

ABSTRACT

of the dissertation on the topic:

Designing a public realm in large cities in Kazakhstan: socio-ecological, architectural and urbanism principles

submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy (PhD) in the educational programme 8D07302 – Architecture and Urban Planning

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Relevance of the Research. There is a growing recognition of the role and importance of public realms within urban environments in large cities. This trend is driven by the increasing influence of cities on the social and economic lives of both developed and developing countries. Kazakhstan is notable in this context; however, despite its vast territory and unique natural conditions, research on urbanism processes has not been widely disseminated here, particularly in the study of public realms and their impact on urban development. The analysis of changes in the public realms of Almaty, Astana, and Shymkent, the most populated cities in the country, becomes particularly pertinent.

This thesis aims to identify both qualitative and quantitative changes in the public realms of Almaty, Astana, and Shymkent. This approach is motivated by a shift in priorities in urban planning towards sustainable development goals, where attention is given to environmental aspects of nature conservation and meeting residents' needs for a quality living environment. Thus, the importance of comprehensive research aimed at a thorough assessment of public realms, reflecting social changes in the urban structure, comes to the forefront.

The analysis of the principles of formation and development of public realms plays a key role in determining their theoretical significance and practical application in modern urbanism methodologies. Special attention is given to adapting to the changing needs of the citizens in large cities of Kazakhstan. In the context of dynamic economic, social, and architectural-urban development, public realms in cities undergo a complex process of evolution, occupying an increasingly significant place in the urban environment.

Historically, public realms have occupied a central place in the architecture of cities, reflecting key aspects of composition and design while contributing to the improvement of urban life quality. This underscores the importance of further study and analysis of public realms as they acquire new significance in the contemporary urban context, responding to the challenges of the time and changing social demands.

This research is dedicated to the study of social-ecological and architectural-urbanism principles for the development of public realms in major cities of Kazakhstan. The study includes theoretical and practical analysis of contemporary experiences from various countries, identifies the main conditions and factors influencing the creation of socially comfortable public realms, and proposes the development of a conceptual model.

In major cities of Kazakhstan, as in other megacities around the world, the formation of public realms occurs under the influence of numerous factors: socio-economic, natural, ecological, and urbanism.

Socio-economic aspects, such as the demographic structure of the population, economic development, migration trends, and social structure, dynamically change over time and directly or indirectly impact the structure and functionality of public realms. In small towns, public realms are usually concentrated in centres, parks, and squares, whereas in megacities, their number and variety significantly increase, providing each residential area with its zones for recreation and social interaction. New forms of public realms emerge in areas in front of shopping and entertainment centres, pedestrian streets, and venues for outdoor public events.

The demographic composition of the population in large cities becomes more diverse, leading to the emergence of specialised places for leisure activities for young people or, conversely, elderly individuals, as well as meeting places for various ethnic groups, especially during national and religious holidays.

The economic development of a city affects the leisure and entertainment infrastructure, stimulating investment in the creation and development of new types of public realms, including the reconstruction of obsolete buildings and the repurposing of industrial zones.

Natural conditions – climate, landscape, and the presence of water resources – determine the layout of the city and the distribution of its functional zones, influencing the location and form of public realms.

Ecological factors are considered in the context of the interaction between the population and the natural and man-made environment, including issues of urban ecology and the provision of a quality living environment, as well as social ecology, emphasising social differentiation and the needs of various population groups.

Urbanism factors encompass all aspects of city planning and infrastructure – from engineering and technical solutions to urban design and the aesthetics of public realms, determining their size, configuration, and location over time. These factors are closely intertwined with socio-economic conditions and will be analysed in detail in the context of the development of public realms in Almaty, Astana, and Shymkent, as well as using examples from several major cities around the world.

Despite the extensive scientific research dedicated to the design of public realms, there is a lack of studies on the creation of socially comfortable public realms in the megacities of Kazakhstan.

The relevance of the research is justified by the following:

- the necessity to identify major socio-ecological, architectural, and urbanism issues in the principal cities of Kazakhstan, particularly in Almaty, Astana, and Shymkent;
- the imperative to understand the interconnections between urbanisation, public realms, and social sustainability;
- the increased social fragmentation of public realms and the creation of gated communities as a result of market-oriented approaches and developer projects;
- the need to develop strategies to improve public realms, through socio-ecological and architectural-urbanism principles.

The research utilised works focused on the following areas:

- **The history of urban public realm formation**, examined in works by K. Baipakov, A. Margulan, T. Basenov, M. Mendikulov, V. Glazychev, Bunin M., Savarenskaya A., Abilov A., Khozhikov A., Glaudinov B., Lavrov L., Yermeev A., Ana A., Kuspanaliyev B., Samoylov K., Sennett R., Inam A., Potapov A., Kapkov S., Rakhimov I., Shaburov P., Kamalova G., Asylbekov D., Zhurin A., Kenzhebekov M. I., Nikolaev E., Glaudinov M., Baderdinov L., Eskendirov M., Maloyan G., Sarzhanov N., and Schurch T.;

- **Features of the modern urban public realm phenomenon**, considered in works by Kuspanaliyev B., Dovey K., Pafka E., Inam A., Glazychev V., Glaudinov M., Nurzhanov A., Kornilov A., Saekov D., Tolegen A., Abilov A., Khozhikov A., Kocheridi A., Maulenova G., Musabaev V., Abaydulov D., Bingham-Hall J., Dyachkov O., Geyl Y., Purcell M., Matveeva O.;

- **Theoretical principles of sustainable city formation**, revealed in works by Roseland M., Felder M., Dale A., Wilson V., Bridger D., Talen E., Sungduck L., Onyx J., Sennett R., Lane J., Anderson B., Young I., Klinenberg E., O'Brien M., Jeffries L.;

- **The formation of comfortable public realms**, presented in works by Abilov A., Khozhikov A., Glazychev V., Carmona M., Tonkiss F., Inam A., O'Brien M., Jeffries L., Middleton J., Peel D., Lloyd G., Kamel N., Kamalipour H., Peimani N., McFarlane C., Roy A., Vendina O., Kaika M., Thielen K., Lynch K., Brenner N., Theodore N., Wolch J., Byrne J., Newell J., Atkinson R.;

- **Architectural and urbanism aspects of forming and improving public realms**, studied in works by Kuspanaliyev B., Abilov A., Sidorenko L., Zhanbozov A., Glaudinov M., Baderdinov L., Dubin R., Mametov A., Karmanov Sh., Samoylov K., Turekulov A., Duisenbi A., Geyl Y., Khairzhan A., Galimzhanova A., Nysanbayev L., Khozhikov A., Kocheridi A., Vasilenko I., Kaydalov E., Hallsworth S., Stephenson S., Madelin R., Porphyrios D., Bishop P., Williams L., Imrie R., Moore R., Edwards M.

However, there is still a lack of works reflecting the formation of socially comfortable inclusive public realms in the changing socio-ecological and architectural-urbanism conditions of Kazakhstan's major cities.

The research objective is to investigate existing social, ecological, architectural, and urbanism issues of public realms and develop socio-ecological, architectural, and urbanism principles for creating a modern, comfortable urban environment in various types of public realms in major cities of Kazakhstan.

To achieve this goal, the following tasks are addressed:

- by examining selected examples of public spaces in Almaty, Astana, and Shymkent, alongside an international case study from the United Kingdom (Cardiff Bay in Cardiff), this research seeks to analyse the socio-functional role of the public realm and to identify the social, architectural, and urbanistic dimensions involved in the creation of modern, comfortable urban spaces.

- the study will further explore global practices and key trends in the development of contemporary urban environments, particularly addressing issues of social equity, urban governance, private ownership of urban spaces, and the right to access and utilise these areas. Additionally, it will consider the challenge of achieving

an optimal balance between various users of the public realm, including pedestrians and transport systems.

- to critically reassess previous research and address existing gaps related to the socio-functional role of the public realm in everyday societal use, this study will investigate potential correlations between urban morphology, the vibrancy of public spaces, and the overall comfort of urban environments.

- based on the findings, the research will establish principles for the development of modern, comfortable public spaces and propose conceptual models and design solutions aimed at enhancing the quality of urban public spaces in the city of Almaty.

Research methodology. The data collection methods employed in this dissertation encompass both qualitative and quantitative approaches. Qualitative methods include morphological analysis of architectural and urban planning, field observation, and photographic documentation of research areas. Architectural and urban planning components of public realms are examined through morphological analysis of the built environment, focusing on site permeability, accessibility of public spaces, streets, sidewalks, and paths created by pedestrian movement, as well as connections with neighbouring areas. Additionally, morphological analysis assesses urban density and the functional purpose of adjacent buildings to evaluate the vibrancy of public realms. Social interactions, relationships between individuals, and their behaviour in public realms are studied through field observations, supported by photographs taken on different days of the week and at various times to corroborate these observations.

Quantitative methods include sociological research through surveys and questionnaires administered to city residents to compare and validate the findings from urban morphology analysis and field observations. The survey framework is based on the principles of sociological research established by Professor Abilov A.Zh. to identify existing socio-ecological, architectural, and urbanism issues in public realms. Statistical demographic data analysis is also employed to illustrate the sociological aspects of the city, complementing the findings from urban morphology analysis and field observations. Secondary data were sourced from previously published scientific works, official and government websites, and internet platforms.

Expert assessment involves analysing the compliance of existing urban planning conditions with the criteria for modern urban public realms.

Research object. Urban public realms in the cities of Almaty, Astana, and Shymkent, as well as a foreign precedent in the UK – Cardiff Bay in Cardiff.

Research subject. The socio-ecological, architectural, and urbanism principles for the development of modern and socially comfortable urban public realms.

Thesis hypothesis. A socially comfortable urban public realm is achieved through the comprehensive integration of socio-ecological and architectural-urbanism factors.

Research boundaries. The temporal scope covers the 20th and 21st centuries. Geographically, the research focuses on public realms in Almaty, Astana, and Shymkent, at the city level (city scale), public realms in financial and administrative business districts (district scale), as well as public realms in residential quarters (local scale).

The scientific novelty of the thesis:

- conducted a comprehensive analysis of public realms in major cities of Kazakhstan based on socio-ecological, architectural, and urbanism criteria: in Almaty – Republic Square, the intersection of Baytursynov and Satpayev streets, and public realms in residential areas; Lovers' Park in Astana and the square in front of the Shymkent Akimat.

- developed conceptual-theoretical models and proposals for improving urban public realms for similar urban areas.

- proposed socio-ecological, architectural, and urbanism principles for enhancing social cohesion among citizens and vibrancy through comfortable urban public realms.

The practical significance of the dissertation:

- providing scientific and practical recommendations for designers and architects on creating public realms in major cities, with a focus on architectural and urbanism principles.

- expanding knowledge on the social-functional role of public realms, emphasising the principles of sustainable communities. These findings will be valuable for architects, urban planners, local communities, and government bodies to understand the impact of urban transformations and convert these areas into more comfortable and sustainable districts.

- developing socio-ecological, architectural, and urbanism principles, and offering conceptual proposals for transforming public realms, using Almaty as an example. These results will assist urban planners in making project decisions that create socially equitable and comfortable environments for city residents.

The results of this thesis can be used in the educational process for preparing educational courses on urban planning, urban sociology, and sustainable development principles.

The scientific validity of the established propositions in the thesis is substantiated by the following:

- conducting field studies and analytical work: examining 10 public realms in 6 major cities, including Almaty, Astana, and Shymkent, as well as London, Cardiff (UK), and Dubai (UAE).

- studying and comparing the morphological analysis of urban areas in combination with sociological research.

- collecting, studying, and analysing literary sources of domestic and foreign experiences in creating socially comfortable public realms.

Approval of the thesis. The results of the scientific research work have been implemented in the design of objects by the LLP "Scientific Research Institute 'Almatygenplan'" – fragments of urban planning areas in detailed planning projects (DPP) in the master plan of Almaty until 2040, as well as in the LLP "3-A Engineering" in the following projects:

1. Concept for the development of the district of dilapidated multi-storey residential buildings in the block of Rozybakiev, Zhandosov, Radostovets, and Satpayev streets, Almaty.

2. Public realms of a multifunctional residential complex located in the block of Aiteke bi, Kazybek bi, Baribaev, and Kairbekov streets, Almaty.
3. Landscaping of the square around the Ascension Cathedral in Almaty.
4. Multifunctional residential and business complex located between Seifullin Avenue and Nauryzbay Batyr Street above Satpayev Street, Almaty.
5. Public realms of a multifunctional residential complex located at Nazarbaev Avenue 28A, Almaty.
6. Public realms of a residential complex located at Khallilullin Street 196/17 and 196/18, Almaty.
7. Multi-apartment residential complex located at Bostandyk district, Ermensai microdistrict, Torangy street №55, Almaty.
8. Public realms of a residential complex located at Ospanov Street 80/85, Almaty.
9. Public realms of a multifunctional residential complex located at Timiryazev Street 177, Almaty.

The dissertation puts forward the following propositions:

- a conceptual-theoretical model for the reconstruction of public realms in major cities of Kazakhstan.
- principles for forming socially comfortable public realms considering the architectural and urbanism features of major cities in Kazakhstan.

Personal contribution:

- developed methodological frameworks for forming socially comfortable public realms;
- formed a model of a social survey of the population, allowing the identification of key factors influencing urban morphology on social comfort in public realms;
- surveyed public realms of various urban significance in major cities of Kazakhstan.

Research results. The results of the study were reported and discussed at seminars and scientific-practical conferences dedicated to urbanism, architecture, planning, development, and construction of urban infrastructure.

Seven articles were published on the topic of the dissertation, including three articles in publications recommended by the Committee for Quality Assurance in Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan; two articles in international conference materials, including one article published in a publication included in the Russian Science Citation Index, and two articles in an international scientific journal included in the Scopus database.

Structure and volume of the thesis. The dissertation consists of 241 pages of typewritten text and includes an introduction, three chapters, conclusions and recommendations, a list of references (154 titles), an appendix (25 tables), and illustrative material forming a cohesive whole with the text.

In the first chapter, the history of public realm formation is reviewed, and theoretical aspects of their development in urbanism practices in major cities of Kazakhstan and abroad are identified. A literature review and analysis of similar studies on the dissertation topic, focusing on fundamental aspects of public realm formation in cities, is conducted. Both domestic and international approaches to creating socially comfortable urban realms are highlighted.

Key findings of the first chapter:

The historical analysis of public realms illustrates their multifaceted nature, functional variability, and critical role in shaping the urban environment and enhancing citizens' quality of life. Each stage of public realm development reflects socio-economic and cultural changes in society, showing an evolution from the simple, mono-functional spaces of ancient settlements to the complex and differentiated structures of modern cities.

The analysis of the current state of public realms revealed:

- the necessity to make urban planning decisions based on comprehensive data, considering all factors that influence the qualitative and quantitative characteristics of public realms. This approach should avoid standardised methods and typical solutions, taking into account the city's unique morphology.

- the role of socio-ecological factors in shaping the social realm of a metropolis, contributing to its differentiation according to the diverse mentalities, lifestyles, and leisure preferences of various demographic and ethnic groups within the urban population.

- the importance of spatial control, social equality, and informality in urban public realms. Responsible governance and clarity in implementation are essential to achieve consensus among all participants regarding current, potential, and future users. Economic inequality and social differences can lead to the segregation of public realms into distinct urban environments.

- the necessity to create socially open public realms on the peripheries of urban districts and blocks, providing residents with opportunities for social interaction, especially between people from different social strata. This promotes a more active social life through public realms.

The analysis of public realm formation in major cities emphasises the need for a comprehensive and systematic approach to planning. This approach must consider the numerous factors that influence the uniqueness and specificity of local conditions and history. Planning decisions at both the master plan level and the detailed planning of individual urban areas should be based on thorough pre-project analysis:

Architectural and urbanism. Identifying existing architectural and urbanism issues in public realms can involve various types of analysis, including urban density, multifunctionality, ownership forms of public realms, the share of roads in the urban environment, pedestrian connectivity, permeability and accessibility (including for people with limited mobility), visual boundaries of public realms, and the operation of social infrastructure facilities during the evening and nighttime.

Socio-ecological factors. Sociological research, including population surveys and field observations, is valuable for identifying residents' needs and preferences regarding various types of public realms and their locations within the urban structure. Ensuring the safety of these places is increasingly important. This analysis should include surveying areas intended for creating public realms and studying the greening of the urban environment.

In the second chapter, Socio-ecological and architectural-urbanism factors influencing the formation of public realms at citywide, district, and local levels are analysed using case studies from Almaty, Astana, and Shymkent, with Cardiff (UK)

serving as a foreign comparison. The results of the morphological analysis of these urban areas and accompanying sociological research are presented. Existing socio-ecological and architectural-urbanism problems within the public realms of these major cities are identified.

Key findings of the second chapter:

In the development of public realms in Almaty, Astana, and Shymkent, socio-ecological and architectural-urbanism aspects are critically important for creating a sustainable and healthy urban environment. Research highlights that the successful formation and development of public realms rely on a balanced combination of social, ecological, architectural, and urbanism approaches, collectively ensuring urban sustainability and social vibrancy.

One key finding is that pedestrian accessibility and social activity in public realms are directly related to urban morphology. For instance, in Almaty, Republic Square, initially designed as a city-forming public realm, is primarily used as a transport corridor, which negatively impacts pedestrian accessibility and social activity in the entire area. This highlights the importance of urban planning that considers not only transport needs but also the creation of conditions for active public interaction, recognising the functional and social role of public realms. Public realms that facilitate social interaction and inclusion are essential for forming a sustainable community. However, as the research indicates, many existing public realms are divided and fragmented due to the dominance of automobile transport, which hinders accessibility and usability for pedestrians and cyclists.

The study also reveals that the presence of green spaces and amenities for leisure and recreation is crucial in creating comfortable and attractive public realms. The research emphasises the need to increase the proportion of green and open-access public realms in urban development to improve the ecological situation, enhance the quality of the urban environment, and stimulate social activity. Special attention is given to visual boundaries – the interaction between streets, buildings, and public realms – which is key to creating a socially comfortable urban environment.

A comparative analysis with foreign case studies, such as Cardiff Bay, shows that the challenges faced by Kazakh cities are not unique. In some urban projects abroad, inclusive planning principles are also not fully implemented. These principles should consider the opinions and needs of the local population and balance new construction with the preservation of public realms to ensure social activity and interaction.

In the third chapter, conceptual design proposals for improving the studied urban public realms in the conditions of major cities of Kazakhstan and Cardiff (UK) are developed; principles for forming a socially comfortable urban environment are proposed; a model for forming urban public realms considering the urbanism features of major cities in Kazakhstan is presented.

Key findings of the third chapter:

The study of public realm development in different cities of Kazakhstan and the UK highlighted the importance of integrating historical context and local culture, ensuring multifunctionality in urban development, maintaining adaptability, and enhancing pedestrian network accessibility. These are key architectural and urbanism

principles for creating modern urban realms. Principles for forming public realms should promote social inclusion and improve the quality of life for all population categories, including people with limited mobility. Implementing ecological and social principles, such as using environmentally friendly materials, incorporating greenery, encouraging public participation, and maintaining transparency in planning, not only enhances the urban environment but also stimulates social interaction and creativity, reduces social tension, and increases trust in authorities. Collectively, these efforts create a flexible, inclusive, and socially vibrant urban environment that meets the needs of modern society.

The proposed theoretical model for forming modern urban public realms involves a multi-stage approach, starting with an in-depth analysis of historical and cultural contexts and progressing to the development of concepts that consider multifunctionality and modern trends. A crucial aspect of the model is the creation of socially comfortable and ecologically sustainable spaces that are accessible to all population groups. Implementing the model requires active public participation to ensure that projects meet the real needs and desires of residents. The model also includes continuous monitoring and adaptation of spaces to ensure they remain functional and attractive over time. This approach contributes to the formation of active, healthy, and culturally enriched urban public realms that address the challenges of modern urban development.

Using Almaty as an example, conceptual proposals for transforming urban public realms have been developed, each aimed at improving the quality of the urban environment and the ecological sustainability of areas.

For Republic Square, the conceptual project proposes enhancing the area's functionality and attractiveness through compact development, building multifunctionality, improving the pedestrian network and transport infrastructure, and incorporating more greenery and new lighting. These changes aim to create a comfortable and safe environment that attracts more residents and tourists, thus contributing to the formation of a sustainable community.

For the square in front of Satpayev University, the concept involves creating a "shared space" on a small section of Baytursynov Street, allowing equitable use of space by all road users, ensuring social justice, and activating vibrancy in the area. This project requires active community participation and new mechanisms for managing urban transformations. As this proposal is hypothetical, further extensive research considering city-level transport problems is needed.

In the "Baytal" residential complex area, the proposed models aim to create pedestrian-oriented infrastructure and improve pedestrian accessibility. This includes forming a new boulevard and additional pedestrian alleys, as well as landscaping green areas. These changes aim to create an accessible, inclusive, and multifunctional urban environment and sustainable community, enhancing the quality of life and ecological sustainability.

Each project underscores the importance of architectural, urbanism, ecological, and social aspects in creating lively, sustainable, and comfortable urban public realms that meet the needs of modern society and contribute to improving public well-being and economic activity in the area.

Conclusion

In today's world, public realms acquire particular significance for the urban environment, influencing the social and economic lives of urban populations. The research conducted in the cities of Almaty, Astana, and Shymkent demonstrates the relevance of transforming public realms. The approach to transforming such realms includes a multi-level analysis, from historical significance to modern architectural and urbanism requirements. The study underscores the necessity of a comprehensive approach to planning, which should combine architectural, urbanism, ecological, and social principles.

1. The study of the historical development of urban public realms has revealed their key role in shaping the quality of life and cultural environment of cities. Considering six stages, from ancient civilisations to the present day, it shows how the functions and significance of these realms have changed in response to social, economic, and cultural demands of the time:

- In the early stages, during ancient civilisations and antiquity, public realms served as centres of religious and political life;
- In the Middle Ages, public realms were mainly places of trade and cultural interactions;
- The Renaissance period brought the expansion and differentiation of public realms, reflecting the growth of urban and cultural demands of society;
- The industrial era and the development of capitalism stimulated territorial changes in cities, leading to the creation of micro-districts and polycentric urban structures and prioritising automobile transport;
- The modern stage is characterised by creating multifunctional, inclusive spaces capable of supporting sustainable development and social interaction among citizens.

The historical analysis allows us to understand that public realms are not merely places for meetings or recreation but crucial elements of the urban environment reflecting socio-economic development and cultural changes in society. The evolution of public realms demonstrates how approaches to planning and using urban territory have changed and adapted to new challenges in the modern world.

2. Modern urban planning solutions must consider all aspects—from architectural-urbanism to socio-ecological—to create public realms that meet the needs of all population groups. This includes ensuring a rational transport network, pedestrian accessibility of the urban environment, social safety, functionality of public realms, and ecological sustainability of the area.

3. The study of the influence of socio-ecological and architectural-urbanism factors on the development of public realms in major cities of Kazakhstan, such as Almaty, Astana, and Shymkent, reveals the critical role of these factors in creating a sustainable and healthy urban environment. The analysis shows that successful formation and development of public realms require a balanced combination of various approaches:

- In Almaty, for example, problems related to the pedestrian network, insufficient greening, and the lack of an active social urban environment necessitate revising urban planning design decisions. Enhancing the visual boundaries of public realms and the multifunctionality of urban development can significantly increase social activity and contribute to creating a comfortable urban environment;
- In Astana and Shymkent, problems with the transport network and visual attractiveness of public realm boundaries were also identified, reducing the social vibrancy of the studied areas. More effective urban planning strategies that consider the needs of all population groups need to be developed.

Comparison with the situation in Cardiff Bay (UK) illustrates that the problems faced by Kazakh cities are not unique, and successful solutions can be found through global experience exchange. More attention should be paid to ensuring social safety, improving infrastructure, and creating conditions for pedestrian movement and cultural enrichment of citizens through the enhancement of the urban environment.

4. To ensure the successful development of public realms, a comprehensive approach and active public participation in the planning and development process of the urban environment are critically important. This ensures:

- Socio-ecological sustainability;
- Social inclusion;
- Effective use of architectural-urbanism solutions for creating a comfortable urban environment.

To realise the potential of public realms in major cities of Kazakhstan, all aspects of urban planning must be considered—from architectural-urbanism factors to ecological and social characteristics, some of which are also reflected in the prospective development of public realms in Almaty, according to the city's master plan for development until 2040.

5. The principles for the development of public realms in the cities of Kazakhstan involve combining historical context, local culture, and multifunctionality of urban development. These elements not only promote social cohesion but also enrich the urban environment, stimulating social interaction and creativity. Active citizen involvement in the project development process ensures that the results meet their real needs and desires, encouraging the long-term attractiveness of these spaces.

6. The developed theoretical model represents a multi-stage approach to creating public realms, starting with analysing historical and cultural context and ending with integrating modern architectural solutions. It emphasises the importance of creating public realms accessible to all population groups.

7. Using the example of Almaty, conceptual projects aimed at transforming public realms to improve urban morphology through compactness and density of development, placement of social infrastructure facilities, and improvement of landscaping and greening in the area are developed:

- In the Republic Square area project, improving the vibrancy of the public realm through density changes and multifunctional use of buildings is proposed;

- Creating a "shared space" near Satpayev University and increasing the number of cultural and social service facilities in the area will enhance the vibrancy of the public realm;
- In the "Baytal" residential complex area, transformations aimed at creating a pedestrian-friendly and comfortable urban environment and placing more social infrastructure facilities along main streets are planned to create conditions for interactions among residents and form sustainable communities.

The conceptual proposals presented in the work emphasise the significance of architectural, urbanism, ecological, and social aspects for creating lively and sustainable urban public realms. Conceptual proposals are developed as possible scenarios for the spatial organisation of the considered areas. It is important that each conceptual proposal should be based on sustainable development principles, promoting the formation of active, comfortable, and functional urban public realms, meeting the challenges of modern urban development.