



 **GEO PARK**[®]
Harz . Braunschweiger Land . Ostfalen

Landmark 19

Bösenburg



Harz



Networks of the Geoparks



The **Global Geopark Network** is a worldwide association of various Geoparks, all of which pursue common goals under the auspices of the UNESCO.



European Geoparks



A **National Geopark** is a clearly defined region, which conveys both geological history as well as the development of a cultural landscape. In addition, the institutions responsible for the Geoparks are actively involved in the protection of its geological heritage.

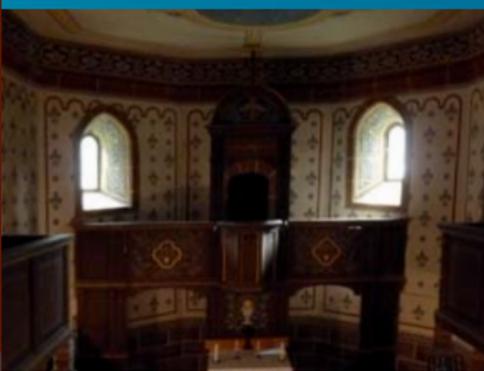


The **Geopark Harz · Braunschweiger Land · Ostfalen** was founded in 2002. Its geographical position in Europe as well as the location of the individual landmark regions are depicted in the map above.

1 Stonemasonry school in Bösenburg Burgberg in Bösenburg

The spur-like Burgberg (170 m above sea level) in Bösenburg towers above the valley of the stream Fleischbach by 40 m and is crested by the Romanesque to early Gothic church St. Michael, widely visible as a landmark. A 15 ha hill-top settlement already existed in the Bronze Age on this historic place. In the course of Germanic colonisation a refuge fort with a burial place, a court place and religious centre originated here since the 4th century – today they have long since disappeared. This fortress was esteemed to be centre of the Thuringian empire but was given up again, supposedly in the 11th century.

The name “Bösenburg” probably goes back to the Thuringian King BISINUS (around 460). We can get to the Burgberg from the Dorfstraße via a narrow driveway. Traces of the old underground sandstone



Interior of the church St. Michael



Tomb of Bösenburg sandstone

extraction are visible on the hillside: bare rocks, a barred, almost blocked up mine mouth and dump material. The purpose of extraction of the Mid Bunter Age (Solling Formation, Chirotherian sandstone) was gaining ashlar. This popular light-coloured, easy to finish sandstone was processed mainly by local stonemasons in the village itself.

Between 1620 and 1630 experts from Bohemian Olmütz immigrated, leading this craft to its heyday by their special skills; hence the term “Stonemasonry school of Bösenburg”. The sandstone is found in many local and regional buildings and works of art (inter alia the church and the water mill of Bösenburg, tombs on the cemeteries of Bösenburg and Burgsdorf). During the Second World War the bomb-proof hollows of the Friedrichsbruch served as a storing place for the inventory of the university and state library of Halle.

The church can be visited on prior appointment.

Contact: Gudrun Scheffler

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2 Sandstone Road shelf at Polleben

Between Hermsdorf and Polleben the street runs through the Schlenzetal (valley). Here the stream crosses the resistive sandstone layers. Its valley which in Polleben still is wide and gently sloping narrowing to a width of now 50m. A rock wall at the western roadside at the Steinmühle (mill) catches the eye. The outcrop – 50m long and 5m high – shows pale yellow and red brown sediments of the bunter (Hardeggen Formation). The sloped layers fall with a tilt of about 15° south down to the centre of the Mansfelder Mulde, which is 3 km away east of Polleben. There the bunter is already covered with Muschelkalk. The thin layers of sandstone and siltstone of the road shelf are not usable as ashlar. Thick-laying sandstone of the Solling Formation, however, was extracted in the old stone quarries 300m to the south in the Schlenzetal.



Road shelf



Mine mouth of the dewatering gallery

3 Remains of the Mansfeld copper shale mining Entrance of Schlüßelstollen dewatering gallery

A field path 400m west of the end of the location Friedeburg towards Gerbstedt leads to the Neumühle (mill). Not far from the building is the entrance of the Schlüßelstollen dewatering gallery. The strong flow conditions at the mine mouth show the importance of the construction begun already in the 18th century and further driven from 1809 to 1879. It formed the basis of dewatering of the whole copper shale mining region. The collection of mining water was done over a channel-shaped “scratching line”, hewn about 2m deep into the rock laying below the copper shale layer. Pumping stations led the water collected due to the free fall on the deepest places of the mine workings to the dewatering gallery. The gallery west of Eisleben stretches to a length of 31.06 km via Klostermansfeld and Gerbstedt to Friedeburg and dewateres over the Schlenze into the Saale.

4

View to the “Mansfeld Pyramids”
Hoyerstein at Welfesholz

Even from far away three impressive grey cone-shaped elevations strike the eye, they mark the relief of the Mansfelder Land distinctively. They are deposited large dumps of the 20th century, also called the “Mansfeld Pyramids”, witnessing 800 years of copper shale mining. The three mine dumps are well visible from the Hoyerstein (also “Porous stone”). We can reach it via the track leading from the southern outskirts of Welfesholz towards east. The Hoyerstein is remindful of the battle of Welfesholz in 1115, in which troops of the rebellious ruler under the command of the Duke of Saxony **LOTHAR VON SÜPLINGENBURG** († 1137) defeated the units of Emperor **HEINRICH V.** († 1125). The leader of the imperials, Count **HOYER VON MANSFELD**, lost his life in the duel there. The mine dump of the sunk **Fortschrittschacht** (mine) south of Volkstedt (1909–1967, former **Wolf-Schacht**) is



Mansfeld Pyramids



Hoyerstein (Tertiary quartzite)

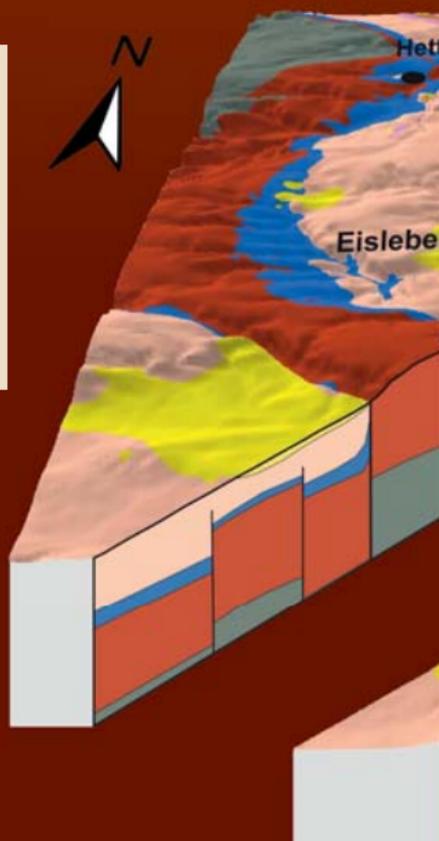
311 m above sea level and about 140 m high. The peak of the mine dump of the **Ernst-Thälmann-Schacht** (1915–1962, former **Vitzthum-Schacht**) north of Volkstedt is about 350 m above sea level and overtops the surrounding area by 130 m. The **Otto-Brosowski-Schacht** (1906–1969, former **Paul-Schacht**) is in the east of Augsdorf. Its mine dump at 283 m above sea level and about 100 m height takes the third rank in this scope. These three point cone mine dumps, together with the detached block in the roof mine dumps of the 19th and the 20th century, form the third and last mine dump generation. The few low mine dumps of the second generation are only up to 30 m high and originate from the 18th century. The beginnings of mining, however, are marked by numerous hilly small dumps up to 4 m high. Due to the heavy metal content of the rocks the mine dumps are uncovered by vegetation.

**The memorial place of the battle of Welfesholz in Welfesholz, Dorfstraße 36 can be visited by appointment.
Contact: Edgard von Stromberg, ☎ 0049 34783-31103**

➤ Geologic Overview

The area of the Landmark **19** is in the south-eastern Harz foreland and stretches partly to the Saale. With its wide scarcely structured tablelands, the steppic fields and meadows and lack of forests, the landscape offers only little change. The conditions below ground are more exciting. The geologic 3D model shows a large key-shaped structure: the Mansfelder Mulde. It arose in the Upper Tertiary about 20 million years ago. The series of deposits began with thick formations of the Upper Carboniferous and the Rotliegend 310 million years ago. It is mainly erosion debris of the prior folded Variscan mountains. It gathered in alluvial plains fed by rivers and mostly consists of red sandstones. In the following there are 258–251 million years old sediments of the Zechstein with the copper shale loam on the basis and up to 300m thick sulphate and salt rocks lying above.

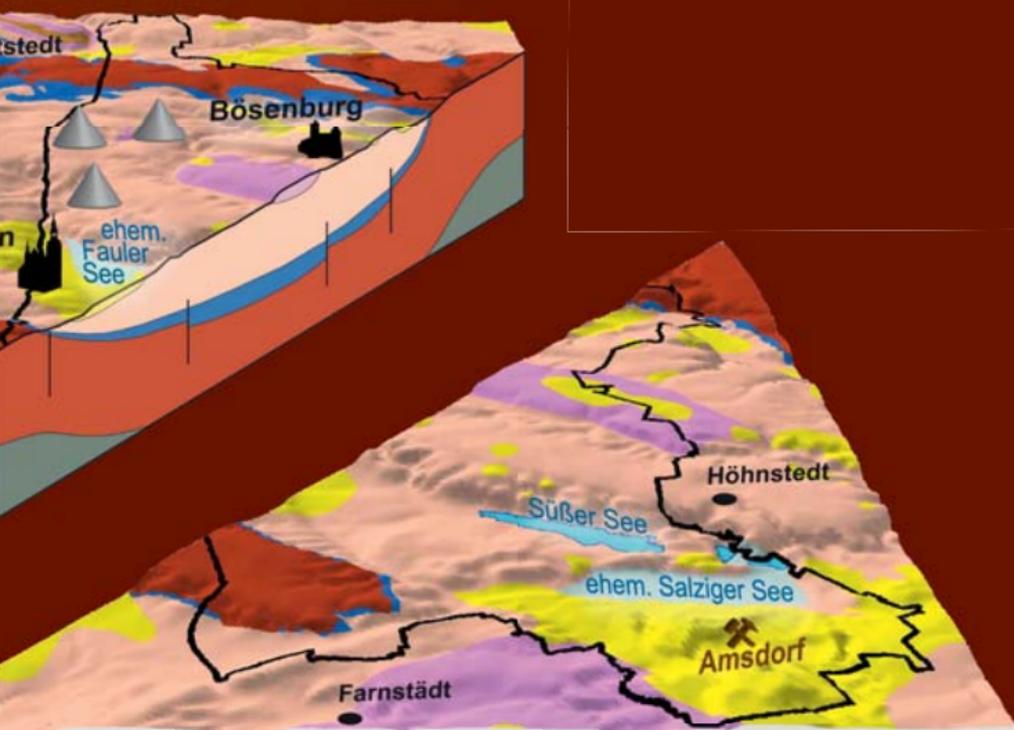
These soluble rocks arose by several changes of flooding and evaporation of a flat sea. The Triassic follows above it beginning with sandy and argillaceous river and lake sediments of the 251–243 million years old Bunter. Their partly compact sandstones were surface mined in numerous quarries and can be seen at many buildings. The deposited Muschelkalk (Lower and Middle Triassic, up to about 239 million years) is only spread in the centre of the syncline between Polleben and Schochwitz. Formations of the Tertiary (65–2.6 million years, brown coal, sand, gravel) have remained in the moats of the saddle structures as well as in the



local depression areas, arisen by leaching Zechstein in particular. The largest Tertiary deposits are extracted in the brown coal pit Amsdorf. During the Ice Age (Pleistocene, beginning 2.6 million years ago) the region was twice covered by Scandinavian ice of glaciers. The remains of the glaciers and their melting water (boulder clay, sand, gravel, clay) cover the area widely. A thick loess layer was formed by wind erosion, on which fertile black earths developed. The lakes of the Mansfelder Land arose only during the post-glacial warm period (Holocene, since 11,600 years) lasting until today in the depression areas over the leached Zechstein salt.

The changing geological conditions have heightened mining since time immemorial. The copper shale only about 40cm thick had special economic importance. Intensively mined for 800 years, it made the Mansfelder Mulde well known as a mining area. First beginnings of mining even go back to the Bronze Age. Early mining activities started from the surface and then followed the ore-bearing shale layer to more and more deeper levels.

The deepest mining site was at Bösenburg 995 m underground. The three massive point cone mine dumps are witnesses of the last phase of mining, which came to an end with natural depletion of deposits in 1969. All in all 80 million tons of ore were extracted, summing up to 2 million tons of copper.



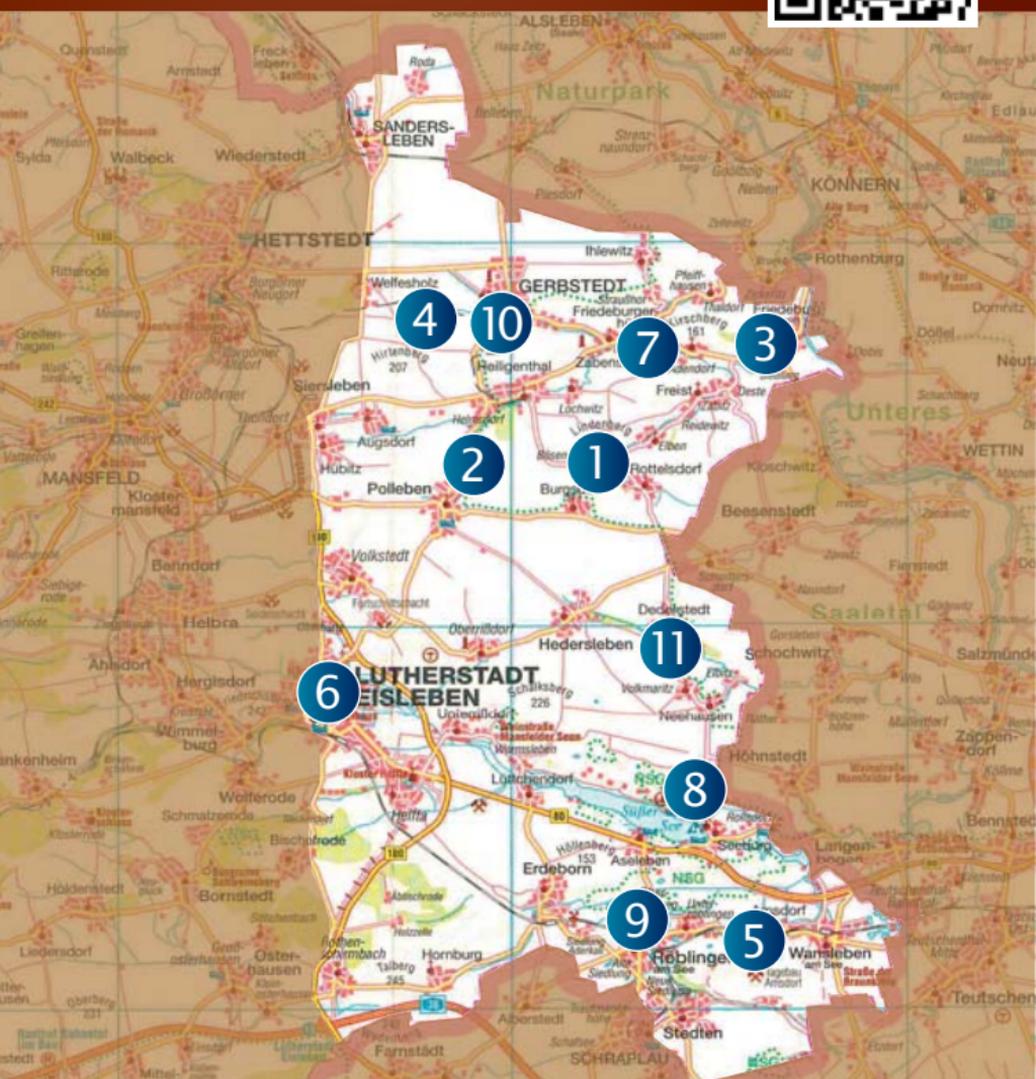
➤ Glossary

Landmarks are widely visible or particularly well-known ground points or places serving for a first orientation in the largest Geopark of Europe giving its name to one of its part areas.

Geopoints are points of special interest. The geologic history and the development of the nature and culture landscape can be seen and conveyed on them. Geopoints of the area of one landmark are continuously numbered and can be connected to individual geo-routes. Geopoint 1 is always the place of the eponymous landmark.

The map section helps you to plan your personal **geo-route** around Bösenburg.

*Order leaflets in English
Information en français*
www.harzregion.de



5

Crude montan wax for the world Surface mining Amsdorf

The open brown coal pit of Amsdorf lies between Röblingen and Wansleben on the tableland south of the Salziger See (lake). Geologically the area already counts to the Querfurter Mulde which connects to the Mansfelder Mulde in the south and is separated from it by the Teutschenthaler Sattel. Underground salt leaching and salt migration have created a large depression filled with rich formations of the Tertiary (brown coal, sand, clay), overlain by a cover of glacial sediments (sand, gravel, stones).

A lookout is on the southern side of the pit, which can be reached from Stedten driving eastwards. The production facilities of the company Romonta (**“Rohmontanwachs aus Amsdorf”** – crude montan wax from Amsdorf) are seen in the north. The pit in Amsdorf has been in operation since 1958.



View from the lookout of the surface mine



Compactor

Here about 500,000t of coal are extracted every year. The coal only secondarily serves the generation of energy. It is mainly used for producing crude montan wax, extracted by special processes and delivered to 60 countries. It is contained in glosses, lubricants and shoe polishes, but can also be used in the asphalt industry and in founding. We cross the pit using the street in northern direction.

On the right we can see revegetated extraction areas and behind that the rising point cone mine dump of the former potash mine Teutschenthal. Turning left to Unterröblingen we reach a car park at the Romonta main gate. The open air exhibition “Rolling material“ in front of the company fence shows the technical history of the montan wax global market leader (locomotives, special waggons, extractors and other items), which can be visited any time.

**Company tours are offered for groups.
Contact: Detlef Berger, public relations
☎ 0049 34601 - 40158**

6

Education for miners (Eisleben)

Old mining school and miner's fountain

Due to the development of mining the demand for head miners and foremen for the metallurgical works in the Mansfeld copper shale mining was very high. Already in 1719 the shareholder of the time decided to grant young miners a scientific education according to the Freiberg model. At first the tuition in Eisleben was done sporadically as required and with regard to the possibilities. In 1780, the electoral Saxon government decided to offer regular lessons in Eisleben. 18 years later the Eisleber Bergschule (Mining School of Eisleben) was founded in which eight trainees could start the apprenticeship annually till 1808. The costs for the education were borne by the shareholder of Mansfeld. The school was open to other students, but they had to cover the costs themselves. Day-to-day school life was not comparable with today's. The apprenticeship took 4 years



Miner's fountain



Kamerad Martin

beginning with three lessons a week under the condition that the trainees had to work daily in the respective company. Various monuments in the town of Eisleben which was first mentioned in the records in 994 commemorate 800 years of copper shale mining such as the "Kamerad Martin" on the Breiter Weg or the Knappenbrunnen (Miner's fountain) opposite the former old mining school. The fountain was founded by the Mansfeld-Kombinat (combine) in 1983 and created by the sculptor WOLFGANG DREYSE from Quedlinburg. Eisleben is also famous as the place of both birth and death of MARTIN LUTHER (1483–1546). Luther's father was a master smelter and owner of several mines and metallurgical works. Count ALBRECHT IV. VON MANSFELD (†1560), a friend of Luther, founded the new town of Eisleben with the church St. Anna, in which a stone picture bible, unique in Europe, can be visited.

7

Slag bricks

Corn bottles in Friedeburgerhütte

The so called corn bottles are on the left side of the street entering the village from Gerbstedt. These are large, masoned tanks made of slag stones built between 1825 and 1841. The shareholder of the Kupferkammerhütte (metallurgical works) had it built for the families working there.

They were used for storing bonus crop. The corn bottles have a clear diameter of 4.5 m, each is 9.5 m high and below surface in loess loam. As the opening on the top of the bottles was about 1 m below the surface and was closed with a slab the inside temperature remained constant. The slag stonework protected it from humidity and vermin. Relics of only 3 out of 10 corn bottles have survived. They were secured and reconstructed between 1995 and 2001.



Corn bottle



View from the gallows column to the Süßer See

8

Lakes of Mansfeld

Gallows column at the Süßer See

Two lakes marked the natural scenery of the region for a long time: the Salziger (salty) and the Süßer (sweet) See. They were the “blue eyes” of the Mansfelder Land. Their formation is closely connected with the land depression by leaching of salt of the Zechstein. 8,000 years ago the Süßer See began to form. It stretches from Seeburg to Lüttchendorf and is about 4.9 km long and just less than 1 km wide at Aseleben. Its northern bank consists of Lower Bunter and is mainly used for wine and fruit growing. The gallows column is on the elevation north of the camping site Seeburg. These are the remains of the gallows base made of field stones in 1720. From there you will have a wonderful view to the lake and the locality Seeburg with the Renaissance castle. We reach the elevation from the car park at the northern beach via the street through the settlement of weekend cottages.

9

Salziger See (salty lake)

Lookout at Röblingen am See

The former Salziger See (salty lake) stretched between Rollsdorf, Amsdorf and Unterröblingen to Röblingen. Today it is crossed by the B 80, used as grass and arable field landscape. We can find the lookout short before entering Röblingen coming from Aseleben. First marine deposits already arose in the late glacial 14,000 years ago but only in the Holocene the extended lake area developed 11,600 years ago.

With its 840 ha, the Salziger See was the largest lake of Middle Germany about 300 years ago. Due to the waterworks of the Mansfeld copper shale mining the sea level sank several times. After strong water ingress in the mine workings in 1892, the lake was finally dried up in 1894. Remains of the Salziger See are the Binder- and Kerner See south of Rollsdorf as well as some smaller lakes north of Röblingen.



View to the relics of the Salziger See



Museum Gerbstedt - former convent building

10

Local and mining history

Museum Gerbstedt

The small town of Gerbstedt as a cradle of medieval copper shale mining is on the northern edge of the Mansfelder Mulde. Worth visiting are especially the historic centre of the locality with the Renaissance townhall (1566) and the town church close by (1739). A part of the former convent building is today used as a community centre and has a small museum inside. Here the local and mining history comes alive such as a model of the convent of Gerbstedt, a model of the Otto-Brosowski-Schacht (mine) and some miner's uniforms. Strolling through the town we see numerous miniatures made of painted concrete created by the artist GÜNTHER BEINERT from Gerbstedt. These are mostly imaginative replications of regional fortresses and castles but also original craftsmen as well as miners and smelters.

The museum is open on Saturdays and Sundays from 2 pm – 5 pm and on appointment. Contact: Ulrich Elster

☎ 0049 34783-27502 or 0049 152-29 138507

A memorial stone for DR. OTTO KLEINSCHMIDT (1870-1954) is in front of the vicarage in Dederstedt. Since 1899 he worked as a parish priest in nearby Volkmaritz. In 1910 he changed to Dederstedt. He was a meticulous and tireless ornithologist. Very soon ornithology made him well known far across the village. In 1905 he published his journal "FALCO" and the monograph series "Berajah - Zoographia infinita". In these texts he continuously attacked existing views on zoological systematics and the Darwinian theory of evolution. His best known work is the field guide "Singvögel der Heimat" (local oscine birds). KLEINSCHMIDT probably got the inspiration for his natural bird drawings also from Laweketal at Dederstedt. There an information board shows which bird species can be watched at which time.



Memorial stone for Dr. Otto Kleinschmidt



Drawing of Dr. Otto Kleinschmidt

The grey wagtail drawn by KLEINSCHMIDT bred at the vicarage in 1931. Even today two of his original mounted specimens can be seen in the church of Dederstedt. In 1926 KLEINSCHMIDT left Dederstedt to take over the leadership of the newly founded church research home for philosophy in Wittenberg. In July 1998 the citizens of Dederstedt unveiled the monument for DR. OTTO KLEINSCHMIDT.

Matching the opinionated priest and ornithologist they chose a very hard Tertiary quartzite as memorial stone. These rocks arose during the Tertiary (65-2.6 mio years ago) from sands, glued together by silica due to the subtropical climate. Numerous quartzite blocks were laid open during the Ice Age by the effect of scraping glaciers and taken to the surface from their point of origin. They were used for cultic purposes and as mill stones.

The church St. Susanna can be visited by appointment.

Contact: Richarda Barth

☎ 004934773-21115



Stops for meals & accommodations



A Hotel An der Klosterpforte Eisleben

www.klosterpforte.com

☎ **0049 3475-71440**



B Strandhotel Zahn Aseleben

www.strandhotel-zahn.de

☎ **0049 34774-28069**



C Gasthof Zahn Stedten

www.gasthof-zahn.de

☎ **0049 34774-70090**



REGIONALVERBAND HARZ E.V.

The Regionalverband Harz is a nonprofit association of the administrative districts of Goslar, Harz, Mansfeld-Südharz, Osterode am Harz and Nordhausen. It supports nature and environmental conservation as well as culture and is supported by the network of its far more than 100 sustaining members. The aims will be realised by the organising institution of nature parks in the Harz region. As shareholder of the Geopark Harz · Braunschweiger Land · Ostfalen GbR, founded in 2004, the Regionalverband Harz is in addition responsible for the southern part of the homonymous Geopark. Its Partner association FEMO in Königslutter cares for the northern part. The Geopark Harz · Braunschweiger Land · Ostfalen has been a member of the European and Global Geoparks network under the patronage of the UNESCO since 2004.

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