



Granary Island, Gdansk, Urban Design Study



Introduction / Philosophy

Across from the historic city centre of Gdansk and close by the landscape space of the old bastion, a new district of Gdansk in mixture of history and modernity is built up along the river Motława on the Granary Island.

The aim is to create a city district, which reflects the historic urban structure, but is not a replica of the former architecture and land use. It respects the identity of the old European city with its cultural imprints of urban spaces: Block structure, courtyards, streets, plazas, lanes...

According to the speciality and centrality of the location, a structure is created - rather dense at the top of the island and more open to the south - which integrates itself into the green space of the old bastion.

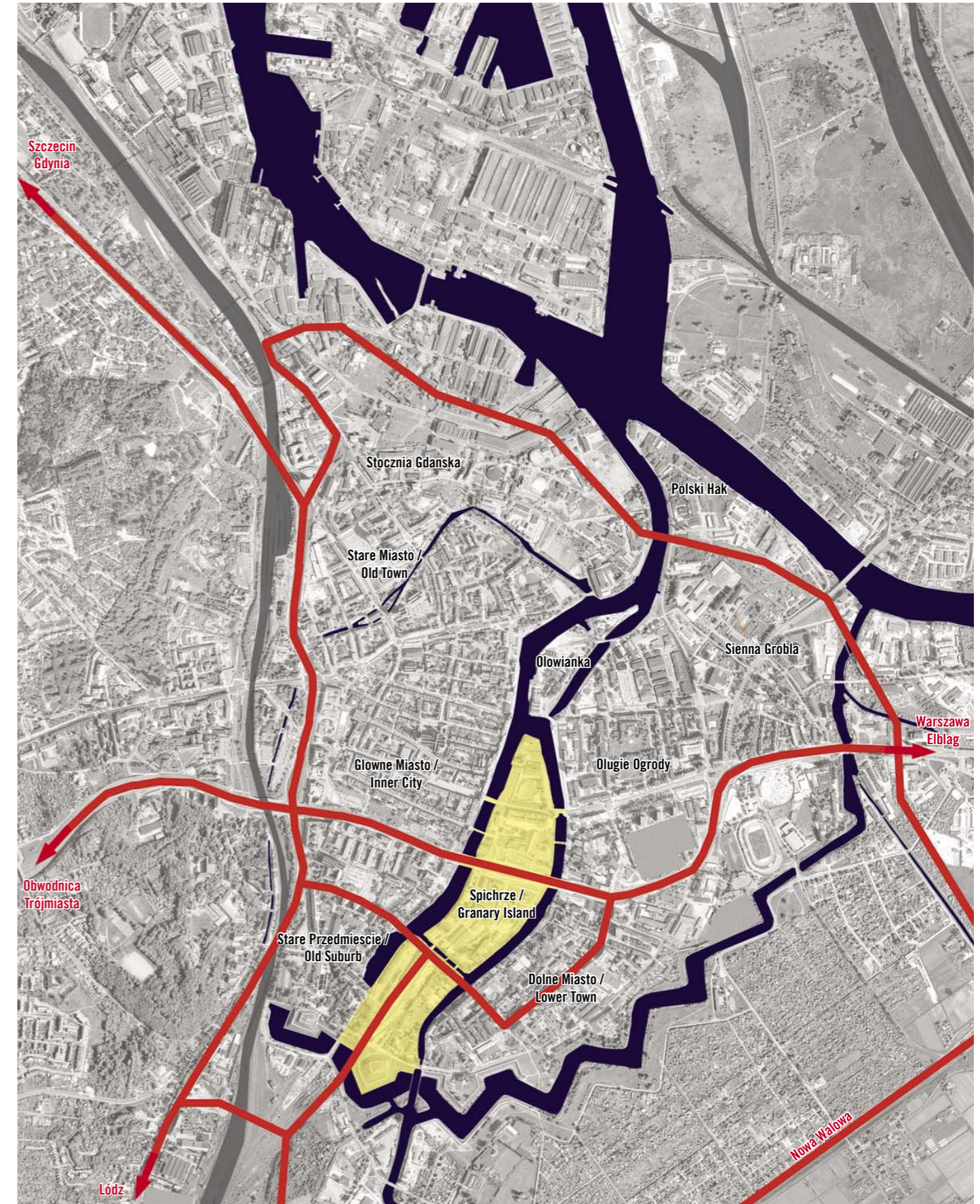
Alltogether ten varied quarters with different identities compose the island and built up a multifunctional, but coherent structure, according to physical conditions of the surrounding and the demands of society and economy. The separation of the different quarters allows a stable development of the whole planning site, because each unit can be created alone or even in sections as part of the whole project.

The concept adopts as well certain historic archetypes like the granaries as also foresees contemporary types of building, which consider today's needs and demands of society with multifunctional uses, providing shopping, work spaces, inner city living in varied forms, recreation spaces for the whole population and visitors of Gdansk.

Granary Island

Through its structure and location, Granary Island connects the different adjacent districts of Gdansk and opens up to the landscape at the bastion. Across from the city centre, the porousness of the urban structure and the adaptation of the existing building heights guarantee the perception of the inner city, especially towards the towers of the New City Hall and the Church of our Lady. Different quarters of the whole district accomplish a new character for the island, which show a continuous change of the urban structure from north to south within the planning area. Altogether ten different quarters with manifold spaces and archetypes can be recognised. They reflect the respective needs and demands of the surrounding and the requirements of the land use. Quarters interlock with each other considering the urban structure as well as the land use. The ten quarters are named by their speciality and characteristic, which are described and explained by their functions further below:

Top of the Island, Yards of Gdansk, Granary Chain, Island Centre on "Podwale Przedmiejskie", Central Business Quarter, Church Quarter, Housing along the river Motława, Housing in Bastion's Courts, Technology Court, Bastion's Park.



Site Plan of the City of Gdansk with districts of the inner city and main traffic routes

Streets and Traffic

The design of the streets creates accentuated lines of sight to the valuable town's landmarks, like the city gates. Considering the importance of the new district for tourism, retail and recreation, wide areas of the island are planned regarding traffic reducing measures and pedestrian zones. Nevertheless they are accessible by adjacent owners. A central car park below the Island Centre guarantees enough space for individual traffic caused by visitors. Private underground garages are foreseen for all new buildings for residents and employees. Additionally, the already existing tram station will be transformed into an important connecting point for the public traffic in Gdansk.

The Riverbanks

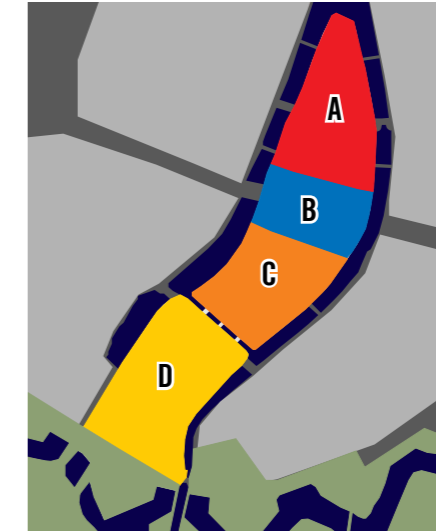
There will be a wide range of different designed and characterised open spaces along the riverbank of the Island. In the north, important public buildings like a museum and a hotel will function as lighthouse for the island. In the south, openings to the landscape space establish a relationship to the old bastion. Housing in different forms align the park. In the east, cross building structures with concerted lines of sight over the island and to the water create interesting vantage points for residents and visitors. To the south of the eastern riverbank mainly housing with direct access and view to the water is provided. New stairways with offshore pontoons and landing stages give possibilities for water sport. Along the linear Granary Chain in the west, according to the historic sample, a swimming footbridge is anew installed across from the "Long Bridge" at the city centre. Here, additional space is provided as landing stage and for recreation, water sports, outside gastronomy or just to linger or stroll along the riverbank. The special archetype of the granary reminds of the history of the island. The repetition and combining of this building type are forming the waterfront. The buildings present themselves as a chain. They are either refurbished, reconstructed or even traditionally new planned and built. Furthermore they are able to accommodate manifold uses, like retail, offices, loft housing or special uses like a hotel, galleries etc.

Open and Green Spaces

Looking from north to south, the public space transforms from a rather stony to a very green character. In the historic orientated top of the island plazas, private and public courtyards with shopping passages characterize the urban structure. A footpath is leading through the blocks and continues through the passage under the "Podwale Przedmiejskie" by the Island Centre, passes the central business and the church quarter and leads further over the wide green Bastion's Park into the landscape at the old fortification of the citadel. The Park offers possibilities for recreation and sport activities. Additionally it inhabits public facilities, like an elementary school, a kindergarten, a retirement home, playgrounds etc.



Integration of inner city and landscape



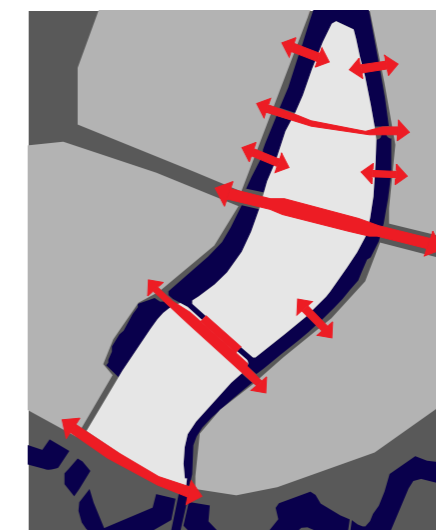
Partition and characteristics of the planning area



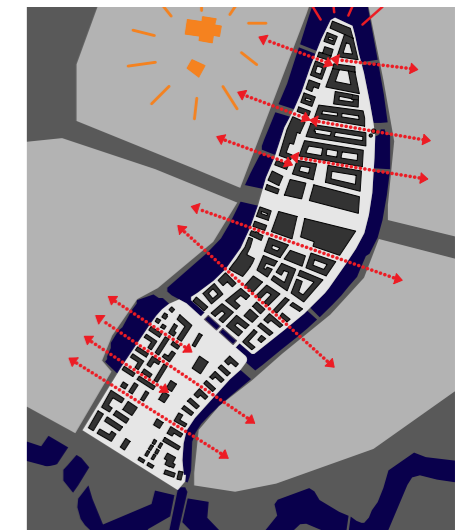
Ten Quarters



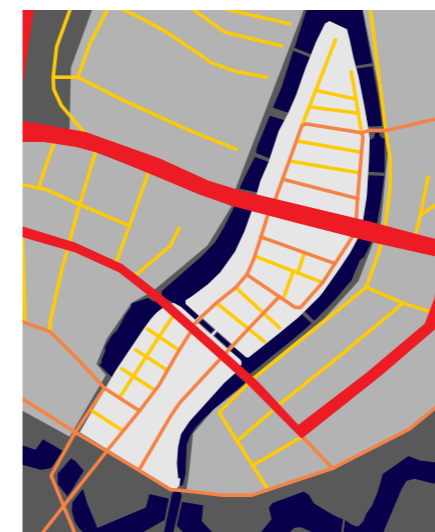
New Structure with integrated, worth keeping buildings



Interlockings between the planning area and the neighbored quarters



Lines of Sight / Vantage Points



Individual traffic
Main roads (red), collecting roads (orange), coverage roads (yellow)



Green spaces with footpaths



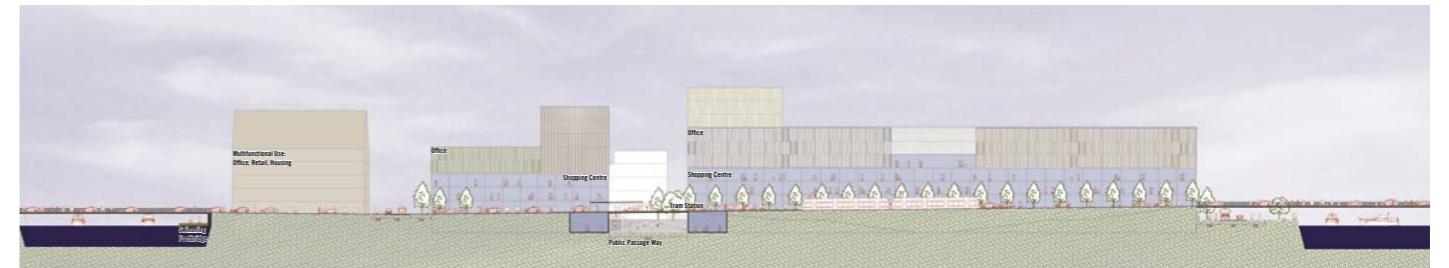
Main footpath:
Footpath from the bastion to the inner city with the bastion's park, plazas and court yards



Site Plan, Scale: 1:7.500



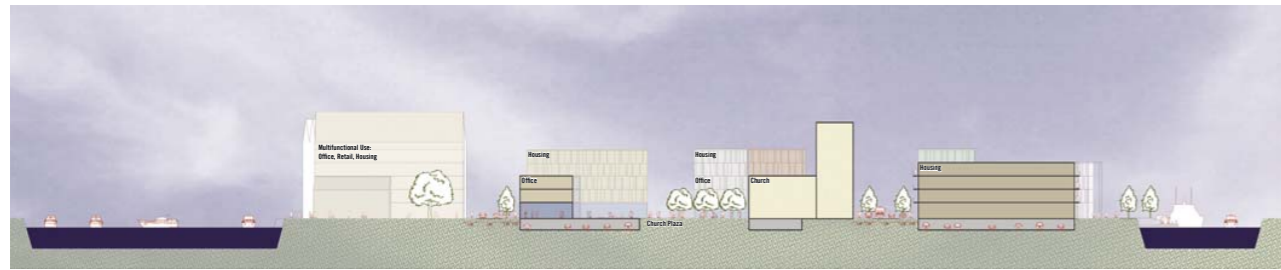
Section A - A, Scale: 1:2.000



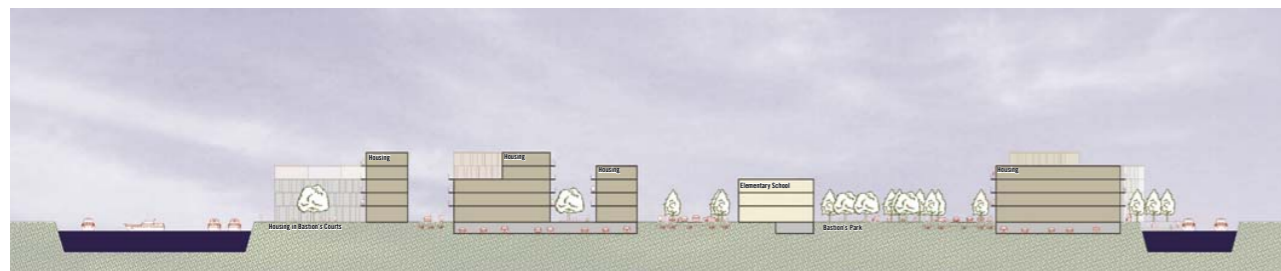
Section B - B, Scale: 1:2.000



Bird's Eye View „Top of the Island“ from the North



Section C - C, Scale: 1:2.000



Section D - D, Scale: 1:2.000



Today's structure

Phase 1

Phase 2

Phase 3



Bird's Eye View „Top of the Island“ from the North



Perspective Plaza at the „Islandcentre“ from the South-East



Landuse, Scale: 1:7.500

| | Plot 1 | Plot 2 | Plot 3 | Plot 4 | Plot 5 | Plot 6 | Plot 7 | Plot 8 | Plot 9 | Plot 10 | Plot 11 | Plot 12 | Plot 13 | Plot 14 | Plot 15 |
|------------------------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------------------|---------|---------|---------|---------|---------|
| Plot Area | 3.712 | 4.887 | 2.096 | 4.948 | 5.427 | 7.486 | 2.271 | 4.753 | 7.718 | 3.716 | 2.845 | 2.009 | 5.885 | 3.296 | 8.289 |
| Surface Area | 3.712 | 3.699 | 1.784 | 3.750 | 3.976 | 9.025 | 1.855 | 3.071 | 5.073 | 1.844 | 1.903 | 2.009 | 5.885 | 3.296 | 8.289 |
| Gross Floor Area | 6.924 | 15.002 | 8.276 | 17.108 | 20.381 | 23.018 | 8.813 | 14.097 | 25.363 | 7.720 | 11.919 | 11.181 | 31.235 | 16.171 | 42.056 |
| Surface Area Ratio | 1,00 | 0,76 | 0,85 | 0,76 | 0,73 | 1,21 | 0,82 | 0,65 | 0,66 | 0,50 | 0,67 | 1,00 | 1,00 | 1,00 | 1,00 |
| Floor Area Ratio | 1,87 | 3,07 | 3,95 | 3,46 | 3,76 | 3,07 | 3,79 | 2,97 | 3,29 | 2,08 | 4,19 | 5,57 | 5,31 | 4,91 | 5,08 |
| Landuse | | | 1.407 | 3.447 | | 3.448 | 693 | 2.358 | 9.440 | | 1.800 | | | | |
| Housing | | | 2.737 | 7.200 | | 10.545 | 4.408 | 6.412 | 6.316 | | 6.319 | 5.154 | 13.580 | 1.350 | 17.198 |
| Office | | | 3.132 | 6.461 | | 9.025 | 3.512 | 5.420 | 9.607 | | 3.806 | 6.027 | 17.655 | 9.888 | 24.858 |
| Retail / Shopping | | | | | | | | | | | | | | | |
| Trade / Light Industry | | | | | | | | | | | | | | | |
| Special Use | Museum | Hotel | | | Existing Block | | | | | Existing Buildings | | | | | Cinema |
| | 6.924 | 15.002 | | | | | | | | | | | | | 4.933 |

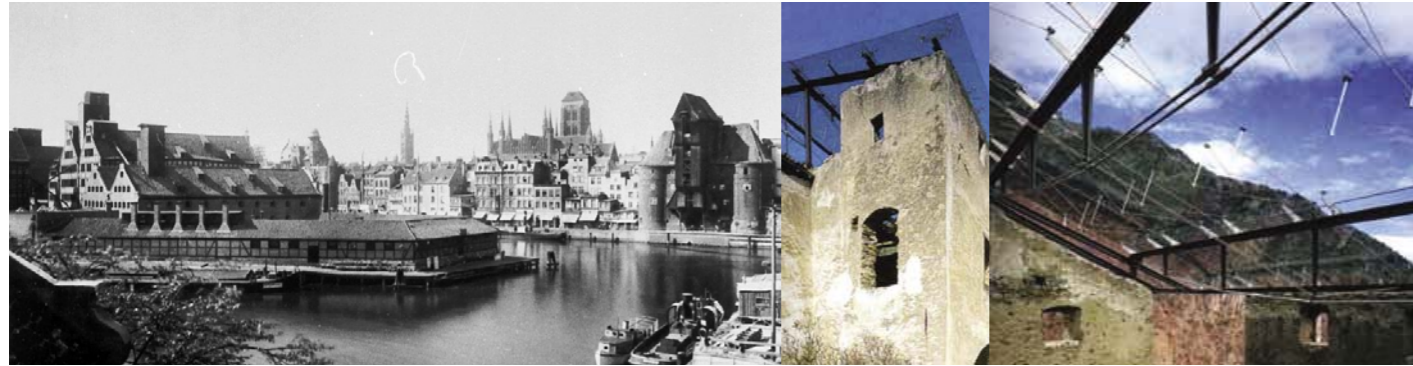
| | Plot 16 | Plot 17 | Plot 18 | Plot 19 | Plot 20 | Plot 21 | Plot 22 | Plot 23 | Plot 24 | Plot 25 | Plot 26 | Plot 27 | Plot 28 | Plot 29 | Plot 30 |
|------------------------|---------|---------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Plot Area | 6.892 | 9.684 | 3.402 | 1.672 | 1.623 | 3.635 | 7.348 | 12.125 | 2.971 | 2.636 | 2.995 | 2.099 | 3.173 | 2.136 | 3.149 |
| Surface Area | 5.331 | 5.962 | 2.518 | 1.290 | 995 | 2.540 | 2.531 | 7.586 | 1.524 | 578 | 1.251 | 971 | 1.307 | 964 | 1.307 |
| Gross Floor Area | 25.914 | 28.166 | 12.051 | 4.614 | 2.253 | 9.898 | 11.043 | 40.371 | 7.918 | 1.878 | 5.171 | 3.937 | 5.324 | 3.908 | 5.385 |
| Surface Area Ratio | 0,77 | 0,62 | 0,74 | 0,75 | 0,61 | 0,70 | 0,34 | 0,63 | 0,51 | 0,22 | 0,42 | 0,46 | 0,41 | 0,45 | 0,42 |
| Floor Area Ratio | 3,76 | 2,91 | 3,54 | 2,76 | 1,39 | 2,71 | 1,50 | 3,33 | 2,67 | 0,71 | 1,73 | 1,88 | 1,58 | 1,83 | 1,71 |
| Landuse | | | | 864 | | 7.318 | 11.043 | 9.216 | 6.782 | 1.878 | 5.171 | 3.937 | 5.324 | 3.908 | 5.385 |
| Housing | 2.692 | 4.318 | 1.152 | | | | | | | | | | | | |
| Office | 9.156 | 17.886 | 2.798 | 2.500 | | 2.540 | | 12.568 | | | | | | | |
| Retail / Restaurants | 3.052 | 5.962 | 1.999 | 1.250 | | | | 11.704 | 1.136 | | | | | | |
| Trade / Light Industry | | | | | | | | | | | | | | | |
| Special Use | Hotel | | Parking Garage | | Church | | | Hotel | | | | | | | |
| | 11.014 | | 6.702 | | 2.253 | | | 6.883 | | | | | | | |

| | Plot 31 | Plot 32 | Plot 33 | Plot 34 | Plot 35 | Plot 36 | Plot 37 | Plot 38 | Plot 39 | Plot 40 | Plot 41 | Plot 42 | Plot 43 | Total |
|------------------------|---------|---------|---------|---------|---------|---------|--------------|---------|-------------------|--------------|-----------------|---------|---------|--------------------|
| Plot Area | 2.045 | 5.133 | 4.715 | 3.290 | 3.424 | 1.981 | 820 | 1.017 | 1.682 | 698 | 781 | 2.599 | 5.640 | 129.565 |
| Surface Area | 615 | 2.652 | 2.309 | 1.717 | 1.738 | 1.141 | 444 | 1.200 | 994 | 400 | 396 | 566 | 637 | 111.590 |
| Gross Floor Area | 2.460 | 7.018 | 6.158 | 7.177 | 7.271 | 4.865 | 1.332 | 2.400 | 2.982 | 800 | 1.188 | 1.698 | 4.511 | 476.715 |
| Surface Area Ratio | 0,30 | 0,52 | 0,49 | 0,52 | 0,51 | 0,58 | 0,54 | 0,63 | 0,59 | 0,57 | 0,51 | 0,22 | 0,20 | 0,66 |
| Floor Area Ratio | 1,20 | 1,37 | 1,31 | 2,18 | 2,12 | 2,46 | 1,62 | 1,25 | 1,77 | 1,15 | 1,52 | 0,66 | 0,80 | 2,81 |
| Landuse | | | | 7.177 | 7.271 | 4.865 | | | | | | 1.698 | 4.511 | 119.470 |
| Housing | | | | | | | | | | | | | | 127.121 |
| Office | | | | | | | | | | | | | | 126.434 |
| Retail / Restaurants | | | | | | | | | | | | | | 13.176 |
| Trade / Light Industry | | 7.018 | 6.158 | | | | | | | | | | | 62.413 |
| Special Use | | | | | | | Kindergarten | Gym | Elementary School | Sportscenter | Retirement Home | | | 26.101 |
| | | | | | | | 1.332 | 2.400 | 2.982 | 800 | 1.188 | | | Existing Buildings |

Urban Indices



Perspective „Bastion's Park“ from the North

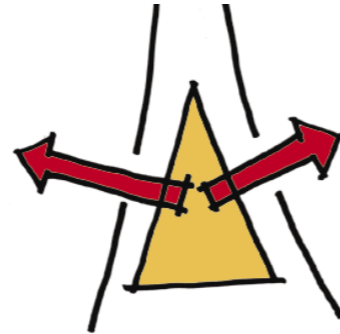


Historic Picture of Granary Island

Castle Juval, South Tyrol, Italy



Library of Viernheim, Germany



Connection

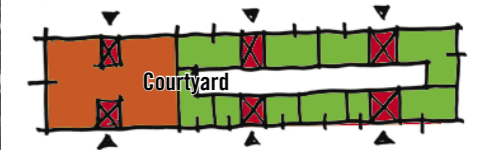
Pictogram Connection on Top of the Island, two pedestrian bridges



Hackesche Höfe, Berlin, Kurt Berndt 1906/07



Italian Centre, Glasgow, Page & Park, Glasgow, UK

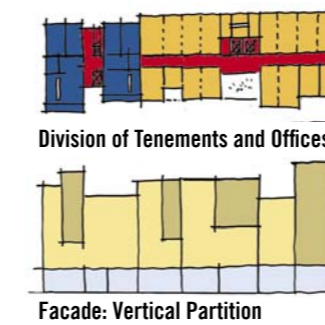


GF: Possible Partition of Shops and Staircases

Pictogram possible Partition and Arrangements of Shops and Staircases at ground floor



Granary Hotel, Barth, Germany, Giencke & Company, Graz, Austria



Division of Tenements and Offices

Facade: Vertical Partition

Division of Tenements and Offices, Vertical Partition of the Facades Italian Centre, Glasgow, Page & Park, Glasgow, UK



Cut out site plan

Hyatt Hotel, Cologne

Maritim Hotel, Cologne



Cut out site plan



Fünf Höfe, Munich, Herzog & De Meuron, Basel, Switzerland

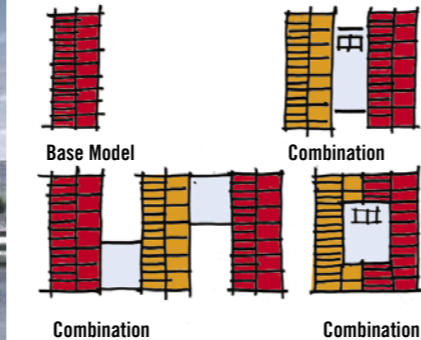
Light house of the island: The area is dominated by important public functions like a museum or a congress centre. Existing buildings like the Deo-Granary are integrated into the quarter. Important new public passages into the Inner City and to Olowianka by new pedestrian bridges are foreseen. The whole area is dedicated as pedestrian zone with access permission for adjacent owners.

Continuation of the historic structure: Smaller units are provided for ground floor and different implementations of the facade compositions are foreseen. Additionally inner courtyards and passages are formed for public and private use.

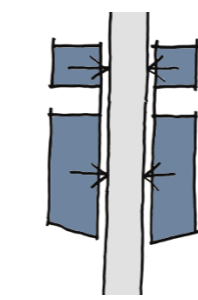
Distriptive Pictograms and References



Siebenberge, Cologne, Conversion of an old Granary, Kister Scheithauer, Gross, Cologne



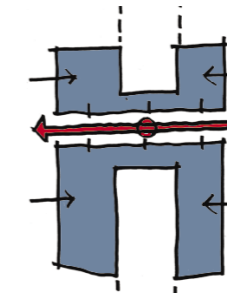
Pictogram Granary Typologies



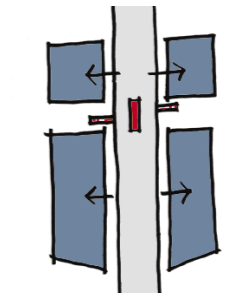
"Clamp"
Pictogram Clamp on the Motorway



Beursplein / Koopgoot, Rotterdam



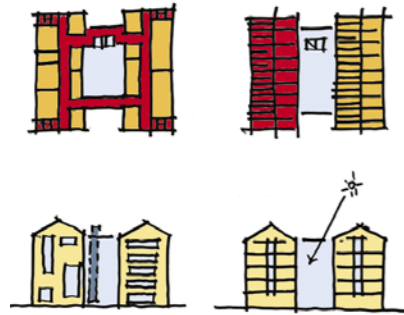
Ground Floor
Pictogram Access to the Shop Areas



First Floor



Beursplein / Koopgoot, Rotterdam



Typologies
Pictogram Modules and Combinations



Union, Hanauer Landstraße, Frankfurt o.M., Conversion of an old brewery, Landes & Partner, Frankfurt o.M.



Beursplein / Koopgoot, Rotterdam



Ground Floor Passage



First Floor: Bridge
"Principle"

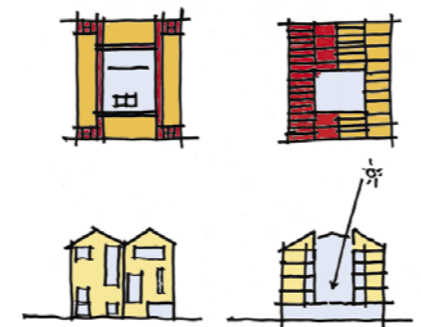
Pictogram Access to the Shop Areas (Section)



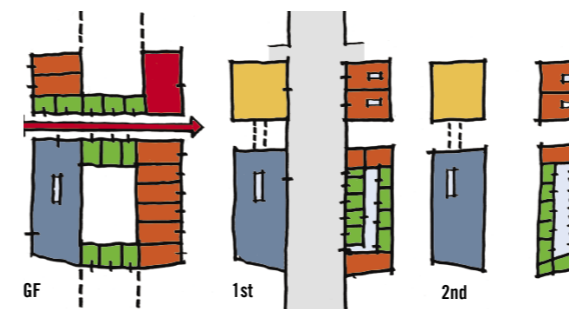
Beursplein / Koopgoot, Rotterdam, Netherlands, de Architects Cie (P. B. de Bruijn), Jerde Partnership



Granary City, Hamburg



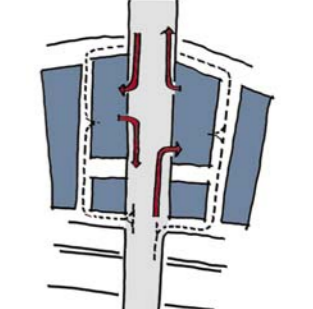
Typologies
Pictogram Granary Typologies



Possible Shop Units
Pictogram possible Shop Units



Potsdamer Platz Arcades, Berlin, Renzo Piano, Genua - Paris



Ramps to Parking Garage
Pictogram Access Ramps from Motorway to Parking Garage



Cut out site plan



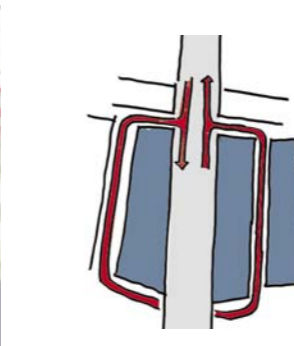
Typologies
Pictogram Granary Typologies



Architecture Centre, Vienna, Conversion of an old brewery, Giner & Wucherer with Rainer Körberl, Innsbruck, Austria



Cut out site plan



Pictogram Traffic Guidance /Loop under Motorway



Potsdamer Platz Arcades, Berlin, Renzo Piano, Genua - Paris

Creating of a historic orientated waterfront in opposite to the „Long Bridge“ of the Inner City. The waterfront consists of a repetition and combination of the historic archetype of the granary, which create a chain along the waterfront. Gaps between the granaries give way to interesting perspectives from the river bank into the island and in opposite from the Island to the river and the Inner City. A long footbridge produces the possibility for a walk along the river bank. Shops and restaurants at the ground floor and loft for offices as well as housing in the upper storeys are established in those buildings. Some of the new granaries can accommodate also special uses like a hotel, galleries or artist studios.

The block structures on both sides of the „Podwale Przedmiejskie“ create a multi-functional business complex out of a shopping centre, offices and additional special uses. They clamp the motorway like a „bench vice“ and form a new entry for Granary Island and the City Centre of Gdansk. The ensemble of buildings is connected by a generous underground passage, which offers a great flexibility of the retail reparation. The base with the shopping centre consists out of three storeys. The office structure on top adapts the urban situation of the surrounding property and builds up a bridge between the northern and the southern part of Granary Island. A generous central parking garage is built under the whole complex. On the crossing of the motorway and the underground passage a junction between public traffic (tram), individual traffic (motorway respectively parking garage) and the pedestrian zone is formed.



Potsdamer Platz, House Huth, Berlin, Renzo Piano, Genua - Paris



Engelhardtthof Berlin, Kahlfeld Architects, Berlin



Potsdamer Platz, House Huth, Berlin

Office and Hotel Building Friedrichstraße, Berlin, Max Dudler, Berlin - Zürich



Ecumenical Centre, Munich - Riem, Florian Nagler, Munich



Bewag-Building, Gendarmenmarkt, Berlin, Max Dudler, Berlin - Zürich

Stadtwerk Frankfurt o.M., Ortner & Ortner, Berlin - Vienna



Multistorey parking garage, Granary City, Hamburg

Public-Park-Quarter, Darmstadt, Kramm & Striegel, Darmstadt



Cut out site plan

Münchmer Rückversicherungen, Baumschlager & Eberle, Lochau - Vienna



Cut out site plan

Public-Park-Quarter, Darmstadt, Kramm & Striegel, Darmstadt

In the Central Business Quarter, urban blocks are grouped around a central plaza, connected to the Island Centre. Shops are located at ground floor, offices in the regularly storeys and some housing on top of the buildings. Special uses like a hotel etc. can also be accommodated. The buildings are most likely horizontal disposed.

The Church Quarter adapts the structure of the Central Business Quarter, but dissolves lightly the strong historic structure in transition to the green open spaces in the southern part of the planning area. A new church around another plaza cultivates the centre of this district. In opposite to the business quarter, the blocks are smaller and provide more housing instead of offices. Here, an additional central multi-storey car park can be placed.



Different exemplary parkways



De Pijler Elementary School, Rotterdam, KCAP / ASTOC Rotterdam - Cologne

Indoor- Sport-Centre



Cut out site plan

Playground Nieburgstraße, Berlin, Topotek 1, Berlin

In sequence of the green space along the old fortification of the citadel, the Bastion Park blends into the urban structure of Granary Island and features a green frame for special uses of sport, recreation and public facilities, like a school, a kindergarten, a retirement home etc. Besides the aspects of recreation, an additional space for flora and fauna as well as a fresh air lane, leading into the centre of Gdansk, is created.



Hollandia, Schiedam, Netherlands, KCAP / ASTOC, Rotterdam - Cologne



Steps to the water

Green Housing, Beijing, China, KCAP / ASTOC, Rotterdam - Cologne



Green Housing, Beijing, China, KCAP / ASTOC, Rotterdam - Cologne

Housing, Gouda, Netherlands, KCAP / ASTOC, Rotterdam - Cologne



Cut out site plan

Housing, Gouda, Netherlands, KCAP / ASTOC, Rotterdam - Cologne

A band of housing is formed along the Motlawa River bank. Southeast, it stands in coherence with the northwestern band of the Granary chain. Courts are formed and create open views to the water. A public footpath for the public and footbridges give possibilities for recreation and water sports.



Herti 6, Zug, Switzerland, KCAP / ASTOC, Rotterdam - Cologne



Development Centre, Ingolstadt, Fink & Jocher, Munich



Orsoyer Straße, Düsseldorf, KCAP / ASTOC, Rotterdam - Cologne



Vidmar-Halls, Bern, Switzerland, multifunctional use, Rykart Architekten, Bern,



Teacher Seminar Building, Chur, Switzerland, Bearth & Deplazes, Chur, Switzerland



Cut out site plan

Stadstuinen, Rotterdam, Netherlands, KCAP / ASTOC, Rotterdam - Cologne

Additional housing in varied forms in open block structure is provided. The building structure consists out of dwelling houses and terrace houses, which foresee two staged maisonettes for each units. Here, along a quiet part of the river bank, the possibility for high qualitative housing in middle of the Inner City is disposed.



Cut out site plan

Technology-Centre Adlershof, Berlin, Sauerbruch & Hutton, Berlin

To achieve a most possible wide range of different uses in this central planning area, a small part for handy craft, technology businesses and not intensive light industry is provided in a structure in accordance to the surrounding properties. The buildings are arranged around courtyards for storage and exhibition and can offer space for labs, studios or workshops.

Conclusion

The transforming structure from the city centre to the bastion accentuates the terrific location of the project, stretched out between the historic downtown area and open landscape. The urban structure condenses itself to the north and melts to the south filling nature into the city. Historic components characterise the design. As main focus of the concept, the old urban structure and historic archetypes are absorbed and interpreted in a modern way. A new central district is created with multifunctional uses, providing shopping, work spaces, inner city living in varied forms, recreation spaces for the whole population and visitors of Gdansk.



Model of the site from the east



Model of the site from the south

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