

**Fig. 3** Artist's impression of the concept of the Archaeopark (drawing M. Ernée). ■

# Archaeopark Liboc

## Origins and Conception of one Educational Project \*

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- The Archaeopark in Liboc was founded in 1994 to improve the accessibility to the results of archaeological research and raise awareness of archaeological heritage. The Archaeopark itself is divided into two parts: one representing the early medieval environment of the settlement below Prague castle and another representing the late medieval environment of countryside around Prague.

### 1 Starting points and aims of the Archaeopark

The Archaeopark is placed at the centre of the originally suburban village of Liboc that has preserved its former picturesque countryside character. It was founded by Archaia, a civic associa-

tion in 1994, primarily with the support of the Prague 6 council, also the Prague Capitol council, the Czech Ministry of Culture and other institutions. Archaia was founded in 1991 and its mission, aside from the protection, preservation and documentation of archaeological and other historical monuments, is to

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popularise and present archaeology and heritage protection to the public.

The park is property number 26, situated on the village green northeast of the Empire style church of St Fabian and St Sebastian between the streets Libocká and V domcích. The council of Prague 6 has rented the land, including the buildings, free to the civic association Archaia for 35 years to build an archaeological educational centre with an archaeopark.<sup>(1)</sup> A garden of about 1500 m<sup>2</sup> represents the larger part of the property. Here single parts of the park have gradually been built. The eastern part of the site contains the original dwelling (**Fig. 1: C1**), gardener's house (**Fig. 1: C2**) and the newly built toilets (**Fig. 1: A1**).

The position at the edge of Prague brings many advantages, especially easy access to public transport. On the other hand, it restricts certain activities because of lack of space and health and safety regulations (for example some types of experimental activities such as growing crops on a larger scale, breeding animals or some pyrotechnic experiments). The position of the park between the Summerhouse Hvězda, the woods at Bílá hora and the national cultural monument of Šárka offers the possibility to include a visit to the park within sightseeing tours of these monuments.

From the beginning while setting up Archaeopark Liboc our belief was that without targeted education it is impossible to cultivate a care for the historic and cultural heritage. The main aim of the park is the development of an awareness of the importance of archaeological heritage for not only understanding our

past but also understanding monuments as creating an irreplaceable part of the environment. The aim of the park was to make the results of archaeological research, especially from Prague's medieval sites, accessible in an attractive and generally accessible way (*Bureš 2002*). The archaeological findings are presented through experiment, reconstruction, construction and simulation. These are executed exclusively by professional craftsmen and a small group of collaborators and friends of the Archaeopark. The park offers to visitors, aside from the traditional exhibition of structures and objects, the experience of a reconstructed past, the possibility to use some tools and to take part in some of the productive activities. We have organised various workshops, courses, summer schools and other programmes complemented by basic information on archaeological sources. We laid emphasis on independent work by the participants aimed at gaining experience. A limiting factor for the formulation of this conception was the restricted space and conditions of the park.

The activities are aimed at children and teenagers, eventually also parents with young children took part. On one hand, children and teenagers are more open to new ideas and the experience, which the Archaeopark can contribute to the forming of their relationship to archaeology and cultural heritage regardless of their future professions. On the other hand, people of working age, because of economic reality, lack an interest in several days' courses (**Fig. 2**).

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<sup>(1)</sup> An archaeologist PhDr Michal Tryml, a local councillor at that time, played an important role in securing support from the council of Prague 6.



**Fig. 2** Group of children in the Archaeopark. ■

The budget of the project counted that the building of the park would be a one-off payment from outer sources and that this investment would be non-returnable. After opening the park to the public and beginning of full operation, repairs, maintenance, and other costs connected to the park's operation would be covered by entrance fees, participants' fees for programmes and money from the operation and renting of the 'medieval' inn. This should secure the continuity of the park's operation without dependency on grants. Financing of further development of the park and innovation of programmes was planned by fundraising and grants.

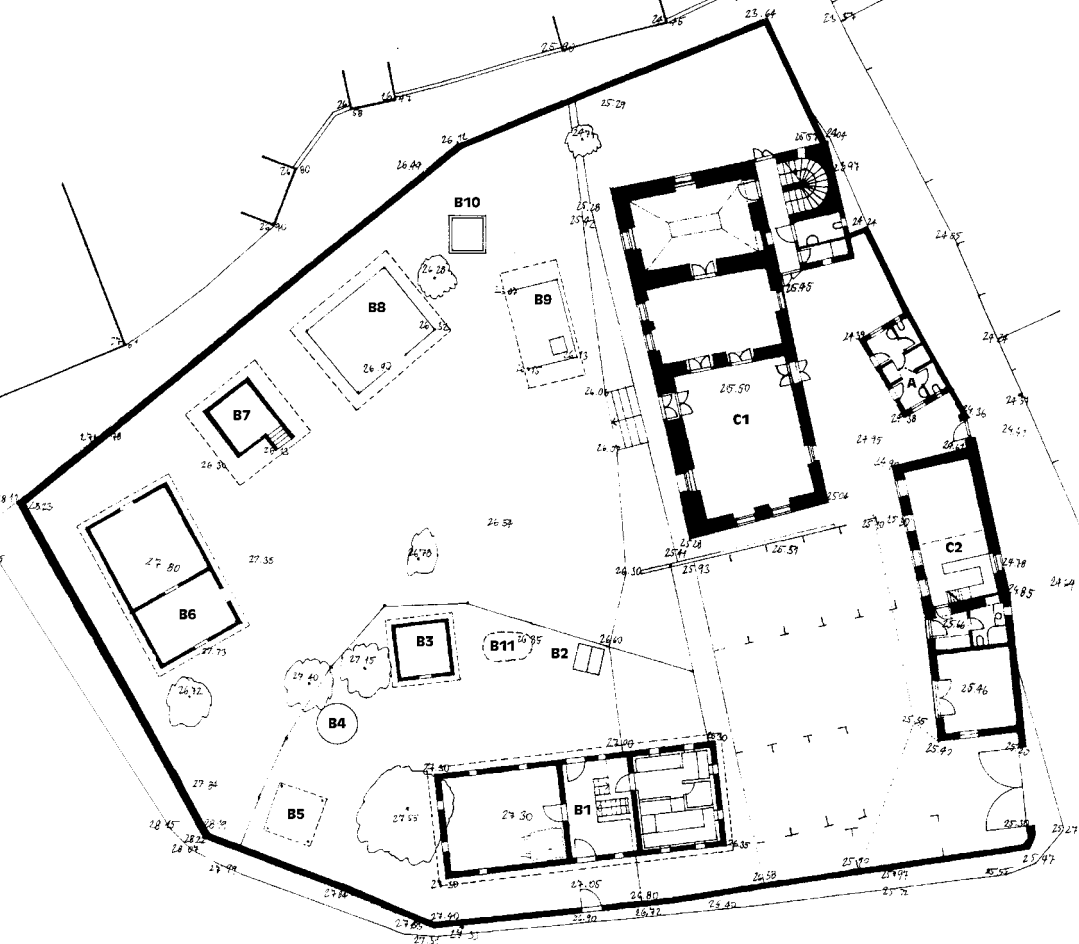
## **2 History of the property**

The use of the historical potential of the remaining buildings of the former smallholding and the environment of

the historical centre of Liboc, where the property is situated, was part of the original conception. The triangular shaped property near the church of St Fabian and St Sebastian is demarcated by three old roads and surrounded by a brick wall. The house is situated at an exposed position and plays an important part in creating the character of the historical village. It is a freestanding cottage, which was later surrounded by a vegetable garden.

The oldest written reference on house number 26 is from 1728 when a cottage belonging to Jan Remešek is mentioned as one of then Liboc smallholdings.<sup>(2)</sup> The next reference is from 1767 when the house was owned by Jan Frýdlovský. According to the accompanying description of the property, there was a house of rectangular plan with a living room and bedroom in one half

<sup>(2)</sup> State Central Archive, Department 1, collection Nejvyšší purkrabství, Gruntovní kniha pro Liboc, Ruzyně a Veveslavín founded in 1744 (1728-1790), sign. NP 944.



**Fig. 1** Overall plan of the Archaeopark Liboc according to the project. ■

and cow shed and a shop in the other.<sup>(3)</sup> According to the Josefský katastr cottage number 26 belonged to Jakub Šesták.<sup>(4)</sup> We have not yet managed to find documents describing the rebuild of the house, which took place in the first half of the 19th century. On the sketch from the Stablní katastr the structure is already present at its current size. The rebuild therefore had to take place before 1842. In the building department

of the council of Prague 6, there are no plans for the main building.<sup>(5)</sup> An exception is a proposition for the addition of a gardener's house (**Fig. 1: C2**) in the southeast part of the property from the year 1883. The core of the main residential building (**Fig. 1: C1**) originates from the 18th century. The extensive rebuild at the first half of the 19th century gave the building the character of a neoclassical style countryside building.<sup>(6)</sup>

<sup>(3)</sup> Archive of Capitol Prague, Kniha pamětní vsi Liboce, founded 1767, sign. 4808.

<sup>(4)</sup> State Central Archive, Department 1, collection Josefský katastr, book No 5510, from 1786.

<sup>(5)</sup> Archive of the building department of the council of Prague 6 – stavební spis k objektu čp. 26.

Before the Second World War, the building was used as a summer house for a rich Prague family. At that time originated, the now demolished, arbour and skittle alley. After the war, the buildings were used as a surgery, flats and workshops. In the years 1989 to 1994, the decaying buildings were empty and the property was used for allotments.

### 3 The project of the Archaeopark and its conception

The concept of the park was created between the years 1994 and 1999. Ideas, discussions on the overall conception, aims and content of single features were, in 1999, finalised by Archaia with a formulation of the project of an Archaeopark which together with architectural documentation became the basis of a request for building permission (*Bureš 2000*).<sup>(7)</sup>

According to the project, the area was to be divided into two basic parts. The original buildings were to be used as a background for the Archaeopark and a visitor's centre with toilets. In the main building (**Fig. 1: C1**) would be an entrance hall with cash desk, a shop selling books, replicas and souvenirs, a lecture hall and a clubroom. In the attic of the reconstructed building would be the offices for park staff and for storage of material. The gardener's house (**Fig. 1: C2**) would become a care-

taker's flat with added workshop. The operational part of the park would be, according to the project, divided from the Archaeopark itself by a high wattle fence, or a hedge so that the experience of the reconstructed environment would be disturbed as little as possible.

The Archaeopark (**Fig. 3**) would be divided into two different complexes. The first one should introduce visitors to the possible building design of a proto-urban settlement below Prague castle from the 2nd half of the 12th to the 1st half of the 13th centuries. The projected surface house with timber-frame construction with a sunken storage room (**Fig. 1: B6**) and an already built, sunken outbuilding (**Fig. 1: B7**) would present various constructions of the so called *grubenhäuser* excavated in the settlement at St Peter Na Poříčí in Prague New Town (*Bureš – Kašpar-Vařeka 1994, Bureš – Kašpar – Špaček – Vařeka 1997, 1998*). This area would represent the time when the settlement below Prague Castle changed into a high medieval town and would be complemented with a production area in the northern part of the site (**Fig. 1: B9**) allowing for a number of productive activities typical for early medieval settlement of a proto-urban character, archaeologically documented on many Prague sites.

The second part creates the atmosphere of a countryside environment of

<sup>(6)</sup> Aside from above stated sources also used were: Farní věstník libocký, 1908, č. 2, s. 4. and State Central Archive, I. odd., fond Tereziánský katastr, sign. Rakovnicko 2727, poddanská fassa z r. 1713, její okulární visitace z r. 1719; there also quoted the state according to Berní rula from 1654. Historical search was done by Mgr Kateřina Hanzlíková. The authors thank Mgr Jan Pařez PhD for correction of the sources quotation.

<sup>(7)</sup> Likewise from the authors, the conception and preparation of the park project was also carried out by PhDr Štěpánka Jílková. The graphic design was done by Michal Ernée, who also in the years 1998 – 2000 took part in preparation of programmes and the execution of some experiments. He played an important part in the publishing activities of the park. Mgr Vojtěch Kašpar co-operated in interpretation of archaeological situations from the excavations near the church of St Peter Na Poříčí at Prague New Town.

the late Middle Ages and thus reminds us that Liboc was, until recently, part of the agriculture hinterland to Prague. The three-part house (**Fig. 1: B1**), modelled partly on the remains of a late medieval/early post medieval village building uncovered in Prague – Vysočany and other evidence from excavations of villages in Bohemia and Moravia (see below), will be used as a period tavern. The space for a farmstead, demarcated by a wattle fence, will be filled with other constructions: a granary (**Fig. 1: B3**), hayloft (**Fig. 1: B5**), bread oven (**Fig. 1: B4**) and a well (**Fig. 1: B2**).

#### 4 Questions and methods of construction and experiment in the Archaeopark Liboc

Models, constructions and experiments were not approached by the project of the Archaeopark Liboc in a single fashion. The conception of the park was the priority; the various structures would be executed in various ways so that the result would give the impression of an organic unit. Some of the buildings were executed as an experiment, some as functional constructions and some as models. The criteria for deciding what way the structures should be executed were decided on the one hand by the potential interest for visitors and, on the other hand, an expert view based on current knowledge. The other criteria were the accessibility of sources for experiments or constructions, mostly based on Archaia's own excavations. The experimental constructions were, in such cases, a continuation of empiric research or the next phase for testing interpretative models. The park fittings were also

partly created in an experimental way, mostly replicas of tools and, to a smaller extent, recent ethnographic material (agricultural tools, house equipment; mostly small wooden artefacts bought or collected especially in the region of Šumava). One of the aims of this open-air exhibition was to offer the visitors variations in constructions based on archaeological sources, so they can themselves look for solutions during their visit (for example the constructions of so-called grubenhauses). The immediate experience from the stay in the reconstructed historical 'developed' environment gives a very different view of problems and allows even a layman to consider the advantages and disadvantages of reconstructed spaces in the function of a building.

#### 5 Executions

The main buildings have either been built (**Fig. 1: B1, B7, B8, B9**) or detailed planning documentation have been prepared (**B6**).

The construction of wooden buildings from the settlement below the Prague Castle at the end of Early Middle Ages and the beginning of the high medieval period (the late 12th – early 13th century) aimed at testing the possible interpretations of specific features related to this periods, sunken structures. We find this type of archaeological remains of buildings in Bohemia and Moravia from the earliest phases of high medieval towns. Czech archaeology traditionally describes these features, so called grubenhauses, as sunken dwellings (for example *Klápště – Richter – Velímský 1996, Velímský 1989*) and only later other interpretations were considered, especially that they were a part of non-preserved surface structures (*Procházka*

2000, Vařeka 2002). At the site near St Peter Na Poříčí, which was chosen as a model for our experimental constructions, the sunken rectangular features are the only type of archaeologically documented buildings present (*Bureš – Kašpar – Vařeka 1994, Bureš – Kašpar – Špaček – Vařeka 1997, 1998*). Because of the absence of any traces of surface buildings, we cannot unambiguously prove that these features represent the subsurface parts of unpreserved surface buildings or if they are independent sunken structures. The surface timber-frame wooden buildings that we might theoretically presume on the basis of analogues for example from the German region (for example *Legant – Karau 1994*) would not be preserved in the soil condition of the site. The original surface of the researched period was disturbed by later intrusions on the area by intensive settlement activity of a lively town organism with traces from Late Middle Ages up to the present. Therefore, it would in this case be easy to confuse the absence of empiric evidence for the proof of an absence of a certain type of development. Because of this the chosen feature was constructed as an independent sunken structure (**Fig. 1: B7**), and another as a subsurface storage space for a larger surface dwelling (**Fig. 1: B6**).

The core of the projected farmstead from the Late Middle Ages presents a model of a three-part corner-timbered house with a living room, entrance room and upper and lower storage rooms (**Fig. 1: B1**). The construction is partly based on the finds of village buildings from the end of the Middle Ages from the Prague territory. It is mainly based on various sources from the whole of Bohemia and Moravia (see below).

## 5.1 The sunken structure B7

### 5.1.1 Archaeological situation

We chose as the source for the construction of sunken structure B7 feature ES3/FS3 uncovered between 1988 – 1992 during the excavations of a settlement complex near St Peter Na Poříčí from the second half of the 12th to the 13th centuries (*Bureš – Kašpar – Vařeka 1994, 2000; Bureš – Kašpar – Špaček – Vařeka – 1997, 1998*). The feature belongs among some of the smaller rectangular structures with a rectangular plan, which are typical for the second and third horizon of occupation of the site, generally dated to the first half of the 13th century. Altogether six sunken features were excavated in these horizons, of from 2.4 to 1.8 m to 3.2 to 2.7 m size and 0.8 to 1.7 m depth. They were provided with staircase and in some cases with stone retaining wall. The features did not disturb each other and the distance from each other was at least 5 m. In none of the features were the traces of hearths. For the construction of feature ES3/FS3 we chose to interpret it as an independent sunken structure with a storage or production function (at the same time we do not exclude the second and according to current evidence more probable possibility that the features present the subsurface storage space - cellar - of an unpreserved surface building, which could have been larger than the sunken part).

### 5.1.2 Description of an excavated feature ES3/FS3

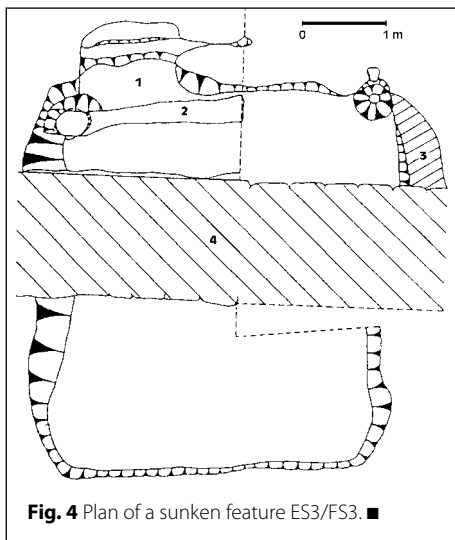
Feature ES3/FS3 belongs to horizon 2. The sunken structure has a rectangular plan with rounded corners, was 3.2 to 2.7 m large with the longer axes on a North-South alignment. It was 1 m deep

in the subsoil (**Fig. 4**). The walls of the dugout broke from the surface sharply, the walls were smooth, vertical or near vertical, the break at the bottom was sharp, and the bottom flat. In the corners of the western wall were postholes. The sunken structure was entered via a staircase situated on the western part of the northern wall (**Fig. 4: 1**), which was provided with three steps cut into the subsoil (**Fig. 5**). By the entrance on the bottom

of the feature was the visible imprint of a beam (**Fig. 4: 2**). In its infill were found a line of iron nails. Through the centre of the feature from West to East was the wall of modern stables, which disturbed about 30% of the structure (**Fig. 4: 4**). The structure did not burn down and therefore we miss remains of burnt wooden constructions or clay daub with imprints (relation of burnt daub with imprint **Fig. 4: 3** to the feature could not be determined). The construction was probably dismantled and the pit gradually filled with rubbish.

### 5.1.3 Construction

The postholes in two corners and the negative of a beam in the bottom of the feature by the entrance represent the only construction remains. It is impossible to exclude the possibility of other shallow holes in the corners of the south wall, which were missed by the excavation, or that the corner posts were not placed below the level of the floor. If we use the interpretation of the feature as a sunken building, the most probable construction solution, based on analogues from the traditional wooden architecture, would be a rebated construction with horizontal construction elements placed in grooves in vertical load-bearing posts. The imprint of the beam by the neck entrance, which was connected to a posthole in the North West corner of the building, suggests that the bottom beam of the wall infill would have been used as a threshold. The left doorframe upright (while looking from the interior) would be represented by a load-bearing corner post. The right upright would probably have been inserted into the bottom horizontal element of the rebated construction. The find of nails situated at regular intervals of 15 cm in



**Fig. 4** Plan of a sunken feature ES3/FS3. ■



**Fig. 9** Replicas of nails used in the roof construction of the building B7. ■





**Fig. 5** Entrance neck into the sunken feature ES3/FS3 after excavation. ■

the imprint of the beam may indicate a wooden floor – joining the ends of the floor planks to the threshold. If the floor construction was solved in this way, then we can presume that the ends of the planks were oriented at right angles to the gabled wall and were pushed between the first and the second horizontal elements of the infill of the walls, and in the area of the entrance between the doorframe they were joined to the threshold with nails. In the interior we suppose the placing of the floor planks on footing beams.<sup>(8)</sup> The steps and walls of the neck entrance were probably secured by a wooden construction because the soft sandy subsoil of the site would cause an early collapse of the entrance (**Fig. 6**).

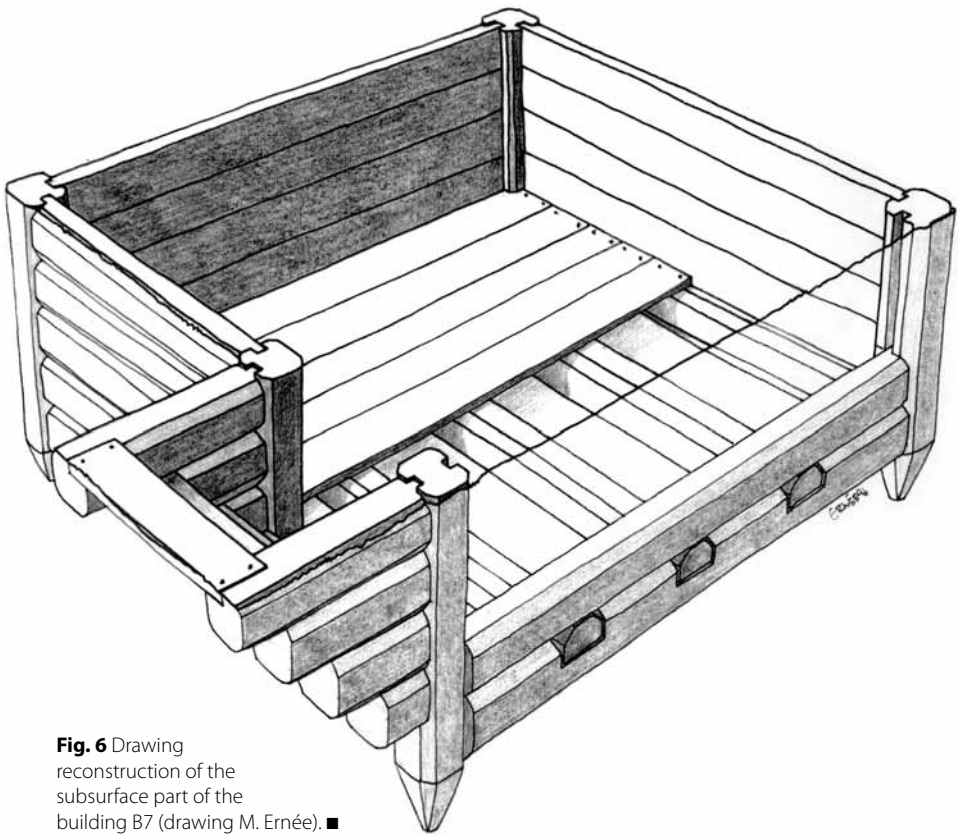
The construction of the surface part is hypothetical. In the case of the interpretation of the feature as an inde-

pendent sunken structure, we consider the fitting a roof frame, probably with a ridge beam, on the load-bearing perimeter walls of the rebated construction (**Fig. 7**). The roof could have reached over the gable of the entrance. The entrance could have been protected by an independent roof (**Fig. 8**).

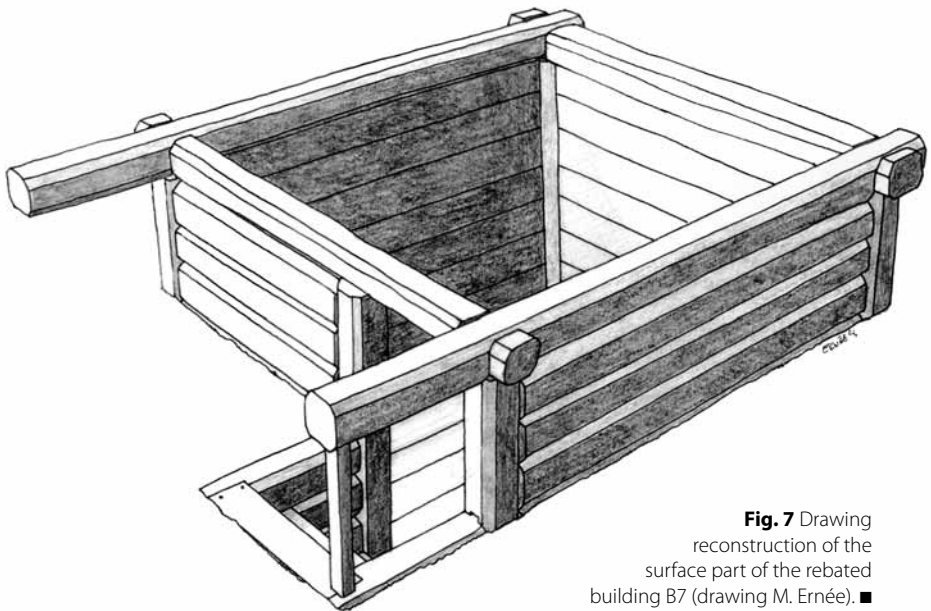
#### 5.1.4 Building

Building took place during the summer of 1997. It was done mostly with knotted pinewood (because of the lack of finds of charcoal to determine the species of the wood used), reed for roof covering, wicker for wattling, clay for daubing and replicas of rectangular hammered nails (**Fig. 9**). The carpentry work was done by two Ukrainian carpenters, experienced in traditional construction technology and a helper of Czech origin. Work was

<sup>(8)</sup> This construction element is documented for example in corner-timbered houses in Switzerland, which were dendrochronologically dated to the late 12th - 15th centuries. The overreaching floor planks were placed between the horizontal timbers of the log construction and were visible from outside (Furrer 1998).



**Fig. 6** Drawing reconstruction of the subsurface part of the building B7 (drawing M. Ernée). ■



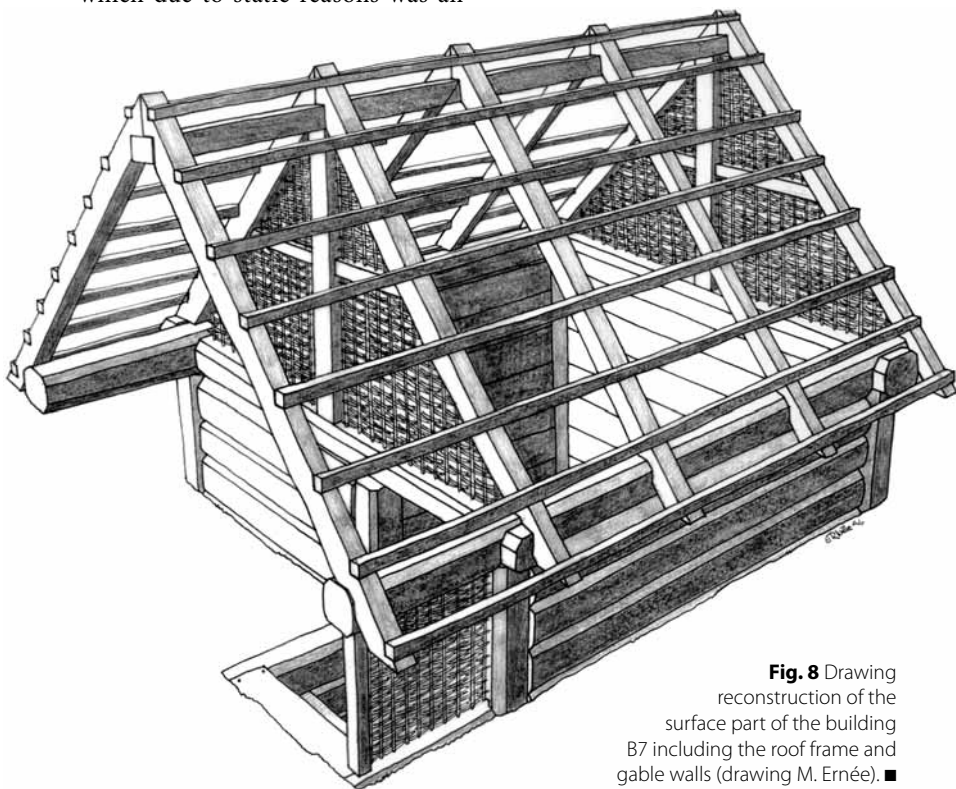
**Fig. 7** Drawing reconstruction of the surface part of the rebated building B7 (drawing M. Ernée). ■

carried out with replicas of asymmetrical carpenter's axes, which according to archaeological finds, were used in the Late Middle Ages. The construction used logs, hand hewn half logs, beams (hewn in a traditional way with asymmetrical axes) and split planks.

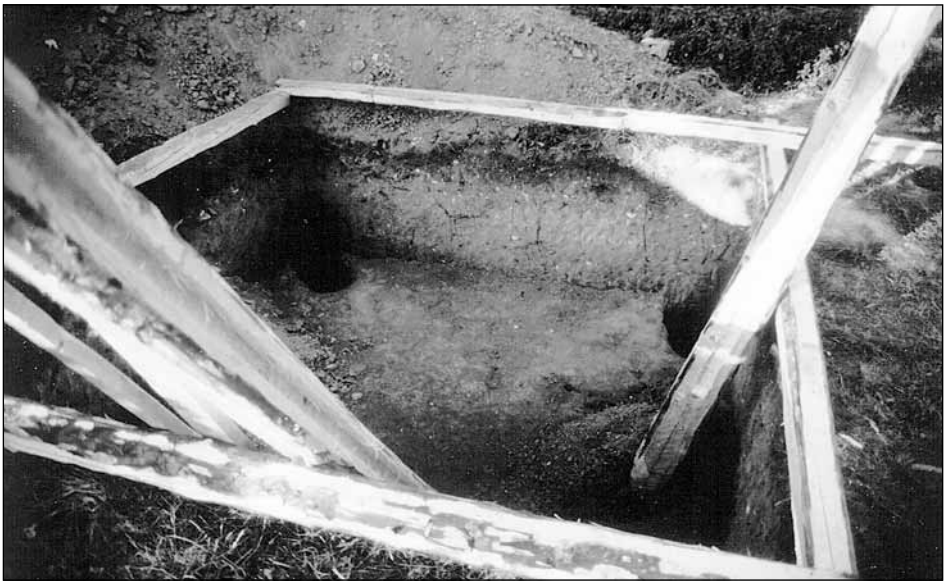
The building pit was dug out to a size corresponding to the excavated situation. The load-bearing corner posts were provided with grooves cut by chisel and axe and put into holes (**Fig. 10**). On the bottom of the pit we placed at right angle to the eaves three rough-hewn footing beams and laid on them a floor of split planks. The exception to the archaeological situation is the post for the right doorframe upright (while looking from interior) which due to static reasons was an-

chored below ground level, while in the excavated structure we presume it was inserted into the bottom element of the wall infill placed into grooves in the corner posts. In the same way further postholes were created in the corners of the south wall. In the grooves in the corner posts and right doorframe upright were inserted horizontally laid half logs with the hewn side towards the interior and dovetail at the ends (**Fig. 11**). The side walls were secured with a rebated construction, the steps were made from split planks.

The corner posts were joined by tie beams and purlins, which reached to the edge of the entrance. The construction by the left side of the entrance (when looking from interior) was provided



**Fig. 8** Drawing reconstruction of the surface part of the building B7 including the roof frame and gable walls (drawing M. Ernée). ■



**Fig. 10** Experimental building of structure B7: foundation hole with prepared load bearing posts and post holes. ■



**Fig. 11** Experimental building of structure B7: rebated construction in the subsurface part. ■

with horizontal wattling carried by vertical split poles. The building was covered with a roof frame with a ridge beam born by uprights placed into the tie beams of the gable walls. Rafters

from rough-hewn beams were carried on the ridge beam. They were joined at the top by lap joints and at the bottom inserted into purlins (**Fig. 12**). Poles were nailed to the rafters and thatched



**Fig. 12** Experimental building of structure B7: rough construction with a roof frame. ■



**Fig. 13** Experimental building of structure B7 before finishing. ■

with reed (**Fig. 13**). The gables were wattled (**Fig. 14**) and daubed (**Fig. 19**). The interior was covered by a platform ceiling of daubed logs (**Fig. 15**). The entrance was provided with a ledged

door of four planks, which was secured by a simple wooden lock. Outside the wooden walls, above the surface, were covered with daub held on by wooden pegs (**Fig. 16, 17, 18, 19**).



**Fig. 14** Experimental building of structure B7: finished building before daubing. ■



**Fig. 16** Experimental building of structure B7: preparation of the rear wall for daubing. ■



**Fig. 17** Experimental building of structure B7: detail of the wall prepared for daubing. ■



**Fig. 18** Experimental building of structure B7: daubing. ■





**Fig. 19** Finished experimental construction of the structure B7. ■



**Fig. 15** Experimental building of structure B7: the daubed platform ceiling. ■

## 5.2 Surface house with a subsurface storage room B6

### 5.2.1 Archaeological situation

A house with a subsurface storage room was planned on the basis of a sunken structure ES1 uncovered by archaeological excavations of a settlement area near the church of St Peter Na Poříčí, which belongs to the first settlement horizon from the second half of the 12th to the beginning of the 13th centuries (*Bureš – Kašpar – Vařeka 1994, 2000; Bureš – Kašpar – Špaček – Vařeka 1997, 1998*). The five structures of the earliest horizon were of a square plan of 20 to 36 m<sup>2</sup> area, up to 2 m in depth, and lacking staircases and traces of hearths. The buildings were situated at regular intervals of 10 to 15 m in a row oriented North - South. Near the building, which seems to represent the core of this development of presumed properties appear pits and good quality pebble cobbling

in the centre of an area between single buildings. We interpret these features as the subsurface parts of non-preserved surface buildings of wooden, probably timber-frame construction that would have been larger than the subsurface parts (*Vařeka 2002*).

### 5.2.2 Description of the feature according to the excavations

Sunken structure ES1 was excavated between 1988 and 1990. Six massive postholes were found on the perimeter of a feature of a square plan with sides 6 m long, (two in corners and one in the middle of opposing walls). On the south side the post holes were probably doubled (**Fig. 20**). The diameter of the postholes was about 0.5 m. The feature was dug into ground and its lower part reached into a gravel-sand layer. The depth of the feature was between 1.4 to 1.5 m, the bottom was regular and flat without traces of a finish. The nearly vertical walls do not show any traces of a construction (for example wooden frame).

### 5.2.3 Construction

Feature B 6 is the only one from the main buildings of the Archaeopark not yet built, being still in the planning phase.

The construction solution is based on the find of massive postholes in the interior of the sunken feature that are the remains of a post structure of considerable static parameters. The problem is the joining of this post skeleton to a presumed surface part, which regarding the absence of traces in the subsoil around the sunken part was probably of a timber-frame construction. The interpretation as presented by the drawing is a two-space solution of the surface building with an entrance hall and a hall placed above

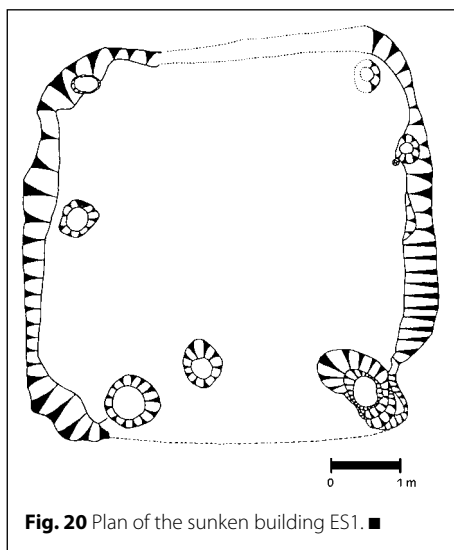
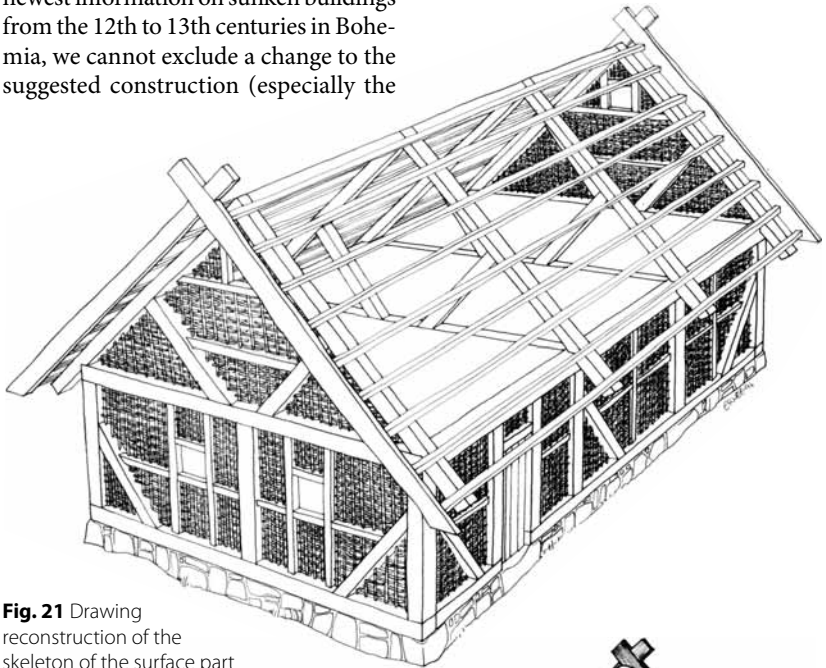


Fig. 20 Plan of the sunken building ES1. ■

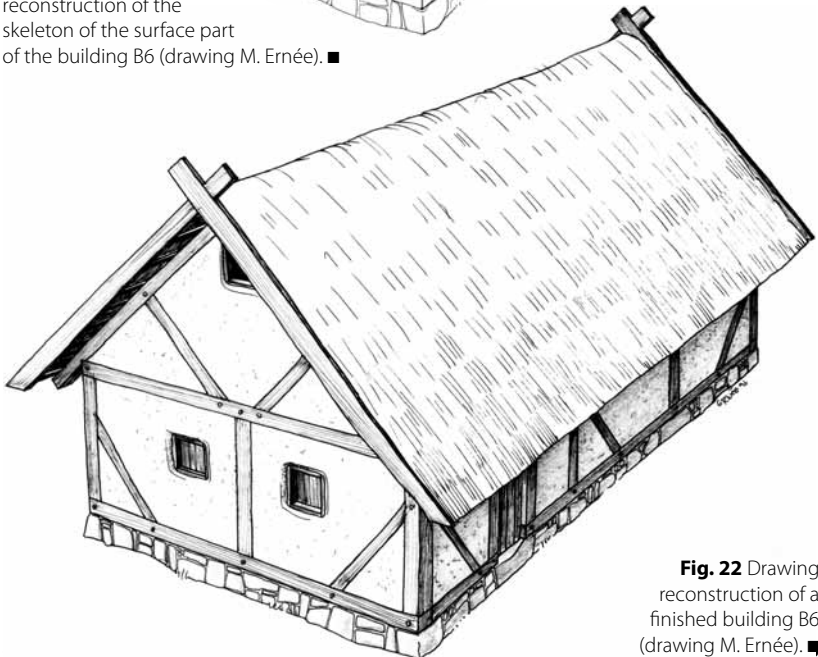


the subsurface space, which was used as cold storage (Fig. 21, 22). Based on the newest information on sunken buildings from the 12th to 13th centuries in Bohemia, we cannot exclude a change to the suggested construction (especially the

possibility of a multi-storey solution of the structure).



**Fig. 21** Drawing reconstruction of the skeleton of the surface part of the building B6 (drawing M. Ernée). ■



**Fig. 22** Drawing reconstruction of a finished building B6 (drawing M. Ernée). ■

## 5.3 Three-part house B1

### 5.3.1 A 1:1 scale model of a village house from the end of the Middle Ages

The 1:1 scale model of the late medieval village house fulfils the aim of building a farmstead reminiscent of the vanished village environments, which until recently represented a large part of the area of the current city. As the core of the farmstead we chose a typical building of the village environment from the end of the Middle Ages in our region – a corner-timbered house with a three-part plan with a living room, entrance room and upper and lower storage rooms. We could base the construction on Archaia's own excavations only to a limited extent (especially excavations in Prague – Vysočany, *Bureš – Hanzlíková – Pischmuthová – Vařeka 2002*). Because of this, we chose a model based on current knowledge of late medieval village houses in Bohemia and Moravia, based on both archaeological research and the research of preserved village houses. An important limit to the project was the plan to use the village house as a period tavern that would, in the future, bringing finances to cover part of the costs of the park. Because of this specific aim, the building had to fulfil current health and safety and building regulations. The conception and construction of the building thus suffered many compromises and, from the expert point of view, incorrect solutions. Mostly these are hidden from the view and will be explained in the information materials placed in the structure.

Archaeological excavations of villages joined to Prague in the 20th century provide only fragmentary information on the design of the village house from

the late Middle Ages (for example *Huml 1982*). More data is provided by rescue excavations carried out by Archaia in Prague – Vysočany (*Bureš – Hanzlíková – Pischmuthová – Vařeka 2002*) and in Prague – Záběhllice (*Ernée 2002*). To pursue the chosen aim we decided for a model based on four sources, which when combined provide an idea on the design of a village house of the 15th century in the Prague area. The archaeology give evidence mostly of the plans, organisation, and construction (remains of stone construction – walls and stone bases, indirect evidence of wooden construction, for example imprint in daub) of a village house, its construction details (for example entrance openings) and fittings (hearths and artefacts, compare for example *Nekuda R. 1995, Smetánka 1994*). The knowledge of surface parts is provided by preserved village houses from the end of the 15th to the 17th centuries, allowing to reconstruct corner-timbered walls, platform ceilings, size and the organisation of window and door openings, height of the hall and its fixed fittings (for example *Škabrada 1999*). Other information on the construction design is offered by ethnographic sources from regions with a tradition of a corner-timbered village house (*Blomkvist 1956, Frolec – Vařeka 1983, Mencl 1980, Tłoczek 1980*). The structure of a three-part house and its fitting is also recorded in written sources from the 16th century (see for example *Petráňová – Vařeka 1987, Vařeka – Petráňová – Plesingerová 1988*).

### 5.3.2 Construction

The three-part transversely divided house of a rectangular plan, 15.2 to 5.3 m large consists of a living room, entrance room, lower and upper storage rooms

(the height of the roof ridge is 7.37 m). The placing of the house on a slope allowed the placement of the lower partly subsurface storage room and a half storey solution of the upper storage room corresponds to the considerable height of the living room. To build the structure we decided on a corner-timbering, which is documented as the basic type of construction of village buildings both in archaeological data and in preserved village architecture. The type of material, spruce wood, does not correspond to either archaeological or ethnographic evidence (mostly fir) and we justify its use only by its financial accessibility. The corner-timbered construction of logs about 0.3 m thick with simple lap joints and overreaching ends with the traces of cutting by axe is based on both archaeological and ethnographic evidence. Stone is used in the base of the living room and the entrance room and in the lower, partly subsurface storage room, which was fully built in stone including the retaining wall of the entrance. On the northwest edge of Prague we cannot exclude farmsteads built completely of stone, which were documented in the Slánsko region (ca. 40 km East of Prague) by archaeological excavations (*Smetánka 1969, 1972*) and ethnographic research (*Vařeka 1973*). In our case, we chose to build the walls in a combination of stone and wood, which after complementing with clay daub will show the visitors the three basic building materials of a village of this period. The independent log construction units of the living room and the upper storage room are connected by rebated construction of the eaves walls of the entrance hall. The rafter roof frame is based on the supposition of the gradual replacing of a typologically

earlier system with ridge beam (used for the sunken structure B7) to the more developed rafter system of the Later Middle Ages. Between the two possibilities of thatched or shingle roof, we chose for practical reasons shingles (we have not managed to gain hand threshed rye straw for thatching) which in this period probably represented the more expensive prestige solution. The living room of 3.5 m height will be provided with a stone stove and a hearth in the corner by the entrance. Apart from a smoke hole, the draining of smoke will be secured by a makeshift chimney leading to the loft area. From the entrance room, there is a narrow staircase into the lower storage room and a ramp entrance into the upper storage room.

The aim of using the building as a period tavern forced a number of adaptations. The living room and the entrance room are open to the public but the visual experience and authenticity had to be completed to modern health and safety regulations and other modern norms. For example below the floor of the hall there is electric heating and emergency lights will be installed. The most controversial problem, especially because of the necessity to fulfil fire safety requirements to gain building permission, was the open hearth and stove in the wooden interior of the hall, the smoke rises towards the ceiling and is partly caught by a makeshift chimney of wattle construction, which for fire safety reasons was daubed with clay. We solved this by describing the makeshift chimney as air-conditioning with an inlay of modern materials, which in the loft is connected to real but hidden air-conditioning. In the lower storage space there are modern toilets and in the upper storage room a modern kitchen,

which will stay hidden from the visitors. The entrance room is, in contradiction with the prevailing evidence, provided by a couple of opposed doors. This solution was forced by the necessity to divide the entrance to the tavern for the two groups of visitors, those from street and those from the Archaeopark.

### 5.3.3 Building

After levelling of the ground and digging the subsurface part of the storage room, the stone parts of the construction were built. As material for the building of wall bases and the lower storage room walls Argillite, corresponding to local subsoil gained at the edge of Prague, was used. Contrary to archaeological evidence but because of modern norms we used lime mortar. The walls had to be insulated and utilities were placed below the floor of the storage space. This was followed by the corner-timbered construction of the living room and

the upper storage room from unhewn spruce trunks (**Fig. 23**). The joints were simple lap joints of half-circular shape cut into the lower log to fit the shape of the following log. The walls were secured against sliding sideways, caused by vertical pressure, by overreaching of the ends and ash pegs placed in drilled holes joining neighbouring logs (**Fig. 24**). On the logs of the shorter sides of the top tie beams were placed that carried the rafters of the roof frame (**Fig. 25**). The living room and entrance room were provided with a platform ceiling of spruce logs about 0.2 m diameter. In the living room the ceiling is supported by a central squared girder (**Fig. 26**). Hand split fir shingles were nailed to ledges on the roof frame. To join the shingles we did not choose hammered nails as presumed in the project but, for reasons of durability, nickel-plated nails with heads hammered to a T shape. The entrances of the entrance room, upper storage room



**Fig. 23** Building of a three part house B1: log built hall on the right, on the left lower storage space with stone walls and upper bedroom with log constructed walls. ■



**Fig. 25** Building of a three part house B1: erecting the rafter roof frame. ■



**Fig. 24** Building of the three part house B1: detail of corner joints of the log construction with irregular ends of logs. ■



**Fig. 26** Building of a three part house B1: interior of the hall with pyramidal organisation of windows in the gable wall. ■



**Fig. 27** Building of a three part house B1: view from the park grounds at the finished rough building with a shingle roof. ■

and living room were provided with rough-hewn doorframes. The thresholds are bottom logs. The window openings are 0.5 to 0.5 m size or the height of two logs and window frames of rough-hewn uprights are exclusive to the living room. Two windows open in the yard eaves wall (Fig. 27) and in the gable wall there are three windows in a characteristic pyramidal arrangement (Fig. 28). The height of the upper opening, which will be used for draining smoke, corresponds to the lower surface level in the hall. The slit openings in the storage room will be lined as with in the log constructed upper storage room's small openings, by a simple cut between two neighbouring logs. The interior of the living room would be fitted with a wooden floor, a couple of poles, benches along the walls and tables

for visitors. The floor in the entrance room would be made from stone slabs. The joints between logs would be filled with moss and in the interior daubed and while outside the wooden walls would be covered with a thick layer of daub. A thick layer of daub will covers the platform ceiling in the loft.

## 6 Operation of the Archaeopark and programmes for the public

In 2000 Archaeopark Liboc started trial operations. In that year 1300 visitors participated in the programmes (Bureš 2001). During the trial operation in the years 2000 – 2003 visitors saw in the Archaeopark a weaver's workshop



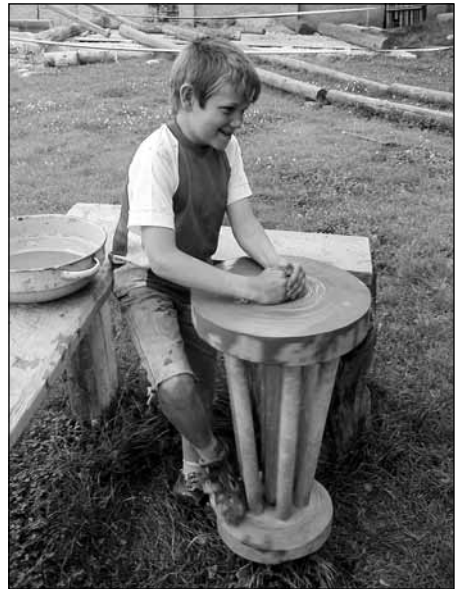
**Fig. 28** Building of a three part house B1: look at the gable and yard eave walls of the finished rough building. ■

of the first half of the 13th century with a functional construction of a medieval horizontal loom and a spinning wheel in the sunken structure (**Fig. 29, 1: B7**), a potter's workshop with a replica of a late medieval fast spinning potter's wheel (**Fig. 30**) and two functional kilns under a simple post-built shelter of oak wood covered with short split logs (**Fig. 31, 1:B9**) and a wood working workshop with a reconstructed medieval peddling lathe placed in a wattle and a daub structure. The Archaeopark is dominated by the three-part house with a shingle roof of the farmstead.

The Archaeopark contains not only immovable reconstructions and constructions, but in the programmes we use a number of replicas of archaeological finds. This mostly concerns replicas of tools: axes (for example **Fig. 32**), adzes, chisels, carpenter and other tools. In many simulations, experimental and experience programmes we use replicas of archaeological finds. These concerned prehistoric and medieval pottery (**Fig. 33**), prehistoric ornaments or small artefacts (weights, toys and so on). Visitors to the Archaeopark could buy some of the replicas of archaeological finds as a teaching aid or as souvenirs. The park is equipped with a number of information boards depicting single activities and with a reduced wooden folding model of a sunken structure from the first half of the 13th century, where there is in the park, a weaver's workshop (**Fig. 34**). The reduced model allows the simulation of archaeological research of the remains of the building and to demonstrate the process of the construction of a building based on archaeological evidence. <sup>(9)</sup>



**Fig. 29** Building B7 equipped with a working model of a horizontal loom. ■



**Fig. 30** Replica of a fast rotating potter's wheel. ■

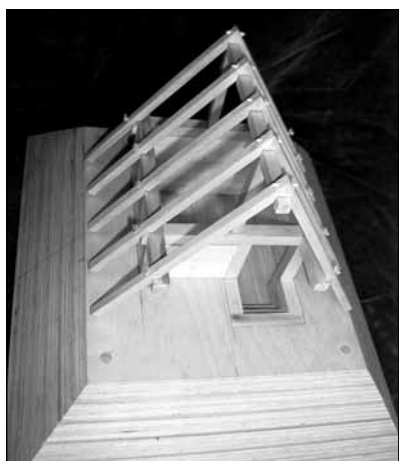
<sup>(9)</sup> Model created by Michal Ernée.



**Fig. 31** Potter's workshop below a simple post-built shelter. ■



**Fig. 33** Set of replicas of prehistoric and medieval pots used in the park for educational purposes. ■



**Fig. 34** Folding model of the building B7. ■



**Fig. 32** An example of an axe replica used in the Archaeopark. ■

During trial operations we introduced some programmes which were not included in the original conception – simulation programmes in which, especially children and youths, simulated activities connected with archaeological excavating (excavations of a training inhumation grave, drawing of an archaeological situation, work with finds and so on).

In the years 1999 to 2000 the Archaeopark Liboc published for visitors colour information brochures 'Carpenters in Middle Ages', 'Medieval Pottery', 'Sunken Building from the 13th Century' and 'Archaeopark Liboc'.

The new management of the civic association Archaia, which was elected at the end of the year 2001, does not regard the operation and development of Archaeopark Liboc as their priority. This led to decline in experimental and educational programmes. From autumn 2003 the Archaeopark is practically closed to the public and is used only occasionally for private actions.



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## Summary

### Le Parc archéologique de Liboc: Origine et conception d'un projet pédagogique

Le Parc archéologique de Liboc a été fondé en 1994 pour pouvoir mieux communiquer les résultats des recherches archéologiques et former ainsi la conscience de la patrimoine archéologique. Le parc est divisé en deux parties: l'une représente le moyen âge ancien au contexte d'un village au pied du château de Prague et l'autre le milieu rural aux environs de Prague au moyen âge récent.

Quant à la première partie, il y a un bâtiment d'exploitation et on envisage d'y reconstituer une maison aux pans de bois. Les deux reconstitutions représentent des types différents des constructions enterrées découvertes sur le site de Poříčí dans la Nouvelle-ville de Prague (grand-ensemble chez St-Paul).

La deuxième partie suggère l'atmosphère rurale du moyen âge récent et ainsi nous rappelle qu'il n'y a pas longtemps que le village de Liboc constituait l'arrière-pays agricole de Prague. Dans le centre, il y a une construction typique pour le lieu et l'époque - maison divisée en trois parties avec une chambre, une entrée et deux celliers. La maison est reconstituée d'après les fouilles réalisées dans les villages tchèques et moraves. Elle servira de brasserie médiévale. D'autres reconstitutions sont projetées pour compléter le plan de la ferme.

La reconstruction de la maison en brasserie a nécessité plusieurs changements. Comme la chambre et l'entrée seront ouvertes au public, l'impression visuelle la plus authentique possible a dû respecter les normes hygiéniques actuelles et celles de sécurité. Par exemple sous le plancher de la chambre, il y a un chauffage électrique et on y installera un éclairage d'urgence. Tous les compromis seront expliqués dans les matériaux disposés dans la maison.

A Liboc, on présente les découvertes archéologiques à l'aide de l'expérience et de la reconstitution. Celles-ci sont réalisées par les artisans professionnels et par les quelques membres du groupe damis du Parc. Le parc de Liboc invite les visiteurs non seulement à venir regarder les constructions et objets, mais encore à essayer différentes activités. On y organise divers workshops, cours, stages de lété et d'autres programmes qui offrent aux visiteurs un grand nombre d'activités complétées des informations sur les données archéologiques.

### Der Archäopark von Liboc – Grundlagen und Konzeption eines pädagogischen Projekts

Der Archäopark in Liboc wurde 1994 gegründet, um den öffentlichen Zugang zu den Resultaten archäologischer Forschung zu verbessern und um das Be-

wusstsein für archäologische Denkmäler zu erhöhen. Der Archäopark selber besteht aus zwei Teilen: Der eine stellt das frühmittelalterliche Milieu der Siedlung unterhalb der Prager Burg dar, der andere repräsentiert die Lebensverhältnisse des ländlichen Raums um Prag während des späten Mittelalters.

Im ersten Abschnitt ist der Bau eines auf der Bodenoberfläche zu errichtenden Hauses mit einer Fachwerkkonstruktion und einem eingetieften Vorratsraum geplant; ein bereits erbautes separates Grubenhaus gehört ebenfalls zu dieser Anlage. Beide Gebäude stellen verschiedene Rekonstruktionen von Grubenhäusern dar, die in der Siedlung von St Peter Na Poříčí in der Prager Neustadt ausgegraben wurden.

Im zweiten Abschnitt des Parks wird die Atmosphäre des spätmittelalterlichen ländlichen Raums gezeigt, die uns daran erinnert, dass Liboc noch bis vor kurzem zum landwirtschaftlich geprägten Hinterland von Prag gehörte. Als Zentrum des Bauernhofes wählten wir ein typisches Gebäude eines Dorfes aus unserer Region vom Ende des Mittelalters – eine Holzbohlenskonstruktion mit einem dreiteiligen Grundriss, der aus Halle, Eingangshalle und einem Raum für Vorräte besteht. Das Haus, das auf der Grundlage von Befunden aus Grabungen von Dörfern in Böhmen und Mähren errichtet wurde, wird in Zukunft periodisch als Gaststätte genutzt werden. Die Fläche für einen Bauernhof, die durch einen Flechtwerkzaun abgegrenzt ist, wird mit anderen Gebäudetypen bebaut werden.

Die Absicht, das Gebäude als Gaststätte zu nutzen, zwang zu zahlreichen Bedarfsanpassungen. Die Halle und die Eingangshalle sind für die Öffentlichkeit zugänglich, so dass das visuelle Erlebnis und die Authentizität hier zugunsten der modernen Gesundheits- und Sicherheitsstands zurücktreten mussten. Zum Beispiel befindet sich unter dem Fußboden der Halle eine elektrische Heizung, außerdem wurden Sicherheitsleuchten installiert. Alle diese modernen Einrichtungen werden mit Hilfe von Informationsmaterialien im Haus für den Besucher erläutert.

Die archäologischen Funde und Befunde werden durch Experimente und Rekonstruktionen vorgestellt. Diese werden ausschließlich von professionellen Handwerkern und einer kleinen Gruppe von Kooperationspartnern und Förderern des Archäoparks durchgeführt bzw. erstellt. Für die Besucher bietet der Park neben der traditionellen Ausstellung von Befunden und Objekten die Möglichkeit, einige der Werkzeuge selber zu benutzen. Der Park hat bereits diverse Kurse, Seminare, Sommer-Schulen und andere Programme organisiert, durch die den Besuchern ein umfangreiches Angebot von Aktivitäten vorgehalten werden konnte, das durch Basis-Informationen zu den archäologischen Quellen ergänzt wird.