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• Harz - Braunschweiger  
• Land - Ostfalen  
• UNESCO  
• Global Geopark

Landmark **21**

# Lohra Castle



 **GEO PARK**<sup>®</sup>  
Harz . Braunschweiger Land . Ostfalen

**Harz**



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UNESCO  
Global Geopark

On the 17<sup>th</sup> of November, 2015, during the 38<sup>th</sup> UNESCO General Assembly, the 195 member states of the United Nations resolved to introduce a new title. As a result, Geoparks can

be distinguished as **UNESCO Global Geoparks**. Among the first 120 UNESCO Global Geoparks, spread throughout 33 countries around the world, is Geopark Harz · Braunschweiger Land · Ostfalen.

UNESCO-Geoparks are clearly defined, unique areas, in which locations and landscapes of international geological importance are found. They are operated by organisations which, with the involvement of the local population, campaign for the protection of geological heritage, for environmental education and for sustainable regional development.



As early as 2004, 25 Geoparks in Europe and China had founded the Global Geoparks Network (GGN). In autumn of that year Geopark Harz · Braunschweiger Land · Ostfalen became part of the network. In addition, there are various regional networks, among them the European Geoparks Network (EGN). These coordinate international cooperation.

In the above overview map you can see the locations of all UNESCO Global Geoparks in Europe, including UNESCO Global Geopark Harz · Braunschweiger Land · Ostfalen and the borders of its parts.

## 1

In the Hainleite Hills  
Lohra Castle

Visible from far and wide, Lohra Castle, the ruin of a hilltop castle, is reached via Highway A 38. From the Bleicherode exit, we drive in the direction of Grosslohra, then southwest through the town, and, at the top of Hainleite Hill, we turn left onto the road to Lohra Castle.

Lohra Castle is the westernmost castle in the Hainleite Hills, located on the edge of the Eichsfelder Pforte valley, which was formed by the Wipper River. Many routes led, and still lead, through this valley, connecting the Eichsfeld area with the north of Thuringia and the Harz region. The castle ruins consist of the remains of the 11<sup>th</sup> century keep, the unique Romanesque double chapel (12<sup>th</sup> century), some dwellings, the gatehouse and the curtain wall. A noble family, closely associated with the Hohenstaufen dynasty, took its name from the castle.



*Muschelkalk outcrop*



*Double chapel*

Family members held various royal offices, which afforded them the possibility to upgrade the castle both defensively and aesthetically. Around 1227 the Beichlingen Earls took over the castle and rule of its territory, but were forced to sell part of it to the Earls of Hohnstein in 1320. The Earls of Hohnstein were resident in the castle until their family line came to an end in 1593. After a long, conflict-filled period, Lohra Castle, as part of the remainder of the Earldom of Hohnstein-Lohra-Klettenberg, came under Brandenburg's control in 1699. From 1712 the castle belonged to Prussia. The inner keep was the source of stone used for reconstruction. The buildings of the castle complex, on the 410 m a. s. l. hill spur, are constructed from local limestone dating to the Lower Muschelkalk (Middle Triassic), which was quarried in the Hainleite area. With the financial support of the German Foundation for Monument Protection, the chapel underwent partial renovation in 2000.

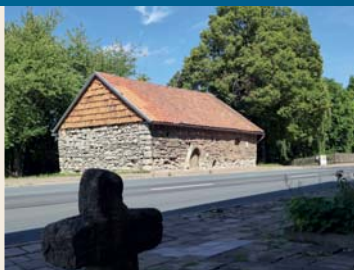
2

## House Abbey of the Earls St. Gangolf Basilica, Muenchenlohra

In the northern Hainleite foothills, sitting atop a small rise, is one of many imposing Romanesque buildings in the Geopark. It is the Basilica of St. Gangolf in Muenchenlohra, rebuilt between 1882 and 1885 at the behest of the Prussian Custodian of Historical Monuments FERDINAND VON QUAST (1807 – 1877) and extensively renovated between 1951 and 1957. The church was part of the Augustinian women's abbey purportedly founded by the Earls of Lohra, as documented in the Admont mortuary roll in 1477. In the Peasant's Revolt the abbey was converted into an estate which came under Prussian control in 1815. The church tower had long ago been torn down by then, as had the western apse, the side nave, and the side apses. The remaining central nave became the village church. In the karstified ground, selenite, or crystalline gypsum, has been found.



*St. Gangolf Basilica*



*Elende Chapel*

3

## Place of Pilgrimage Elende Chapel

It is only 3 km from Muenchenlohra to Elende. Why not take a walk in the scenic north Thuringian hill country? Elende was long one of the most famous sacred sites in Thuringia, if not the most popular medieval pilgrimage destination in the Archbishopric of Magdeburg, the Principality of Anhalt and the Electoral Circle of Saxony. You could come across the Elende pilgrimage badge up to 1000 km away! Pilgrims came to see a miracle-working image of the Virgin Mary. In 1626 the image and the Elende Miracle Book, in which miracles were recorded until 1517, were moved to Heiligenstadt. The chapel and the pilgrims hostel "Maria im Elende" opposite, were a "hardship station", or hospice. The chapel (ca. 1300) is among the oldest buildings in the region. Church services were held in it until 200 years ago. It was later used as a coal bunker for the hostel.

**St. Gangolf Basilica, Muenchenlohra,**  
**Opening Times: Daily from 8 a. m. to 5 p. m.**  
**[www.muenchenlohra.de](http://www.muenchenlohra.de)**

## 4

## Potash Mining

## Mine and Waste Pile, Bleicherode

Although potash mining had been successfully carried out north of the Harz since the middle of the 1800s, it was only in 1889 that drilling near Kehmstedt identified a potash deposit south of the Harz. A flourishing mining industry began in the South Harz potash district. On May 2, 1899, sinking of the Velsen 1 shaft started and extraction began on April 28, 1902. The Velsen 2 shaft followed on June 26, 1903. These shafts in the Bleicherode Mine are named after the Royal Mining Commissioner GUSTAV JULIUS VAN VELSEN (1847 – 1923). The building complex, erected by the Prussian Mining Exchequer, is a prominent landmark of the potash mining industry and a protected historical monument. The 90 year old shaft lifting apparatus, incorporating a steam hoist, is unique in German mining. A steam hoist from 1909, with 1,200 HP, is still functional and can be viewed upon arrangement.



Bleicherode Mine



Waste pile, Bleicherode

After almost 100 years of potash mining, the mine was closed in 1990. Parallel to the operation, backfill was brought into the mine to stabilise the excavation voids. Later industrial waste came along as well. From 1940 the mine waste was stockpiled. When production ceased there were 36 million m<sup>3</sup> of waste. Over 70 % of the waste pile, which is visible from far around, consists of soluble salts. These are dissolved by precipitation and, due to the lack of base sealing beneath the pile, end up in surface water and in the groundwater. As a result, a project was undertaken to establish the technical basis for covering old waste piles from the potash mining industry. The idea of a so-called biological seal has been implemented on half of the waste piles thus far. In addition, they have been covered with soil and revegetated. A photovoltaic plant has been in operation on the waste pile of the Bleicherode Mine since 2009.





## 5

## Mining History

## Pulley Wheel, Schiller Square, Bleicherode

Until 1231, Bleicherode belonged to the Earldom of Lohra and by 1326 belonged to the Earldom of Hohnstein. In 1648 it fell to the Bishopric of Halberstadt and, by extension, to Brandenburg (later Prussia). The town is closely tied to the nearly 100 years of potash mining in the South Harz. Attesting to that period, along with the mining complex, are the extraction tower pulley wheel and old tunnel locomotive with wagons which stand in Schiller Square. Here, not far from the former Royal Mining Inspectorate and present-day town common on Uthemannstrasse, the Bleicherode Miner's Association "Glueckauf" erected a memorial dedicated to the dead who were lost in the mine. On the first weekend of July each year a mining festival is held. Association members also gather for a memorial service on December 4, St. Barbara's Day, patron saint of miners.



Schiller Square, Bleicherode



Head tower, Sollstedt

## 6

## Wipper Valley

## Potash Works, Sollstedt

The Sollstedt Potash Works were founded in 1901 by the businessman HERMANN SCHMIDTMANN. The works were created by the amalgamation of numerous independent works and small mines in the Wipper Valley, including the Kraja Mine. Production ceased in 1991. Up to that point 84 million tonnes of potash had been produced. The mine workings extend over an area of 44 km<sup>2</sup> and stretch 11 km east to west and 4 km north to south. In 1993 a commission of mining experts recommended that the excavation voids be backfilled with mineral waste to stabilise them. This process is ongoing. In this way surface infrastructure, like residential areas, businesses, train lines, streets and rivers should be protected against subsidence and disturbance caused by the collapse of those voids.

## 7

## Natural Monument

## Suelze Spring near Niedergebra

Around 250 m west of the Gebra (Hainleite) railway station, on the opposite side of Highway A 38, is a natural monument: the Suelze Spring. Salt-loaded water is backed up in a small pond. The spring itself is hidden in the forest, but is accessible. Geological fault-zones play an important role for the aquifer system in this area. On a slope of the Bleicherode Hills we find stone from the Upper Buntsandstein (Red formation), that has been heavily leached and contains saline groundwater. The groundwater can spread easily in this karstified area and can infiltrate the Middle Buntsandstein (Lower Triassic) stone below. The salt content of the water is increased due to precipitation seeping through the potash-mining waste pile at Bleicherode. The saline water flows along the rock strata, seeking a route back to the surface.

*Suelze Spring**Border marker near Rehungen*

## 8

## Historical Border

## Border Marker near Rehungen

A road leads from Rehungen toward Deuna, crossing the district border between Rehungen (Nordhausen) and Vollenborn (Eichsfeld). Deuna was transferred by the Earls of Gleichen to the Electorate of Mainz in 1294. Rehungen, however, belonged to the Earldom of Hohnstein. A charter from 1425 documents an agreement between the Archbishop of Mainz and the Earls of Hohnstein that the “defensive dyke on Schoenberge” marked the border between their territories. Both sides would protect it and a tower was built to that end. The Rehungen watchtower is listed in the Electorate's files from 1567 as marking the border between the Earldom of Hohnstein and the Eichsfeld territory of the Electorate. The border extended to (Bad) Sachsa. The border is still marked today by marker stones which have the Wheel of Mainz on the western face and a half-moon on the Rehungen side.



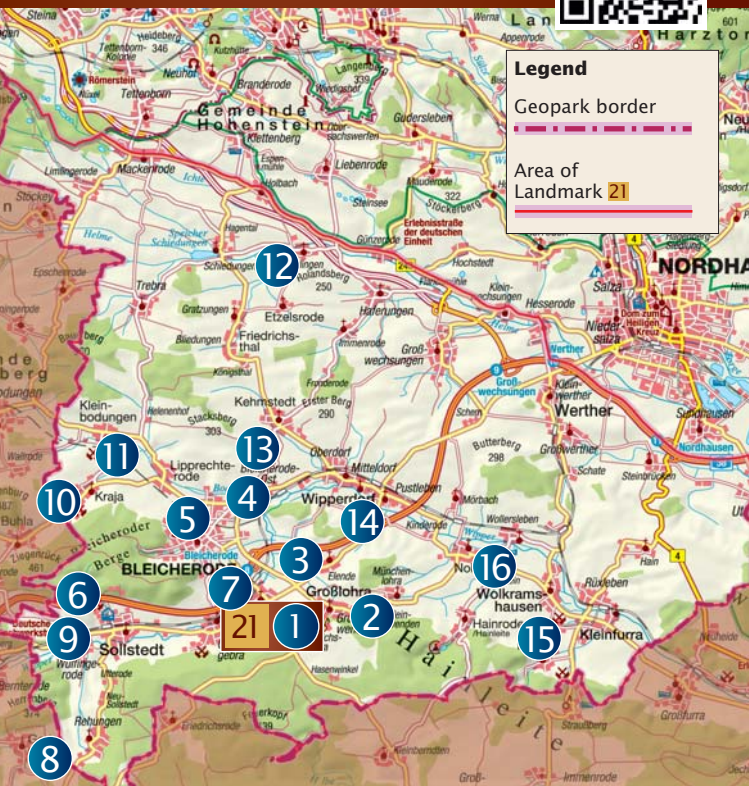
# Glossary

**Landmarks** are points in the landscape or actual localities which are highly visible and well-known. They serve as an initial orientation in one of the largest Geoparks worldwide and give the specific areas their names. Every landmark area is represented in a special leaflet.


**Geopoints** are points of particular interest. At these points, the geological history of the area or the evolution of the cultural landscape are evident and can be conveyed to visitors. Geopoints are numbered in sequence within the region of a Landmark. They can be combined to constitute an individual Geo-Route. The Geopoint No. ① is always the place which has given its name to the Landmark.

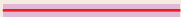
The map below will aid you with planning your own personal **Geo-Route** around Lohra Castle.

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Order leaflets in English  
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**Legend**

Geopark border  


Area of Landmark 21  




## 9 Border Markers & Mine Cars Wuelfingerode

Wuelfingerode is situated in the Wipper Valley in the north Thuringian Buntsandstein Region. The Wipper, a tributary of the Unstrut, geographically separates the Ohm Hills (inc. Bleicherode Hills) from the northwestern edge of the Thuringian Basin (inc. the Muschelkalk ridge of the Hainleite and Duen Hills). A gilded coffin was discovered in 1857 in the Protestant church of St. Elizabeth. In the coffin was the corpse of HANS VON BODENHAUSEN (1606 – 1684). During the Thirty Years War he negotiated with the warring parties on behalf of the Hohnstein estates in an attempt to protect the Earldom from damage. The half-moon on the markers of the border with the Eichsfeld (Electorate of Mainz) comes from the von Bodenhausen family crest. A 16<sup>th</sup> century border marker and a mine car have been preserved by the Sollstedt parish as testimony to the history of the region.



Mine car (Hunt)



Waste pile, Kraja

## 10 Waste Pile Former Twin Shaft Mine, Kraja

At the edge of the village of Kraja, in the direction of Buhla, there is a 15 m high waste pile covering an area of 45 x 65 m. It is a relic of past potash mining. After initial test drilling for potash was carried out in 1899, the Kraja twin-shaft mine was created between 1913 and 1915 (Shaft I 570 m, Shaft II 598 m deep). The mine belonged to the Sollstedt Potash Works. In 1912 a cableway was built to transport the potash from Kraja to the Sollstedt processing plant. When problems occurred at the plant or with the cableway, material was dumped at the Kraja waste pile. Along with white-grey stone from the sinking of the shafts, dark grey ash and reddish potash remains were also deposited here. The Kraja Mine ceased operation in 1967. Krajaer Kopf Hill, at 459.7 m a. s. l. towers over both village and waste pile.

## 11

## Potash Mines

## Althans I and II, Kleinbodungen

The mine shafts, which lie hidden, were sunk in 1909 and 1913. At the beginning of the 1930s, both shafts were closed as the deposits were mined out. A year after coming to power, the National Socialists converted them to munitions depots. Unlike other underground munitions depots (e. g. the Ludwigshall potash mine), no production took place here. From June 1944 the aboveground storage facilities of the munitions depot were cleared out and converted into a satellite camp, named "Emmi", of the Mittelbau concentration camp. The prisoners here had to disassemble damaged V2 rockets into their component parts. On April 5, 1945, the prisoners were despatched on a death march to Bergen-Belsen. Potash mining began again after the war. During the GDR era, the material shaft of the Bleicherode Mine was located here. The two mines were connected in 1953.



Memorial site



View to the Ziegenloecher sinkholes

## 12

## Sinkholes

## Ziegenloecher Sinkholes near Puetzlingen

Puetzlingen is a village in the sub-district of Werther, west of Nordhausen. On Roland's Hill (249.6 m a. s. l.), southwest of the village, are two sinkholes. These are the Ziegenloecher (Goat Holes). Their location is marked by the surrounding copse of large deciduous trees. Oral history suggests that the sinkholes came into existence between 1830 and 1840. One of them has a diameter of 40 m and is 9 m deep, the other a diameter of 38 m and depth of 7.5 m. There is a third sinkhole, the Klusfleck, to the south of the reservoir at Schiedungen. These sinkholes were formed by karstification of the underground Zechstein (Upper Permian) stone (salts, sulphate stones). Underground cavities are formed which, when they collapse, create large sinkholes on the surface. It is not uncommon for sinkholes with a diameter of up to 100 m to be formed this way.



13

Quarry

**Buntsandstein Outcrop, Kehmstedt**

Along the road between Bleicherode and Kehmstedt, on the left just before a sharp curve, we see a wall of red-brown sandstone. It is a former quarry. In the past it was worked to produce sand for use in construction. The red-brown sandstone is mostly fine to medium grained, with some coarse-grained inclusions, in a weak matrix. These properties make it especially good for construction purposes. Geologically it belongs to the Middle Buntsandstein (Lower Triassic). Until the middle of the 1990s, the former quarry was illegally used for the dumping of construction and residential waste. This illicit rubbish dump was later cleaned up by the government and the rubbish disposed of properly. Today this outcrop of Buntsandstein (Bunter sandstone) is protected as a natural monument.



*Outcrop near Kehmstedt*



*Water collection basin, Wipperdorf*

14

Interim Storage

**Leachwater Collection Basin, Wipperdorf**

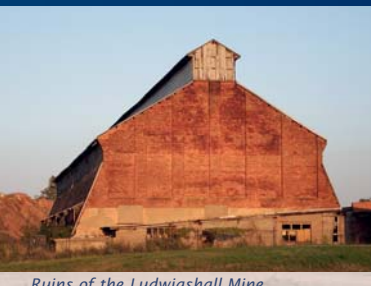
During mining in the north Thuringian part of the South Harz potash district, salt-loaded wastewater had to be discharged into the Bode and Wipper Rivers. To aid with regulation of the salt-load in this water, the leachwater collection basin was built between 1964 and 1967. This interim storage facility receives the salt-loaded runoff from the waste piles at Bleicherode, Sollstedt and Bischofferode. From here, it is discharged, subject to the prevailing hydrological conditions in the central Saale River catchment area, in small amounts into the Wipper River. The collection basin consists of two smaller basins with capacities of 410.000 m<sup>3</sup> and 330.000 m<sup>3</sup>. From 2009 to 2011, the Lausitz and Central Germany Mining Management Company (LMBV) carried out restructuring work, adding a mineral clay seal in both basins. Before this there was no sealing layer.

15

Potash Mine

## Ludwigshall Mine, Wolframshausen

The Ludwigshall Potash Mine, southeast of Wolframshausen, was sunk between 1905 and 1907. In 1911 an underground connection to the Immerode Mine was created. The extracted potash was transported via cableway to Ludwigshall for processing. Production, which had been suspended between 1914 and 1916, finally ceased in 1924. In 1936 the mine was taken over for use as a munitions depot where grenades were produced and stored. A major explosion on the 660 m working level on July 29, 1942 saw 145 workers lose their lives. The munitions depot was closed thereafter. From 1954 the potash works were dismantled. The sealing plug constructed in the mineshaft was not, however, up to current standards of the time. Permanent sealing of the shaft was only achieved in 2012-13 when, by order of the Thuringia government, the mineshaft was finally backfilled.



Ruins of the Ludwigshall Mine



Huenstein menhir

16

Menhir

## Huenstein near Nohra

Along the road from Wolframshausen to Nohra, in the hamlet of Huenstein, there stands a large limestone (Muschelkalk) menhir. It is shaped like a leaf, tapering to a point. According to legend, a giant once lived with his wife on Woebelsburg, one of the hills of the Hainleite. One day they argued about who could throw the furthest. The giant's wife took a boulder from the Woebelsburg and tried to throw it to the other side of the Wipper River, which runs through the valley. She was unsuccessful and, in anger, kicked the boulder, making a hole in the middle of it, which can still be seen today. The hole is commonly called the "belly-button". The towering block of stone, a menhir or "huenenstein", has been connected by archaeologists to an excavated early Bronze Age burial ground nearby. It is believed the stone adorned a grave mound there.



## The Geology of the Area

If we consider the Thuringian Basin in the context of the entire region between the Harz Mountains and the Thuringian Forest and Thuringian Highlands, the area covered here is in the northwest of the Basin with flat to slightly tilted strata from the Buntsandstein and Muschelkalk. The Thuringian Basin borders the southern Harz Zechstein Belt (South Harz karstic landscape). To the south of Nordhausen, until close to the Bleicherode Hills and the edge of the Hainleite chain of hills, the basin is bordered by the north Thuringian hill country. With the exception of the river valleys of the Wipper and Bode, not to mention many tributaries of the Helme, which are filled with Ice Age sediments, the surface is predominantly stone from the Buntsandstein period. This stone lies on top of thick Zechstein salt deposits.

The basin was already being formed as the Zechstein Sea was drying out 250 million years ago. From the Lower to the Middle Triassic it was chiefly sandstone that was deposited in the basin, which subsided further under the weight. Climatic conditions and the stone's iron oxide content resulted in the sandstone's red colouration. The sea then returned. Thick layers of Middle Triassic Muschelkalk were then deposited in the shallow sea basin. This stone is found close to the surface on the plateaux of the Bleicherode, Duen and Hainleite Hills. Distinctive terraces on their margins separate the Thuringian Basin from the Thuringian hill country. How were these terraces created?

During the beginning of the Mesozoic (Triassic) all the continents still formed the supercontinent Pangaea. By the end of the Mesozoic (Cretaceous) the continents were drifting apart and gradually forming their present-day constellation. Mountain building processes lasting into the Tertiary led to the Thuringian Basin area being riven into Hercynian (i.e. northwest-southeast) oriented strata. In the humid, tropical climate of the Tertiary period intensive weathering occurred which saw the disappearance of entire layers, regardless of stone type, and levelled out the surface. Later, during the Pleistocene, further weathering took place, which included frost shattering. Now the type of stone – whether it was sandstone or Muschelkalk (esp. from the Lower Muschelkalk) – made a difference. The latter contained less water than the more porous sandstone. The uplands of the Hainleite, Duen and Bleicherode Hills, therefore, are land surfaces that remain from the Tertiary. In contrast, the neighbouring hill country was deeply eroded by powerful rivers during the Pleistocene. Slippages from the plateaux are common even today (e. g. from the bedding plane of Krajaer Kopf Hill).





## Selected Points of Information



Waldgaststätte Teichtal  
Hainrode  
[www.teichtal.de](http://www.teichtal.de)  
☎ **0049 36334-53438**



Touristinformation  
Bleicherode  
[www.bleicherode.de](http://www.bleicherode.de)  
☎ **0049 36338-45760**



## REGIONALVERBAND HARZ E.V.

The Regionalverband Harz is a non-profit association. Its full members include the administrative districts of Goslar, Goettingen, Harz, Mansfeld-Suedharz and Nordhausen, as well as the World Heritage-listed city of Quedlinburg. The association's goals are the promotion of art and culture, the care and protection of historical monuments and environmental conservation and landscape management. It further aims to build tolerance in all areas of culture and foster international understanding among peoples and also to preserve local history and traditions. One way, among many, in which these goals are achieved is trusteeship of nature parks in the Harz region. The Regionalverband Harz, with the help of its 130 supporting members, is also responsible for the southern section of the UNESCO-Geopark, which covers an area of 6,202 km<sup>2</sup>.

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