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HAMBURG

# Waterfront Development in the Port City

Over the past decades, Hamburg has reshaped parts of its former industrial port into liveable neighbourhoods—giving the city a new face and urban identity. Major urban redevelopment projects like HafenCity, Holzhafen and the upcoming Kleiner Grasbrook demonstrate Hamburg’s balanced approach to integrated urban development.

HAMBURG 



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Aerial view across the Elbe River, Elbphilharmonie towards downtown Hamburg.  
Image: Andreas Vallbracht, Mediaserver Hamburg



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**Hamburg developed innovative planning strategies that address growth pressures and strengthen the port's role as the economic muscle of the city.**

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### **The Challenge**

The port of Hamburg forms the heart of the city, with urban development growing around it over the centuries. Its central location has made it a foundational component of Hamburg's urban structure and identity. While the port contributes significantly to the economic, social and cultural landscape, operating a large international port within a metropolitan area of almost 2 million residents poses several challenges. These range from logistics and transportation, safety and emissions to urban zoning and development.

As one of three German city-states (i.e., municipalities that are also federal states), Hamburg cannot grow beyond its borders and must therefore find opportunities for internal redevelopment and densification. This has driven innovative planning strategies that address growth pressures and strengthen the port's role as the economic muscle of the city.

Policies for its port and waterfront are thus complex and cut across multiple domains, requiring an integrative and comprehensive approach. The city's efforts in such balanced development have paid off, with Hamburg now ranking among the most attractive, liveable and thriving cities, both within the country and globally.

Hamburg's comprehensive approach is exemplified by three distinct projects—HafenCity, Holzhafen and Kleiner Grasbrook. These demonstrate how waterfront and port areas can be rejuvenated into liveable urban neighbourhoods that balance economic, social and environmental needs.



View from the public terrace towards the Elbphilharmonie.  
Image: Thomas Hampel, Mediaserver Hamburg

## Urban Projects and Solutions

### HafenCity

Once obsolete following changing trade patterns, substantial land at the Hamburg Free Port was redesignated for urban development, creating what is now known as HafenCity. Covering 2.4 km<sup>2</sup>, it is one of Europe's largest projects and extends Hamburg's downtown area by 40%. The masterplan was set up in 2000 and construction has proceeded in three stages since 2001—progressing from the west to the east along the northern banks of the Elbe River. The site also sits next to a UNESCO World Heritage Site, Speicherstadt or “Warehouse City”.

The HafenCity development has led to different urban expressions, typologies and atmospheres across its three construction phases. By 2030, HafenCity will house approximately 16,000 residents, create 45,000 new workplaces, and welcome an additional 10,000 students and 50,000 tourists. It will form the new city centre of Hamburg.

The first phase (Western HafenCity) was largely completed in 2009, featuring office buildings for international businesses as well as high-class residences, most of which were located along a long stretch of quays. This phase established and implemented the fundamental principles of urban flood protection, namely the construction of the buildings and streets on elevated dykes.

This segment of HafenCity enjoys the prime location of being close to the city's central tourist hotspots which benefitted from the 2016 completion of the iconic landmark, the Elbphilharmonie. The building's combination of concert halls, hotels and elevated panorama walks quickly made it a main attraction in Hamburg.

The second phase (Central HafenCity) placed more emphasis on urban spaces and building typologies. It created an urban focal point with modern downtown scenery,

retail and dining offerings, museums and the HafenCity University. Additionally, it introduced buildings with higher densities that added to the urbanity of the area.

Central HafenCity also served as a testbed for new development policies such as “Conceptual Tendering”, which selected winning land bid proposals based on ambition and originality instead of just economic considerations. For example, a dedicated housing complex with attached soundproof studio spaces was built for musicians, enabling practice and rehearsals in a residential setting. This not only served the nearby Elbphilharmonie and its orchestra, but also added artistic character to the district.

Currently nearing completion, the third and final phase (Eastern HafenCity) adopts even more experimental planning and construction approaches, such as the use of timber for high-rise structures. This area will feature a more compact layout of offices and residential buildings. Special attention is also being paid to ensure diversity of housing typologies, sophisticated landscape design and connectivity to Hamburg’s main transportation arteries.

### Holzhafen

Unlike HafenCity which underwent a grand master planning effort, Holzhafen or the “Timber Port” saw incremental changes over time.



Integration of old and new structures at Holzhafen—with historical warehouses and the Hamburg fish market hall to the right.  
Image: Christian Spahr, Mediaserver Hamburg



**The HafenCity and Holzhafen redevelopment projects have resulted in spillover revitalisation effects on the existing centres and old city districts. These experiences have helped to inform future urban development plans in Hamburg.**



Holzhafen is Hamburg's oldest man-made port downstream of the Elbe River, with a variety of historical layers, contrasting architectural styles and urban typologies. After centuries as a busy labour spot, the modern redevelopment of Holzhafen commenced around the turn of the millennium. This transformed the area into a mixed-use district—with modern apartments, hotels and offices—that also houses Hamburg's main fish market, a historical maritime port and a cruise centre.

Here, priority was on the balancing and integrating of historical and cultural assets with modern architecture, tourism and cultural industries. Besides preserving certain historical structures, some new buildings subtly mimic the old brick-stone warehouses lining the riverbank. The thoughtful design of Holzhafen allows visitors to take a peek into its maritime past while also getting an overview of the operations of the industrial port across the river.

### Outcomes and Future Outlook

Without doubt, both HafenCity and Holzhafen are becoming increasingly popular and vibrant. This can be attributed to their attractive waterways and unique port atmospherics. At the same time, there have been spillover revitalisation effects on the existing centres and old city districts.

Experiences from both projects have helped to inform future urban development. Lessons from HafenCity include the importance of distributing commercial activities across the city, and providing infrastructural and pedestrian connectivity from redevelopment areas to the existing urban fabric. A good mix of housing types also boosted social integrity in neighbourhoods, with HafenCity achieving a higher proportion of families with children (28%) than the citywide average (18%). In addition, Holzhafen underscored the value of having smaller historical buildings and structures throughout the landscape to add character to the area.



Kleiner Grasbrook (also known as the “Leap across the river” project). Preparation of the site is underway with terps (man-made mounds for flood protection) for buildings and streets. To its left is the final phase of HafenCity development.  
*Image: Martin Elsen, Mediaserver Hamburg*

### **Kleiner Grasbrook**

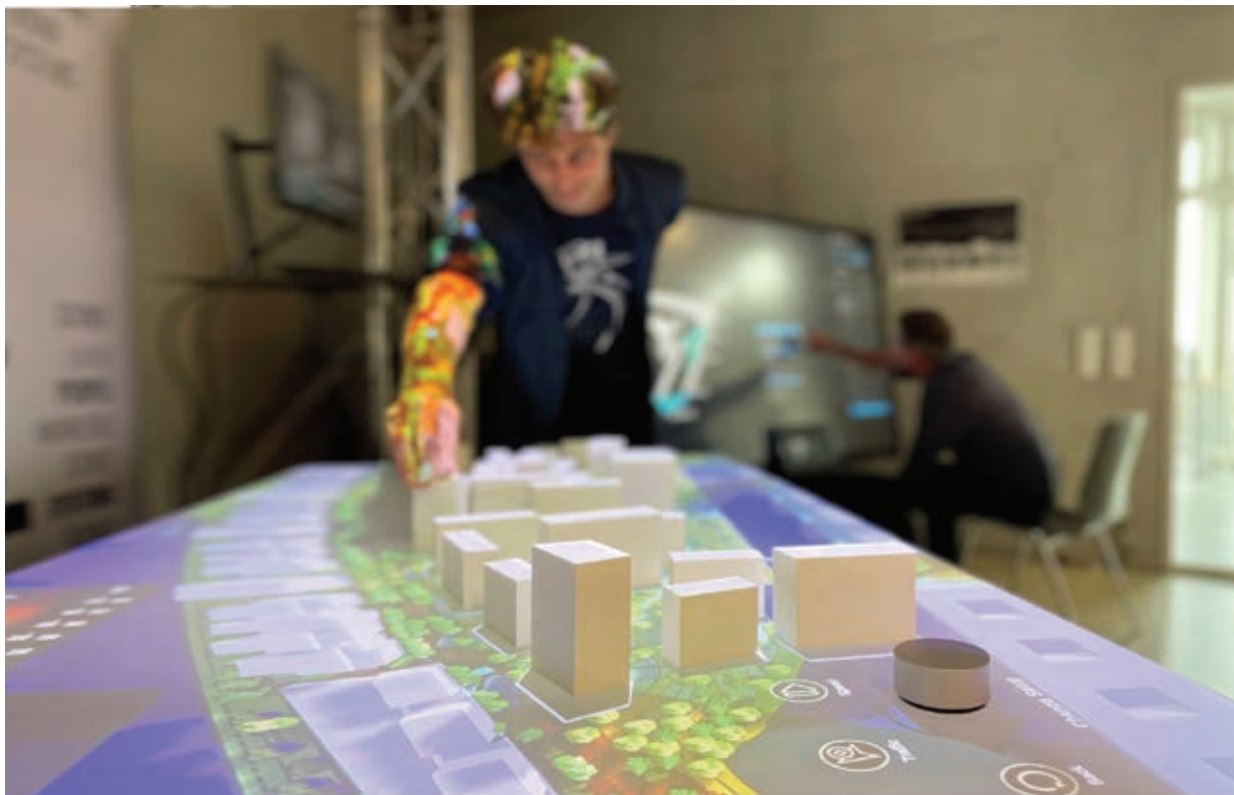
Kleiner Grasbrook is an upcoming waterfront and port redevelopment project that aims to convert a former industrial site into an innovation-oriented business district. Lying across the Elbe River from HafenCity, the project will accommodate 16,000 new jobs and 6,000 new residential units to address the pressing demand for housing.

The planning of Kleiner Grasbrook seeks to address two key issues:

1. How can the city create a new district while ensuring connectivity to the main urban centres?
2. How can the city balance and manage potential changes to socio-spatial dynamics, including in the neighbouring residential district, Veddel?

To improve connectivity, train lines will be extended to provide transport links from Kleiner Grasbrook to HafenCity and the Hamburg city centre. Furthermore, the city will replicate and expand the use of HafenCity’s successful flood and stormwater safety solutions in Kleiner Grasbrook.

Hamburg’s urban developers also pursued unconventional planning approaches. For example, the city held an urban and landscape design competition called the Wettbewerblicher Dialog or “Competitive Dialogue”. This competition allowed for multi-stakeholder participation and citizen engagement. As Veddel residents had highlighted concerns such as a lack of recreational offerings and poor transport connectivity, the redevelopment plans took into account the need to build infrastructure including bridges to enhance accessibility, allowing Kleiner



Digital Simulation Tool for Kleiner Grasbrook's urban planning.  
Image: HCU Digital City Science

Grasbrook and Veddel to develop together. The Kleiner Grasbrook town square would also serve as a shared centre for both districts.

In addition, the competition was supported by novel digital tools that allowed “on-the-fly” analysis of design proposals. Digital City Science researchers of HafenCity University, the Massachusetts Institute of Technology, and the city-owned HafenCity Hamburg development agency collaborated to create a custom-made tool called “Cockpit for Collaborative Urban Planning”. Utilised in the urban design competition and schematic planning phase, the tool was able to simulate pedestrian flows, stormwater run-off and wind speeds between buildings to be constructed in Kleiner Grasbrook.

## Conclusion

Hamburg continues to blaze a trail towards becoming an attractive, forward-looking and resilient city, leveraging its port areas and waterfront developments as essential success factors. Insights gained from past projects will continue to form the foundation of new development plans and endeavours in the city. 📍