between 1845 and 1851
- Battery Quattro Fontane built between 1830 and 1850

But the most important Habsburg military asset built in Venice during their dominion is definitively the so called Torre Massimiliana (Maximilian tower).

The fort of S. Erasmo or “Forte Massimilano”, commonly known as “Torre Massimiliana”, stands on the south-west point of the island of S. Erasmo in front of the port of Lido.

Its construction is a work of the Austrians that they built it between 1843 and 1844 on the grounds of the former fort of S.Erasmo built by the French between 1811 and 1814. Surrounded by a water ditch and by a bank with an irregular polygonal plant, it was defending the southern part of the littoral of S. Erasmo taking enfilade of the mouth of the port of Lido. Together with the battery S. Erasmo (1859-64) and the two redoubts of S. Erasmo Vecchio and S. Erasmo Nuovo (1832-33), the last ones built on former French fortifications, it constitute the defence system of the littoral of S. Erasmo in front of the Mouth of the Port of Lido, in support of the sixteenth century fort of S.Andrea, of the fortifications of the islands of Vignole and of the Lazzaretto Nuovo and to the Austrian fort of Treporti.

The Maximilian tower is a defence work built for the use of the artilleries in barbette that allows the observation and the concentrated throw in a around horizon and that recalls the towers Martello – circular – located as guard, in medieval age, of the British coast of the Channel. Its name is due to the inventor of this particular type of fortification, the Archduke Maximilian Joseph of Austria – Este (1782-1863), the third son of the governor of Lombardia and duke of Modena Archduke Ferdinando. Between 1820 and 1827, the Archduke Maximilian coordinates the experimental study for a new system of fortifications with a circular plan to be accomplished in an unique model at the moment of the definition of the defence plans of all the cities of the Empire. The fort is destined to host a battery of 10 guns in barbette on the terrace floor. The gun mouth of each piece is arranged to rotate on a circular rail in order to concentrate in an unique

point a great volume of fire. In 1831 it is started the construction of the 25 towers of the Entrenched camp of Linz (completed in 1835). Four towers of the same typology will be built between 1834 and 1836 in Brescello sul Po, in the territories of that time dukedom of Modena, demolished after the establishment of the kingdom of Italy..

The Maximilian tower of S. Erasmo follows the model of the towers of Linz and it is the only example of this type survived in Italy. It has an external diameter of about 28,50 meters, an internal diameter of 8,50 meters and an height on the terreplein of 11,00 meters. The plant is divided by walls in eight trapezoidal rooms for an overall covered surface of 600 square meters.

The recent restoration of the Maximilian tower is a remarkable best practice to acknowledge.

Between December 2003 and April 2004, in the framework of a programme agreement between Veneto Region , Municipality of Venice and Water Authority, for interventions in favour of the defence of the high tides and the urban and environmental upgrade of the Island of S. Erasmo , that has lead to:

- a rising and reinforcement of the rivers and of the dykes of the island;
- to the widening of a small natural beach in front of the mouth of the port;
- to the creation and re-organization of the landing place;
- to the re-establishment of the docks;
- upgrade of the road system and of all the services of the entire island.

The Maximilian tower has been an object of a complete restoration according to a path of modern philological recovery, respectful of the architectonic-historic asset, but with the inclusion of totally movable structures that allows a daily use. The result is the preservation of the monument as typology and building evidence of a relevant and unique work of military defence in the lagoon and the consequent restitution of the original composition matrix of the inner space of the building of the landscape and the construction of a system of infrastructures that allows nowadays the functioning of these same spaces, offering specific roles, but complementary to all the elements of the new plant.

The foreseen re-use of the tower included in the wide project of the “Parco della Laguna di Venezia” - Park of the Lagoon of Venice- (with the arrangement of a permanent exhibition space at the round floor and the possibility to host, at the first floor, areas for associations or the same siege of the Park) has determined also the need to equip the building of the most sophisticated plant technologies, made outside of the historical building, in a new volume designed in the missing area of the terreplein, where there are concentrated also the restrooms.

The Maximilian Tower is property of the State property, that has given the building in concession to the Municipality of Venice, that has afterwards assigned it to the institution “Parco della Laguna”

Costs: for the annual management, the institution Parco della Laguna, that manages with a Memorandum of Understanding with the Municipality of Venice, funds with the amount of € 40.000,00 assigned on year basis through a call to the subjects that candidate themselves for the ordinary management of the complex (opening, cleaning, ward service, ordinary maintenance). To this funding, it must be added time by time, further funding in contribution of the several initiatives that are organized in the Tower (exhibitions, performances, cultural events, ....).

The overall cost of the intervention of restoration is the following amount € 3.900.000,00 divided according to an MoU between Veneto Region, Municipality of Venice and Water Authority:

- Regione Veneto..... € 585.000,00 (15%)
- Municipality of Venice.....€ 1.365.000,00 (35%)
- Water Authority.....€ 1.950.000,00 (50%)

The amount was part of an higher overall budget of € 72.400.000,00 dedicated to the intervention of safeguard and protection of the Island of S. Erasmo

The tasks of the above mentioned institutions were divided as follows:

- Water Authority : rebuilding of the rivers and channels digging
- Veneto Region: realisation of the sewer system and of the purifier
- Municipality of Venice: urban works, green areas, streets, bridges, restoration of the Maximilian tower

Since several years Marco Polo System geie , also on behalf of Veneto Region is working on a path of knowledge, valorisation and recovery of the military architectures of the nineteenth and twentieth century. In Forte Marghera it has set up a Centre for the documentation on the military architectures that today, in this conference we take the opportunity to propose as point of reference of the network, as a whole comprehensive of the most relevant existent Defence Systems in Europe, within which the KuK fortresses can represent an interesting sub-system

The Centre has already hosted seminars and laboratories of relevant European universities: Venice, Weimar, Stuttgart, and Graz on planning, urban valorisation, restoration and today Marco Polo System geie proposes it as a tool of scientific work for all the Universities or research institutes, cultural institutions, Ngo's that we strongly believe that can be the scientific ground of the network.

Beside the scientific value, the network can also implement a relevant touristic-cultural networking that grounded on the military architectures is capable to put in relation the entire European Continent

Nowadays the challenges goes over the simple processes of restoration of the single elements and of the. historical monumental challenge. The challenge is in providing the correct dimension of system to the elements that ranging from the Baltic to the Adriatic and to the Mediterranean – along the Danube, the Chain of Alps and from the Tirrenium Sea to the North Sea has featured the history of our Continent and towards which only a comprehensive governance approach, grounded not only on the safeguard, but also targeted to the valorisation capable to perceive all the potentialities

In conclusion, our proposal is to start from today to set up an effective management tool for the functioning of the network capable to gather, manage and valorise economical resources, the international cultural and scientific cooperation, the European programmes

Marco Polo System geie proposes the constitution of an European Grouping of Territorial Cooperation (EGCT) grounded on an effective European Network of Modern and Contemporary Military Architectures