



MYKOLAIV

PROJECT ORGANISERS:

- Estonian Housing Association (Eesti Korterühistute Liit, EKÜL)

SUPPORTED BY:

- Estonian Centre for International Development (ESTDEV)

IN COOPERATION WITH:

- Ukrainian non-governmental organisation Housing Ukraine
- The United Nations Economic Commission for Europe (UNECE)

Apartment building at 48 Kherson highway

MYKOLAIV 2023 – 2024

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1. EXTERIOR OF THE BUILDING (existing condition)



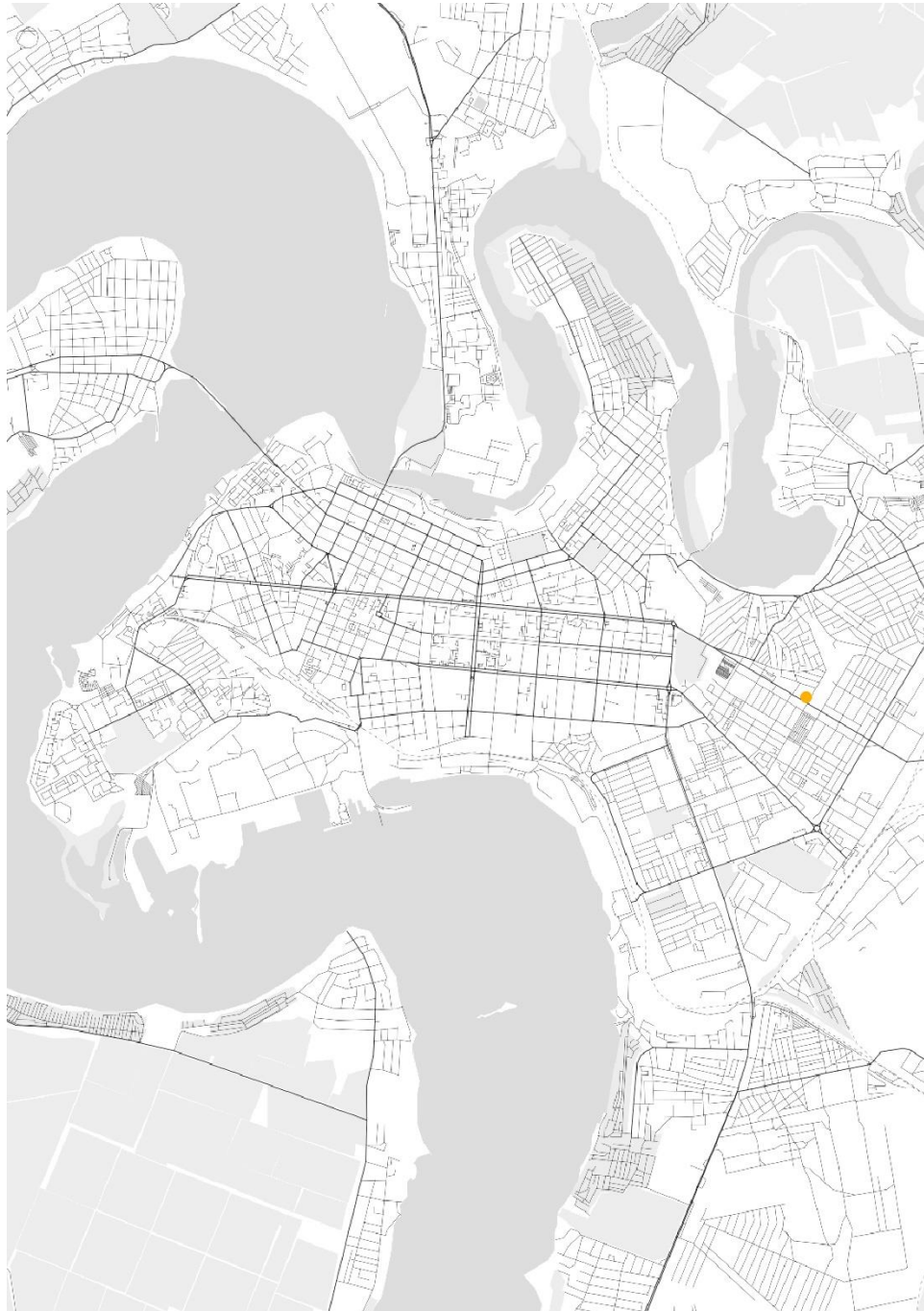
1. EXTERIOR OF THE BUILDING (existing condition)



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2. LOCATION OF THE OBJECT



3. EXTERIOR OF THE BUILDING AFTER RENOVATION



3. EXTERIOR OF THE BUILDING AFTER RENOVATION



3. EXTERIOR OF THE BUILDING AFTER RENOVATION



4. GENERAL CHARACTERISTICS OF THE OBJECT

Technical characteristics of the object

Year of construction - 1992

Number of floors - 10

Construction area - 1347,4 m²

Building volume - 46 216 m³

Total area - 11 298,3 m²

Total area of the apartments - 4980 m²

Living area - 7910,2 m²

Area of common areas - 2613,8 m²

Number of apartments - 144

Number of 1-room apartments - 9

Number of 2-rooms apartments - 63

Number of 3-rooms apartments - 72

Total area of 1-room apartments - 363 m²

Total area of 2-rooms apartments - 3366,3 m²

Total area of 3-rooms apartments - 4955,3 m²

Living area of 1-room apartments - 147,6 m²

Living area of 2-rooms apartments - 1934,3 m²

Living area of 3-rooms apartments - 2898,1 m²

Basement - yes

Current energy efficiency class - G

4. GENERAL CHARACTERISTICS OF THE OBJECT

Structural characteristics of the facility

Foundation - reinforced concrete

Walls - reinforced concrete

Partitions - concrete

Slabs - reinforced concrete

Floor - cement screed

Roof - flat, roofing felt

Windows - metal-plastic

Doors - metal, metal-plastic

Stairs - concrete

Engineering characteristics of the object

Water supply

Sewerage system

Heating

Electricity supply

Gasification

Telephone communication

Television

5. ANALYSIS OF NEEDS AND PROJECT OPPORTUNITIES

Existing technical problems

- Heating (engineering networks in poor condition, outdated)
- There is no facade insulation
- Roofs damaged by shelling by the Russian Federation, partially repaired
- Large energy losses during heating
- Lack of landscaping around the building
- No centralised air conditioning system.

Technological solutions

- 🌱 Solar panels as an alternative energy source
- 🌱 Ventilated facade (clinker and aluminium composite panels)
- 🌱 Internal centralised heating system in the form of an individual heating point
- 🌱 Internal centralised air conditioning system
- 🌱 Energy-saving means of internal and external lighting
- 🌱 Improvement and landscaping of the territory
- 🌱 Useable roof with public space
- 🌱 Internal roof drainage system for rainwater drainage
- 🌱 Creation of inclusive space through reasonable accommodation (agreed with the building manager)
- 🌱 Secure entryway

6. DESCRIPTION OF ENERGY EFFICIENCY POTENTIAL



Desired class of energy efficiency

G

Current class of energy efficiency

B

The energy efficiency of a residential building is influenced by the availability of energy-saving solutions, such as façade insulation, energy-efficient windows and doors, individual communication systems and alternative energy sources that separate the building from centralized networks. These solutions allow the building to produce energy independently, not only supplying it to the residence but also contributing a portion to the centralized grid.

The ultimate goal is to move closer to creating a "passive" energy-efficient building.

Heating: centralised, with individual heating devices in some apartments (boilers).

Electricity: centralised supply.

Cooling, ventilation, air conditioning: natural ventilation system with an exhaust shaft, air conditioning in some apartments with individual air conditioners.

Cold water supply system: centralised.

Hot water supply system: centralised, some apartments have individual water heating devices (boilers, columns, boilers).

Lighting system: from a centralised power supply system.

Consumption and cost of utilities in February 2024

3-rooms apartment, number of residents - 1.

Name of service	Volume/Consumed per month	Tariff, UAH.	To be paid, UAH	To be paid, EUR
Heat energy supply			1630,38	39,7
Heat energy	0,8155	1999,08	1630,38	39,7
General house heating needs	68,607 Gcal			
Electricity supply	132,3 kWh	2,64	336,05	8,18
Gas supply	64,3 m3	7,96	511,828	12,46
Gas distribution		2,388	153,55	3,74
Water supply and sewerage			580,69	14,13
from centralised water supply	15,94 m3	17,532	279,41	6,8
for centralised sewage disposal	11,54 m3	16,512	263,2	6,4
for subscriber services for sewage disposal	-	38,08	38,08	0,93
Contribution and other payments (intercom)	-	35	35	0,85

Household waste management			32,11	0,78
Waste removal (collection and transportation)		28,78	32,11	0,78
Subscription fee	-			
IN TOTAL			3 279,60	79,826

2-rooms apartment, number of residents - 2.

Name of service	Volume/Consumed per month	Tariff, UAH.	Payable, UAH	Payable, euro
Heat energy supply			1375,44	33,478
Heat energy	0,667 Gcal	1999,08	1333,42	32,455
General house heating needs	68,607 Gcal			
Subscription fee			42,02	1,023
Electricity supply	202 kWh	2,64	517,4	12,6
Gas supply	50,0 M3	7,96	398	9,7
Gas distribution		2,388	119,4	2,9
Water supply and sewerage			307,16	7,48
from centralised water supply	10 M3	17,532	159,54	8,4
for centralised sewage disposal	8,94 M3	16,512	147,62	3,6
for subscriber services for sewage disposal	-	38,08	38,08	0,93
Contribution and other payments	-	35	35	0,85
Household waste management			32,11	0,78
Waste removal (collection and transportation)		28,78	32,11	0,78
Subscription fee	-			
IN TOTAL			2 784,51	67,775

7. DESCRIPTION OF THE FORM OF OWNERSHIP AND MANAGEMENT OF THE RESIDENTIAL BUILDING

A condominium (apartment building co-owners' association) is a legal entity established by the owners of apartments and/or non-residential premises in an apartment building to facilitate the management, maintenance, and use of their property and common areas (in accordance with the Law of Ukraine "On Apartment Building Co-Owners' Associations").

Condominium «48, Kherson lane»

USREOU – 42412932

Head – Korolkov Yevhen.

The apartment building co-owners' association at 48, Kherson highway has 290 members.

The decision shall be made by a roll-call vote and shall be deemed adopted if the co-owners whose total number of votes exceeds 50% of the total votes of all co-owners vote in favor of it.

During the voting, each co-owner (or their representative) has a number of votes proportional to the share of the area of the apartment or non-residential premises they own relative to the total area of all apartments and non-residential premises in the building.



A letter from the building association about consent to participate in the project and carry out further repair work

8. LIST OF REPAIR WORKS

Building Repair works:

- Dismantling old flooring and installing new flooring in common areas
- Dismantling and installing new windows and doors
- Dismantling damaged heating systems and installing new one
- Preparatory work and installation of a ventilated facade
- Installation of an internal air conditioning system
- Dismantling of the old rainwater drainage system and installing a new one on the roof of the building
- Preparatory works and installation of interior wall finishing in common areas
- Preparatory work and installation of an individual heating unit and its connection
- Roof repair
- Installation of a "green" roof
- Dismantling old and installing new energy-saving lamps in the common areas of the building
- Dismantling old balcony finishes and installing new ones
- Installation of elements of a new entryway with accessibility features.

Repair Works to Improve the Adjacent Territory:

- Earthworks
- Dismantling old landscaping and installing new landscaping coverings
- New landscaping of the territory
- Dismantling old street lighting and installing new energy-efficient lighting.

9. PRELIMINARY CALCULATION OF THE COST OF REPAIR WORK

The estimated preliminary calculation is presented in euro.

Description of repair works	Price in euro
1. Development of project documentation	200 000
2. Development of heating systems	592 200
3. Development of air conditioning systems	907 200
4. Works to reduce energy losses	2 803 000
5. Improvement of the adjacent territory	300 000
IN TOTAL:	4 802 400

10. INFORMATION ABOUT THE CITY AND ITS REPRESENTATIVES

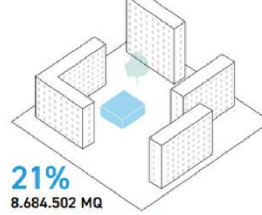
Mykolaiv is a city in southern Ukraine, located on the banks of the Inhul and Pivdennyi Buh rivers.

The city has three types of residential development: multi-apartment residential buildings, single-family homes, and manor houses.

Despite the war, homeowners' associations in Mykolaiv continue to modernize residential buildings under existing programmes. In 2023, compensation was provided to five buildings that implemented energy-saving measures.

Residential Apartment Buildings

Багатоквартирні житлові будинки



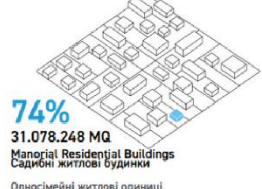
Mixed Low Storey Residential

Змішані малоповерхові житлові будинки



Single Family Residential Units

Односімейні житлові одиниці



Manorial Residential Buildings

Садибні житлові будинки

Односімейні житлові одиниці

TEAM



YEVHEN POLIAKOV

A successful civil engineer and architect who has realised his potential in senior positions in central and local government in Ukraine. Chief Architect of Mykolaiv, Director of the Department of Architecture and Urban Planning of the Mykolaiv City Council.

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Architect and urban planner with a specialisation in urban design, in particular open public spaces and building exteriors, as well as experience in design in an architectural firm and management in the city administration.



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