APPENDIX 2

TECHNICAL DAMAGE ASSESSMENT REPORT

Prepared from the Official Ukrainian Technical Assessment Report

English Version

Odessa Maternity Hospital No. 5

Building Damage Assessment Following the March 28, 2026 Drone Attack

Odessa, Ukraine

May 2026

Disclaimer

This English version has been prepared from the original Ukrainian Technical Damage Assessment Report for information and project communication purposes. Certain sections have been edited for clarity and readability while preserving the technical findings and conclusions of the original document. In case of any discrepancy or inconsistency, the original Ukrainian version shall prevail.

EXECUTIVE SUMMARY

On March 28, 2026, Odessa Maternity Hospital No. 5 was struck by a Shahed-type drone during a large-scale attack against civilian infrastructure in Odessa.

The attack caused significant damage to the roof structure, upper floors, ventilation systems, internal partitions and reinforced concrete floor slabs.

A certified technical assessment determined that the overall level of damage is estimated at **41–80%**, corresponding to **Category II Damage** under the applicable Ukrainian methodology.

Despite substantial damage, the assessment confirms that:

- the building is not considered a total loss;
- the primary load-bearing structure remains largely intact;
- emergency stabilization measures have been identified;
- reconstruction is technically feasible.

The recommended recovery strategy consists of:

1. Emergency Stabilization
2. Structural Rehabilitation
3. Reconstruction Works
4. Medical Recommissioning

The restoration of Odessa Maternity Hospital No. 5 will help preserve critical maternal and neonatal healthcare capacity for Odessa and Southern Ukraine while strengthening healthcare resilience during wartime and future recovery.

TABLE OF CONTENTS

1. INTRODUCTION

The technical inspection of the building structures of the non-residential facility was carried out in order to determine the measures required for immediate emergency stabilization works following damage caused by the armed aggression of the Russian Federation.

The facility is located at:

28 Dobrovoltsiv Street, Odessa, Ukraine

The inspection was performed by a certified technical expert authorized to conduct building condition assessments and related architectural engineering activities.

The assessment was based on the following documents:

1. Contract for the performance of the technical inspection.
2. Commission Inspection Report dated March 30, 2026.
3. Technical report regarding the assessment of the technical condition of the building structures and the determination of the possibility of continued operation of the damaged non-residential building located at 28 Dobrovoltsiv Street, Odessa.
4. Results of the inspection supported by photographic documentation of the observed damage and destruction.
5. Design solutions developed for immediate emergency stabilization works.
6. Archival records and information provided by construction organizations and municipal services.
7. Qualification certificate of the responsible expert.

The inspection was conducted in accordance with the applicable Ukrainian regulations governing technical inspections, structural safety assessments and rehabilitation of damaged buildings and structures.

2. BRIEF DESCRIPTION OF THE FACILITY

2.1 General Information

The subject of this assessment is the building structure of **Odessa Maternity Hospital No. 5**, which sustained damage as a result of military aggression.

The facility is located at:

28 Dobrovoltsiv Street (formerly Marshala Govorova Street), Odessa, Ukraine.

Description of the Incident

On March 28, 2026, a Shahed-type loitering munition (kamikaze drone) struck the building of Odessa Maternity Hospital No. 5 located in the Prymorskyi District of Odessa.

Main Facts Concerning the Damage

- The drone impacted the roof of the building and caused a fire.
- Damage was sustained by the roof, floor slabs between the third and fourth floors, windows, doors, medical equipment and furniture.
- At the time of the attack, more than 80 people were present in the facility, including:
    - 32 pregnant women and maternity patients;
    - 19 newborns, including infants receiving mechanical ventilation;
    - 33 members of the medical staff.
- Thanks to the rapid evacuation of patients and staff to the underground shelter, no casualties occurred.
- Patients were temporarily transferred to Maternity Hospitals No. 1 and No. 7. Two newborns required hospitalization.
- Emergency responders, psychologists from the State Emergency Service of Ukraine and officers of the National Police were deployed to the site. Medical personnel also assisted in extinguishing the fire.

Purpose of the Investigation

- to determine the technical condition of the building structures damaged as a result of military action;
- to identify emergency stabilization measures required to ensure safety and prevent further deterioration;
- to evaluate the feasibility of future reconstruction and restoration works.

The inspection included detailed photographic documentation of all identified defects, damage and structural failures.

2.2 ARCHITECTURAL, PLANNING AND STRUCTURAL CHARACTERISTICS

The assessed facility is a four-storey healthcare building with a basement level and rooftop technical structures.

The principal façade is oriented toward Dobrovoltsiv Street.

The building consists of a central block connected to two side wings and includes technical rooftop structures housing engineering equipment and building services.

General Building Characteristics

The facility was designed and constructed for healthcare purposes and accommodates:

- maternity wards;
- delivery rooms;
- operating theatres;
- neonatal intensive care facilities;
- gynecological departments;
- diagnostic and support services;
- administrative areas;
- technical and utility rooms.

The building also contains a protected underground shelter capable of supporting medical activities during air raid alerts and emergency situations.

Prior to the attack, Odessa Maternity Hospital No. 5 was considered one of the principal maternity healthcare institutions serving the population of Odessa and Southern Ukraine.

Structural System

Foundations

The building is supported by strip foundations resting on a prepared sand base.

No signs of critical foundation failure were identified during the inspection.

Basement Walls

Basement walls are constructed from reinforced concrete foundation blocks.

Load-Bearing Walls

The primary load-bearing walls are constructed of solid clay brick masonry laid in cement-sand mortar.

Wall thickness varies according to structural location and function.

Reinforced concrete belts are incorporated within the wall system to improve structural stability.

Floor Structures

The floor system consists of precast reinforced concrete hollow-core slabs.

These slabs provide the primary horizontal load-bearing system of the building.

Staircases

The staircases and landings are constructed from precast reinforced concrete elements.

Internal Partitions

Internal partition walls are constructed of brick masonry and finished with plaster.

Roof Structure

The building is covered by a flat roof system comprising:

- vapor barrier layers;
- thermal insulation;
- lightweight screed layers;
- waterproofing membranes;
- bituminous roofing materials.

Rainwater drainage is provided through an external drainage system.

Windows and Doors

The building is equipped with metal-plastic window and door systems incorporating insulated glazing units.

Building Services

The facility is equipped with:

- electrical systems;
- water supply systems;
- wastewater systems;
- central heating systems;
- supply and exhaust ventilation systems.

No gas supply system is installed within the building.

---

3. RESULTS OF THE VISUAL INSPECTION OF BUILDING STRUCTURES

Following the impact of the Shahed-type unmanned aerial vehicle and the subsequent fire, a detailed visual inspection of the building structures was carried out.

The inspection confirmed that the observed damage resulted from the direct impact of the drone, blast effects and fire-related destruction.

The inspection covered:

- foundations;
- load-bearing walls;
- floor structures;
- roof structures;
- partitions;
- windows and doors;
- engineering systems.

General Condition of Structural Elements

The inspection established the following:

Foundations

No significant damage affecting the load-bearing capacity of the foundations was identified.

Load-Bearing Walls

The principal load-bearing walls remain generally intact and continue to ensure the overall stability of the structure.

Roof Structures

The roof and rooftop technical structures sustained severe damage and partial destruction.

Floor Structures

Several reinforced concrete floor slabs sustained significant damage, including cracking, local failure and partial collapse.

Internal Partitions

Numerous partition walls were damaged or destroyed.

Windows and Doors

Window and door assemblies throughout the affected area sustained extensive damage.

Engineering Systems

Ventilation systems and other engineering infrastructure were damaged as a result of the explosion and fire.

Detailed Damage Assessment

The following defects and structural failures were identified during the inspection:

Foundation Settlement

Localized settlement of the foundation was identified in one area of the building.

Damage to Partition Walls

Several brick partition walls on the first floor sustained severe damage and partial destruction.

Destruction of Drywall Partitions

Drywall partitions located in the affected area were destroyed.

Damage to Windows and Doors

Numerous window and door assemblies were destroyed or rendered unusable.

Destruction of Metal-Plastic Partitions

A glazed metal-plastic partition located on the second floor was destroyed.

Damage to Upper Floors

Significant damage was identified on the third and fourth floors, particularly in the vicinity of the impact area.

Collapse of Floor Slabs

Several reinforced concrete floor slab panels collapsed.

Other damaged slab elements remain unstable and continue to present a risk of collapse.

Damage to Ventilation Shafts

Ventilation shaft walls and associated technical structures sustained extensive damage.

Loss of Stability of Structural Elements

Several damaged structural elements exhibit signs of reduced load-bearing capacity and require stabilization, strengthening or replacement.

3. Damage Classification

Based on the results of the visual inspection and the assessment of the technical condition of the building structures, the overall level of damage to the facility was estimated at:

41% – 80% DAMAGE

According to the applicable Ukrainian methodology for the assessment of damaged buildings and structures, this level of damage corresponds to:

CATEGORY II DAMAGE

The assessment established that both load-bearing and non-load-bearing structural elements sustained significant damage.

The nature and extent of the observed damage indicate the need for:

- partial demolition of selected structural elements;
- strengthening of damaged load-bearing structures;
- replacement or repair of damaged non-load-bearing components;
- implementation of emergency stabilization measures prior to reconstruction works.

Recommendation Regarding Continued Operation

Based on the observed technical condition of the building, continued operation of the facility in its current state is not recommended.

The building requires:

Major Repair Works

and

Reconstruction Works

to restore its structural integrity, technical systems and operational functionality.

The implementation of these measures will allow the facility to be safely returned to service.

Technical Assessment Summary

The inspection confirms that:

- significant structural and non-structural damage occurred as a result of the March 28, 2026 drone attack;
- portions of the roof structure and floor slabs sustained severe damage;
- several structural elements require stabilization or replacement;
- the primary structural framework remains largely preserved;
- reconstruction remains technically feasible.

The building is **not considered a total loss**.

---

4. RECOMMENDATIONS FOR IMMEDIATE EMERGENCY STABILIZATION WORKS

General Provisions

In order to preserve the remaining structural integrity of the building and prevent further deterioration, emergency stabilization measures shall be implemented before any reconstruction works commence.

The purpose of these measures is:

- to eliminate immediate safety hazards;
- to prevent additional collapse of damaged elements;
- to protect the building from weather exposure;
- to prepare the structure for reconstruction works.

All stabilization and demolition activities shall be carried out by qualified contractors in accordance with approved technical documentation and applicable safety regulations.

Emergency Stabilization Measures

1. Isolation of Engineering Systems

Prior to any stabilization or demolition works, damaged engineering systems shall be disconnected.

This includes:

- electrical systems;
- heating systems;
- water supply systems;
- technical equipment serving damaged areas.

---

2. Installation of Temporary Structural Supports

Temporary support systems shall be installed beneath damaged reinforced concrete floor slabs.

The objective is to prevent further collapse and ensure safe access for reconstruction personnel.

Support systems shall extend through the affected levels of the building where necessary.

---

3. Installation of Temporary Shoring Structures

Temporary timber and steel shoring systems shall be installed in areas affected by structural instability.

These systems shall:

- support damaged slabs;
- transfer loads safely;
- reduce the risk of progressive collapse.

All support components shall be designed and installed under engineering supervision.

---

4. Controlled Demolition of Damaged Elements

Damaged structural components that cannot be safely preserved shall be removed.

The demolition process shall include:

- identification of unstable elements;
- controlled dismantling procedures;
- sequential removal of damaged components;
- continuous monitoring of structural stability.

---

5. Removal of Destroyed Rooftop Structures

Destroyed rooftop technical structures shall be dismantled and removed.

Debris accumulated on the roof and upper floors shall also be removed.

Particular attention shall be paid to structures located within the impact area.

---

6. Controlled Removal of Damaged Floor Slabs

Damaged reinforced concrete floor slabs shall be dismantled in a controlled and sequential manner.

The sequence of operations shall include:

1. cutting damaged slab sections;
2. removal of detached fragments;
3. dismantling of adjacent damaged panels;
4. relocation of temporary support systems as required.

The works shall continue until all unstable structural elements identified during the assessment have been removed.

---

7. Protection of the Building Envelope

Destroyed windows and openings shall be temporarily sealed.

Protective coverings shall be installed to:

- prevent water infiltration;
- protect interior spaces;
- reduce further deterioration of building materials.

OSB panels or equivalent protective materials may be used for temporary closure.

---

8. Temporary Roof Protection

Temporary roofing systems shall be installed above exposed areas of the building.

The temporary protection system shall prevent:

- rainwater penetration;
- snow accumulation;
- accelerated deterioration of structural elements.

---

9. Cleaning and Removal of Debris

All debris resulting from the attack, fire and partial collapse shall be removed from:

- roof areas;
- floor slabs;
- technical rooms;
- circulation areas.

Debris removal shall be completed before reconstruction activities begin.

---

10. Restoration of Roof Drainage

The roof drainage system shall be inspected and restored in order to prevent water accumulation and infiltration.

Proper drainage is essential to protect the remaining structural elements during the reconstruction period.

Objective of the Emergency Stabilization Phase

The emergency stabilization phase is intended to:

- secure the structure;
- eliminate immediate safety risks;
- prevent additional collapse;
- protect the building from environmental exposure;
- create safe conditions for future reconstruction works.

5. MAIN CONCLUSIONS OF THE ASSESSMENT

Based on the inspection and evaluation of the technical condition of the building structures of Odessa Maternity Hospital No. 5, the following conclusions have been reached.

General Findings

On March 28, 2026, the building sustained significant damage as a result of the impact of a Shahed-type unmanned aerial vehicle and the subsequent fire.

The attack affected:

- roof structures;
- rooftop technical facilities;
- reinforced concrete floor slabs;
- partition walls;
- windows and doors;
- engineering systems and technical infrastructure.

The inspection confirmed the presence of damage affecting both load-bearing and non-load-bearing structural elements.

Technical Condition of the Building

Foundations

The foundations remain serviceable.

No critical damage affecting the load-bearing capacity of the foundation system was identified.

Load-Bearing Structures

The principal load-bearing masonry walls remain generally intact and continue to provide overall structural stability.

Floor Structures

Several reinforced concrete floor slabs sustained severe damage, including cracking, loss of support and partial collapse.

Roof Structures

Roof structures and rooftop technical facilities sustained extensive damage and partial destruction.

Engineering Systems

A significant portion of the engineering systems requires repair or replacement before the facility can be returned to operation.

Damage Classification

Based on the results of the inspection, the overall level of damage to the facility is estimated at:

41% – 80%

According to the applicable Ukrainian methodology for damage assessment, this corresponds to:

CATEGORY II DAMAGE

The building has sustained substantial damage while retaining a significant portion of its primary structural framework.

Required Technical Measures

The assessment confirms the necessity of:

- emergency stabilization works;
- controlled dismantling of damaged structural elements;
- strengthening of selected load-bearing components;
- replacement of damaged building elements;
- restoration of engineering systems.

These measures are required prior to the resumption of normal building operations.

Feasibility of Reconstruction

The technical assessment concludes that the building is suitable for restoration through:

Major Repair Works

and

Reconstruction Works

The structure is not considered a total loss and may be restored following implementation of the recommended stabilization and reconstruction measures.

Final Expert Opinion

The condition of the building does not justify complete demolition.

The preservation of the primary structural framework makes reconstruction technically achievable and economically reasonable.

Following completion of:

- emergency stabilization works;
- structural rehabilitation;
- replacement of damaged systems and components;

the facility may be returned to safe operation.

---

6. REFERENCES

This assessment was prepared in accordance with applicable Ukrainian legislation, construction standards, technical regulations and methodological guidance governing:

- inspection of buildings and structures;
- assessment of damage caused by military actions;
- emergency stabilization measures;
- repair and strengthening of damaged structures;
- reconstruction and rehabilitation of public buildings;
- technical safety requirements applicable to healthcare facilities.

---

7. PHOTOGRAPHIC DOCUMENTATION

English Captions for Photographic Documentation

Photo 1

General View of the Damaged Hospital Building

Photo 2

Condition of the Damaged Façade

Photo 3

Condition of the Damaged Façade

Photo 4

Destruction of Rooftop Superstructure

Photo 5

Condition of the Damaged Façade

Photo 6

Condition of the Damaged Façade

Photo 7

Drone Impact Location on the Roof

Photo 8

Condition of the Roof and Roofing System

Photo 9

Destruction of Rooftop Superstructure

Photo 10

Destruction of Rooftop Superstructure

Photo 11

Destruction of Rooftop Structural Elements

Photo 12

Destruction of Ventilation Duct

Photo 13

Destruction of Rooftop Superstructure

Photo 14

Destruction of Rooftop Structures at the Impact Area

Photo 15

Collapse of Reinforced Concrete Floor Slab

Photo 16

Collapse of Reinforced Concrete Floor Slab

Photo 17

Through-Crack in Partition Wall

Photo 18

Concrete Spalling at Floor Slab Joint

Photo 19

Collapse of Floor Slab Between Structural Axes

Photo 20

Collapse of Floor Slab and Partial Structural Failure

Photo 21

Structural Collapse at the Explosion Impact Area

Photo 22

Damage to Rooftop Structure Wall

Photo 23

Displacement of Floor Slab from Exterior Wall

Photo 24

Damaged Structural Connection Area

Photo 25

Damage to Structural Support Zone

Photo 26

Damage to Reinforced Concrete Structural Elements

Photo 27

Damage to Roof Structural Components

Photo 28

Damage to Internal Structural Elements

Photo 29

Damage to Partition Structures

Photo 30

Crack in Reinforced Concrete Floor Slab

Photo 31

Destruction of Windows and Openings

Photo 32

Condition of Damaged Floor Slabs Between the Third and Fourth Floors

Photo 33

Partial Collapse of Floor Slab

Photo 34

Partial Collapse of Floor Slab

Photo 35

Destruction of Metal-Plastic Partition Wall

Фото 1 Загальний вигляд пошкоджень будівлі з боку дворового простору

Фото 2 Стан пошкоджень фасаду

Фото 3 Стан пошкоджень фасаду

Фото 4 Руйнування надбудови на покрівлі будівлі

Фото 5 Стан пошкоджень фасаду

Фото 6 Стан пошкоджень фасаду

Фото 7 Місце попадання дрону в дах будівлі

Фото 8 Стан даху з покрівлею

Фото 9 Руйнування надбудови

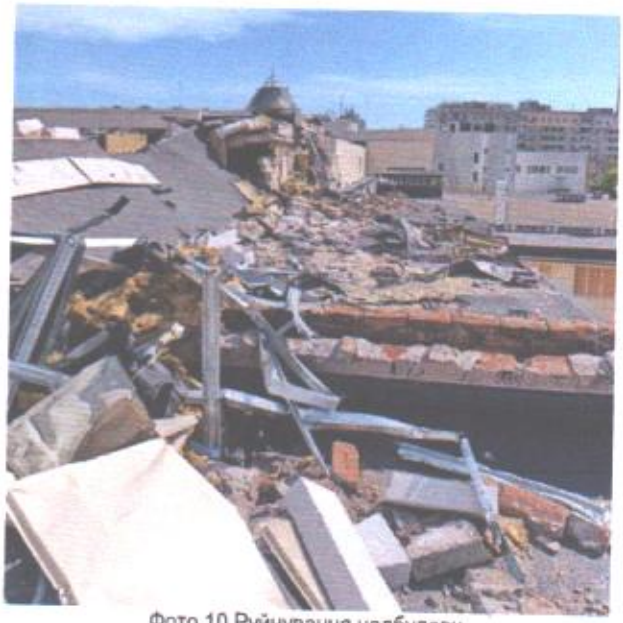

Фото 10 Руйнування надбудови

Фото 11 Руйнування конструкцій надбудови

Фото 12 Руйнування вент/каналу

Фото 13 Руйнування надбудови

Фото 14 Руйнування надбудови, місце попадання

Фото 15 Руйнування плити перекриття

Фото 16 Руйнування плити перекриття

Фото 17 Наскрізні тріщини в перегородці

Фото 18 Випадіння розчину зі швів між плитами

Фото 19 Руйнування плити перекриття 3 поверху в осях 12-13/В-Ж

Фото 20 Руйнування плити перекриття, обвалення частини конструкції

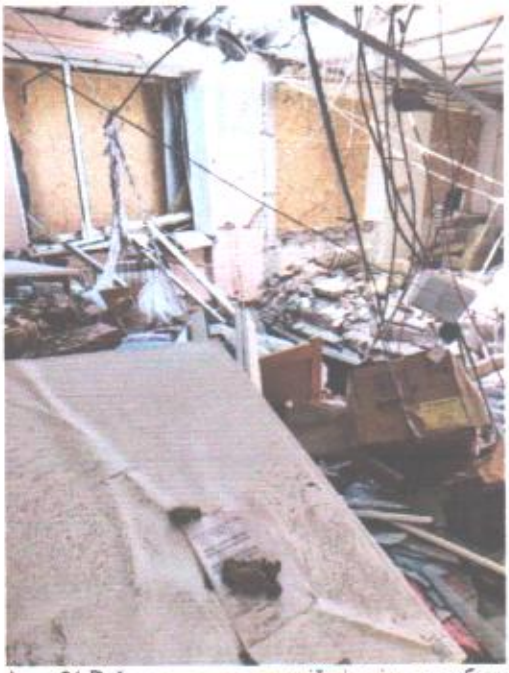

Фото 21 Руйнування конструкцій під місцем вибуху

Фото 22 Пошкодження стіни надбудови

Фото 23 Зміщення плит перекриття із зовнішньої стіни

Фото 30 Прогини в плитах перекриття

Фото 33Обвалення частини плити перекриття

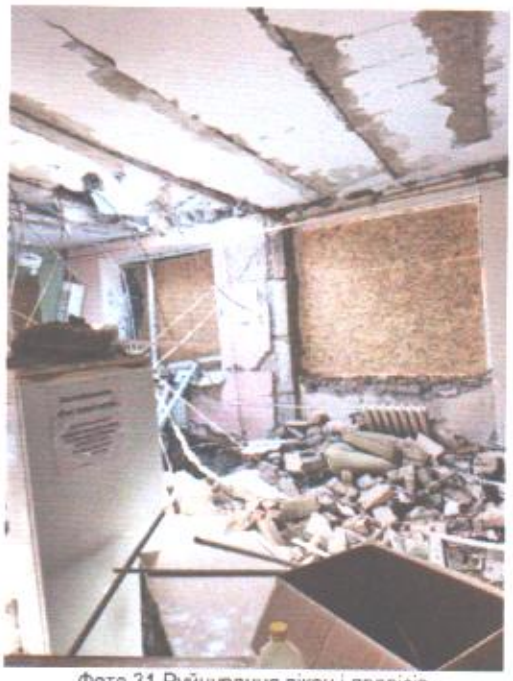

Фото 31 Руйнування вікон і прорізів

Фото 34 Обвалення частини плити перекриття

Фото 32 Стан руйнування плит перекриття між 3 і 4 поверхами

Фото 35 Руйнування металопластикової перегородки

KEY TECHNICAL CONCLUSIONS

Damage Level

41–80%

Damage Classification

Category II Damage

Structural Condition

The primary structural framework remains largely preserved.

Building Status

The building is **not considered a total loss**.

Emergency Measures

Immediate stabilization measures are required before reconstruction.

Reconstruction Potential

Reconstruction is technically feasible.

Recommended Approach

Stabilization → Structural Rehabilitation → Reconstruction → Recommissioning

Strategic Significance

The restoration of Odessa Maternity Hospital No. 5 will contribute to preserving essential maternal and neonatal healthcare capacity for Odessa and Southern Ukraine.

ВИТЯГ
з Реєстру БУДІВЕЛЬНОЇ діяльності щодо інформації про технічне обстеження Єдиної державної електронної системи у сфері будівництва

Реєстраційний номер документу: ТО01:5994-4064-1877-7977

Статус документа: Діючий

Загальна інформація

Документ	26 від 13.05.2026
Організація, що видала	ФОП (2312009937)
Сертифікований експерт	Мішин Василь Миколайович (АЕ 006970, АЕ 001795)
Тип звіту	Звіт про обстеження об'єкта у зв'язку з пошкодженням внаслідок позапроектних впливів (пожежі, стихійного лиха, аварії, воєнних дій або терористичних актів)
Тип обстеження	Попереднє
Коротка рецензія	

Адреса

Адреса	Адреса згідно експериментального порядку	Наказ
Одеська обл., Одеський район, Одеська територіальна громада, м. Одеса (станом на 01.01.2021), вулиця Добровольців, 28	не присвоювалась	не призначалась

Інформація про замовників