

Urban Renewal Design Plan for the City Center and Surrounding Areas of Elin Pelin, Bulgaria

— Rooted in the Legacy of Mountains and Rivers, Weaving a Sustainable Habitat

Trace . Reshape . Destination

I. Overall Vision: A "City of Stories" Growing at the Foot of the Pirin Mountains

This plan aims to transcend conventional urban renewal, striving to shape the city center of Elin Pelin into a resilient entity that "carries memory, integrates with nature, and looks toward the future." The design deeply responds to three unique regional characteristics: the natural endowment of the Pirin Mountains, the profound literary tradition represented by Elin Pelin, and the scale and texture of traditional Bulgarian settlements. All modern technological strategies and functional organization are built upon this foundation, ensuring that the renewal outcomes are a unique and irreplicable "Elin Pelin Answer."

II. Core Design Strategies and Integration of Regional Characteristics

1. Durability: Employing Timeless Materials in Harmony with Mountains and Rivers

- Contemporary Interpretation of Local Stone: Extensive use of granite and travertine from the Pirin Mountains as the primary paving, façade, and landscape materials. Their physical and chemical stability ensures a lifespan of several decades. Paving patterns are inspired by traditional Bulgarian weaving motifs and mountain curves.
- Long-Lasting Wood Applications: Use of locally sourced high-quality oak and beech, treated with modern thermal modification or acetylation to enhance resistance to decay, pests, and deformation. Used for outdoor platforms, seating, and railings, these materials develop an elegant silver-gray patina over time, blending seamlessly with the natural environment.
- Modern Expression of Traditional Craftsmanship: Encouragement of the use of Bulgaria's traditional "gabion" technique at key nodes. Local stones are filled into metal mesh cages to form retaining walls, seating, or tree pits — sturdy, durable, permeable, and ecological — directly inheriting local construction wisdom.

2. Sustainability: Building a Symbiotic Ecosystem of Mountains, City, and Water

- "Sponge Watershed" Simulating Mountain Hydrology: Construct a comprehensive rainwater management system ranging from building roofs (green roofs), roadside ecological swales, sunken rainwater gardens in plazas, to riverbank ecological buffer zones. Mimicking the natural hydrological processes of the Pirin Mountains, this system achieves source reduction, process delay, and end purification of rainwater runoff, ultimately replenishing rivers and groundwater.
- Microclimate Regulation Based on Mountain Climate: Utilize computer simulations to analyze prevailing wind directions (mountain and valley breezes). Guide wind flow through building

layouts and open space arrangements to create summer ventilation corridors, alleviating the urban heat island effect. In winter, use building layouts and evergreen plants to block cold winds. Vegetation is 100% localized, forming low-maintenance, highly adaptable plant communities.

- "Foothill Light" Energy Plan: Integrate photovoltaic panels into the roofs of public buildings and new corridor structures, aligning with architectural forms. The generated electricity is prioritized for public lighting, electric vehicle charging stations, and small public service facilities, symbolically transforming "the sunlight of the Pirin Mountains" into urban energy.

3. Ease of Maintenance: Modular, Adaptive, and Intelligent Management

- "Lego-Style" Infrastructure Modules: Design standardized stone paving, precast concrete curbs, and replaceable drainage modules. In case of damage, these can be quickly and locally replaced like puzzle pieces, minimizing the impact of repairs on the overall environment and disruption time.

- Smart Operation "City Dashboard": Establish a management platform integrated with IoT sensors to monitor real-time data on public lighting energy consumption, irrigation system soil moisture, rainwater garden water levels, and the structural health of key buildings. This shifts from "reactive maintenance" to "predictive maintenance," significantly reducing long-term operational costs and manpower requirements.

4. Rationality: Respecting Texture and the Logic of Intensive, Mixed Functions

- "Organic Growth" Rather Than "Surgical Intervention": Strictly protect the scale and orientation of existing historic streets and alleys. The volume of new buildings follows the principle of "small scale, clustered grouping," mimicking the free and organic layout of traditional villages and echoing the mountain contours.

- Functional Mixing of "Life Folds": Avoid rigid functional zoning. Introduce literary bookstores, artisanal workshops (e.g., traditional wood carving, weaving), and family-style restaurants into historic buildings. In new construction areas, place cafes and small creative offices on the ground floor, with residences above, recreating the vibrant daytime and tranquil nighttime atmosphere of traditional neighborhoods.

III. Collaborative Functional Layout and Connection System in Dialogue with Mountains and Rivers

1. Regionally Culturally Led Functional Collaboration

- Literary Narrative Core Zone: Centered on the existing historic building cluster in the city center, create the "Elin Pelin Literary Trail." Connect the writer's former residence museum, open-air recitation theater, themed sculpture park, and "Story Café," making literature an experiential and participatory soul of the city.

- Mountain Product Market Ring: Utilize streets on the periphery of the core zone to regularly host markets featuring Pirin Mountain specialties (herbs, honey, cheese, wood products), directly linking the mountain economy with urban consumption and revitalizing neighborhood commerce.

- Wellness and Leisure Service Belt: Leverage riverside spaces and sightlines to the mountains to layout ecological healing gardens, outdoor sports centers, and hot spring therapy facilities,

reinforcing the city's role as a "comfortable gateway" to the Pirin Mountains National Park.

2. Strategic Connections with Surroundings and Nature

- Visual Corridor Control: Designate and strictly protect multiple "sacred sightlines" from the city center to the main peaks of the Pirin Mountains. Control building heights and forms along these corridors to ensure the unique pattern of "mountains in the city, the city reflecting the mountains."
- Greenway and Trail System Extension: Seamlessly connect the city center's pedestrian and bicycle systems to the national park's hiking trail network via linear parks and ecological corridors, enabling a barrier-free transition from urban strolling to mountain exploration.
- Regional Resonance of Cultural Activities: Extend venues for literary festivals and traditional music festivals from the city center to surrounding villages, forming a regional cultural festival system of "core ignition, multiple blossoming" to promote overall tourism development.

IV. Plazas and Pedestrian Spaces: The Stage Where Stories Unfold

1. Thematic Plaza Sequence

- "Elin Pelin Story Plaza": The main plaza. Features an interactive water installation at its center, simulating a mountain stream; paving inlaid with bronze plates engraved with excerpts from the writer's works; surrounded by movable wooden seating steps suitable for daily leisure and small-scale performances.
- "Pirin Foothills Market Plaza": Employs a flexible, detachable canopy system. On regular days, it serves as a shaded leisure plaza; on market days, it quickly transforms into a bustling trading and social venue. The ground is paved with durable local stone.
- "Contemplation Courtyard" Network: Transform existing courtyards around churches and historic buildings into several tranquil pocket plazas, featuring local flowers, herb gardens, and murmuring water features, providing spaces for meditation and solitude.

2. Human-Centric Pedestrian Network

- Covered Walkway System: Drawing inspiration from traditional Bulgarian "Chushka" architectural elements, construct continuous wooden or lightweight steel structure corridors covering main commercial streets, providing shade and shelter from rain, with facades suitable for hanging local climbing plants.
- Sensory Experience Paths: Design themed walking trails such as the "Literary Olfactory Trail" (planting flora described in the writer's works) and the "Mountain Stone Tactile Trail" (displaying various local rocks), enriching the pedestrian experience.

V. Circulation Organization: Efficient and Serene Rhythm of Landscape

- "Parking on the Periphery, Slowness in the Center, Priority to Public Transit": Establish four ecological "forest parking lots" integrated with landscaping on the outskirts. All tourist vehicles park here, transferring to electric shuttle buses or rental bicycles to enter the core pedestrian zone.
- "Invisible Logistics, Service Backstreets": Fully utilize back alleys, transforming them into unified,

greenery-screened logistics and service passages, achieving "backstage" operation for commercial deliveries in the core area and ensuring the visitor experience on main streets.

- Switching Between "Festival Mode" and "Daily Mode": During major festivals, temporarily convert part of the public transit loop into an extended pedestrian area, creating larger celebration spaces, with the system designed for quick conversion flexibility.

VI. Accessibility Design: Inclusive Care for All Ages and Abilities

- Universal Barrier-Free Access: Starting from the peripheral parking lots, barrier-free shuttle buses, flat and continuous pedestrian paths (with slopes strictly controlled below 5%), and ubiquitous resting seats ensure that everyone can comfortably reach and experience the core area.

- Multi-Sensory Guiding System: Beyond standard tactile paving and accessibility signage, develop an AR guide app equipped with multilingual support (including Bulgarian and English) and audio descriptions. Install touchable bronze relief maps and aroma diffusion devices emitting scents of local plants at key nodes.

- Intergenerational Shared Facilities: Children's play facilities use natural materials like logs and ropes to simulate mountain forest adventures. Elderly rest areas are located in sunny, wind-sheltered spots with open views, equipped with ergonomic armchairs. Placing these adjacent to each other promotes intergenerational interaction.

VII. Conclusion: A Legacy for the Future

This plan is not merely an update of physical space but a deep excavation and contemporary expression of the soul of Elin Pelin. By closely weaving together the natural landscape, literary spirit, and contemporary living wisdom, it strives to create an eternal city that is:

- Physically enduring, breathing in harmony with the environment;
- Culturally confident, telling a unique story;
- Operationally intelligent, easy to nurture and grow;
- Experientially inclusive, open to all.

This will be a living legacy dedicated to Bulgaria, to the Pirin Mountains, and to future generations.