

# MYKOLAIV



Mykolaiv  
city on the wave

## 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 21 Velyka Morska St.

MYKOLAIV 2023 – 2024

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# 1. EXTERIOR OF THE BUILDING (existing condition)



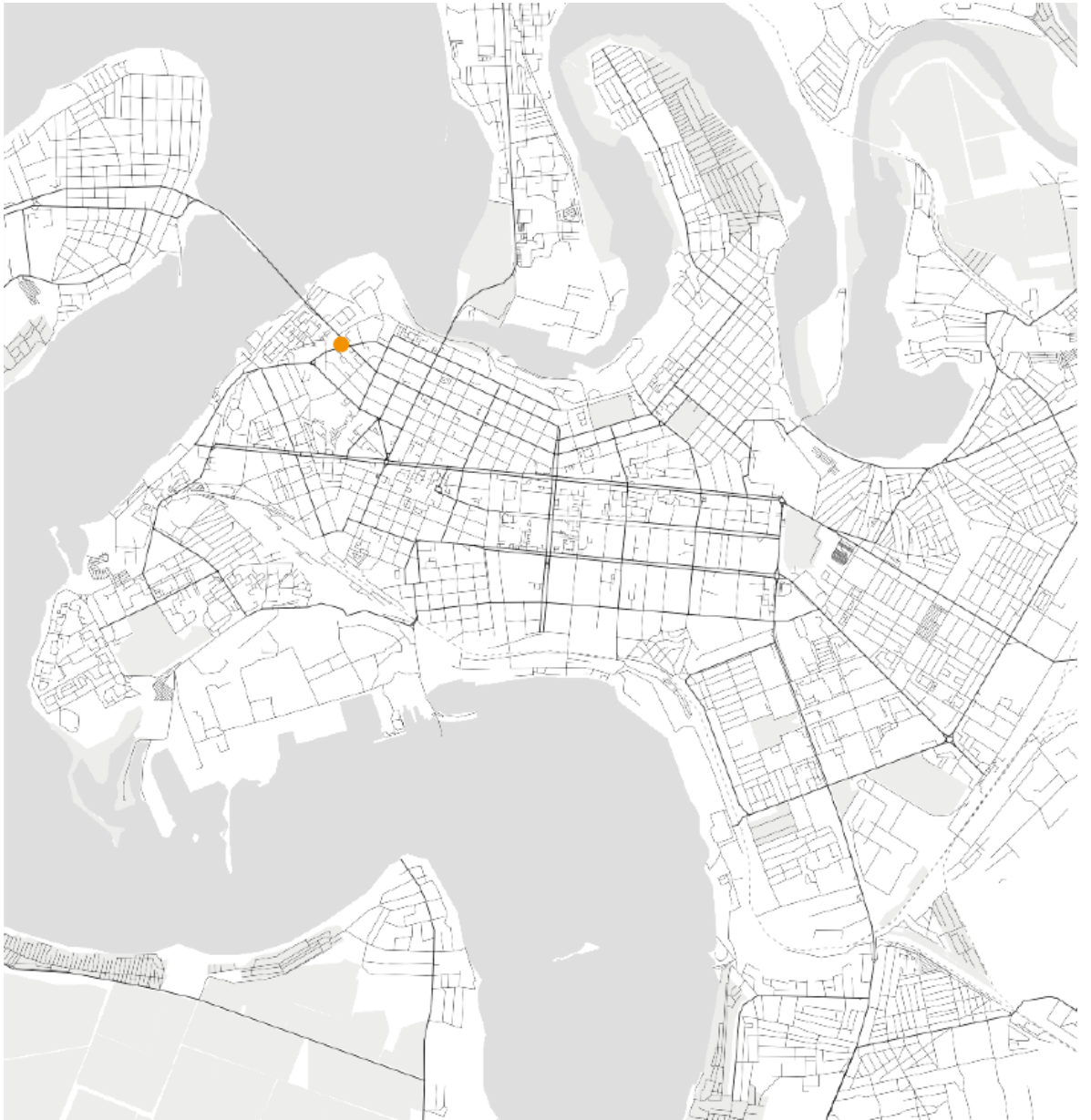
# 1. EXTERIOR OF THE BUILDING (existing condition)



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## 2. LOCATION OF THE OBJECT



### 3. EXTERIOR OF THE BUILDING AFTER RENOVATION



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### 3. EXTERIOR OF THE BUILDING AFTER RENOVATION



## 4. GENERAL CHARACTERISTICS OF THE OBJECT

Technical characteristics of the object

Year of construction - 1962

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Number of floors - 5

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Construction area - 870,9 m<sup>2</sup>

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Building volume - 11010 m<sup>3</sup>

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Total area - 3277,7 m<sup>2</sup>

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Total area of the apartments - 2495,1 m<sup>2</sup>

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Living area - 1603,6 m<sup>2</sup>

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Area of non-residential premises - 57,8 m<sup>2</sup>

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Number of apartments - 59

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Number of 1-room apartments - 15

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Number of 2-rooms apartments - 34

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Number of 3-rooms apartments - 10

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Total area of 1-room apartments - 450,6 m<sup>2</sup>

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Total area of 2-rooms apartments - 1488,2 m<sup>2</sup>

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Total area of 3-rooms apartments - 556,3 m<sup>2</sup>

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Living area of 1-room apartments - 247,3 m<sup>2</sup>

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Living area of 2-rooms apartments - 945,7 m<sup>2</sup>

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Living area of 3-rooms apartments - 410,6 m<sup>2</sup>

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Basement area - 541,5 m<sup>2</sup>

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Current energy efficiency class - G

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#### 4. GENERAL CHARACTERISTICS OF THE OBJECT

Structural characteristics of the object

Foundation - strip, rubble stone

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Walls - red brick

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Partitions - brick

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Slabs - reinforced concrete

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Flooring - cement screed, tiles, linoleum

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Roof - 4-pitched, slate

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Windows - wood, metal-plastic

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Doors - metal, metal-plastic

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Stairs - reinforced concrete

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Engineering characteristics of the object

Water supply

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Sewerage system

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Heating

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Electricity supply

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Gasification

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Telephone communication

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Television

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## 5. ANALYSIS OF NEEDS AND PROJECT OPPORTUNITIES

### Existing technical problems

- Water supply (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 AFTER RECONSTRUCTION

Desired class of energy efficiency



Current class of energy efficiency

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 individual apartments (boilers).

**Electricity:** centralised supply.

**Cooling, ventilation, air conditioning:** natural ventilation system via an exhaust shaft, air conditioning in some individual apartments via 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 (there is lighting for common areas, lighting of the adjacent territory).

Consumption and cost of utilities in February 2024.

**3-room apartment, number of residents - 1.**

Name of service	Volume/Consumed per month	Tariff, UAH.	To be paid, UAH	To be paid, EUR
<b>Heat energy supply</b>			<b>1910,363</b>	<b>46,5</b>
Heat energy	0,956 Gcal	1999,0	1910,363	46,5
General house heating needs	27,8328 Gcal	7		
<b>Electricity supply</b>	65 kWh	2,640	<b>171,60</b>	<b>4,18</b>
<b>Gas supply</b>	65 M3	7,9568	<b>517,2</b>	<b>12,59</b>
<b>Gas distribution</b>	31 M3	2,040	<b>63,24</b>	<b>1,54</b>
<b>Water supply and sewerage</b>			<b>405,76</b>	<b>9,88</b>
from centralised water supply	10,8 M3	17,532	189,35	4,61
for subscriber water supply services	-		19,04	0,46
for centralised sewage disposal	10,8 M3	16,512	178,33	4,34
for subscriber services for sewage disposal	-	10,810	19,04	0,46
<b>Contribution and other payments (door phone)</b>	-	30,0	<b>30,0</b>	<b>0,73</b>
<b>Household waste management</b>			<b>60,97</b>	<b>1,48</b>
Waste disposal (collection and transportation)		28,78	60,97	1,48
Subscription fee	-	3,41		
<b>IN TOTAL</b>			<b>3 159,133</b>	<b>76,9</b>

## 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 «21, Velyka Morska St.»

USREOU - 4099661,

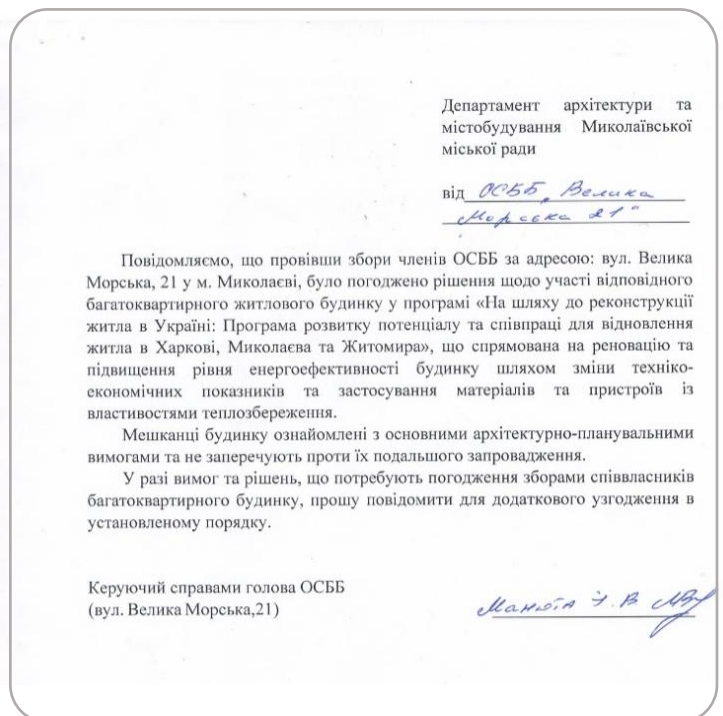
Head - Maniuta I.  
(manager under a contract for the provision of relevant services).

The apartment building co-owners' association at 21, Velyka Morska Street has 72 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 water supply systems and installing new ones
- 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 finishes in common areas
- Preparatory work and installation of an individual heating unit and its connection
- Dismantling of the attic ceiling
- Installation of a reinforced concrete attic floor (roof)
- Installation of the roof covering
- Installation of a "green" roof (with vertical landscaping)
- Dismantling and installation of 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 entrance group with accessibility features
- Repair works to improve the surrounding area
- Earthworks
- Dismantling old landscaping and installing coverings
- New landscaping of the area
- Dismantling old and installing new energy-efficient street 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	328 000
2. Development of heating systems	504 000
3. Development of air conditioning systems	1 128 300
4. Works to reduce energy losses	993 400
5. Improvement of the adjacent territory	300 000
<b>In total:</b>	<b>3 253 700</b>

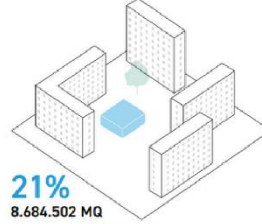
## 10. INFORMATION ABOUT THE CITY AND ITS REPRESENTATIVES

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  
Садиби 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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KATERYNA KHMELNA

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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