



Design of the Fährberg area under
consideration of the preservation of
historical monuments as part of the
Federal Garden Show 2025 Rostock

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urn:nbn:de:gbv:519-thesis2022-0310-3

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1. Occasion

In 2018, the Hanseatic and University City of Rostock applied for the Federal Garden Show 2025 and was awarded in the same year. In the course of this, seven areas around the Warnow River were selected. They shall be connected with each other as well as with the surrounding areas and the city center. The potential of the individual projects shall be elaborated in order to give the city a coherent, upgraded overall image. To achieve this, competitions have been launched that bring together planning offices from different sectors to master a diverse range of requirements.

2. Aim and structure of the thesis

In this master thesis, the project "Fährberg" was looked at more closely. This project is intended as the entrance area of the Federal Garden Show. With its already existing uses, the listed Fährhaus, and its changed elevation due to the incoming Warnow Bridge, offers a great potential for the planning but also great challenges. The goal is to find feasible solutions and to elaborate new potentials for the creation of a harmonious place to encounter both for the coming Federal Garden Show and for later uses by the citizens of the city.

For this purpose, this thesis first analyses the topic of garden shows both generally and historically. The uniform concept of the city of Rostock is presented so that the area to be planned fits conclusively into the overall area.

To gain precise insight into the planning area, the thesis proceeds from a large scale to a small scale. The process begins with a historical depiction of Rostock, followed by Gehlsdorf, and ends with the planning area. This is categorized by both, uses and ecosystems.

To create an insight into the complexity of the planning area, the competition published in 2021 is explained in chapter 6.

Finally, the design is explained with various renderings to visualise the ideas. The goal here is to create a space in which people can meet across generations.

3. Federal Garden Shows

In a biennial rhythm, the German Federal Garden Shows take place in different major cities. The German Federal Garden Show Society focuses on various topics to promote urban development. Among other things, cultural heritage, nature conservation, value creation, but also climate protection are important precursors to ensure sustainable planning. In a ten-year rhythm, the garden shows are taken to the larger level in the form of the "International Garden Show". The counterpart at the state level is formed by the Federal Garden Shows in the individual federal states (cf. Sandner, 2019, w.p.).

3.1. History of the Federal Garden Shows

The first international agricultural and horticultural exhibition was held in Erfurt from September 9 to 17, 1865. On September 6, 1876, a General Exhibition of German Horticulture was opened in Erfurt's Augusta Park. It lasted until September 1876, and several national horticultural exhibitions were held in the traditional "flower city" until World War I (cf. Zerrull, 2011, S. 208-222). A Hamburg state prize was donated to the international garden exhibition in 1887 (cf. Staatsarchiv, S. 436). From 1900 it became a tradition with the "Great German Horticultural Exhibition" continued (cf. Staatsarchiv, S. 437). 7 years later, the third international horticultural exhibition was also held in Dresden (cf. Staatsarchiv, p. 441). This time, a "Great Horticultural Exhibition" was held in Mannheim at the same time (cf. Caroli, 2008, w.p.).

During the time of the Weimar Republic, three horticultural exhibitions were held, which were well received by the public. It took place in the cities of Dresden, Essen and Liegnitz. During the National socialistic era, garden shows continued to be held and were called Reichsausstellungen des Deutschen Gartenbaues. Large cities such as Hanover, Berlin, Stuttgart and again Dresden and Essen were chosen as locations (cf. Allinger, 1950, w.p.).

The Federal Garden Shows, as they are known today, came into being in the post-war period. The official start was marked in Hanover in 1951. The One with the most visitors was held in Munich in 1983 with 11.5 million visitors (cf. Bundesamt, 2014, w. p.). Another successful

international one was held in Stuttgart in 1993 with 7.3 million visitors. After that, however, visitor numbers declined to about 3 million (cf. Sander, 2011, w.p.)

Since 1980, there have been some critics questioning the sustainability value. National economist Lucius Burckhardt criticizes "open spaces close to the city that can be transformed into parks," the result being that "once useful parks are too richly orchestrated and transformed into therefore only more manageable parks." (cf. Burckhardt, 1981, w.p.). Kurt Duwe, an FDP member of the Hamburg City Council, cites the International Building Exhibition in connection with the International Garden Show in Wilhelmsburg /Hamburg as an example. The Hamburg Senate describes that nature will need 25 years for the compensatory measures of the destroyed biotopes to create an adequate replacement. This is because more than 2200 trees and more than 4000 meters of destroyed hedges will need 20-30 years of development to equal the old growth. Also, the draining of almost 3000 square meters of a wet meadow for the construction of a noise barrier, "cannot be the purpose of a garden exhibition" said Duwe (cf. Kleist, 2013, w.p.).

3.2. Tasks of the Federal Garden Shows

With the beginning of today's garden shows, the main focus was on the restoration of urban green spaces destroyed by the Second World War. But also the "greening of residential areas, implementation of urban green corridor projects, ecological renaturation measures, conversion of military and industrial legacies, reconstruction of garden and natural monuments, creation of leisure, sports and tourism infrastructure, relocation of large-scale traffic facilities, complex development of urban neighbourhoods, qualification of urban peripheries, land unsealing, shoreline design, flood protection, climate corridors, energy generation, the greening of roofs and facades, city staging and mission statement processes, regional development scenarios, etc. " (Sandner, 2019) have been part of the tasks of federal garden shows since the post-war period.

Through the further development and maintenance of the created places, the German Federal Garden Show Society writes, the quality of life of the residents should be secured in the long term. The green spaces should strengthen social cohesion between different groups of people.

A future-oriented integration of all planning areas is decisive. In this way, reference is also to be made to demographic and climate change as well as to nature and monument conservation.

Citizens will be involved in the idea and planning process in advance through a broad-based participation process. This can be done with the help of online surveys, on-site meetings, or information formats. In this way, potential conflicts are to be resolved in advance (cf. Sandner, 2019, w.p.).

3.3. Financing of the Federal Garden Shows

Despite the by now large dimensioning of the projects at each Federal Garden, it has so far always been possible to finish on schedule since the first Federal Garden Show in 1951 in Hanover. This has been made possible by strict adherence to construction costs and the associated binding nature of the respective planning and realization procedures.

The foundation for the investments is a combination of various funding programs. On the one hand those of the countries, which include the federation and the European Union, as well as local own portions, which come to a large extent by savings several years. On the other hand, the garden shows are also financed by sponsors or foundations as well as the income from the garden shows itself.

At the end of the garden shows, the sites are usually handed over to the city, which then takes over the site with the help of the previously approved maintenance and utilization concept. A life-cycle cost calculation ensures precise, quality care to maintain the high standard (cf. Sandner, 2019, w.p.).

4. Rostock as the organizer of the garden shows

Rostock was the organizer of the International Garden Show in 2003 and will be the organizer of the Federal Garden Show in 2025. On the latter, the objectives of the garden show will also be discussed in detail.

4.1. International Garden Show 2003

In 2003 the first garden show took place in Rostock, which was an international garden show and the first national garden show in Mecklenburg Vorpommern at the same time. The main idea was the development of infrastructure throughout Rostock. Among them was the construction of a tunnel under Rostock's Warnow River, providing a fast connection between the east and west of Rostock for motorists. The tunnelling of the main train station and the construction of an exhibition hall was also realized in the course of the international garden show. However, the main focus laid on the construction of a large landscape park in the northwest of the city. A landscape and recreation park with a large open-air area was created. As with many national garden shows, the attempt was made to keep the area as a tourist hotspot. This succeeded so far, including the Rostock IGA area, no federal garden show (cf. Fudickar, 2021).



Figure 1/2: International Garden Show

With 2.6 million visitors, there was ultimately a deficit of about 20 million euros, which is why the IGA grounds remained chargeable (cf. Labude-Gericke, Rostocker Iga-Park ab jetzt offen für

alle, 2019, w.p.). Since 2018, with the arrival of a new management, the park is free of charge. Since then, the number of visitors has quadrupled. The location on the Warnow River invites water sports and environmental education has been increased (c.f. Fudickar, 2021, w.p.).

4.2. Federal Garden Show 2025

The citizens of the Hanseatic City of Rostock approved the application to host the Federal Garden Show on 16.05.2018. Competitors were the cities of Schwerin and Wuppertal. Due to a lack of financial commitments from the state for a possible Federal Garden Show in Schwerin and a withdrawal of the Wuppertal application, Rostock was awarded the contract in August 2018 (cf. Labude-Gericke, 2018, w.p.).

The guiding principle of the Federal Garden Show is to connect peripheral areas around the Warnow River with the city centre. It is referred to the opening to the water. There are seven construction projects planned for the 2025 Federal Garden Show in Rostock:

1. the expansion of the city harbour with a multi-purpose hall and a state archaeological museum
2. the Hechtgraben wetlands
3. the city park on the site of the former landfill site
4. the Warnow Quartier as an urban residential area
5. the waterfront promenades
6. the Greifenbrücke to connect the eastern harbour with the existing Holzhalbinsel
7. the Fährberg as a meeting place on the waterfront.

The planners of the office partnership A24 and Holzer Kobler would like to extend the Wallanlagen so that it meets the harbour. New uses are to be created at the city harbour that will allow for "play and sports as well as relaxation on wooden decks, green spaces, and benches" (Behrmann, 2021, w.p.).

Many previously remote districts are to be linked by the construction projects. This will be done through the Warnow Circuit (Warnow Rund), also referred to as the "Rostock Oval". A cycle path of about 5km in length. The banks of the Lower Warnow are to become places of encounter by being developed into promenades.

The individual parts of the city will be better connected through shorter routes. The city is also to become greener, offering more attractions and meeting places. Renate Behrmann, the commissioner for the Federal Garden Show in Rostock, is certain that the city will "expand and consolidate its image as a place to live, work and study and as a special tourist attraction in the north" (Behrmann, 2021, w.p.)

Behrmann emphasizes that the citizens played a major role in the decision-making process for the guide. Through information events on the individual projects and expert discussions with planners, architects and the Lord Mayor, numerous discussions arose, the results of which were forwarded to the BUGA department. However, the Corona situation has made face-to-face discussion difficult, resulting in a shift to online platforms.

However, Behrmann emphasizes that the pandemic regarding the Federal Garden Show was quickly addressed. She praises the high level of commitment and flexibility of the employees, so she is in good spirits that the deadlines can still be met. Above all, the focus is on completing the 545-meter bridge that will make the Rostock Oval complete (cf. Behrmann, 2021). It accounts for a large part of the total costs, which will amount to around 113 million euros. But other urban development projects, such as the new construction of the Volkstheater and the Archaeological State Museum, would also have been difficult to finance without the Federal Garden Show. The state government has agreed to provide a large part of the funding. The federal government covers about half of the costs (cf. Focus, 2018, w.p.). The green projects, such as the Fährberg, which is the focus of this paper, account for only a small portion of the total costs.

4.3. Aims of the Federal Garden Show Rostock

With the award of the Federal Garden Show in 2025, the city of Rostock wants to further advance the development concept. In the process, the shore zones of the Warnow River will be brought further into focus.

The city as a whole defines two main objectives:

- the qualitative upgrading of inner-city areas
- the optimization of infrastructures.

In addition, the shore areas will be connected by the so-called Warnowrund, thus linking the districts of Gehlsdorf, Toitenwinkel, and Dierkow with each other and with the rest of Rostock. Getting closer to and experiencing the shore are also among the BUGA's guiding principles.

The construction of a bridge that crosses the Warnow River in its entirety will connect the planning area with the historic city centre. But it will also bring the districts of Dierkow, Toitenwinkel, and Gehlsdorf closer to the city centre. The focus is on keeping the visitor frequency permanently high even after the Federal Garden Show 2025. The aim is to "present use appropriate to the location [that] take into account the quality requirements for a sustainable public open space with high recreational value" (Grupp, 2021, p. 5). In addition, great emphasis will be placed on the design quality of contemporary landscape architecture as well as a sustainable planning and maintenance concept that takes local characteristics into account. Importance is attributed to the "Altes Fährhaus" (old ferry building), which is a historic monument. The allotment gardens and the adjacent wooded areas are also taken into account in this work. The fact that the Rostock Sailing Club and the Rostock Rowing Club are located in the competition area is expected to create a symbiosis between relaxation, sports, and the public interests. Furthermore, the planning area offers an exposed view of the historic city centre of Rostock. The bridge described in Chapter 4.2 (Fig. 3), which crosses the Warnow River, arrives in the area of the Fährberg and is intended to serve as the entrance to the Federal Garden Show.



Figure 3: Warnow Bridge

4.3.1. Das Warnow circuit (Warnow Rund)



Figure 4: Warnow Circuit

In 2010, the Hanseatic City of Rostock decided to link the individual districts along the Warnow River more closely with each other in order to improve access to the Warnow as a vacation destination. In the course of the Federal Garden Show, this was concretised under the term Warnow Circuit (Warnowrund). It belongs to a network of paths that is intended to function regionally, supraregionally and even internationally. The highlight of the path is the connection through the long-distance cycle path Berlin- Copenhagen. This leads across the Warnow Bridge, which begins at the city harbour and ends at the shore of Gehlsdorf. That bridge and the Griffin Bridge (Greifenbrücke) on the eastern part of the Lower Warnow are intended to provide better access to the districts of Gehlsdorf, Toitenwinkel and Dierkow. The main focus will be on bicycle and pedestrian traffic. In this way, Rostock should become more car-free and climate-friendly. It is also intended to boost tourism. With the expansion of a "fast" and "slow" loop, all age groups are to be encouraged to exercise. Included are "walking, jogging, cycling, skating [and] rollerblading" (team red Deutschland GmbH, 2020, p. 5).

The fast round is located landside (outside) and is intended to have a speed of 10-25 kilometres per hour. It will be uniformly designed throughout the whole circuit. Low rolling resistance and curve radius of more than 20 meters are necessary to ensure good trafficability.

The slow round is intended for all users traveling slower than eight kilometres per hour. A low proportion of joints or joint-free design shall ensure good passability for children, walkers and wheelchairs. This is intended to prevent evasion on the fast round (cf. team red Deutschland GmbH, 2020, p. 12). The guiding colour, chlorophyll green, clearly distinguishes the Warnowrund from the usual traffic colours and thus visualizes its own scenic character (cf. team red Deutschland GmbH, 2020, p. 19).

Seven guidelines were established to serve as a basis for the planners.

A **sustainable and attractive** design aimed at nearby recreation in a car-free environment. Sustainable manufacturing that can last for several decades should be considered.

The second guideline is **accessibility and inclusivity**. Bringing together people from different ethnicities, age groups, and locations is envisioned here. Accessibility is inevitable to include people of any mobility.

In addition, the Warnowrund is to be **continuously connected**, even during floods, in order to permanently connect all parts of the city.

The construction of the Warnow Bridge will create a loop that can be further developed. **Paths** leading along the Warnow can **continue to grow**.

The design should be **self-explanatory**. Signs and markings should be designed internationally understandable.

The **individual adaptation** of the design of the seven projects, in order to emphasize the potential and the spirit of the respective place, is particularly important in the planning.

The last guideline relies on the planners' willingness to experiment. In order to be **innovative and exemplary**, dynamic lights or fluorescent markings could be used at some sections, for example (cf. team red Deutschland GmbH, 2020, pp. 5-6).

4.3.2. The lighting

80 percent of the German population lives in urban areas. Citizens' expectations of cities are constantly changing (cf. Plaza, 2012, p. 1). Regarding this, the old design of cities at night is no longer sufficient. Optimal illumination is becoming increasingly important from an economic, environmental, and social point of view.



Figure 5: Urban Lighting

Inadequate lighting creates areas of anxiety. To counteract this, the city of Rostock is establishing a "Concept for Street and Path Lighting" in 2019. The goal is to adapt the lighting to the needs of the users. The night-time atmosphere should be characterized on paths and squares by illuminations of historic buildings (cf. Rostock S., 2019, p. 9). Nevertheless, it is also necessary to adapt the lighting to the historic inventory. Static lighting with a dimming function will be planned in the course of the Federal Garden Show. The light housing and the mast top and base are to be made of powder-coated, recyclable die-cast aluminium. A light grey colour and tool-less opening is planned. The modules on the mast shall be replaceable without tools.

To avoid light emission, as much light as necessary but as little as possible shall be planned. However, the Fast Round shall be continuously illuminated. Since the northern sections are less used, dynamic lighting control is planned here. An insect- and bat-friendly light colour also is reasonable from an ecological point of view (cf. team red Deutschland GmbH, 2020, p. 24).

5. Inventory

5.1. History

5.1.1. The origin of Rostock

In this work, the history of Rostock is outlined, as the planning area offers a generous view of the historically interesting city.

In 2018, the people of Rostock celebrated their 800th anniversary, as the city was granted the "Lübische Stadtrecht" in 1218. However, the city was already known earlier as both a Slavic trading centre and a supra-regional maritime trade network. At that time, the Slavic settlement was called "Roztoc", which means "the flowing apart of a river". This can be explained by its geographical location on the Warnow River, at the end of the Baltic Sea. On a hill, close to the Warnow River, a market, town hall as well as a church, now known as St. Peter's Church (Petrikerche), were built (the Old Town). There was a rapid growth of the town in the middle of the 13th century, which meant that there was no more room for the immigrants on the hill. A second town centre (the Middle Town) was formed about 1232 around a second church, St. Mary's Church with a town hall and a market square. Twenty years later, while the middle town was still being developed, a third town centre (the New Town) was formed with St. Jacob's Church, on today's University Square. In 1262-1265 the three settlements united, with the Middle Town forming the centre with the council seat. At the end of the 13th century, a seven-meter high rampart was built, enclosing an area of about one square kilometre. It included 22 city gates, 4 of which are still preserved. By the orientation of more than half of the city gates towards the water, it becomes obvious that Rostock was oriented to maritime trade (cf. Wieden & Schmidt, 1996, w.p.).

In 1283, Rostock officially became a Hanseatic city, which is why the medieval city flourished due to maritime trade in the Baltic region. In the mid-15th century, representative secular and church buildings were constructed in the brick Gothic style. Among them was the university, founded in 1419, which is the oldest university in the Baltic region (cf. Kunze, 2021). From Gehlsdorf, where the area to be planned is located, the quality of the city on the waterfront stands out best. Especially the Petrikirche with its 117 meters height catches the eye (cf. Wegener, 2021, p. 9).

Although Rostock is known as a city of water, its connection to it is ambivalent. Although the city was created by the water, the actual access to the water in the city centre can only be experienced visually. The busy boat traffic and associated boat docks make swimming at the city harbour impossible. Direct access to the water can be found mainly in Warnemünde and Gehlsdorf.

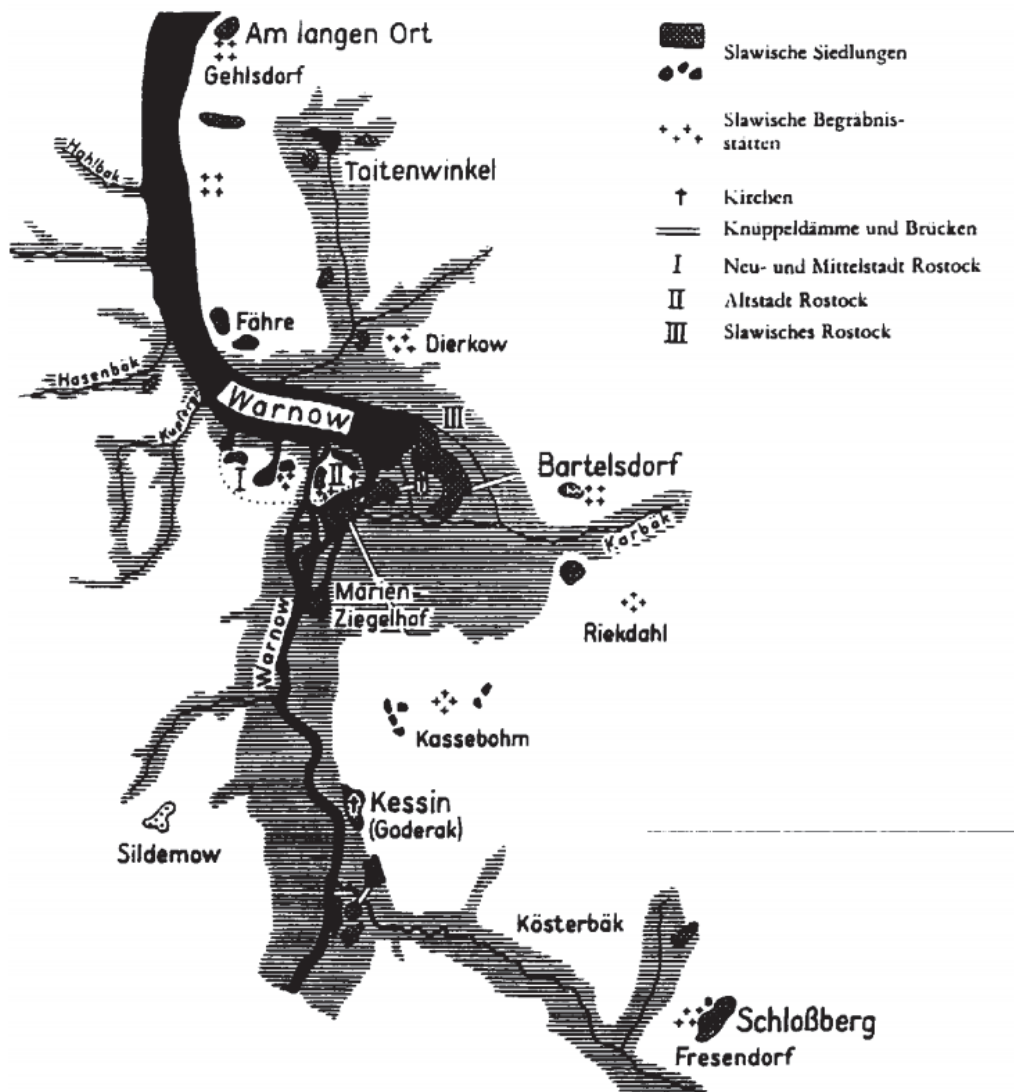


Figure 6: Emergence of Rostock in the 13th century

5.1.2. History of Gehlsdorfs

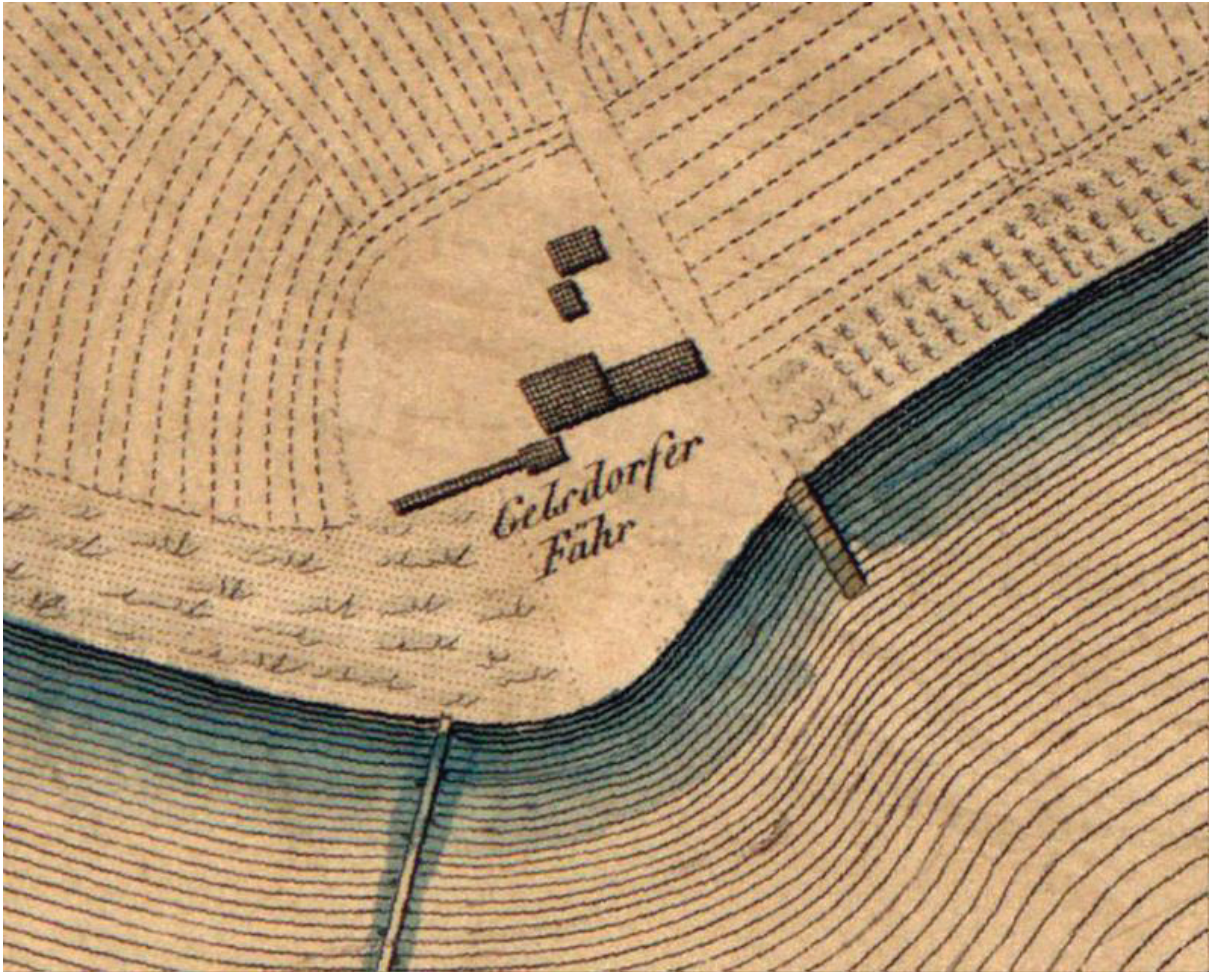


Figure 7: City map from 1814

Gehlsdorf was mentioned for the first time in 1285 (cf. *Alterthumskunde*, 1856, p. 181). At that time, it was still called Michkhelestorpe (Michaelsdorf). The historical documentation shows a large gap between this reference and the founding of the empire. Since then, there have been many mansions in Gehlsdorf, many of which have been renovated and are still standing today. Characteristic for the villas is the typical historicism of the time with bay windows, turrets and carved, visible beam heads. But also, many new buildings stand upscale residential location. The long waterfront promenade, along which many yacht and sailing clubs are located, is also characteristic (cf. Krause, Mende, & Rostock, 2014, p. 18). The village was easily accessible by the privately operated steam ferry from the city harbour, which was established in 1880.

The property to be planned is also located on the waterfront and is leased from a sailing club. It is the old Fährhaus (ferry house), which is now a listed building.

5.2. The planning site

The planning area is located in the northern part of the lower Warnow river in the residential area of Gehlsdorf. It is about 12.8 hectares in size and rises to the north about 13 meters above sea level. The lower Warnow river also forms the southern boundary of the planning area at the same time. A bicycle and pedestrian path run along the shore, which is also used in parts for driving or parking, which was not intended to be this way by the city but is tolerated. To the west, it is bordered by allotments and residential buildings. The northern border is formed by the Gehlsheimer Straße which serves as the main access road. To the east are the so-called Hechtgrabenniederung and the Durnbuschweg. This is a foot and cycle path made of a water-bound road surface.

The area includes two forest and allotment garden areas, a play area, a rowing club, a sailing club, a meadow area, a cobblestone road (the Ferry Road), and the Fährhaus with its property.



Figure 8: Site plan of the planning area

5.2.1. History of the Fährhaus

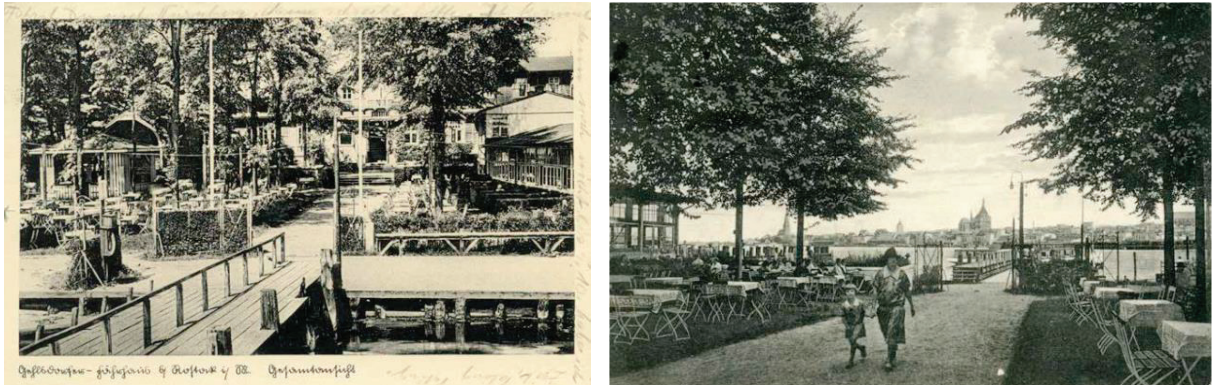


Figure 9/10: Postcard/Picture of the old Fährhaus area

The Fährkrug business, now known as the Fährhaus, was first mentioned in 1871 when Friedrich Franz II, the Grand Duke of Mecklenburg, granted a hereditary lease to the city of Rostock. There was a tavern with a bowling alley and a larger residential building. There was also a restoration garden and a playground. It is assumed that in 1893 the "new" representative Fährhaus was built, which received an extension on the west side in 1908. After the end of the First World War, it got another extension with a winter porch on the southeast side of the site. In 1927, it also received a summer porch. The outdoor facilities were primarily used for restaurant operations. In front of the building, there were rows of trees and tables.

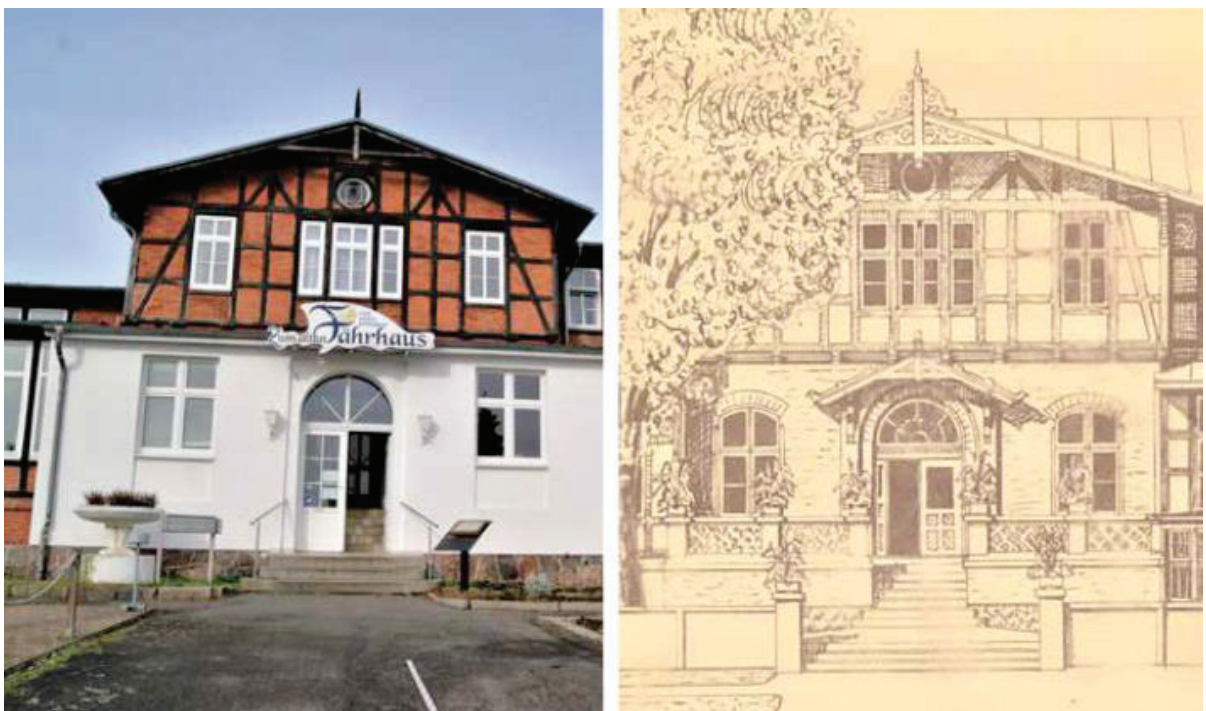


Figure 11/12: The Fährhaus current/old

A terraced structure characterized the image, which gave a better view of the city from the building. Low retaining walls and a five-step staircase (not shown accurately) highlighted the building. The hedges at the edge of the bank also gave way to a plinth wall.

With the expansion of Gehlsdorf, water sports associations moved to the north side of the Warnow River. In the 1950s, the Society for Sport and Technology was housed in the old Fährhaus. This had a military orientation and used the spacious open areas for sports and parades. The throwing of grenades as well as the shooting was also practiced here. In 1990, the successor of the Society for Sports and Technology was founded a sea and sailing club in Rostock. As a result, more berths for yachts and dinghies were needed near the shore (cf. Claus, 2021, pp. 4-8).

The building and the associated property are listed as architectural monuments on the list of the Hanseatic and University City of Rostock. According to §1 (1) of the Monument Protection Act of Mecklenburg-Western Pomerania, this means that the zoo is to be protected as "[...] source[s] of history and tradition, to be maintained, to be scientifically researched and to be worked towards a meaningful use" (DSchG MV, 1988, w.p.). If a structural change is planned in this very part, a monument conservation permit is required, which is anchored in §7 (1) as follows:

"The approval of the lower monument protection authorities is required by anyone who:

1. wants to remove monuments, change them, move them to another location or change their previous use,
2. wants to perform any measures in the vicinity of monuments, if the appearance or the substance of the monument is significantly affected by this" (DSchG MV, 1988, w.p.).

In addition, when new additions are made to or in a monument, the Florence Charter must be observed. This means that any addition must be simply designed and deconstructible. Accordingly, a plain design that can be removed without residue is necessary.

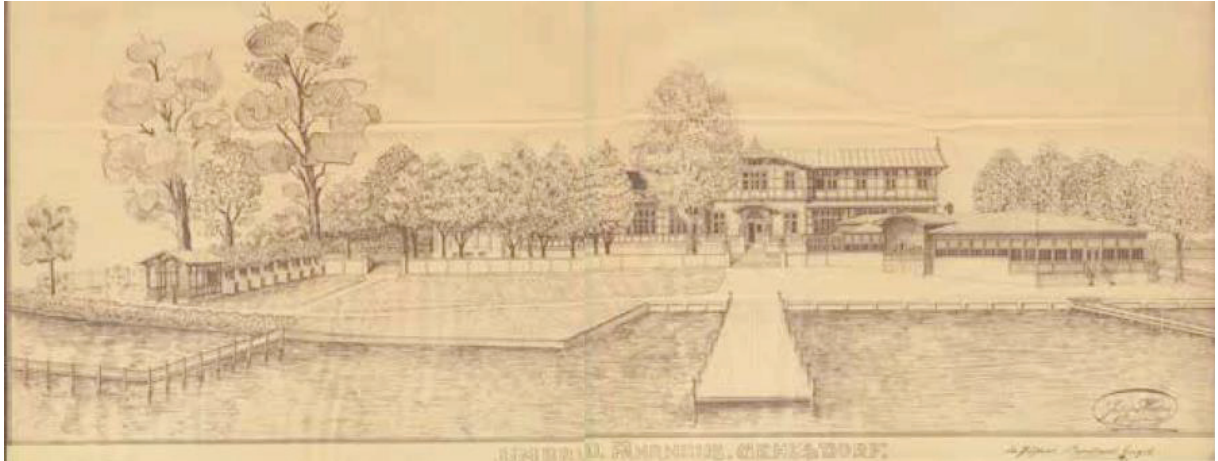


Figure 13: Postcard of the old Fährhaus

5.2.2. Location of the Fährhaus

Due to its location on the northern lower Warnow river, it is directly opposite of Rostock's old town. The potential of an exposed view is accordingly inherent in this location.

The building itself has a floor area of about 1100 m² and is located centrally/east on the property. The main entrance of the building is located in the eastern part facing the Warnow River. The area in front of the building is paved or asphalted. There is also a fenced lawn in front of the building. In winter, yachts are parked in this area. Towards the rear, the terrain rises to 5 meters above sea level. Here are 2 more buildings and parking areas for vehicles and boats. To compensate for the height difference, there are stairs and embankments between the two parts of the plot. In total, the property covers an area of about 8500 m².

The landmarked area is bordered to the northwest by private property and to the southwest by another sailing club. The southern border is formed by the promenade at the lower Warnow.

5.3. Paths

For better comprehension, the trial system is divided into different categories below. Paths and areas intended exclusively for pedestrians are shown in yellow. Orange represents mixed traffic of pedestrians and bike paths and red are the drivable paths.

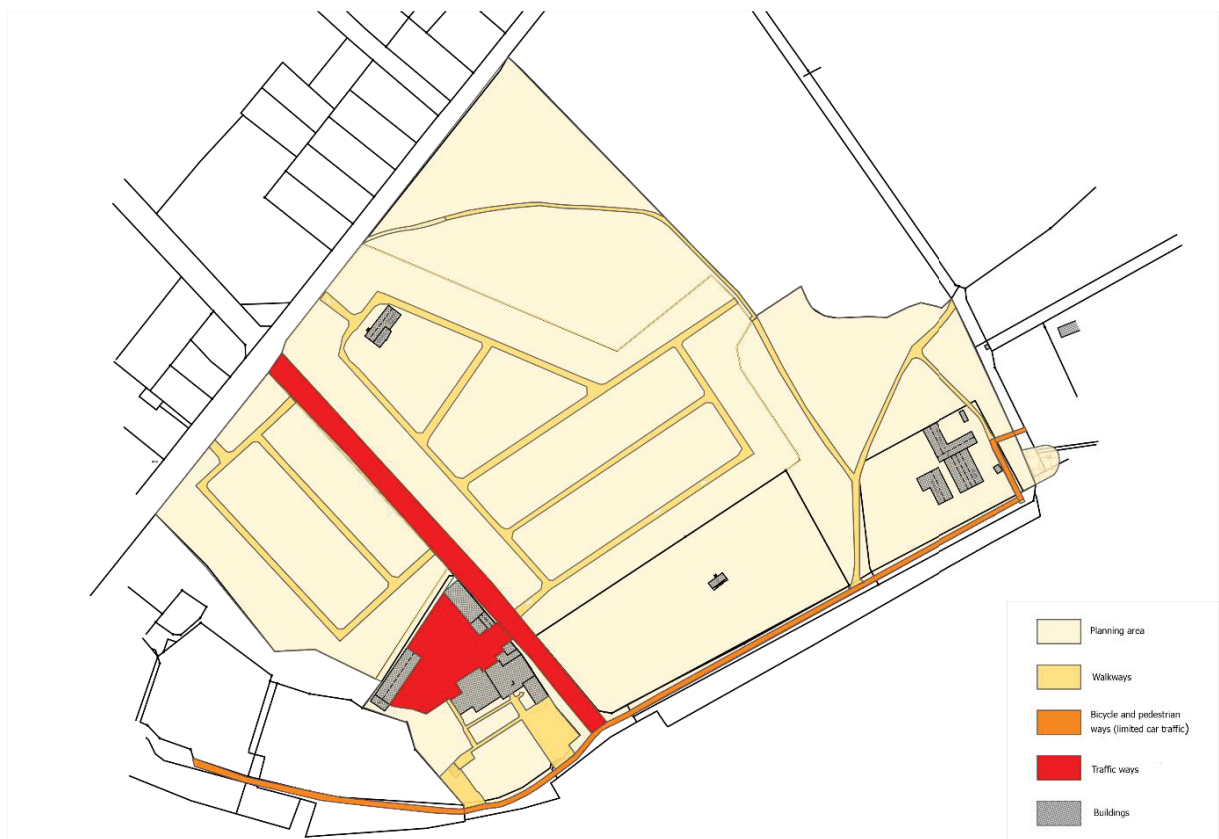


Figure 14: Paths of the inventory

The majority of the footpaths are made of water-bound path surfaces (Fig.: 15). Especially in the wooded areas and allotments, there are trails and grassy areas that are used as paths (Fig.: 28,29). The area at the old Fährhaus is partially paved and asphalted to make driving possible (Fig.:16).



Figure 15: Paths next to the rowing club



Figure 16: Access to the ferry house

The bike paths are mainly small-grooved paved and asphalted, which corresponds to a high degree of sealing (0.75-0.9). However, the water-bound path surface is also found here.



Figure 17: Walkway along the shore



Figure 18: Walkway along the shore



Figure 19: Road between Warnow and the ferry house

The passable paths are made of asphalt, especially around the old Fährhaus, but the Ferry Hill is particularly remarkable. Typical for northern Germany are the colourful and partially hewn cobblestones. The unevenly worked and differently sized stones do not lie in a strict row. Many of these stones have Scandinavian origins and were brought to Mecklenburg by the ice-age moraines. Wetness makes the different colours even more obvious. This path is bordered on the side of the Fährhaus by a curb also made of natural stones. On the opposite side by a footpath of rectangular concrete block paving.



Figure 20: Cobblestones near the Fährhaus



Figure 21: Fährstraße

5.4. The Warnow square

The Warnow Bridge, made of concrete, arrives in the area between the old ferry terminal and the meadow square at a height of 3.20 meters. This corresponds to a terrain difference of 2.40 meters above the existing level. Currently, the street Fährberg has a slope towards the shore. By the change of the ground level, the existing situation is changed strongly and the lower section of the street runs evenly towards the bridge. Due to the piling up of the ground, some existing trees of the avenue (*Tilia platyphyllos*) cannot be preserved.

A square situation is created, which has a high design potential. Car traffic, except for cleaning and maintenance vehicles, is completely eliminated, but the 6m wide bridge must be connected with a bicycle and pedestrian path. In the planning, the path connection is changed and shifted to the north. The riverside path arriving from the west must also be adapted to the terrain elevation (cf. Grupp, 2021, p. 12).

5.5. The meadow

The approximately 10.000m² sized meadow is located east of the Fährhaus and the Warnow Bridge and consists to a large extent of lawn. At present, the meadow is a fenced area, which is to be made multifunctional usable in the future. There is a dilapidated building and a few trees, including *Tilia cordata* and *Salix alba*.



Figure 22: The meadow



Figure 23/24: Building and fence of the meadow

In the '90s this meadow was used intensively, as the regatta course for various sports was located there. The 1000-meter-long course is used by rowers, dragon boaters as well as canoeists. However, since the water depth is less than one meter in some places and needs restoration, it is only used on a few weekends nowadays. The regatta course will also be equipped with a start and finish platform. In the course of the Federal Garden Show, the angle of the regatta track will be changed due to the construction of the Warnow Bridge, so that it will project further into the middle of the Warnow (Fig. 25).

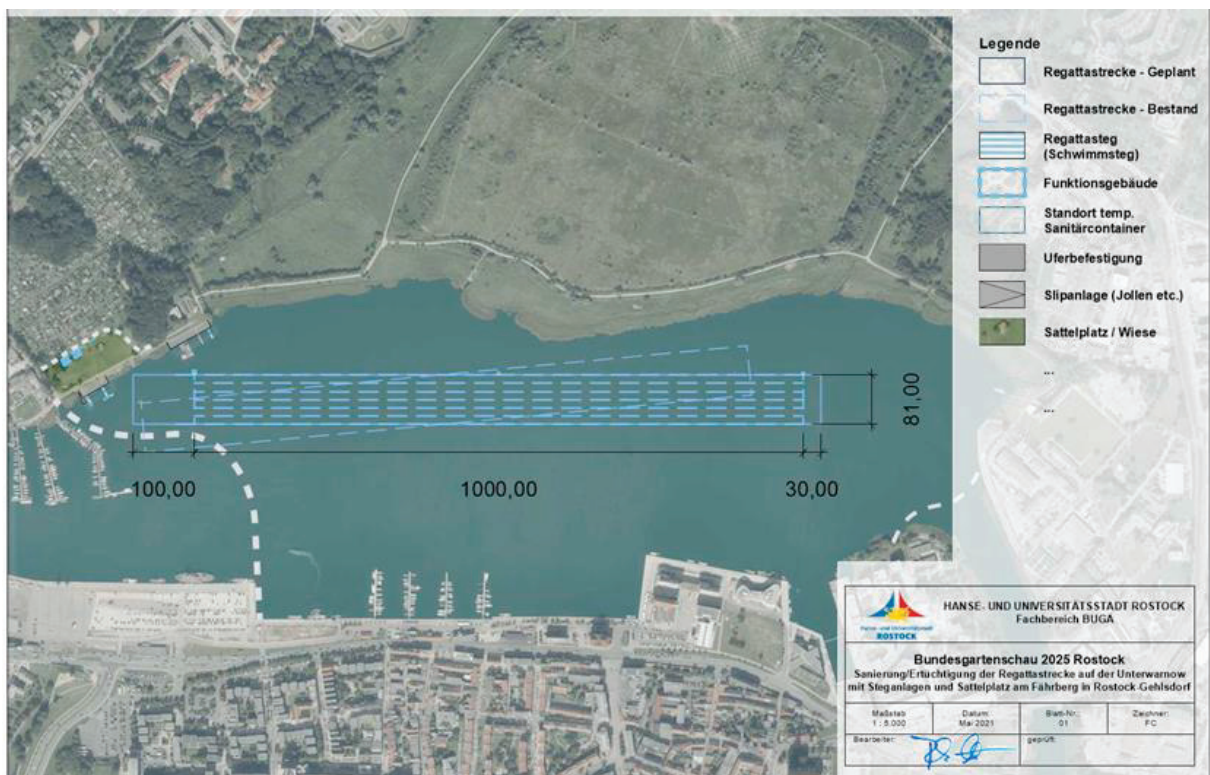


Figure 25: Relocation of the regatta course

The meadow is used to prepare the boats for the competition, to park boat trailers and vehicles, and to allow camping. In total, 60 cars, 30 vans, and 20 boat trailers should be able to fit in the area. There is additionally a dilapidated building on the site of the saddle court, which is used for the regattas. In the course of the Federal Garden Show, this building shall be renewed. The new building shall have a length of 35 meters and a width of 8 meters. This building will be used primarily during competitions as an organization office with sanitary and changing facilities. But also outside the competitions, the multifunctional building should serve as a training room and store materials and regatta equipment. In addition, two sanitary containers, including supply and disposal lines, shall be located in the area. The functional building shall also be equipped with media connections. The start and finish platforms of the regatta course shall also be equipped with media connections. The building shall be made barrier-free accessible via the new wave path. Temporary parking spaces must also be available here to ensure access during competitions. New walkways are also planned. These include a new public spectator pier, two mobile piers measuring 18x3m, and a mobile winner's pier. It is important, because of the fluctuating water level, that the footbridges are designed to float.

Apart from sports events, the area should also be made usable for the public. A playground and sunbathing area, as well as a city beach, are planned (cf. Barthel, 2022, pp. 11-15). It is important to create a place that unites different uses without interfering with each other.

5.6. The rowing club



Figure 26/27: Pier and building of the rowing club

East of the meadow is the Rostock Rowing Club. Rowing has been known since ancient times, but the British did not define rowing as a modern sport until the 18th century (cf. Lithgow, 2022). In 1885, the rowing club was officially founded in Rostock and has since become a federal base for rowing. Meanwhile, a sports building is located on the site, offering modern sanitary facilities and changing rooms (cf. Leiding, 2022). In the course of the Federal Garden Show, the rowing club hopes to build a second floating dock due to the increasing number of members. This should provide docking and landing areas for the rowers and canoeists. Further to the west is another pier of solid construction, which will provide space for trailer boats and yachts. The club can finance itself in part with the mooring fees. By relocating the wave path, the rowing club can no longer be reached by motorized traffic. A new access possibility as well as further parking possibilities are to be considered therefore. In addition, the installation of a mobile crane shall also be possible here (cf. Grupp, 2021, p. 15).

5.7. The woodlands

The forest area consists mainly of beech and oak trees. It is divided into two parts by a footpath. In the southern part is a parking lot belonging to the allotment garden area. This should be removed in the course of the Federal Garden Show and placed on the area of the allotment garden site. The southern forest area is characterized by bicycle and footpaths. In the northern part is a ball and playground. Here, a "Climate-Adapted Playground" should be created with good links to the rest of the planning area. A multigenerational active place is also planned. A theme garden is intended, which should be located in the wooded area. Prerequisites for the planning are barrier-free access and a traffic-safe green and path connection (cf. Grupp, 2021, p. 17).



Figure 28/29: Football field in the woodlands

5.8. The allotment gardens

Allotment gardens should serve as recreational spaces and cultivation opportunities in nature for residents of the city. Depending on the recreational value, the focus is on ornamental and lawn areas or fruit and vegetable cultivation. For the public, they offer a better quality of life through noise reduction, greening, biotope and species protection, dust binding and the loosening of built-up areas (cf. J. Gerold, 2005, p. 21).

In Germany, the Federal Allotment Garden Law regulates allotment garden sites, whereby each association must have an allotment garden regulation (cf. BBR, 2008, w.p.).

The allotment garden sites in the planning area are among the oldest existing allotment garden sites in Rostock, having been established in 1916. Here, climatic and urban development factors are fulfilled by them, but also the success factor is essential. For the Federal Garden Show, the path connections should be revised and made accessible to the public all year long. Thereby a connection to the surrounding planning is important. Among them the green areas of the forest area and the meadow at the shore. The Durnbuschweg as a sidewalk and bike path must be renovated in the process. In addition, recreational opportunities, entrance areas and common areas should be created. There shall also be approximately 66 parking spaces on 199 garden sites. The preservation of the outer edge as well as the tree population are inevitable (cf. Grupp, 2021, p. 16).

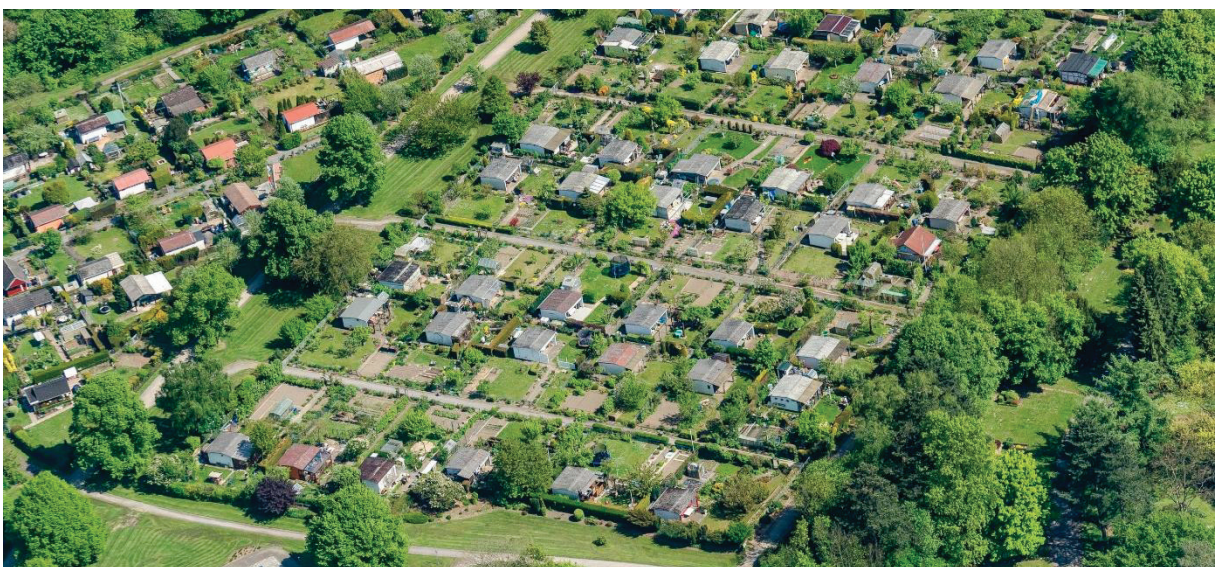


Figure 30: Allotment gardens

5.9. The climate

The planning area is located in the city of Rostock, which is in the north of eastern Germany and thus in the northern hemisphere. This means that the summer months begin in June and the winter months in November. In total, the sun shines about 4.2 hours a day, with July having the most sunshine hours (322) and January having the least sunshine hours (72). On average, there are about 77 hours of sunshine per month (cf. Merkel, 2021, w.p.).

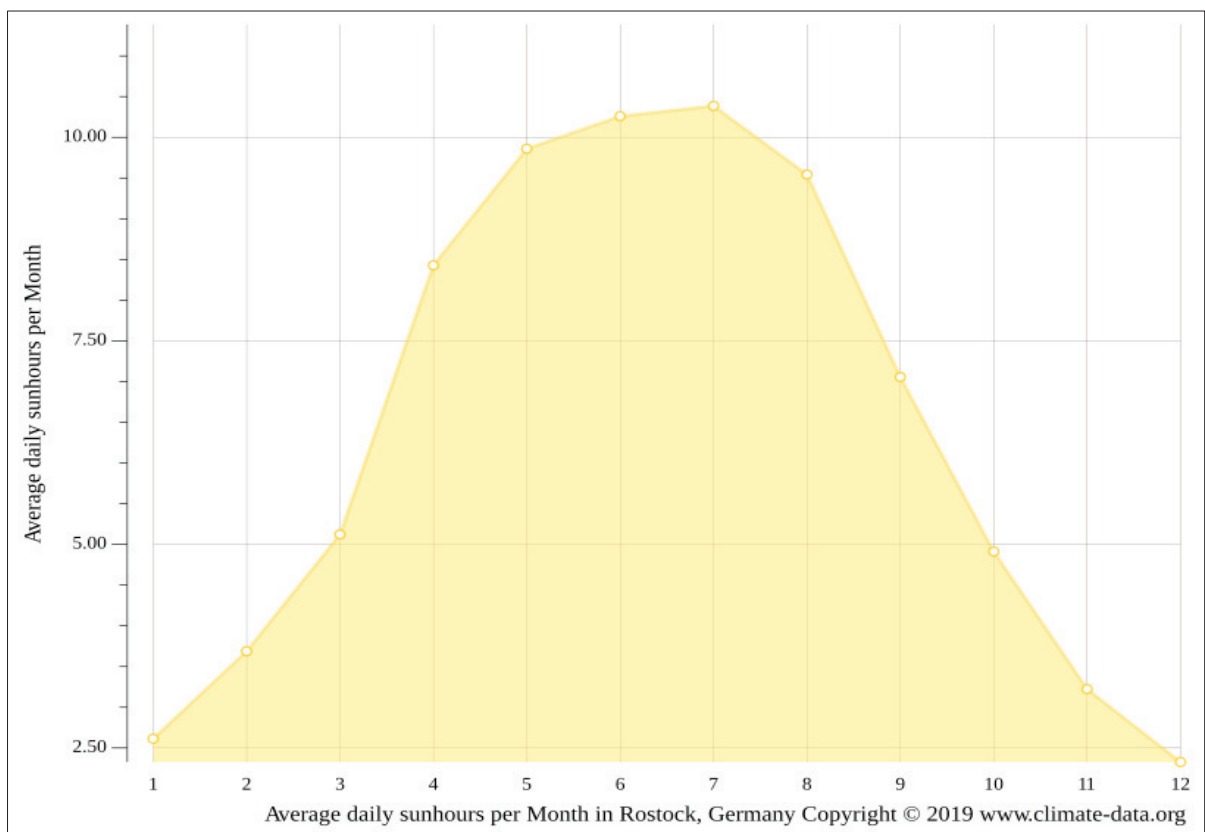


Figure 31: Climate diagram of Rostock

Likewise, there are on average 1.7 days more rain compared to the rest of the country. It rains an average about 15 days per month, or about half of each month in Rostock, with July having the most rainy days and February the fewest (cf. Effe, 2021,w.p.). Precipitation varies from 46mm and in the driest month to 82mm in the wettest month.

Humidity also plays an important role in weather perception. Humidities above 95% and below 23% are unpleasant (cf. Fachverband-Gebäude-Klima, 2019, w.p.). Rostock has an average humidity of about 83%, with winter months higher at 89%. The relatively high humidity is mainly related to the proximity to the Baltic Sea. The sensation of humidity also depends on the temperature because high humidity at very high or low temperatures can be perceived as

oppressive. The annual average temperature in Rostock is 11.9 degrees Celsius. With 1.2° C, January is the coolest and with 18.6°C, July is the warmest (cf. Merkel, 2021, w.p.). The high humidity in winter, combined with the cool temperatures, can occasionally make the weather feel wet and cold.

Water temperature averages 8.8°C, reaching about 17°C in the summer months.








 Month	 Daytime temperature	 Nighttime temperature	 Water temperature	 Humidity	 Hours of sunshine	 Rainy days
January	2,4 °C	-2,0 °C	2,0 °C	89,0 %	1,2 h	18,0 D
February	2,3 °C	-3,1 °C	2,0 °C	87,0 %	2,2 h	16,0 D
March	6,5 °C	-0,8 °C	3,0 °C	84,0 %	3,5 h	12,0 D
April	11,1 °C	2,5 °C	5,0 °C	81,0 %	5,6 h	15,0 D
May	16,8 °C	6,9 °C	9,0 °C	78,0 %	7,4 h	12,0 D
June	20,1 °C	10,3 °C	14,0 °C	79,0 %	7,5 h	12,0 D
July	22,0 °C	12,9 °C	17,0 °C	79,0 %	7,0 h	15,0 D
August	21,4 °C	12,6 °C	17,0 °C	80,0 %	6,0 h	14,0 D
September	18,0 °C	9,3 °C	15,0 °C	82,0 %	5,3 h	13,0 D
October	12,4 °C	5,9 °C	11,0 °C	85,0 %	3,0 h	18,0 D
November	6,7 °C	2,0 °C	7,0 °C	87,0 %	1,6 h	15,0 D
December	3,3 °C	-0,8 °C	4,0 °C	88,0 %	0,7 h	17,0 D

Figure 32: Monthly comparison in Rostock

Overall, it can be said that Rostock is located in the humid-moderate climate zone, where extreme temperature fluctuations are not to be expected, although they are becoming more frequent due to global warming. The characteristics of the seasons are also clearly definable in this latitude. Whereas the summers, because of the temperate climate zone, are pleasantly warm and the winters are relatively mild. This also means that there are usually no extreme droughts and no permanent snow cover. In agriculture, the temperate climate zone is very usable. Many types of grain and field crops such as potatoes, corn, rapeseed, and beets grow here (cf. Effe, 2021, w.p.).

5.10. The vegetation

The vegetation has adapted to the temperate climate zone. These latitudes often guard deciduous and mixed forests. Typical species are oaks, beeches, birches, alders, pines, and spruces. Near the ground, ferns, herbs, and shrubs are found. The vegetation mapping of the planning area can be divided into the potential natural vegetation and the real vegetation.

5.10.1. Potential natural vegetation

The North German botanist and plant sociologist Reinhold Tüxen, born in 1899, is considered the pioneer of today's modern plant sociology in Germany. The concept he introduced, "Today's potential natural vegetation as an object of vegetation mapping " (Tüxen & Preising, 1956, w.p.), is used in scientific works as a component of landscape and forest planning (Schmidt, 1998). Potentially natural vegetation is defined by the: "imagined natural state of vegetation, which can be conceived for today or a certain earlier period, if the human effect on vegetation under the other living conditions existing today or existing at those times were eliminated and the natural vegetation, to exclude conceivable effects of climatic changes taking place in the meantime and their consequences, were imagined to be, as it were, abruptly switched on into the new equilibrium" (Tüxen & Preising, 1956, w.p.).

The potential natural vegetation serves as a planning basis for nature conservation and landscape management measures.

The planning area would be divided into 3 categories. The wet habitat would be largely dominated by lowland forests, floodplain forests, and deciduous mixed forests. Beech forests would characterize the north-western part, whereas the reed belt directly adjacent to the Warnow River would be free of woody vegetation (cf. Teschner, 2019, p. 2).

5.10.2. Real vegetation

Due to the influence of mankind in Central Europe, the vegetation has changed over the centuries. It corresponds to the current soil and climatic site conditions. Since there would be forest almost everywhere in Central Europe without human influence, the real vegetation is much more diverse than the potential natural vegetation (cf. Litt, 2000, p. 49-64).

In 2019, a biotope type mapping was carried out on behalf of the city in the planning area of the Federal Garden Show. The first mapping area, "Ferry Hoof/City Beach", includes the biotopes:

1. field groves, avenues and tree rows
2. coastal biotopes
3. running waters
4. green areas
5. settlement areas
6. biotope complexes of settlement, traffic and industrial areas.

The first five biotopes are presented in summary below.

5.10.2.1. Field groves, avenues and tree rows



Figure 33/34: Avenue at the ferry street

According to the Naturschutzausführungsgesetz (Nature Conservation Implementation Act) MV §18 (1) and the tree protection statute of the Hanseatic City of Rostock, "trees with a trunk

circumference of at least 100 centimetres, measured at a height of 1.30 meters above the ground, are protected by law". The road leading to and from the bridge, called Fährstraße, is a closed avenue with *Tilia platyphyllos*, which have a trunk circumference of more than one meter and are therefore protected. Towards the south (Warnow) there is a larger gap, but with a loss rate of less than 20%. (cf. Teschner, 2019, p. 7).

5.10.2.2. Coastal biotopes



Figure 35/36: Reeds

On the shore of the Warnow River, there are individual small reed areas between the jetties. Brackish water-influenced reedbed areas (KVR) are considered FFH habitat types and are placed under biotope protection in the Baltic Sea coastal area with a minimum size of 100m² or a minimum width of 100m (LUNG-MV, 2013, S. 100). The reedbed areas of the planning area have a size between 140m² and 580m² and are located in brackish water due to the intermittent strong inflow of the Baltic Sea (cf. Teschner, 2019, p. 7).

5.10.2.3. Running waters

The only watercourse in the planning area is located in the east. The so-called Hechtgraben flows into the Warnow and is intensively farmed. On the steep embankment, the reed (*Phragmites australis*) but also the stinging nettle (*Urtica dioica*) or the true fence bindweed (*Calystegia sepium*) can be found here as well. This watercourse is not subject to any protection.



Figure 37/38: The Hechtgraben

5.10.2.4. Green areas of the settlement areas

6.8 hectares of the planning area are characterized by allotments with wooden arbors (ferry hooves), which enclose an old football field. These are surrounded by wooded areas dominated by the tree species of copper beech (*Fagus sylvatica*), younger Norway maple (*Acer platanoides*), English oak (*Quercus robur*), and winter linden (*Tilia cordata*). Smaller woody plants include black elderberry (*Sambucus nigra*) the snowberry (*Symphoricarpos albus*) and blackberry (*Rubus fruticosus*) present in the forest patches. The fence is accompanied by a 35-meter private hedge. The highly invasive perennial knotweed (*Fallopia japonica*) is dominant.

Ryegrass (*Lolium perenne*), white clover (*Trifolium repens*), and honey grass (*Holcus mollis*) are found on the lawn east of the Fährhaus and are regularly mowed (cf. Teschner, 2019, p. 8-9).



Figure 39/40: Woodlands

5.10.3. Summary vegetation

In summary, it can be said that 14 biotope types can be found in the area of the planning area of the Federal Garden Show around the Fährberg. Many of these biotope types belong to the settlement, traffic, and industrial areas. According to §18 NatSchAG M-V and the tree protection statutes of the city of Rostock, all individual trees are subject to special protection, apart from those recorded by the planning office PfaU GmbH (see: list in Appendix 1, page 74), with the exception of two smaller willows and individual fluttering elms. Furthermore, the lime trees of the avenue near the ferry road are protected according to §19 NatSchAG M-V as well as the brackish water-influenced reed bed (cf. Teschner, 2019, p. 12).

5.11. Fauna

The company Umweltplan GmbH Stralsund has conducted a species protection categorization in the entire Federal Garden Show area from 2019 - 2020. Various species were identified in the Fährberg sub-area. It was determined that bats, breeding birds, amphibians and fish species can be found in this area.

5.11.2. Bats

A heat map was created for bat hunting activity, showing the main areas of activity in the study area (Fig. 41).

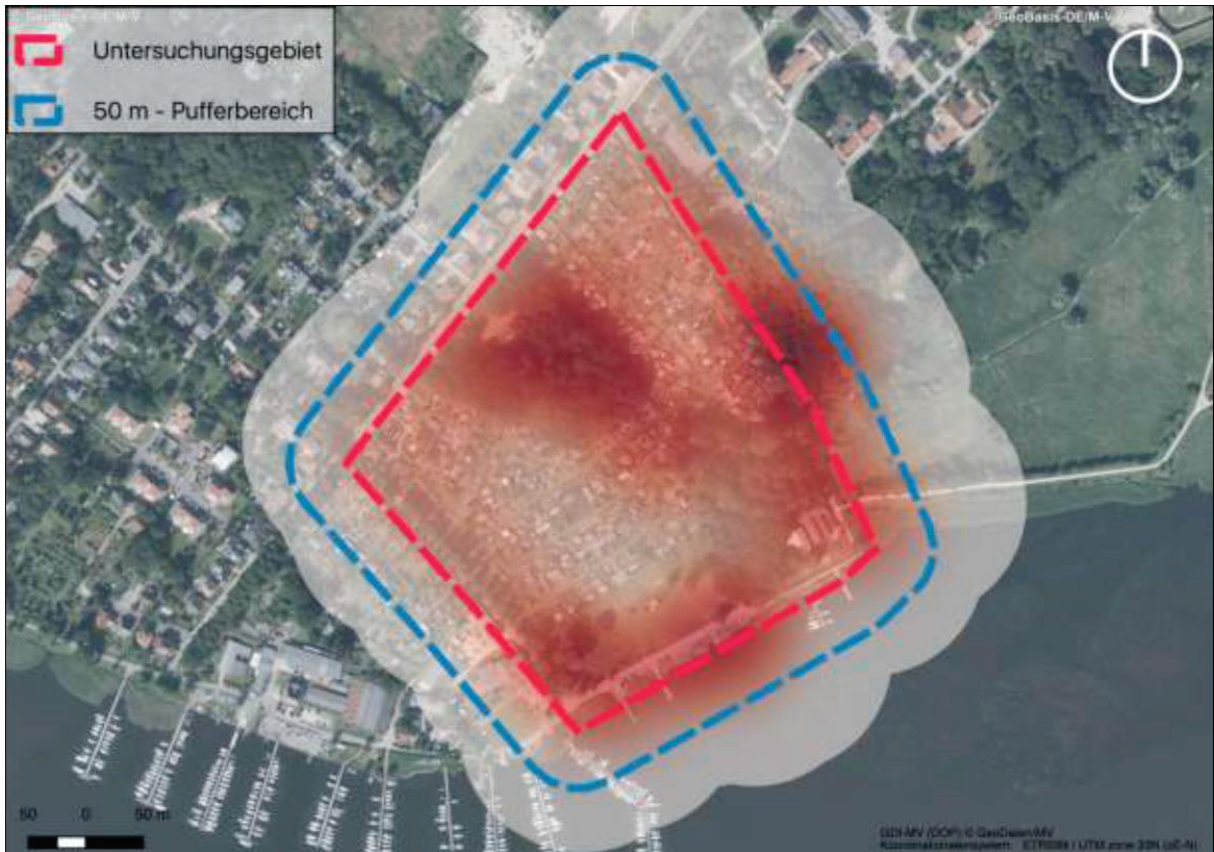


Figure 41: Heat map

The darker red the area is marked, the higher the concentration of occupancy. It is noticeable that the bats mainly stay in and around the wooded areas on the eastern part as well as the Warnow. The Warnow shore is permanently important as a hunting area, as insect availability is permanently high here. The wooded areas serve as refuges for many insect species after they have hatched, which means that they are sometimes hunted throughout. The following species have been recorded in the Fährberg area: Pipistrelle, Evening bat, Broad-winged bat, Mosquito bat, Rough-skinned bat, and the Water bat. Overall, almost half of the species native to Mecklenburg-Western Pomerania was detected, placing the species density in the middle range. Larger summer or intermediate roosts were not detected in the study area. However, smaller summer roosts were detected in the northern part of the Fährhaus. For male bats, some roosts are expected in the woody vegetation (cf. Ehlers, BUGA 2025 Rostock - Artenschutzkartierung nördliches BUGA Areal, Teilgebiet "Fährhufe Stadtstrand", 2019, pp. 30-32).

5.11.3. Birds

The final report of the company UmweltPlan from December 2019 records 26 breeding bird species with 88 territories. The starling was with a single occurrence, the only breeding bird species that are valuable (conservation target species according to Annex II of the Habitats Directive) in the area "Fährhufe". In addition, three other guest bird species were found to be present in the planning area. Among them are the moorhen, the bullfinch, and the linnet. Due to the high frequency of water sports, breeding occurrences here are unlikely. However, an adjustment was made to the report in 2020 when Little Bittern was noted in the reedbed area of the meadow in 2019. In 2020, the sighting was repeatedly confirmed, indicating a suspected breeding occurrence. The Little Bittern is considered strictly protected and is on the red list.

The company UmweltPlan classifies the area "Fährhufe" as insignificant for the avifauna of the city because the high population density, except for the single occurrence of the starling, is due to native species. Only the little bittern should be given special protection. It is the smallest heron species in Central Europe (cf. Minutus, 2009, w.p.) and was not known in Rostock until now. As the occurrence was confirmed in two consecutive years, the Little Bittern seems to have a high disturbance tolerance to anthropogenic influences, such as water sports and the high frequency of pedestrian and bicycle paths.

However, UmweltPlan highlights two disturbance factors that may affect Little Bittern at the Lower Warnow River. On the one hand, anthropogenic disturbance factors should be minimized: for instance, the prolonged mooring of anchored boats. On the other hand, mowing of the reeds should be omitted (cf. Ehlers, BUGA Rostock 2025-Vorkommen Zwergdommel, 2020, pp. 7-8).



Figure 42: Little Bittern

5.11.4. Fish

Due to the connection to the Baltic Sea, the Lower Warnow is strongly influenced by saltwater inflow. Also, muddy elements are to be found here because of the river freight. Dominant species of the river are pike-perch, perch, lead, roach, magpie and river eel. The study area is used by diadromous species (migratory fish) as a feeding ground and migration corridor. These include river eel, sea trout, and river lamprey. However, the study area is also an important spawning and nursery area for euryhaline species (ability to adapt to salinity).

A total of 14 fish species were identified, 70% of which were roach, lead and perch. Thus, almost all structural members of a river community could be detected.

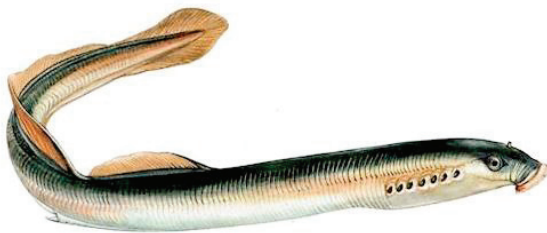


Figure 43: River lamprey

From a nature conservation point of view, at least the river lamprey is highly endangered and therefore strictly protected. The river eel and sea trout are also endangered (cf. Ehlers, Kartierung Ichthyofauna, 2019, p. 17).

5.11.5. Amphibians

Due to the strong anthropogenic deformation of the study area, suitable habitats for amphibians and reptiles are missing. Breeding and spawning waters were found exclusively in the area of the allotment gardens in the form of ornamental ponds. The occurrence of the common toad cannot be excluded out here. However, since there is no evidence of migration or spawning activities and no suitable habitats can be found, the study area is considered to be of low importance for amphibians.

5.12. Soil



Figure 44: Gley soil

The planning area is strongly characterized by the soil class "Gley". Gley soils are influenced by groundwater. Oxidation and reduction processes reduce iron, which becomes water-soluble and gives the soil rust stains after renewed oxidation. The inflow of water provides solutes that make nutrient-rich soil. However, plant growth is restricted by groundwater. As dry periods are common due to global warming, this soil holds water longer than other soils. Agricultural use of gley soils is severely limited due to high groundwater levels, which means they are often used as forest or grassland. However, many gley soils are anthropogenically utilized through melioration (drainage) (cf. HLNUG, 2016, p. 1). Most of the planning area is characterized by the brown soil class gley. Mixed forests with alder, ash, oak, and hornbeam represent the natural vegetation.

Individual parts in the planning area, primarily in the allotment area, are also characterized by Regosol, a largely sandy, lime-free soil.

The eastern riparian area, around the rowing club, is assigned to the lowland fen soil class. This area is assigned to the "bog" protection zone (cf. Geoport, 2019,w.p.).

In addition, there is an Old Slavic settlement site of the 8th-10th centuries in the planning area, which is known as a ground monument. This was documented between 1886 and 1889. Since the location of the site is not clear, archaeological investigations should accompany deeper ground interventions. However, it is assumed that this site is located 150-200m north in the park area (cf. Mulsow, 2019, w.p.).

Overall, the area has been under construction use for over 150 years, so natural soils can no longer be assumed.

5.13. Flood

A flood is "a temporary inundation of land not normally covered with water, especially by surface waters (rivers, streams)" (cf. Kroggel, 2021, w.p.). The exceeding of the so-called mean water level can have different causes. One is the tide-dependent flood, which is usually found on maritime water coasts, and the tide-independent flood. This occurs mainly in standing or flowing waters due to heavy rain or melting snow (cf. Insurance, 2020, w.p.). These events are exacerbated by advancing land use, large-scale sealing, and inappropriate development of water bodies. Numerous climate researchers see a connection between the increasing frequency of extreme weather events and rising temperatures due to global warming. This is because warm air can absorb more water vapor. If the humidity of the air does not change, there will be more precipitation (cf. Geomer, 2021, w.p.). Rostock is affected both by storm surges from the Baltic Sea and by inland flooding from the Upper Warnow and numerous streams, ditches and ponds. Here, the hazard potential is lower, but the frequency is increased. The planning area is located in the flood inundation area due to its location on the Warnow and its low terrain elevation.

Previous representations of the Geoport show the extent of the floodplain with "high probability", "medium probability" and the "flood during extreme events".

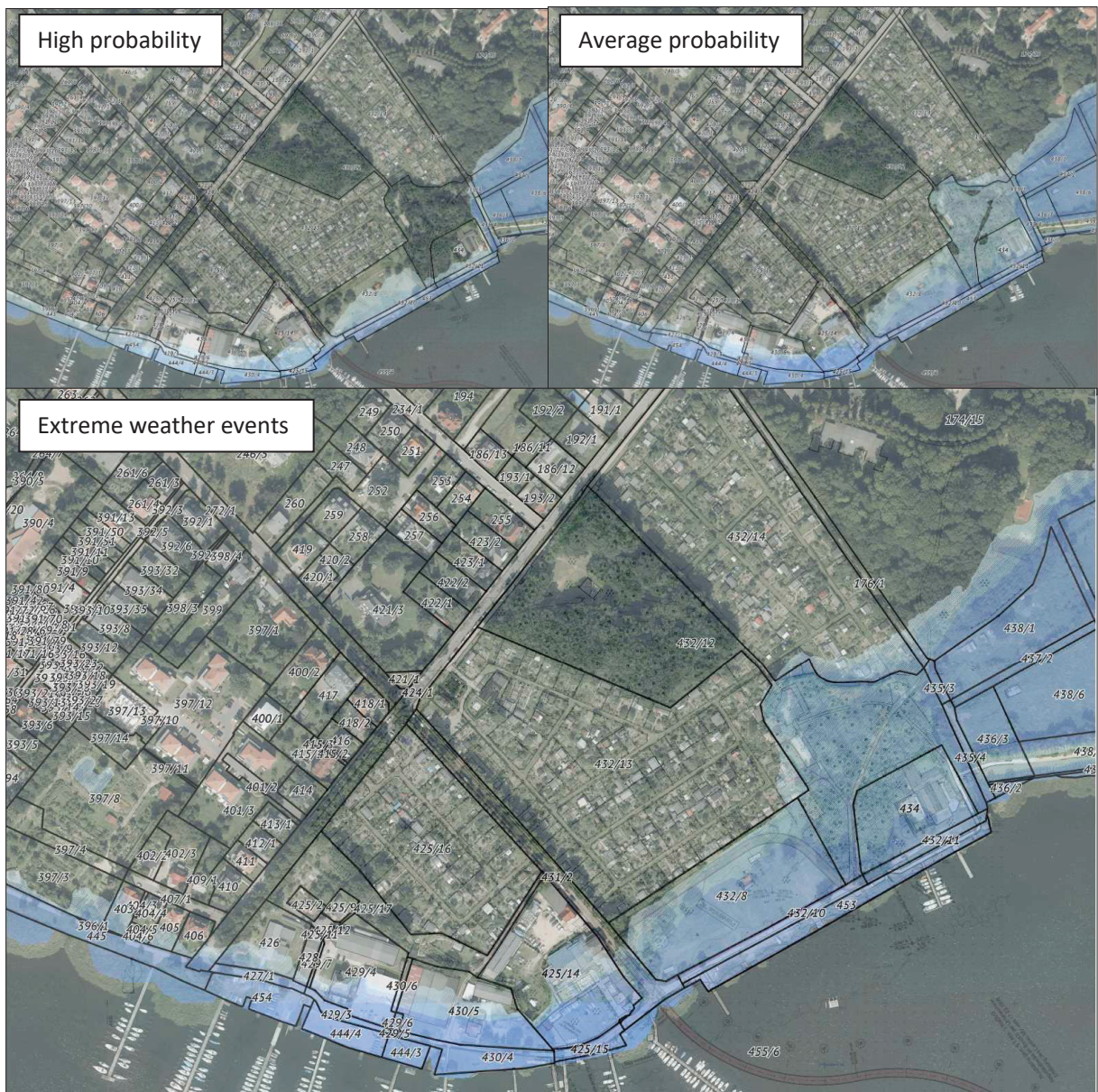


Figure 45/46/47: Flood probability in the planning area

The area of the Fährhaus, the Meadow, and the shoreline area of the Rowing Club are particularly subject to flooding. A 200-year event should be assumed when planning the area. A 200-year rain event is defined by the amount of rainfall that statistically occurs only once every 200 years (cf. Wippersteg, 2018, w.p.). For the planning area, the reference flood elevation is 2.50 meters above mean sea level. In addition, a climate allowance of 0.5 meters and wave overtopping of 0.2 meters should be included in the calculation. This results in a

design top elevation of 3.2 meters above mean sea level. Necessary storm surge protection systems should be taken into account accordingly in the planning (cf. Grupp, 2021, p. 21).

6. The contest

In order to create a sustainable, future-oriented and coherent recreation area for the city, Rostock 2021 announced a preliminary, non-open, single-phase realization competition for the project "Fährberg". The competition was conducted by Procurement Regulation §17. The application procedure was EU-wide. Due to the importance of an entrance situation and the height adjustment of the site by the new construction of the Warnow Bridge, an interdisciplinary planning team was sought, under the direction of a landscape architect. Eligible to participate are "natural and legal persons who, according to § 75 paras. 1, 2, and 3 VgV, are entitled to bear the professional title of landscape architect, architect, and engineer (traffic facilities, hydraulic engineering, structural planning, technical equipment) or are entitled to act accordingly in the Federal Republic of Germany according to the state law applicable to public procurement" (Grupp, 2021, p. 30). Persons who could have an influence on the jury and thus be favoured are excluded from the competition.

The field of participants consists of 10 participants, of which 2 seeded participants and 8 applicants were selected according to the criteria of the EU announcement. The qualifications and criteria of the participants had to be fulfilled by all applicants in the same way. In case of exceeding the maximum number of participants, a decision would have been made by drawing lots.

The jury consists of urban planners, freelance architects, landscape architects, and garden monument conservators.

Participants are required to submit five A0 papers, which must include the following:

An overarching concept is represented by pictograms, diagrams, or schematics.

A site plan at a scale of 1:1000, showing the overarching functional relationships. On the one hand, the structure of use should be dealt with in-depth. These include Buildings, public sanitary facilities, play elements, art objects, water elements, green elements, and tree

locations. For the latter, a distinction should be made between existing and new plantings. Furthermore, the accessibility of the public space to the surrounding area should be shown. The stationary traffic and the separate marking of handicapped parking spaces bicycle parking spaces are to be considered. The third point of the overall concept to be considered is the open space structure. Information should be provided on public green spaces, terrain elevations, and public green spaces.

In-depth sections of the open space and traffic planning are to be shown at a scale of 1:500. The stationary traffic, in which the individual user groups are differentiated, a well-thought-out drainage concept, a representation of the surfaces in terms of materiality, colouration, and changes in surfacing are to be shown in detail. Furthermore, trees, street furniture, greenery, lighting, and signage shall be shown in detail.

Four areas are mentioned in the tender, which should be shown in detail:

- the old Fährhaus including the square in front of the Warnow Bridge
- the shore area to the east of the Warnow Bridge, which should be developed into a city beach, and the associated saddling area
- the southern forest area near the rowing club
- and the northern forest area including the inclusive playground.

In addition, the participants should create two perspectives at eye level, one showing the forecourt of the Warnow Bridge, where the listed Fährhaus can be seen, and the other showing the meadow on the city beach.

Essential sections showing the buildings to be planned with the course of the terrain at a scale of 1:200. At a scale of 1:500 for the outdoor facilities and transitions between indoor and outdoor spaces of the individual spatial relationships should become clear. The representation of these in the ground plan 1:200 is also required.

The same scale is also provided for the elevations of the new buildings with terrain progression.

In addition to the plans, explanations of the design concept are to be formulated that address in detail the central ideas of the open space planning and functional concept. The treatment of the listed building is to be emphasized. Also required are: Characteristics, cost estimate, space program and author's statement.

If all the required competition documents have been submitted on time by the participants, 35,000.00€ (net) will be distributed in the form of expense allowances.

In addition, the following sums were earmarked for the best three placings:

1st prize: 45.000,00€ (net)

2nd prize: 27.000,00€ (net)

3rd prize: 18.000,00€ (net).

The jury decides on the fulfilment of the performance. A change in the prize amounts is also possible if the jury unanimously agrees (cf. Grupp, 2021, p. 29-39).

7. The design

7.1. The concept

The area at the Fährberg is not only very interesting because of its already existing usage, such as the junction by the ferry or the existing water sports clubs. The construction of the Warnow Bridge also brings a completely new image to the shore of Gehlsdorf. Citizens are no longer dependent on traffic to get to the opposite shore. Due to the new height situation formed by the construction of the bridge, the title of the concept for the design was created. *"Let's rise together"* is not only literal but also metaphorical. By arriving at 3.20 meters above sea level, a new view of the historic old town is offered. This situation is elaborated and reinforced by the design. By creating new spaces, Rostock grows not only in height, but also culturally. People of all origins, ages, and mobility are brought together here. Through new path relations, the currently still rather secluded districts of Rostock will be connected with the city centre.

The focus on the design, however, was not only on the square between the Fährhaus and the Warnow river. The historically protected Fährhaus and its outdoor facilities influenced the design significantly. The detailed research of the listed building is also reflected in the design. By considering the natural environment, great importance was attached to the protection of the existing biotopes. The handling of the use of the already existing sports is reflected in the design. In particular, there are three versions in front of the Fährhaus that meet different needs.

7.2. The Fährhaus



Figure 48: Planning area - the ferry house

The Fährhaus, built-in 1893, is listed as a historical monument by the Hanseatic City of Rostock since 1994 (cf. Rostock, 2021, p. 14). Accordingly, sensitive handling of the conditions is necessary. In the course of the Federal Garden Show, the extension of the building in the east will be removed. The area in front of the building will remain as a lawn, but to create the spatial feeling, it will be framed by planting areas and hedges. Rows of trees located in the planting areas guide the view to the building. Historic photos show that rows of trees were also used here to create a cosy atmosphere. A light-coloured pavement was chosen to absorb heat and at the same time contrast with the red building.

However, due to the sailing club's use of the area, the lawn is used to lease it out for yoll parking in the winter.

To create a compromise between monument protection and leaseholder, two different designs for this area were made. In the design the width of the path that leads to the house will be changed. That automatically resizes the lawn. The variant of the narrow path offers the possibility to park at least 35 yolls in the area. In the west of the path is more space for wintering more yolls offered. This variant is not only advantageous for the sailing club, but also provides more room for the planned restaurant and it's outdoor catering. This variant is beneficial from a climatic point of view due to the lower percentage of sealed area. There is more green space

in which rainwater and floodwater can percolate, which has less impact on the groundwater level.

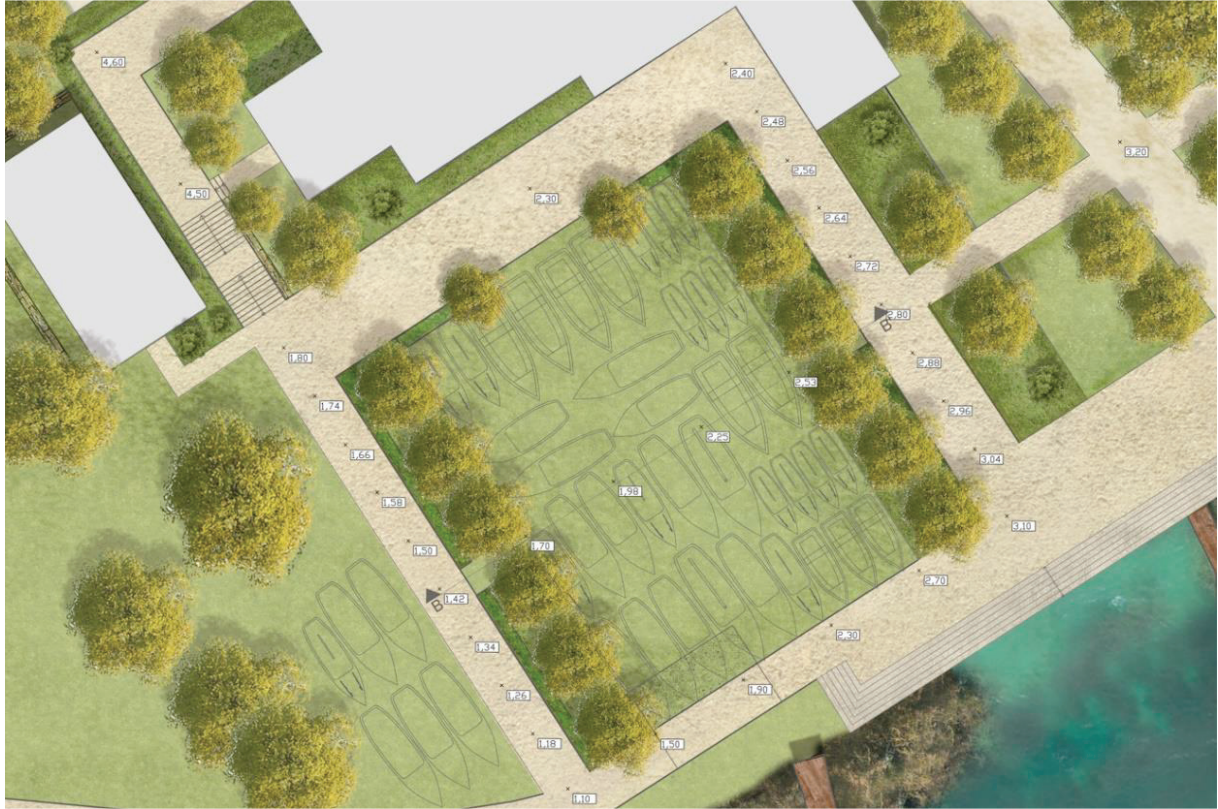


Figure 49: Planning area - the ferry house - version 1 – floor plan



Figure 50: Planning area - the ferry house - version 1 – perspective

The other version focuses on the Fährhaus. The wider path gives the main entrance a more central position in the field of vision and literally draws visitors into the building.

Furthermore, the building is less obscured by the trees than in the first design. The higher percentage of sealed surfaces allows for easy passage of multiple types of mobility, such as bicycles, scooters, or inline skates. Since in this version the yolls have a subordinate position, a third row of trees can be added here to frame the western path.



Figure 51: Planning area - the ferry house - version 2 – floor plan



Figure 52: Planning area - the ferry house - version 2 – perspective

The third variant focuses on monument preservation and forms a compromise of the variants one and two.

The planting areas are drawn closer to the entrance of the Ferry Building from the east. This reduces the sealed area and brings the entrance area into the focus of the view.



Figure 53: Planning area - the ferry house - version 3 – perspective

All variants are provided with an installation area for the Liebherr load crane measuring 8 x 10.8 meters. Half of this area protrudes into the designated lawn area and is therefore developed as a drivable infiltration system. This can be done using either grass pavers or turf gravel.

The other half projects onto the newly constructed path leading to the Warnow Bridge. Due to the elevation change, this path has a slope of 4.5%. All calculated heights are adapted to this gradient, which can be seen in detail in the appendix on the general plan, as well as a detailed cut in the appendix Cut B-B'.



Figure 54: Planning area - the ferry house – crane spot



Figure 55: Planning area - the ferry house – slope and seating steps



Figure 56: Planning area - the ferry house – seating steps – Perspective

To offer even more space to stay, this path was supplemented by seating steps (orange) directly at water. Six steps offering a view to Rostock's old town invite visitors to linger.

On the northern part of the site, 28 parking spaces are planned. Since this area is significantly higher than the southern part, various stairways and a ramp are planned here to overcome the elevation difference. To the west is the newly planned clubhouse.

Like the parking area to the north, it will be framed by planters and walls to buffer the heights.



Figure 57: Planning area - the ferry house – parking area – floor plan

7.3. The Fährstraße (ferry street)

The Fährstraße leads from the shore of the lower Warnow up to the Gehlsdorfer Straße and ends in a traffic circle. It has a vertical difference of about 13 meters, to which the entire terrain adapts. At the lower end, the arrival of the Warnow Bridge is planned, which works as bicycle and pedestrian lane.

The road is paved with fieldstones. To honour the historic structure, the fieldstone pavement should be preserved. However, since a bicycle lane is planned along this stretch, a compromise of cut and uncut fieldstone pavement could be made. Here, particular attention should be paid to a certain roughness, as the cut fieldstone pavement can be very slippery when wet with the given gradient.



Figure 58: Planning area the - ferry street – perspective

7.4. The Warnow square

The new situation, due to the changed heights, allows for a variety of design options. The view of the Warnow River is emphasized and focused in the design. The quality of stay is increased by the construction of a staircase and seating steps. A raised platform, which leads over this facility, encourages visitors to linger as well as to stroll. The steps below are thus shaded and offer a cool place to relax on hot days. The staircase consists of 20 treads with 10 seating steps.



Figure 58: Planning area - the Warnow square – floor plan

These are divided into 5 segments, each with 4 treads and 2 seating steps. Due to the height difference of about 3 meters and a large area, the step size was chosen relatively small. Heights and widths can be taken from the Appendix Cut C-C'.



Figure 59: Planning area - the Warnow square – perspective 1



Figure 60: Planning area - the Warnow square – perspective 2

7.5. The meadow

The steps are directly connected to the city beach, which is located on the meadow. Here visitors can enjoy direct access to the water. The meadow also offers the possibility to park enough vehicles, trailers, and boats during regattas. Camping is also possible here. Furthermore, there is a functional building with the dimensions 8 x 35 meters, where it is also possible to confer during competitions, to change clothes, or to store belongings.

Outside of competitions, the building should serve as a training room. A newly planned road no longer runs directly along the shore but along the allotment gardens.



Figure 61: Planning area - the meadow – perspective 1



Figure 62: Planning area - the meadow – perspective 2



Figure 63: Planning area - the meadow – perspective 3



Figure 64: Planning area - the beach – perspective 4

7.6. The allotment gardens

The character of the allotment garden sites shall be preserved. In particular, the clear structure of the paths will be elaborated and connected with the surrounding places. Thus, interfaces between the meadow, the Warnow square, and the forest areas are created.

7.7. The woodlands

The majority of the trees are beeches, worth protecting. Therefore, the forest will hardly be changed in its structure. Barefoot paths and discovery trails shall accompany the paths and offer points of contact in the course of the Federal Garden Show. The football field in the north will be restructured.

7.8. The multigenerational square

7.9. The multigenerational square

The multi-generational square in the northern forest area is an open space divided into lawn and equipment parts. The northern part is intended for multiple possibilities. It can be used for playing football, romping or doing yoga.

The southern part will be equipped with playground and workout equipment. The company "Mayer Spielgeräte" will present in the following exemplarily a few of these devices. There will be playground equipment as well as sports equipment for young and old.



Figure 65: Planning area - multigenerational square – Playground 1

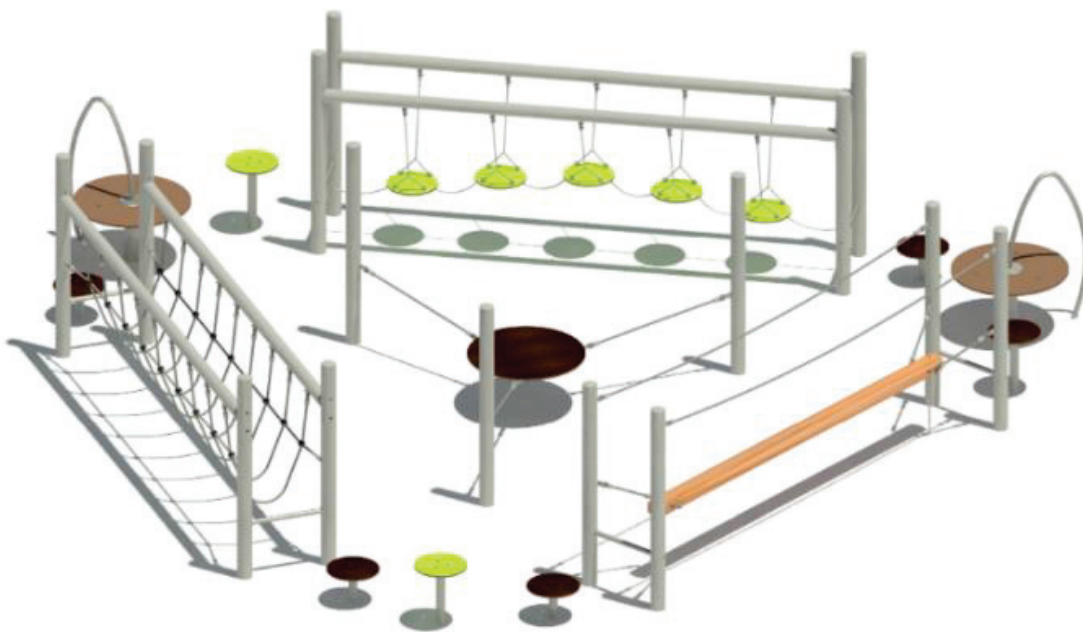


Figure 66: Planning area - multigenerational square – Playground 2

7.10. The rowing club

The rowing club is getting another pier to meet the use of the more than 200 club members. In addition, an exposed view of the old town can be enjoyed in the south-east of the planning area. In order to create a public viewpoint for walkers, a platform was designed that offers sufficient space.



Figure 67: Planning area – the rowing club – floor plan



Figure 68: Planning area – the rowing club – view

7.11. The vegetation

The existing trees shall be preserved as far as possible. This will not be possible in the area of the ground elevation near the bridge, which means that 3 *Tilia platyphyllos* will have to be felled and replanted after the elevation. The area will generally be enhanced by alley plantings as framing. New plantings will be largely provided by *Tilia platyphyllos* or other native species. Since the planning area is regularly affected by flooding, pumping woody species such as *Prunus padus* or *Liquidambar styraciflua* are provided in the area in front of the Fährhaus.

Ornamental beds are also conceivable in this area. Here, emphasis is placed on insect friendliness. The colour scheme will be adapted to the Fährhaus. Neutral colours such as white flowers are planned.

The shoreline areas should remain largely untouched in order to avoid damage to the biotope for protected bird and fish species. However, since the bittern is present in the shore area of the planned city beach, but is not tied to a particular location due to the annually changing breeding site, new reed beds will be offered to which it can migrate.



Figure 69: Planning area – vegetation – perspective 1



Figure 70: Planning area – vegetation – perspective 2

7.12. The lighting

In order to avoid scare areas, enough pole lights will be placed in the area of the Warnow forecourt. These should play a subordinate role in the design. Since the hunting ground of the bats is located in the area of the lower Warnow, dimmable lights are used so that the bats do not feel influenced in their hunting at certain times of the night. Lighting will also be provided in the woodland and allotment areas, either timed or activated on movement to keep light emissions as low as possible.



Figure 71: Planning area – the lighting – perspective 1



Figure 72: Planning area – the lighting – perspective 2



Figure 73: Planning area – the lighting – perspective 3

7.13. The equipment

To ensure a durable and at the same time modern design, robust benches, fences and trash cans are selected. The railing matches the design of the bridge, with the rest of the equipment chosen to contrast with the Fährhaus.



Figure 74: Planning area – the equipment – perspective 1



Figure 75: Planning area – the equipment – perspective 2

8. The conclusion

A special challenge for the creation of the designs was the inclusion of the concerns of all users. Both to honour the listed building in its entirety and to meet the requirements of the sailing club resulted in two different designs. The change in elevation due to the arrival of the Warnow Bridge at 3.20 meters above sea level, while remaining barrier-free, also presented a special engineering difficulty.

The resulting concepts for the open spaces represent a new opportunity for Rostock to combine the new and the old, to design sustainably, and to bring new momentum to the Gehlsdorfer shore. Creating intergenerational zones will generate more tolerance and improve the quality of life.

The replanting of tree rows and the reuse of old materials reflect the significant history of the Fährhaus. The Warnow square will be given a new, modern structure with its new heights, inviting people to linger but also to stroll. The Fährstraße will be restored while retaining its old charm.

Forest areas, allotment gardens, and the rowing club will be given a new image with playgrounds and new path structures.

In summary, the design was kept timeless for a harmonious composition of history, closeness to nature, and practicality. An increase in the overall quality of staying and the experience of the facility have had a significant influence on the design.

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Acknowledgement

For the time being, I would like to thank my second supervisor, Dipl. Hist. Uta Jahnke, who used her professional connections to connect me with BUGA 2025 Rostock GmbH to enable me to plan the project in a way that was appropriate for the monument.

Special thanks go to my first supervisor, Prof. Dr. Carolin Rolka, who brought exciting ideas into the design planning with her enthusiasm.

The constructive criticism and the helpful suggestions of both supervisors supported me a lot in my work and gave me the opportunity to start my first job in my working life directly at the Federal Garden Show in Rostock.

Furthermore, I would like to thank Frank Claus, who with his valuable preliminary work collected numerous sources, which are reflected in this thesis.

Finally, I would like to thank my family and friends who have supported me mentally throughout the writing process.

Affidavit

I hereby certify that I have prepared the present work independently and only with the help of the indicated aids. In addition, I have taken all sources used by me, both in printed form and in the works available on the Internet, and have identified them by precise references. Pictures were either marked by a corresponding source reference or created by me.

Rostock, the 26-06-2022

Appendix

A



 PflaU GmbH Planung für alternative Umwelt GmbH	„Kartierung der Biotoptypen auf dem BuGa-Gelände Rostock“	 RGS
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Tabelle 3: Erfassung der Einzelbäume mit Kronendurchmesser, Höhe, Stammumfang und Schutzstatus

Baumnummer	Arten	Kronendurchmesser [m]	Höhe [m]	Stammumfang [cm]	Geschützt nach §18*	Geschützt nach BS**	Bemerkung
13	Stieleiche (<i>Quercus robur</i>)	12	12	> 100	X		eingezäunt
14	Hängebirke (<i>Betula pendula</i>)	8	14	> 100	X		eingezäunt
15	Hängebirke (<i>Betula pendula</i>)	7	8	> 100	X		eingezäunt
17	Silberweide (<i>Salix alba</i>)	15	20	258	X		
144	Silberweide (<i>Salix alba</i>)	5	5	84		X	
145	Silberweide (<i>Salix alba</i>)	6	6	95		X	
146	Silberweide (<i>Salix alba</i>)	11	14	125	X		
172	Stieleiche (<i>Quercus robur</i>)	15	20	> 100	X		
173	Roskastanie (<i>Aesculus hippocastanum</i>)	16	19	> 100	X		
174	Winterlinde (<i>Tilia cordata</i>)	16	16	> 100	X		mehrstämmig
175	Silberweide (<i>Salix alba</i>)	12	18	> 100	X		
176	Esche (<i>Fraxinus excelsior</i>)	14	16	> 100	X		
177	Hainbuche (<i>Carpinus betulus</i>)	13	12	> 100	X		mehrstämmig
178	Winterlinde (<i>Tilia cordata</i>)	15	18	> 100	X		
179	Flatterulme (<i>Ulmus laevis</i>)	7	10	82		X	
180	Flatterulme (<i>Ulmus laevis</i>)	6	8	57		X	
181	Flatterulme (<i>Ulmus laevis</i>)	6	10	125	X		
182	Esche (<i>Fraxinus excelsior</i>)	5	7	47			
183	Flatterulme (<i>Ulmus laevis</i>)	6	8	50		X	
184	Stieleiche (<i>Quercus robur</i>)	7	8	78		X	
185	Bergahorn (<i>Acer pseudoplatanus</i>)	9	11	88		X	
186	Bergahorn (<i>Acer pseudoplatanus</i>)	10	12	104	X		

* § 18: Geschützt nach §18 NatSchAG M-V

** BS: Baumschutzsatzung der Hansestadt Rostock

