



TERMS OF REFERENCE FOR THE INTERNATIONAL  
OPEN ARCHITECTURAL DESIGN COMPETITION FOR  
UKRAINE'S SCHOOL OF THE FUTURE

ANNEX 6  
TECHNICAL TASK

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# DEFINITIONS AND ABBREVIATIONS

- **Adaptive Reuse Architectural Design** means a design documentation, a set of architectural solutions for a building design featuring maximum solutions for the site, the interior and the exterior of the building, which can be applied independently of the specific target site or location, and could be re-used, in adapted form, for multiple different locations, each time by individually integrating and adapting it to the local context, i.e. adaptive reuse architectural design will not contain solutions for integrating the design into a specific site, but will be developed at a later stage to suit the specific site. The design will have to be prepared in accordance with the requirements laid down in Ukrainian legislation, including the Procedure for the Preparation, Examination and Application of Reuse Designs in Construction (ПОРЯДОК розроблення, здійснення експертизи та застосування проєктів повторного використання у будівництві), approved by Resolution No 1160 of the Cabinet of Ministers of Ukraine dated 14 October 2022 <https://zakon.rada.gov.ua/laws/show/1160-2022-%D0%BF#Text>

- **Architectural Proposal** – an Adaptive Reuse Architectural Design Proposal developed by the Entrant, expressing the main architectural idea of the competition object and prepared in accordance with the terms of the open design competition.

- **Multi-purpose education centre** means a multi-purpose education centre complex (hereinafter – the Complex), a combination of all buildings dedicated to learning and supplementary functions.

- **The principle of a "full-day school"** means an educational process that goes beyond the delivery of formal education and envisages seamless integration of non-formal education and an expanded relationship with the local community.

- **Financial donor** means a natural or legal person who is interested in the reconstruction of Ukraine's educational infrastructure and who plans to finance the future implementation of the project in accordance with the Adaptive Reuse Architectural Design developed by the winner of this competition.

- **Dual-use shelter** means a civil protection compliant structure (in accordance with requirements of ДБН В.2.2-5:2023 Захисні споруди цивільного захисту) capable of being used for other functions in peacetime as defined in clause 4.1.

- **Expert examination of the design, or expert examination** means expert validation of the conformity of a design / separate parts of the design with the requirements of construction norms and regulations and normative documents, the mandatory use of which is established by the legislation of Ukraine, without providing a general expert report. This examination will guide the contracting authority and the beneficiary in evaluating the adequacy of the service provision.

## INTRODUCTION

An international workshop was organised prior to the Competition to not only apply best practices in educational architecture, but also to properly assess and respond to the educational needs of Ukraine today. It was attended by representatives of Ukrainian and Lithuanian education, architecture, responsible governmental institutions and non-governmental organisations who shared their insights. The workshop defined the main needs and principles of the future school which formed the basis for the technical assignment for competition and design services. It should also be noted that, in line with the principle of integral cooperation, one of the cornerstones for the success of the project is that the architectural competition proposals will have to be prepared in cooperation with an architect licensed to practise in Ukraine.

# OVERVIEW OF THE CURRENT SITUATION

## 3.1 The state of education and infrastructure in Ukraine today

Some pupils have been deprived of an access to high-quality educational services as early as 2020 due to the pandemic that struck at that time, and later due to the actions and consequences of Russian military aggression. More than 3,000 school buildings in Ukraine are currently severely damaged or destroyed as a result of ongoing military aggression. More than a third of Ukrainian pupils only have access to distance learning. A large number of pupils do not attend school because their safety is not guaranteed: there are no shelters. Internal migration to safer parts of the country has put the education infrastructure in less war-affected regions under severe strain, some schools operate three shifts a day. Pupils and teachers are facing the problems of emotional and psychological well-being. The following key priorities are identified in the light of these and other challenges related to education in Ukraine:

- Access to education;
- Pupil and teacher safety;
- Educational gaps due to inadequate education process;
- Teacher burnout and pupils' psychological well-being.

In terms of the needs of educational infrastructure which exist today and will remain in place for the near future, Ukraine will require the following types of educational institutions:

- a network of small primary schools in rural areas;
- multi-purpose education centres in regional centres covering an area of up to 50 kilometres;
- schools in major cities that can address demographic changes due to internal migration.

The examination of a multitude of arguments at the competition development phase has led to a decision to develop the concept of a Multifunctional Education Centre.

## 3.2 Changes in the education system

Ukraine is undergoing an education reform that will bring about systemic changes in secondary education, with a move towards a 12-year secondary education system comprising three levels:

primary school - an educational institution of the I degree, which provides primary education: grades 1-4;

gymnasium - secondary education institution of the II degree, which provides basic secondary education: grades 5-9;

lyceum - an institution of secondary education of the III degree, which provides specialized (humanities or natural sciences) secondary education: grades 10-12.<sup>1</sup>

In the face of the war, the situation of education poses many challenges but it is seen as a key area to help the country and society through the difficult phase of the war and the changes of the near future. While the Ukrainian education system has managed to adapt to some extent by using distance learning tools, they are by no means a substitute for regular live interaction, experiential education and opportunities for communities to function fully. Schools are also seen as having a special role to play in the reintegration of communities, in the return to normal life and in absorbing the effects of military aggression. The need for specific approaches and solutions in schools to address the integration of people with disabilities, whether as pupils, teachers or community members, with appropriate measures related to rehabilitation needs, has already been identified.

The reorientation of the traditional school (where pupils spend only part of the day at school, which is linked to the direct function of learning) towards the principle of the "full-day school" (where pupils are provided with learning and extracurricular activities) is crucial. This is in addition to the need to increase productivity through the use of infrastructure, reducing exclusion in the delivery of formal and non-formal education, as well as promoting the integration of the local community into the educational environment or the use of school infrastructure.

## 3.3 Adaptive reuse architecture and the need for it

The Adaptive Reuse Architecture school building aims to create a dynamic and adaptable learning environment that fosters creativity, collaboration and engagement among pupils, teachers and the community. By combining flexible spaces, advanced technology, sustainability elements and a variety of learning spaces, such a building

<sup>1</sup> Article 9 of the Law of Ukraine On Education

# OVERVIEW OF THE CURRENT SITUATION

can meet the changing needs of the education community and create a stimulating and effective learning environment, taking into account the local context, the authenticity and the needs of the community.

The need for an adaptive reuse architecture school building is a design concept that seeks to create a learning environment that can adapt and respond to the changing needs and requests of pupils, educators and the community. It combines the principles of adaptive reuse architecture with the specific requirements of an educational institution. Looking at the consequences of today's war, a very large number of schools need to be reconstructed or rebuilt today and in the near future. Therefore, in response to the situation and the role of the educational infrastructure, the principles of access to funding, the importance of the fastest possible timelines while substantially improving quality instead of losing it and the integration of modern educational principles, preference is given to the principle of adaptive reuse architectural design.

## 3.4 Situation in the design and construction sector

Ukraine has a vast and geographically extensive territory, so the prevailing construction technologies and materials often depend on the specific region where the construction work takes place. Requirements for seismic, climatic and soil programmes may also vary depending on the location. The country is rich in building resources such as wood, clay, steel and concrete. Traditional building principles prevail, so the most recent sustainable building technologies or practices are rarely applied.

The aim is to create the school of the future; entrants are therefore expected to consider and propose building solutions and technologies that are future-oriented, i.e. solutions that are linked to the totality of the assumptions of sustainability, energy efficiency and eco-friendliness in the construction sector, including the use of construction scrap and building rubble. This is expected to be one of the important considerations for engaging with potential donors for school construction.

The duality of the situation, where the knowledge of modern technologies and the need to integrate them is not in line with the current national building regulations, is another challenge for this project – to influence changes in building regulations based on best practices and examples.

The architects taking part in the competition are expected to pay particular attention to the construction scrap (building rubble) as potential material for future construction. Suggestions on how to use the large amount of building rubble left behind by military hostilities could not only help to implement the principles of reuse in the construction of the future school building, but also to solve the general problem of ecological waste that the country is facing. Using recycled materials such as eco-friendly bricks, recycled metal and recycled wood can reduce waste and increase the sustainability of construction. The adaptive reuse architectural design will need to be able to respond and evolve based on the local materials prevailing in the specific region where it is to be built.

In general, adaptive reuse architecture relies heavily on the use of local materials, achieved through the use of advanced technologies that can be tailored to specific user and environmental needs. By combining local building materials with advanced engineering and innovative technologies, adaptive reuse architecture can be flexible, sustainable and energy efficient, making it a viable solution to meet the ever-changing future needs.

# COMPETITION OBJECTIVE

## 4.1. Object and scope of the competition

The Complex is to accommodate around 550 children of all ages, from primary school to lyceum, with facilities for temporary accommodation for pupils and teachers, spaces for community activities and psychological rehabilitation, and a dual-use shelter.

The Complex comprises:

- Primary school. Grades 1-4. According to the Ukrainian regulations for educational/educational institutions, it must be a separate building or block, or a building attached to the main school structure by a solid wall, with autonomous functionality and entrances.
- Gymnasium I. Grades 5-9.
- Lyceum. Grades 10-12.
- Common-use facilities for all school uses and community needs.
- Civil protection structure: a dual-use shelter (protection level P-4), a dual-purpose building with the protective characteristics of a radiation shelter), with a capacity of up to 650 people, as part of the educational establishment.
- Dormitory-type accommodation for pupils and teachers.
- Site territory (hypothetical). Access to the Complex, leisure, sports and fitness, outdoor education areas, part of the utility area, parking spaces for vehicles.

The total usable area of the Complex is ~8,850 m<sup>2</sup> (calculated according to the Ukrainian minimum normative requirements, and excluding the areas of ancillary and technical-engineering premises), the total area of the Complex is about 10,000m<sup>2</sup>.

An architectural proposal will be rejected if it:

- The total usable area of the Complex is less than 6,500m<sup>2</sup> or more than 9,000m<sup>2</sup> and/or the total gross floor area of the Complex is more than 10,500m<sup>2</sup>.

## 4.2 Procurement object:

The Contracting Authority will procure from the successful Entrant the design services of an Adaptive Reuse Architectural Design for a new school for the reconstruction of the educational infrastructure of Ukraine. The design will have to be prepared in accordance with the requirements laid down in Ukrainian legislation, including the Procedure for the Preparation, Examination and Application of Reuse Designs in Construction (ПОРЯДОК розроблення, здійснення експертизи та застосування проєктів повторного використання у будівництві), approved by Resolution No 1160 of the Cabinet of Ministers of Ukraine dated 14 October 2022 <https://zakon.rada.gov.ua/laws/show/1160-2022-%D0%BF#Text>

The services consist of separate phases: (I) preparation of the design proposals, (II) preparation of the Adaptive Reuse Architectural Design prior to expert examination, and (III) preparation of the Adaptive Reuse Architectural Design following expert examination, including corrections based on its comments, if any. The components of the design and the scope of the design solutions by service delivery phase are detailed in Chapter 6. The design and its scope shall be declared eligible through expert examination, which shall be organised, carried out and paid for separately by the Contracting Authority.

As an option, the Contracting Authority asks the entrants to estimate and quote the prices for possible future services (but the Contracting Authority, the Beneficiary or the Financial Donor shall have no obligation to purchase them):

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(a) Adaptation of the design<sup>2</sup> to the exact location and preparation of the technical design, including but not limited to the identification of, and response to, the local urban, architectural, landscape conditions and community needs, and obtaining the building permit.

(b) Author's supervision of the design during its implementation (construction).

**NOTE: The prices for procurement objects (a) and (b) are shown in the Price Offer Form. They are for information purposes only and will not be used for Proposal examination purposes.**

## 4.3. Territory, site and levels of detail

This is an adaptive reuse architectural design, therefore a specific site is not provided at the competition stage. In order to identify the volumetric and spatial adaptability of the proposals and the outdoor area solutions, three hypothetical sites with different characteristics are provided in the procurement documentation. All architectural proposals and solutions shall be prepared for the hypothetical situation A: the detailed planning of the site, the volumetric spatial composition of the Complex, the planned functional solutions of the buildings, sections and facades, visualizations, as well as other relevant information. Hypothetical situations B and C should only be used for site diagrams of the proposed adaptation of the architectural solution and the variations of the volumetric spatial composition of the Complex to demonstrate the in-principle and potential of reuse adaptability.

## 4.4. Requirements for design solutions

- Architectural adaptability;
- Adaptation to the concept of the “full-day school”, in line with modern educational principles; safety and rational use of facilities;
- Quality of construction and built environment (ergonomics), durability;
- Innovation (adapting new technologies, materials, architectural and environmental features to all members of society: applying the principles of design for all (universal design) to ensure the mobility of human flows and the accessibility of the designed facilities;
- Coherent architectural idea;
- Creating a functional building structure;
- Aesthetics;
- The rationality of the solutions, taking into account the optimality of the relationship between the solutions of the building design and the cost of the project, including the expediency of implementation.

## 4.5. Users of the Complex and the site

The solutions entered for the Competition must ensure that the site and the synergistic functions that can take place there (various activities not directly related to teaching) are partly operational during school hours and to a greater extent after school hours, and that the environment of the site is available for use by the residents of the surrounding areas, if necessary and in agreement with the school.

Users of the Complex and the site:

- Pupils
- Teachers, administration, staff
- Parents, close community

<sup>2</sup> Components of an adapted technical design: general part, site layout (site plan), architectural part (including interior/exterior design including furniture and other elements of small architecture), structural part, external utilities, communication, water supply and sewage disposal, heating, ventilation and air conditioning, gas piping (if necessary), electrical, electronic communications (telecommunications), security alarm (CCTV), access control, sound), fire detection and alarm, process control and automation (building engineering systems management (implementation, adaptation, integration with digital information methodology), heat generation and supply, fire safety, pre-construction and construction organisation, construction costing and recycled materials sheets; work quantity sheets, cost quantity sheets; furniture and equipment sheet, economic part, other parts according to the specificity of the part of the building being designed.

The Designer should note that the list of components of the Adapted Technical Design is a preliminary one and that the design itself will have to be prepared in accordance with the requirements of the applicable Ukrainian legislation, as well as with the specific requirements of the potential Financial Donor. If necessary, the services also include the answering of questions concerning design services from suppliers and prospective contractors during the course of building contract procurement procedure.

# COMPETITION OBJECTIVE

## 4.6. Recommendations for urban design criteria for adaptive reuse architectural design

- The architectural solutions for the Complex must be such that its adaptation allows for a smooth integration into the existing urban fabric.
- The proposed development principles and heights should ensure the creation of a human scale.
- Functional programme of the site. To create an environment that is economically, socially and environmentally sustainable, attractive from the urban / architectural point of view and of high quality, where education, societal and recreational functions coexist and the needs of different interest groups are met. The overall aim is to create an efficient and flexible functional programme, to centralise common use functions where possible, and to allow the same outdoor and indoor spaces to be used for different activities.
- History and cultural heritage. To provide for architectural solutions for the Complex so that its adaptation to the specific site offers opportunities for the creation of an appropriate relationship with the historic or heritage context, if necessary.
- Entrances and accesses roads. Entrances to the site or access roads to car parks must be safe and clearly visible.

## 4.7. Recommendations for the volumetric-spatial structure of the site

### 4.7.1. Competition entrants must propose a high quality and clear urban structure for the Complex so that it:

- is adaptive and can change accordingly to the situation;
- avoids monotonous development;
- is of a human scale;
- shields the inner spaces of the site against street noise and pollution;
- does not create draughts or other local microclimate problems;
- ensures social control, security, public order; builds the overall resilience of the site and takes into account the need for increased security for the specific nature of future activities;
- creates opportunities for an ecosystem connection with the surrounding natural framework.

All public space solutions must be accessible to all members of the community, regardless of age or ability. They must be comfortable, pleasant and safe to use, easy to maintain and repair. Entrants are free to propose a lighting concept for the site and buildings, based on use scenarios and the time of day, possible locations and type of artistic accents, concepts for space and façade greenery, and other complementary solutions.

### 4.7.2. Connections between buildings

The design of the Complex buildings should create convenient interconnections that promote synergies and ensure easy use of shared indoor and outdoor infrastructure of the Complex.

Special attention must be paid to the accessibility and evacuation of the dual-use shelter (visible and clear access and evacuation routes), and to its civilised and dignified use.

The site must have pedestrian and vehicle access points accessible via public spaces; the access points must be integrated into the overall walkway network of the site.

### 4.7.3 Planting solutions for the site

Proposal adaptation must seek to preserve the existing vegetation which not only improves the microclimate but also contributes to the local identity of the site. Entrants must propose a landscaping idea for the competition site.

Landscaping solutions must be sustainable, easy to maintain and prioritise perennials. The local climate and seasonality must be taken into account when proposing landscaping concepts.

### 4.7.4 Universal design and barrier-free environment

The environment must be accessible to persons with reduced functional ability, i.e. they must not be treated differently than other groups of people. Entrants are asked to take this requirement into account when assessing the tragic consequences of war in the country. Integrated universal design solutions should be used to ensure that the same object can be adapted to people with special needs without using additional signage, explanations, or singling out a specific group of people. The entire environment and facilities of the Complex must be accessible to all users.

### 4.7.5 Security and social control



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Security in the area is ensured through spatial integration and visibility of the environment at different times of the day. Easy overview of spaces from all sides must be provided. The functional programming and design of spaces, including architectural and landscaping elements, should encourage building users to feel ownership of the spaces. This can be achieved through semi-private spaces at entrances, seating and artwork. In general, the design of public spaces should encourage compliance and deter potential offenders.

## **4.8 Recommendations for the Complex**

### **4.8.1. Vision for the multifunctional education centre complex**

The Complex is transparent, open, direct, human, warm, contextual, iconic, collaborative and reflective of the country's democratic values. The design of the Complex aims to:

- Create a unified whole, based on the principles of an educational, modern environment, guided by the best educational practices and the recommendations of pupils, teachers, parents and the community;
- The Complex as a whole must foster creativity and a dynamic environment;
- Create a healthy working environment that enhances the efficiency and well-being of pupils;
- Create an environment that fosters community involvement and integration;
- Respond to the community needs arising from the consequences of war;
- Develop a standard for the school of the future;
- Become a benchmark for sustainability through intelligent architectural design, building materials and technology;
- Foster a culture of democracy, transparency and openness, and embody the country's western orientation;
- Create an identity of a warm, immediate and inviting space.

### **4.8.2. Spatial structure of buildings**

The overall composition of the exterior and interior of the proposed multifunctional Complex must meet the high standards of quality, innovation, sustainability and integration into the existing context, which are fulfilled by the following criteria:

- Clarity of the Complex structure and ease of orientation, without additional information signage or sophisticated guidance systems, free of excessive details or complex structural solutions.
- The efficiency, rationality and feasibility of the design solutions are the crucial factors for the realisation of the design. The design should avoid spaces and rooms with low functionality and unsubstantiated solutions. Priority for synergistic activities, dual-use spaces.
- Equal working conditions and uniform quality of environment. Spatial stratification where some premises are clearly inferior to others should be avoided in the Complex. It is particularly important that the design ensures a uniform quality of the environment for all users of the Complex, without singling out a particular user group.
- Multifunctionality and flexibility of spaces. Within a Complex, the same premises can serve different functions and adapt to different needs. Most of the spaces should be easily transformable: subdivided, opened up/closed off or merged. Architects are invited to propose different and synergistic scenarios for the use of the indoor common-use areas of the Complex. Particular attention should be given, and proposals should relate to the dual use of the shelter premises, with a focus on solutions that integrate the functions of the other parts of the Complex without compromising the quality of the activities provided there.

## **4.9 Facilities needed and their characteristics**

The requirements and characteristics of the facilities needed and the expectations for possible planning provided below are indicative.

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## 4.9.1. School needs

**Lobby (ies).** These spaces must be used to create multifunctional spaces and be easily accessible from multiple parts of the building. The design should avoid narrow and long passageways (corridors). The spatial design of the lobby (ies) should consolidate the contemporary educational functions into a coherent community system that shapes the vitality of these spaces. These spaces should be used as gathering, self-development and communication points. They must provide an environment for group work, collaborative and individual learning, recreation, teacher collaboration and parental involvement in school life. They must contribute to the creation of the character of a democratic, modern, open and evolving institution. A space (central lobby), or a group of spaces, must be chosen to this end. It is recommended that the central lobby or the group of spaces is designed at the main entrance. Other important interaction and education spaces, such as classroom and laboratory blocks, the dining hall, the gym, etc., must have functional and visual connections to the space and operate as a single system. Immediate link(s) to the courtyard(s) must be formed. Access control (gates) should be provided to accommodate the flows.

**Primary education environment.** The learning spaces for pupils in grades 1-4 must be separated from the learning spaces for older pupils; they must have their own designated entrance and outdoor area for pupils' activities. At the same time, these pupils must have access to the school's common areas, such as the dining hall, the assembly hall, the gym, the reading room, etc. Solutions to reduce the possibility of crossing flows of different age groups must be proposed. The primary education environment must operate as a set of functional and aesthetic solutions that are conducive to smooth adaptation and integration into mainstream education.

**Library and reading room.** Libraries and reading rooms must become the axis space for modern educational activities, a functional, dynamic educational environment that stimulates learning, thinking and creativity. It is recommended that textbook circulation function is separated from the activities and spaces for accessing other literature. A reading room and a drop-off/pick-up area for books, other than textbooks, must be designed in more accessible areas. A separate lounge/reading room may be created/used, depending on the spatial and functional typology of the proposed building. It must be possible to separate the library (book storage and circulation) part of the building without compromising security requirements. Direct access to the outdoors is recommended to allow reading in outdoor spaces. The library/reading room must provide several types of seating: a conference-style seating for group work (amphitheatre), a multi-seat table for group work, personal (mobile) computer workstations, mobile couches. Both general and local (table-top) artificial lighting must be provided. Enclosed, semi-transparent spaces for small group work adjacent to the library/reading room are recommended. The reading room and its complementing spaces must be equipped with technological tools (projectors, smart screens, etc.) conducive to the modern education process and useful leisure activities; free wireless internet access must be available. The library and the reading room must be conveniently accessible and usable not only for educational and extracurricular activities, but also freely accessible and conveniently available to community members.

**Classrooms, teaching/learning rooms.** The traditional rostrum-type (presentation) space solution must be replaced with an easily transformable one, adaptable to different forms of learning. The formation of clusters of teaching and learning spaces may be proposed. The spatial and design elements of the classroom must accommodate the need for whole-class, small-group and personal learning. In addition to the traditional classroom attributes (desk with a chair and a wall with a blackboard), it is necessary to provide spaces, or parts of spaces, with the attributes of an informal space (sofas and shelves for personal belongings). It is recommended that where classroom partitions are adjacent to large lobbies, they are made of transparent (with the possibility of covering-up), sliding partitions, thus creating options for extended, combined, multi-classroom activities using the lobby space. The option of combining classrooms (in pairs) and splitting them (in two) by mobile partitions must be available.

**Laboratories, technology and specialised classrooms.** The solutions proposed must encourage pupils' exploration and discovery through experience. Creation of separate groups of spaces or building blocks to accommodate laboratory, technological or other specialised teaching/learning activities is recommended. An access option isolated from the whole school building must be available. Such grouping of school functions would allow for a more active and convenient use of these spaces for extracurricular activities or non-formal education, and create opportunities for community members to use the school facilities. Science laboratories should consist of three interconnected spaces. Two classrooms for theory work and one laboratory for practical training (learning). This division of spaces creates the opportunity to rationalise the use of laboratory equipment, to carry out ongoing research, and to master the safe use of rare equipment. Where possible, visual links between laboratories and

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corridors or common areas must be created. Technology classrooms and laboratories must also meet the principles of robotics and maker activities. Convenient access to enable the use of the facilities outside school hours must be designed.

**Function/assembly hall.** The recommended design of the function hall should be adaptable to a variety of activities. Opportunities for performing arts activities and showcases, community meetings and other cultural activities must be created. In order to diversify the use of the space, it is recommended to install a portable, collapsible stage platform, which would create the possibility of forming spatial performances with different scenarios, a portable amphitheatre and portable, easily storable chairs. A portable backstage system must be designed, along with dressing rooms, prop storage facilities. Light-tight, portable curtains or other systems that control natural daylight are recommended to ensure functional change and aesthetic expression of the space. In addition to the inventory for specific activities, the assembly halls must be equipped with a multimedia video and sound system (projector, screen, sound equipment, control consoles) and stage lighting equipment. The artificial lighting solution for the assembly hall must accommodate a number of scenarios: uniform light flux to ensure uniform illumination of the space (for conferences), dimming of the light flux, and spot-zone and stage lighting to create the required atmosphere (for stage performances, film screenings).

**Gym(s).** The gym(s) must accommodate 3 classes (up to 75 pupils) at the same time; the design must therefore include one extra-large gym or two gyms (one larger and one smaller). Spectator seating (up to 100 seats) for the gym, using portable transformable amphitheatres and/or spectator balconies, must be available. Spatial separations and divisions (nets, curtains) must be provided to create separate safe zones for active sports. Adequate numbers of changing and sanitary facilities and showers must be provided. A convenient designated access to the gym is recommended, to allow the use of the space for extra-curricular or community activities outside school hours. The changing area shall have immediate and convenient access to the outdoor sports grounds. A separate fitness room should be added to the gym halls. Existing gym halls shall be provided with compliant flooring, equipment for a variety of sports activities, adequate and safe artificial lighting and compliant air circulation. In addition to traditional sports equipment, it is recommended to introduce modern multimedia systems that provide a variety of ways to motivate physical activity.

**Dining hall.** The design of the dining hall should not only meet the immediate need for food consumption, but also provide a comfortable space for gatherings, extracurricular, informal and community activities. Functional and visual connections to adjacent spaces (lobbies, multifunctional spaces) by creating open accesses are recommended. The proposed food dispensing principle must maximise the service of instantaneous flows. A snack bar with a distinctive design that reflects a youthful aesthetic must be designed and installed. Warming area for brought-in food must be provided. Where possible, a food technology training area must be integrated in, or designed next to, the dining hall. Different types of seating must be offered. Bar-style, communal table(s), dining tables of different heights. Appropriate technological tools for educational activities (projector, sound system) should be provided to maximise the use of space and to integrate additional activities. A direct connection to the outdoors must be created and eating areas protected from direct precipitation and sunlight must be designed.

## 4.9.2. Dormitory needs

The design must include a 35-bed dormitory-type building or a separate block with 15 double rooms for pupils and 5 single rooms for teachers. The functional, ergonomic and aesthetic design of the facilities must allow pupils and teachers to have adequate rest or to engage in learning or work activities as appropriate. The dormitory must include common lounge facilities, a kitchenette(s) with dining areas, an on-duty staff workstation, storage and support facilities. The dormitory must be integrated into the site in such a way as to allow its residents to use the existing facilities and to create private functioning opportunities. A set of architectural solutions that would make it easy to increase the number of seats as necessary by extending part of the building must be provided.

## 4.9.3. Community needs

The role of the community in school activities is seen as crucial. In addition to the traditional access to the school building, the community must also be able to use outdoor facilities, sports and event halls. A designated space for community activities must be provided; it must be possible to easily subdivide it into several spaces for the needs of the community in specific situations (e.g. the needs of war veterans and reintegration). Decision about the activities to be carried out there would be made during design adaptation phase, following a survey on the needs of the community and an examination of other inclusive design challenges. Community members must also be given convenient access to the library, reading room, technology and specialised classrooms, and the dining hall where

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community dinners can be held. Considering the infrastructure of security buildings in the country and the ongoing threat, the community should also have access to the on-site dual-use shelter of the Complex.

## 4.9.4. Security needs, dual-use shelter

Architects are asked to identify functional, ergonomic and aesthetic solutions to ensure maximum safety of the shelters in the event of an emergency, while at the same time being comfortable, aesthetically pleasing and with fully integrated dual-use possibilities. A design where part of the education or service spaces is located in the premises of the shelter would increase the efficiency and economic rationality of the building, but care must be taken to maintain safety requirements and avoid material impairment of the quality of education or related activities.

## 4.10. Spatial structure of the complex

Total Complex has the usable floor area of approximately 8,850 m<sup>2</sup> (but not less than 6,500 m<sup>2</sup> and not more than 9,000 m<sup>2</sup>), while the total floor area requirement is approximately 10,000 m<sup>2</sup>, but not more than 10,500 m<sup>2</sup> (excluding the dual-use of the shelter for education or other uses of the Complex); the Complex must be designed to accommodate approximately 550 pupils and approximately 70 to 90 teachers, administrative staff and support staff, along with up to 20 regularly present community members at any one time (in formal and informal learning and working spaces); the indoor space of the buildings shall be divided into:

- Primary school pupils. Grades 1-4. Two parallel classes in each grade. 18 pupils in one class. 144 pupils in total. Children aged 6-10 years. **Total floor area of primary education space: ~900 sq.m.**
- Gymnasium pupils. Grades 5-9. Two parallel classes in each grade. 25 pupils in one class. 250 pupils in total. Age 10-15 years.
- Lyceum students. Grades 10-12. Two parallel classes in each grade. 25 pupils in one class. 150 pupils in total. Age 15-18 years.
- **Total floor area of gymnasium and lyceum spaces: ~3,000 sqm.**
- **Total floor area of common-use education and community spaces: ~4,000 sqm.**
- **Total floor area of the dormitory (35 beds): ~550 sqm.**
- **Total floor area of the dual-use shelter space: ~1,500 sqm.**
- **Total area of outdoor spaces ~11,200**

Here and below, the floor areas are indicative and may be adjusted during design process; minimum floor areas are calculated in accordance with Ukrainian legislation.

Need for spaces

Space	Requirements and comments. Minimum normative quantities.	Usable area/quantity
Primary education. 144 pupils (8 classes of 18 children)		767
First grade. 36 pupils (two parallel classes of 18 pupils each)		227
Play and learning facilities	2.5 m <sup>2</sup> per pupil	90
Recreation areas (with an option of afternoon sleep)	2.0 m <sup>2</sup> per pupil	72
Ancillary rooms for educational and practical aids, sanitary facilities, Changing room with wardrobe	according to the applicable standards, the space per pupil should be as follows: sanitary facilities – 0.75 sq.m., changing rooms and wardrobes – 0.2 sq.m..	65
Grades 2-4. 108 pupils (two parallel classes of 18 pupils each)		540
Classrooms	2.5 m <sup>2</sup> per pupil	270
Leisure - recreation spaces	2.0 m <sup>2</sup> per pupil	216
Sanitary facilities, changing rooms and wardrobes	according to the applicable standards, the space per pupil should be as follows: sanitary facilities – 0.3 sq.m., changing rooms and wardrobes – 0.2 sq.m.	54

# COMPETITION OBJECTIVE

Gymnasium and Lyceum. 400 pupils (16 classes of 25 children each)		2,700
Gymnasium (grades 5-9). 250 pupils (two parallel classes of 25 pupils each) Lyceum (grades 10-12). 150 pupils (two parallel classes of 25 pupils each)		2,486
General education cycle universal classrooms and specialised classrooms (Ukrainian language and literature (2), foreign literature (2), history and social sciences (2), geography (2), mathematics (2))	2.5 m <sup>2</sup> per pupil	625
Foreign language classes (2 classrooms)	2.5 m <sup>2</sup> per pupil	125
Physics, chemistry, biology science classes (3 classrooms)	2.5 m <sup>2</sup> per pupil	188
Natural science laboratories: physics, chemistry, biology (3 laboratories)	3.0 m <sup>2</sup> per pupil	225
Computer science (practical training) and computer technology classroom with ancillary room	5.0 m <sup>2</sup> per pupil	125
Computer science classroom (theory)	2.5 m <sup>2</sup> per pupil	63
Classroom for teaching the subject of Homeland Defence (2 classrooms)	2.5 m <sup>2</sup> per pupil	125
Drawing, sculpture, painting class for half of the teaching group	6.0 m <sup>2</sup> per pupil	75
Theatre, music, rehearsal classroom, for half of the teaching group (can be organised in a multi-purpose hall, with storage space provided)	6.0 m <sup>2</sup> per pupil	75
Lingua franca classrooms (2 classrooms): for half of the teaching group	3.0 m <sup>2</sup> per pupil	75
Sanitary facilities	0.3 m <sup>2</sup> per pupil	120
Leisure spaces and personal learning spaces	1.5 m <sup>2</sup> per pupil	600
Cloakrooms (with storage lockers)		65
Training workshops		214
Training workshop for pupils in grades 5-9 (metal and woodworking, 1 group of 13 pupils)	7.0 m <sup>2</sup> per pupil	91

# COMPETITION OBJECTIVE

Training workshop for pupils in grades 5-9 (food preparation, 1 group of 13 pupils)	4.5 m <sup>2</sup> per pupil	60
Workshop theory classroom	2.5 m <sup>2</sup> per pupil	63
Common-use education and community spaces		3,534
Physical education and sport		1,568
Sports and fitness multifunctional hall	30x20 m	600
Multi-purpose hall for junior grades	24x12 m	288
Multi-purpose mini-gym (dual-, multi-purpose)	24x12 m	288
Sports equipment storage facilities	16.0 m <sup>2</sup> next to each gym hall	48
Physical education teachers' room	9.0 m <sup>2</sup> per staff member	18
Separate boys' and girls' changing rooms at each gym hall, with showers and toilets	1.47 m <sup>2</sup> per pupil, on assumption that 4 classes of 100 pupils change their clothes at the same time. Showers and WCs 0.25 m <sup>2</sup> per pupil	326
Library, reading room, media room (40 seats)		200
Library with reading room and media room (subscription with catalogue, reading room with individual workstations, audiovisual material, open access resources)		165
Ancillary and storage rooms: book storage room, video storage, staff room		35
Multi-purpose function space (300 seats)		500
300-seat amphitheatre-style meeting space with stage	0,7 m <sup>2</sup> per seat	300
Ancillary rooms and spaces (changing rooms (2), costume room, inventory and prop storage room, apparatus room, sanitary facilities, access)		215
Other spaces		250
School museum repository (display function must be integrated into publicly accessible common areas)		50
Community premises with designated access from the outside (decision about the activities to be carried out in the premises will be made in consultation with the local community during the adaptation of the design to the specific location)		200

# COMPETITION OBJECTIVE

Catering		320
Dining hall with food dispensing line	(1/3 of pupils) seats (with seating for first graders)	200
Buffet		15
Food preparation and storage facilities		60
Staff and ancillary facilities		45
Medicine and preventive healthcare		176
Therapy room		16
Treatment room		18
Psycho-physiological support room		18
Speech therapist's room		18
Inclusion activity room for working with children with special needs	4 m <sup>2</sup> per pupil	50
Playroom for children with special needs (can be split into several rooms)	4 m <sup>2</sup> per pupil	50
Bathrooms for pupils with special needs		6
Office, service and ancillary facilities		520
Offices (school master, clerical office, deputies, accounting, archive)		140
Teachers' working premises	at least 3 of 60 sq.m. each	180
Teachers' lounge and psychological support room		25
Meeting room (Academic Council)		50
Sanitary facilities for teachers and staff. On each floor		25
Social educator's office		15
Utility rooms (utility staff room with shower, utility workshop, furniture and inventory storage facilities)		70
Security (watchman) room		15

# COMPETITION OBJECTIVE

Accommodations. Dormitory (35 places)		440
Dorm rooms (15 double rooms for pupils and 5 single rooms for teachers)	8 m <sup>2</sup> per occupant	280
Bathrooms (1.2 m <sup>2</sup> per occupant)		42
Common and recreation rooms (2.0 m <sup>2</sup> per occupant)		70
Caretaker's room and information counter		18
Kitchen-dining room		30
Civil Protection. Dual-use shelter		1,416
For pupils in grades 1-2	2.0 m <sup>2</sup>	144
For pupils in grades 3-4	1.6 m <sup>2</sup>	116
For pupils in grades 5-12	1.3 m <sup>2</sup>	520
staff	1 m <sup>2</sup>	100
sanitary facilities for pupils	0.25 m <sup>2</sup> per pupil	136
sanitary facilities for staff members	0.4 m <sup>2</sup> per person	40
ancillary facilities		210
technical facilities		150
Outdoor area		11,200
Recreation		1,300
For active games for pupils in grade 1 (with gazebos)		240
For active games for pupils in grades 2-4		340
For active games for pupils in grades 5-12		400
For the relaxation of pupils in grades 5-12		320
Educational and research spaces		3,500
Greenhouse(s) with an option of keeping domestic animals		200
Meteorology and geography learning grounds		100
Educational and research area for primary school pupils		200
Orchard, flower and ornamental nursery, vegetable garden		3,000



## COMPETITION OBJECTIVE

Physical education and sport		5,600
Outdoor training grounds with equipment (basketball, volleyball, tennis, rollerblading, skateboarding, BMX bikes, parkour, etc.)		1,400
School stadium with 250 m running track		4,200
Vehicle parking, vehicle keeping areas and other ancillary areas		800
Car parking for teachers and staff		10 cars
Car parking for guests and parents		25 cars
School bus shed or garage		2 vehicles
Bicycle and rollerblade storage shed		50 units

# REQUIREMENTS FOR THE SUBMISSION OF AN ARCHITECTURAL PROPOSAL

The Contracting Authority seeks to obtain comparable submissions and to evaluate them properly; the implementation of this clause is therefore of particular importance for the effective work of the Evaluation Panel; entrants are therefore requested to comply with the following conditions for document submission, without breaching these requirements.

Entrants must submit their competition documents in accordance with the rules set out in Clause 14 of the Competition Terms and Conditions.

## 5.1. Requirements for boards and graphic material

Entrants must submit their boards measuring 100 (h) x 70 cm. They must be submitted in both digital and physical format. The minimum number of boards: 8; the maximum number of boards: 10; boards shall be arranged in two rows of four or five using the layout below. Physical board thickness: approx. 2.5 mm. The boards will be displayed vertically. The boards must indicate the order in which they are arranged (numbering). Digital versions shall be submitted in the CVP IS offer window 'Envelope 1' and in physical form 'Envelope 3'. The boards must contain;

- Main project presentation – visualisation of the design;
- Design presentation – annotation (part of the explanatory note);
- Site plan for hypothetical situation A, including site solutions M1:500 (including ground floor plans, building accesses, outdoor areas: recreation, education, sports and health solutions, parking and internal roads and paths, green areas, other planned solutions for the site presenting the idea of the design);
- Axonometric view of the hypothetical situation site A, including buildings (schematic detail showing the arrangement of the main parts of the Complex);
- Schematic site diagrams for hypothetical situations B and C showing the arrangement of the main parts of the Complex, at M1:1,000 (they must show the areas occupied by the above-ground floors, the in-principle delineations of the outdoor area parts (recreation, education, sports and wellness, vehicle parking, internal roads and paths, green areas);
- Axonometric views of the site for hypothetical situations B and C, including buildings (at least one for each situation. Schematic detail showing the arrangement of the main parts of the Complex);
- Floor plans of all buildings and/or blocks for hypothetical situation A, at M1:250 (the level of detail of the premises/areas must clearly convey the architectural idea and include information (explications) about the uses and the floor area of the areas/premises);
- Building facades, at 1:250 (if necessary, at 1:500, with conventional markings, elevations, explained specifications of the construction and finishing materials used, proposed colour/material solutions);
- Characteristic sections of the buildings and/or blocks of the Complex, one or two for each building and/or block, at 1:250 (at 1:500 if necessary). In addition, sections / fragments of sections of individual buildings may be provided at the discretion of the entrant, at M 1:100 or M1:50, depending on the information the Entrant seeks to convey, and the level of detail of such information);
- 3D spatial views of the building, rendered in computer graphics, which, in the entrant's opinion, offers the best representation of the volumetric and spatial ideas for the Complex;
- The diagrams, assemblies, materials, texts, etc. presenting the adaptability principles and solutions of the proposed architectural idea;
- The diagrams, assemblies, materials, texts, etc. presenting the sustainability principles and solutions of the proposed architectural idea;
- Other relevant information to help reveal the architectural idea, in the form chosen by the Entrant.

# REQUIREMENTS FOR THE SUBMISSION OF AN ARCHITECTURAL PROPOSAL

Arrangement layout for Competition design boards (indicative):

Code	Code	Code	Code						
The main image – visualisation presenting the design	Hyp. Sit. A Site Plan showing spatial solutions	Proposed principles and solutions for adaptability (text, principle diagrams, assemblies, materials, etc.)	Other relevant information (diagrams, visualisations, text, etc.)						
design annotation / diagrams / other	Hyp. Sit. A axonometric view of the site territory with buildings	Proposed principles and solutions for sustainability (text, principle diagrams, assemblies, materials, etc.)							
	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Hyp. Sit. B Site diagram</td> <td style="border: none;"> </td> <td style="border: none;">Hyp. Sit. C Site diagram</td> </tr> <tr> <td style="border: none;">axonometric view</td> <td style="border: none;"> </td> <td style="border: none;">axonometric view</td> </tr> </table>	Hyp. Sit. B Site diagram		Hyp. Sit. C Site diagram	axonometric view		axonometric view		
Hyp. Sit. B Site diagram		Hyp. Sit. C Site diagram							
axonometric view		axonometric view							
Code	Code	Code	Code						
Visualisations	Visualisations	Visualisations	Visualisations						
Floor plans	Floor plans	Floor plans	Floor plans						
Facades / Sections	Facades / Sections	Facades / Sections	Facades / Sections						

## 5.2. Requirements for the explanatory note

The Explanatory Note must be submitted in a separate A4 file (landscape layout), in English. The Explanatory Note must provide textual and visual information that fully presents the idea and solutions of the design. It must cover the materials presented on the boards and include explanatory and supplementary text to the materials. The scale of the graphic material (drawings) must be such that the information contained therein is sufficiently clear, understandable and legible. The Explanatory Note shall not be more than 50 pages. It must be submitted in the CVP IS offer window 'Envelope 1' and in physical form in 'Envelope 3'.

### Order of the content of the Explanatory Note:

- Architectural idea;
- Possibilities for adapting and modifying the architectural idea (orientation of the site in relation to the cardinal directions, shape and proportions of the site, terrain, main accesses) to suit the different situations of possible sites (hypothetical situations A, B and C);
  - Adaptability of the architectural proposal and idea. Description and presentation of the possibilities for adapting/modifying the architectural concept in the event of a change of the site on which it is to be built. Measures and solutions in response to specific situations:
    - urban context
    - community needs
    - functional development needs
    - availability and rational use of building technologies
    - aesthetic culture identity
- Area layout for the site of the Complex (hypothetical situation A);

# REQUIREMENTS FOR THE SUBMISSION OF AN ARCHITECTURAL PROPOSAL

**Functional solutions.** Description and presentation of the functional solutions for all buildings and/or blocks of the Complex, showing how they comply with the Competition Terms and Conditions:

- Synergies between planned functions, integrity of solutions
- Compliance with the modern principles of education
- Compatibility between flows with different interests and the functions of the Complex
- Community involvement (persons other than participants of the education process)
- Empowering the full-day school principle.

**Security.** Description of the solutions for mandatory civil security facilities (dual-use shelter) and their accessibility, ensuring the overall security and the operationalisation of the dual-use shelters by providing for a secondary (dual) functional use.

**Sustainability.** Description and presentation of the application of sustainability principles from a social, environmental and economic perspective. Description of the envisaged solutions for these aspects:

- Proposals related to energy efficiency in terms of energy use and savings, use of materials and resources in terms of the proposed construction technologies, materiality, the use of reused, recycled and renewable materials.
- Measures through which the architectural solutions integrate the building into nature and its environment, i.e. enable the creation of green spaces, the introduction of eco-infrastructure, the maintenance of plant and animal diversity and the protection of the environment.

- Principles that ensure the longevity of architecture through adaptability to evolving needs and conditions.

- Key structural solutions for the buildings, with an emphasis on adaptability to the site;

- Description of the economic soundness and practicality of the realisation potential of the design proposal;

- General characteristics of the site (hypothetical situation, site A) and of the buildings (structures). The tables of the general details of buildings must contain the following data: development intensity, development density, total area, usable floor area of the building (in the case of multi-purpose buildings – design floor space for every separate use), building volumes, number of floors, floor heights. **Note: The proposal must include details for each building separately, and the sum of the details for the whole Complex.**

**Table for presenting general indicators**

Site (in hypothetical situation A)		
	Unit of measurement	Quantity
Site surface area	sq.m.	22,800
Site development intensity	%	
Site development density	%	
Green portion of the site	%	
Building(s) / part of the building(s)		
Primary education		
Total floor area	sq.m.	
Usable floor area	sq.m.	
Volume of the building / part of the building	cubic metres	
Number of floors	pcs.	
Height of the building / part of the building	m	

# REQUIREMENTS FOR THE SUBMISSION OF AN ARCHITECTURAL PROPOSAL

Gymnasium, Lyceum, Shared education and community spaces		
Total floor area	sq.m.	
Usable floor area	sq.m.	
Volume of the building / part of the building	cubic metres	
Number of floors	pcs.	
Height of the building / part of the building	m	
Accommodations. Dormitory		
Total floor area	sq.m.	
Usable floor area	sq.m.	
Volume of the building / part of the building	cubic metres	
Number of floors	pcs.	
Height of the building / part of the building	m	
Civil Protection. Dual-use shelter		
Total floor area	sq.m.	
Usable floor area	sq.m.	
Dual-use floor area	sq.m.	
Volume of the building / part of the building	cubic metres	
Number of floors	pcs.	
General data of the building(s) / parts of the building(s)		
Total floor area	sq.m.	
Usable floor area	sq.m.	
Dual-use area in the civil protection structure	sq.m.	
Volume	cubic metres	
Number of floors	pcs.	
Building height	m	

Other information of the Entrant's choice to help illustrate the proposed idea.

### 5.3. Presentation requirements for digital material

- The entrant must submit the digital materials specified in the Competition Terms and Conditions by digital means, using the CVP IS offer window 'Envelope I'.
- The entrant must maintain anonymity. Any information referencing to the author of the design must be removed from the material on the digital medium: in addition to visual references to authorship in the text and graphics, such information must be removed from the properties of the digital file: in the case of \*.pdf files, it is important to make sure that the File > Properties > Description > Author box is blank or contains no details of the author; in the case of \*.doc, \*.docx files, it is necessary to make sure that the File > Info > Author and Last Modified By boxes are blank or contain no details of the author. Anonymity is a material condition of the competition, the breach of which will result in the entrant's disqualification.

# REQUIREMENTS FOR THE SUBMISSION OF AN ARCHITECTURAL PROPOSAL

· Metadata can be removed from submissions using the software used to create such documents, as well as other methods, including free online services such as [www.metawiper.com](http://www.metawiper.com) or equivalent.

## 5.4. Requirements for folders on digital media

The digital media submitted by the entrant must consist of the following folders:

- **WEB\_ entrant code** (material for online presentation and publicity) Submitted in:
  - folder **PANELS\_WEB\_ entrant code:** board models (5 Mb maximum per \*.jpg format medium);
  - folder **EXPLANATORY\_NOTE\_ entrant code:** Explanatory Note (10 Mb maximum per \*.doc or \*.pdf format medium);
  - folder **VISUALS\_WEB\_ entrant code:** Main visualisations (five visualisations, with at least one of the overall view of the architectural complex (from an elevated view), one of the main accesses of the school: the main entrance (from the human vantage point), one of the interior space, and two optional) that best present the idea of the Architectural Proposal (\*.jpg format media size up to 10 Mb);
  - folder **TEXT\_ entrant code:** a short text introducing the concept of the design (500 characters maximum, in \*.docx or other editable format);
- **PRINT\_ entrant code** (material for the production of physical presentation and publicity tools) Submitted in:
  - folder **PANELS\_PRINT\_ entrant code:** board layouts in original size (in \*.pdf format);
  - folder **ILLUSTRATIONS\_PRINT\_ entrant code:** materials to be presented on the boards: individual visualisations (in \*.jpg, \*.tiff format), drawings (in \*.jpg, \*.pdf format).

**Note: The total number of individual files uploaded to CVP IS must not be more than 100; the size of a single file must not be more than 2 GB; there is no limit on the total size of all files uploaded. Entrants are requested to allow themselves more time for the submission of their proposals, and to note clause 6.1.7 of the Competition Terms and Conditions, which states that the Contracting Authority shall not be held liable for any technical malfunction of the CVP IS system.**

# COMPONENTS AND SCOPE OF ADAPTIVE REUSE ARCHITECTURAL DESIGN BY SERVICE DELIVERY PHASE, AT THE TIME OF CONTRACT IMPLEMENTATION:

## 6.1. General requirements for newly-designed buildings:

- Newly-designed buildings will have to comply with energy efficiency class A (under Ukrainian normative regulation). Innovative architectural solutions and environmentally friendly (local, durable) materials must be used. Buildings must be protected against overheating, thus reducing cooling costs;
- Building class CC3 (under Ukrainian normative classification and requirements);
- The design will have to be developed and built in accordance with the applicable laws and regulations of Ukraine;
- All buildings must be adapted for people with special mobility needs by creating barrier-free access to buildings and providing vertical connections and spaces for such people;
- Maximum natural daylighting must be ensured in key education areas.

## 6.2. Parts of the design proposals and scope of the design solutions:

Design proposals shall be prepared in accordance with the successful Architectural Proposal entered in the competition and the feedback on the Architectural Proposal received from the Evaluation Panel. The purpose of the design proposals is to express the concept of the architecture and other principal solutions of the proposed building / Complex of buildings, and to assess the credibility and feasibility of their realisation.

The design proposal must consist of:

- the Explanatory Note;
- drawings illustrating the architecture of the building (plans, sections, facades, diagrams);
- volumetric representation (axonometries, visualisations);
- solutions and elements for a portion of the site, to the extent possible in the absence of a specific site for the construction of the building;
- preliminary schematic solutions for the structures and engineering parts, and;
- preliminary estimated cost of construction.

## 6.3. Components of the adaptive reuse architectural design and the scope of design solutions:

- General, without exact on-site and external networks;
- Arrangement of the hypothetical site (site plan) and indicative planning guidelines;
- Architectural part (interior/exterior design, including the selection of furniture and other elements of small architecture);
- Fundamental solutions for structures with a computation model. The foundations part is not provided, drilled piles are considered at the preparation phase;
- Guidelines for the installation and connection of outdoor engineering networks using the latest technological solutions;
- Guidelines for the accessibility of the hypothetical site, access to the site, traffic circulation and parking arrangements on the site;
- Water supply and waste water disposal, without outdoor connection part;
- Heating, ventilation and air conditioning;
- Electrical engineering, without time connection part. An electrical switchboard is planned;
- Electronic communications (telecommunications);
- Security alarms (video surveillance, access control, audio);
- Fire detection and alarm;
- Implementation / adaptation of process control and automation into the engineering systems of the building (smart home principles); integration with digital information methodology;
- Heat generation and supply without outdoor part;
- Fire safety;
- Pre-construction work and organisation of construction work;
- Determination of the calculated price of construction and quantity bills for recycled materials; quantity bills for works; quantity bills for costs; quantity bill for furniture and equipment;
- Economic part;

## COMPONENTS AND SCOPE OF ADAPTIVE REUSE ARCHITECTURAL DESIGN BY SERVICE DELIVERY PHASE, AT THE TIME OF CONTRACT IMPLEMENTATION:

- Adherence to good design practice guidelines for adaptation and implementation<sup>3</sup>, including but not limited to the involvement of the community and the identification of its needs, adaptation of the design to the local context, essential implementation steps for smooth integration of the design;
- other parts, depending on the specifics of the part of the structure being designed.

**6.4.** The designer must take into account that in order to meet the requirements of CPVA and/or the Beneficiary, the Adaptive Reuse Architecture part of the design must be prepared in accordance with the requirements set out in the applicable Ukrainian legislation. Depending on the design solutions and their scope agreed during the design process, the list of the components of the Adaptive Reuse Architecture design may be modified in agreement with CPVA and the Beneficiary.

**6.5.** When developing an Adaptive Reuse Architectural design, the designer must pay particular attention to the requirements of the standards for accessibility, suitability for all users (including accessibility for disabled persons), universal design and planning principles; it is recommended that the ISO standard and its guidelines (ISO/IEC 71 Guide 71:2001, ISO/IEC 71:2014, ISO/TR 22411:2021) or equivalent guidance documents be taken into account in the development of the design to ensure the principles of universal design and planning.

**6.6.** The designer must take into account that the Adaptive Reuse Architectural design will have to provide a detailed definition of the qualitative parameters of the construction materials and/or works to be used for the implementation of the design, but competition and non-discrimination between suppliers will have to be ensured at the same time, i.e. there must be a possibility to choose from at least three (3) suppliers/contractors, without restricting competition between potential suppliers/contractors. Also, prepare the Project in such a way that it contains sufficient and sufficiently detailed compounds (assemblies) (e.g. plans, characteristic sections with altitudes, dimensions, references to the assemblies, structural and structural assemblies of sufficient detail with specified dimensions, characteristics of the products-materials used and parameters, sections of engineering networks, axonometrics, etc.), ensuring that the exact estimated price could be calculated according to the prepared Project;

**6.7.** The designer submits the project in Ukrainian and English languages, in case of textual conflict between Ukrainian and English, priority is given to the Ukrainian language.

**3** These guidelines should include, among other things, the following requirements for public space connectivity and pedestrian links:

- Where cycling paths exist on the adaptation site, plans for their integration should be made;
- The adaptation phase needs to address and ensure connections to surrounding attraction points, convenient access by service vehicles, smooth accessibility by bicycle and on foot; ways to mitigate the restrictive impact of major streets, if any, in the adaptation site must be proposed;
- in terms of the relationship of the Complex to its surroundings, it is important that the adaptivity solutions make the location accessible, both visually and physically. It is important that the public areas of the Complex are easily accessible and that their entrances are visible from both near and far. Pedestrian routes, connections, landscaping and lighting should be proposed on a site-specific basis, and intersections between the pedestrians and other modes of transport should be dealt with in a unified way, giving priority to pedestrian traffic;
- The edges (perimeters) of public spaces are extremely important: the event, multi-purpose and sports halls, the dining hall, the library with reading room, multi-purpose classrooms and workshops, and the showcases of after-school (non-formal education) facilities are much more interesting and safe, compared to a blind wall or empty classrooms.



## USEFUL LINKS

1. [Law of Ukraine "On the regulation of urban planning activities"](#)
2. [Law of Ukraine "On full secondary education"](#)
3. [ДБН А.2.2-3:2014 "Склад та зміст проектної документації на будівництво"](#)
4. [ДБН В.2.2-3:2018 "Заклади освіти"](#)
5. [ДБН В.2.2-5:2023 Захисні споруди цивільного захисту](#)
6. [Санітарний регламент для закладів загальної середньої освіти](#)
7. [Resolution of the Cabinet of Ministers from October 14, 2022 No. 1160 "On Approval of the Procedure for the Development, Examination and Application of Reuse Projects in Construction"](#)
8. [Resolution of the Cabinet of Ministers from May 11, 2011 No.560 "On Approval of the Procedure Procedure for approving construction projects and conducting their examination"](#)
9. [Resolution of the Cabinet of Ministers from March 10, 2017 No. 138 "On use of protective structures of civil defence for economic, cultural and household needs in peacetime"](#)
10. [Procedure for developing project documentation for the construction of objects, which was approved by the order of the Ministry of Regions dated May 16, 2011 No. 45.](#)
11. [Practical Guide on the design of shelters in institutions pre-school and general secondary education from the Ministry of Restoration of Ukraine](#)