

Geological component

Inventory and state of preservation of geological features

(In order of importance)

- **Heinrichsburg** castle: built of imported Thuringian travertine; a unique romantic structure requiring structural assessment and surface repairs
- **Grotto** (now inaccessible artificial cave): built of imported Thuringian travertine with artificial stalactites and romantic elements made of authentic rocks, minerals or fossils; it is proposed to open it – a static assessment and repair of the interior is necessary, creation of an access route to the cave with revitalization of the rock outcrops in the vicinity (including the area near the artificial pond)
- **Fossil trees** (the original “Krkonoš/Giant forest”, nowadays a partial accumulation of blocks of stone in the zoo grounds located in the llama enclosure and nearby surroundings): a collection of a large number of imported pieces of Araucarites from the foothills of the Krkonoše Mountains; preserve and make available to the public
- **Smoothed basalts** dredged from the bed of the River Elbe, local material, very valuable pieces that cannot be replaced; preserve (relocate) and present appropriately to the public
- **Basalt pillars and blocks**: originally used to build access paths, bridges, stairways and stone retaining walls; material can be replaced from current sources; remove vegetation and uncover original stone paths in appropriate locations
- **Natural outcrops of phonolite (trachyte)** in the Lumpe Park area, which were part of the original trails and excursion routes (ravine, path to the cave): currently rather weathered and unstable in places (risk of rock fall), cutting of the trees is necessary
- Other types of rock (mostly single blocks) of regional origin: used for the construction of trails, walls and bridges, or for educational purposes (possible to replace from existing sources)

Assessment of the existing value of the site

The inanimate part of Lumpe Park is a combination of local rocks and imported rock material from distant (often no longer exploited) deposits, which is unprecedented in volume and degree of preservation in one place. At present, the geological attractions are partly found in their initial place (Grotto, castle, remnant of the Krakonoš Forest and ravine) and partly relocated as part of the landscaping works carried out in the zoo grounds formerly (smoothed basalts, individual araucarites, etc.). Most of the preserved geological features are unique in nature and cannot (or can only very hardly) be replaced from current sources. A considerable part of the original volume of imported rocks known from the period photo documentation is probably hidden under the backfill layer, or was used in some construction works or even stolen. In spite of this significant reduction in the number of exhibits (due to the aforementioned redesign of the zoo in the second half of the last century), the local collection forms a unique whole in good condition. This is another argument why it is necessary to ensure proper registration and protection of all existing relics of the Lumpe Park area, including their presentation to the public.

Proposal for the preservation or treatment of individual elements

For romantic travertine buildings (castle, cave) it is recommended to commission a structural analysis and assessment. Should the cave be made accessible, a more complex repair and revitalization of the interior will be necessary. The extent to which the original romantic elements of the site (e. g. the waterfall, artificial stalactites or cave decorations) should be restored remains a question. An alternative solution is to use modern technology and present the original state “only” by means of virtual reality and preserved period photographs. It is also

desirable to adapt the access roads to both monuments “in the spirit of Lumpe Park”, i. e. with maximum use of natural stone.

I suggest that large isolated blocks of rock (e.g. smoothed basalts) be placed in their initial or other suitable locations. Furthermore, collect small stones (travertine, petrified wood) related to the original area throughout the zoo grounds; these form part of not only the ornamental rockeries but are often scattered freely in the greenery between paths and enclosures.

On the unused path next to the castle, a nature trail can be created from the original rock sets to present the original elements of the Lumpe’s park along with information signs on the individual rock types and their origin. In selected places I propose to remove the vegetation cover (or even the backfill layer) and make accessible the original stone paths, steps and walls known from historical photographs (e. g. paths around the artificial pond).

The natural outcrops of the trachyte featuring plate jointing must be assessed in terms of stability and the risk of falls of parts of rocks. It is necessary to cut the overgrown pioneer trees in these segments.