



Organisation
der Vereinten Nationen
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• Harz - Braunschweiger
• Land - Ostfalen
• UNESCO
• Global Geopark

Landmark **17**

Mansfeld Castle



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

Harz



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Harz · Braunschweiger
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UNESCO
Global Geopark

On the 17th of November, 2015, during the 38th 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.



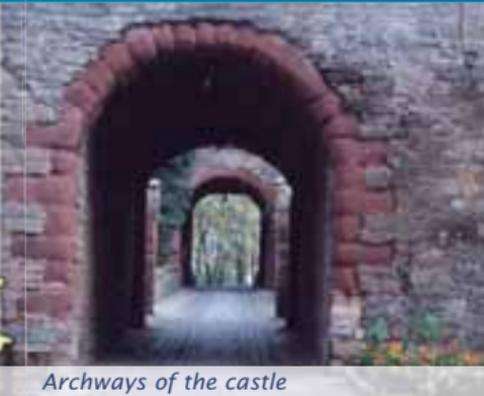
As early as 2004, 25 Geoparks in Europe and China had founded the Global Geoparks Network (GGN). In autumn of that year Geopark Harz · Braunschweiger Land · Ostfalen became part of the network. In addition, there are various regional networks, among them the European Geoparks Network (EGN). These coordinate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

Impressive structure of the Harz foreland Mansfeld Castle

The formidable site of the castle and fortress of Mansfeld raises right in the east of the Harz at the border of a tableland steeply declining to the valley. A Count of Mansfeld was first mentioned in a document in 1060. Records about a castle date back to 1229. A big fire burnt down the medieval fortress in 1509. At the beginning of the 16th century the Counts of Mansfeld had the castles of Vorderort, Mittelort and Hinterort erected there. Common castle buildings were built from 1517 to 1549. At that time there was the purchase and construction of the town estates by the three lines of the Counts of Mansfeld and St. Annenkirche (church). Due to high debts the counties came under forced administration from 1570 onwards. Since then the castles of Mittelort and Hinterort have decayed. Today, however, the castle presents itself as one of the most impressive buildings of the Harz fore-



Archways of the castle



Rotliegend outcrop in the castle moat

land. In 1780 it fell to the Prussian State. The family VON DER RECKE purchased it in the 19th century. They had a residential house erected on the ruins of Vorderort castle in neo-Gothic style. Therewith the castle finally got today's appearance. In 1947 the Mansfeld Castle was handed over to the use of the Protestant church and has been in the ownership of the friends' association castle Mansfeld since 1999. Substantial restructuring measures have been carried out in the last years and currently the castle is used as a Christian youth centre for education and encounter.

We find a worth-seeing geologic outcrop of sandstones of the Rotliegend formation in the area of the outer castle moat. Further information can be obtained from the information board on site. A nature and geotrail starts at the castle leading to other signposted outcrops.



Town information Mansfeld

☎ 0049 34782 - 90342

www.mansfeld.eu

2

Replica of the first German steam engine Mansfeld Museum Hettstedt

More than 800 years of copper shale mining history and the processing companies in the Mansfeld Revier are documented in the Mansfeld Museum displayed in the baroque castle, in which WILHELM VON HUMBOLDT († 1835) and his wife CAROLINE († 1829) lived for some time.

Moreover minerals and fossils like the *Palaeoniscum freieslebeni* (copper slate herring) are exhibited. Manifold witnesses and documents as well as technical models give an insight in the mining of the past. Machines and equipment as well as a replicated mining situation and the surface construction of the ventilation shaft Lichtloch 24 of the dewatering gallery can be visited. The main attraction of the museum is the original replica of the first German steam engine of Watt construction.



Mansfeld Museum



Mining machinery

The machine was constructed by mining assessor CARL FRIEDRICH BÜCKLING († 1812) and first put into operation in 1785.

It was used in the König-Friedrich-Schacht (mine) near Hettstedt to pump up mine water. As a purchase of the machine at the company Boulton & Watt in Birmingham would have been too expensive, BÜCKLING and the senior inspector of mines SIGISMUND WAITZ VON ESCHEN († 1776) were sent to a study trip. By command of the Prussian government they should research the new machines in such a way that a reconstruction would be possible in Germany, which succeeded due to industrial espionage. The steam engine had to be replaced by a more powerful one already in 1794. The old machine was in operation for another appr. 50 years in the coal mine of Löbejün. The replica, built in 1985, is put into operation at events.

Opening hours: Wednesdays to Sundays 11 a. m. - 5 p. m.

☎ **0049 3476 - 200753**

www.mansfeld-museum-hettstedt.de

3

Cradle of copper shale mining

Geotrail Hettstedt

The Geotrail Hettstedt leads to the important construction monuments closely connected to the mining history of the town. Mining began on the Kupferberg around 1200. Legend tells that two newly arrived miners NAPPAN and NEUKE discovered the first copper ore there.

Today the oldest miner's church of the region, St. Gangolf Kirche, is on the Kupferberg. The preceding building was a small St. Mary's chapel. Count ALBRECHT I. VON ARNSTEIN (1175 – 1235) had the hospital founded by the comital family moved from nearby Arnstedt to the chapel on the Kupferberg. The following construction of St. Mary's chapel and the hospital were dedicated to St. Gangolf. Today an association uses the former church for concerts or exhibitions. Among the towers of Hettstedt the Saigertor (gate)



Brewery house



Town hall

catches the eye. The mining word "saiger" is a synonym for vertical, that means, a vertically driven pit was a "saigerer Schacht" [vertical shaft] (in contrast to a dipping shaft running aslope). Built in the 15th century the Molmeckturm (tower) is a part of the town wall still preserved. The town hall and the late Gothic hall church St. Jacobi are close together. A newer monument overlooks at the Heinrich-Mann-Weg (trail): the Flame of Friendship. The reason for its construction was the supply of natural gas of the steel mill and the copper-silverworks by the Soviet Union from 1974 onward. Find out more about the town history of Hettstedt in the Brauhaus (brewery house) at the bus station. The building belonged to a moated castle, its beginning dates back to the 13th century. Since the mid of the 17th century the castle has been used for brewing. Today the Braukommune Hettstedt is the owner of the brewery house.

**Bürgerbüro Hettstedt (Citizen's office Hettstedt)**

☎ 0049 3476 - 8010

www.hettstedt.de

4

A fold in the zoo

Geologic outcrop Walbeck

We find an interesting geologic outcrop in the Zoo Walbeck. The argillaceous slate of the Lower Carboniferous contains fossil plant remains. Animal species of the indigenous fauna, different breeds of farm animals and some exotic birds live in the enclosures of the Zoo Walbeck – a part of the old palace garden. We go through the zoo and a further hundred metres towards the valley to the “Planteur” house. We pass the impressive “Adelheid” oak. The Adelheidquelle (Adelheid spring) encircled by sandstones can be found on the opposite downhill side. Passing a pond we finally get to the “Planteur” house. The neoclassical house was built by the former castle owner for the gardener in 1802, who was responsible for the trees in the extensive park. About 20,000 fruit trees supposedly have stood here when the owner died in 1817. The “Planteur” house is in private property today.

*Geologic outcrop Walbeck**Walbeck Castle*

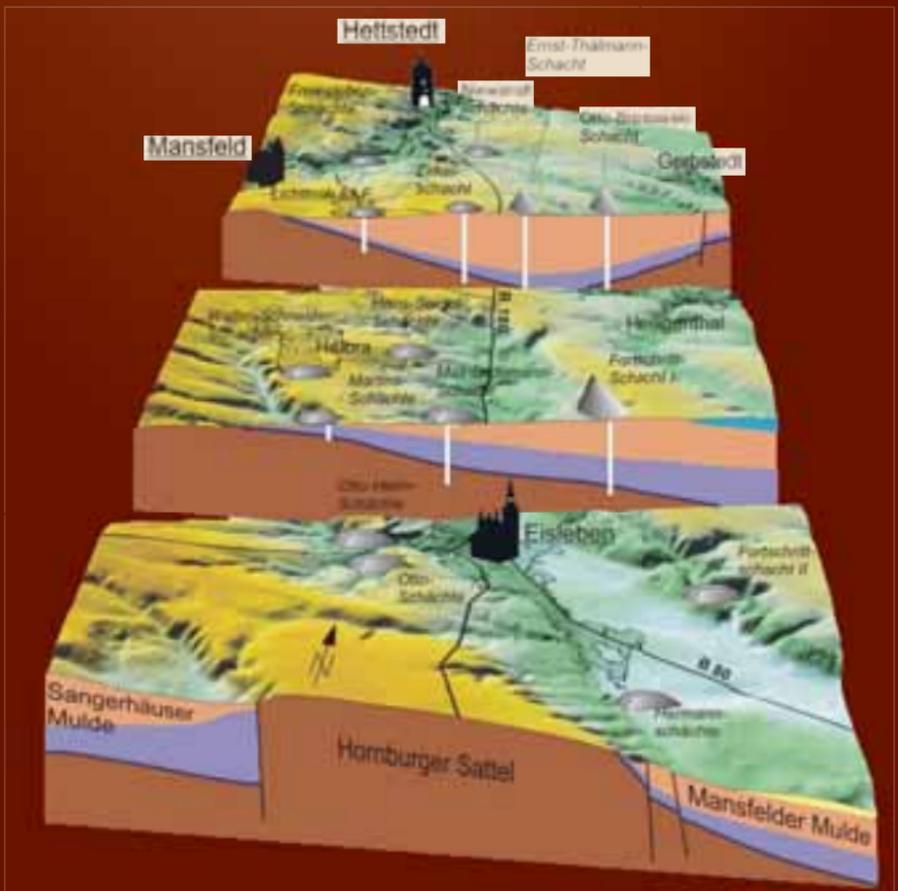
Emperor OTTO I. († 973) gave the palatinate in Walbeck to his second wife ADELHEID († 999) in 951. Their beloved daughter MATHILDE († 999), the first abbess in Quedlinburg, founded a Benedictine monastery here in 992. Today's castle Walbeck was erected on its foundation walls. After the secularisation in the 16th century the castle changed the owners several times and was owned by the family VON DEM BUSSCHE in the 18th century, who has it reconstructed into a late baroque three-winged complex. After several further changes of ownership and the expropriation in 1945, the complex was widely used for agriculture. The castle complex can only be visited from the outside. First mentioned in documents in 950, Walbeck was easy to reach between the palatinates Quedlinburg, Tilleda and Memleben.

Opening hours of the Zoo Walbeck**April – October daily 9 a. m. – 7 p. m.****November – March daily 9 a. m. – 3.30 p. m.**📞 **0049 3476 - 559367**

➤ Geology of the area

The Wippra zone of the Harz mountains raises in the north-west of the area around the landmark “Mansfeld Castle” with argillaceous slates and quartzites more than 400 million years old. They belong to the Lower Palaeozoic bedrock (Ordovician – Silurian). The bedrock is covered by Upper Carboniferous sediments arisen by destruction of the Variscian rock. These are mainly red sandstones, conglomerates and argillites, the so-called “Mansfeld Beds”. The sandstones of the “Hornburg Beds” and the so-called “Melaphyre” as the witnesses of volcanism from the Lower Permian (Rotliegend, about 300 million years old) are a bit younger. The youngest sediments of the Rotliegend consist of conglomerates of the Eisleben formation. Between it and the “Mansfeld Beds” there is a time gap showing no sedimentation.

The strongly saline Zechstein Sea flooded the Harz and its surrounding area in the Zechstein about 250 to 257 million years ago. The dark copper slate seam, only a few decimetres thick, is at the base of the saline Zechstein sediments being the subject of mining for over 1,000 years.



- | | | | |
|--|------------------------------------|---|--------------------------------------|
|  | Känozoikum |  | Rotliegend |
|  | Muschelkalk |  | mine with point cone mine waste dump |
|  | Buntsandstein |  | mine with low mine waste dump |
|  | Zechstein (mit Kupferschieferflöz) | | |

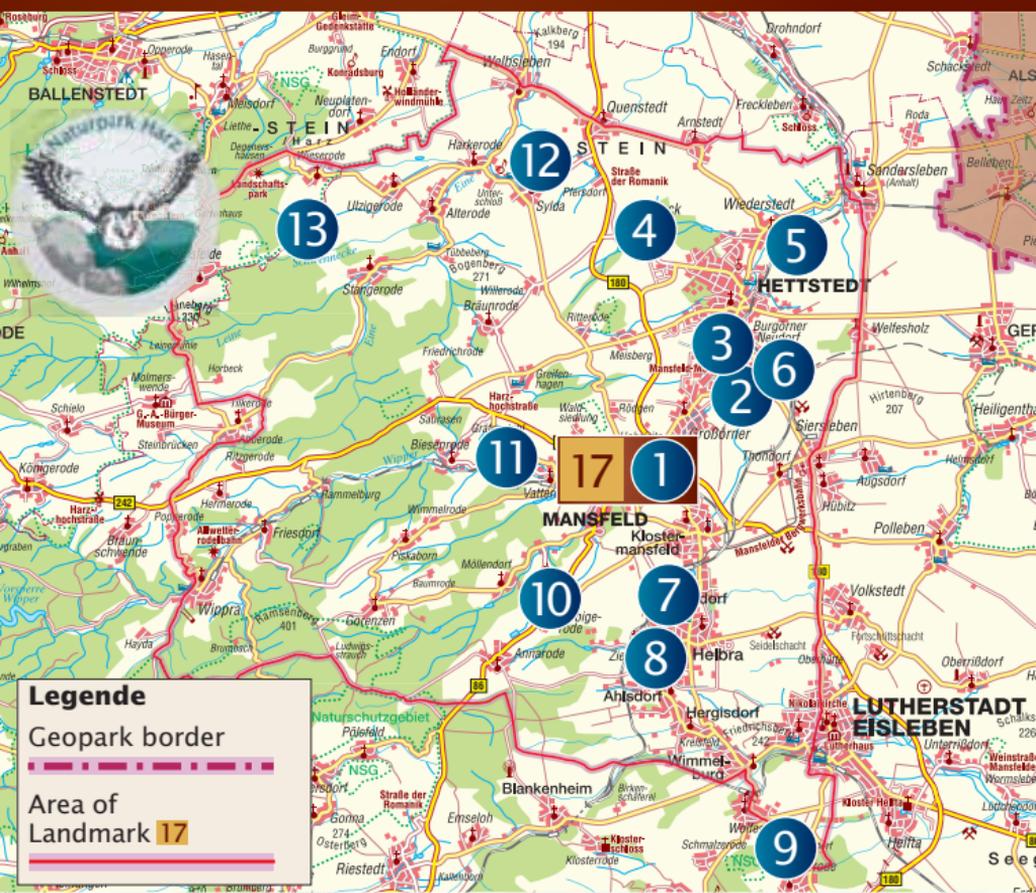
➤ Glossary

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 Nr. ① is always the place which has given its name to the Landmark.

The map section helps you to plan your personal **geo-route** around the Mansfeld Castle. Mansfeld has the name affix “Lutherstadt” (Luther’s town) and reminds on the reformer **MARTIN LUTHER** († 1546), who went to school here from 1488 – 1497. His father **HANS** had rented a smelter for melting out black copper some years before.

Order more leaflets
Information en français
www.harzregion.de



5 A gap in geologic history Tal der Heiligen Reiser (valley) Hettstedt

Behind the undercrossing of a railway embankment between the promenade and the Talstraße we go left and follow the signs. Thus we reach an impressive outcrop, the “Grand Canyon” of the Mansfelder Land. Here, in the Tal der Heiligen Reiser (valley), a weak adjustment (angle discordance) between the Upper Carboniferous argillites and the micaceous sandstones to the Upper Rotliegend porphyry conglomerates of the “Eisleben Beds” laying above can be seen. What you see is a considerable time gap, because the Hornburg layers are completely missing. From the Tal der Heiligen Reiser a walking trail leads to Oberwiederstedt. GEORG PHILIPP FRIEDRICH VON HARDENBERG († 1801), known as NOVALIS, was born in the local Renaissance castle. The miner specialist and lawyer made history as a poet of early Romanticism. The castle is a museum today.



Outcrop in the Tal der Heiligen Reiser



Machine monument

6 VDI (Association of German Engineers) Machine monument

Coming from Siersleben, at the entrance of Hettstedt we follow the signs to the machine monument. After a short walk we reach the monument erected on 20 August 1890. The Verein der Deutschen Ingenieure (Association of German Engineers), founded in Alexisbad (Landmark 15) in 1856, donated it in order to honour the first steam engine of Watt construction. The machine, built in 1795, was used to dewater the König-Friedrich Schacht (mine), about 100 m deep, in the Burgörner Revier. A fully operable replica is in the Mansfeld Museum (Geopoint 2).

The monument consists of a granite block with two bronze plates as well as a basement of bunter and granite panels. A mining walking trail leads from the machine monument through the listed dump landscape of the Burgörner and Welfesholzer Revier to Gerbstedt in the area of the Landmark 19.

Opening hours Novalis Museum:
Tuesdays – Sundays 10 a. m. to 4 p. m.

☎ 0049 3476 - 852722

www.novalis-stiftung.de

7 Mansfeld mine train Station Benndorf

On 15th November 1880 a narrow-gauge railway (750 mm) over a distance of 5 km was put into operation for the transport of copper shale from the Glückhilfsschächte (mines) at Welfesholz to the Kupferkammerhütte (smelting works) in Hettstedt. The route network was extended to all extraction pits and smelter between Eisleben and Hettstedt in the following years. In 1969 all pits were closed, the end of the train impending. Until 1990 the railway track, shrunk to about 20 km in length, merely served for the transport of intermediate goods in and between the smelter in Helbra and Hettstedt. The Verein Mansfelder Bergwerksbahn e. V. (Association of Mansfeld Mine Train reg. association) maintains a train operation on the remaining track Klostermansfeld – Hettstedt for the museum using steam trains and diesel locomotives.



Mansfeld mine train



In the lapidarium

8 Rock collection Lapidarium Helbra

The lapidarium was set in the garden of the community center of the municipality of Helbra. Here we can see rocks of the Mansfelder Mulde and from the Lower Harz. The locations of the rocks reach from Tilkerode (Landmark 15) and the Pferdeköpfe at Wippra (Landmark 12) via Biesenrode and Siebigerode (Landmark 17) to the open brown coal pit of Amsdorf (Landmark 19). The visitor learns more about the formation, appearance and usage of rocks.

A board, standing in front of the community house of the location, first mentioned in 1155, informs about mining hiking trails around Helbra. A former industrial monument – the Malakowturm (tower) – is at the home and mining trail. These kinds of massive pithead frames were mainly erected between 1850 and 1870.

Sightseeing of the Lapidarium Helbra only on arrangement on: ☎ 0049 34772 - 28312

www.erlebnisweltkupfer.de

9

Sandstone of Neckendorf

“A pulpit for the devil ...”

A forested area stretches from the west of the locality Neckendorf along the Neckendorf Grund, defined in its western part as nature conservation area “Eislebener Stiftsholz”.

Sandstone was broken there on several places and used in many buildings of the region. Coming from Neckendorf we reach along the Grund after about 1 km in the forested northern hillside the dumps and quarries of the quarry operation, closed down only in the 1930s. Shortly behind it we see the Teufelsgrund. The vernacular made out of cliffs and crevices the pulpit and kitchen of the devil. Further westward there are more cliffs and small quarries, the most western one is the former quarry Dockhorn. Still today the red-coloured sediment rocks of the Upper Rotliegend are well outcropped on its walls.



Sandstone of Neckendorf



Southern hillside of the Neckendorf Grund

According to latest studies they are approximately 265 million years old.

Conglomerates and conglomeratic sandstones with their quartzite boulders – up to the size of a child’s head – predominate in the quarries. The distinctive cliff of the devil’s pulpit consists of this conglomerate. Above it clearly shifted sandstones follow, going over in the upward direction in fine shifted siltstones and claystones, so-called “Blättertön”. The rocks were formed at desert-like climate conditions by detritus and alluvium flows, caused by periodic strong rain and led to temporary flooding and deposit of flat flood plains. Also short-time lakes arose, today passed on as “Blättertöne” and in which even relics of insects or footprints of larger animals have remained.

10

Construction stone for regional buildings

Former quarry Siebigerode

Coming from Mansfeld we go towards Blumerode. After about 500 m we reach at the left hand side the former quarry. The outcropped feldspar-rich sandstones and the embedded conglomerates and claystones are formed in the Upper Carboniferous about 300 million years ago. They are sediments of the Variscian mountains, which were washed up by rivers in the foreland. Remarkable are the petrified woods. Fragments of tree trunks show partly well visible cell structures. Some of these tree trunks were exhibited in the parks of Siebigerode. The sandstone was used as construction stone for churches amongst others in Siebigerode and Eisleben as well as for gravestones and feeding troughs, also used for manufacturing mill stones. Privately and state-owned operated quarries manufactured up to 1,000 mill stones annually in the 18th century.



In the former quarry



Outcrop at the Klipp mill

11

Wippra Zone

Klipp mill at Vatterode

A very nice outcrop is on the opposite of the train stop Klipp mill of the Wipperliese railway line. Here we see metamorphic rocks of the Ordovician (470 million years). Former sediments (clays, coarse clays and sands) were changed due to high pressure and temperature at the mountain formation to coloured phylitic clay slate and thin plated, finegrained quartzites. This process is known as metamorphosis. The layers were intensively folded and tilted in the course of the mountain building. The quartzites are typically characterised here and can be recognised in the whole geologic unit of the Wippra Zone. A location, of which a rock for a larger region is known, is named as "locus typicus" and therefore has a transregional importance for geologic science, like the Wippra Zone has.

Wipperliese: Kreisbahn Mansfelder Land

☎ 0049 34772 - 20257

www.wipperliese.de

12

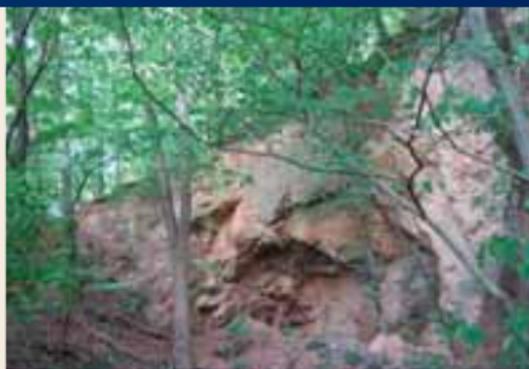
Medieval castle complex

Castle ruin of Arnstein

The castle ruin of Arnstein is high above a prong declining steeply to three sides over the Einetal (valley) at the outskirts of Harkerode. It is one of the largest medieval fortress complexes of the Harz region and got its name after the house of Arnstedt. WALTER VON ARNSTEIN († around 1169) began erecting the castle probably around 1130. After the Arnsteiner died out at the end of the 13th century, the owners changed many times. The castle was in the ownership of the family VON KNIGGE from 1812 – 1945, their mausoleum is on the base of the castle hill still today. Since then the municipality of Harkerode is the owner of the ruin. We can visit the relics of the complex. The main building is partly reconstructed. We go up the foot path from the parking place at the street between Sylda and Harkerode to the castle ruin. From there you have a phantastic view over the surrounding area.



Castle ruin of Arnstein



Quarry at the Klus hill

13

Diabase quarry

Klus hill at Pansfelde

The impressive Klusberg overtops with a height of 290.5 m above sea level the surrounding area. Its core area consists of a particular hard diabase rock. Clay slate can be found at the western hillside of the Klusberg as well containing remains of the polyp-like sea dweller of the Silurian (420 to 440 million years ago). The rock is named graptolite shale according to the so-called graptolite. The diabase was excavated in a quarry at the south-eastern hillside of the Klusberg used as gravel in street and way construction. Since 1994 the Klusberg is defined as nature conservation area. A castle was on its highest point in the 11th century which belonged presumably the Knights von der Ackerburg. A guest room was erected on the castle site presumably at the beginning of the 15th century. Devotional findings such as pilgrimage symbols have remained from this time.

Municipality of the town of Arnstein

☎ 0049 3473 - 962210

www.arnstein-harz.de



Selected points of information

Stops for meals & accommodations



Christliche Jugendbildungs- und Begegnungsstätte Schloss Mansfeld
www.schloss-mansfeld.de

☎ **0049 34782 - 20201**



Reit- und Sporthotel Nordmann
Stangerode
www.nordmannharz.de

☎ **0049 34742 - 9530**



Heimvolkshochschule Alterode
Bildungshaus am Harz
Alterode
www.heimvolkshochschule-alterode.de

☎ **0049 34742 - 95030**



REGIONALVERBAND HARZ E.V.

The Regionalverband Harz is a non-profit association incorporating the counties of Goslar, Göttingen, Harz, Mansfeld-Südharz and Nordhausen. It supports the protection of nature and environment as well as the cultural heritage of the Harz through the assistance of its sponsoring members. Its aims are achieved in part through the patronage of Nature Parks in the Harz region. As a partner in the Geopark Harz · Braunschweiger Land · Ostfalen GbR, newly founded in the year 2016, the Regionalverband is responsible for the southern portion of the UNESCO Global Geopark Harz · Braunschweiger Land · Ostfalen. Its partner association located in Königslutter is responsible for the northern portion. Since the year 2004, the Geopark Harz · Braunschweiger Land · Ostfalen has been a member of the European Geoparks Network.

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