

The Nexus Project

A NEXT-GENERATION
PRIVATE SECURE SPACE

LIVING AREA/TOTAL AREA
238 M²/290 M²

FORMIC
SHELTER

Luxury Private Secure Space



We present the realization of a luxury next-generation underground shelter, designed as a fully functional secure living space for long-term family occupancy in the event of a crisis.

This project offers:

- a high level of protection,
- advanced technologies,
- the comfort of premium living,
- discreet architectural integration into the surrounding property,
- and maximum client privacy.

The FORMIC NEXUS project is part of a private estate covering approximately 50 hectares, creating a unique combination of exclusive living, absolute privacy, and strategic security within an open landscape.

The philosophy of the NEXUS



FORMIC NEXUS represents a unique combination of:

- luxury living,
- private protection,
- modern architecture,
- technological autonomy,
- and discreet security.

The project is designed for clients who require:

- maximum levels of privacy,
- long-term security,
- architectural distinction,
- and independence even during crisis situations.

The entire concept was designed with the ambition to create one of the most advanced private secure residential projects of its kind.

The underground spaces are connected to the surrounding buildings via secure underground routes.

Project Location



The shelter is located in the central part of the estate, between three separate buildings, and is securely connected to them via underground routes.

The shelter features three independent entrances and exits.
The main entrance is discreetly led from the estate's main building directly into the protected section of the shelter.

The other two entrances connect the shelter with the left and right buildings on the estate through an underground connecting shooting range, which also serves as a secure communication and evacuation corridor between the individual structures.

This solution significantly enhances:

- the security of the entire estate,
- the flexibility of movement within the site,
- emergency evacuation options,
- and the overall autonomy of the property.

The entire concept has been designed so as not to disrupt the aesthetics of the main residence or the surrounding buildings.



Individual Approach

Every FORMIC project is entirely individual.
The scope of protection, technologies, autonomy, interior design and level of security are tailored according to:

- the client's lifestyle,
- the project location,
- the required level of protection,
- anticipated risk scenarios,
- and comfort requirements.

The aim of the project is not merely to create a technical underground shelter, but a safe and comfortable space that enables the client to:

- stay for extended periods without a significant reduction in comfort,
- protect their family and closest individuals,
- preserve privacy,
- maintain psychological stability during crisis situations,
- and ensure technological self-sufficiency.

Every detail of the project is individually designed with an emphasis on:

- security,
- functionality,
- long-term durability,
- discretion,
- and a luxurious interior finish.

THE PREPARATORY PHASE INCLUDES:

- scenario-based risk study,
- threat analysis,
- simulation calculations,
- design of technological systems,
- followed by complete project design documentation

Project description



This is a luxury underground shelter with a total area of approximately 295 m², of which around 238 m² is designed as a fully functional living area.

The shelter is designed to provide safety and long-term autonomous occupancy for 6 to 8 people for a minimum period of 12 months.

The project is conceived as a highly resilient secure space intended to provide protection against:

- weapons of mass destruction,
- chemical, biological, and nuclear threats,
- industrial accidents,
- civil unrest,
- natural disasters,
- terrorist attacks,
- and long-term infrastructure outages, including blackout scenarios.

The autonomy period can be further extended by increasing supplies and expanding the technological capacities.

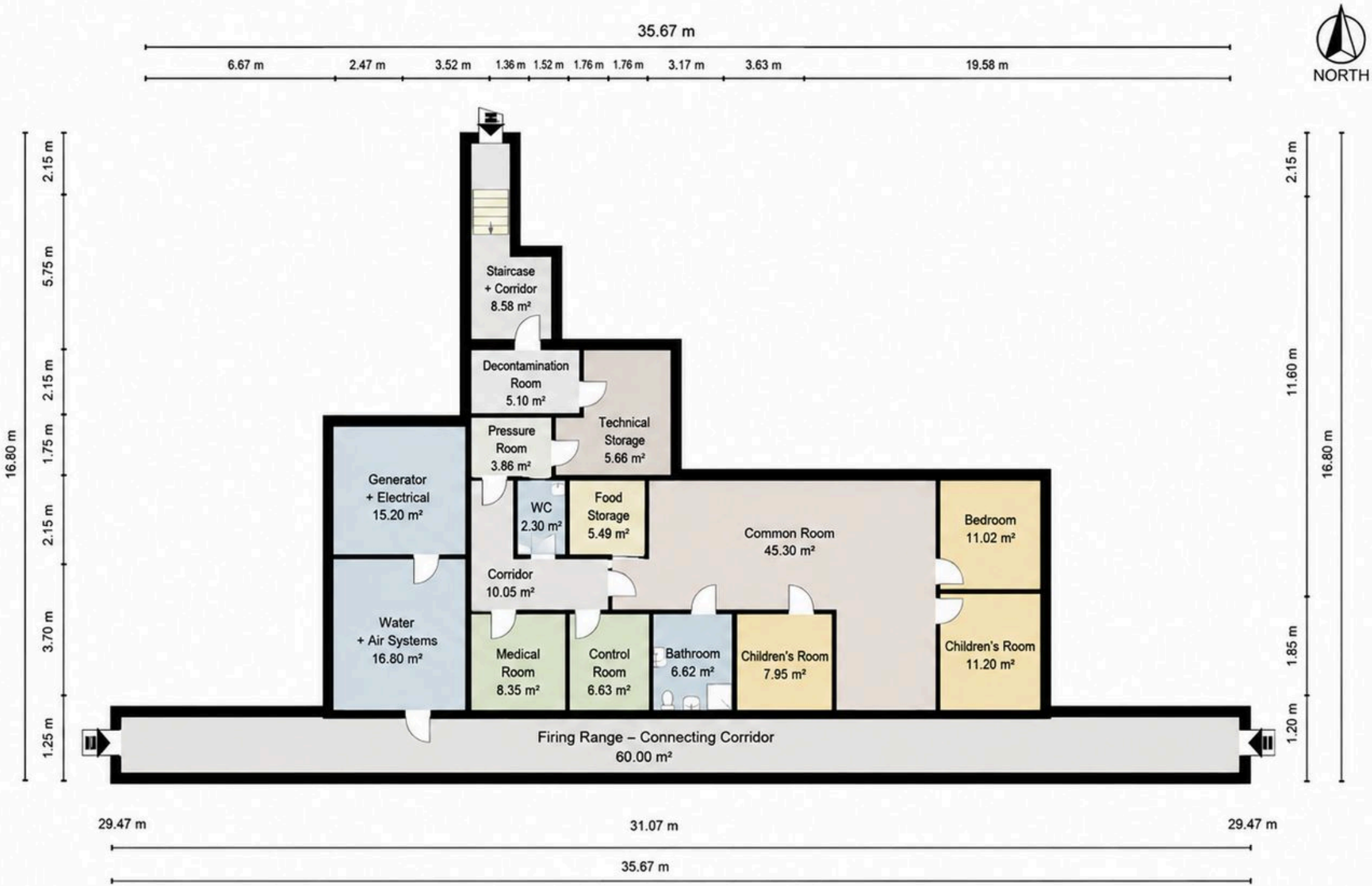
The structure is designed in accordance with the requirements of ČSN 73 9010 – Design and Construction of Civil Protection Structures.

The load-bearing structure of the shelter consists of a monolithic reinforced concrete construction made of high-strength reinforced concrete using a “White Tank” waterproof concrete system.

During the installation of the steel reinforcement, we use a special technological procedure that creates the effect of a Faraday cage and provides enhanced protection against electromagnetic pulse (EMP).

Key Project Parameters

Shelter living area	cca 238 m²
Total area	cca 295 m²
Capacity	6–8 people
Minimum autonomy period	12 months
Construction type:	monolithic reinforced concrete structure
Structural system	white tank waterproof system
Access	main entrance from the residence
Emergency exits	multiple independent routes
Connecting corridor / firing range	Yes
Shelter type	luxury private secure shelter
CBRN protection option	Yes
EMP protection option	Yes
Standard	ČSN 73 9010



Overall Floor Plan Scale 1:200

Shelter Layout Flow

Spatial Layout & Interior Concept



The entire shelter has been designed as a fully functional underground residence, enabling long-term autonomous occupancy in maximum safety without any significant compromise in living comfort.

THE LAYOUT OF THE STRUCTURE COMBINES:

- a residential area,
- medical facilities,
- a technological center,
- security zones,
- logistics and storage areas,
- and a special underground connecting corridor.

EACH SPACE WAS DESIGNED WITH AN EMPHASIS ON:

- security,
- ergonomics,
- psychological comfort during long-term occupancy,
- separation of clean and contaminated zones,
- and a high level of operational self-sufficiency.

Main Entrance Staircase and Connecting Corridor

Access to the shelter is provided via a discreet staircase from the main building. The entrance corridor itself is designed to:

- minimize direct pressure impact,
- enhance the security of the property,
- and enable controlled entry of individuals.

The connecting corridor forms the first security zone between the above-ground part of the estate and the protected space itself.

DECONTAMINATION ROOM

Immediately behind the entrance area is a decontamination zone designed for:

- personal cleansing,
- removal of any potential contamination,
- and transition between the external environment and the protected section of the shelter.

The room is equipped with:

- a decontamination shower and decontamination agents,
- filtration systems,
- automatic safety modes,
- and pressure-tight closures.

WASTE AND TECHNICAL SECTION OF THE DECONTAMINATION AREA

The decontamination zone is followed by a separate technical section designed for:

- waste storage in hermetically sealable containers,
- the technical support infrastructure of the decontamination system,
- and service access.

TECHNICAL STORAGE ROOM

The next section consists of a technical storage room designed for:

- spare parts,
- operational materials,
- service equipment,
- and strategic technical reserves.

PRESSURE ROOM

The pressure room represents one of the most important security zones of the shelter.

Its purpose is to:

- stabilize the internal overpressure,
- protect against the penetration of contamination,
- and separate the clean section of the shelter from high-risk areas.

CENTRAL SHELTER CORRIDOR AND SANITARY FACILITIES

The central corridor connects all key sections of the facility.

This area includes:

- sanitary facilities.

The layout was designed to:

- separate the technical and residential areas,
- enable safe movement of people,
- minimize the risk of contamination spreading,
- and increase overall operational safety.

TECHNOLOGY SECTION – ENGINE + ELECTRICAL

The technologies are designed for long-term autonomous operation.

A separate technological center designed for:

- a diesel generator,
- backup power sources,
- battery storage systems,
- energy management of the facility,
- and emergency power supply.

WATER + AIR TECHNOLOGY SECTION

One of the most critical sections of the entire shelter.

This section is designed to remain operational even during extreme crisis scenarios.

It includes:

- CBRN filtration and ventilation,
- air filtration systems,
- overpressure technologies,
- water storage tanks,
- water filtration systems,
- heat recovery ventilation,
- and CO_2 regeneration technologies.



MEDICAL ROOM

A separate medical room designed for:

- healthcare,
- emergency treatment,
- isolation of individuals,
- and storage of medical supplies.

CONTROL ROOM / SECURITY CENTER

The control room serves as:

- the main security center,
- a technological monitoring hub,
- a communication node,
- and a crisis management center.

From this space, the following can be monitored:

- technological systems,
- filtration and ventilation,
- energy systems,
- CCTV systems,
- the surrounding area of the property,
- and security sensors.

UNDERGROUND CONNECTING CORRIDOR / FIRING RANGE

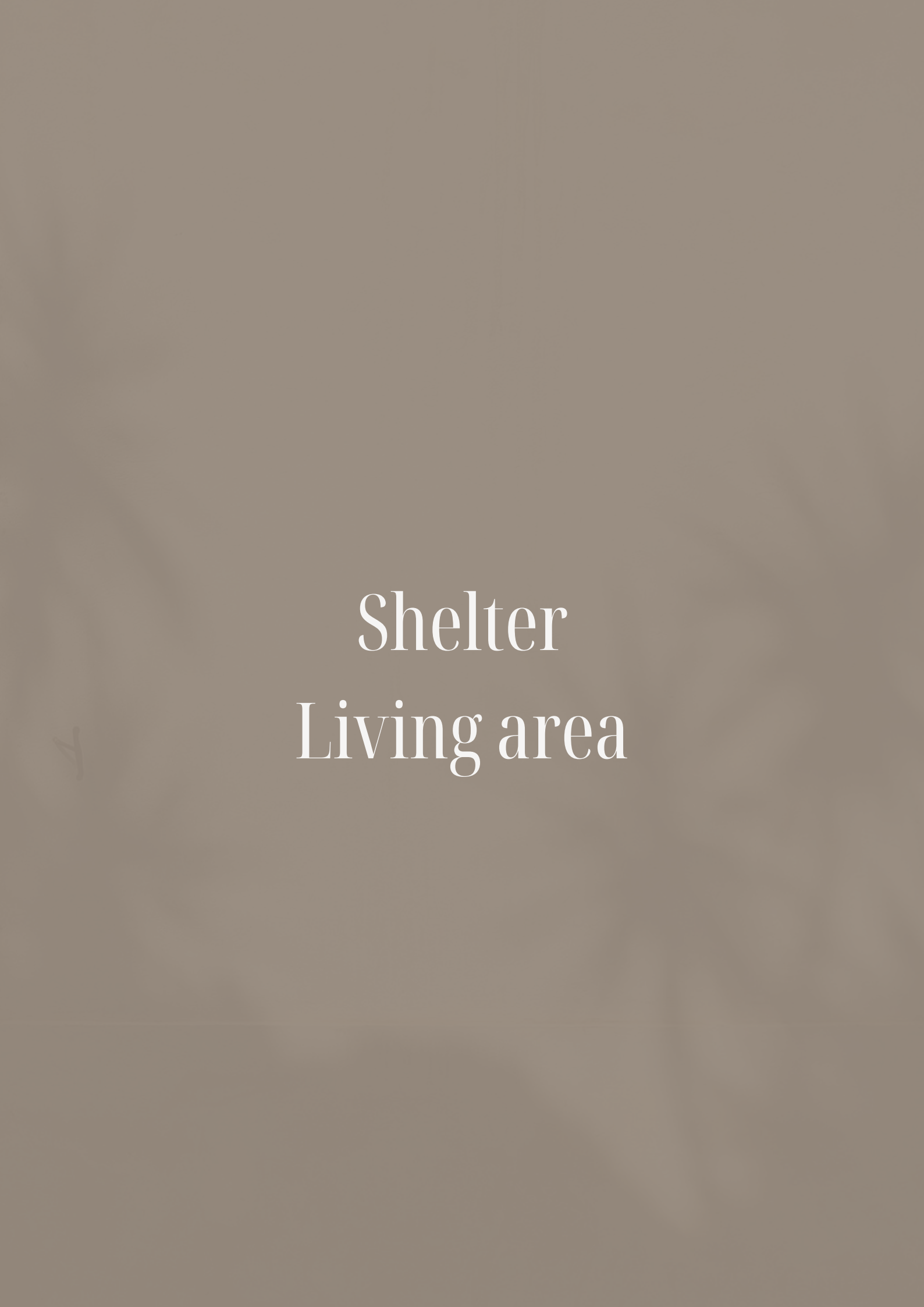
One of the most unique elements of the project is an extensive underground connecting corridor, which simultaneously serves as:

- a secure escape corridor,
- a connection to the surrounding buildings,
- an emergency evacuation route,
- a logistics corridor,
- and an underground firing range.

This space significantly enhances:

- the security of the property,
- defensive capabilities,
- discreet movement of people,
- and the overall autonomy of the estate.

Emergency entrances and exits are discreetly integrated into the surrounding buildings within the estate.



Shelter
Living area

Central Common Room – approx. 45 m²

THE HEART OF THE ENTIRE SHELTER IS A SPACIOUS COMMON ROOM DESIGNED AS THE MAIN LIVING AREA FOR THE CLIENT AND THEIR FAMILY'S EVERYDAY LIFE.

The space can include:

- a luxury lounge area,
- a dining zone,
- a multimedia center,
- a workspace,
- a kitchen,
- and, if required, integration of the facility's smart control system.
- The architectural concept allows for premium materials, acoustic comfort, and a fully customized interior design solution.

Food Storage Room

A SEPARATE SUPPLY ROOM DESIGNED FOR LONG-TERM STORAGE OF FOOD AND STRATEGIC RESERVES.

Master bedroom

A SEPARATE BEDROOM PROVIDING MAXIMUM PRIVACY AND PEACE DURING LONG-TERM OCCUPANCY.

Children's room

THE SHELTER INCLUDES SEPARATE CHILDREN'S ROOMS DESIGNED WITH AN EMPHASIS ON LONG-TERM PSYCHOLOGICAL COMFORT AND FUNCTIONALITY.

Bathroom

COMPLETE SANITARY FACILITIES, INCLUDING THE OPTION TO INTEGRATE:

- premium sanitary fittings,
- independent water heating,
- water filtration,
- and energy-efficient autonomous systems.



1

Security Features

THE SHELTER IS EQUIPPED WITH:

- high-level CBRN filtration and ventilation,
- an overpressure system,
- blast-resistant valves and an overpressure/underpressure control system,
- gas-tight and pressure-resistant doors,
- EMP protection,
- backup power sources,
- battery systems,
- a perimeter monitoring system,
- independent communication systems,
- secure data infrastructure.

2

Technologies and Technical Solution

THE PROJECT INCORPORATES TECHNOLOGIES FROM RENOWNED GLOBAL MANUFACTURERS, INCLUDING:

- CBRN filtration and ventilation,
- CO_2 regeneration systems,
- water filtration,
- heat recovery systems,
- diesel generators,
- battery storage systems,
- automated control systems,
- satellite communication,
- and security monitoring.

3

Architectural Integration

One of the key benefits of the project is its highly discreet integration into the architecture of the entire estate.
All security features are integrated in a way that:

- does not disrupt the aesthetics of the property,
- is not visually identifiable,
- and at the same time provides a high level of protection.

HE UNDERGROUND SPACES ARE CONNECTED TO THE SURROUNDING BUILDINGS VIA SECURE UNDERGROUND ROUTES.

Main Residential Building



The dominant feature of the entire estate is the main residential building, designed as a modern countryside villa that combines traditional architectural proportions with a minimalist contemporary expression.

THE ARCHITECTURE OF THE BUILDING IS BASED ON:

- clean geometric lines,
- pitched roofs with dark roofing,
- large-format glazed surfaces,
- natural materials,
- and an open connection with the surrounding landscape.

THE FAÇADES ARE DESIGNED IN LIGHT NATURAL TONES, COMPLEMENTED BY:

- dark window frames,
- wooden elements,
- exposed concrete,
- stone,
- and luxurious minimalist details.

The main living area is directly connected to the central terrace and the exterior.





INTERIOR CONCEPT OF THE MAIN RESIDENCE

THE INTERIOR OF THE BUILDING IS DESIGNED AS A COMBINATION OF:

- minimalist luxury,
- natural materials,
- warm tones,
- and open, airy spaces.

THE DOMINANT INTERIOR ELEMENTS INCLUDE:

- large-format glazing,
- wooden wall cladding,
- designer lighting,
- built-in library systems,
- natural stone and marble,
- and custom-designed furniture.

THE LIVING AREAS ARE CONCEIVED WITH AN EMPHASIS ON:

- maximum comfort,
- visual connection with the landscape,
- natural light,
- and seamless integration of the interior with the exterior.

Relaxation & Outdoor Area



The project includes an extensive relaxation zone comprising:

- an outdoor and indoor swimming pool,
- a large-format leisure terrace,
- an outdoor kitchen,
- lounge zones,
- and a landscaped garden with a natural character.

TERRACE AND OUTDOOR KITCHEN

The central terrace is directly connected to the main living area of the building.

It includes:

- large-format paving in a light tone,
- designer outdoor seating,
- a dining table for 10–12 people,
- and an outdoor kitchen made of exposed concrete.

THE OUTDOOR KITCHEN FEATURES:

- a worktop,
- an integrated grill,
- a cooking area,
- a sink,
- and designer wooden elements.

Pool & Garden Area



The exterior includes a minimalist sunken pool oriented towards the open landscape.

THE GARDEN IS DESIGNED WITH A NATURAL CHARACTER AND AN EMPHASIS ON:

- ornamental grasses,
- natural vegetation,
- minimal visual barriers,
- and maximum connection with the surrounding environment.

The entire estate feels open, calm, and at the same time highly exclusive.

Additional Buildings within the Estate



GARAGES / WINTER GARDEN

The building can serve as:

- a winter garden,
- hydroponic or bioponic cultivation space,
- garages for up to 8 cars,
- technical rooms,
- or a representative social area.

The building is connected to the underground security system via the underground connecting firing range.

APARTMENT BUILDING WITH INDOOR POOL AND OPEN KITCHEN

One of the most architecturally distinctive elements of the estate is a glazed building featuring an original arched structure.

The third building within the estate uses a modern interpretation of traditional architectural elements.

Its dominant features include:

- arched entrances,
- stone materials,
- a pitched roof,
- and minimalist detailing.

The transparent architecture creates a striking contrast with the massive traditional volumes of the surrounding buildings.

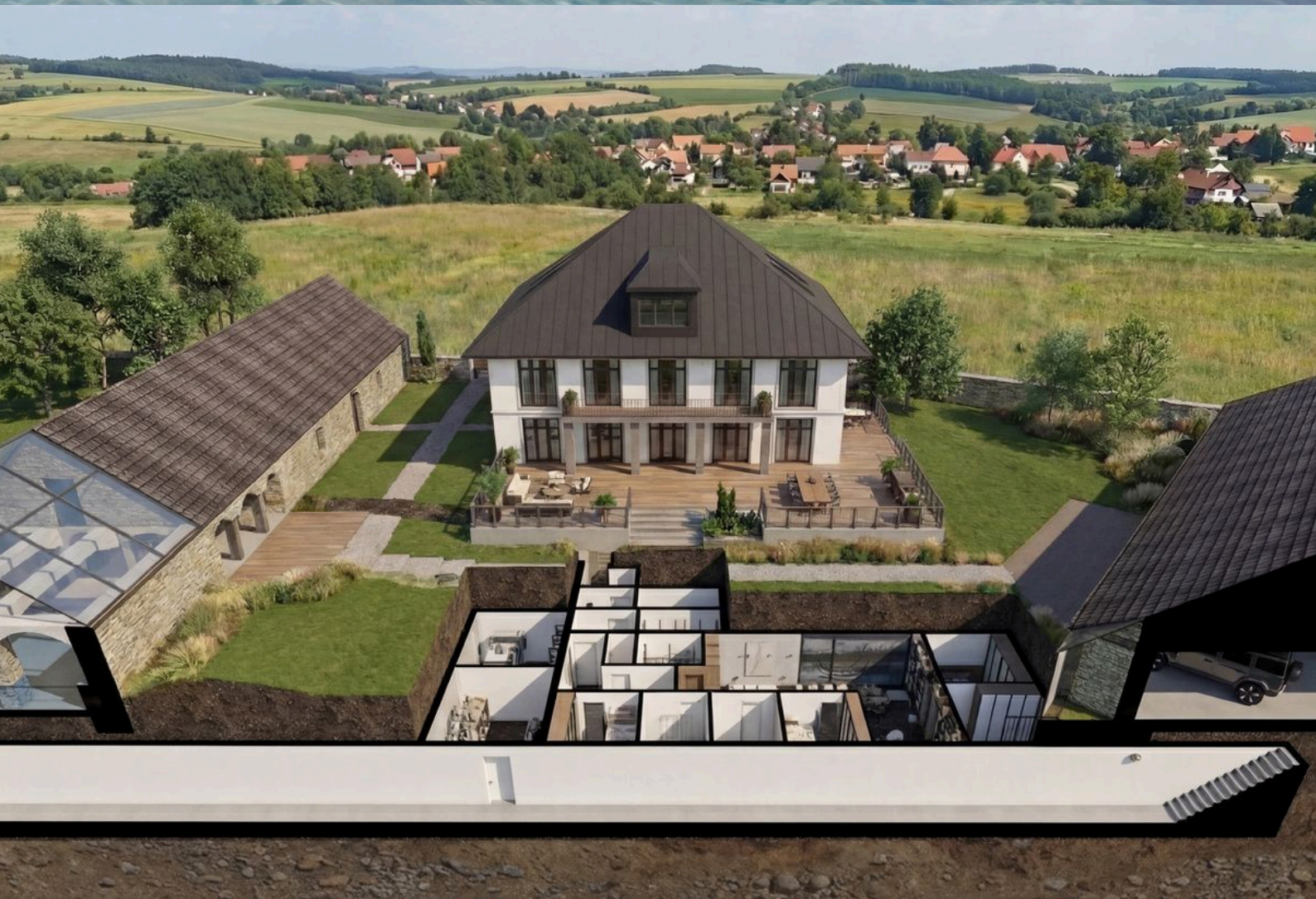












Your Private Secure Future Starts Here

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ALL INFORMATION RELATED TO THE PROJECT IS SUBJECT TO CONFIDENTIALITY AND AN NDA.

Private Protective Architecture