



LIFE Szachownica/PL

PROJEKT nr LIFE12 NAT/PL/000012



**Carrying out necessary conservation work on a territory of
Szachownica Cave designated within Natura 2000**

*Wykonanie zabiegów ochrony przyrody na terenie Specjalnego
Obszaru Ochrony Siedlisk Natura 2000 Szachownica*

*Project co-financed with the European Union funds under the financial instrument LIFE + and the
National Fund for Environmental Protection and Water Management.*

Co-ordinating beneficiary: Regional Directorate for Environmental Protection in Katowice, Poland

www.lifeszachownica.pl

LOCATION

The Szachownica Cave is located in the northern part of the Śląskie Voivodeship in the Lipie Commune, Kłobuck Poviát.

NATURAL VALUES

The Szachownica Cave is one of the longest cave systems in the Wieluń Upland. The underground corridors are located in the peak area of the limestone hill named Krzemienna Góra (approx. 227 metres above sea level). Due to its natural values, the hill is subject to legal protection in the form of:

- The Załęcze Landscape Park,
- The "Szachownica" Nature Reserve,
- The Natura 2000 Szachownica PLH240004 area.

Diversity of thermal conditions prevailing in the cave as well as the abundance of suitable hiding places make the cave one of the largest wintering habitats for bats in Poland in terms of the number of hibernating individuals. Every year more than 2,000 bats hibernate here, representing 10 species, including four species protected under the EU law:

- barbastelle bat (*Barbastella barbastellus*) 1308
- Bechstein's bat (*Myotis bechsteinii*) 1323
- pond bat (*Myotis dasycneme*) 1318
- mouse-eared bat (*Myotis myotis*) 1324



fot. Maurycy Ignaczak

The Szachownica Cave is also used by bats during autumn swarming. The number of individuals in the cave in that period can be much larger than in the hibernation period.

The cave is a site of particular concentration of bats from the central and southern part of the country and an extremely important one for the preservation of the bat population in Poland and the European Union. In a longer term, preservation of the Szachownica Cave in a desired condition, due to its being a bat habitat, can be of key importance to the survival of these animals.



fot. Maurycy Ignaczak

GENESIS

In the Krzemienna Góra area there are several caves that once represented a single system and were formed as a result of dissolution of rocks by post-glacial waters. The present shape of the caves is, however, a consequence of limestone mining that resulted in the hill having been cross cut thus exposing entrance to ample cave corridors. Over time, bats started to make regular use of the caves as their winter shelter. The largest cave within the dormant quarry site is the Szachownica Cave I, which is the object of interest for the implementation of the project at issue.

Man-made exposure of vast surfaces of cave walls accelerated physical weathering processes inside the cave and, in effect, affected of the stability of the rock massif.



fot. Maurycy Ignaczak

At present, an intense process of orogen damage, coupled by the natural processes of frost penetration and karst phenomena, can be seen in addition to recent rock falls and noticeable ceiling bed sagging. Furthermore, the process of dilatation of rock fissures is enhanced by the gravitational settling of already affected fragments. There is a risk of a total collapse of the cave ceiling and every indication that a fall of some part of the cave is inevitable.



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THE LIFE SZACHOWNICA/PL PROJECT

The object of the project is to undertake active conservation measures consisting in a strengthening of the ceilings and walls of the Szachownica Cave.

THE PROJECT'S PURPOSE AND EXPECTED EFFECT

- The primary purpose of the project is to preserve an important bat habitat and ensure suitable habitat conditions to the species. The project outcome will be as follows:
- securing the ceilings in the Szachownica Cave halls,
- preservation of the number and cubature of cavities used by bats,
- preservation of the existing bat entrances to the cave, and ensuring a suitable micro-climate for bats in the Szachownica Cave.

MEASURES TO BE EMPLOYED AS PART OF THE PROJECT IMPLEMENTATION

In order to put a halt to the destruction of the Szachownica Cave works will be carried out, consisting in a consolidation of the orogen inside which the Cave is located. A combination of specialist methods commonly applied in the mining industry to support underground dog headings in mines will be employed in order to secure the cave, including pressure injections, installation of injection bolts and roof bolting.

The rock blocks forming the cave ceiling, bonded and strengthened with bolting, will ensure stability of the entire rock massif affected by underground work. Also possible water leakages through the cave ceiling will be removed.

