

6 Locations for Bridge Design

1. Brommy

Coordinates: 52° 30' 20.4" N, 13° 26' 11.5" E



2. Europacity

Coordinates: 52° 31' 54.5" N, 13° 21' 48.5" E



3. Gleisdreieck

Coordinates: 52°30'13.0"N 13°22'24.8"E



4. Moabit

Coordinates: 52° 31' 26.5" N, 13° 19' 09.7" E



5. Spandau Citadel

Coordinates: 52° 32' 19.9" N, 13° 12' 34.4" E

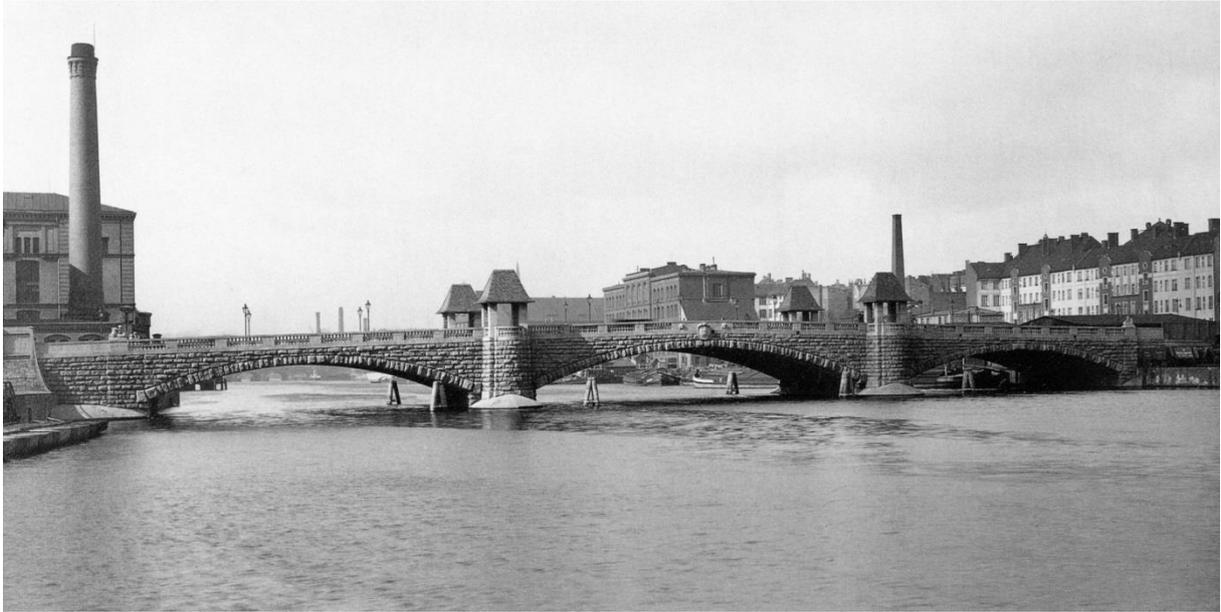


6. Waisen

Coordinates: 52° 30' 53.1" N, 13° 24' 54.7" E



1. Brommy



Coordinates: 52° 30' 20.4" N, 13° 26' 11.5" E

The Brommy Bridge was built in 1909 and demolished in 1945. It is bridging the river „Spree“ between the downtown districts Kreuzberg and Friedrichshain and is close to the Berlin Wall (East Side Gallery).

1. Brommy

History

There were two previous bridges on the site. The first bridge was constructed for coal trains and was only later used by pedestrians. It was replaced by a road bridge in 1909, which was named after Admiral Karl Rudolf Bromme. This arch bridge was made of compressed concrete and a limestone covering. It was decorated with masonry ornaments. In 1945 it was demolished by German troops, leaving only the abutments, a pier in the river and the access from Brommystraße, which remain to this day. After the Second World War the Spree was used as a natural border between the American and Soviet sector and along the northern waterfront the Berlin Wall was erected, which inhibited any reconstruction of the bridge. Reconstruction plans only began after reunification.

Surroundings

The Brommybrücke should arch over the river Spree in Berlin, which divides the areas of Kreuzberg and Friedrichshain. Most parts to the north and south of the bridge were previously used as industrial areas and are now gradually developing and revitalizing. Many new construction projects are planned on both sides of the bridge. The bridge is therefore a crucial connection for the future developments in the area.

On the southern abutments (head of the Brommystraße) a grated viewing platform, called the Spreebalkon, was constructed in 2007. It towers over the river Spree and is used as a viewing point by many tourists. The platform gives an indication of the value a bridge at this location would have as a tourist attraction and as a local landmark.

On the northern shore there is an open-air museum called the East Side Gallery. It contains the remnants of a painted section of the Berlin Wall, which reminds people of Berlin's recent history. Directly next to the

wall a 14-story residential building was newly constructed. Due to this construction the bridge cannot directly cross the Spree. Therefore the city owns an area to the building's west, which is designated for the access to the bridge.

The whole area on the river shore is now being developed under the label MediaSpree, which consists of building projects by communication and media companies. Hence most of the area towards Ostbahnhof is now under construction. This development is highly controversial since some fear further gentrification of the area. The discussion about the development also influences the design of the Brommybrücke. Public debate rejected a previous plan for a road bridge, because it would have meant more disturbances by traffic. Thus public interests have to be respected in the further design process.

Future City Development Plans

City developers formulated two main goals. One is to allow for more views of the river and to open more water accesses. So far there are only a few public places at the Kreuzberg waterfront which allow for a view over the river. With this in mind a path along the river is also planned. The other main goal is connecting the neighborhoods and connecting them to public transportation.

Technical specifications

The bridge should serve pedestrian and biking purposes. Bicycle traffic should be able to cross both ways while pedestrians should be able to stroll and linger – to appreciate the view for example. However, traffic should be able to pass continuously. The design can therefore include platforms, which can be furnished with seating areas. The bridge should serve as a local landmark and tourist attraction. A width of at least 4 m is necessary, and the railing needs to be at least 1.3 m high.

General requirements:

- no piers within 4.5 metres of the water's edge
- maximum ramp gradient 6%

Frequent ship traffic is usual in this section of the Spree. Glare-free lighting should therefore be incorporated. Regarding the lighting it is important to note that:

- The height of the point of light is between 3 and 5 m.
- The setting angle is 0 degrees.
- The glass cover is clear and flat.
- There are reflectors.
- The discharging lamps are tubular.

Additionally, it is required that the construction does not interfere with ship navigation systems. It has to be radar suitable. It is required that:

- Big, parallel areas should be avoided.
- Cavities should be avoided.
- Slanted construction elements should be avoided.
- A radar-absorbing coating should be applied (in the form of mats/pads).

Extraordinary strains, like a ship collision, should be factored into the design, even though it is very unlikely.

The construction should be accessible for all people, also for people with special needs or disabilities. This has to be especially incorporated into the choice of the covering of the floor and the design of the entrance.

As a footbridge the vibrations from side winds and traffic has to be reduced.

The new bridge spans about 110 m over the Spree. The construction of new piers is prohibited, because they would disturb the ship traffic. The remaining pier in the river can be used. However, it should not carry any weight because its stability is not confirmed. The same applies for the remaining abutments on the shore. The current construction (Spreebalkon) on the southern shore will be removed and reconstructed at another location and does not need to be considered in the design of the bridge.

The soil material onsite has been analyzed. The southern building site consists mainly of sand of various grain sizes. On the northern site the topsoil also contains construction debris. The ground water runs on both sides about 4m below the surface. Additional foundational work is not required.

The site's height is about 36.8 m above mean sea level. The highest level of the Spree is assumed to be about 32.49 m. The lower edge of the construction should be at least 4.5 m over the river's water level. With respect to the topographic circumstances the bridge does not need any special elevation. A 20 cm height difference to the bridge's surroundings is sufficient.

2. Europacity



Coordinates: 52° 31' 54.5" N, 13° 21' 48.5" E

Location at the entrance of the future city quarter „Europacity“, bridging several train tracks, located close to Berlin Central Station.

2. Europacity

Site specifications

The Europacity is a planned development area with a sustainable design concept which will be located north of the central station (Hauptbahnhof) in Berlin. In this development process a new link for pedestrians and cyclists between the quarters Moabit and Mitte has been proposed. To complete this link a bridge crossing the tracks emerging from the central station has yet to be planned.

History

During the 19th century the area around Heidestraße developed into a site for rail roads. Three rail road stations were constructed one of them was called Hamburger Bahnhof located right next to Heidestraße. After Second World War the area was severely destroyed by bombs. During the division of Berlin, the quarter got into a peripheral location and became a no man's land. Since that time, it was used as a container terminal. Up until 2003 the area was dominated by its rail roads, when Berlin senate decided to build a new depot station elsewhere. After 150 years of being designated to rail roads the area has the chance for new developments.

Traffic and access

The traffic in the area is heavily dominated by the Heidestraße, which is also a part of the federal highway B 96. It connects the northern part of Berlin with the southern, entering the Tiergartentunnel at the southern tip of the Europacity, next to the central station. Also heavily frequented roads are the Perleberger Straße and the Invalidenstraße, creating the northern and southern borders of the area. The Lehrter Straße at the Western edge of the area is a less frequented road crossing through a residential area.

The central station with its connection to the train, S-Bahn, tram, bus and underground network creates the main access point to public transport. An existing bus line through Lehrter Straße and future bus lines through the Europacity complete an integrated network. A new S-Bahn line (S21, currently in construction will also enable quick connection with the northern part of the ring network.

Pedestrian and bike connectivity

With a new horizontal link between the quarters of Moabit and Mitte, at the heart of the Europacity, new possibilities for pedestrians and cyclists alike will be enabled. As currently the only options are to use the roads north and south of the area or use the walkway along the river Spree even further to the south. On the eastern edge of the Europacity one footbridge already exists and two more are planned, crossing the Berlin-Spandau Ship Canal. These bridges will connect the Europacity to a highly frequented walkway along the eastern banks of the canal. Thus the necessity for a link of the rail tracks is further underlined.

Urban development context

The new Europacity will be a show piece for modern architecture like no other, combining aspects of living, working, shopping, culture and leisure. On the western side of the tracks, with a green strip in between, a new residential area is also in development.

The leisure area in and around the Poststadion, with its park, stadium, tennis courts, public pool, spa and climbing center, west of the Lehrter Straße is another crucial part to be connected by the new bridge over the Tracks.

Technical specifications

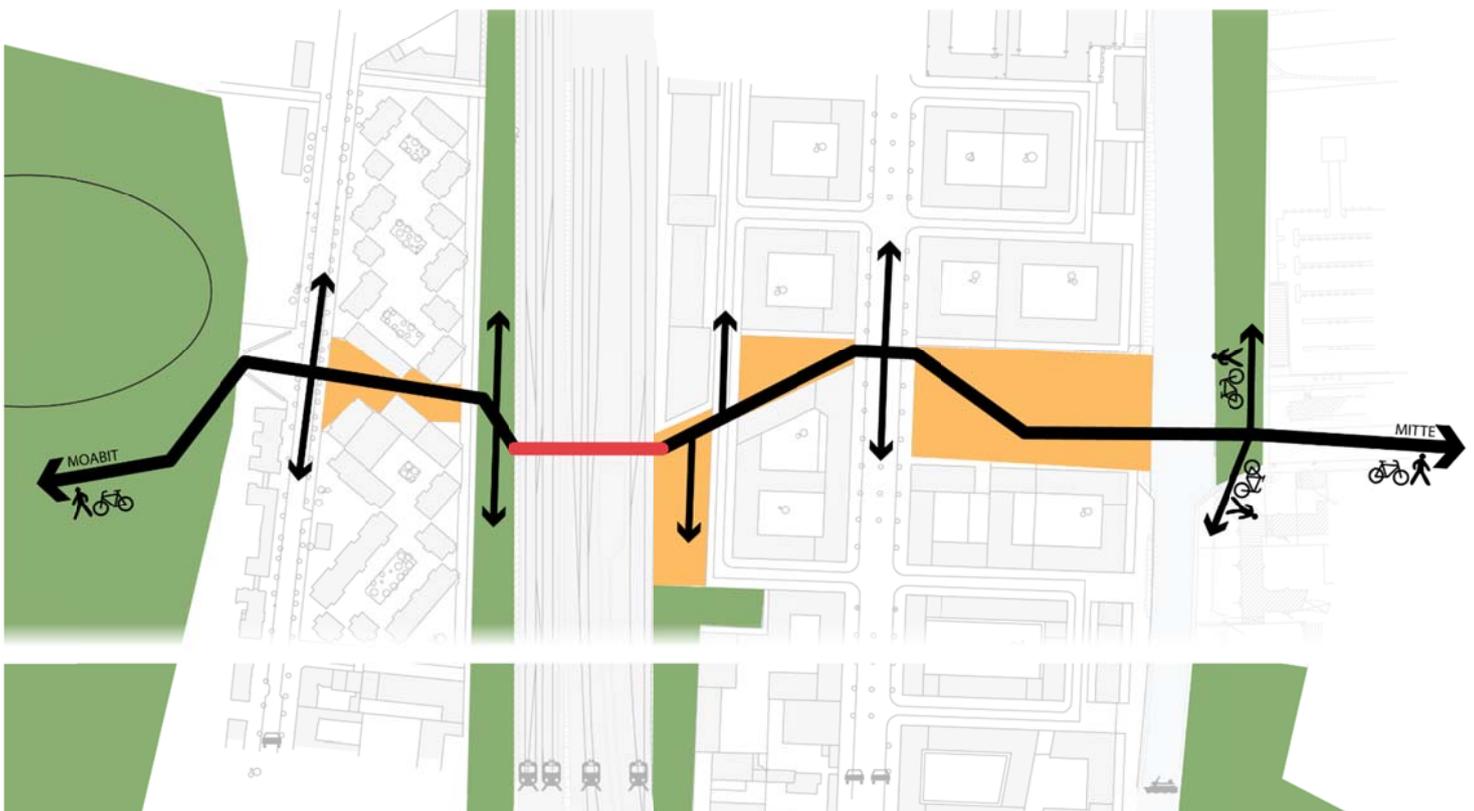
These specifications should be seen as mandatory and should be met if possible. The boundaries of the marked areas for the construction of the ramps should also be met.

- Deck width – railing to railing – 4m
- Headroom underneath the footbridge over the bridge deck – 2.5m
- maximum ramp gradient 6%
- Required clearance for trains – 6.2 m + adjustment of the overhead cable, in coordination with the DB Netz AG (it is suggested to work with just the 6.2 m clearance, else the standard clearance would be set to 7.7 m)
- High-voltage protection according to RiZ-ING Elt 2
- Bridge loads according to Eurocode

- Safety distance of the base structures to the rails according to DS 804
- Handrails for cyclists and pedestrians – 1.3 m
- The ground in and around the proposed bridge is a peat over a sludge over a sand
- The stable subsoil of the sand can be expected in the range of 4 – 6m beneath the ground

Desired specifications

- Vibration should be kept at a minimal level, without dampers
- Cavities, especially open ones, should be avoided
- Impact protection and calculation according to Eurocode



3. Gleisdreieck



Coordinates: 52°30'13.0"N 13°22'24.8"E

Situated in Berlin's new highrise area „Potsdamer Platz“, the bridge for this site should connect the two inner city parks „Tilla Durieux“ and the „park at Gleisdreieck“ over the ship canal „Landwehrkanal“.

3. Gleisdreieck

Site specifications

History

Until the end of World War II, what is now Tilla Durieux Park used to be Potsdamer Bahnhof – Berlin’s first railway terminus. The new footbridge is to be built where once the tracks leading to it crossed the channel (and the two adjacent roads). But the old bridge does not exist anymore: the end of the war left Berlin divided and once central, bustling Potsdamer Platz found itself integrated into the death strip that separated East from West with the infamous Berlin Wall running right through it. Thus, rebuilding the destroyed railway station next to the wall in no man’s land of West Berlin made no sense. The area north of the channel was used only to build an elevated Maglev train line that was rendered redundant when Berlin became reunified; the area south of the channel was simply used as a stockyard.

Today, two parks can be found here: Smaller Tilla Durieux Park (named after a stage actress who was a very popular star during the 1920s) in the north and Park am Gleisdreieck (“Park at Triangular Junction”) in the south.



1: Potsdam Train Station in 1876, view from the south

The site and its surroundings

The two parks are part of the attempt to create 20 green pathways through Berlin. Planned by Amsterdam-based “DS Landschaftsarchitekten”, Tilla Durieux

Park is known for its lawn sculpture with a length of 450 metres and five seesaws with a length of more than 20 metres each splitting the “lawn cushions” into two parts.

Park am Gleisdreieck is part of the aim to create green pathways through Berlin. It is much larger than Tilla Durieux Park and the citizens of Berlin participated in its planning. It is characterized by lawn for playing and sunbathing, some copses, long wooden benches, playgrounds and paved paths for pedestrians, cyclists and skaters plus some historic relicts from its time of trains and tracks. In fact, you can still find some railway sidings throughout the park.



2: The two parks, aerial view from the north with Potsdamer Platz in the front

After 1990, Potsdamer Platz became Europe’s largest building site, and as one tower building is located close to the channel, it will be clearly visible from the new bridge: the 21-storey Atrium Tower (formerly debis tower) designed by Renzo Piano.

The bridge will not only connect the two parks, but furthermore provide a “missing link” of the long-distance cycle track “Berlin-Leipzig”: it runs through both parks (at present, the routes are located on the west side of Tilla Durieux Park and on the east side of Park am Gleisdreieck, cyclists must cross the streets and use a bridge east of the parks to continue on the track).

A new railway line “S 21” is scheduled to be built by 2025; its route will be to the east of the parks, parallel to the existing railway route that is above ground. It will go through the car park, which will soon be partially converted into apartments (with view of the park).

Besides the four train tunnels, a long-distance heat pipeline runs under the channel at a depth of 10.00 metres.

Wastewater disposal lines can be found under the forecourt of Tilla Durieux Park (1,800 mm), as well as under the two streets and between rescue area and street (1,000 mm). An underground wastewater pressure line runs on the eastern edge of the public property; the top of the small rampart is private property. The sites east and west of the parks are privately owned as well.

A shipping pier is located at the northern bank of the channel; its design may be changed – and the location slightly moved – but the ability to embark or disembark a ship there must remain. Furthermore, the width of the channel must not be narrowed.

Also, at the southern end of the forecourt of Tilla Durieux Park, is the entrance to underground parking.

A free view into the parks and the visual axis from one park to the other should remain.

Technical specifications

There are several general requirements that must be met:

First of all, the bridge must be at least 4 metres wide, as pedestrians and cyclists are to cross it in both directions.

The height of the guard rail must measure at least 1.30 metres. Please keep in mind that wheelchair users cross the bridge as

well, so please avoid any line-of-sight obstructions for them.

General requirements:

- no piers within 4.5 metres of the water's edge
- maximum ramp gradient 6%

The Berlin administration calls for a load of 12 tons. Several criteria regarding the height of the bridge must be met: above the street, the required – and this will be the determining – clearance is 4.50 metres, and the clearance above the channel is 3.00 metres above flood level. The northernmost part of Park am Gleisdreieck is a rescue area for the four train tunnels located 12.15 metres below ground level. The required clearance of this area is 3.5 metres, and a helicopter must be able to land there.

Ship impact needs not be included in design only if pillars are at least 5 metres away from embankments, which consist of walls of various heights and slopes. At a depth of 1 metre, non-cohesive soil can be found.

Regarding the design of the bridge, bear in mind that its vibration must be low; additionally, it should be safe from vandalism and “dirt traps” should be avoided so that maintenance would be rather inexpensive. Finally, its lightning must not impede the traffic.



3: rescue area in northern Park am Gleisdreieck

4. Moabit



Coordinates: 52° 31' 26.5" N, 13° 19' 09.7" E

The location of this bridge family is at the confluence of the river „Spree“ and the ship canal „Landwehrkanal“ connecting the downtown districts Charlottenburg and Moabit.

4. Moabit

Site specifications

The bridges are to connect Charlottenburg and Moabit-two quarters of Berlin, which lie in the center of the capital city of Germany.

The district contains mainly sports infrastructure such as sports fields, a ball court, playgrounds and a gymnasium. The most important buildings in the area are the thermal power station Charlottenburg, the Water Police station, car service station, Technical University Berlin, IWF factory and office buildings. On the banks of the river there are also some cafes.

History

Charlottenburg was once the center of the former West Berlin and is now popular for its shopping district and many well known hotels. On the contrary Moabit was an industrial suburb district, where because of its proximity to the city centre a government quarter and central rail station were built.

One of the bridges will connect the banks of the Spree River and the other is to link Goslarer Ufer with Neues Ufer. Both of the bridges can be found on the city plans from the late XIX century and the early XX century in nearly exactly same locations.

Waterways

The location of the bridges is near Spreekreuz-place where the Spree River connects with Charlottenburg Canal and Landwehrkanal. While Spree And Landwehrkanal are two of the most popular waterways of Berlin, the Charlottenburg Canal (over which one of the bridges is to be built) is deemed uninteresting and is omitted during city tours.

Cycling and walking infrastructure

There are cycling and pedestrian routes on both sides of the Spree. One of these is a part of Berlin's green-ways, a route for pedestrians and cyclists, which offer a great view of the river. Due to the locations of bridges nearby (or rather the lack of them) many cycle routes are disconnected from each other, and to change the route a long detour is necessary. The bridges would make travelling easier by shortening the distance. Building them would enrich Berlins cycling and walking infrastructure, offering people more variety in choosing the route of their workout or a tourist trip. The bridge would also make the boat tours more interesting for the passengers.

Another advantage would be connecting the apartments, which are being built near Goslarer Ufer to the sports fields, playgrounds and school on the other side of the waterway.



Pictures from: www.alt-berlin.info

Technical specifications

Location

The bridge over the Spree River will be located on the Salz-Ufer side between Clara von Simson street and Carnot street and near the sports field on the other side.

The second bridge is to connect the Quedlinburger Street to the other bank of Charlottenburg Canal.

The land is the property of the State of Berlin and the sites are in public use. The places for the project are designated (Nach Vereinbarung mit „Vattenfall“ Energieunternehmen).

Technical specifications

The minimum width of the bridges is 4,0m. Their minimum height over the water is 4,5m.

No piers within 4.5 metres of the water's edge

A maximum ramp gradient of 6%.

The clear height under the bridges cannot be less than 2,5m above the road.

Their load capacity cannot be less than 5kN/m.

Within the project area the height coordinates lie between approximately 34,10m (sports fields) to 34,00m (Neues Ufer), 32,8m (Salz-Ufer), and 36,70m (at the junction of Goslarer ufer with Quedlinburger Straße).

Soil

The foundation soil is in bad condition and consists mainly of sludge and sand. The height of the banks in the area is around 1.3m. The loadbearing soil for normal load is located 2-3m deep on both sides of the river and 3-4m deep on both sides of the canal.

Water

The height of the main aquifer is 30,5-31,0 m.a.s.l. The exchange frequency of the water in the area is very high.

Trees

In the area there are many trees, some of them are not marked on the maps of tree population. If any of the trees were to be cut down, it is obligatory to plant a new one to compensate.

Transport

The nearest metro and city-rail stations are relatively far away. The bridge over the Spree River would shorten the way to the nearest bus stop for the students of the Technical University and the inhabitants in the area of the campus.

Other

The bridges have to be illuminated, but the lights must not shine in the direction of the ships.

It is necessary to provide precautions against vandalism at both bridges.

5. Spandau Citadel



Coordinates: 52° 32' 19.9" N, 13° 12' 34.4" E

This bridge family is located 20 minutes outside of Berlin in the district Spandau close to the historic monument Spandau Citadel.

5. Spandau Citadel

In general: Citadel part of Spandau

Spandau, as one of the oldest districts of Berlin, has a diverse historical background including Spandau Citadel. The translation of “Spandau” from the Slavic word “Spandowe” means confluence and shows the importance of the location of Spandau Citadel and the bridges which are planned to reach the citadel.

First mentioned in the 12th century as a fortress city, Spandau became part of Berlin in 1913. A long time it was the Guardian of Berlin because of its geographical location and the direct connection to the Havel. Spandau was the military hotspot and also a great emporium on the route of commerce from Magdeburg to Poland. Being one of the main producer of military equipment, the citadel was used as a store and retreat for the military.

History of the Spandau Citadel

With the development of firearms medieval castles lost their importance. However, the fear of the invasion of the Ottomans demanded buildings for defence throughout Europe. This was the reason why the Italian architect Rochus Graf zu Lynar designed a fortress instead of a castle in Spandau in 1559. After 35 years of building time, the citadel was finished to fulfil its main aim of protecting the town Spandau and the water route to Berlin. Even if the Ottoman invasion has never taken place, the citadel was seat of war several times during history. During World War II hundreds of scientists experimented here with warfare agent as sarin, tabun or hydrogen cyanide by order of the Nazi Regime.

Today

Since the end of the 19th century, the Zitadelle Spandau has lost its defensive

purpose while the importance of civil purpose and cultural use increased steadily. More and more buildings were converted to museums and exhibitions and the place has become a popular tourist spot. More than just an old fortress to visit, the citadel became a place of joy. Almost every night the citadel hosts concerts and other events. A theatre in the middle of the building assures the pleasure for young and old. The former laboratory of warfare agent has been converted to ateliers for painters, sculptors and other artists.

Genius Loci

The Juliusturm (Tower) is one of the town’s landmarks although the year of construction is unknown. The 30 meters high building stands next to the south western bastion “König” and was probably used as a peel or even a dungeon. After World War II the Juliusturm was part of a saying to describe the situation of owning more money than spending it. So the tower pictures safety and affluence.

The historic center of Spandau is located in the south west of the citadel. Since it is surrounded by water, it is often described as an island. Even though the city was almost completely destroyed by the end of 1945, architects and engineers were able to rebuild the old town’s houses and streets and revive the character of the fortress city.

Technical Specification

The Spandau Citadel and its surroundings need to overcome an environmental and visitor friendly development in order to preserve the ecological balance of this area and simultaneously increase the experiential value of Spandau Citadel. At the moment there is only one way to reach the island where the citadel is grounded – the “Zitadellenbrücke” (citadel bridge). Therefore, two new bridges are planned:

1. Footbridge north of Juliusturm-Bridge

2. Footbridge over ditch



On the one hand bridges influence the environment by improving the route guidance of cyclists and pedestrians by linking existing routes. On the other hand an increase of visibility of the fortress can be reached as the footbridges serve as viewing platforms. Nevertheless, several limiting conditions and requirements have to be taken into account.

Challenges of the bridges

According to German regulations, footbridges have to be accessible for people with impairments, so that the ramp's gradient should not exceed more than 6°. Moreover, the bridges are used by pedestrians and cyclists so a width of at least 4.00 m and a railing height of 1.30 m are demanded. Cars are not allowed to pass the bridges. Aside from that, this area is listed as an urban heritage, a protected landscape, an area of species protection and a Flora-Fauna-Habitat. This is the reason why both bridges have to require little maintenance in order to prevent nature gaining prevalence in hollow spaces.

The grounding can be described as boggy.

Footbridge north of Juliusturm-Bridge

As the Spandau citadel is located at the confluence of the rivers Havel and Spree shipping and transport have a special importance. The confluence is part of the Havel-Oder-Waterway and includes a watergate between the Glacis of the fortress and the neighbourhood Kolk of Spandau. The owner of waterway and Watergate is the "Bundeswasserverwaltung", which imposed the following regulation: Bridge and watergate have to be separate buildings spatially and legally. It is not allowed to build a bridge over, above or across the watergate, so that a compromise was taken by choosing the site for the new bridge north of the Juliusturm-Bridge. Nevertheless, this location still includes shipping and traffic as well during the time of building. The traffic of container vessels causes at least a clear height of 5.25 m above water surface and its pillars are suggested at the riversides. The bridge has to span about 50 m. The operating water level amounts to 30 m above sea level. Unfortunately at both riversides the space for ramps is limited.

Footbridge over Ditch

The bridge at the second site is the smaller one as it only spans about 17 m from the Glacis of the fortress to the street "Am Juliusturm". Its necessary clearance is 2.80 m because this waterway is only used by smaller boats in order of inspections.

General requirements:

- no piers within 4.5 metres of the water's edge
- maximum ramp gradient 6%

6. Waisen



Coordinates: 52° 30' 53.1" N, 13° 24' 54.7" E

The Waisen Bridge in downtown Berlin is one of the oldest bridge sites in Berlin. All former bridges from medieval times until its last design as an arched stone bridge in 1894 have been destroyed.

6. Waisen

History

The Lindholz-Plan from 1660 is the first known document aimed to connect the Middle Aged cities (Old-) Berlin with "Coelln". The draft included several bridges. Some of the most prestigious bridges ultimately originated from the Lindholz Plan, two of them being the Waisen Bridge and the Oberbaum Bridge.



At the beginning of the 18th century, the first blockhouse-bridge was constructed at the location where the Waisen Bridge would ultimately be built.

The early construction was a wooden pile bridge with a central movable section, used for watercraft passage. With a length of approximately 83m (~250ft) and a width of about 7m (~21ft), this bridge was of great significance for the cities then. It was the first connection that allowed carriages and livestock to cross without hindering transport via water.

With the completion of the Oberbaum Bridge in 1724 and the subsequent demolition of the now unserviceable blockhouse, the bridge came to be called Waisen Bridge, named after the adjacent hospital, Grosse-Friedrich- Hospital. The hospital also functioned as an orphanage; "Waisen Bridge" translates to "orphan bridge".

The hospital was demolished in the early 1900s.

In 1831 the royal building deputation decided to remove the old bridge and completely rebuild it, since it was frail and prone to reparations.

The Waisen Bridge was designed as a wooden bridge again. In 1876, when the bridge fell into the cities ownership, Berlin's city administration decided to rebuild the bridge in a way that was meant to last.

The new design materialized between 1892 and 1894. The Waisen Bridge was redesigned as an arched stone bridge, with the two outer arches having a clear width of 18.5m (~55.5ft) and the middle arch a clear width of 20m (60ft). The bridge was now made of clinker brick and sandstone, spanning about 90m (~270ft) in total length, with a width of 20m (~60ft).



It was designed to withstand any traffic via carriages and motorized vehicles.

Surviving World War I and almost the entirety World War II without any greater damage, the Germans demolished the southern end of the bridge in a last attempt to protect themselves from Allied Troops.

After the war, a temporary wooden construction was put in place to offer a crossing-point, since the surrounding bridges had also been destroyed.

In 1960, after the adjacent Jannowitz Bridge was rebuilt, the responsible authorities deemed that it was not viable to rebuild the Waisen Bridge. It was too severely damaged and its maintenance no longer made economical sense, leading to its demolition later that year.

Surrounding area

The area surrounding the location of the former Waisen Bridge is a place of historical significance. In north-western direction Marienviertel is located. It is dated back to the early 13th century, and was the first recorded settlement of the former cities Berlin and Coelln.

Crossing over to the "Märkisches Ufer" on the south shore, one can visit the "Märkisches Museum" (Marcher Museum), which was built from 1899 to 1907 and was the first museum in Berlin to be completely independent of the Prussian crown.

Apart from the "Märkisches Museum", the south shore is site for various embassies, e.g. the Brazilian- or Chinese embassy.

The "Fischerinsel" towards the west, is a vivid place that also offers large green spots to relax.

The Jannowitz Bridge in the east is the main crossing point for all kinds of traffic, including a train station for both, a subway station and regular.

Furthermore, the present city site plan offers a clear vanishing point, in which the new bridge should be built, in order to link the "Rolandufer" in the north, with the "Märkisches Ufer" to the south, and the "Littenstraße" with the street "Am Köllnischen Park".

Technical specifications

- the bridge has to have a minimal width of 4m and a handrail which must not be any lower than 1,30m
- the required clearance above the water level amounts 4,50m
- the required clearance above the sidewalk amounts 2,50m
- the bridge must be handicapped accessible
- maximum ramp gradient 6%
- furthermore, the bridge and its waterside bearing must sustain a ship collision without collapsing (bridge bearing in question is already in existence)
- the technical details regarding the waterside bridge bearing are no longer in existence and therefore must be newly calculated, but it should be included in the new draft
- no piers within 4.5 metres of the water's edge

Design

- pillar-free spanning of the bridge across the Spree
- low-maintenance in the style of the historic site
- limit bridge's motions to a minimum to where its virtually free of vibration
- the artificial lighting must not be distracting for passing ships
- vanishing point as a projection of the town picture