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REVITALISATION OF URBAN SPACE UPON THE EXAMPLE OF COPENHAGEN

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Abstract

The objective of this paper is to present selected contemporary activities in the urban space of Copenhagen aimed at the recovery of land in the process of revitalisation. They constitute examples of rational and economical management of areas inside the city limits and they inscribe in the concept of limiting of the urbanisation costs.

The current harmonious development of the capital of Denmark constitutes a result of a strategy, in force for decades now, based on the implementation of architectural and urban planning solutions aimed at the continuous improvement of the comfort of living of the city residents. The urban culture is expressed in the creation of top quality public spaces, especially in the organisation of pedestrian zones based on the principles of the universal design.

Introduction

The capital of Denmark is currently recognised as one of the most friendly places for living in Europe due to the quality of the housing environment and urban public spaces, to the organisation of the transport system with cycling lanes, and the cleanliness of water of the entire waterfront along which the city develops.

The current harmonious development of Copenhagen constitutes an effect of a strategy, consistently in force for decades now, based on the implementation of architectural and urban solutions aimed at the continuous improvement of the quality of life of its residents. The urban culture is expressed in the creation of safe, sustainable, healthy, and universal public space, with special attention paid to the needs of pedestrians. Such an approach fosters the occurrence of all sorts of relations between residents, stimulates their activity, and facilitates their contacts. It encourages them to remain in the public space and to make use of diversified forms of services. At the same time, it assumes that the development of the urban community should be based on the relevant dynamism of public life and on limiting of its pace (the concept of slow motion)¹. All possible activities for the benefit of protecting, defending, and continuing of

¹ M. Żakowska Kopenhaga. *Najlepsze miejsce na ziemi*, Miasta, No. 11, 2015, p. M086

all values which constitute the tradition of the city and should be handed down to next generations are promoted, as well.

The attractiveness of Copenhagen as a place of residence is also dictated by its unique character, expressed in the scale and typology of the city centre architecture, which reflects the history of the development of the city, as well as the great advantages of its location in connection with water and green areas².

The city is fit in the central part of a finger-like urban structure, which has developed around the intensely developed historical City. Its spatial layout clearly exhibits a legible division into a medieval and renaissance city and downtown quarters surrounding it concentrically, which started to develop after the city walls had been demolished. The outskirts of the downtown areas are characterised by low architecture, surrounded by greenery.

The city centre constitutes the largest concentration of the service programme in the scale of the region, with the widest range of impact. This is the place where one of Europe's longest main pedestrian promenade, Strøget, broadly developed, is located, together with representational recreational paths that run along the seashore and a channel located within the limits of the city³.

The spatial policy of the city takes into account principles of sustainable city planning and architecture, open to the natural environment, consistent with social expectations and economic requirements. The municipal authorities make every effort to make Copenhagen a leader as a sustainable model city (Eco-Metropolis) amongst metropolitan cities in the scale of the globe. Diversified activities for the benefit of the creation of sustainable urban space combining economic requirements, social needs, and comfort of the natural environment are regarded as priorities and of key importance by urban planners and architects⁴.

The city vs. regional plans

The development of the metropolitan area of Copenhagen was particularly intensive in the second half of the 20th century. This area occupies a leading position in the spatial structure of the country due to its location, as well as its population, international relations, fulfilling the role of a capital city, and the investments in progress. The strengthening of the rank of the city in the scale of the country, as well as in the region of Øresund and in Europe, was fostered by its connection via traffic routes with Malmö, Sweden (2000) executed under a legal act dated 1991 (Øresund Link).

² In 2008 Copenhagen took the first position in the list of 25 cities of the world recognised as the best place to live. After: *A metropolis for people Visions and goals for urban life in Copenhagen 2015*, City Council, Copenhagen, 2009, p.3

³ In 1962 the process of excluding of the city centre from the road traffic was commenced by introducing the priority for the pedestrian traffic in this area. The next transformations for the benefit of the pedestrian traffic took place in Nyhavn (1980). More: Gehl J. *Miasta dla ludzi*, RAM, 2014, p. 12

⁴ Cf.: *Copenhagen city of architecture. The architecture policy of the city of Copenhagen*, published by the Technical and Environmental Administration, City of Copenhagen, Copenhagen 2010, p.8

According to the far-reaching assumptions of the development strategy of Great Copenhagen, it was assumed that its territory would be inhabited by ca. 2 million people⁵. The municipal plan from 2011 forecast that by 2025 the population of the city itself would have reached 637,000⁶.

The urban structure of the metropolitan area is shaped as a result of the first regional plan (Finger plan), consequently continued for nearly 70 years now and possessing the status of an icon, developed in 1947, which to this day determines the planning policy and the main directions of the spatial development of the region⁷. It decided about the development of the suburbs in the form of belts along five radial railway and road routes, which converge in the city centre. The space between the belts, free from any development, is occupied by protected green areas and agricultural lands.

The next regional plan (1961) assumed the extension of two belts towards the west (to the towns of Roskilde and Køge), and yet another one (1973) proposed to prolong the three remaining belts towards the towns of Helsingør, Hillerød, Frederikssund, in order to balance the development of the metropolis.

The regional plan from 1989, which is also in force as the municipal plan for Copenhagen, as the main centre ('the palm') of the finger-like structure, introduced the principle of concentration of general urban services within its territory, and secondary services – in hubs of the 'finger' belts of development. It was also decided that the development of housing architecture would consist in completing of free spaces in these belts, as well as in the area of Ørestad on the island of Amager. The goal was to obtain harmonious development of the entire metropolitan area, maintaining the green wedges reaching the limits of the city of Copenhagen⁸.

Subsequent regional plans continued and developed the assumptions referred to above, including the last ones developed in 2007 and 2013, getting adjusted to the constantly occurring new challenges connected with the development of the city and its growing position in the scale of the region of Øresund. The capital of Denmark combined with Malmö, Sweden, currently forms a centre of an integrated metropolitan area.

The regional plans were strictly connected with the municipal plans. One should point out to the municipal plan from 1993, which outlined the still continued priority principles of housing architecture within the territory of the city itself (the palm of the finger-like structure), which comprises Copenhagen and Frederiksberg. Four most important directions and principles of the development of urban architecture were also defined at the time: in close relation with the public transport system, in close relation with the sea, development of the concept of the green city, and care for the urban landscape and scale of architecture. The city development policy also comprised the preservation of the historical substance and the preservation and exposition of all values of the historical City, as well as modernisation of the existing architecture and

⁵ It was assumed that by 2025 the region of Øresund would have the population of nearly 3.9 million. Source: *The Finger plan. A Strategy for the development of the Greater Copenhagen Area*, Ministry of the Environment, Denmark, 2015, The Danish Nature Agency, Copenhagen 2015, p. 2 .

⁶ Cf.: *City of Copenhagen Municipal Plan 2011*, City of Copenhagen, Centre for Urban Development, 2011, p.3

⁷ The plan was published in 1948.

⁸ Location of services near the public transport hub allowed to limit the need to use cars by the region inhabitants considerably. More: *Copenhagen Municipal Plan 1993*, The Municipal Corporation, The Lord Mayor's Department, Copenhagen, 1993, p.22

revitalisation of selected downtown areas in order to secure standards of living and of public space corresponding to the comfort of living on the outskirts of the city.

The assumptions listed above were continued by subsequent municipal plans. The plan from 2009 based the city development strategy on four fundamental priorities, assuming that Copenhagen should be: accessible to everyone, green, dynamic, bound with water (blue Copenhagen)⁹. The last of the municipal plans, introduced in 2011, continues the directions of the city development set in the previous plans. Simultaneously, it concentrates on the policy of the development of the Øresund region by 2015. It assumes the creation of healthy, sustainable, non-emission (CO₂) urban space (Malmö and Copenhagen as a laboratory of new healthy technologies), equipped with economical transport systems. At the same time, it is planned to create in this area a zone sustainable in social terms, with the most favourable living, residence, and working conditions. It is planned that the region will constitute the centre of development of knowledge, innovation, and scientific research¹⁰.

Examples of contemporary activities in the urban space

As it has been mentioned in the introduction, the goal of this paper is to present selected contemporary activities in the urban space, undertaken today for the benefit of the development of the city 'from within', inside the existing limits of the city. These activities are being undertaken in nine selected areas, located in different parts of Copenhagen. They are demarcated in the municipal plan from 2011 as priority areas for the development of the city in response to the forecast increase of its population¹¹. These are: Nordvest, Science City North Campus, Valby South, Sydhavn, Nordhavn, Kødbyen i Polititorvet, Nordøst Amager, Carlsberg, and Ørestad¹².

The proposed transformations in the areas listed above differ considerably due to their scale and character of the architecture located there, different values of landscape and natural environment. They refer to the completion of the existing housing architecture by the introduction of new complexes, as well as by sanitation of the existing buildings and broadening of the service structure along with recreational grounds, streets, and urban piazzas. It is also planned to support the existing traffic networks and to develop new ones, including the promotion of cycling. Generally speaking, the goal of the transformations is to obtain the improvement of the residents' living conditions, to stimulate the revitalised space, as well as to improve its attractiveness in functional and aesthetic terms. A brief description of the strategy of actions in the areas referred to above is provided below.

Nordvest- the plan of the transformations, partially already implemented, comprised three areas of activity – territories located at Dortheavej, Bispebjerg along with a large complex of the

⁹ After: A. Skovbro *Urban Planning in Copenhagen –Towards a Sustainable Future*, Danish Ministry of the Environment, <http://siteresources.worldbank.org>, access 10.03,2016

¹⁰ *City of Copenhagen. Municipal Plan 2011*: published by City of Copenhagen, Copenhagen, 2011, pp. 8-9

¹¹ *City of Copenhagen. Municipal Plan 2011*: published by City of Copenhagen, Copenhagen, 2011, pp. 30, 31

¹² After: *City of Copenhagen. Municipal Plan 2011*: published by City of Copenhagen, Copenhagen, 2011, p. 30

hospital, the area of the Nørrebro station. They belong to the most neglected areas of the city, with lower standards of flats, as well as of the public space. Currently, different initiatives are being implemented in these areas, financed from the municipal budget, aiming at the levelling of the living standards of their residents with the ones inhabiting other city quarters. It is planned to reach better integration of the area of Nordvest with the surrounding housing areas, as well as the entire city.

Transformations in the vicinity of Dortheavej street comprised the completion of the existing housing substance with complexes of council buildings, the introduction of a programme with public utility functions: a youth club, a library, and a culture centre. It was also planned to broaden the public space zones by the introduction of new squares (e.g. Møntmester square).

Bispebjerg is an attractive area, located on a hill. It is characterised by the occurrence of larger greenery oases in the form of parks and allotment gardens. Transformations in this area are planned to be carried out in the decade to come; they comprise the extension and renovation of the complex of the existing hospital in connection with the extension of the green areas. It is also planned to organise better traffic connections between this area and the surrounding residential areas, as well as green and recreational areas and the entire city. The traffic network linking Bispebjerg with the city centre will also be developed.

Nørrebro constitutes an area inhabited predominantly by young residents, diversified in terms of their ethnic origin. Transformations in this area, planned to be implemented in 2018, aim at the improvement of safety and extension of the programme of services in public zones, with special emphasis put on the areas in the vicinity of underground stations. It is planned to extend and modernise the existing traffic complex (Nørrebro Station) as a hub that integrates different transport systems – high-speed rail, underground, coaches, pedestrian and cycling traffic.

These plans constitute a continuation of the activities already undertaken for the benefit of creating a sequence of attractive urban spaces in Nørrebro. They comprise the transformation of a wide belt of land spanning from Nørrebrogade street to Tagensvej street (Superkilen, arch. Big, Topotek1, Superflex). A belt of land parallel to the one referred to above, between the underground stations of Nørrebro and Bispebjerg (Mimersparken), has been put into order, too. An urban recreational space was organised there, filled with greenery and sports facilities, walking lanes, and organised places for residents' meetings. This space is linked with the aforementioned green zones near the Bispebjerg hospital.

Science City North Campus is adjacent to the area of Nordvest described above. Transformations in this zone of the city comprise the modernisation of the northern university campus (Niels Bohr Science Park, Panum and Pharma Science Park), the modernisation of the university hospital, and of public transport. The goal of the activities is to obtain better solutions and to facilitate the cooperation of the university with the city and the business sector.

Valby South belongs to urban areas obtained as a result of the liquidation of industry. It is located near an important hub – the Ny Ellebjerg station. The territory is situated between the streets Vigerslev Allé, Vigerslevvej, and from the south it is filled with green areas along with a park- Idrætspark.

The programme of the transformations comprises the creation of new attractive residential complexes, referring with their character to the traditions of this area. It is also planned to create a network of new roads and walking lanes linking this area with its surroundings and the city centre.

Sydhavn is a quarter by the port, intersected with canals. Many industrial facilities are located here – now monuments of history, recognised as the heritage of the Danish industry. These are e.g. the old HC Ørstedsværket (1916), the Uniscrapbygningen (1917), the buildings of the pump station and the old harbour (1917).

The area is well linked with the city centre via public transport lines. The local plan, modelled on e.g. the revitalisation of territories on the Java island in Amsterdam, as the main design concept assumes the opening of residential areas and pedestrian promenades towards internal canals and the main canal of Sydhavnen.

The plan of transformations, which were partially carried out, comprised three areas of activity: Sluseholmen, Teglholmen, Enghave Brygge. They constitute individual enclaves separated from each other by means of canals, which are connected by bridges, walking lanes, and roads. The function that dominates in all the three areas is the residential one and services relating to it. The block development, filled with greenery, is accompanied by recreational waterside belts, and in Enghave Brygge large open green areas are introduced¹³.

The first of the areas referred to above, its northern part, is a place where an attractive recreational complex has been realised, with promenades, bridges, and swimming pools.

Teglholmen is to be an area dominated by the residential function, shaped in the form of blocks filled with greenery and forming a compact frontage along the water canal.

Enghave Brygge, located the closest to the city centre, is divided into two zones: industrial and residential, separated by means of greenery. The residential block development has been designed in a belt along the waterfront, and its interiors open up towards the water. From the north this area is adjacent to Havneholmen, where a large shopping complex Fisketorvet has been erected, along with administrative and office buildings and housing complexes. This area is linked with the Amager island by means of a foot and bike bridge¹⁴.

The area between **Kødbyen** and **Polititorvet** borders on the historical city centre, and from the south it is adjacent to Sydhavn referred to above. Kødbyen is an area of an industrial character (the old meat district). It is separated from the internal canal and the complex of Polititorver by a railway line.

A favourable location within the urban structure enables to extend the service programme in this area, predominantly in the field of administrative and office services, which fosters the creation of new jobs for city residents. To this end, it is planned to improve the options of using public transport and the connections with the adjacent areas, also by the extension of walking lanes along the canal that intersects the city centre. The extension of the programme of diversified

¹³ *Enghave Brygge, Lokalplan*, Københavns Kommune, 2015

¹⁴ More : *Copenhagen city of architecture. The architecture policy of the city of Copenhagen*, published by Technical and Environmental Administration, City of Copenhagen, Copenhagen 2010

services, especially the ones that support recreation connected with water, is to increase the attractiveness of this part of the city for residents.

Along Kalvebod Brygge street a new public space was created in recent years, by the introduction of representative edifices, such as e.g. SEB Bank (2007-2010, Lundgaard & Tranberg Arkitekter, SLA), Nykredit bank – the Crystal (2008-2010, Schmidt Hammer Lassen Architects), together with attractive squares that accompany them.

Nordøst Amager constitutes a post-industrial area, located in close vicinity of the airport. Due to the proximity of waterside parks on the island of Amager, it is planned to extend services for city residents relating to recreation in this area, especially with water and sailing. It is also planned to locate all sorts of institutions and companies here, which would generate new jobs. These decisions are justified by good connections with the city centre, particularly via the public transport and the underground line. The introduction of the programme referred to above also aims at the stimulation of this part of the city and the improvement of safety of its residents.

Ørestad constitutes an area located in close vicinity to the historical city centre, on the outskirts of a natural reserve. This reserve comprises a large south-western part of the island of Amager along with the seashore belts, and it reaches the city centre with a green wedge. The municipal plan from 1993 included this largest natural territory in the existing system of green wedges in the metropolitan area. This plan assumed the transformation of Ørestad, along with the execution of transport connections with Malmö, into a new attractive urban space located in the geographical centre of the region of Øresund¹⁵.

Over the last decade Ørestad transformed into a modern sustainable urban space, concentrating diversified services with the dominating function of culture and residential architecture, and connected with the city centre by means of quick public transport lines. Currently, it is a place where top model standard architecture is being erected.

Carlsberg is an area located in the district of Vesterbro, in the vicinity of Frederiksberg and Valby. Currently it is subjected to intense transformations due to the transfer of the Carlsberg breweries beyond the territory of Copenhagen (2009) and rendering it accessible to the city residents.

Unique historic buildings, exhibiting high aesthetic values, dating back to the 19th century and the beginning of the 20th century, as well as historic gardens, constitute one the most valuable historic industrial complexes in the country. They are the testimony of over 160 years of production and scientific and experimental works relating to it, conducted in laboratories, in the research centre, and in Carlsberg Academy¹⁶.

Transformations which currently take place in the area in question are implemented according to a concept of a team of Danish architects Entasis, which was awarded as the best developed master plan (Best Master Plan in the World, 2009) at the world architecture festival in Barcelona.

¹⁵ After: *Copenhagen Municipal Plan 1993*, The Municipal Corporation, The Lord Mayor's Department, Copenhagen, 1993, p. 98, 217

¹⁶ Source: www.carlsberggroup.com, access in December 2015.

The post-industrial area reclaimed by the city is to play the role of a new sustainable attractive public space, harmoniously linked with the industrial complex of the historic breweries. Its aim is to stimulate residents, to create new forms of social life, and to be a place for meetings, concerts, and festivals, as well as different cultural events. The nearest 20 years will see the erection of new residential complexes and administrative and office facilities in the vicinity of this historic structure, as well as buildings of educational institutions. It has been assumed that all new edifices shall satisfy the standards of energy efficiency.

The revitalised space is concentrated around the main central square of Bryggernes Plads. It has been designed as a vibrating space of social life, filled with elements of street furniture and surrounded with attractive services: a cultural programme, coffee shops, restaurants. The new public space (Carlsberg City District) is linked with the recently revitalised area near Sønder Boulevard in the place where a new underground station is located.

Figure 1. Transformations of the territory of Carlsberg – construction works at Ny Carlsberg vej street. Figure 2, 3. Historic buildings of the complex of the Carlsberg breweries



Source: Photos by the Author

Nordhavn is an area located in the northern part of Copenhagen, so dominated by the port and industrial function. In the municipal plan (2011) it was demarcated as the largest area of transformations within the territory of the city, as well as in Scandinavia itself. It was assumed that it would fulfil the role of an urban planning laboratory with the application of intelligent technological solutions. The works have been in progress for 10 years now and they are planned to continue over the next 50 years, and the territory of the investment is divided into 5 stages¹⁷. The land development is a result of an international competition (2009), won by a designing team of COBE, SLETH and Polyform¹⁸.

It is planned to transform the post-industrial areas located in the southern part of Nordhavn into a new attractive zone of the city, filled with the service, administration and office and residential programme for 40,000 residents. Currently, within the scheme of the first stage of the works, a residential complex consisting of multi-family buildings has been executed at Marmorvej street, in the vicinity of the seat of the United Nations, UN City (2013, arch.3XN).

¹⁷ After: <http://urbantransform.eu>, access in March 2016.

¹⁸ The study was prepared in a larger team, together with Copenhagen City and Port Development and Rambøll.

Another residential complex, Århusgade Kvarteret, with dense residential architecture, is under construction at the moment.

All the facilities erected in Nordhaven inscribe in the principles of designing sustainable architecture. The public space is dominated by pedestrian and cycling traffic, as well as public transport. In order to improve the accessibility of this area, it has been linked with the city centre by means of a new underground line.

Northern parts of this area are to still fulfil the function of a port. To this end, a complex of four new terminals for tourist traffic services has been erected. Innovative methods of increasing the surface area of the land are applied here by means of using the soil obtained from the construction of the underground and roads within the city limits. The works connected with the new investments in Nordhavn are carried out under the supervision of specialists employed in the new facility located here, the Soil Centre Copenhagen, which serves as an example of sustainable architecture.

Nordhavn. Figure 4, 5. The edifice of the Soil Centre Copenhagen. Fig.6. Buildings of new terminals in Nordhavn. Figure 7. Marmorbyen- a new residential architecture complex. Figure 8. The edifice of the UN City. Figure 9. Adaptation of the existing silos for residential purposes and newly erected complexes of residential buildings



Source: Photo by the Author

Figure 10. Territories covered with the development plan defined in the Municipal Plan from 2011 (source: City of Copenhagen. Municipal Plan 2011)



Source: City of Copenhagen. Municipal Plan 2011

Summary

In recent years, the capital city of Denmark has been subjected to great transformations. The municipal development policy is inscribed in the spatial development policy of the entire country. It also reflects the role of Copenhagen connected with its location in Europe, especially with its significance as the centre of the region of Øresund, connected with Malmö, Sweden. The development of the city is based on the strategy that specifies its leading functions and on the implementation of coherent actions undertaken in different scales – from the scale of the regional and municipal plan, to local plans.

Special recognition should be given to the consistent continuation of the principles of the municipal development since 1947, basing the first regional ‘finger’ plan developed then, which still constitutes an icon of the urban planning art. Subsequent plans developed its assumptions in response to new challenges, connected with the processes of urbanisation and the growing number of residents of Great Copenhagen, and the changing living standards. The principles adopted nearly 70 years ago, referring to the creation of belts of architecture along the routes of the public transport and the preservation of green wedges that separate them, are still taken into account.

The contemporary city (the 'palm' of the finger-like structure) constitutes a model example of creating sustainable space friendly for its residents and harmoniously developing, which today occupies the highest position in studies devoted to the quality of urban life. The practice of prototyping of planned public investments is one of the aspects which have a decisive effect on the attractiveness and approval of architectural and urban planning solutions by residents. It allows to test and correct the undertaken design-related decisions prior to their implementation in the investment process. It also aims at obtaining optimal solutions adjusted to the needs of residents. Currently, it constitutes a permanent element of the urban planning process and it is based on the cooperation of the municipal authorities with specialists from various fields and users of the urban space.

Special attention should be paid to actions connected with the protection of historical heritage in Copenhagen, and with displaying of all values which should be handed down to the next generations. The pursuits of balance in terms of the attractiveness of the place of residence and comparable living conditions downtown as well as on the outskirts of the urban development is also crucial. This objective is reached within the scheme of the examples of revalorisation actions presented in this paper, which are undertaken in different scales and scopes, depending on individual conditions of the place and its tradition. Territories inside the city limits, reclaimed as a result of the removal of industrial, military, port and transport buildings and facilities, are transformed. Within the scheme of the concept of shaping of a sustainable urban environment, they are replaced with new eco-friendly architecture, as well as the existing buildings are adapted. The pedestrian zones and cycling lanes are extended and linked with the public transport routes. Also, different activities for the benefit of the residents' activities and the creation of a healthy living environment for them are promoted, e.g. by extending green areas and spaces connected with water.

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