Foreword by the President of the European Central Bank

In 1998, the European Central Bank (ECB) began operations in the Eurotower, in the heart of the financial district of the city of Frankfurt am Main, Germany. In the year 2000, as the organisation grew rapidly, we had to rent additional space in a nearby building, the Eurotheum. Both buildings have hosted us in our first steps, but from the beginning it was clear that a long-term solution for the institution's premises would have to be found. The coming enlargement of the European Union with new Member States and the increase in the tasks to be fulfilled mean that the time has come to provide the ECB with a new home especially designed to support the functions of a central bank.

An important step in this direction was taken on 5 March 2002 when the ECB signed an agreement with the City of Frankfurt to acquire the site of the Grossmarkthalle, which has served for decades as Frankfurt's wholesale fruit and vegetable market. As the Grossmarkthalle itself is a listed building, under historical preservation order, its fundamental appearance must be retained as an integral part of the overall project. Our plan is to erect an additional building - or several buildings - on this site to meet the requirements of a modern central bank in the 21st century serving an enlarged euro area.

As central bankers, we have been entrusted with the task of maintaining price stability in the euro area in the interest of the citizens of Europe. This task is demanding and complex in a rapidly changing environment. It requires work ranging from economic, statistical and legal analysis to multifold operational activities. We use sophisticated, modern information and communications technologies. We perform our tasks in close cooperation with the other members of the European System of Central Banks (ESCB), and also in close contact with the financial markets, institutions of the European Union and its Member States, international bodies and academic fora.

These characteristics point to some of the requirements for our new premises, including the flexibility to serve diverse working styles and to foster interaction and communication.

The design of our future premises should reflect the values we regard as essential to our activities. We are committed to transparency, integrity, excellence and efficiency.

The level of security, safety and health of the users of the new premises is a priority for the ECB. The proposed design should take into account not only the security requirements but also people's reasonable concerns for their safety.

The ECB has a strong obligation to use its resources responsibly. In addition, as a public institution the ECB not only aims to provide its staff with the optimal working environment, but is also committed to the City of Frankfurt to ensuring the ECB premises integrate well into their urban surroundings. The citizens of Europe expect the ECB to create a building that is environmentally sustainable.

The requirements spelled out in this competition brief pose an interesting albeit challenging task to talented and innovative designers. We hope that they will know how to interpret our vision and translate our functional needs into an exceptional design. I am sure that many of the best architects from every continent will rise to this challenge and submit outstanding proposals. Welcome to the Competition.

European Central Bank
Urban Planning and
Architectural Design Competition

for the
New ECB Premises
in Frankfurt am Main, Germany

ECB

Competition Brief

Europe riding on Taurus – ancient fresco found in Pompeii

Introduction

The European Central Bank (ECB) has decided to construct its new premises on the current site of the Grossmarkthalle (wholesale market) in the eastern part of Frankfurt am Main. For this purpose, it has launched an international urban planning and architectural design competition. The objective of this Competition is to identify the best design proposals for the new ECB premises and to choose an architect or group of architects to undertake the final construction of the new ECB premises. The design proposals will have to provide solutions for the functional integration of the old Grossmarkthalle building which constitutes part of the purchased area.

A new home for the ECB

Public buildings are conveyors of meaning and this one in particular symbolises the European Monetary Union and our currency, the euro. The new building should reflect our values and our identity as a central bank and an European organisation. We are building for a new concept of public service, founded on the principles of integrity, excellence, efficiency and transparency.

The new home of the ECB should inspire the ECB's culturally diverse staff with pride and should grace the city with a landmark of design, however simple and unpretentious. It should be welcoming to the outside while providing a secure environment.

We would like all of these qualities to be expressed with originality as part of an inspiring contribution to the building of a unified Europe.

- Functionality

Our new premises should provide a functional environment, which meets the diverse requirements of its users. At the same time, we expect the architectural proposals to foster interactive communication between people in order to avoid the creation of organisational barriers and to promote teamwork. The design should in particular maximise the likelihood of personal interaction across intra-organisational boundaries and hierarchical layers.

- Quality design

Europe's artistic legacy is part of its cultural heritage. In this sense, we expect high quality designs which will provide Europe with an icon of modern architecture.

- Flexibility

As the ECB is a young organisation with emerging new challenges, flexibility and rapid response are key to its performance.

The functional and spatial programme is based on 18 functional areas. It amounts to approximately 100,000 sqm of main usable space for office areas, conference facilities and space for other necessary activities. The spatial informa-

tion in Part C provides a quantitative framework offering flexibility for future development to accommodate changing circumstances.

The architectural design should be based on a modular approach. The first phase of construction should provide 2,500 workplaces. The possibility of two modular expansions of 500 workplaces each is to be planned for. The architectural proposals should include these growth modules in the overall urban planning for the site and show how they will integrate with the architectural and organisational scheme for the first phase.

Office areas must be highly flexible and adaptable to changing requirements. Office concepts must be designed to be reversible with little effort or cost. The standard floor sector must be structured so that all standard office layouts are possible, i.e. cellular offices, communicative offices (combi offices), group and open plan offices. The basic facade grid must be large enough to allow for a reasonable variety in the configuration of workplace furniture.

- Cultural diversity

The ECB is a culturally diverse institution today and will be even more so after the EU Enlargement, when new Member States join the Union and eventually adopt the euro. A multinational workforce and international atmosphere form the core of our strengths and need to be welcomed in the plan for the ECB's new premises.

- Urban environment

The new premises, including the Grossmarkthalle, should sensitively reflect the site's history and fit into both its immediate neighbourhood and the overall urban plan of Frankfurt. The Grossmarkthalle is a listed building, under historical preservation order, and must retain its fundamental appearance. However, the considerable technical and physical defects presently in the building offer a challenge to the engineers of the 21st century.

- Technical requirements

The core business functions of our institution require the highest levels of reliability, security, operational safety, and flexibility. These requirements shall be considered accordingly in the design of the technical plant and infrastructure. Consequently, the technical systems must be conceived for defined emergency situations and constructed in such a way that neither breakdowns nor operational shutdowns will result in interruption of the bank's activities. The entire premises shall have all utilities and appropriate backup systems.

Indoor climate is of great importance for the comfort and productivity of our staff as well as for the cost efficiency of the buildings. Systems to provide a climate appropriate to the requirements of the different functional areas shall be provided with a view to creating an optimal environmental balance.

Design proposals and technical concepts shall support the principle of sustainable development. The efficiency of the buildings including economical, ecological and social aspects has to be seen in relation to the operating costs, future maintenance and energy consumption.

- Security, safety and health

The ECB's functions require high security standards. When responding to these needs, the architect's design should nonetheless strive to organise the facilities and provide security solutions in such a way that all security requirements are successfully met with minimum disruption to the bank's functions and in the least visible way.

In the context of possible threat scenarios and their probability of occurrence, candidates shall consider all aspects of security and safety design. The design shall respond in a well-balanced manner to parameters such as building height, relevant stand off distances of buildings to public areas, modular security zoning and physical barriers on the site.

The safety of the ECB staff and visitors is a high priority. Accordingly, escape, fire protection and structural systems shall be designed to protect the lives of individuals and to minimise the risk exposure of the ECB. Specifications prescribed in the local building code are considered as the minimum requirements. We welcome innovations and improvements beyond these standards.

Architects are invited to aim for a design which takes into account the personal feelings and safety concerns of the staff working in a highly visible public institution.

- Efficiency

As a supra-national public institution, the ECB feels accountable to the citizens of Europe for the responsible management of its resources. Therefore, the new premises should be built in a cost-effective manner. Decisions on investments, however, should be taken with a long-term perspective and consider the whole lifecycle costs of the premises.

About the ECB

The ECB was established on 1 June 1998. Its legal framework is the Treaty establishing the European Community and the Statute of the European System of Central Banks (ESCB) which is attached to the Treaty as a Protocol.

The ECB, together with the national central banks (NCBs) of all 15 EU Member States constitute the ESCB. The Eurosystem consists of the ECB and the national central banks of the 12 Member States which form the euro area. It does not include the NCBs of three EU countries (Denmark, Sweden and the United Kingdom) that have not yet adopted the euro. The term "Eurosystem" thus denotes the organisational form in which the ESCB performs its core functions. The distinction between "ESCB" and "Eurosystem" will vanish when all EU Member States have adopted the euro.

The Eurosystem performs the central banking functions in the euro area. Its main tasks are conducting monetary policy in the euro area and issuing euro banknotes and coins. The euro area is the second largest economic area with a single currency in the world. The euro is the common currency for around 300 million Europeans.

The primary objective of the ECB is to maintain price stability in the euro area. Without prejudice to its primary objective, the ECB also supports the general economic policies in the euro area.

The supreme decision-making body of the ECB is the Governing Council. It consists of the six members of the Executive Board of the ECB and the governors of the NCBs of the Member States that have adopted the euro. The President of the ECB is both Executive Board Chairman and Chairman of the Governing Council.

The key task of the Governing Council is to formulate monetary policy for the euro area. It specifically determines the interest rates at which credit institutions may obtain liquidity from their respective national central banks.

The Executive Board of the ECB consists of the President, the Vice-President and four other members. All are appointed by common accord of the Heads of State or Government of the 12 countries that form the euro area. The Executive Board is responsible for implementing monetary policy as formulated by the Governing Council and gives the necessary directions to the national central banks of the Eurosystem for this purpose. The Executive Board also prepares the Governing Council meetings, makes proposals to the Governing Council on the issues/items requiring decisions and manages the current business of the ECB.

The third decision-making body of the ECB is the General Council. It consists of the President and the Vice-president of the ECB along with the governors of all 15 NCBs of the EU Member States. The General Council contributes to the advisory and co-ordinating functions of the ECB and to the preparations for the enlargement of the euro area.

The ECB serves a geographical area that currently comprises 12 EU Member States, each with its own history, culture and economic background. The number of Member States in the euro area is expected to increase significantly in the coming years following the forthcoming enlargement of the European Union and further economic and political integration.

The ECB enjoys full independence in performing its tasks and has all the instruments and powers necessary to effectively conduct monetary policy. It has its own budget and its capital has been subscribed and paid up by the NCBs. It performs its functions in accordance with the principles of transparency and openness.

As a truly European organisation, the ECB reflects common traditions and shared values as well as the cultural diversity of its staff. As a public organisation it emphasises efficiency. The ECB employs at present around 1,200 staff from all Member States of the European Union at its premises in Frankfurt am Main, Germany.

The architects participating in this Competition are invited to find innovative solutions that support these ideas and the requirements of the ECB laid down in this competition brief.

Eurosystem

EUROPEAN
CENTRAL BANK

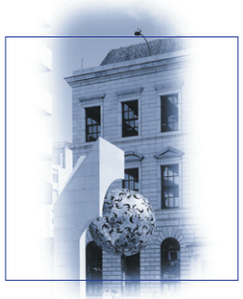
NATIONALE BANK VAN BELGIË/
BANQUE NATIONALE DE BELGIQUE

DEUTSCHE
BUNDESBANK

BANK OF GREECE

BANCO DE
ESPAÑA

BANQUE DE
FRANCE



CENTRAL BANK OF
IRELAND

BANCA D' ITALIA

BANQUE CENTRALE DU
LUXEMBOURG

DE NEDERLANDSCHE
BANK

ÖSTERREICHISCHE
NATIONALBANK

BANCO DE
PORTUGAL

SUOMEN PANKKI

DANMARKS
NATIONALBANK

BANK OF ENGLAND

SVERIGES RIKSBANK

ESCB

Part B

External conditions and requirements

1 The location: Frankfurt am Main

The city of Frankfurt am Main is a European metropolis shaped culturally and economically by finance. It is the centre of the Rhine-Main metropolitan area containing a total of around 4.5 million people. Frankfurt itself currently has a population of around 650,000. The city is cosmopolitan – around one-third of the inhabitants do not have German passports. The high number of jobs and its location at the centre of a densely populated area contribute to Frankfurt having the highest relative commuter rate amongst German cities. Around 290,000 commuters travel everyday to one of the 560,000 jobs in the city. The city owes its importance to its long history of being a traffic hub and centre of trade and trade fairs. Frankfurt's airport, with the second-highest number of passengers and the highest volume of air cargo in Europe, together with its train station, on one of the most important railway junctions and with one of the largest station buildings on the European continent, form part of this tradition. Frankfurt is shaped today and will be in the future by its importance as a centre for services and finance. In addition to its stock exchange, with roots going back to 1585, the city is home today to over 400 domestic and foreign banks, more than 100 publishing houses, 200 advertising and PR agencies, and around 170 insurance companies. This has had a strong impact on Frankfurt's urban development. There are now 18 high-rise buildings of over 100-m height in the city. For example, in 1997 the highest office building in Europe, the approximately 260-m high Commerzbank skyscraper, was completed by British architect Sir Norman Foster. The 1993 decision on where to locate the seat of the European Monetary Institute (EMI), the forerunner of today's ECB, was made in favour of Frankfurt. The EMI subsequently became the European Central Bank in 1998.

Areal view of Frankfurt

2 Urban development of Frankfurt am Main

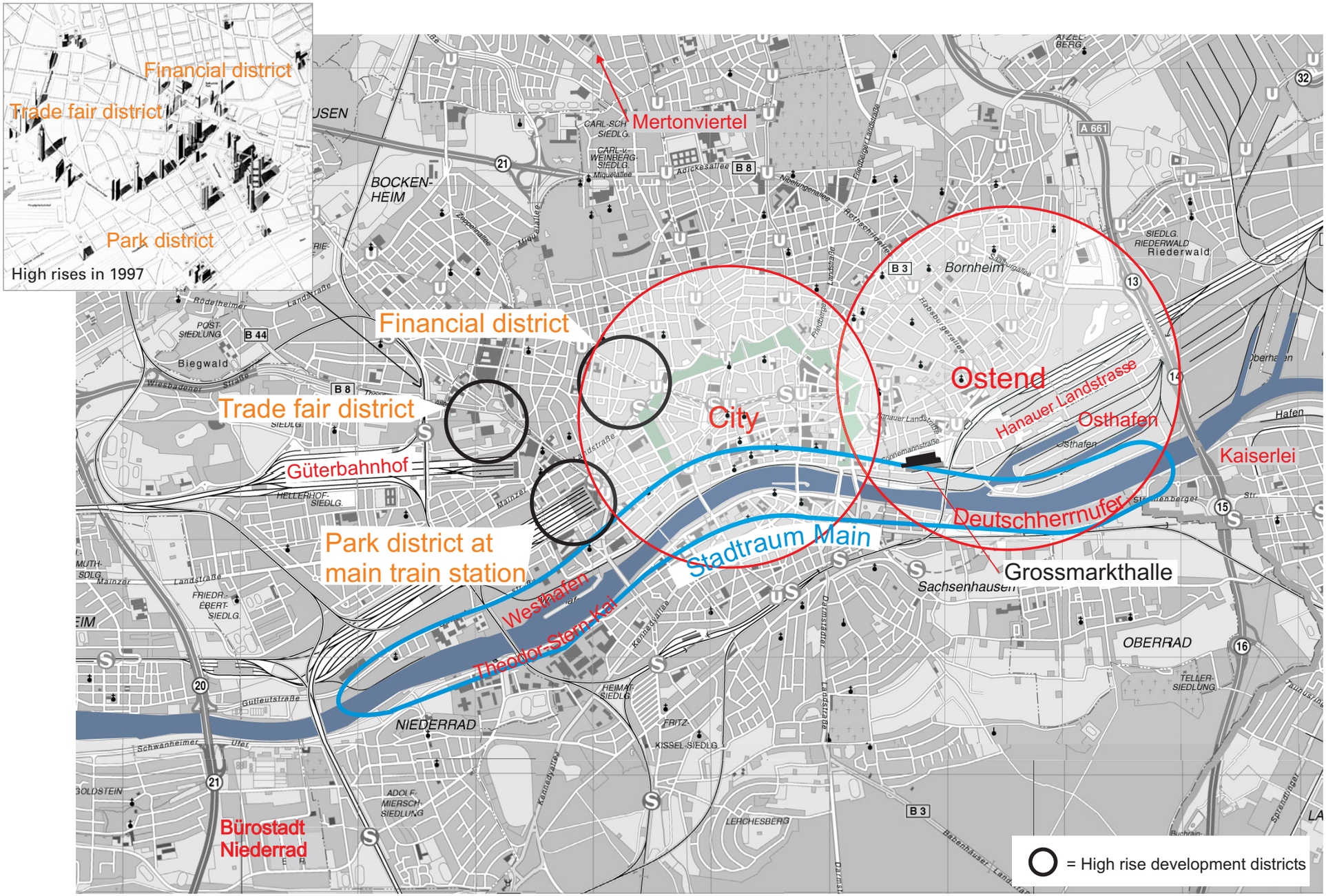
The city of Frankfurt am Main has been affected by rapid economic structural change, which has had an impact on all areas of the city. Although services and offices have been historically clustered in the city centre and its western fringe, in the last few years other areas, previously characterised by light industry and large infrastructure facilities, have now also become service locations (Bürostadt Niederrad, Güterbahnhof, and Mertonviertel). The eastern part of Frankfurt in particular, especially along Hanauer Landstrasse, has been discovered as a location for services and offices. This area is developing as a location especially for new start-up companies.

Along the Main river, which has traditionally served as a location for large infrastructure facilities such as ports, the Grossmarkthalle (wholesale market), abattoir (slaughter house) and power stations, new residential and office projects have been developed on disused parts of these facilities. The conversion of these areas was initiated by a consilium for the "Stadtraum Main" (Main river urban area), and a new identity for the "City on the River" was developed with mixed residential and service quarters. Apart from the large district of Osthafen (East Port), which was reserved for industrial use by a city council resolution in 1998, all projects in the "Stadtraum Main" have now been begun or completed over almost the whole area (Deutschherrnufer, Theodor-Stern-Kai, Westhafen, southern Ostend, Kaiserlei). The conversion of the Grossmarkthalle site into the home of the ECB is one of the last building blocks in completing this concept.

The City of Frankfurt commissioned a high-rise development plan in 1997/98, which at the same time gave guidelines for the construction and integration of future high-rise buildings and is a blueprint for the high-rise building itself: "Today Frankfurt's high-rise buildings possess a new symbolic character. They are ... both architecturally and technologically top products and serve in their totality also to promote the identity of the city." The high-rise development plan is an informal instrument of the urban development. It distinguishes between three districts: the financial district, the trade fair district and the park district at the main train station.

A basic principle of the high-rise building development plan is that existing quarters should not be directly affected by the construction of high-rise buildings. For the Grossmarkthalle site, this means that any possible high-rise building locations must be examined for their impact on the current state of Frankfurt's Ostend (East End) district.

The competition area is located in a zone which is not approved for additional high-rise buildings under the present town plan. However, the basic agreement between the City of Frankfurt and the ECB may also allow for high-rise buildings on the future site of the ECB, after taking into consideration the needs of the surrounding areas (see Section 4.7 below).


Financial district
Trade fair district
Park district
High rises in 1997
Mertonviertel
Financial district
Trade fair district
Güterbahnhof
Park district at
main train station
City
Ostend
Hanauer Landstrasse
Osthafen
Kaiserlei
Deutschherrnufer
Stadtraum Main
Grossmarkthalle
Westhafen
Theodor-Stern-Kai
Bürostadt
Niederrad
= High rise development districts

3 Location of the competition site in the urban context

3.1 Location and surroundings

The competition site lies in Frankfurt's Ostend (East End) district which adjoins the eastern side of the city centre (known as the City). The "Anlagenring" (former fortification ring) defines and encompasses Frankfurt's city centre. This ring marks the former line of fortifications around the medieval city which was razed to the ground at the end of the 18th and beginning of the 19th centuries. It was replaced by promenades, spacious green areas and parks, but its origins can be seen clearly in the layout of the city. The competition site lies outside this ring between the Obermainanlage and Osthafen (East Port). At the same time, it forms the western end of the industrial and port facilities in Ostend. It will thus become the connecting link between the City, with its classical city centre and traditional financial district on the one hand, and the new concentration of developments in eastern Frankfurt on the other hand.

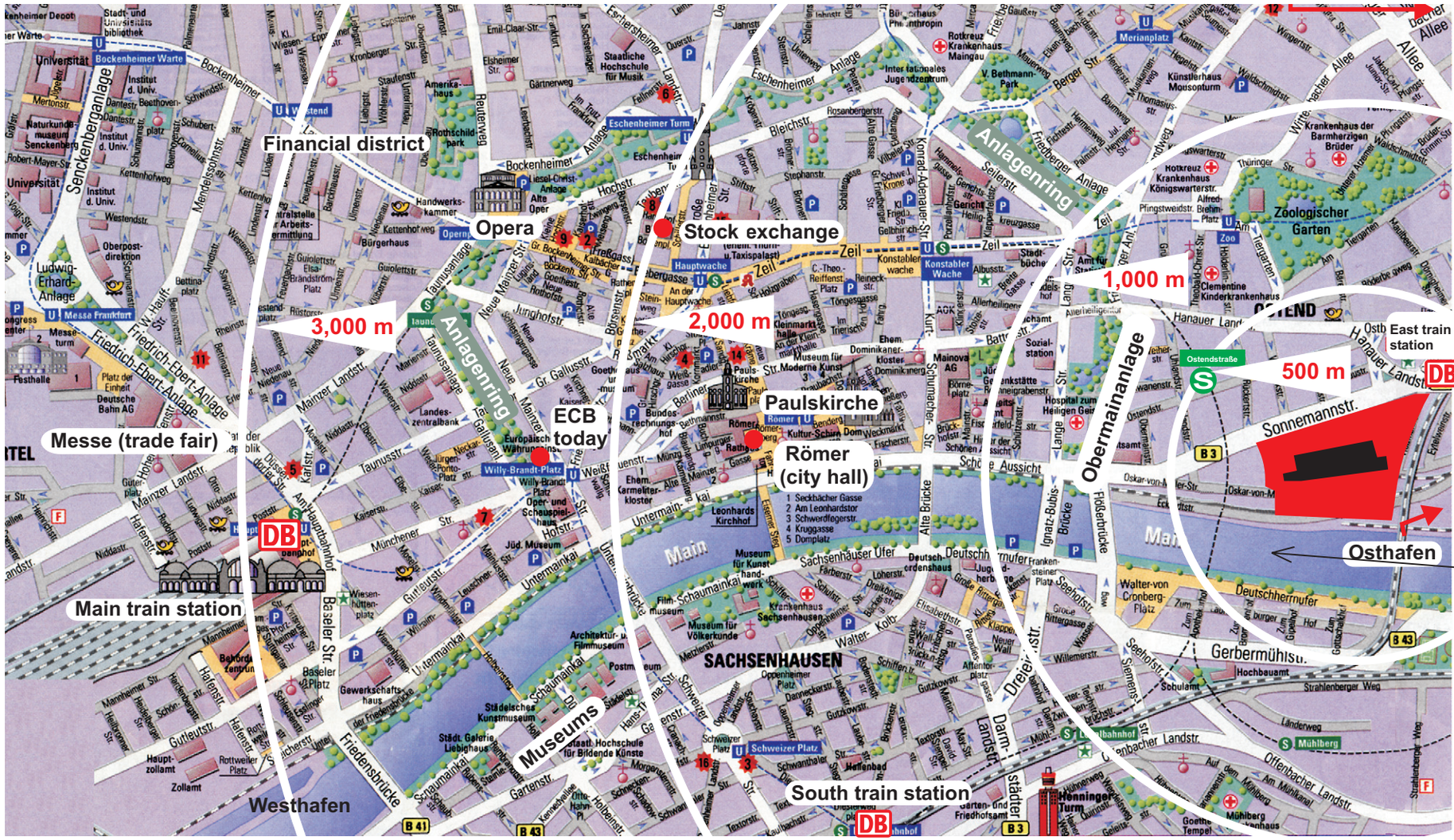
The special quality of the competition site is further enhanced by its location immediately on the Main river, the fourth largest river in Germany.

The riverside location offers a broad view of the Frankfurt skyline, which can never be blocked by new developments. This situation lends the location breadth, spaciousness and world openness. It also ensures that it will receive a great deal of attention from the other bank of the river, from the numerous bridges, and from passing ships and high-speed trains. Accordingly, any future development has a chance of becoming an outstanding landmark.

The settlement of the ECB is a major module in the city's development plan, intended to promote the eastern part of Frankfurt and upgrade it into a counterpoise to the strong financial district in the western part of the city. In addition, the project offers a chance to integrate the geographically isolated Grossmarkthalle site more closely into the life of the city and improve the connection and accessibility between the Ostend district and the river. These goals place special emphasis on the networking of open space, walkways and roads.

Across the river on the opposite shore lies an area known as Deutschherrnufer which is also included in the "Stadtraum Main" concept and which has recently been redeveloped to a large extent with flats and offices. Next to this is the eastern edge of Sachsenhausen, the cider district popular with tourists, and the beginning of the district of Oberrad. A number of museums stretch along the south shore of the Main river in an area known as the Museumsufer beginning around 1 km west of the Deutschherrnufer. Museums located there include the German Architecture Museum (Ungers, Germany), the German Post Museum (Behnisch,

View of Frankfurt from the east, 2002



Germany), the German Film Museum, the Städel Art Gallery (Peichl, Austria; Jourdan, Germany) and the Museum for Applied Art (Meier, USA).

The distance between the competition site and the city centre with its medieval city hall (the Römer) and St. Paul's church (Paulskirche) is 1.7 km. It is 2 km to the stock exchange, 3 km to the Hauptbahnhof (Main Train Station), the financial district and the trade fair grounds in the west, and 12 km to the airport. The nearest underground and express city railway stations are both around 500 m away. Motorway access is available via the Frankfurt Ost junction approximately 2 km away. The good road infrastructure, even though overloaded and thus needing improvement, connects the competition site to major traffic hubs such as the airport, main train station, express city railway/underground stations and motorway. Thus the location of the competition site fits with the ECB's identity as a supranational institution with worldwide connections.

3.2 History of the district and present condition

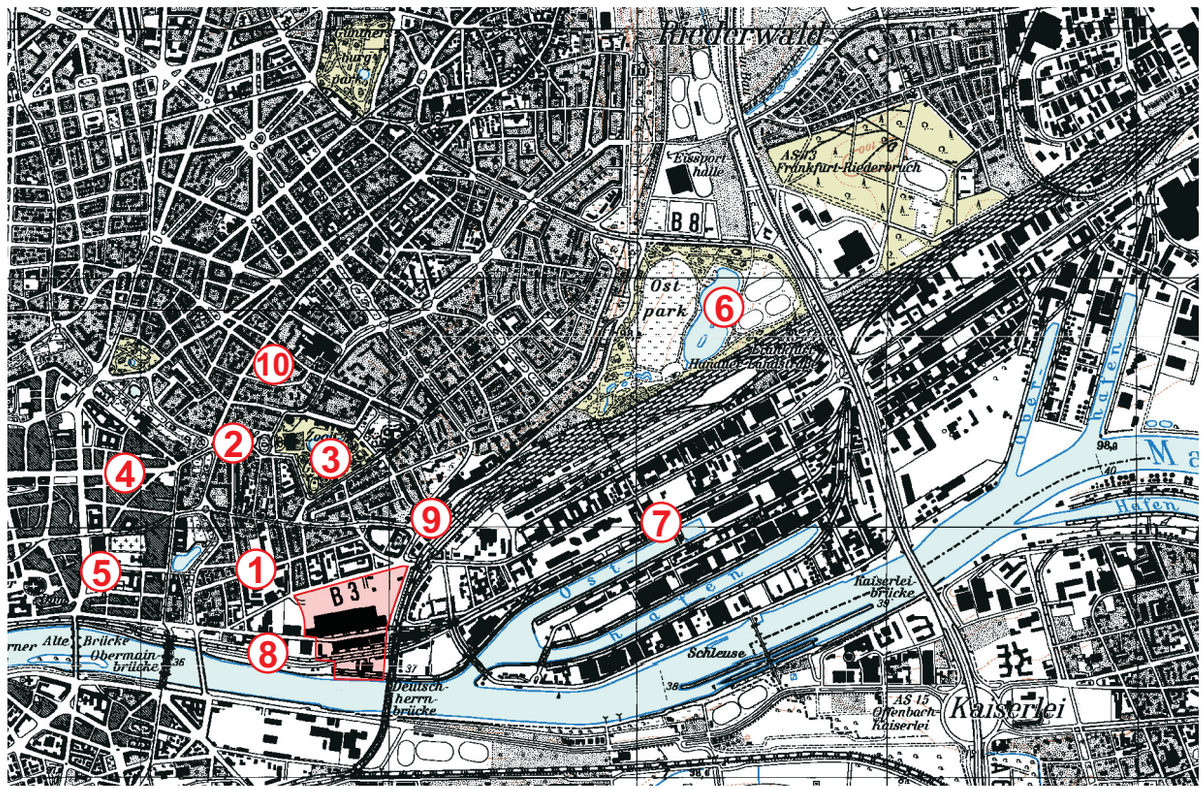
Frankfurt's Ostend district today still retains an industrial character. Until the 1840s it was a mainly agricultural area lying outside the old city fortifications. Later, villas were built on the land. The district was rather sparsely settled and did not have any distinctive village centre. With the industrialisation of Frankfurt the structure began to change. In 1845, the "English Gas Factory" was the first large industrial building in Oskar-von-Miller-Strasse. Just three years later, the railway line to Hanau, a city east of Frankfurt with a population today of just under 100,000, was opened.

The Main riverbank railway line (port railway), which is still maintained, was opened in 1859 as a link between the Hanau railway line and Frankfurt's railway stations to the west. Heavy residential development took place in the following decades between Ostendstrasse (1) (see adjacent plan) and Pfingstweidstrasse (2), which was mainly settled by Jews. In 1874 the Frankfurt Zoo was established on the Pfingstweide (3). The development structure dating from the early years of the Second Empire is still maintained today. Ostend was considerably upgraded by the opening of the Zeil road (4) in 1881, which linked Ostend with the City; today the Zeil is the most important shopping street in the City. The synagogue (5) was built at Börneplatz in 1882. One of the first public parks in Germany, Ostpark (6), was created between 1907 and 1911, with extensive meadows and a large pond.

The further development of the area was closely connected with the development of the Main river as a commercial waterway, during the course of which the Osthafen (East Port) (7), with its ancillary installations, such as the Weseler Werft (Wesel Wharf) (8), was built in 1912.

One year later the new Ostbahnhof (East Train Station) (9) was opened at Danziger Platz. The 33-m high tower of the Mouson soap and perfume factory (10) was built in 1925, thus becoming Frankfurt's first high-rise building. Today, the Mouson Tower serves as a cultural centre. For the workers in the numerous industrial and port facilities, large housing districts were built around the turn of the century in the architectural style of the time.

Construction of the Grossmarkthalle followed soon afterwards in 1927/28 as one of the centres for supplying food to the population. After being heavily damaged in the Second World War, Ostend resumed its industrial tradition in the 1950s and reconstruction proceeded quickly. Many measures were taken in the district to improve traffic connections in the eastern part of Frankfurt. The Güterbahnhof Ost (East Freight Train Station) with the Container Terminal was opened in 1968. Ostend was connected to the S-Bahn (express city railway) network in 1990, and the U-Bahn (underground railway) connection from the Zoo to Ostbahnhof followed in 1999.



Ostend today

Synagogue at Börneplatz (before 1938)

Crane with Grossmarkthalle in the background (between 1950 and 1960)

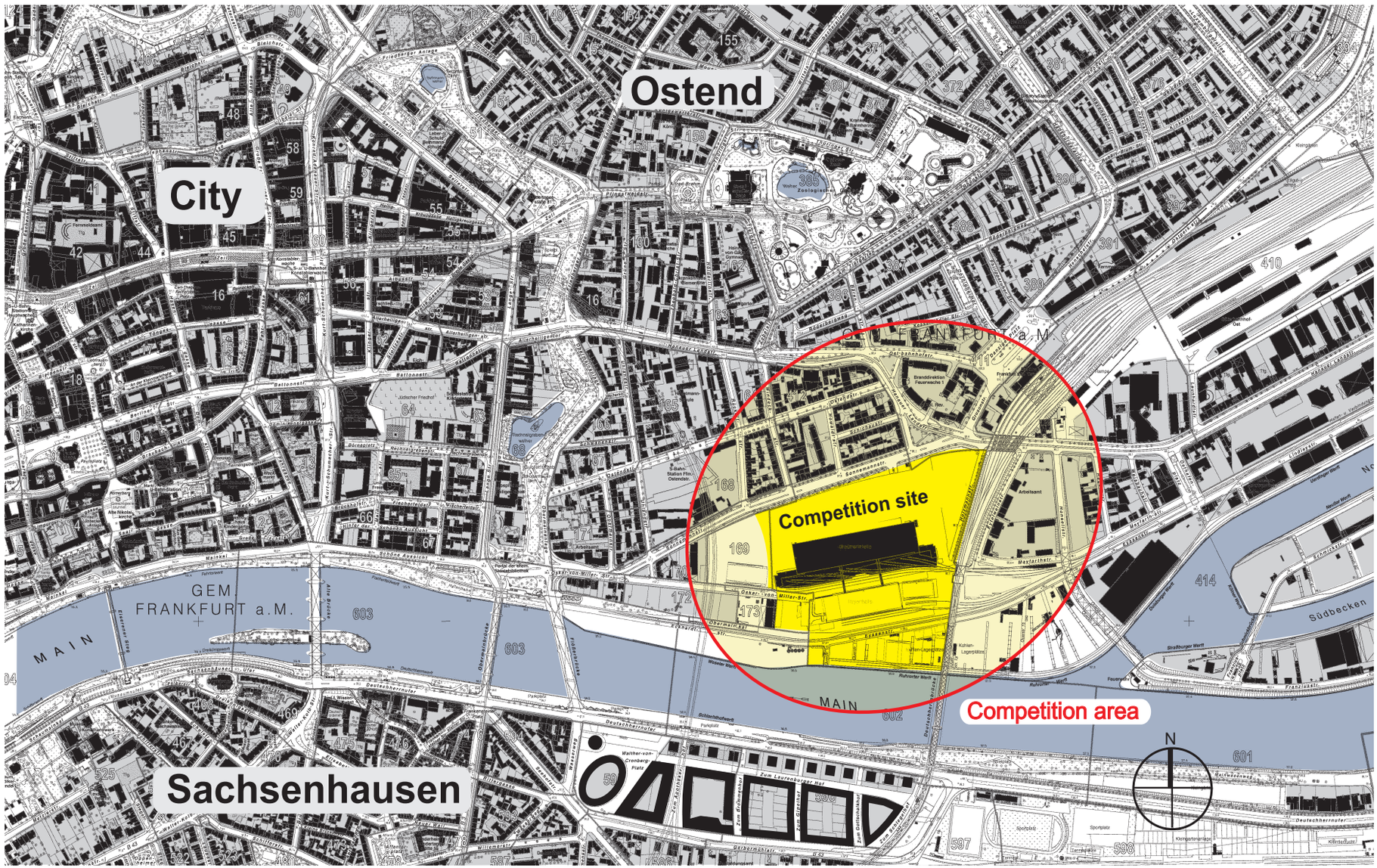
Mouson Tower

Scheme for city expansion and new industrial areas (1910)

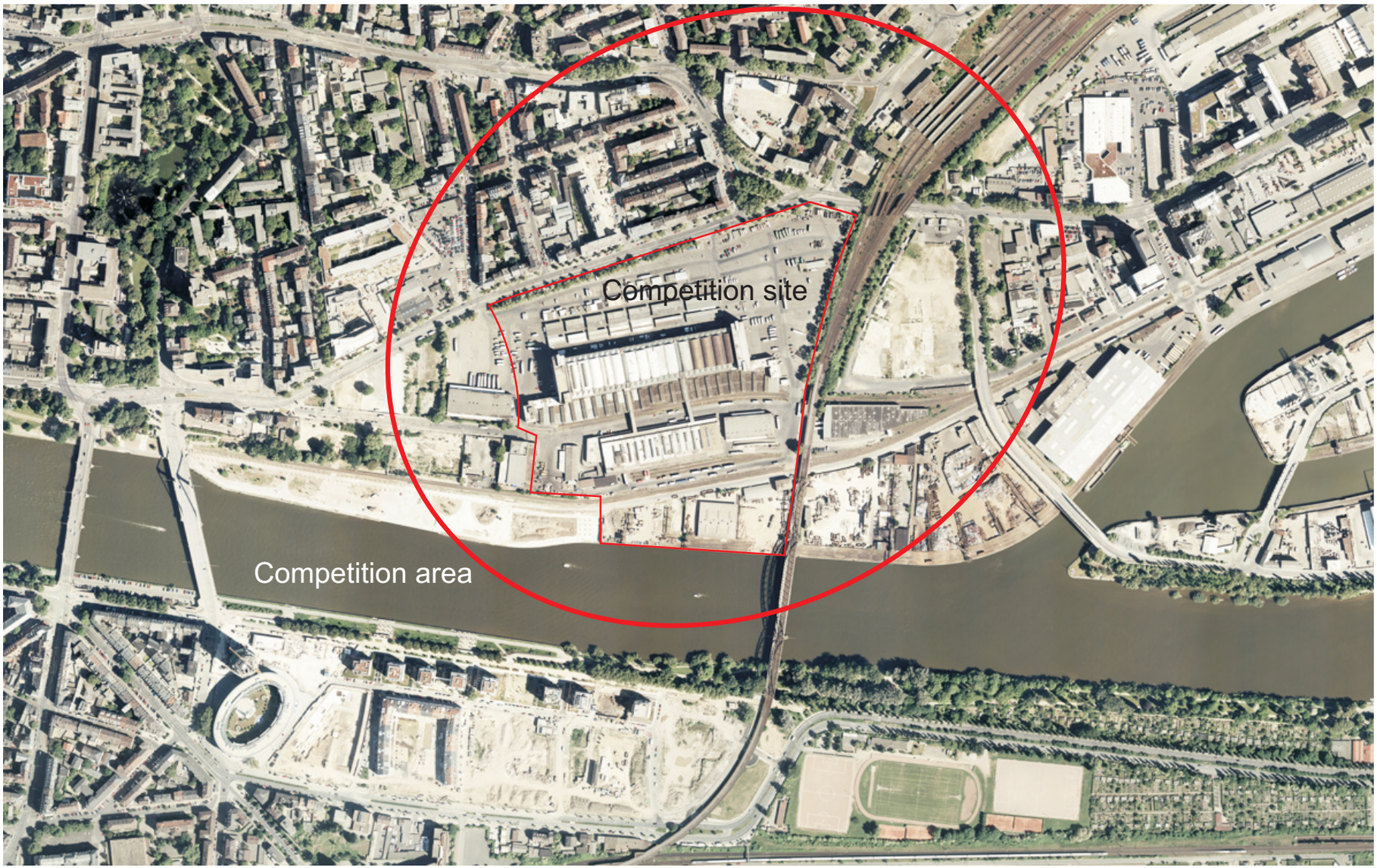
Current Grossmarkthalle site

Historical view of Osthafen

Barge on the Main (about 1950)



Map of eastern Frankfurt



Areal view of Grossmarkthalle area, 1998

Today Ostend has a population of around 27,000 and covers an area of 643.2 hectares. For several years now the whole area along Sonnemannstrasse and Hanauer Landstrasse between Flösserbrücke and the Kaiserlei motorway junction has been undergoing profound structural change. This has also affected the other side of the Main, called the Deutschherrnufer, which was formerly the abattoir site. Many disused areas and empty industrial buildings are being converted to new uses. Thus a number of designer furniture businesses, IT companies, advertising agencies and loft developments can now be found in the old buildings.

Deutschherrnufer, 2002

New appartments on Deutschherrnufer

Grossmarkthalle (view from east)

View of Ostend with the Deutschherrnufer project in the foreground

Grossmarkthalle and Ostend, 2002

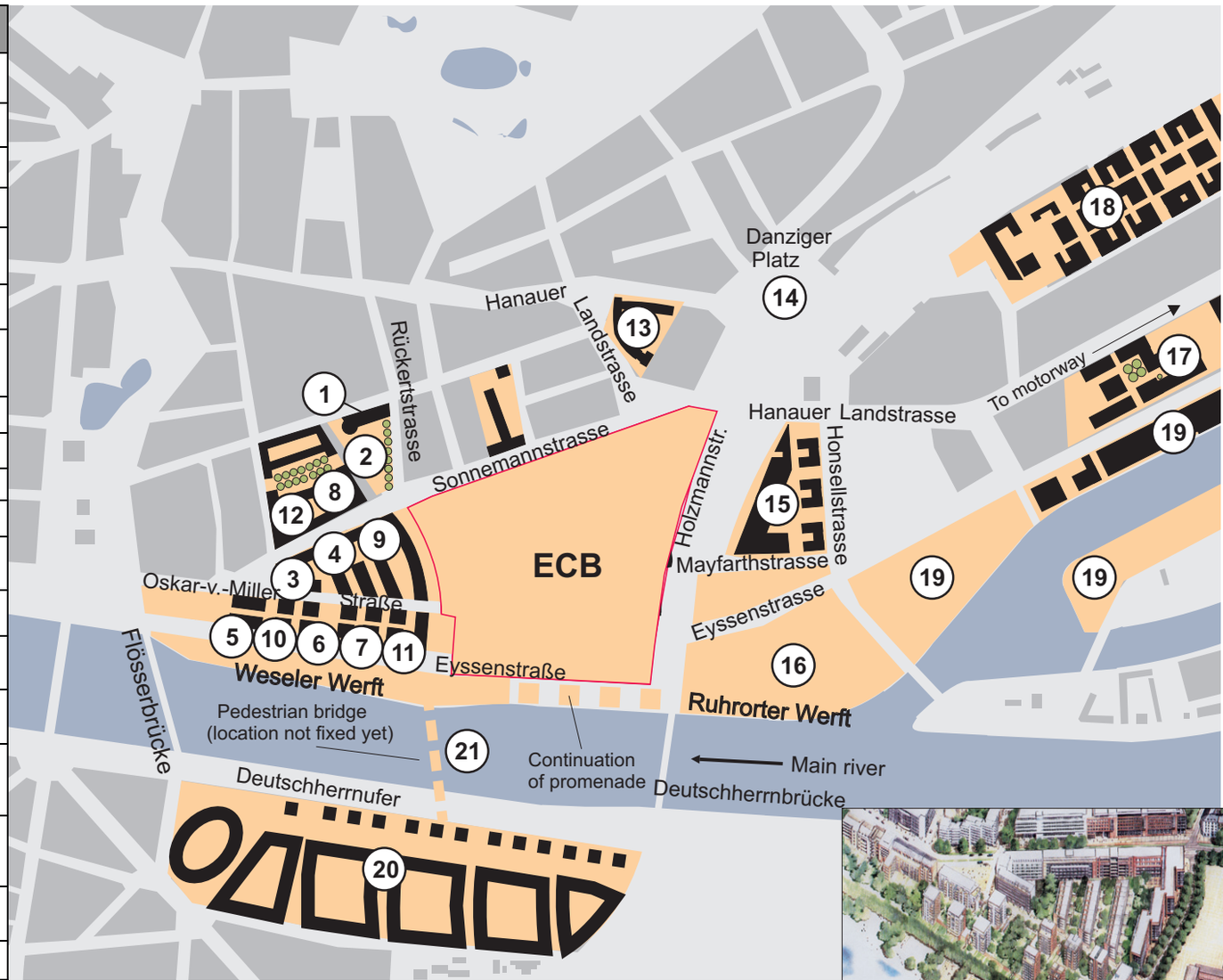
The central development axis in Ostend today is Hanauer Landstrasse, which was originally largely industrial on both sides. This area is now considered to be a fashionable new area for start-up companies. The current development illustrates the metamorphosis of this traditionally industrial and workers' quarter into a modern district for residences, offices and new technology. The process is dynamic and each part of the area is at a different stage. Whereas some projects, such as the conversion of the former abattoir area, Deutschherrnufer, into a high-class residential quarter are almost complete, other locations such as the Grossmarkthalle or large parts of the Osthafen still have their traditional use. A new residential area, "Living by the River", is being developed on the west side of the competition site. The Weseler Werft (Weseler Wharf), an area of former warehouses, lies next to it on the bank of the Main. It has recently been redesigned as a public park on the riverside. An overview of current and future projects is given here.

The ECB plans to build its new premises in the middle of this rapidly evolving environment on the site of the Grossmarkthalle with facilities for around 2,500 workplaces. The site lies between Sonnemannstrasse and the Main river and offers outstanding potential for development.

View of Grossmarkthalle from the south, 2002

Development to 2010
(only building projects)

	Project	Completion
1	Apartment buildings Rückertplatz	2002
2	Public square Rückertplatz	2002
3	Saatchi & Saatchi office building	2002
4	Housing project Sonnemannstrasse	2003
5 - 7	Apartment buildings Oskar-von-Miller-Strasse	2002 -2004
8	Office building beside bank academy	2004
9	Office shop and apartment building Sonnemannstrasse	2004
10	Kindergarten	2004
11	Apartment building	2005
12	Bank academy	2001
13	Apartments, offices, retail space	open
14	Public square Danziger Platz and Ostbahnhof	open
15	Office building and shopping centre	2004
16	Eyssenstrasse site offices, apartments production	2004
17	Raab-Karcher site offices and shops	2004
18	Güterbahnhof Ost site offices, production, culture, retail space	to be determined
19	Osthafen offices, logistics infrastructure	2010
20	Deutschherrnufer 1,400 apartements and offices	2005
21	Pedestrian bridge	to be determined



Planning for buildings in
Oskar-v.-Miller-Strasse (No. 3-11)

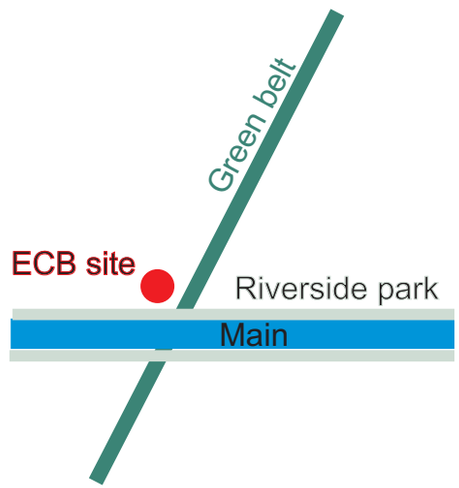
3.3 Public open space

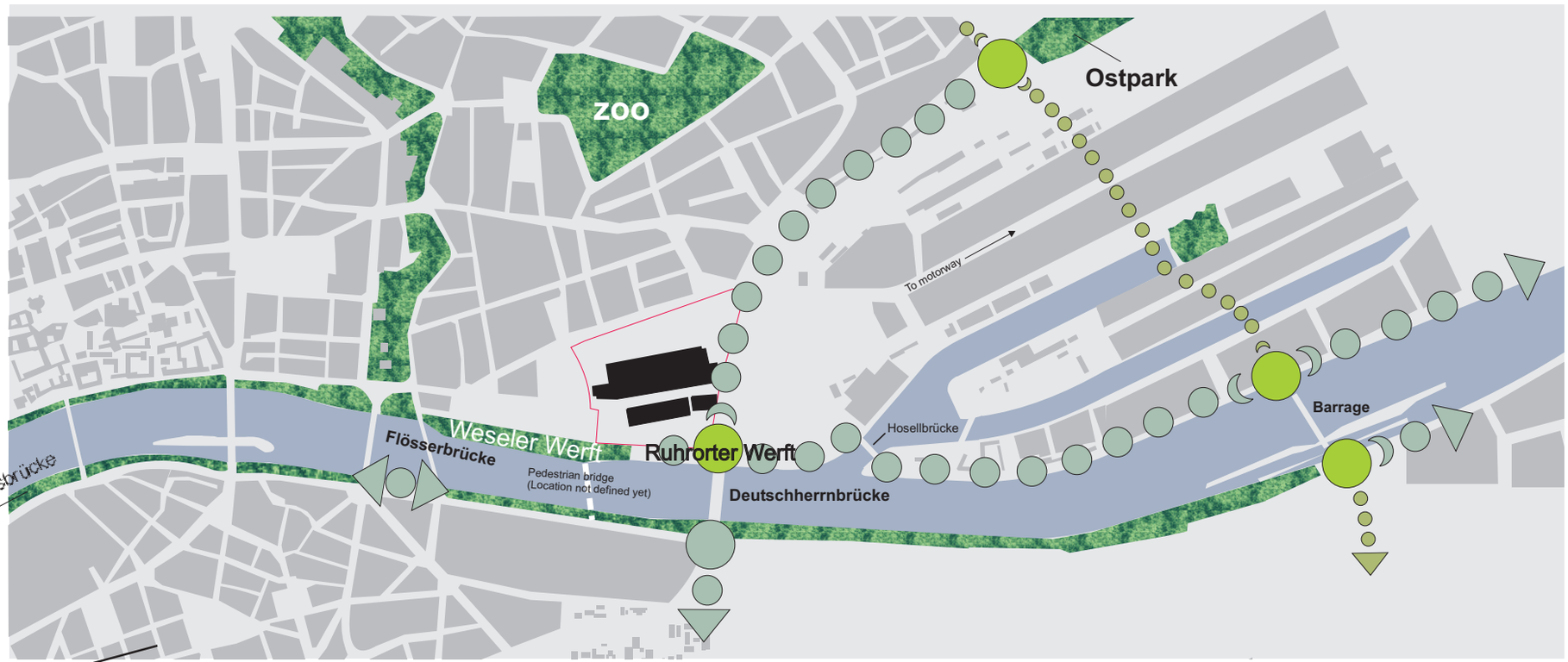
The competition site lies at the junction of two important open space development axes. In a north-south direction the site lies adjacent to the green belt (GrünGürtel in German), which represents an important element of Frankfurt's city development plan. This planning received an award in 1996 at the UN Habitat II conference for being a positive example of sustainable city development. It aims to create a ring-shaped band of open space of 8,000 hectares around the core of Frankfurt. This area was designated as a protected area in 1994. The green belt is used as a recreation area in town and offers living space for flora and fauna.

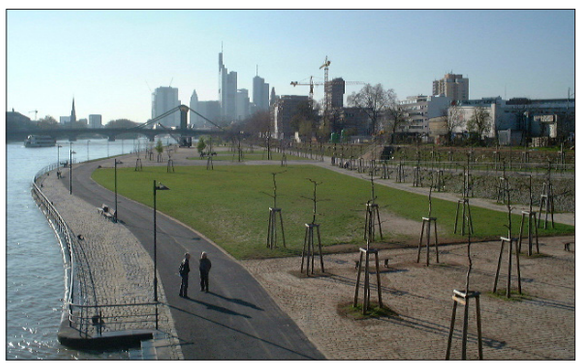
The only gap in the existing green belt is currently in Ostend. A spacious green belt connection between Ostpark and the Main river is planned along the railway line. It will be continued as an attractive footpath over the Deutschherrnbrücke to the south bank of the Main. The link is to lead along Ostparkstrasse over Danziger Platz and along Holzmannstrasse to the Main. This will also complete the green belt bicycle route of around 80 km.

The second axis of development runs along the river. The Main is not only one of the most important living arteries of Frankfurt, but also one of the most important open space elements of the cityscape. An important goal of city planning under the "Stadtraum Main" concept for some years has been to open and landscape both sides of the river for the public, with the intention of gradually recovering it as a riverside park and connecting it to more distant city districts.

The "Main Riverside Park" concept forms part of the plan for the "Stadtraum Main". It includes also the space immediately adjacent to the south of the competition site. The Weseler Werft on the Tiefkai, southwest of the competition site, is already laid out as part of this green area and continues the charming promenade of about 3.5 km from the Friedensbrücke to the Honsellbrücke. This is also accompanied by an upgrading of the roads on the riverbank. Today, the immediate surroundings of the competition site are less attractive. There is a lack of access to the Main riverfront, little green area and the open spaces are scattered. A 40-m wide strip (see Page 43) along the Main is intended to continue the green strip on the Hochkai along the southern border of the competition site. This will remain the property of the City of Frankfurt. In this connection, a café is planned in front of the southwest corner of the competition site on the bastion. A pedestrian bridge from the riverside strip south of the competition site to Deutschherrnufer is intended as a link over the river. A notable feature is the valuable and distinctive tree stands, particularly the row of robinia trees along the rail embankment and the chestnut trees next to the Deutschherrnbrücke.







Weseler Werft riverside park

3.4 City climate

The competition area is part of the lower Main climate zone. Southwest and northeast winds dominate the climatic conditions and the Taunus hills determine their direction.

Other wind systems important for the city's climate are based on temperature contrasts between warmer developed areas and cooler open spaces. Depending on their extent and where and when they occur, they are classified as either local or regional compensating currents.

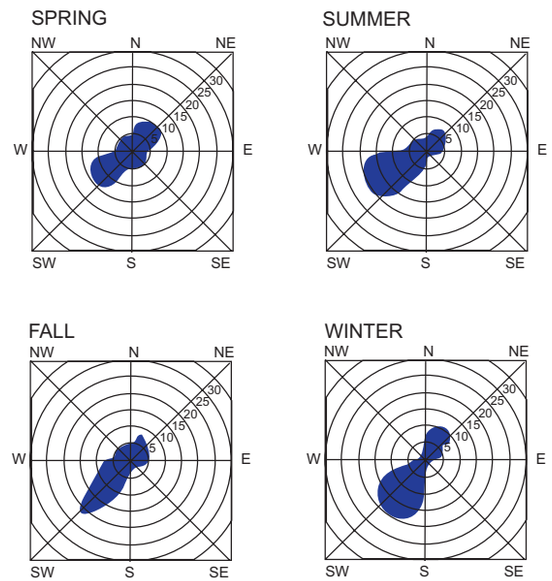
In sunny weather with little wind, the Wetterau wind, a thermally induced regional compensating current that comes into the city from the northeast, gains in importance in the competition site area. Due to its strength, it is the only compensating current flowing over the city area offering thermal relief and cleaning the air. The effective area of the Wetterau wind however can be so heavily restricted by dense building structures that a change of air no longer takes place near the ground. Then it remains a wind flowing over the dense city structures above roof level, which generally provides no direct bioclimatic relief for the population.

The Main river serves an important ventilation function. As one of the last undeveloped corridors crossing the city, it allows compensating currents to penetrate into the compact city mass at ground level. The accompanying improvement of the bioclimatic conditions works mainly to the advantage of the residential areas located immediately along the riverbanks. Wherever the development along the Main recedes or is heavily broken up, the area benefiting from the wind currents expands and includes also more distant residential areas.

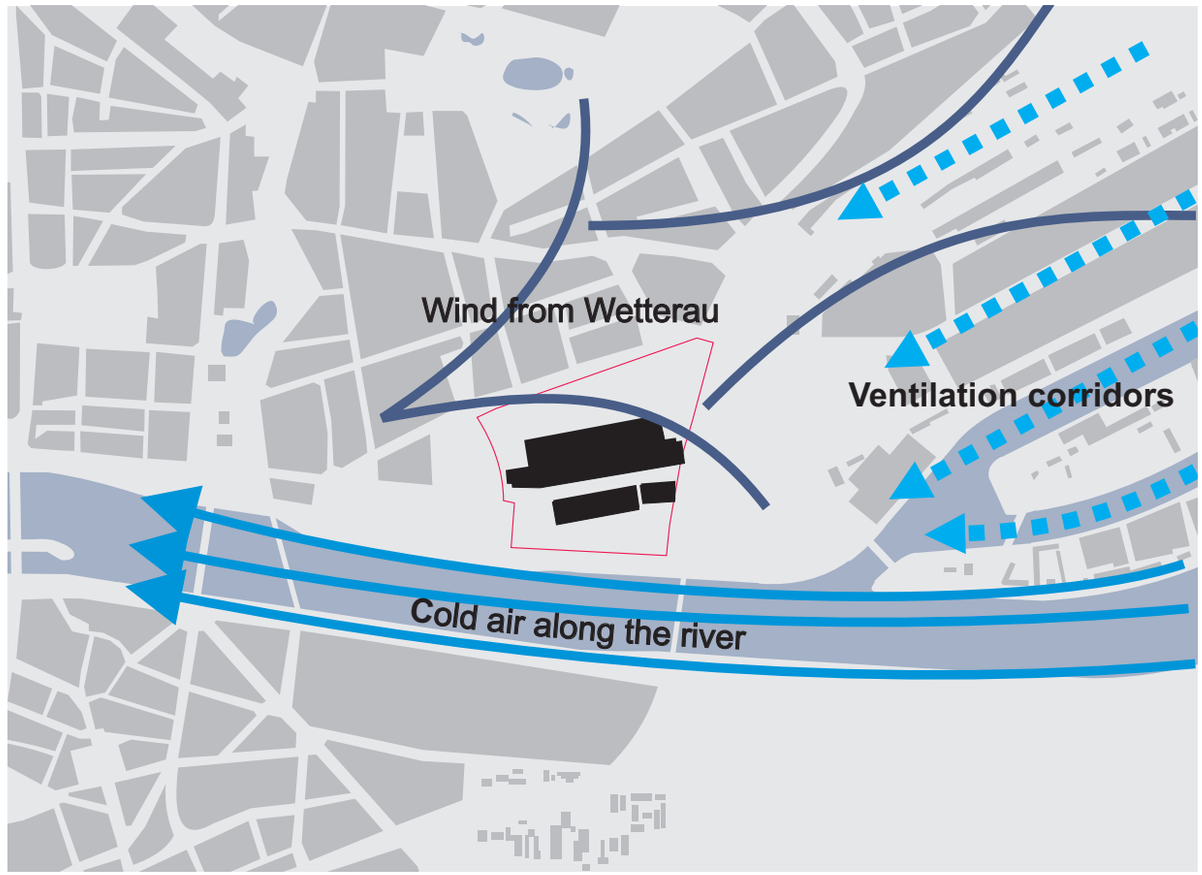
Other ventilation routes benefiting the competition area are the rail freight yards immediately adjoining the competition site running from northeast to southwest, Hanauer Landstrasse running in the same direction, and Lindleystrasse. All three allow the Wetterau wind to penetrate near ground level after it cools off in the first half of the night.

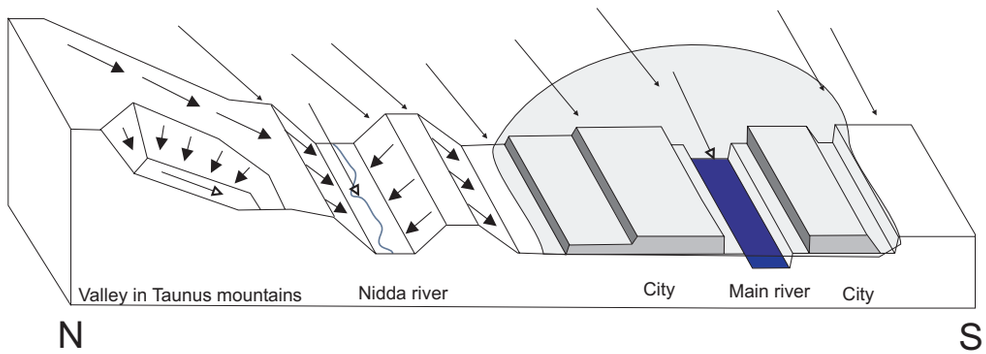
Further ventilation corridors lying in the immediate vicinity of the competition area are the two port basins of the Osthafen. The competition area can also be regarded as well-ventilated by winds from the south and southwest, since air masses from over the Main river can penetrate directly into the area.

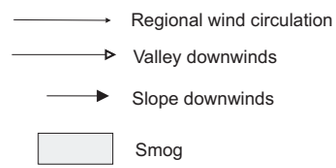
Climatic conditions at the Grossmarkthalle site, with its large open areas and buildings oriented in the direction of airflow can be regarded as not particularly difficult. Neither high buildings nor cross-development at right angles to the wind direction block ventilation and the open areas allow the wind to pass.



Seasonal incidence of wind directions for Frankfurt (Georgii)







Inflow of cold air
into Frankfurt (Georgii)

3.5 Road and public transportation access

Ostend is well connected both for passenger vehicles and heavy vehicles, and also for public transportation. The two main access roads traversing the district are Sonnemannstrasse bordering the competition site on the north side, and Hanauer Landstrasse. Both roads are among the most important routes in the city road network and serve essentially as a link between the city and the motorway to the east and also to the neighbouring cities of Offenbach and Hanau. The Sonnemannstrasse/Hanauer Landstrasse road route thus connects the outer motorway ring with the Alleenring and Anlagenring (avenue ring and former fortification ring roads). Although it is possible to cross the Main via the motorway and the Anlagenring road, this is not possible today on the Alleenring road. This missing link in the road network leads to heavy congestion on Sonnemannstrasse and Hanauer Landstrasse for through traffic. It must be assumed that the two main roads today will remain important parts of the road network and that the high incidence of traffic on them will remain for the time being. However, in view of the imminent restructuring of the whole Ostend, some relief of the traffic situation is urgently needed. At present, the City of Frankfurt has the following traffic plans for the future:

- A new road bridge east of the competition site is planned to remedy the lack of a river crossing, however, the exact location and date of construction are uncertain. Such a bridge would open a connection between Hanauer Landstrasse in the north and the Deutschherrnufer area on the south bank of the river while also providing an additional valuable link to the road network for the competition site.
- Separately from the plans for an additional river crossing, there are plans to relieve Hanauer Landstrasse by expanding and extending the parallel Ferdinand-Happ-Strasse.
- Lindleystrasse is to be included in the traffic concept.
- Rückertstrasse will be extended through to Oskar-von-Miller-Strasse. This is of secondary importance for the overall city road network, but has implications for the competition site.

An underground station is near the competition site. The Grossmarkthalle is connected via the Ostendstrasse S-Bahn station to all S-Bahn lines. The S-Bahn system basically connects surrounding towns to Frankfurt while the U-Bahn system can be thought of as more a local transportation system for travel within Frankfurt. A further S-Bahn line in an easterly direction, which will cross the existing underground line under Ostbahnhof on a second underground level, is planned. The U-Bahn route currently ends at Ostbahnhof; its extension eastwards is planned too. However, the competition site would not be affected by the building alterations. There is a ground level tram route in Hanauer Landstrasse. There are currently holdups between the tram and road traffic. An extension of the underground will allow the Hanauer Landstrasse tram route to be relocated in order to widen the road from two to four lanes, and thus increase the road's capacity for motor traffic. In addition, Lindleystrasse is to be included in the traffic concept still to be drawn up by the City of Frankfurt.

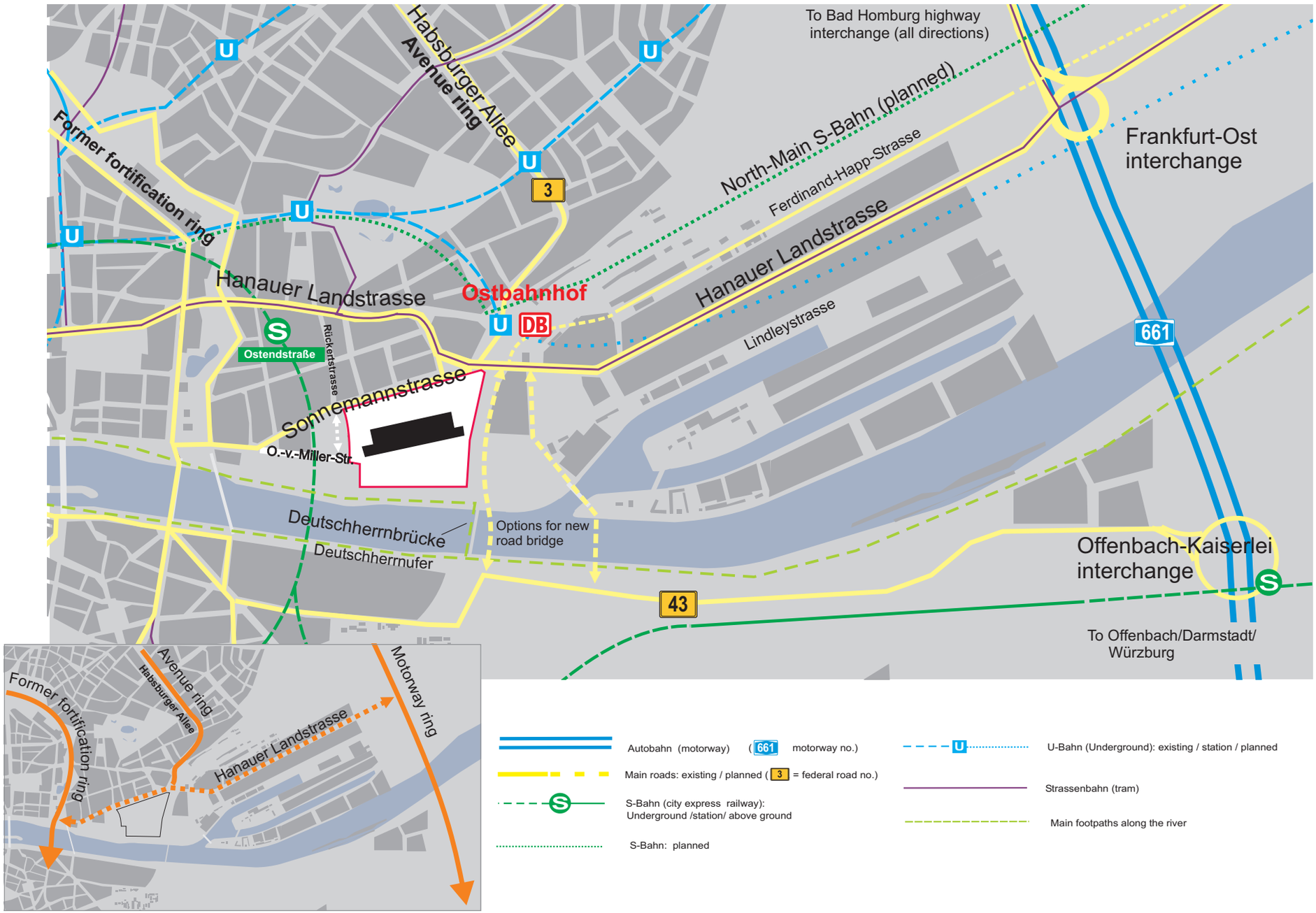
In conclusion, it can be said the competition site is well connected to the local area and beyond but heavy congestion represents a considerable problem. In order to prepare for future development the City sees a necessity for further expansion and improvement measures which have not yet been conclusively discussed.

Access to the site itself is described in the following section.

Sonnemannstrasse

Ostbahnhof

Deutschherrnbrücke (railway/pedestrian)


To Bad Homburg highway interchange (all directions)
Habsburger Allee
Avenue ring
Former fortification ring
North-Main S-Bahn (planned)
Ferdinand-Happ-Strasse
Frankfurt-Ost interchange
Hanauer Landstrasse
Ostbahnhof
Lindleystrasse
Ostendstraße
Rückertstrasse
Sonnemannstrasse
O.-v.-Miller-Str.
661
Deutschherrnbrücke
Deutschherrnufer
Options for new road bridge
Offenbach-Kaiserlei interchange
43
To Offenbach/Darmstadt/ Würzburg
Motorway ring
Autobahn (motorway)
motorway no.
Main roads: existing / planned
federal road no.
S-Bahn (city express railway): Underground /station/ above ground
S-Bahn: planned
U-Bahn (Underground): existing / station / planned
Strassenbahn (tram)
Main footpaths along the river

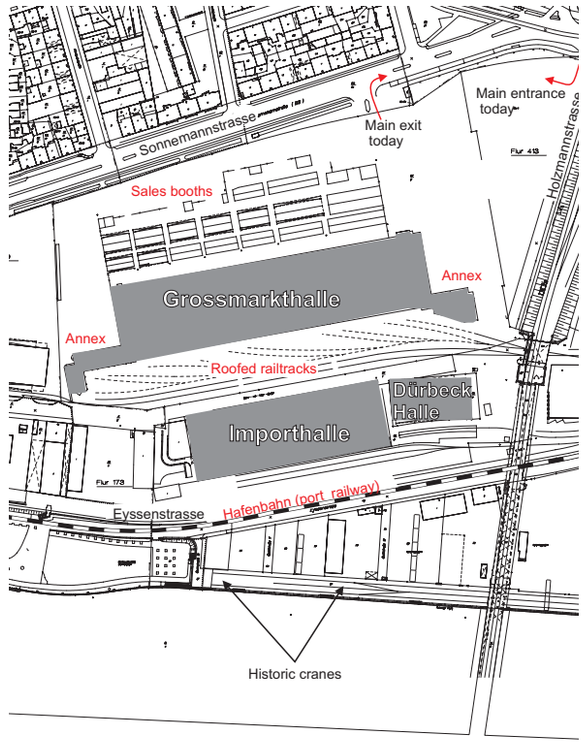
4 Competition site and area/competition tasks

4.1 General

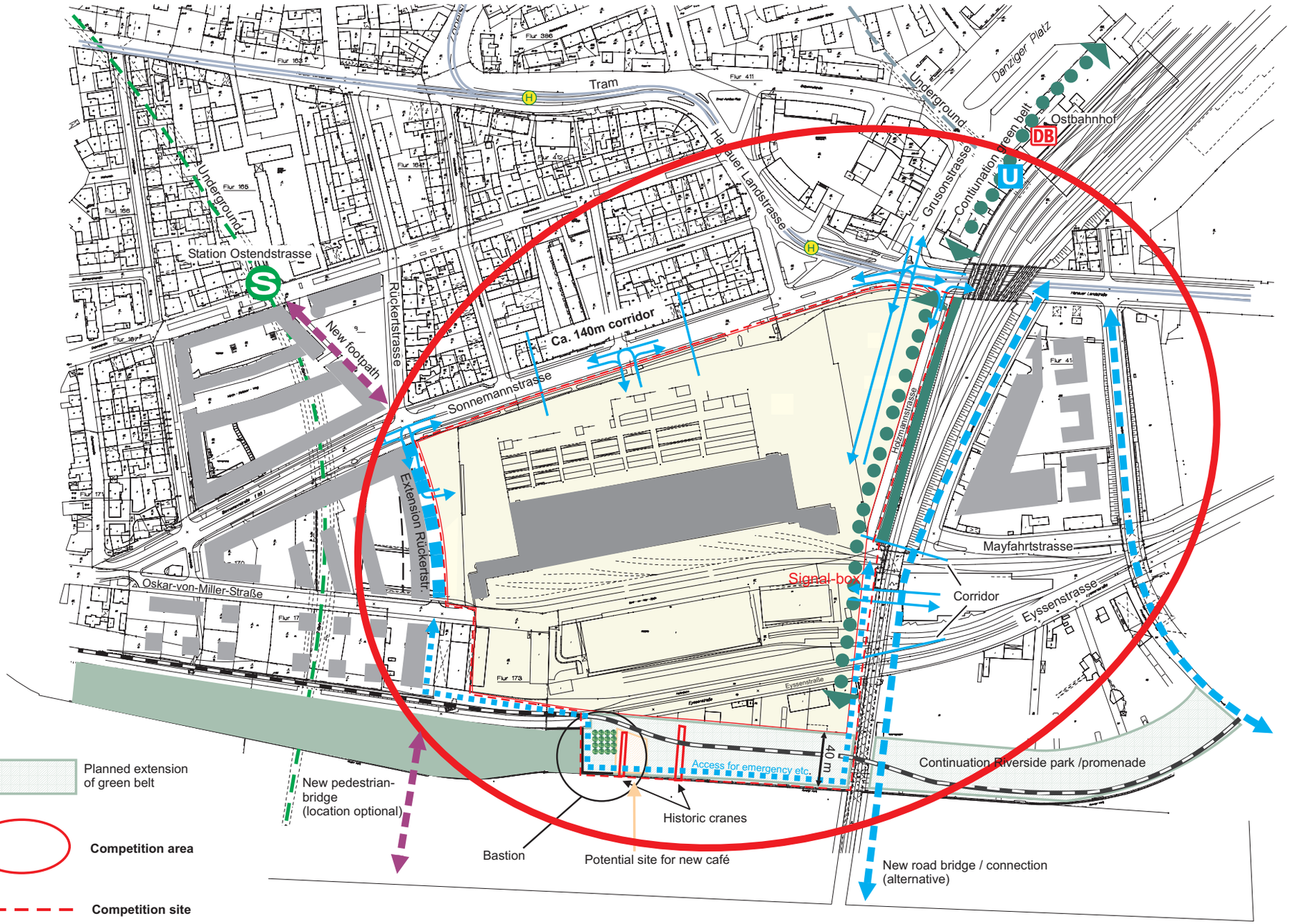
A distinction is made between the competition area and the competition site.

The competition site not only includes the land which will be transferred to the ECB under the purchase agreement between the ECB and the City of Frankfurt but also the area immediately adjoining it. It is bound by Sonnemannstrasse on the north, Holzmannstrasse and the railway embankment on the east, the extended Rückertstrasse on the west and the strip of land along the Main river on the south. Even though the riverside strip is not part of the ECB property, architects should include their proposals for this area as part of their plan for the competition site. The site is irregularly shaped, mostly flat and around 12.0 hectares in area. It includes the Grossmarkthalle site and some adjoining parcels of land on the southern edge of the site. It is used at present for the operation of the wholesale market and includes installations and buildings for the market business, railway tracks and sidings, cranes and subsidiary plant. The site is crossed today by several roads, supply and drainage pipes and cables, and a railway track for Frankfurt's port business. The most important part of the existing building stock is the Grossmarkthalle building and the smaller Importhalle (Import Hall). The borders of the competition site can be seen from the site plans (see also the adjacent illustration).

The competition area extends beyond the competition site as the task of the Competition includes an overall town-planning concept for the integration of the new ECB premises into the urban and landscape context in close interdependency with the surrounding neighbourhood. A convincing and comprehensive town planning concept is expected which takes into account the dimension of the project in respect to the scale of the traditional town block structure. The expected town planning concept should correspond approximately with the site plan scale of 1: 2,000 as indicated by the area bordered in red on the adjacent plan (Page 43). In particular, ideas for the adjoining Grusonstrasse/Danziger Platz quarter on the northeast and the area south of Mayfahrtstrasse between Deutschherrnbrücke and Honsellbrücke are required together with user concepts. For the quarter south of Eyssenstrasse a town block structure is out of the question, as a ventilation corridor from the Main river needs to be kept open. Attention is to be given to the immediate neighbourhood of the site, which requires proposals for the design of the access roads adjoining the competition site and their integration into the public road network. Design proposals are also needed for the open space on the south side of the site and the area adjoining on the east up to the railway embankment as part of the green belt connection.



The Grossmarkthalle area today


Tram
Underground
Station Ostendstrasse
Rückertstrasse
New footpath
Sonnemannstrasse
Ca. 140m corridor
Extension Rückertstr.
Oskar-von-Miller-Straße
Hanauer Landstrasse
Grusonstrasse
Continuation green belt
Danziger Platz
Ostbahnhof
Mayfahrtstrasse
Signal-box
Corridor
Eyssenstrasse
Access for emergency etc.
40 m
Continuation Riverside park /promenade
New pedestrian-bridge (location optional)
Historic cranes
Bastion
Potential site for new café
New road bridge / connection (alternative)
Planned extension of green belt
Competition area
Competition site
Site owned by the ECB
Potential site entrance and exit points

4.2 Access

4.2.1 Vehicles

The main entrance and exit are currently on Sonnemannstrasse (see Page 42). There are side access roads from Oskar-von-Miller-Strasse and Holzmannstrasse on the west and east sides of the site.

Sonnemannstrasse is a four-lane road that forms part of the German federal highway system ("Bundesstrasse" 3/B 3). It is among the most important and heavily used arteries in Frankfurt's road network. Sonnemannstrasse ends in the east in Hanauer Landstrasse, which itself leads to the motorway interchange (A 661). Sonnemannstrasse connects in the west to the "Anlagenring", the former fortification ring road, and is therefore also a convenient link to the centre of Frankfurt and the City.

The site is therefore accessible from all directions.

As part of the competition, the location of the entrances (which will determine the address) along with the integration/connection of the competition site to the public road and footpath network must be clarified. At the moment several possibilities emerge, including some in combination:

- Access directly from Sonnemannstrasse. Here a full connection with the access road and exit to the east and west can be built. A physical corridor is provided for the location of this access (see Page 43).
- Access via Holzmannstrasse. Due to the immediate neighbourhood of Hanauer Landstrasse/Sonnemannstrasse/Grusonstrasse junction and the railway bridge, only one entrance and exit are possible: to the right on the way in, to the right on the way out. In addition, this access road competes with the spacious green Main riverside-Ostpark axis planned by the city.
- Access from the east via a new access road. This road can in future become important for access from the eastern motorway. There would be a corridor for this road between Mayfahrtstrasse and Eyssenstrasse, which in future can be dispensed with. The road would become an early left turn-off possibility from Hanauer Landstrasse.
- Lengthening of Grusonstrasse. Here – assuming the tramline is relocated – a new access possibility could be provided via a full junction. The extended Grusonstrasse could in addition provide a connection to the Mayfahrtstrasse moved southwards.
- Extension of Rückertstrasse between Sonnemannstrasse and Oskar-von-Miller-Strasse (in connection with the adjacent residential development in the area to be rehabilitated). This extension will receive a full connection to Sonnemannstrasse (access and exit to the east and west), whereby the access road to the ECB should lie near the junction with Sonnemannstrasse.

Alternatives are also permissible if they can be integrated into the public road network.

The ECB requires 1,500 parking spaces in underground parking facilities – achievable in two stages (1,000 spaces initially, augmented by a further 500 spaces later). Underground parking facilities must be covered by at least 1.5 m of soil so that even large trees can be planted above them. Some ground level parking spaces for cars, 10 bus parking spaces and also the delivery area should be added to this. Details are explained in Part C 3/13 and 17.

The ECB prefers for security reasons to designate only two entrance and exit roads (entry control points 1 and 2). One entrance and exit road is to be reserved for passenger vehicles and the second for delivery vehicles (see Part C2 Section 2.1). There shall be sufficient space for queuing in the public road area in order to avoid jams in front of the entrances. The length of the queuing lane depends on the point where vehicles merge with the public road network. Flexible working hours should be assumed.

Vehicles entering the site through entry control point 1 should be able to reach both the drop-off point in front of the main entrance to the ECB building, and the underground staff parking garage. The access road should be as economical in the use of space as possible, whilst allowing vehicles to pass without friction and free of intersections – including pedestrian walkways – and should fit into the open space concept.

The following security aspects are emphasised:

- Walkways on the site shall be unambiguous and self-explanatory. The routing of roads and locations of parking areas in particular should provide sufficient distance to mitigate the effect of an explosion blast wave.
- Employee, visitor, taxi etc. vehicles shall be directed separately from delivery vehicle traffic, and crossing of the different driveways shall be avoided.
- The routing of the roads shall not allow any long straight stretches to prevent cars from approaching buildings at high speed.
- Parking facilities – both above ground and underground – shall be laid out as far away as possible from high-security areas.

- Parking under buildings (except for the secure parking area) must be excluded as a basic principle.

All areas of the site must be accessible by fire fighting vehicles, ambulances and other emergency vehicles.

4.2.2 Public transportation – local routes

The site is well connected to the public transportation network. Bus stops and stations for trams (Line 11), the underground (Line 6), the S-Bahn in Ostendstrasse and the Ostbahnhof train station are 500 m away by foot. The most important connection is the Ostendstrasse S-Bahn station, which lies on the main S-Bahn route. All destinations in the S-Bahn network are directly accessible from this station. The direct travel time from Frankfurt's Main Train Station to the Ostendstrasse S-Bahn station is six minutes. By tram, the same journey takes 15 minutes, ending at the Danziger Platz.

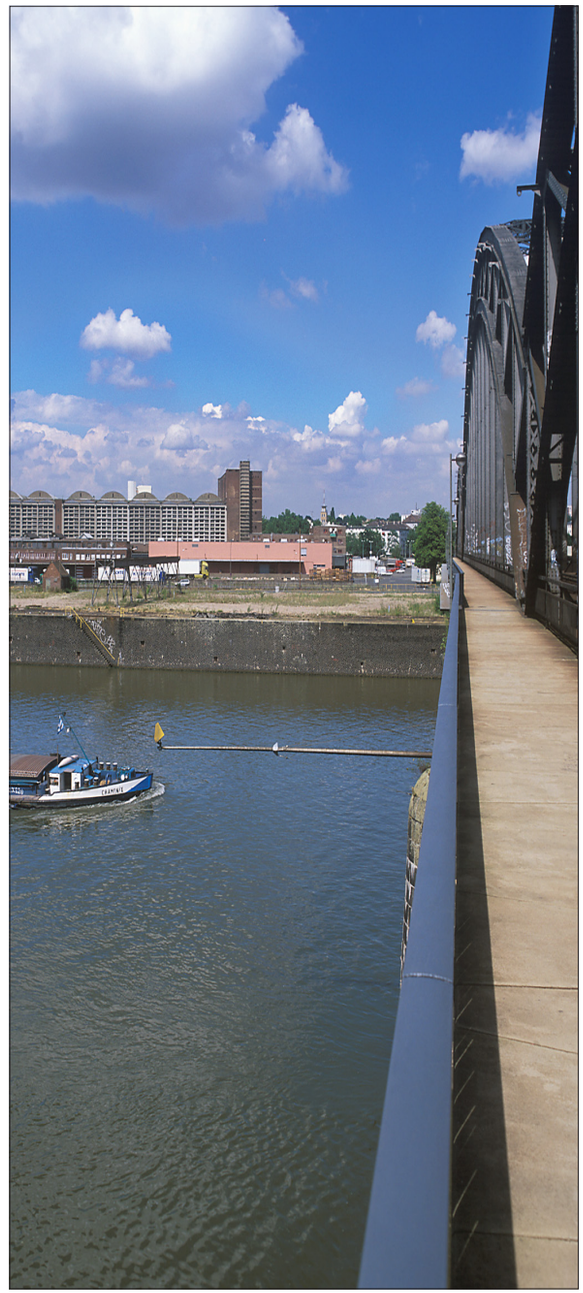
4.2.3 Pedestrians and cyclists

Sonnemannstrasse is bordered on both sides by a cycle path on the same level as the footpath. The cycle path joins the Main riverside path over the Oskar-von-Miller-Strasse in the area of Flösserbrücke – west of the site. The continuation of the Main riverside path to the east and the closing of the green belt to the Ostpark are of major importance for pedestrian and cycle traffic.

In planning the walkway system on the competition site, the orientation to the main entrance (entry control point 1) and the nearby public transportation stations should be noted. An access possibility shall be created for the Main riverside promenade.

4.2.4 Helicopters

A helicopter landing port shall be designated on the roof of one of the buildings.



4.3 Inventory of existing buildings

4.3.1 The Grossmarkthalle

Martin Elsässer built the Grossmarkthalle between 1926 and 1928. He was one of the most important architects of the Weimar Republic. Previously, the land had been used for agriculture. During the course of its existence the Grossmarkthalle has been used most of the time for its original purpose. However, a dark chapter in its history occurred during the Nazi period. In 1941 and 1942 it was used as a collection point for Frankfurt's Jewish population prior to deportation to concentration camps in eastern Europe. A competition to design a memorial to this tragic event will be held separately at a later date. The exact location for the memorial on the site has not yet been determined. Candidates are invited to propose a location.

After the war, the American army occupied large parts of the Grossmarkthalle site. The areas taken over were used mainly as workshops for military vehicles of all kinds, but ice cream was also produced here for the soldiers stationed in Europe. Starting in 1948 the requisitioned areas were returned in stages to the market's management.

The material of the building dates mainly from the end of the 1920s. In the Second World War large parts of the building were considerably damaged. The western third of the hall was destroyed and rebuilt later. The western office building, the Importhalle, the cellar facilities, the railway tracks and sidings, and the ramp structures were also damaged.

The rebuilding of the Grossmarkthalle began in 1947 and was completed in 1953. The areas given back by the US Army were then repaired and rebuilt. The refrigerated storage area in the east wing of the Grossmarkthalle was converted to offices and storage space. By 1964, the entire site had been returned to the City of Frankfurt, so that the wholesale market's activities could once again take place on all parts of the area. Since then the site has been used for wholesale market activities.

The Grossmarkthalle building consists of the hall and two wings, one on each end. Smaller ancillary and residential buildings are joined to the main building.

Brick was a preferred construction material in Elsässer's time. He used it for the structure both to introduce a modern element, and also for surface decoration. Elsässer's concept of architecture – traditional motifs combined with the most modern building technology – can be clearly seen in the Grossmarkthalle. The steel structure of the two wings is clad with brick. A glass enclosed vestibule stands at each end of the wing buildings. The two wings each measure approximately 59 m x 15 m and are nine stories high. The hall itself is 220 m long, 51 m wide and 23.5 m high. The structure of the hall consists of 15 concrete shells on a trapezoidal frame which were constructed in the patented Zeiss-Dywidag process. The thickness of the shells at their vertex is only 7 cm. The shells were not taken up to the external glass facade, so that the remaining strip could be constructed as horizontal roof glazing. The warehouse and refridgerated storage in the basement are accessed along their length by two driveways and can take traffic. The Grossmarkthalle was the largest suspended hall building of its time. The enormous volume of space in the hall building allows good ventilation to ensure optimum hygiene for the fresh produce and its storage.

The Grossmarkthalle is a listed building, standing under historical preservation order, and is to retain its fundamental appearance. However, there are considerable technical and physical defects in the building (see below). Innovative ideas are required so that the renovated building and any new buildings fit into the local town planning while still providing an economically acceptable solution to meeting the ECB's organisational and functional needs. This means the Competition involves a multitude of tasks including: determining the role of the Grossmarkthalle building, particularly for areas accessible to the public (see space programme, Part C), retaining the fundamental appearance of the listed building, renovating the building to permit additional loads, and taking into account the structural, building services, acoustic and energy design requirements of the uses proposed.

Below are some excerpts from a comprehensive expert evaluation of the condition of the Grossmarkthalle building. These convey only a first impression as the basis for a discussion as part of the Competition. The as-built drawings are attached to the competition documents.

4.3.2 The structure and material of the Grossmarkthalle

- General

The Grossmarkthalle is a minimally heated hall building without thermal insulation. The external dimensions of the hall itself, not including the wings, are 220 m x 51 m x 23.5 m. A basement extends under the whole building. Underground access to the Importhalle building, which also has a basement extending under its entire area, is available by means of a tunnel extending from the the centre of the hall. The hall building

is divided lengthwise into three sections, each with five barrel vaulted roofs. So-called "coffee bridges" (because of the small snack bars located there for market visitors) span the entire width of the building at a height of around 3.7 m in each of the three sections. Two of them continue outside on the south side as steel bridges connecting the Grossmarkthalle to the Importhalle above ground and bridging over the train sidings between the two buildings. The Grossmarkthalle has a sophisticated climate control system which is based essentially on natural ventilation in combination with the enormous volume of space in the hall. In winter the hall is moderately heated to around 10 to 15°C. Despite the moisture given off by the produce, the air is relatively dry because of the frequent external air changes. As a result of the dry air and internal air circulation, surface condensation normally does not appear on the internal surfaces of the single glazing and the non-insulated concrete structural elements. This usually happens only when the air outside is extremely cold.

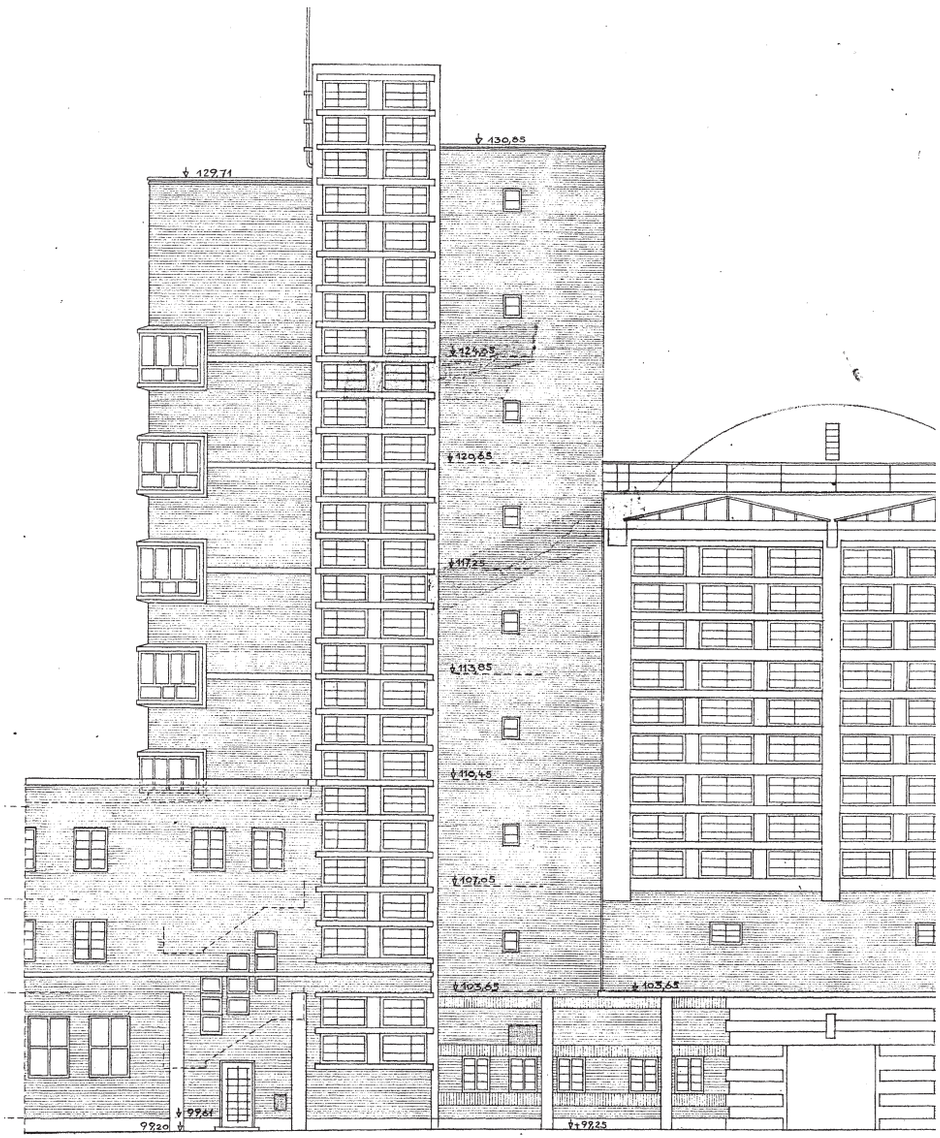
- Basement

The basement is around 3.7 m high and is therefore principally suited for use as storage and plant rooms, for example. It is probably not possible to lower the floor slab for structural design reasons.

The outer walls of the basement are in need of complete renovation.

West wing (1938)

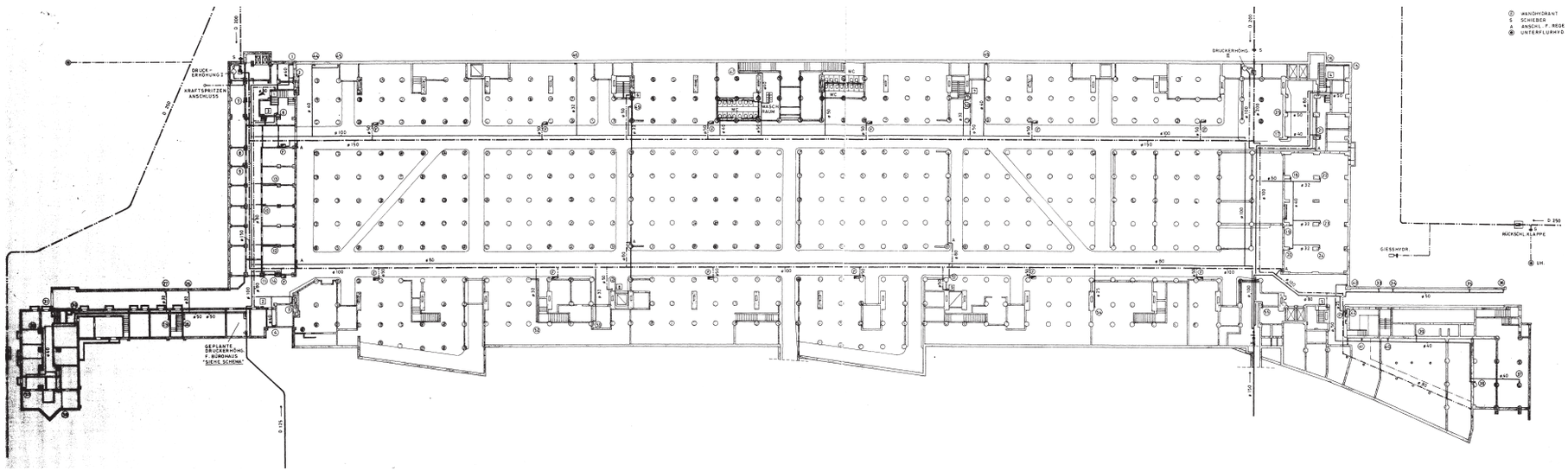
View from the river



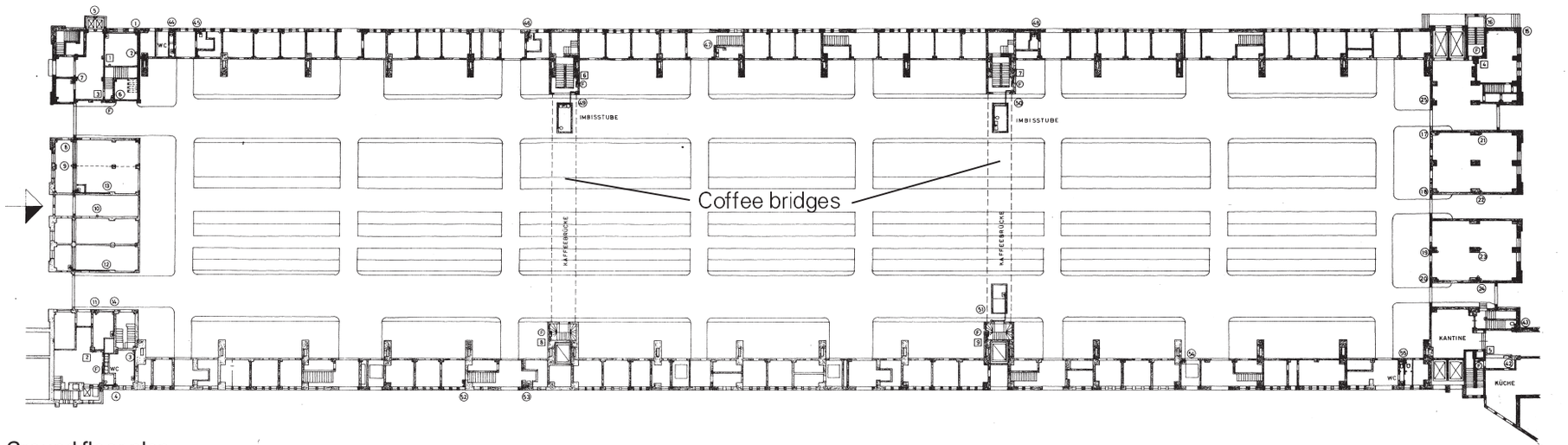
View of the south

West wing (original state)

West wing (today)

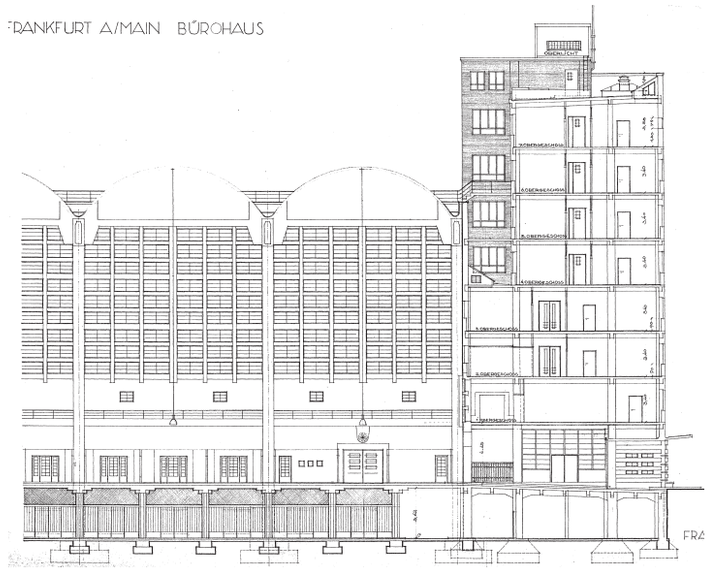


Basement plan



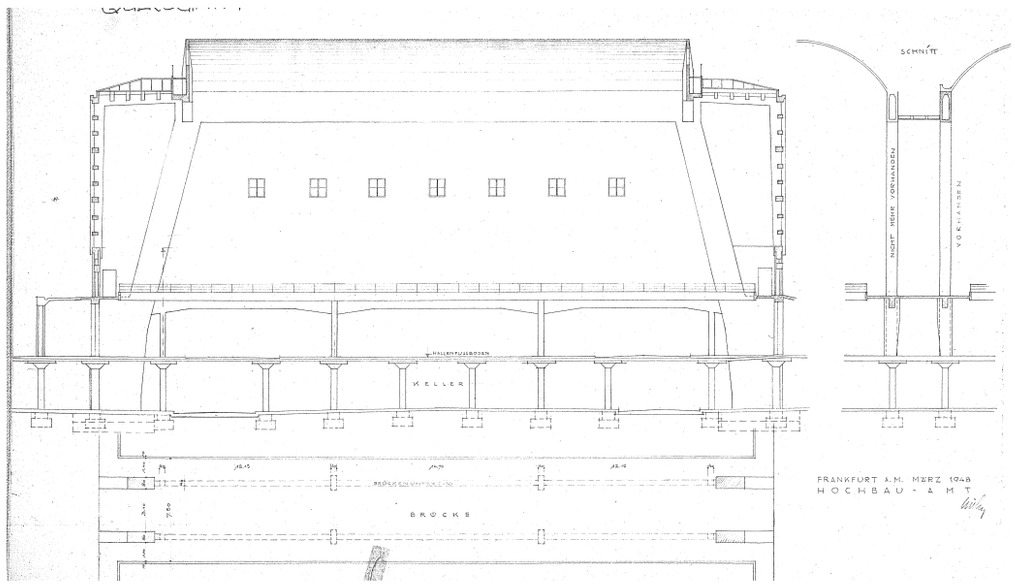
Ground floor plan

The hall – looking west



Longitudinal section of the hall and east wing

The hall – looking east



Cross section of the hall

Old part of the roof

New part

Roof – looking east

Footbridge along the hall

Main facade

Detail of the west wing facade

- Main facades on the long sides of the building

The main facades are in front of the slanted supporting columns of the building and in need of total repair. The load-bearing system of the glazed facades on the long sides of the building consists of a reinforced concrete construction with the main columns, horizontal bars lying about 10 cm deeper, and secondary columns lying again around 2 cm lower. Six single-glazed panes, bedded into steel frame profiles, fill in the bays formed by this. Some glass bays lying on top of each other can be opened together via a rod mechanism as an opening flap.

The main facades on the long sides consist of reinforced concrete elements with steel frame windows and are also in need of repair. The existing single-shell, uninsulated concrete construction cannot be adequately improved thermally if the appearance of the facade is to be maintained.

- External walls of fair-faced brickwork

The external walls built above the side buildings to the foot of the facade, the external walls around the staircases and the single-storey hall buildings consist of fair-faced brickwork. This brickwork has a thickness of 36.5 cm and is plastered on the inside. The joint mortar of the brickwork skin must be repaired. A thermal insulation layer on the outside that would be an advantage for the building material will not be acceptable to the building preservation authority.

- Roofs

The hall is roofed over by barrel vault roofs of reinforced concrete laid at right angles to the length of the building. The barrel vaults have a span of 37 m and a shell thickness of 7 cm. The roof of the western part of the hall was destroyed in the war and rebuilt afterwards. The war damage in the centre part of the hall was only repaired. The finishing of the roof is made of plastic insulation. The edge of the barrel vault roofs was enclosed originally by a zinc metal flashing. The two roof vaults on the west side, in contrast to the remaining construction, have a glass gabled roof construction of a single-shell, industrial glazing without putty.

The flat roofs of the side buildings on the ground floor in front of the long sides of the hall contain bituminous waterproofing.

All roof areas must be completely repaired.

4.3.3 Importhalle (Import Hall)

Roofed-over train sidings run along the length of the south side of the Grossmarkthalle. The Importhalle is south of these sidings and is connected to Grossmarkthalle by pedestrian bridges and a tunnel in the cellar. In the opinion of the building preservation authority, the Importhalle is an integral part of the Grossmarkthalle complex, and enjoys the same preservation status. Nonetheless, it is considered to be an ancillary building to the main building. However, the building material of the Importhalle is in even worse condition than the Grossmarkthalle. A convincing comprehensive town-planning solution may result in a demolition permit for the Importhalle being issued.

4.3.4 Remaining existing buildings

Open and closed sales stalls for wholesalers and producers, mainly erected after 1948, stand on the north side of the Grossmarkthalle. The Dürbeck Hall stands to the east of the Importhalle. In addition, there are various residential buildings which are attached to the east and west side of the Grossmarkthalle and a large number of smaller buildings and structures, such as the weighing house, track installations and signal boxes. These structures are mostly disused, and will be removed completely.

4.3.5 Technical monuments

Two old cranes for loading river barges are located on the riverfront strip on the southern edge of the competition site. The cranes adjoin the historic bastion fortification on the Hochkai. A railway signal box stands on the east side. The city government and the building preservation authority require preservation of these installations as characteristic witnesses of the industrial past of the site. They are to be integrated into the open space planning as part of the Competition, including the rail tracks and the paving.

4.4 Open space/landscape

The open spaces on the site are almost completely paved over today and serve as traffic circulation areas or storage space. Besides extensive parking areas and driveways, there is a large number of train sidings on the competition site. The Grossmarkthalle site blocks access to the riverfront from the rest of the district so that the local population is not aware of the presence of the Main river.

All railroad tracks on the Grossmarkthalle site have been taken out of service. The port railway track must remain operational for port business. The trains of the Frankfurt Historical Railway will also use it once or twice per month. The City of Frankfurt has moved this track to the riverside strip on the south of the competition site.

The riverside strip of around 40-m wide between the ECB's property and the Main river will remain property of the City of Frankfurt, which will also maintain it. The riverside strip is to be converted to public green space as part of the "Main Riverside Park" plan. However, the development and planting of this riverside strip require the consent of the ECB. An emergency access route shall be specified. It is immediately adjacent to the already completed Weseler Wharf on which events can be held to a limited extent.

A pedestrian bridge over the Main connecting both riverbanks is proposed. The City of Frankfurt intends to build a café on the Main riverside quay and has designated an area near the bastion for this. The bridge and café are not part of the Competition, but their integration should be taken into consideration and their location should be designated.

The City of Frankfurt foresees closing the gap in the green belt between Ostpark and the Main riverside with a spacious, attractive green link along the eastern edge of the site with recreational amenities. Design proposals are expected for the riverside strip adjoining the site on the south, its connection to the Main Riverside Park and for the north-south green strip on the eastern side of the site as a part of the Competition. These will relate to the bastion, as a special future location with café and improved access to the Main.

Basically the degree of paving and surface runoff shall be reduced. Valuable tree stands – such as those on the Deutschherrnbrücke and along the railway embankment – are to be retained where possible and the amount of green space increased.

This applies also to the competition site itself. An open space concept for the site itself shall also be developed. This must conform to the town planning concept and the above-mentioned green belt and connect with the immediately adjacent public green space. It must also agree with the site access concept, security requirements and the requirements of an ecologically sustainable concept.

Landscape planning plays an important role in the project in terms of environmental integration, open space quality and security. Open spaces not only allow an attractive design for the outdoors areas, but also can aid in meeting security requirements. Thus thorny plants can prevent unauthorised access; and ponds, lakes, streams, wells, lumps of rock, earth embankments and slopes can perform or support perimeter security.

4.5 Security

The ECB has high security requirements. Intelligent site and open space planning which enhance security should be balanced with cost efficient technological solutions in the design. Security considerations should be an integral part of all aspects of site planning. The siting of buildings, their orientation and relationships to each other and points outside the site, access routes, perimeter, open spaces and even light planning must be considered. The security requirements regarding access and open space planning have already been discussed and will be described in detail in Part C. In regard to exterior security planning, two points are important:

- Adequate distances shall be included in the orientation and alignment of buildings that are particularly security sensitive. Particularly attention should be paid to the relationship of buildings to public roads, railway tracks and the river (to reduce the possibility of attack and mitigate blast waves). It is also important to avoid direct lines of sight into high-security areas and the main entrance.
- The competition site shall be protected by applying the "onion principle": there shall be a primary and a secondary barrier in order to limit the access possibilities to a minimum – entry control point 1, entry control point 2 (an access from the Main riverside shall be guaranteed) – and thus avoid unauthorised malevolent access onto the ECB site. This could involve a combination of fences, walls, bollards, biotops or embankments, hedges etc. It should also be possible to quickly block access roads with physical barriers during periods of risk or danger.

4.6 Ecology

The degree of paving is to be kept as small as possible and the runoff of rain water is to be limited.

The main southwest to northeast wind direction should be considered in the orientation of the buildings.

Noise barriers will be required for any buildings or parts of buildings facing the heavily used Sonnemannstrasse on the north or the railway line on the east. The trees along the railway embankment and on the Deutschherrnbrücke shall be involved where possible in the planning.

Transformer station

Roofed railtracks

Annex west

The Importhalle

4.7 Planning permission

The necessary planning permission for the planned building works will be obtained on the basis of the results of the Competition. The main conditions for this are set down in the Urban Framework Agreement concluded with the City of Frankfurt.

As a result, the Urban Framework Agreement requires the following factors to be discussed:

- Integration of the building development of the project site into the town planning context and statements on the town planning development of the surrounding area;
- Building masses, building heights and design concept, whereby the height is to be limited to 150 m;
- Open space and access, connection and access to the public road and footpath networks;
- Function and integration of the Grossmarkthalle building.

German planning law applies, including the Building Code of the state of Hesse (Hessische Bauordnung (HBO)) of 1 October 2002 and the high-rise building guidelines. The documents and expert opinions required individually for the planning permission do not form part of the competition procedure.

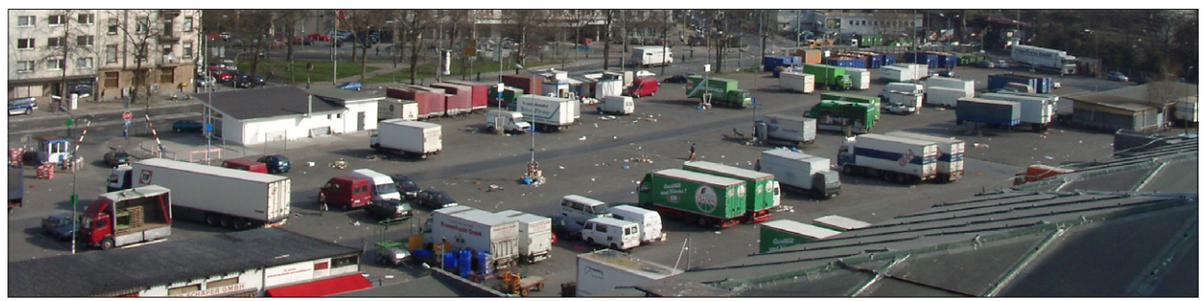
4.8 Growth modules

Two separate growth modules of 500 workplaces each are to be integrated into the planning concept. These modules are designed to accommodate the enlargement of the euro area and the growth of the ECB's functions in the future. They are to be built sometime after the completion of the first phase either separately or at the same time. Each module must be planned as a complete entity which, nonetheless, is completely integrated with the rest of the existing buildings, infrastructure, and landscaping. The development concept shall form a whole, complete in itself, in each building phase. The individual phases are to be shown in outline diagrams as floor layouts – with the linking points for external and internal access – and are to be documented plausibly in elevation drawings.

Railtracks and historic cranes

Port railway

Bastion



Northern part of the site

4.9 Technical supply systems/infrastructure

The site is connected to all public utility services such as electricity, gas, district heating, telecommunications and drinking water. It can be assumed that all existing pipes and cables, if they connect with the outline design concept, will be relocated.

4.10 Building soil

The site was formerly part of the Main alluvial meadow. An old tributary of the Main formerly ran across the terrain. Under the present surface of the land there are several metres of made-up ground that was tipped here for the construction of the present or earlier developments for protection against high water. Under the fill soil are Quaternary clays with organic components. The clays rest on a bed of Quaternary gravel sands.

The technical problems with building soil and foundation are regarded as surmountable, in the light of present knowledge. A typical foundation for other building projects in the surrounding area is a combined raft slab and pile foundation.

The maximum groundwater table to be assumed lies around 1.5 m under the average site level (98.00 m above sea level); de-watering during construction works will therefore be necessary.

A danger to the site during high water periods from the Main is currently not expected.

5 Conclusion

The overall concept is to provide an answer to the complex internal and external planning requirements. Besides the high-value town planning location by the river as a connecting link between the core of the City and the Ostend, it is above all the dynamic structural change of the latter that makes the particular atmosphere of the district.

The aim of the Competition is to obtain a concept:

- which satisfies the high design, flexibility, efficiency, functionality and sustainability demands;
- which meets the growth requirements of the ECB;
- with a sensitive architectural language which respects the purpose and corporate culture of the ECB as a public and culturally diverse institution based on the principles of transparency and openness;
- which takes the high security requirements of the ECB into account and yet all the same shows an open character;
- which fits into the town planning, traffic and open space context, taking note of the requirements in the Urban Framework Agreement between the City and ECB (see Section 4.7 above), involves the adjacent areas in the design proposals and as a large-scale complex is able to stimulate further development of the city area;
- which appropriately pays homage to the historical roots of the Grossmarkthalle and keeps sight lines open;
- that takes into account the urban climate conditions.

The most important tasks included in this connection are the appropriate treatment of the Grossmarkthalle in a challenging relationship between old and new and their anchoring in the public consciousness via the perspectives offered. In addition, the concept for the immediate neighbourhood of the competition site demands a balance between the efforts to open up the riverside area and the specific security requirements of the ECB.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