

Executive Summary

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Executive Summary

State Party

Federal Republic of Germany

State, Province or Region

Bavaria, Swabia

Name of Property

Water Management System of Augsburg

Geographical coordinates to the nearest second

The location of the Wasserwerk am *Roten Tor* (Red gate) is given as the central coordinate of the nominated property:
48° 21' 36" N; 10° 54' 11" E

Textual description of the boundaries of the nominated property

The boundaries of the nominated property are defined by the limits of the canal system chosen to represent *The Water Management System of Augsburg*. The canal system comprises in the south canals in the *Stadtwald*

collecting drinking water, in the east diversion canals bordering the western bank of the *Lech* River, in the west canals bordering the eastern bank of the *Wertach* River and in the north the *Lechkanal* running parallel to the west of the *Lech River*. The boundaries are set by the canal borders and their 5 metres legal protection zone on both sides acting as buffer zone. The nomination area is widened at the area of the fountains on the *Maximilianstraße* and in the *Lechviertel*, these elements are connected by underground canals and water supply pipes as part of *The Water Management System of Augsburg*. Buildings over the canal system and expanding over the banks of the canals are inscribed in a widening of the nomination area.



Map of the nominated property, showing boundaries and buffer zone Criteria under which property is nominated

Criterion: (ii), (iv), (vi)

Draft Statement of Outstanding Universal Value

a.) Brief synthesis

The Water Management System of Augsburg is located in the Bavarian City of Augsburg, Germany. A sustainable system of creative water management evolved in successive phases through the City's application of innovative hydraulic engineering, demonstrating an exemplary utilisation of water resources over the course of more than seven centuries to the present day.

Augsburg is situated on the northern tip of a gravel plain, formed during the Ice Age, which spreads between two Alpine rivers, the *Lech* and *Wertach*, as they converge at the mouth of a great drainage basin. The glacial gravel deposit acts as a large unconfined aquifer that serves as a natural filter that produces an inexhaustible source of purified groundwater that powerfully emerges in a series of springs that feed streams known locally as "founders". Water,

and Augsburg's strategic location at the crossroads of important trade routes, are key foundations of the growth and prosperity of the city and its population, and its status as a flourishing trade metropolis. This city of emperors, parliaments, wealthy merchants and bankers was characterised by an aura of modernity, cleanliness and scientific understanding fostered by *The Water Management System of Augsburg*. The nominated architectural and technological monuments preserve successive socio-technical ensembles that are vivid testimony to the City's continuous successful urban administration and management of water that brought pre-eminence in two key stages in human history: the water "art" of the Renaissance, where exceptional significance is embodied in the standard-setting achievements of the "fountain masters" of Augsburg and their influence on the development of urban water management systems through technical exchange diffused along European trade routes; and the Industrial Revolution, when a tradition of water management that began in the Late Middle Ages triggered early industrialisation in a city far from coal, where water – for power – propelled the textile industry, and subsequently machine manufacturing, to a position of international acclaim, and where renewed innovation sustained Augsburg's leading position as a pioneer in hydraulic engineering well into the twentieth century.

The Water Management System of Augsburg represents an urban water landscape that is unparalleled in terms of its surviving successive technical diversity. The system includes: the sources of both potable and process water (spring water and river water, respectively) and their network of canals and complex of watercourses that already in the year 1545 kept the two types of water in strict separation throughout the system (over 300 years before the cause of cholera was ascertained); water towers from the fifteenth to seventeenth century that housed pumping machinery driven by water wheels and later by turbines to counter the abrupt topographical change presented by the plateau that hosts the historic city centre of Augsburg (potable water was lifted to expansion basins on top of the towers, from which it could flow by gravity in wooden pipes to consumers); a water-cooled butchers' hall from the early seventeenth century; a system of three monumental fountains of extraordinary artistic quality that are among the most splendid bronze monuments of the Renaissance to be found north of the Alps; *Hochablass* Waterworks that represents modern cutting-edge hydraulic engineering of the late-nineteenth century; hydropower stations, and finally the hydroelectric power stations that continue to provide sustainable power in the twenty-first century.

b.) Justification for Criteria

Criterion (ii): *The Water Management System of Augsburg* has generated significant technological innovations. The strict separation between drinking and process water was introduced as early as 1545, long before research into hygiene matters established as a fact that impure water was the reason for many diseases. An international exchange of ideas regarding water supply and water generation evolved which, in turn, inspired local engineers in their drive for innovations many of which were tested and implemented in Augsburg for the first time. Testimonies are extraordinary works of engineering, architecture and art, which clearly manifest the uninterrupted application and further development of technical and artistic standards over time, i. e. the canals itself, the weirs, canal crossings monuments, drinking water works, fountains, a water-cooled meat cutting, processing and sales facility and early industrial power generation.

Criterion (iv): As a technological and architectural ensemble, *The Water Management System of Augsburg* illustrates the use of water resources and the production of highly pure water as the basis for the continual growth of a city and its prosperity since the Middle Ages. This richness offered favourable conditions for the everyday life, skilled crafts and trades and

industries to settle in Augsburg, e.g. mills, tanneries, dye works, textile production and goldsmiths as well as all phases of power generation. Significant types of buildings are drinking water works, fountains, waterpower stations and more.

Criterion (vi): *The Water Management of Augsburg* is directly and tangibly associated with the fundamental idea and concept of separating drinking and process water as a prerequisite for sustainable and social development. More than 60 hydro-technology models from the 17th, 18th and 19th century in permanent exhibition and depots, original instruction plans and paintings in the waterworks at the Red Gate (*Rotes Tor*), sketches, engravings, manuscripts and printed material in the city's archives, libraries and art collections as well as historic daily registers recording visits of experts are testimonies of Augsburg's recognized leading position for water engineering over centuries. The book "Hydraulica Augustana", published by *Caspar Walter* in 1754, became one of the early reference books for hydro-engineers and documents the extraordinary significance of the standard-setting achievements of the fountain masters of Augsburg, their influence on the development of urban water management systems and the scientific exchange between different European regions.

c.) Statement of Integrity

The nominated property *The Water Management System of Augsburg* fully complies with the requirements. The technical-architectural ensemble constituting the System is of adequate size so it can fully represent the features and processes which lend the property its importance. Moreover, the nominated property is not threatened by any negative impacts caused by urban developments and/or neglect.

d.) Statement of Authenticity







The Water Management System of Augsburg is one of the exceptional and very rare preserved structures that document the development of an urban water management system since medieval times. The system is still in use, its function is based on the preserved ensemble of water management features such as canals, water courses, waterworks for the production of drinking water, hydro-technical structures and buildings, a triad of fountains of extraordinary artistic quality, a water-cooled meat cutting, processing and sales facility and a range of hydropower plants. The form and the design of *The Water Management System of Augsburg* are largely preserved in its original substance and material. The technical innovation achieved in Augsburg illustrates clearly that the community was keen to keep their drinking water clean, even before research into hygiene matters was undertaken. The ensemble of elements of *The Water Management System of Augsburg* are carefully preserved to convey its significance as a whole.

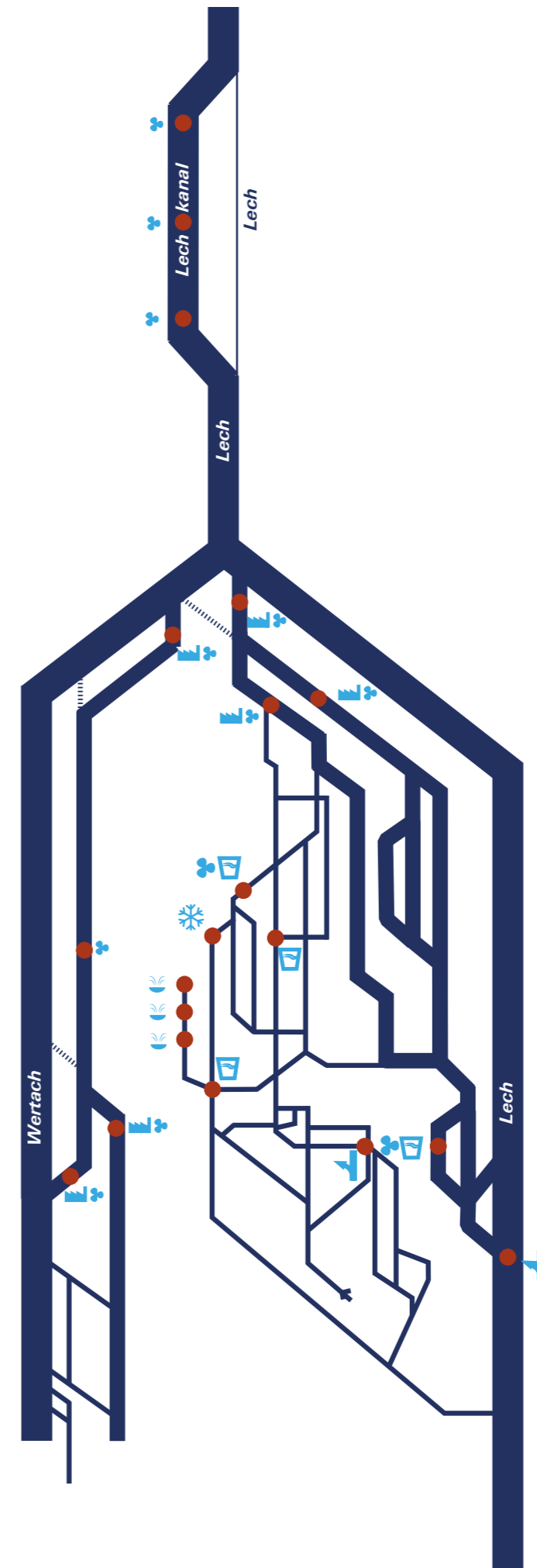
e.) Requirements for protection and management

All 22 elements of the nominated property have been included in the Bavarian heritage list. They are thus protected by law in accordance with the Bavarian Heritage Protection Act. All the important upkeep or change measures and all construction interventions are to be coordinated with the Lower Heritage Protection Authority of the City of Augsburg and require approval in accordance with heritage protection law. Large parts of the nominated property lie in conservation and FFH areas or within the existing heritage protection areas 'Ensemble Old Town Augsburg' and 'Olympic Canoe Course'. This provides extra protection for the nominated property and elements contained within it, as strict regulations exist for water quality control and nature conservation in addition to building and heritage preservation. The protection, sustainable use, development and design quality of the nominated property and its setting are also ensured by various ordinances, master plans and guidelines elaborated by the City of Augsburg. Buffer zones have been designated and mapped for the nominated property. Besides, throughout the entire nominated property, relevant sight lines with the nominated elements have been analysed, documented and mapped in order to ensure the visual integrity of the protected asset

also beyond the defined buffer zones. In order to coordinate and to guarantee the preservation and proper management of the nominated property, and to guarantee its sustainable development, the City of Augsburg has established a World Heritage Office. Among other things, it checks any projects and planned constructions against compatibility with the World Heritage standards and takes care of the regular review of the general state of conservation of the property. A Management Plan has been compiled to define the framework of the future management of the property. ■

Water Management System of Augsburg Schematic illustration

-  Industry
-  Process water supply
-  Drinking water supply
-  Fountain
-  Weir / Culvert
-  Cooling water supply



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