

## World Heritage Scanned Nomination

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UNESCO Region: EUROPE AND NORTH AMERICA

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**SITE NAME:** Upper Middle Rhine Valley

**DATE OF INSCRIPTION:** 29<sup>th</sup> June 2002

**STATE PARTY:** GERMANY

**CRITERIA:** C (ii)(iv)(v)

**DECISION OF THE WORLD HERITAGE COMMITTEE:**

*Excerpt from the Report of the 26<sup>th</sup> Session of the World Heritage Committee*

**Criterion (ii)** As one of the most important transport routes in Europe, the Middle Rhine Valley has for two millennia facilitated the exchange of culture between the Mediterranean region and the north.

**Criterion (iv)** The Middle Rhine Valley is an outstanding organic cultural landscape, the present-day character of which is determined both by its geo-morphological and geological setting and by the human interventions, such as settlements, transport infrastructure, and land-use, that it has undergone over two thousand years.

**Criterion (v)** The Middle Rhine Valley is an outstanding example of an evolving traditional way of life and means of communication in a narrow river valley. The terracing of its steep slopes in particular has shaped the landscape in many ways for more than two millennia. However, this form of land-use is under threat from the socio-economic pressures of the present day.

**BRIEF DESCRIPTIONS**

The 65km-stretch of the Middle Rhine Valley, with its castles, historic towns and vineyards, graphically illustrates the long history of human involvement with a dramatic and varied natural landscape. It is intimately associated with history and legend and for centuries has exercised a powerful influence on writers, artists and composers.

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**1.b State, Province or Region:** Federal State (Land) of Rhineland-Palatinate: Parts of the Autonomous (kreisfreie) city of Koblenz and the counties of Mainz-Bingen, Mayen-Koblenz, Rhine-Hünsrück, and Rhine-Lahn Federal State (Land) of Hesse: Parts of the county of Rheingau-Taunus

**1.d Exact location:** N50 10 25 E7 41 39

**The Cultural Landscape of the Middle Rhine Valley**  
**from Bingen/Rüdesheim to Koblenz**

**(Upper Middle Rhine Valley)**

**Nomination of properties for inscription on  
UNESCO's World Heritage List**

**Federal Republic of Germany  
Federal States of Hesse and Rhineland-Palatinate**

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# 1. Identification of the property

**Middle Rhine Valley from Bingen/Rüdesheim to Koblenz (Upper Middle Rhine Valley)**

## a. Country

Federal Republic of Germany

## b. States

Federal State of Rhineland-Palatinate

Parts of the autonomous (*kreisfreie*) city of Koblenz and the counties of Mainz-Bingen, Mayen-Koblenz, Rhine-Hunsrück and Rhine-Lahn.

Federal State of Hesse

Parts of the county Rheingau-Taunus

## c. Name of the property

Upper Middle Rhine Valley

## d. Exact location on map and indication of geographical coordinates to the nearest second

World Heritage Area: 7°32'23" E to 7°55'52" E, 49°57'16" N to 50°22'09" N

Buffer zone: 7°30'51" E to 7°56'34" E, 49°56'21" N to 50°22'37" N

## e. Area of the property proposed for inscription

Area of the core zone in square kilometres: ca. 272.5 km<sup>2</sup>

Area of the buffer zone in square kilometres: approx. 346.8 km<sup>2</sup>

The area proposed for inscription in the World Heritage List coincides closely with the natural feature referred to as the "Upper Middle Rhine Valley", which extends from the Bingen Gate (*Binger Pforte*), where the River Rhine flows into the deeply gorged, canyon section of the Rhine Valley, up to the Lahnstein Gate (*Lahnsteiner Pforte*),

where the river widens again into the Neuwied Valley. The area in question also includes the adjoining middle and upper Rhine terraces (Upper Valley) which bear witness to the course taken by the river in ancient times. In both structural and functional terms these areas are closely linked to the narrow section of the valley, as are the steep V-shaped valleys of the streams flowing into the Rhine.

The other two sections of the Middle Rhine Valley – the part where the river opens out into the Neuwied Valley and the Lower Middle Rhine Valley – are not characterized to the same extent by this canyon shape.

Apart from geological and geomorphological factors, the delimitation of the nominated area takes account of other aspects of the region's history and cultural history (the coherence of settlements, landscapes characterized by numerous castles) as well as of its typical cultural landscape (terraced vineyards), the flora and fauna (xerothermic ecosystems, stone-fruit orchards, coppice forest; nature conservation areas and fauna/flora/habitat areas) and aesthetics of the landscape (natural scenery, visual relations, characteristic rock formations).

To protect the nominated area against harm or intrusive development and with a view to maintaining important historical, functional and biological integrity, a buffer zone has been established around the core zone. The external border of this buffer zone is on the catchment divide, since it is only on the other side of this dividing line that the encroachment onto the landscape of large numbers of mostly clearly visible buildings can be excluded. Most of the areas on the other side of this dividing line belong to other nature-spatial units. In historical terms, too, on the other side of this dividing line the links with the Upper Middle Rhine Valley become less obvious.

On the left bank of the Rhine, the core zone and buffer zone largely coincide with the area of outstanding natural beauty comprising the section of the Rhine from Bingen to Koblenz coinciding with the delimitation laid down in the ordinance on the preservation of the landscape of the Middle Rhine region dated 26 April 1978, and on the right bank of the Rhine between the border between the federal state of Hesse and Rhineland-Palatinate and the Rhine uplands near Bornhofen.

## **Delimitation of the property proposed for inscription on the World Heritage List:**

### **Outer limit of the buffer zone of a future World Heritage Area**

#### **Delimitation on the left bank of the Rhine:**

The eastern border of the buffer zone is marked by the former Hindenburg Bridge over the River Rhine, which was destroyed in World War II, the only remnants today being a few pillars. Sweeping southwards, the border circumvents the Rochusberg (a hill which constitutes an important landmark in the area) to the east and south and crosses the River Nahe at the tower ruins of Trutzbingen. From there, it continues around the two hills to the north of Münster-Sarmsheim, which together with the Rochusberg form the eastern part of the Rhenish Slate Mountains. This was the barrier through which the River Nahe broke in a geologically significant manner to create today's characteristic landscape. The area of the former Amalienhöhe mine (a technological monument) is included in the buffer zone, while on the other side of the mine the border follows the line of the catchment divide. This line runs past the hills of Rossel and Auerhahnkopf on the western side of the Salzkopf near the Lauschhütte forestry building. For ease of location in the landscape, wherever possible the border follows existing roads and forestry tracks. Following the Rheinhöhenweg to the west, at the Kammerwegberg, the border meets up with the boundary of the natural space, which runs to the northwest along the catchment divide. South of Birkheim the outer limit of the buffer zone leaves the catchment divide and follows the border of the association of communities (*Verbandsgemeinde*) before meeting up again with the catchment divide northwest of Karbach. From here, the border of the buffer zone again follows the catchment divide and subsequently the motorway. From the Koblenz-Waldesch motorway junction the Hunsrückhöhenstraße heading towards Koblenz only roughly follows the course of the catchment divide, but sections of it correspond to the route taken by the old Roman road, which is why it was taken to serve as the northwestern boundary of the buffer zone. The former upper terrace of the Rhine southwest of Koblenz, which is today almost completely covered by the built-up area known as Karthause, is included in the buffer zone. The former Fort Alexander and Fort Konstantin on this upper terrace constitute important features of the former Koblenz-Ehrenbreitstein fortifications. At

Kurt Schumacher Bridge, the border of the buffer zone switches to the other bank of the River Mosel, circumnavigating the loop made by the Mosel along its banks until it reaches Lützel. Lützel is included in the buffer zone because of the largely still appreciable traces of the extensive and evocative Koblenz-Ehrenbreitstein fortifications. As a result, the buffer zone near Koblenz includes the districts of Karthause, Rauenthal, Lützel and part of Neuendorf, namely the immediate area surrounding the old city in Koblenz located in the World Heritage Area.

### **Delimitation on the right bank of the Rhine:**

Starting from the former Hindenburg Bridge between Bingen and Rudesheim as the eastern extremity of the buffer zone, the border continues roughly equidistant from the Rhine along the local district boundary, from Rudesheim to the north. At the Rheinberg and Kammerburg fortifications, which mark the point where the territorial defences of the Rheingau region in the late Middle Ages (a living wall of hornbeam called the *Rheingauer Gebück*) crossed the Wisper Valley, it switches to the conurbation of Lorch. From here, taking account of the area's topography, the border takes the shortest route to the Rhine tributaries' catchment divide west of Wollmerschied. (Wollmerschied and Espenschied are outside the buffer zone, since both lay beyond the *Rheingauer Gebück*, which formed the historical border of the Rheingau region in olden times.) Unlike on the left bank of the Rhine, the outer limit of the buffer zone over the border of Hesse follows not the catchment divide, but rather the eastern border of the association of communities known as *Verbandsgemeinde Loreley*. Within the neighbouring *Verbandsgemeinde Braubach* the boundary no longer follows the political border, but rather first the upper course of a stream called the Reichelsteiner Bach, then the political border to the east of Dachsenhausen and finally a fairly straight line through Hinterwald to Biebricher Hof, where it meets the boundary of the natural space. Above Friedland it then joins up with the border of the Lahnstein Gate (*Lahnsteiner Pforte*) across the River Lahn west of Friedland. The landscape of the exposed western slopes of the Lahn Valley is such that these are included within the buffer zone at Mehrsberg and Licher Kopf. Beyond Licher Kopf the border again follows the catchment divide. The northern boundary of the buffer zone is formed by the L127 and K17 roads, including Arenberg monastery. These roads run across a range of hills which separates the catchment areas of the Eselsbach stream, with its mouth at Ehrenbreitstein, from the Mallendarer Bach, a

stream whose mouth lies outside the buffer zone. Near the county border the boundary traverses Ehrenbreitstein and then crosses the Rhine.

### **Delimitation of the core zone**

The actual *Upper Middle Rhine Valley World Heritage Area* lies within the boundaries described above and features all the criteria on which the application to UNESCO's World Heritage Committee for world heritage status is based. It is the area which the respective regional governments have pledged to the world community to protect in all respects and constitutes a single, unbroken expanse of terrain. The only exclave is the rounded top of the hill called the Rochusberg near Bingen.

The basis for the proposed borders is the geographical delimitation of the Upper Middle Rhine Valley nature reserve.

Many important aspects of the cultural landscape of the Upper Middle Rhine Valley are taken in, such as the geomorphological aspect. The main terraces which are so important for an understanding of the landscape's development and which bear witness to the former bed of the River Rhine before it was buried in the mountains, are included within the boundary. With just a few exceptions, all vineyards of significance to the Middle Rhine wine-growing region and the lower Rheingau region are also included. As a result of this relatively broad delimitation, virtually all points of interest from the point of view of monument conservation are included within the demarcated area. However, the following deviations from the delimitation of the nature reserve still appear necessary:

#### **On the left bank of the Rhine:**

1. Owing to its geological, topographical and cultural importance, the Rochusberg is an essential feature for the coherence of the cultural landscape of the Middle Rhine Valley, despite being classified as belonging to the low-lying hill country around the River Nahe known as the *Unteres Nahehügelland*. Its forested summit between where the River Nahe breaks through in the west and the former quartzite quarry in the east is therefore identified as an exclave of the core zone. This exclave also includes the slope to the west with the remains of the historical terraced vineyards

under the Scharlachkopf, the buildings of the oblate monastery and the land around the Villa Sachsen with its vineyards stretching out to the west.

2. Unlike the delimitation of the natural border, the eastern boundary of the proposed World Heritage Area follows the left bank of where the River Nahe flows into the Rhine, making the so-called Binger Loch the entrance to the World Heritage Area. After including the railway tracks between the mouth of the River Nahe and the Rhine, the border on the left bank of the Rhine runs over the clear rocky ridge to the west of the youth hostel, then follows the dry ditch up the slope, where it meets a forestry track at an altitude of 300 metres.
3. Where the Rhine breaks through the Taunus quartzite ridge between Bingen and Trechtingshausen the natural borders are deemed too constrictive, so it is proposed that the boundary be shifted further to the west. Only in this way can it be ensured that a sufficiently broad strip of land sloping down to the left bank of the Rhine is protected. For ease of location in the landscape, wherever possible the border follows existing roads and forestry tracks. Above the aforementioned forestry track, leaving out a quarry to the south and circumnavigating behind the summit of the Hartberg, the border subsequently follows the road known as Heilig Kreuzstraße. From the "*Entenpfühl*" pasture land the border follows the western boundary of the Morgenbachtal nature reserve, which is included in the future World Heritage Area because of its special importance to the flora and fauna of the Middle Rhine region.
4. Between the Beilenstein above Trechtingshausen and the Sooneck feldspathic ware works the boundary follows the limits of the Upper Middle Rhine Valley nature reserve.
5. From here on, the boundary leaves the natural borders. Owing to its inclusion in the historically significant so-called "*Viertälergebiet*", or area of the four valleys, the localities of Oberheimbach and Manubach, which were already prominent settlements in the Middle Ages, and their vineyards must also be included in the future World Heritage Area. The *Viertälergebiet* used to comprise the four valley communities of Bacharach, Steeg, Manubach and Diebach. Consequently, the southern border follows the natural boundary of the Bingen Forest (Binger Wald) as

far as Igels-Berg, after which it coincides with the north-south sections of the lateral valleys, including the vineyards that date back to 1900. At Medenscheid the boundary joins up again with the border of the physical Upper Middle Rhine Valley, which it follows until the fork between Thalbach and Gründelbach to the west of St. Goar. From here, it follows the limits of the association of communities, before rejoining the natural physical border north of Karlbach. Here it extends up to the northern end on the Dommelberg south of Koblenz. Between Bacharach and Oberwesel, the vineyards dating from around 1900, which extend beyond the defined nature reserve, are also included in the World Heritage Area.

6. Beyond the Upper Middle Rhine Valley nature reserve, the boundary continues to run along the former tow-path to Oberwerth. Oberwerth, the parts of Neustadt designated as being worthy of conservation and the old city in Koblenz also form part of the nominated area. The obvious boundary here would follow the railway tracks between Horchheimer Bridge and the junction with the Rhine valley section and between this intersection and the railway bridge over the River Mosel. Owing to the extensive destruction of the historical cityscape between Herz-Jesu-Kirche and the Balduin Bridge, to the north of the church the boundary leaves the railway tracks and follows Löhstraße over Balduin Bridge to the other bank of the River Mosel. Accordingly, the old city in Koblenz and the vast majority of the part of the city facing the Rhine are included in the proposed future World Heritage Area. The northern boundary of the nominated area is formed by the River Mosel, the Deutsche Eck and the northernmost point of the World Heritage Area on the immediate left-hand bank of the River Rhine.
  
7. On the bank of the River Mosel opposite Koblenz the boundary runs along the riverbank until it reaches the border marking the right-hand bank of the Rhine, which traverses Ehrenbreitstein south of the sports facilities, and then the Rhine.

**On the right bank of the Rhine:**

1. Directly opposite the mouth of the River Nahe, the so-called "*Mühlenstein*", a quartzite cliff rising out of the Rhine close to its banks, constitutes the meeting point between the boundary of the core zone on the left bank of the Rhine and the right-hand bank of the river. The core zone on the right bank of the Rhine extends as a

counterpart to the *Rochusberg* exclave along the bank as far as the *Adlerturm*, which constitutes the easternmost point of the former city walls around Rüdesheim. From here on, to the north the boundary follows the *Grabenstraße*, which marks the line of the former city walls in the east. Subsequently, following a hollow ditch running up the slope, behind the youth hostel it joins up with the so-called *Große Allee*, or main avenue, of the former *Niederwald* nature park via a rough country road. This avenue constitutes the northern boundary of the area of coppice forest and leads to the site of the former hunting seat of Castle Niederwald.

2. Behind Assmannshausen the inclusion of the lateral valley ends with the eastern sections of the Assmannshausen vineyards, with a long dry ditch along the southern edge of the valley and a track for agricultural vehicles to the Schneperflur pasture land serving as boundary lines.
3. To enable the peaks and hilltops to the right of the Rhine to be included in a future World Heritage Area, between Assmannshausen and Lorch the boundary departs from the natural physical features of the landscape, and the actual border of the nominated area is pushed back. Owing to the great variation in height, no attempt was made to stick to a single contour line; instead an effort was made to make the boundary run parallel to the Rhine on the basis of the existing road network and taking account of the relevant lateral valleys. For lengthy stretches, the border follows the *Rheinhöhenweg* on the right bank of the Rhine and sections of the so-called *Kaufmannsweg*, once used as a path around the Binger Loch. In this way, the important landmark peaks of Bacharacher Kopf, Teufelskadrich, Geißberg, Mandelberg and Lehrener Kopf can be fully included in the nominated area.
4. Closing off the area from the mouth of the Wisper into which there is a clear view from the Rhine, the southwesterly exposed slopes on the Mückenkop by Lorch are so important that it was decided they should be included in the future World Heritage Area.
5. Compared with the remainder of the boundary and in terms of visual relations, the line followed by the border of the natural landscape between Lorch and Dörscheid is too tight to allow any delimitation of the core zone. Consequently, the boundary was



shifted further to the east, behind the hills overlooking the Rhine. To the east of Dörscheid, between the core zone and the buffer zone, for the first time the border coincides with the natural physical boundary and follows it to where it meets the Lahnsteiner Pforte, including the Koppelstein nature reserve. Between Weyer and Dahlheim it briefly strays from the natural physical border, shadowing instead the outer limits of the association of communities (*Verbandsgemeindegrenze*).

6. Although in actual fact they do fall within the Upper Middle Rhine Valley nature reserve, the industrial and business facilities around the junctions leading onto the B42 were not included in the core zone. The boundary follows the southwestern extremity of the Koppelstein nature conservation area and then extends along the village boundary between Braubach and Oberlahnstein until it reaches the banks of the Rhine.
7. Being densely populated, most parts of the region stretching from Oberlahnstein and Niederlahnstein and comprising the Koblenz suburbs of Horchheim, Pfaffendorf and Asterstein cannot be considered for inclusion in the core zone. The 1953 ordinance on the protection of the Rhine Valley had already excluded Oberlahnstein and Niederlahnstein from its scope. Consequently, the core zone only includes the river bank area and the old centre of Oberlahnstein, with Martinsburg, Burg Lahneck, the Church of St. John and Löhnberg Mühle, a mill in Niederlahnstein.
8. The locality and fortress of Ehrenbreitstein, which should be viewed as a whole, along with the old city centre of Koblenz also located within the future World Heritage Area, are fully included in the nominated area.

## **2. Justification for inscription**

### **a) Statement of significance**

The Middle Rhine Valley is one of Europe's great historical river landscapes. When it broke through the Slate Mountains, the Rhine created a series of natural areas where geological processes are visible and which constitute breathtaking scenery. The deeply

downcut valley, on the lee side of the Hunsrück hills, enjoys an unusually mild climate where fauna and flora usually found in the Mediterranean region and in southeastern Europe thrive (see section 2.ab below). The terracing of the steep valley sides, which began around 1,000 years ago, not only created a wine-growing region that is still world famous, but also made a decisive contribution towards improving the living conditions of species which thrive in warm conditions.

As a transport route, the Rhine has served as a link between the southern and northern halves of the continent since prehistoric times, enabling trade and cultural exchange, which in turn led to the establishment of settlements. Condensed into a very small area, these subsequently joined up to form chains of villages and small towns. In this way, down through the centuries the landscape that developed testified more clearly than any other to the interaction between humankind and nature, cultural achievements and their prerequisites and repercussions. The experience of travelling through this unique, unmistakable landscape, so highly valued for centuries, is bolstered by the wide range of references made to it in literature and legends, the fine arts and music.

#### **aa) Cultural significance**

The importance of the Middle Rhine as a core region of the medieval Holy Roman Empire is reflected not only by the large number of mostly tiny historical towns that sprang up on the extremely narrow strip of land forming the valley floor, many of which have retained their historical character until today, but also by the unique cluster of around 40 hilltop castles and fortresses erected over a period of around 1,000 years. Four of the seven electors, the highest-ranking princes of the empire, held portions of it and this was where they met up to discuss who would become king. Furthermore, it was here that they set up their customs posts, which further underpins the economic importance of the Rhine as a trade route.

In the 17th century, starting from the Thirty Years' War, conflicts between the rulers of this territory were compounded by the tussle between France and the German Empire which dominated European history at the time. The Rhine was at the heart of this tussle. The Palatinate War of Succession in 1689 left most of the castles along the Rhine in picturesque ruins, a decisive element of the notion of a romantic landscape in the 19th century.

In 1797 the Rhine became the border with the French Republic, and thus it was to remain until Blücher crossed the river at Kaub during the night of New Year's Day 1813-14. The history of Prussia, of which the Rhineland became part in 1815, resulted in this event becoming a symbol of the successful wars of liberation.

In the late 18th century the Rhine Valley, which had previously been a mere staging post, was discovered and extolled as a destination for travellers. For Heinrich von Kleist, who sailed up the river in 1803, it was "the most beautiful stretch of country in all Germany, in which the Great Gardener evidently laboured *con amore*." Like him, two years later Friedrich von Schlegel also described the valley in terms of a deliberately carved landscape: "(Thus) the area around the Rhine appears more like a complete painting or work of art devised by a creative spirit than the result of pure chance." Clemens von Brentano and subsequently Heinrich Heine then created the character of the sorceress Loreley, who endures to this day as a living myth, in numerous personifications and ironical forms. Johann Wolfgang von Goethe was also full of praise for the landscape and local wine after visiting Bingen and the Brentano family in the Rheingau region. Amongst the Romantic painters who portrayed the landscape in larger-than-life terms, the leading exponents were surely Carl Gustav Carus and William Turner. Their feelings and those of many others were immortalized in songs, images and texts which created an image of the landscape that still colours Europeans' relationship with this region today, whether deliberately or not. The romantic appeal of the Rhine can be attributed to the fact that in the 19th century the Middle Rhine became an unmistakable symbol for the European Middle Ages. In the eyes of Victor Hugo, who travelled through the valley in 1840 (the year of the so-called "Rhine Crisis"), the Rhine was the river where Germany and France met, and he sought to play down the latest flare-up in the clash between the two peoples by describing the river, which they had fought over for so long, as their joint heritage.

But Rhenish Romanticism was reflected not just in literature and paintings, but also in architectural works. Spurred on by a fascination with all things medieval, but also in an attempt to provide documentary evidence backing their political claim to the newly won "Rhenish Province", starting in the 1820s members of the Prussian royal family started acquiring castle ruins along the Rhine and converting them into romantic summer residences. Members of the nobility and leading industrialists followed in the footsteps of the Hohenzollern family until just before World War I. Caught between the conflicting

tasks of conserving historical monuments as such, on the one hand, and honouring the claims of the new owners to restore, change the designation or simply make alterations to their premises, on the other, the national conservation authorities were often forced to give way to the latter. However there was no discussion about always starting out from what was already there and seeking to integrate it into the new construction. So historical and historicizing, genuine and imagined medieval features were incorporated into castles like Rheinstein, Stolzenfels (designed by Karl Friedrich Schinkel) and Sooneck, as well as in later fortresses, creating examples of architecture which today rank amongst the most outstanding monuments of historicism.

After the Franco-Prussian War of 1870-1871, these fortresses were joined by monuments to a national pride which emphasized the differences between the two countries and which, from a modern point of view, are somewhat problematic, namely the Niederwald monument overlooking Rudesheim and the monument in the Deutsche Eck by Koblenz. These edifices bear witness to a policy that failed in two world wars, marking as they do the beginning and end of a Middle Rhine Valley that has now once again become a symbol of European unity.

The Upper Middle Rhine Valley has remained a main channel of European traffic right up to the present day and is still a lively economic area. But whereas the structural changes accompanying the relative demise in the importance of traditional economic activities such as viticulture, slate mining, fishing or river piloting, certainly have had an impact on the historical image of the cultural landscape, they have not fundamentally changed it, unlike the situation in the upper and lower reaches of the Rhine.

#### **ab) Ecological significance**

The Middle Rhine Valley is a unique cultural landscape, whose appearance and importance is characterized by the interaction between the physical natural features of the area (steep-sided narrow valley of the River Rhine), the landscape created by human intervention (vineyards, fortresses and clearly historical towns and villages), the area's ecological uniqueness (biotopes meriting a high level of protection on the slopes of terraces shaped by wine-growing) and the tourist image (Rhine romanticism in the Loreley valley and the Rheingau region). But in terms of nature conservation, too, the Middle Rhine Valley boasts some unique features, such as xerothermic eco-systems (= warm and dry) open landscape

biotopes, which constitute valuable habitats for a large number of rare and endangered plant and animal species, and coppice forests.

Thus the Middle Rhine Valley is characterized by its unusually high number of natural and man-made habitats and a correspondingly high number of plant and animal species.

The valley enjoys an extremely mild climate, marking the transition between the Atlantic and continental microclimates. The upper part of the valley in particular, being sheltered from the wind by the Hunsrück hills, is afforded direct protection from major air currents, and hence enjoys warmer, drier, less windy weather than the adjacent high ground. The relief of the valley sides causes major exposure-related differences in the local climate. The steep, south-facing slopes receive a lot of sunshine and enjoy an excellent climate for wine production.

Of particular ecological importance is the existence of a unique 'warm slope area' resulting from the local interaction between air currents caused by air cooled at night on the valley slopes meeting the warmer air on the valley floor. This situation is conducive to the occurrence of species that thrive in extreme warmth, and frost-sensitive species on the steep sides of the valley.

The flora and fauna of the Middle Rhine Valley are above all a product of the post-ice-age period in Central Europe, when those animal and plant species that had survived the cold periods in refuges wandered into the zone blessed with warmer weather after the ice had retreated. Owing to the north-south orientation of the Rhine Valley and the east-west orientation of its main lateral valleys and neighbouring valleys (e.g. the Danube Valley) the conditions were ideal for connecting up with the refuges in Asia and those western and southern parts of Europe that benefit from a moderate climate and are influenced by Atlantic currents favouring animal and plant migration. To a certain extent, this is still the case today. Thanks to the climatic conditions prevailing in the valley, warmth-seeking, xerothermophilous species in particular, some of them of Mediterranean origin, managed to push a long way north. As a result, in the Middle Rhine Valley numerous species reach the northernmost limit – and in some cases the easternmost and westernmost limits – of their overall range. Examples of this phenomenon are the green lizard (*Lacerta viridis*), the *Schmetterlingshaft* (*Libelloides coccajus*) [no English equivalent], the praying mantis

(*Mantis religiosa*), and the butterflies southern white admiral (*Limenitis reducta*) and scarce swallowtail (*Iphiclides podalirius*); examples of plant varieties are the Montpellier maple (*Acer monspessulanum*), the gas plant (*Dictamnus albus*) and various feather grasses (species of *Stipa*).

Furthermore, endemic species or sub-species only occurring in the Middle Rhine Valley – like the Middle Rhine *Graseule* butterfly (*Ammoconia senex* ssp. *mediorhenana*), a candytuft locally known as the *Bopparder Schleifenblume* (*Iberis intermedia* ssp. *boppardiensis*) – have developed, underscoring the value of this cultural landscape for maintaining biodiversity.

Over the last 1,000 years humankind has strongly influenced the Rhine Valley eco-system. In the process, the construction of transportation infrastructure on the valley floor and more and more housing resulted in the loss of types of biotope, and this also occurred on the neighbouring high plains as their use by humans intensified. However, on the slopes, with their different exposures and inclines, extensive farming has created a diverse, intricate mosaic of different crop-dependent biotopes.

On the steep, southward-facing slopes the main biotopes are vineyards, characterized by a thin or even negligible layer of soil, dry stone walls with split stone staircases and shelters and piles of slate resulting from the degradation of slate and various ores. On gentler slopes small stone-fruit orchards, gardens and fields were established or formed as a result of grazing on semi-arid vegetation comprising multiple species and other biotypes on poor soils. Forested north-facing sites have been converted into oak coppices, amongst other things with a view to harvesting tan, firewood and timber for mining. The systematic, sustained cultivation of these dry forests up until the 1950s constitutes a form of forest management that is unique in the world.

These various usages effectively boosted the proportion of natural open land in the Middle Rhine Valley, entailing a whole range of positive effects for warmth-loving organisms dependent on a higher incidence of sunshine. Typical crop-dependent xerothermophilous species include the red-winged grasshopper (*Oedipoda germanica*) and the chequered blue butterfly (*Scolitantides orion*) on bare piles of rock, and the European wall lizard (*Podarcis muralis*), which finds suitable habitats and overwintering places in the walls. These are just some of the species enjoying special protection. Indeed, in the Bern Convention, the Federal Republic of Germany undertook to conserve endangered habitats of this kind.

Unlike in other valley systems in Central Europe, human intervention resulted in the creation of new habitats in which a diversity of species, largely uncommon anywhere else in Europe, developed. Thanks to centuries of wine-growing, flora and fauna developed in the Middle Rhine Valley which are dependent on this special cultural landscape, with its open habitats and dry stone walls. For many plant and animal species this area is one of their primary ranges in Germany.

One example of this is the butterfly fauna inhabiting the heath land known locally as the *Dörscheider Heide*, which is today a significant nature reserve. More than 600 species (macrolepidoptera) have been counted within an area of less than five square kilometres – a level of diversity found hardly anywhere else in Central Europe.

For centuries, several significant European bat populations in the Middle Rhine Valley (colonies of the greater mouse-eared bat *Myotis myotis*) have been closely linked to castle ruins, monasteries and attics and are dependent on the conservation and maintenance of these anthropogenic buildings.

The significance of the Middle Rhine Valley for nature conservation in Europe is evident from the fact that the entire region contains one European reservation and Ramsar wetland and 14 flora/fauna/habitat areas and nature conservation areas. The overall proportion of such areas is roughly 30%. The special importance of nature conservation areas in the Middle Rhine region lies in the diversity of habitats and the species resident there, conditioned by the extreme differences in altitude and the special climatic conditions associated with warm south-facing slopes.

In some parts of the valley the usage of some mid-range and upper slopes (extreme slopes ranging from steep to very steep) for special crops such as vines and other fruit looks set to be discontinued. This development could have a negative impact on the anthropogenically determined diversity of species and biotopes. Consequently, it is a declared top-priority conservation objective to uphold the variety of habitats and hence the diversity of species in such locations by maintaining or developing past forms of cultivation or – if this is not possible – to achieve this objective as far as possible by introducing special forms of cultivation or implementing appropriate conservation measures.

The river itself, being a major, sharply inclined waterway undisturbed by transverse structures such as damming stages, is itself a biotope of great international importance. As a rule, comparable rivers elsewhere in the world are slow-flowing and set in lowlands. Despite having been used in many different ways and repeatedly interfered with down through the ages (extended, polluted) it nonetheless remains a habitat for numerous animal species characteristic of the river. Between the 1950s and the 1980s the multiple factors associated with the channelling of waste water into the river greatly decimated the levels of original indigenous Rhine fauna. Since then, thanks to successful attempts by the respective federal states involved to keep the river clean by reducing the amount of pollutants dumped in it, the number of species has clearly increased once more. For instance, the river now contains numerous fish species that were once classed as missing but have now returned to their original range. The same applies to small animals such as the mayfly (*Ephoron virgo*), the lithophilic snail (*Theodoxus fluviatilis*), the freshwater mussel (*Anodonta anatine*), the freshwater clam (*Unio pictorum*) and the freshwater mussel (*Unio turmidus*). In addition to these original endemic species, there is a strikingly high number of interrelationships (for example, between the molluscs which benefit from the elimination of catchment divides via canals like the Rhine-Main-Danube Canal).

## **b) Comparative analysis**

Sections of two European river valleys are inscribed on the World Heritage List or will shortly be inscribed on it: the Loire Valley section between Sully and Angers, and the Wachau section of the Danube. In both cases the main emphasis is on aspects of their cultural history (forts, castles, historical towns or cities). In addition, the Loire is the biggest river in Europe and has largely remained unregulated. One favourable factor in the case of the Wachau was that traditional wine-growing continues over large areas. However, in neither case have geological processes, orogenies and subsidence plus the flow of the river itself resulted in a landscape with such a stark relief, such a range of habitats and offering such a rich experience. No waterway is such a central feature of the continent as the Rhine, linking as it does the countries of Europe over such large distances. In terms of the number of forts and castles, the Rhine Valley is undoubtedly outranked by the Loire, but there the man-made monuments are spread over a section three times the length of that in question here. The heyday of construction work in the Loire Valley was in the 15th and 16th century, whereas in the Rhine Valley it was in the High and Late Middle Ages.



Compared with the Rhine, the Loire is a relatively unimportant transport route. The viticulture in the Wachau covers a larger surface area than it does by the Rhine, but what makes wine-growing on the Rhine so special is the existence of steep slopes. Moreover, the Middle Rhine Valley is the oldest cultural landscape where vines are grown on steep and very steep slopes that is still intact in Europe. Finally, neither the Loire nor the Wachau can boast natural phenomena and human activities as intimately interlinked as they are by the Rhine. This in turn has led to the existence of a plethora of sagas, songs and pictures, and in this respect the Rhine is unrivalled by any other European waterway.

**c) Authenticity and integrity**

Thanks to the relatively small amount of leeway given by the natural landscape of the Middle Rhine Valley to the people inhabiting it, this section of the river has undergone fewer changes than others. As a consequence, but also thanks to early attempts made by the area's inhabitants, visitors and local officials to protect the landscape, the authenticity of the area in question has been largely retained.

**ca) Historical heritage and monument conservation**

The historical authenticity of most of the monuments built in the Middle Ages and historical sites including the forts, some of which were re-fashioned in the Romantic vein in the 19th century, is undeniable. Their protection and conservation have always been, and still remain today, a main focus of the monument conservation efforts by the state authorities. The first tour of inspection by Ferdinand von Quast, who was appointed curator of Prussia's monuments in 1843, took him to the Rhine, more specifically to Bacharach to the ruins of the Wernerkapelle chapel, which he urgently recommended be preserved, "whereby an equal amount of care should be taken to ensure that it does not lose its picturesque character". One year previously, Johann Claudius von Lassaulx had rebuilt the royal seat destroyed by the French in 1804-1805, the old meeting place of the electors near Rhens. It was the first provincial curator responsible for Prussia's Rhenish province, Paul Clemen, who started the task of drawing up a systematic inventory of cultural monuments to be used as a basis for their conservation.

Today, the respective federal state authorities responsible for monument conservation based in Mainz (Rhineland-Palatinate) and Wiesbaden (Hesse) are responsible for inventorying, protecting, conserving and managing cultural heritage. The guiding principle

underlying the work done by these regional government departments is that the historical substance of the monuments in question should be maintained. When sites are given new designations, care is taken to ensure that the new use is appropriate to the monument in question. The Rhineland-Palatinate's Department of Monument Conservation has drawn up a special 'castle concept' for the Middle Rhine region. Funds totalling several million German marks are being earmarked for the preservation of the associated substance and to guarantee that sites are given appropriate designations even if private owners, in particular, are unable to do so. In Hesse the work devised to secure the Ehrenfels castle ruins have already been concluded.

Apart from the efforts made by the state authorities it has been and still is the mostly private owners of cultural monuments themselves, as well as associations and federations specially devoted to monument conservation and landscape preservation (like the Burgenvereinigung castle association set up in 1899, with its headquarters at the Marksburg near Braubach and the Rhenish Association for Monument Conservation and Landscape Protection, set up in 1906 and originally called "*Heimatschutz*", meaning 'protection of the homeland'), that saw it as their duty "to protect our most beautiful natural features, especially the much-extolled and old-familiar scenery along the Rhine and the Mosel from being disfigured in any way." (Paul Clemen 1906).

#### **cb) Landscape protection and nature conservation**

The interplay between monument preservation and nature conservation, which owing to the topography of the area only have limited possibilities for economic expansion and serving tourists' interests in visiting an unspoilt cultural landscape, has meant that the canyon of the Middle Rhine has not been disfigured to any serious extent, with a few exceptions (e.g. the quarry at Trechtingshausen). The decline in the intensity of viticulture, shrinking back to cover roughly a quarter of the original area covered by vineyards, and land reparation may have changed the scenery we have inherited in some places, but not the fundamental structures of the landscape.

After a first attempt in 1938, in 1953 the cultural landscape of the Middle Rhine Valley up to the catchment divide, including parts of the Neuwieder Becken and the Lower Middle Rhine Valley, were designated the "*Rheintalschutzgebiet*" (Rhine Valley Conservation

Area) and thereby placed under legal protection. The ordinance on the preservation of the landscape in the Middle Rhine region dated 26 April 1978 was aimed at conserving the purpose, specificity, beauty and recreational value of the Rhine Valley and its lateral valleys and preventing any damage to the landscape, especially as a result of soil erosion on the slopes of the valley. Much of the official area of outstanding natural beauty stretching from Bingen to Koblenz coincides exactly with that part of the cultural landscape which Rhineland-Palatinate is nominating for inscription in the World Heritage List. The portion of the Middle Rhine Valley in Hesse forms part of the Taunus, an area of outstanding natural beauty, which constitutes the northern part of the Nassau nature reserve, and is located in the Middle Rhine region located on the right-hand bank of the river in Rhineland-Palatinate, stretching from Bornhofen to Lahnstein. In addition, between Bingen/Rüdesheim and Koblenz there are a number of nature reserves and flora-fauna-habitat areas plus one European reserve (for details see Annex II). A number of additional nature conservation areas or the expansion of existing conservation areas is either at the planning stage or is already being implemented.

In the "Analysis of the Middle Rhine Valley" the protection of resources plays a role of primary importance. The Trial and Development Plan (*E+E Vorhaben*) is intended to try out new designations and conservation measures for abandoned vineyards, and the sustained management of the coppice forest is intended to preserve the unique terraced landscape. Supportive measures implemented by the Rhineland-Palatinate's Ministry of Economic Affairs, Transport, Agriculture and Viticulture and the Hesse Ministry of the Environment, Agriculture and Forestry are subsidizing regional wine-growing on the steep valley sides and also the project dubbed "*Mittelrheinmomente*", dealing with key aspects of the Middle Rhine region. These projects are also being driven forward by the relevant associations and state authorities. Numerous associations are concerned with nature conservation in the Middle Rhine region. In addition to the aforementioned Rhenish Association for Monument Conservation and Landscape Protection these include BUND (the Federation for Nature and Environmental Protection), GNOR (the Society for Nature Conservation and Ornithology), NABU (The German Federation of Nature Conservation), GMN (the Society for Man and Nature) and FINK (the Initiative to Promote the Natural and Cultural Landscape in the Loreley/Middle Rhine region).

**d) Criteria under which inscription is proposed**

The inscription of the Upper Middle Rhine Valleys in UNESCO's World Heritage List is proposed under criteria C (II); C (IV); C (V); C (VI); N (I); and N (II).

C (II) Since prehistoric times the Middle Rhine Valley has been one of the most important transport routes in Europe, serving to promote the migration and exchange of ideas, products and culture between the Mediterranean region and the northern part of the continent. The valley, which lies in the heart of the continent, and has served on occasion both as a divide and a bridge between East and West, boasts a strategic importance that has irrevocably linked it to the chequered history of the West.

C (IV) The Middle Rhine Valley is a cultural landscape that has organically developed for over 2000 years but whose character is still today determined by the inherited structural elements of the landscape such as settlements, transport infrastructure and land use. In a patchwork of small natural spaces legacies from all periods of its history and exceptional monuments have been preserved in numbers and a concentration that no other European cultural landscape can rival.

C (V) The Middle Rhine Valley is an exceptional example of an evolving traditional way of life and means of communication in a narrow river valley. What is more, mankind's transformation of the profile of its steep slopes into terracing constitutes an outstanding example of human land use handed down through the ages: the crops grown there and the designated land usage have influenced and shaped the landscape in many ways down through history. However, now this form of land use and the preservation of the scarce habitats and rare populations associated with it are under threat from the pressure of unstoppable change. In individual cases, the development of transport and socio-economic change could also pose a threat to the continued existence of received values.

C (VI) The Middle Rhine Valley is closely linked with important historical events, ideas, traditions, works of literature and the fine arts, especially from the Romantic

period. These have helped (and are continuing) to shape the image of the landscape and impact on notions of European history and culture.

N (I) The section of the Rhine between Bingen and Koblenz is an outstanding example of an antecedent valley in Central Europe. The terraces laid down on both sides of the canyon uniquely bear witness to the river's history during the Quaternary.

N (II) The Upper Middle Rhine region is an outstanding example of an insular xerothermic eco-system far to the north of a temperate zone that owes its existence to favourable orographical and climatic conditions, but more importantly to a form of management of the cultural landscape that has continued, uninterrupted, for over 2,000 years.

### **3. Description**

#### **a) Description of the cultural landscape**

The cultural landscape of the Upper Middle Rhine Valley between Bingen/Rüdesheim and Koblenz consists of the approximately 65-kilometre-long section (river kilometres 527-592) of the Middle Rhine region. This is the valley where the Rhine breaks through the Rhenish Slate Mountains, connecting the broad floodplain landscape of the Oberrheingraben to the lowland basin of the Lower Rhine. The Upper Middle Rhine Valley represents a remarkably uniform and self-contained landscape unit. With its steep slopes still partially covered by vineyards, its settlements huddling on the extremely narrow riverbank or at the entrances to lateral valleys and its hilltop castles clinging to rocky outcroppings and lined up like pearls on a string along the middle river terrace, the valley embodies the very essence of the Romantic Rhine landscape.

At the Bingen Gate, the Rhine emerges from the wide, level basin and tableland of the Upper Rhine area of Rheinhessen into the upper canyon stretch of the river, turning almost at right angles between the dark, forested quartzite ridges of the Soonwald (Hunsrück) forest and the Rheingau mountains (Taunus). The Bingen Gate presents an abrupt contrast to the southern hills of Rheinhessen and the Rheingau. Extremely narrow until widened by

explosives in the 19th and 20th centuries, the Bingen Gate was also known as the "Bingen Gap," as it was only navigable to a limited extent. Mighty outcrops, some rising more than 500 metres above the river, crowd in on the valley. Only a few kilometres upstream, the river, now three times as wide, flows along flat banks between numerous terraced islands. The towns of **Bingen**, at the mouth of the Nahe river, and **Rüdesheim** further accentuate the Gate. Historic monuments built for political purposes have been a feature of this landscape since the second half of the 19th century. The first was the Niederwald monument, erected on the right bank of the river in 1883, by Johannes Schilling of Dresden to commemorate the unification of the German states under Prussia in 1871, and it was countered, on the left bank of the Rhine, by the Kaiser Friedrich Tower, which was erected on a hill called the Rochusberg. Wilhem Kreis had planned to build a national monument to Bismarck on the Elisenhöhe elevation above Bingerbrück to commemorate the Chancellor's 100th birthday, but the project could not be carried out due to the outbreak of World War I. Religious monuments added a different accent to the politically motivated memorials erected by the state. The elaborately neo-Gothic Rochus chapel with its striking silhouette effect was erected on the left bank of the Rhine between 1893 and 1895; on the right bank there is the massive twin-towered neo-Romanesque church of the Benedictine monastery of St. Hildegardis in Eibingen, founded in 1159 and rebuilt in 1904. Remnants of the nave of a Romanesque abbey church on the hill Rupertsberg, at the confluence of the rivers Rhine and Nahe, were preserved by incorporation into an art nouveau villa, although this cannot be seen from the outside.

In Rüdesheim, the old town is dominated by the fortress of Brömserburg from the 12th century: the remains of the upper fortress and the outworks, two Romanesque keeps, and the remaining sections of the town's fortifications, which include the round, late-Gothic tower known as the Adlerturm. Also of interest is the Brömserhof, a complex consisting of late-Gothic and Renaissance elements, and the Klunkhardshof, a patrician house dating from the beginning of the 16th century. The slate mountains west of the city mark the beginning of the steep slopes of the Middle Rhine Valley. The vineyards of Rüdeshimer Berg (Berg Rottland, Berg Roseneck, Berg Schlossberg and Bischofsberg) are among the best in the Rheingau, and are mentioned in records as far back as 1200.

The entrance to the canyon is marked in the river itself by a small castle, the **Mäuseturm**, built on a rock in the middle of the river. Originally a medieval customs house, it was

restored and enlarged in 1855, in the neo-Gothic style, for use as a signal tower for Rhine navigation, and to mark the entrance to the Prussian Rhineland. Burg Ehrenfels, the part of the customs house situated on the right bank of the Rhine has survived only as a ruin and adds an additional picturesque accent to the hillside below the Niederwald forest.

**Assmannshausen**, also situated on the right bank of the Rhine, derives its reputation from the red wine that documentary evidence attests has been produced there since 1470. In 1108, Archbishop Ruthard of Mainz gave the recently cleared vineyards to the abbey of Disibodenberg (Nahe), where Hildegard of Bingen later became abbess. One of its vineyards, the Höllenberg ("on the slope") is known since 1339. The Spätburgunder produced there is among the finest and most expensive red wines in Germany. The "Krone" is a well-known poet's inn (Freilingrath stayed there in 1844), and the "Anker" became famous after Bismarck visited it.

The approximately five-kilometre-long Bingen Gate is followed by the roughly 15-kilometer-long Bacharach valley, which extends as far as Oberwesel. Unlike the largely closed sides of the canyon, with the romantic castles of **Rheinstein** and **Reichenstein**, spurs and smaller V-shaped lateral valleys notch the slopes of the Bacharach valley. The picturesque valley of Morgenbachtal opens to the Rhine at Trechtlinghausen. This picturesque landscape was a favourite subject of the Düsseldorf school of painters in the first half of the 19th century. They were fascinated by the beauty of the steep cliffs in the valley's lower section and the wildly romantic forest below. The land on the left bank of the Rhine can be used for agriculture, as the lower terraces are up to 3 kilometres wide. The slopes on the right bank are planted with grapevines.

At **Lorch**, the River Wisper flows into the Rhine from a V-shaped valley floor, and is the only larger lateral valley opening into the Rhine valley until the river reaches Koblenz. This section has a number of islands, including the larger and smaller Lorcher Werth, the Bacharacher Werth and the Kauber Werth, as well as the rock on which the famous castle of Pfalzgrafenstein ("the palace in the Rhine") is situated. These islands and the remnants of riverside forest give this stretch of the river its special character. Lorch, like the towns of Kaub and Braubach, which lie farther downstream, is an example of a settlement extending into a lateral valley at a ninety-degree angle in a magnificent natural setting. Surrounded by vineyards, the town's architectural mix includes the high-Gothic parish church of St.

Martin, which is located high up on the slope and possesses a five-metre-high carved altar dating from 1483, and there is also the Renaissance façade of the Hilchenhaus. Built in 1546 by a general in the service of the Emperor Charles V, this is probably one of the most beautiful aristocratic seats on the Rhine.

**Bacharach** also has a very picturesque situation at the entrance to the Steeger valley. It lies at the centre of the so-called four-valley region (*Vier-Täler-Gebiet*) with the towns of Steeg, Oberdiebach, and Manubach, and the fortresses of Stahleck, Stahlberg and Fürstenberg. Despite destruction and demolition in the 17th and 19th centuries, the fortress of Bacharach, which was thoroughly restored between 1909-13, is one of the best preserved on the Middle Rhine. The town's many half-timbered houses make it one of the most beautiful settlements on the Middle Rhine. Among the structures that give Bacharach the typical appearance of a romantic Rhine valley town are the town gates, the fortress of Stahleck, rebuilt in the 20th century and now used as a youth hostel, the high-Gothic Werner chapel, begun sometime after 1287, (the year of the death of the child martyr Werner, allegedly the victim of a ritual murder by the Jews of Oberwesel), and the late-Romanesque parish church of St. Peter (see paintings by Carus, Rethel and others.)

**Kaub** became famous after Blücher crossed the Rhine there on New Year's Day 1814. The general's headquarters, a large, elegant Baroque structure, and the Blücher monument by Fritz Schaper (1894) are memorials to this event. The Elector Palatine's fortified customs house, the castle of Pfalzgrafenstein, with its many varieties of oriels and roof forms, is a very picturesque sight. The castle and its setting are often the subject of classical depictions of the "castle on the Rhine." Other picturesque elements are the fortified towers of the Kaub town wall on the right bank of the Rhine, and the terraced vineyards dating from the Middle Ages – now in danger of crumbling – which are crowned by the fortress of Gutenfels. Built on a rocky spur, Gutenfels is a remarkable structure: late-Romanesque in origin, it has a strikingly regular floor plan.

The Wilhelm Erb mine shaft in Kaub, begun in 1837, with many later extensions, is evidence of the slate quarrying done on the Middle Rhine since the Middle Ages. A large part of the installation is still intact, even though a great deal was dismantled after slate mining and working was discontinued in 1972. The Rhine mine on the opposite side of the river from Kaub is the only remaining working slate mine.



The valley landscape starts to change at Oberwesel. The transition from the softer clay-slates and *Bänderschiefer* to very hard sandstone varieties results in a series of narrows in the valley, such as those at Rosstein opposite Oberwesel, and the famous **Loreley**, south of St. Goarshausen, where the river narrows to only 130 metres from its normal width of 300-400 metres. At this point, the Middle Rhine reaches its greatest depth, 20 metres at medium water level. Deep potholes alternate with reefs that hinder navigation. They formerly presented major hazards for river traffic and were one of the historic sources of the Loreley legend. According to the courtly poet Marner (before 1270), the treasure horde of the Nibelungs lies here. The once famous echo that gave the cliff its name has disappeared, probably due to railroad building. The elaborate neo-Gothic tunnel arcades between Oberwesel and St. Goar, and Kaub and St. Goarshausen respectively, consciously borrow forms from late medieval castle architecture.

The plateau at the top of the Loreley cliff, which is a protected area, was redeveloped in 2000. Tourist facilities that intruded on the landscape were dismantled, and a visitors' centre for the Middle Rhine area built. The "Thingstead," built in the 1930's, is a venue for concerts that attract many visitors from outside the region.

The chief architectural features of the town of **Oberwesel**, first documented in 1216, are its two Gothic parish and collegiate churches, the medieval coparcenary castle of Schönburg, and the 16 towers (originally 21) of the almost completely preserved town wall. In spite of the damage suffered during the Thirty Years War and the War of the Palatine Succession in 1689, the construction of the Rhine Valley (*Rheintal*) road through the town in 1828-30, the great fire of 1850, and the building of the railroad in 1857, Oberwesel still has rows of houses, particularly in the side streets, that are among the most beautiful anywhere, not just in the Middle Rhine. The demolition of older buildings for the construction of a school centre and bus station could not be prevented, but the destruction was limited as far as possible. There was a successful campaign to prevent large-scale development of the Michelfeld, an area outside the western town wall, which would have detracted from the integrity of the overall townscape. Both of the large churches still possess their original furnishings, which is now rare, making them of great interest to art historians. This applies particularly to the Church of Our Lady with its famous golden altar and the choir screen that dates from the consecration of the choir in 1331.

**St. Goar**, the seat of the counts of Katzenelnbogen, later landgraves of Hesse, also had a canons' chapter. The church has been a Protestant parish church since the Reformation in 1527. The oldest section, a vast crypt with three naves, dates from the 11th century, and is the most beautiful crypt on the Rhine between Cologne and Speyer. The nave of the church was rebuilt in the mid-15th century and represents a high point of the architectural history of the Middle Rhine. The late medieval wall painting in the nave is one of the largest in the Middle Rhine.

**Burg Rheinfels**, one of the most magnificent fortress ruins on the Rhine, is important for the highly developed fortress-building techniques of the counts of Katzenelnbogen in the 14th century, and the castle and fortress construction methods employed by their 16th-18th century heirs, the Landgraves of Hessen-Kassel. Today's ruins still give an impression of the magnificent appearance this fortress must have had in the Middle Ages and Renaissance. Parts of the extensive fortifications, the earliest built in the 17th century, have been preserved, including the mine tunnels to the Gründelbachtal valley, which are accessible.

Opposite St. Goar is **St. Goarshausen** with the castle Neu-Katzenelnbogen ("**Katz**"). The view from the hillside on the right bank of the Rhine, past Burg Katz toward the Loreley is one of the "postcard views" of the Rhine valley. A few kilometres east of St. Goarshausen is the third Katzenelnbogen fortress, Burg Reichenberg, one of the most important fortified castles of its time, and still one of the most impressive today. The castle wall was originally 40 metres high, and even though the upper part of both round towers has collapsed, this part of the original construction, along with the castle hall, which may have been inspired by Crusader fortresses, is still impressive evidence of Western European military architecture in the Middle Ages.

About the mid-14th century, the fortress of Peterseck was built to secure the Elector of Trier's possessions on the right bank of the Rhine against the Counts of Katzenelnbogen. Later renamed Deuernburg, and known today as "**Maus**," it was one of the most advanced fortress constructions of its day. Like Burg Katz, it was restored in around 1900. Wellmich is the name of the town at the foot of the fortress. It was granted municipal rights in 1357, but this does not seem to have encouraged its growth. The west tower of the parish church

of St. Martin displays Romanesque forms, a phenomenon that appeared quite often in the Middle Rhine in the late Gothic and early Baroque periods.

**Bad Salzig** marks the beginning of the section of the Rhine characterized by the Boppard loops (*Bopparder Schlingen*), which stand out so clearly on maps of the river valley. Further downstream is Hirzenach with its Romanesque/early-Gothic church and the Baroque Benedictine provost's house. At the dividing line between layers of relatively soft and harder under-Devonian rock, between Boppard and Braubach, the river takes an impressive double bend between precipitous slopes incised into the main terrace. The steeply sloping Bopparder Hamm is the largest vineyard still in use in the Middle Rhine region. Opposite lies a smooth, gentle slope covered with orchards, that extends from Filsen to Osterspai. On the left side of the Rhine, the inner bend of the river with the town of Spay (two settlements that grew together) begins to widen after Bopparder Hamm. The same occurs on the right bank below Braubach. After passing Rhens, the Rhine flows in a broader, more open valley towards the Lahnstein Gate.

The town of **Boppard**, situated at the beginning of the horseshoe bend in the Rhine, grew out of a Roman way station built during the early years of the Empire. It was succeeded by a fort on the same site under the Emperor Valentinian, and its ruins are the best-preserved late Roman fortifications in Germany. The square outline of the Roman fortress composes the centre of the medieval town. An early Christian church was built on the foundations of the Roman baths, the site of the existing Collegiate Church of St. Severus, a late Romanesque galleried basilica with three naves, a choir closed on three sides and two towers flanking the choir. The inside of the church is characterized by rich architectural decoration highlighted by the most colourful and varied wall painting in the Middle Rhine. The crucifix over the high altar is one of the most important works of wood sculpture on the Rhine from the Hohenstaufen period. The Carmelite abbey is the most outstanding monastic building in this former free city of the Holy Roman Empire. Although its stained glass windows are now in New York and elsewhere, the late Gothic church still has rich furnishings (wall paintings, choir stalls, paintings, and Gothic and Renaissance tombs). The outward appearance of the town changed considerably in the 19th century, when numerous hotels and lavish private villas were built along the Rhine, giving Boppard the nickname of "Pensionopolis."

**Kamp-Bornhofen** on the right bank belonged to the former Boppard province of the Trier Electorate. While Kamp has a number of houses built by noble families, Bornhofen has a pilgrimage church, a Baroque Franciscan abbey (originally Capucin), and two castles, Burg Liebenstein and Burg Sterrenberg, that stand on a rocky ridge above the town and are known as the "**Feindliche Brüder**" (feuding brothers). They had fallen into ruins by the late 16th century but were partially restored in the 20th century.

**Osterspai** is characterized by half-timbered houses from the 16th-18th centuries, and the remnants of a moated castle built by the local lords. Its surviving elements include a 14th century castle keep and the late Romanesque double chapel of St. Peter. Liebeneck castle, restored in 1873 in the historicist style, occupies a strikingly beautiful position above the Rhine valley, setting its own particular accent on this cultural landscape.

**Ober** and **Niederspay**, which have now grown together, have more half-timbered houses than virtually any other place in the Middle Rhine. The waterfront opposite the nature conservation area known as "Auf der Schottel" is particularly beautiful. The neo-Gothic Catholic parish church quotes architectural features of the cathedral in Aachen, the coronation church of the German kings, presumably because of the proximity to the town of **Rhens**. Charles IV was elected King of the Germans there in 1346, as was Ruprecht von der Pfalz in 1400. The German kings were enthroned in the **Königsstuhl**, the meeting house of the electors, in Rhens after their election in Frankfurt and their coronation in Aachen. Despite the bombings of World War II, the town's streets still display a number of historically important, half-timbered houses, including the Old City Hall, one of the oldest and most beautiful on the Middle Rhine. The Königsstuhl itself, restored in 1842, was moved to its present location above the original site in 1929, and is an example of Prussian historical research and preservation of historical monuments.

Towering above the ninety-degree angle described by the town of Braubach, is one of the seats of the Counts of Katzenelnbogen, the fortress of Marksburg. Along with Pfalzgrafenstein, it is the only surviving medieval fortification in the Middle Rhine. This imposing fortress, whose chief elements date from the 13th and 14th centuries, is based on French and Italian models, and is considered the epitome of a medieval hilltop fortress. It was succeeded as the residence of the Landgraves of Hessen-Rheinfels by the Philippsburg, built in 1568 in the valley. The three high chimneys on the Berg Pankert hill above

Braubach are also a prominent feature of the landscape. Connected by a smoke channel to a former lead and silverworks, they testify to an early initiative to keep harmful emissions away from this cultural landscape.

From the Lahnstein Gate onwards, the Upper Middle Rhine valley takes the form of a funnel leading into the Middle Rhine (Neuwied) Basin. The slopes of the left bank near Koblenz-Stolzenfels are quite steep, while those on the right bank, on either side of the mouth of the river Lahn, fall much more gently toward the river. The hills of the Karthause district of Koblenz, are the last foothills of the left-bank heights before the mouth of the Mosel at "Deutsche Eck," where the fortress of Ehrenbreitstein, called the "Gibraltar of the North," faces it on the right bank.

All four Rhineland electors possessed strongholds within a short distance of each other in this area. **Stolzenfels** castle, dating from the middle of the 13th century, originally belonged to the Elector of Trier. The fortress of Lahneck above (Ober-) Lahnstein was owned by the Elector of Mainz, the Marksburg was a fief of the Elector Palatine, and Rehn belonged to Cologne. It is therefore not surprising that much imperial history was written here in the late Middle Ages. In 1835, the Crown Prince and later King of Prussia, Friedrich Wilhelm IV, had Schloss Stolzenfels restored to commemorate this era. Plans by Schinkel were used for the project, but the original structures were carefully integrated. The neo-Gothic additions, together with the medieval structures, made Stolzenfels into one of the most significant secular buildings of German Romanticism. The furnishings, unchanged since the castle was restored, are a monument to the style of home décor and the intellectual attitudes of the mid-19th century.

Originally two villages, **Lahnstein** changed considerably after 1860 with the arrival of the railway. The villages merged and grew, and industry and trade flourished. The former parish church of St. John the Baptist, which stands at the mouth of the river Lahn, where its mighty west tower dominates the landscape for miles around, bears witness to the town's history. A flat-roofed basilica, whose arches rest on pillars, it is the oldest galleried church on the Middle Rhine and was probably influenced by older French churches. The Romanesque Salhof, which was the property of the Archbishopric of Mainz, is one of the earliest unfortified 12th century dwellings on the Rhine. The late medieval fortress of Martinsburg, with its Baroque additions, and the fortress in Boppard, are examples of the

town forts of the Rhineland electors. With its severely symmetrical floor plan, the fortress of **Lahnneck**, restored in the English neo-Gothic style in 1854, preserves the original face masonry wall dating from the late Hohenstaufen period. Among the 14th century chapels in the area is the Chapel of Our Lady in Oberlahnstein, where the German Electors deposed King Wenzel in 1399 (also called the Wenzel chapel).

In the devastation of World War II, Koblenz was able to preserve only parts of its historic buildings, but the surviving examples still dominate the view of the city from the Rhine and Mosel rivers. These buildings in the old town include the Romanesque basilicas of St. Kastor, Our Lady, and St. Florin; the (modified) Balduin bridge over the Mosel, which is a rare example of a major bridge from the 14th century; the former castle of the elector; and the Neues Schloss (new castle), the first and most important early Classicistic building in the Rhineland, built according to plans by Michel d'Ixnard and Anton Francois Peyre the younger.

Prussian rule saw the construction of the Rhine parks on the riverfront, from Oberwerth to Deutsche Eck, based on plans by Lenné; and the Prussian government building, which made references to the regional architecture of previous centuries with its south German Baroque and Romanesque-Hohenstaufen style. The confluence of the Mosel and the Rhine, which marks the northern limit of the cultural landscape, is dominated by the massive Kaiser Wilhelm monument, erected by the Rhine Province in 1897. It was destroyed in 1945, and rebuilt at the beginning of the 1990's. Its effect is strongest when viewed from the opposite side of the river, from the Prussian fortress of Ehrenbreitstein. Almost completely intact, this fort was built as part of extensive general fortifications for Koblenz, and is considered one of the chief examples of German architecture of the first half of the 19th century. At the foot of the fortress is the Dikasterion (court house), and the Krummstall and Marstall stables by Balthasar Neumann and Johann Seitz, a group of buildings in the South Frankish Baroque style that testify to the role of Ehrenbreitstein as a princely residence in the 17th and 18th centuries.

## **b) History and development**

### **Geology of the Middle Rhine Valley**

The landscape of the Middle Rhine and its utilization by man are rooted in the geological history of this area.

Geological structures determine the course of the river in a northwesterly direction through the Rhenish Slate Mountains. This rock retains heat, and the position of the hillsides favours wine-growing. Slate roofs are typical of the towns along the Rhine. There is mining for various minerals and slate, and mineral water rises through fissures in the earth's crust.

The geological development of this landscape began more than 400 million years ago in the Devonian period.

Sand was deposited near the coast of a shallow sea located in the shelf area between two crustal plates. With higher pressure and temperatures, the sand turned into sandstone and harder quartzites, forming the high ridges of the slate mountains. The finer-grained deposits farther away from the coast turned into shale.

The thrusting forces that shaped mountains at the end of the Carboniferous period, spread in shovel-shaped paths in a southeasterly direction, and the resulting stacking, folding, and scaling produced a succession of huge loads of sediment that also contained volcanites.

After the Cretaceous period at the end of the Mesozoic era, the dry land that emerged underwent profound weathering under tropical conditions.

At the beginning of the Tertiary period, 65 million years ago, the pressure of the African plate on the European continent allowed the broadly exposed slate block mountains to rise again. Countermovement caused the Neuwied basin and the area north of the remaining mountains to sink. As the incline became steeper, and with the Neuwied basin as the closest erosion basis, the river began downcutting backwards through the uplifted mountains, and over a period of approximately 10 million years, created the antecedent gorge of the Upper Middle Rhine with its storied structure. The effects of a succession of

cold and warm periods on older geological structures during the last 2.5 million years (Pleistocene, ice age) shaped today's landscape.

Three early tertiary terraces (dating back to the Pliocene era) form peneplains at about 300 metres above sea level. Underneath there can be as many as six younger main terraces, followed, at under 200 metres above sea level, by the upper, middle, and lower middle terraces, as well as the older and younger lower terraces and the flood plain of the Rhine at 80 metres above sea level.

### **Prehistory and early history**

Evidence of human settlement on the terraces of the Middle Rhine Valley since the early ice age (Hunsrück-Eifel culture) is found in individual graves and Megalithic burial grounds in the forests around Koblenz and Boppard, and the Breyer forest, as well as the ring walls on the Dommelsberg hill near Koblenz and the Hüenberg near St. Goarshausen. The Celtic grave pillar in Pfalzfeld and the Prince's Grave in Waldalgesheim, both on the western edge of the Middle Rhine area, demonstrate that this region had entered the sphere of influence of the high cultures of the Mediterranean by the 4th century B.C. The north-south connection between the mouths of the Nahe and Mosel rivers, which runs along the catchment divide parallel to the Rhine, goes back to pre-Roman times. Large stretches of today's A61 motorway follow a road built by the Romans.

The Roman hegemony that was established in the Middle Rhine area during the first century B.C. lasted for about 500 years. The military road on the left bank of the Rhine was improved to serve as an important long-distance connection between the provincial towns of Mainz and Cologne. Bingen (Bingium) and Koblenz (Confluentes) were the sites of early imperial fortresses. Oberwesel (Vosolvia) had a toll station (mansio). The Rhine shipping route and the roads alongside it composed the backbone of Roman rule on the Rhine. Permanent bridges were built as early as the first century in Koblenz and Boppard (Bodobriga). They had strong walls and round towers for defence, and major parts of them still exist, as they continued to be used in the Middle Ages. Evidence of continuous settlement since Roman times, throughout the years of the Germanic migrations and the Frankish era is found not only in Gallo-Roman place names, but also in the relics of early Christianity. A church with a bema and a baptismal font, which has been preserved and is



still accessible, was probably built into the ruins of the baths of the Roman fortress in Boppard as early the 5th century.

Grave inscriptions in Boppard from the 4th-5th and 8th centuries, including those in the church of St. Severus and the Carmelite church, confirm the continued existence of a Roman ethnic group alongside Frankish immigrants. The oldest oratory in the Church of Our Lady in Koblenz dates from late Roman times, as does the gravestone of a priest called Eleutherius in the Basilica of St. Martin in Bingen. There is documentary evidence of an ordained monk from the Auvergne called Goar who settled there in the mid-6th century and served as pastor to a small flock of river pilots, fishermen and wine growers, and who was venerated as a saint soon after his death. In 765, King Pippin gave the church founded by Goar to the abbey at Prüm, which founded a chapter of canons. Pilgrimages to the grave of St. Goar were popular until the end of the Middle Ages. (The cover of his sarcophagus can be seen today in the neo-Gothic parish church of St. Goar).

### **Early and High Middle Ages**

The Roman settlements, especially the fortified towns of the Rhine valley were taken over by the Frankish kings and made into crown estates or made the property of the exchequer. The area from Bingen downstream to Koblenz, including Bacharach, Oberwesel, St. Goar, and Boppard; and beyond that, to Sinzig and Remagen, was almost completely crown property until well into the Carolingian era. In the 8th century, the state began divesting itself of this property, a process that lasted until the beginning of the 14th century. The beneficiaries of these gifts included the abbots of Prüm and Trier, St. Maximin, and the archbishops of Cologne, Trier, Mainz and Magdeburg. As bailiffs of the abbey of Prüm, the Counts of Katzenelnbogen were able to establish their own area of hegemony around St. Goar and Rheinfels, which passed by inheritance to the Landgraves of Hesse in 1479.

The partition of Charlemagne's empire by his grandsons in 842, which was planned in St. Kastor in Koblenz, gave the left bank of the Rhine between Bacharach and Koblenz to the Middle Kingdom. It was not until 925 that Lorraine was finally united with the East Frankish, German kingdom.

The Rhine, the "Vis maxima regni" (Otto von Freising) remained a heartland of royal power until the Hohenstaufen era. In 1138, the Hohenstaufen Konrad III was elected as German king.

Outstanding evidence of the later Salian – and Hohenstaufen eras – is found in the crypts of the collegiate church of St. Goar, dating from the late 11th century; the nave of the church in Hirzenach; a provost's house in the Benedictine abbey of Siegburg from the beginning of the 12th century; and from the same period, the west section and nave of the collegiate church of St. Florin in Koblenz; the two-towered façade of the church of the St. Kastor cathedral chapter in Koblenz, whose nave and east parts were built in the mid-12th or 13th centuries. The former parish church of St. John the Baptist in Niederlahnstein was the model for the late Romanesque parish churches of Our Lady in Koblenz and St. Peter in Bacharach, as well as the collegiate church of St. Severus in Boppard. The four-zoned scheme of elevation of the Bacharach church can be traced via the cathedral of Limburg back to the cathedral of Laon, and the movement inherent in this structure is a prime example of the liking for decoration in the late phase of Romanesque architecture. The highly original vaulting of the Romanesque architecture in Boppard had no imitators.

### **Late Middle Ages**

In the Middle Rhine area, the late Middle Ages are characterized by territorial fragmentation. Along with the bishop-electors of Cologne, Mainz and Trier; the counts palatine, starting with Hermann von Stahleck in 1142, also established themselves along the Middle Rhine in the areas around Bacharach and Kaub. Most of the approximately 40 fortresses in the area between Bingen and Koblenz were erected as competing symbols of power (the castles of "Katz" and "Maus"), but also as customs stations on the central trade route of the Rhine. Many outstanding examples of medieval military architecture were built, influenced in part by structures in France, Italy, and the Crusader states. The counts of Katzenelnbogen especially distinguished themselves as builders (Marksburg, Rheinfels, Reichenberg, Neukatzenelnbogen).

One memorable 14th century ruler was the elector and archbishop, Balduin of Trier, a member of the House of Luxembourg, whose brother, King Henry VII, mortgaged the imperial free cities of Boppard and Oberwesel to him. These were two of the approximately 20 towns and settlements with lesser municipal rights that were founded in the Rhine valley

along the riverside between Bingen and Rudesheim in the 13th and 14th centuries. Almost all of these towns still have more or less extensive remains of town fortifications. Boppard and Oberwesel resisted integration into a modern territorial state for a long time. Boppard fought for its municipal freedom in 1327 and 1497. The gravestone in the Carmelite church in Boppard of the knight Sifrit von Schwalbach, killed in 1497, is a popular type, that of the fearless, swaggering warrior, and testifies to the struggles for municipal liberty that flared up for the last time in the Peasant War of 1525. The town fortress that Balduin built on the Rhine at Boppard in 1340, is a monument bearing witness to repression during the struggles for municipal independence.

As the territories of all four Rhine electors lay very close together on the Middle Rhine, the towns along the river were the sites of numerous significant events in the history of the empire, such as electoral assemblies, the elections of kings and royal weddings. King Ludwig the Bavarian lived temporarily in Bacharach. The Volto Santo painting in the Church of St. Peter demonstrates Ludwig's admiration for the original in Lucca, and is evidence of the trade between imperial possessions in Italy and the Central Rhine.

Bacharach was the centre of the Rhine wine trade in the late Middle Ages. Wine-growing along the Rhine, documented since Roman times, had previously been practiced only on the lower slopes, but it expanded considerably, beginning in the 10th century. The dry-stone wall terraces that still dominate the appearance of the area were built at that time. The products of Middle Rhine vineyards were exported to England and Scandinavia as "Bacharach" wines. Around 1600, approximately 3,000 hectares of vineyards must have been under cultivation in the Middle Rhine region, about five times as much as today. A major decline in viticulture began in the Middle Rhine area during the Thirty Years War, which resulted in the land being used partly for orchards and partly for coppice forest.

Coppice forests now exist only in remnants, but they were once typical of the valley and played an important economic role. In cycles of 3-15 years, budding oak, beech, and lime trees were cut down and fed to pigs in order to fatten them, burned as firewood or a powder was made from the bark and used in tanning.

There is also documentary evidence of economically significant mining in the Middle Rhine region since the late Middle Ages. The slate quarry in Kaub is mentioned in 1355, as is the silverworks in Braubach.

The Rhine electors' coinage union of 1385 made the Rhenish gold florin into a reserve currency and also demonstrated the economic power of the region in the late Middle Ages.

The 14th-16th centuries represent the golden age of art in the Middle Rhine. The Werner chapel above Bacharach is one of the most perfect and noble creations of the Rhenish Gothic style. Begun soon after 1287, but not completed until 1437, its master builders must have known the cathedrals of Strasbourg and Cologne. The ruins have exerted a lasting influence on the image of the romantic Rhine.

Outstanding Gothic buildings from the 14th and 15th centuries are the basilica construction of the Church of Our Lady in Oberwesel and the Carmelite church in Boppard from 1318, which was enlarged in 1439 with the addition of a high aisle, making it into an aisled hall church. The church of St. Martin in Oberwesel was enlarged in a similar way in the 15th century with the addition of a low aisle. The irregular aisled hall in Steeg, the hall church with two aisles in Oberdiebach, and the basilica in Oberheimbach are other important Gothic buildings on the Middle Rhine. The parish church of St. Martin in Lorch was enlarged with the addition of the four-bayed main nave at the beginning of the 14th century, to which the north aisle was added at the end of the century. In Koblenz, the collegiate church of St. Martin acquired its polygonal apse in the 14th century, and the parish church of Our Lady its choir composed of three bays, an elegant structure that is significant in terms of both town development and art history. Like St. Kastor, Our Lady also acquired elaborate star-vaulting.

The most important ecclesiastical building of the 15th century in the Middle Rhine is the former collegiate church of St. Goar. The aisles, divided into two levels by galleries, along with the star-vaulting and the unusually well preserved wall paintings contribute to the picturesque overall impression.

Late Gothic wall painting is found in many places on the Middle Rhine, including the Church of Our Lady in Oberwesel, in Steeg, in the Carmelite church in Boppard, and in the church of St. Peter in Spay.

The "Golden Altar" in the Church of Our Lady in Oberwesel, which dates from the first third of the 14th century, is one of the rarest and most valuable shrine retables in Germany. Especially charming is the 150-year younger, 15-metre high altar of the church in Lorch, with its extensive and delicate carvings, intricately structured pinnacles, and decorative details. Altars and panels from the 15th and early 16th centuries are found in Spay, Boppard, St. Goar, Koblenz, and Oberwesel. There are many outstanding examples of the sculpture from the second half of the 15th century all along the Middle Rhine.

Artistic influences from the Upper Rhine (Strasbourg) and the Lower Rhine (Cologne) meet in the Middle Rhine, and as of the 15th century, the influence of Mainz (Hans Backoffen, Peter Schro) was added. The epitaph for Margarete von Eltz in the Carmelite church in Boppard was made by Loy Hering of Eichstätt in 1519, after a copperplate engraving by Albrecht Dürer. The memorial tablet for Johann von Eltz in the same church, and the tomb of Coryn von Nassau in Wellmich betray the hand of the master of the Metzenhausen tomb in Trier (Hieronymus sculptor).

### **Early Modern Era**

The Reformation came to the Katzenelnbogen lands in 1527 through Landgrave Philipp the Magnanimous, and to the Palatine areas in 1545 through the Elector Friedrich II. A Hessian collateral line rebuilt the fortresses of Rheinfels and Philippsburg in Braubach, transforming them into Renaissance palaces, in about 1570. The richly carved galleries of the former parish church of St. Barbara in Braubach and the Renaissance tomb of the builder of the church, Philipp II of Hessen Rheinfels and his wife Anna-Elisabeth von Bayern, in St. Goar were built at around the same time (Wilhelm Verneuken of Kalkar, the master of the Cologne City Hall foyer). Only the outbuildings remain of the palace of Philippsburg in Koblenz-Ehrenbreitstein, erected at the beginning of the 17th century.

Since the 17th century, the Middle Rhine has been the theatre of both military and unarmed conflict between Germany and France. After the devastation of the Thirty Years War – when Wenzel Holler discovered the picturesque qualities of the Rhine valley! – the War of

the Palatine Succession (1688-92) caused extensive destruction of fortresses and parts of town fortifications. Koblenz was destroyed to a large extent. Evidence of the reconstruction work of the 18th century can still be seen in the city centre. French architects (Salins de Montfort d'Ixnard, Peyre, Mangain) played a decisive role in the planning and building of the new palace in Koblenz, which the Elector of Trier placed on the riverfront, consciously incorporating the Rhine landscape. Begun in 1779, it was the last monumental palace built by the Ancien Regime in Germany, and at the same time, the first significant early Classicist building in the Rhineland.

As a result of the wars that followed the French Revolution, the left bank of the Rhine became part of the French Republic for a time, and then of the French Empire. Starting in 1801, the Prefect Lezay-Marnesia, who resided in Koblenz, had the Roman road on the left bank repaired. It had fallen into disrepair and was no longer usable. Lezay-Marnesia also encouraged fruit growing on the Middle Rhine (for example, cherry growing in Bad Salzig, on the Norman model), which compensated to some extent for the decline in viticulture at the end of the 18th century.

### **19th century**

Blücher's crossing of the Rhine at Kaub on New Year's Day 1814 marked the end of French hegemony and the beginning of Prussian rule on the Middle Rhine. The new regime was secured through the building of a major fortress at Koblenz, which began in 1817. It included the still existing fortifications of Ehrenbreitstein, Asterstein, Grossfürst Konstantin and Kaiser Franz. Transport and trade were encouraged by ongoing construction of the Rhine road from Bingen to Koblenz (milestones at Koblenz, Boppard, Oberwesel), the widening of the Rhine shipping channel (monument below Bingerbrück in memory of work done under Friedrich Wilhelm III), the abolition of tolls on large stretches of the Rhine, and the introduction of steam navigation in the 1820's, as well as the Rhine tourism that had been propagated particularly by English travellers. After the Napoleonic wars, the Middle Rhine was also consciously promoted as a "German" landscape ("The Rhine – Germany's river, not Germany's border), a sentiment which became even stronger during the Rhine crisis of 1840.

The renovation of fortress ruins in the Romantic style by members of the Prussian royal house, the reconstruction of historic monuments such as the Königsstuhl at Rhens, and the

beginnings of monument conservation bear witness to a new regard for the Middle Ages that had a decisive effect on the cultural landscape. Monument preservation efforts were supported by the Deutsche Burgenvereinigung (German Fortress Association), founded in 1899, with headquarters in the fortress of Marksburg above Braubach, which had been restored by the association's president, Bodo Ebhard; as well as the Rheinischer Verein für Denkmalpflege und Landschaftsschutz (Rhenish Association for Monument Preservation and Landscape Conservation), founded largely by the efforts of the Rhenish provincial curator, Paul Clemen in 1906. The association bought the fortresses of Stahlberg and Stahleck with a view to their preservation.

In addition to the Prussian fortresses of Rheinstein, Stolzenfels and Sooneck (renovation projects planned for Rheinfels and Fürstenberg by members of the Hohenzollern and Oranien families did not take place), restoration work was also undertaken by industrialists, such as fortress Reichenstein by steel magnate Puricelli, starting in 1899, and the Heimburg by Hugo Stinnes, also shortly before 1900.

The excess of nationalistic fervour in Germany under Wilhelm I led to the construction of the National Monument in Niederwald at the southern end of the Middle Rhine and the Rhenish Provincial Monument to the emperor at the Deutsche Eck in Koblenz at the northern end.

In addition to roads and rivers, the railway was also becoming a major transport option in the mid-19th century. The left-bank stretch of the Prussian Rhine railway between Koblenz and Bingerbrück was opened between 1856-69, and the right-bank Nassau line between Rüdesheim and Oberlahnstein in 1862. Railway construction sometimes involved considerable damage to the structural fabric of medieval towns such as Oberwesel and Bacharach. At the same time, the builders attempted to match the genius loci of the Rhine valley with tunnel constructions whose facades were adorned with battlements and towers reminiscent of the neighbouring medieval fortresses. A number of important late Classicistic railway stations, such as those in Rüdesheim and Oberwesel, as well as the monumental neo-Baroque main station in Koblenz 1899/1902, are important relics of transport history.

Like the late Middle Ages, the late 19th century made decisive contributions to the appearance of the Rhine valley through villa and hotel construction.

### **20th century**

The 20th century is characterized by major structural changes, such as the decline in the traditional winemaking sector, which now uses only a quarter of the vineyard area it did at the beginning of the 20th century, despite extensive re-parcelling of the actual growing land. Large areas of fallow land are typically found on former vineyard terraces. (The development of the landscape is described in detail in Sections 2ab and 5.) Mining, especially slate quarrying, has all but ceased. Freight traffic on the Rhine, which produced such important structures as the grain mill in Niederlahnstein, also underwent major change during the last century. Harbour facilities, like the crane in St. Goarshausen, have lost their usefulness with increasing concentration of freight traffic on a few harbours, particularly container installations, and these structures are now classified as industrial monuments.

Today, the most important economic sector is tourism, which has benefited from the expansion of both federal highways along the Rhine during the last five decades. Bypasses have diverted traffic from the historic centres of towns like Bacharach, Oberwesel, Boppard, Lorch and Lahnstein.

The objective of the Rhine Valley Protection Ordinances of 1953 and 1978 is to preserve the cultural landscape, which is the primary resource for the people of this region. On the whole, these efforts have been successful, even though some construction that is inconsistent with the landscape could not be avoided. The classical stretch of the Middle Rhine making up the "Loreley Valley" is still one German landscape that the Federal Government frequently shows off to official visitors from abroad.

Since the 1990's, there has been greater effort to preserve and further careful development of the cultural landscape.

The founding of an association called the Middle Rhine Valley Forum in October 1997 created an instrument that all communities, associations, organizations, and citizens in the region can use in order to preserve this living landscape, which the Federal Republic of



Germany has placed on its list of proposals for World Heritage status because of its natural, cultural, aesthetic, historic and associative value.

### **c) Form and date of the most recent records of the cultural landscape**

The brief list below constitutes a selection of the latest reference works devoted to the cultural landscape being nominated for inscription in the World Heritage List. In each case the main slant of the publication has been indicated.

#### **The Rhine valley in general**

Horst J. Tümmers, *Der Rhein, ein europäischer Fluss und seine Geschichte* (The Rhine, a European river and its history), second revised and updated edition, Munich 1999.

#### **Ongoing efforts to conserve and promote sustainable development in the Middle Rhine Valley**

Rheinischer Verein für Denkmalpflege und Landschaftsschutz (ed.), *Das Rheintal, Schutz und Entwicklung* (The Rhine Valley, Protection and Development). RVDL Rhine Conference 1997 in Mainz, documentation, Cologne 1999.

#### **The Romantic Rhine**

R. W. Gassen, B. Holeczeck (ed.), *Mythos Rhein* (Myths of the Rhine), exhibition catalogue, 4 volumes, Ludwigshafen 1992.

#### **The landscape and the forces that shaped it**

Bruno P. Kremer, *Der Mittelrhein* (The Middle Rhine) (Rheinische Landschaften, vol. 26), Cologne 1985.

#### **Travel guides with an emphasis on art history**

Werner Schäfke, *Der Rhein von Mainz bis Cologne* (The Rhine from Mainz to Cologne) (DuMont art guide), Cologne 1982.

W. Brönnner, F. J. Heyen, G. Fürstin zu Sayn-Wittgenstein-Sayn (ed.), *Wegweiser Mittelrhein* (Middle Rhine Travel Guide), 11 issues on the following topics: prehistory and early history, the Roman era, the Romanesque period, the late Middle Ages, abbeys and

collegiate churches, the late Renaissance and Baroque, industry and technology, museums, historical relics. Koblenz 1998 ff.

### **Planned publications**

Documentation on the cultural landscape of the Upper Middle Rhine Valley is due to be published by the Rhineland-Palatinate Department of Monument Conservation, Mainz 2000.

In both Rhineland-Palatinate and Hesse, cultural monuments have been extensively and uniformly catalogued using the system set out in the "*Denkmaltopographie Bundesrepublik Deutschland*" (Topography of monuments in the Federal Republic of Germany). A survey of the county of Rheingau-Taunus, which also includes Rüdesheim and Lorch, is in preparation. In addition, a series presenting an inventory of monuments belonging to the artistic heritage of the Rhineland-Palatinate, called the *Reihe Kunstdenkmälerinventare*, begun by Paul Clemen, is being continued and consolidated. The latest two volumes discuss two towns in the Middle Rhine Valley: Boppard (2 parts, 1988) und Oberwesel (2 parts, 1998). A third volume on St. Goar is in preparation.

The bibliography (Annex VI) lists a variety of publications on nature and landscape protection and conservation, some of which are internal government memoranda, such as the publications by the International Commission for the Protection of the Rhine (*Internationale Kommission für den Schutz des Rheins*) (IKSR).

### **d) Present state of conservation**

In contrast to the Upper and Lower Rhine, the Middle Rhine Valley has retained its typical overall appearance. The most valuable individual elements of the cultural landscape have been permanently protected and conserved through designation or inscription of numerous nature preserves and FFH (fauna/flora/habitat) areas along the entire course of the river, and the slopes flanking it, and by means of long-term monument conservation programs, such as the "Fortress Concept of the Rhineland-Palatinate State Office for Monument Conservation." The counties bordering on the Middle Rhine have placed the emphasis on monument conservation for many years, and a disproportionately large share of budgeted

funds for monument preservation has been invested in private, ecclesiastical and municipal property. In the Rhineland-Palatinate, a special program provided additional funds for these purposes in 2000. The activities of traditional associations concerned with the Middle Rhine, together with the actions of government offices and licensing authorities have also made highly responsible contributions toward preventing development for tourism that would have had a detrimental effect on the landscape, such as excessively large holiday residence projects.

The state of the environment, of natural sites and of the landscape as a whole is indicated in experts' reviews, management and development plans for nature conservation areas, descriptions in FFH registration forms, landscape plans, the landscape framework plan, etc.

### **e) Policies and programmes related to the presentation and promotion of the property**

The coalition agreement of the Rhineland-Palatinate government and State Development Programme III have made the conservation and sustainable development of the Middle Rhine Valley and its natural landscape, as well as its recognition as a UNESCO World Heritage Site, an express objective of federal state policy. Several decisions of the Council of Ministers of the federal state of Rhineland-Palatinate have documented the significance of the Middle Rhine Valley for federal state policy, and subsequently created the necessary organizational and financial framework conditions. One decision of far-reaching importance was to provide a total of approximately DM 50 billion for the Middle Rhine Valley region in the next 5-10 years, beginning with the two-year budget for the period 2000-2001. The federal state of Hesse will allocate similar funding.

At the regional level, the political committees for the planning groups Middle Rhine-Westewald and Rheinhessen-Nahe, and the region of South Hesse have taken on the task of implementing this process within the framework of regional planning.

The towns and municipalities in the Middle Rhine Valley have declared their support for sustainable development of the cultural landscape of the region, based on the Rhine Valley

Charter and an extensive intercommunity planning analysis authorized by them, thus supporting efforts to have the region listed as a UNESCO World Heritage property.

Local Agenda 21 (LA 21) processes have already begun, or are being initiated in many municipalities of the Middle Rhine Valley. A regional agenda process would be helpful in strengthening regional identity and stressing the need for coordinated action.

## **4. Management of the cultural landscape**

### **a/b) Ownership and legal status**

The nominated cultural landscape comprises some 60 towns and communities or suburbs and parts of communities. The lists of monuments for the area in question include an unusually high number of individual monuments. Most of the cultural monuments in the various settlements and in most cases modest vineyards and former vineyards as well as those on land used for other agricultural purposes have always been privately owned. The same applies to the majority of castles so characteristic of the landscape, like Lahneck, Liebenstein, Maus and Rheinstein, to name but a few. The electors' residence in Boppard and the fortress of Rheinfels are owned by the local authorities; the Marksburg belongs to the *Deutsche Burgenvereinigung* (German Castle Association); and the ruins of Stahlberg Castle belong to the Rhenish Association for Monument Conservation and Landscape Protection, which also owns the expanded Stahleck Castle used by the German Youth Hostel Association. The federal state of Rhineland-Palatinate owns the following forts and castles: Stolzenfels, Sooneck, Sterrenberg and Pfalzgrafenstein, as well as the fortifications at Ehrenbreitstein and the royal seat near Rhens. The federal state of Hesse owns the ruins of Ehrenfels Castle and the Niederwald hunting seat. The Catholic Church (more specifically the bishoprics of Mainz, Trier and Limburg) owns the main ecclesiastical buildings, and the Protestant State Churches of Rhineland and Hesse and Nassau also play an important role, including where the conservation of these monuments is concerned. The Federal Republic of Germany owns the Rhine as a federal waterway.

For a list of the relevant legal bases (laws, ordinances, etc.) see Annex III.

### c) **Protective measures and means of implementing them**

The enactment of the existing conventions, guidelines, laws, ordinances, etc. governing monument preservation and nature conservation by the administrative authorities – whether as watchdog bodies or acting in their capacity as experts – of both the federal states involved, Hesse and Rhineland-Palatinate, is secure. The existing conservation and development plans are being implemented.

The outstanding cultural monuments between Bingen and Koblenz are protected by the Hague Convention. The 5 September 1986 version of the Hesse law on monument protection (the *Denkmalschutzgesetz* or Monument Protection Act) provisionally protects all cultural monuments in Hesse, including in Hesse's section of the Middle Rhine region. In Rhineland-Palatinate, where so far all cultural monuments have been – and still are – protected by the Monument Protection and Conservation Act of 23 March 1978, most recently amended on 5 October 1990, by an administrative act or under the provisions of a legal ordinance, the revision of the law in question will lead to the provisional protection of all cultural monuments.

The objectives of the Rhine Valley Charter (*Rheintalcharta*) of November 1997 include the conservation, management and careful further development of natural and cultural heritage and of the unique cultural landscape of the Rhine Valley, which makes them so valuable. By signing up to this Charter, the vast majority of communities in the Middle Rhine region have committed themselves to continue guaranteeing the authenticity and integrity of the cultural landscape.

In the federal states of the Federal Republic of Germany, European agreements such as the "Bern Convention" on the preservation of European wild plants and animals and their natural habitats are being steadily implemented. The enactment of the *Bundesnaturschutzgesetz* (Federal Nature Conservation Act) on 21 September 1998, the Hesse Nature Conservation Act of 16 April 1996 and the law governing the preservation of natural resources in Rhineland-Palatinate dated 5 February 1979 safeguards, amongst other things, the protection of the natural resources of the Middle Rhine Valley.

The laws, provisions, etc., concerning monument protection and nature conservation and the legal bases concerned with planning at the regional and *Land* levels under European

law, German federal law, federal state law and legislation governing local authority planning and also cross-border arrangements between the federal states of Hesse and Rhineland-Palatinate are listed and, in some cases, reproduced, in Annex III.

**The Rhineland-Palatinate's Regional Development Programme III** identifies the Middle Rhine Valley between Bingen and Koblenz as a main focus of the protection of open spaces. In this context, Rhineland-Palatinate believes that it is particularly important to ensure that settlements are integrated into the landscape in a coherent manner, to the benefit of the environment and the protection of the area's resources as well as for the development of local recreational facilities. This view is set out in greater detail in the regional plans by designating green belts in outlying areas and green spaces within built-up areas. Within these open spaces only plans which do not undermine the aforementioned functions or which are inevitable and in the greater public interest may be approved. Furthermore, in the opinion of the federal state, Regional Development Programme III designates target areas for the protection of certain species and biotopes as core areas and cross-linking intersections within the Middle Rhine Valley. The regional development plans specify that these areas are priority spaces with respect to species and biotope protection.

The **Hesse Regional Development Programme 2000** designates the valley slopes in the lower Rheingau region as a preferential agricultural area, the river valleys as intersections between biotopes and higher ground regions as preferential forestry and ecological areas. The South Hesse Regional Development Plan 2000 specifies these objectives and expressly stipulates the preservation of the cultural landscape.

According to Article 1, para. 4 of the Town and Country Planning Code (*Baugesetzbuch*), these regional planning objectives must be complied with by the relevant local authority departments when developments are planned. Furthermore, other official agencies must refer to these objectives as guidelines when making plans or implementing measures that will impact on the way in which available space is used. This is set out in Article 4, para. 1 of the Regional Planning Act (*Raumordnungsgesetz*) and in numerous clauses governing regional development in the relevant specialized planning laws.

#### d) Agencies with management authority

The federal states of Hesse and Rhineland-Palatinate have a fully-fledged three-tiered management structure. The local agencies with management authority include the following:

- **Hesse Ministry of Economic Affairs, Transport and Regional Development** (the highest regional planning authority)
- **Hesse Ministry for the Environment, Agriculture and Forestry** (the highest nature conservation authority)
- **Hesse Ministry of Arts and Sciences** (the highest monument conservation authority).
- **Rhineland-Palatinate Ministry of the Environment and Forestry** (the highest authority for the preservation of natural resources)
- **Rhineland-Palatinate Ministry of Culture, Youth, Family and Women's Affairs** (the highest monument conservation authority)
- **Rhineland-Palatinate Ministry of Economic Affairs, Transport, Agriculture and Viticulture**
- **Rhineland-Palatinate Ministry of the Interior and Sport** (the highest regional planning authority).

At the middle level in the federal state hierarchy:

- **Darmstadt Regional Commission or "*Regierungspräsidium*"** (as the highest nature conservation authority);
- **Structural and Approval Directorate North** in Koblenz and **Structural and Approval Directorate South** in Neustadt along the wine route as, respectively, the higher regional planning authority and the higher authority responsible for the preservation of natural resources
- **Supervisory and Services Directorate** in Trier as the higher authority responsible for monument conservation.

For regional planning in Hesse:

- **South Hesse Regional Assembly.**

For regional planning in Rhineland-Palatinate:

- the planning cooperatives **Middle Rhine-Westerwald** and **Rheinhessen-Nahe.**

At local authority level:

*Hesse:*

**Rheingau-Taunus County Council – County Committee (*Kreisausschuss*)** – as the state administration's lower nature conservation authority and the agencies responsible for regional development, the preservation of natural resources and agriculture

*Rhineland-Palatinate:*

County councils as the lower regional planning authority, the lower authority responsible for the preservation of natural resources and the lower monument conservation authority; and the town council of the autonomous (*kreisfreie*) city of Koblenz as the lower authority responsible for preserving natural resources and the lower monument conservation authority.

Also at local authority level: various cooperatives of associations, towns and local communities, as appropriate.

### **Specialized agencies**

*Hesse*

**Hesse Monument Conservation Authority in Wiesbaden**

*Rhineland-Palatinate*

**Rhineland-Palatinate Monument Conservation Authority** in Mainz, the **Regional Authority for Environmental Protection and Trading Standards** in Oppenheim, and the **Regional Geological Office** in Mainz.

The graphics in Annex IV afford an overview of the relevant management structures in Hesse and Rhineland-Palatinate.

### **e) Level at which management is exercised**

The competencies of the respective authorities responsible for regional planning, the preservation of natural resources, nature conservation and monument preservation and of the relevant specialized agencies are set out in the legal provisions reprinted in Annex III



like the Federal Planning Act (*Bundesraumordnungsgesetz*), the respective regional planning laws, the forestry laws and the details as set out above.

### **Federal state and regional planning**

At the highest level of management, the Rhineland-Palatinate Regional Development Programme (LEP III) and Hesse Regional Development Plan 2000 stipulate the programmatic framework for a sustained overall development of the space available in the *Länder*. The Regional Development Programme and Regional Development Plan constitute the basis for the graduated bundle of duties associated with regional planning that are geared towards coordination and cooperation, and they help to resolve conflicts in the planning process between matters planned by the experts and the impact on and measures affecting the way in which the available space is structured. In Rhineland-Palatinate the competent bodies are the Ministry of the Interior and Sport, and in Hesse the Ministry of Economic Affairs, Transport and Regional Development as the highest regional planning authorities.

To ensure that the activities of the affected regional agencies are coordinated in the Middle Rhine Valley, the cabinet of the Rhineland-Palatinate government set up the interministerial project group known as the "Middle Rhine Valley Project Management Body". This body reports to the highest regional planning authority in the Ministry of the Interior and Sport. The project group also includes representatives from the State Chancellery, the Ministry of Culture, Youth, Family and Women's Affairs, the Ministry of the Environment and Forestry, the Ministry of Economic Affairs, Transport, Agriculture and Viticulture and one representative from the highest regional planning authority in Hesse.

The responsibility for implementing the aforementioned programmes and plans and therefore for attaining regional planning objectives lies decisively with the agencies responsible for regional and town and country planning. In Rhineland-Palatinate the responsibility for regional planning lies with the planning cooperatives of the Middle Rhine-Westerwald and Rheinhessenn-Nahe planning regions; in Hesse it lies with the South Hesse Regional Assembly. Their main task is to flesh out the plans for regional development when drawing up regional plans and concepts on the use of available space.

In both Rhineland-Palatinate and Hesse, the responsibility for town and country planning and hence the real decision-making power when it comes to altering the structure of the available space lies with the local authorities, which, in accordance with Article 1, para. 4 of the Town and Country Planning Code, have to take account of regional policy in their town and country planning.

On 21 October 1997 a registered association called the Middle Rhine Valley Forum was founded. According to the statutes of this association, its purpose is to serve as a central point for the coordination and organization of future projects in the region. Amongst other things, this includes the inscription of the Middle Rhine Valley on UNESCO's World Heritage List. The main aim is for the local authorities and the associations and federations active in the Middle Rhine Valley to use the Middle Rhine Valley Forum as a base for jointly taking up the relevant planning duties and facing up to the relevant planning problems on their own responsibility and at their own initiative. The Forum constitutes an important platform for both specialists and policymakers for reaching consensus and engaging in cooperation. Accordingly the Forum is a kind of institutionalized community, the aims, magnitude and composition of which can be said to be unique within the Rhineland-Palatinate.

The federal state of Rhineland-Pfalz and Hesse monitor and support these initiatives by providing financial aid as well as via their involvement in the Middle Rhine Valley Forum.

## **f) Agreed plans related to cultural landscape**

### **fa) Federal state development programmes, regional planning, spatial analysis**

The **Rhineland-Palatinate Regional Development Programme III (LEP III)** describes the Rhine Valley between Bingen and Koblenz on the basis of a wide range of competing demands on its use as a "space requiring special planning", and combines this with the task for the agencies responsible for regional planning of drawing up a concept on how this space should be used. The aim of this concept is to make a detailed study of the competing demands on the use of the space in question and of environmental concerns and the protection of resources, and come up with some proposed solutions. The LEP III then goes on to describe the Middle Rhine Valley as a key area for the protection of open spaces and

designates it as a core area or intersection for species and biotope protection, as does the **Hesse Regional Development Plan 2000**. The vineyards are given special protection as preferred agricultural land.

The **regional development plans** for Middle Rhine-Westerwald and Rheinhessen-Nahe and the South Hesse Regional Plan set out objectives and principles for developing built-up areas and open spaces in the Middle Rhine Valley with a view to the sustained future development of the cultural landscape in question. They thereby flesh out the stipulations contained in LEP III and Hesse's LEP 2000. The regional framework plans for landscape development and the respective local authorities' landscape plans should be mentioned in this context.

The **analysis of the Middle Rhine Valley** drawn up by the Middle Rhine-Westerwald and Rheinhessen-Nahe planning authorities, Rheingau-Taunus county and the towns Lorch-am-Rhein and Rüdeshheim-am-Rhein is the product of informal planning between the levels of regional planning and local authority town and country planning. The key element in it is the inter-authority coordination of issues related to the expansion of built-up areas and the development of transport infrastructure and open spaces, all within the framework of a self-imposed commitment by Middle Rhine Valley towns and communities in Rhineland-Palatinate and Hesse. The results of this analysis are taken into account both in regional planning and in town and country planning and thereby become binding.

#### **fb) Management plan**

Inevitably, the conservation of a cultural landscape as sensitive as the Middle Rhine Valley gives rise to conflicts with the existential requirements of the local population with respect to securing and further developing their means of earning a living in a modern society. The conservation and sustainable future development of the region may be jeopardized by a further decline in wine-growing, certain phenomena associated with mass tourism, the construction of transport infrastructure and industrial facilities or a general lack of opportunities to generate income, combined with a lack of coordination and cooperation on the part of the communities in the Middle Rhine Valley. The conservation of the cultural landscape of the Middle Rhine Valley and of the harmonious combination of natural and cultural features which characterizes it calls for a heightened readiness to take action. What is required is a joint strategy that combines the various monitoring instruments in a more

harmonious manner than has so far been the case. Within the context of an integrative contingency plan, economic developments and social security have to be brought into line with the long-term conservation of the natural means of earning a living.

Together with the county of Rheingau-Taunus and the towns of Lorch am Rhein and Rüdesheim am Rhein, the planning communities Middle Rhine-Westerwald and Rheinhessen-Nahe agreed to draw up a spatial planning analysis that is designed to fulfil the function of a management plan within the meaning of the UNESCO guidelines. This plan contains statements about various areas and projects with a view to the future use and development of the Middle Rhine Valley.

There are three main principles providing variations on the general theme of "*Eine Region besinnt sich auf ihre gemeinsamen Stärken: Der Mittelrhein – Ein Stück Weltkultur*" (A region reconsiders its joint strengths: The Middle Rhine – A piece of world culture):

- bolstering regional identity and breaking down the barriers to cooperation;
- conserving and developing the cultural landscape which gives the area its character;
- making sure that the cultural landscape is a multifunctional living and recreational space.

A wide range of target areas is associated with these principles, from which strategic projects and individual measures will be derived and which are of prime importance for the implementation of the concept (see the attached overview of the principles, target areas and objectives behind the action concept).

This analysis of the area in question constitutes a joint basis for planning within the entire Middle Rhine Valley from Bingen/Rüdesheim am Rhein to Koblenz, in the preparation of which two federal states, three administrative regions, three planning regions, five counties, the autonomous (*kreisfreie*) city of Koblenz and 10 towns and associations of communities were involved.

We would like to highlight the following individual measures:

The "**Trial and Development Plan**" (*E+E Vorhaben*) serves to try out new use-related and conservation measures associated with disused vineyards, while the "**Kunstobjekt Rheingarten**" (Rhine Garden Art Object) is intended to bring disused vineyards back to life by planting alternative vegetation in artistic configurations. The "**Sustainable**

**conservation of the coppice forest"** is a self-explanatory project, while the **"Mittelrheinmomente"** project promotes the use of existing vineyards and aims to secure the future of viticulture in the region. Meanwhile, the aim behind the **"Echo Loreley"** EXPO project was to start transforming the Loreley into a landscape park and at the same time enhance the quality of tours, activities and facilities for tourists.

The **"Middle Rhine Castle Concept"** (*Mittelrhein-Burgenkonzept*) programme was launched to safeguard the various castles and fortifications, primarily with a view to highlighting and seeking solutions to the problems associated with the changing generations of private owners.

The problematic cases, that were discussed and on which decisions were then reached by the Federal State Advisory Council for Monument Conservation and the "Group for Project Management in the Middle Rhine Valley", included the planned **extension of the Hotel Rheinfels** above St. Goar and the extension of the hospital and **construction of a new retirement home** in Oberwesel. In both cases a compromise was found that took account of both the understandable interests of investors and concerns related to monument conservation and changes to the urban landscape.

The interministerial project group has also dealt with various other problem cases around the Rhine and issued proposals on how to solve them, e.g. for the quarry in Trechtshausen.

In the past, the existing instruments (laws governing monument protection, monument conservation, nature conservation and the preservation of national resources, as well as area designation and building development plans), the distinction between protective authorities and expert authorities, the establishment of an upper protective authority to rule in the event of any disagreement have prevented large-scale projects that would have disrupted or even destroyed the valley visually on its sensitive steeply rising side (e.g. the planned Gran Dorado leisure park by Oberwesel). Construction laws also served as the basis for rejecting the development of the western outskirts of Oberwesel and the erection of buildings on the foreland by the city walls (Michelfeld). The planned construction of the moat around Katz Castle near the Loreley was rejected by the Upper Authority for Monument Conservation.

The two federal states concerned intend to draw up a paper envisaging necessary nature conservation and landscape preservation measures for the whole area in anticipation of the Middle Rhine Valley's inscription in the World Heritage List.

### **g) Sources and levels of finance**

In June 1999, the Rhineland-Palatinate Ministry of the Interior and Sport's "Project Management Middle Rhine Valley" group submitted a presentation and justification of the rough budget it deemed necessary for special measures in the Middle Rhine Valley. The overall budget of DM 51 million provided for within this framework covers a 5 to 10-year period. The measures that have been – or are still due to be – implemented or promoted using these funds include:

Urban redevelopment within the framework of the Urban Renewal Programme  
(*Städtebauförderungsprogramm*)

The Loreley EXPO project

Relocating a company away from the Rhine Valley

Reconstruction and restoration work on properties of major importance owned by private individuals, the Church and the local authorities

Reconstruction of state-owned forts and castles

Measures aimed at safeguarding biotopes in the Middle Rhine Valley

Environmentally compatible farming within the context of the FUL 2000 programme

Promotion of tourism, agriculture and viticulture

Boosting public relations work with a view to the UNESCO nomination

Supporting the "Regional Management of the Middle Rhine" project.

On the basis of a decision taken by the regional government back in June 1999, in Rhineland-Palatinate's 2000-2001 two-year budget a whole range of new headings were created or the appropriations for existing headings were substantially increased. In the individual plans drawn up by the Ministry of the Interior and Sport, the Ministry of Economic Affairs, Transport, Agriculture and Viticulture and the Ministry of Culture, Family, Youth and Women's Affairs more than DM 10 million was set aside in the budget for the aforementioned measures. Vigorous efforts will be made to continue these measures in the years to come.

In long-term programmes in the Middle Rhine, urban planning measures have for years been subsidized by the Ministry of the Interior and Sport. In the year 2000 alone DM 2.5 million was earmarked for this purpose. For the years 2000 and 2001 the Ministry of Finance provided DM 10 million to be spent on the state-owned forts and castles of Stolzenfels, Sterrenberg, Sooneck and Pfalzgrafenstein as well as the fortifications at Ehrenbreitstein. These efforts at rehabilitation will be continued over the next few years.

However, the list of various funds set aside in the Rhineland-Palatinate budget to be spent on the Middle Rhine region is too extensive to be included within the context of the present UNESCO nomination.

The regional government of the federal state of Hesse also allocates funds, and in some cases substantial amounts, for the portion of the Middle Rhine Valley falling within its borders, taking the money from its programmes for urban and village renewal and regional rural development, as well from funds for monument protection and nature conservation and monies earmarked for the Hesse Cultural Landscape Programme (HEKUL 2000), the Hesse Landscape Preservation Programme (HELP 2000) and in particular the programme for promoting viticulture on the steep sides of the Rhine Valley, amongst others.

The federal states in question are aware of the responsibilities and obligations associated with the nomination of the Middle Rhine Valley for inscription in the World Heritage List. Consequently, they plan to take the following action:

- concentrate funding on the promotion of viticulture on the steep slopes of the Rhine Valley and the EU viticulture restructuring programme in association with the World Heritage List nomination, whereby the vineyards will continue to be harvested and maintained and the decline into disuse of any further vineyards prevented,
- keep open or restore vineyards (including those which have fallen into disuse) and implement the measures set out in the Treaty on Nature Conservation within the framework of existing legal and financial provisions (HELP 2000 or FUL 2000) and in particular the programme focussing on disused vineyards (*Weinbergsbrachenprogramm*). The main emphasis here will lie on measures like those serving to conserve the European wall lizard (an obligation taken on board under the Bern Convention). In principle, though, both HELP and FUL funds can also be used to conserve or develop valuable habitats and biotopes (e.g. vineyard walls as a habitat for the European wall lizard) or for the introduction or conservation of special forms of farming aimed at guaranteeing that rare or endangered animal and/or plant species can thrive and develop.

In principle, nature conservation measures can be financed within the framework of the plans set out in the EU's LIFE-Natur, federal funds for promoting regions representative of the country as a whole, the Trial and Development Plan (*E+E Vorhaben*), compensatory measures in connection with the contingent levy provided for in nature conservation laws, the Hesse Foundation for Nature Conservation, the Rhineland-Palatinate Foundation for Nature and the Environment and the German Federal Federation for the Environment.

## **h) Sources of expertise**

In their attempts to take care of the cultural landscape, the regional governments of Hesse and Rhineland-Palatinate can rely on numerous scientific institutions.

Scientists with the relevant specializations work in the employ of the respective federal states' offices for monument conservation, geology and the environment. In addition, a large number of institutions of higher education, e.g. the universities of Frankfurt, Gießen, Koblenz-Landau, Mainz, Marburg and Trier and the polytechnic (*Fachhochschule*) in Mainz cover issues associated with spatial planning and regional development, nature



conservation and historical geography. The work done by the nature conservation departments in Rhineland-Palatinate and Hesse is backed up by the Institute for Stone Conservation (*Institut für Steinkonservierung*) in Mainz, which is funded by the four German federal states of Rhineland-Palatinate, Hesse, Saarland and Thüringen. This institute is not only consulted in connection with numerous problems arising in connection with restoration work, but also issues appraisals. Scientists with academic training in regional planning are also employed by the planning communities of Middle Rhine-Westerwald and Rheinhessen-Nahe and the office of the South Hesse Regional Assembly.

### **i) Visitor facilities and statistics**

Tourism in the Rhine Valley enjoys a tradition stretching back over more than 200 years. The image born in the 19th century of the Romantic Rhine still characterizes the region in visitors' minds today. Moreover, tourism as an economic factor opens up vital prospects for the Middle Rhine Valley region, as well as reflecting a considerable portion of the identity of the region and the people who live and work there.

Intensifying international competition makes it essential to continue boosting the attractiveness of the activities, tours and facilities available to tourists visiting the Rhine Valley. In this connection a concerted effort is being made to strive towards high-quality tourism. As a growth sector with good future prospects, tourism represents a decisive opportunity for the sustained development of the Rhine Valley.

In 1999 the number of overnight stays by tourists visiting the Rhine Valley region (Rhineland-Palatinate) and Lorch and Rüdesheim (Hesse) totalled roughly 2,450,000, marking a surge for 1998 and 1999 following the decline experienced in 1996 and 1997. During the first 6 months of the year 2000 this positive trend in overnight accommodation continued, with 1,430,000 nights spent by tourists in the Rhineland-Palatinate's section of the Middle Rhine Valley alone, 6.2% more than the figure for the same period in the previous year.

According to a basic survey conducted by Munich University's German Economic Institute for Tourism (*Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr*) back in

1995 the number of day trippers to the Rhine Valley, for whom no statistics are recorded, is estimated at 20 million a year. However, in many places a qualitative improvement in the hotel and catering establishments, of which there would appear to be a sufficient number, is necessary.

In 2002 the German Central Tourism Office (*Deutsche Zentrale for Tourismus*) is planning to run a nationwide marketing campaign based on the theme "200 years of Rhine Romanticism".

In particular, the regional governments support ecologically viable ('soft') tourism and cultural tourism. Examples of this include the following:

### **The Echo Loreley EXPO project**

The plateau of the Loreley cliff has been turned into a landscape park with a view to giving visitors a more vivid experience of the nature and landscape via a new layout of pathways. In this connection, the stairs up the Loreley were transformed, circuits were created and renaturalization measures and landscaping were carried out.

The visitors' centre not only houses a museum dedicated to the myth of the Loreley, the significance of Rhine Romanticism and the region's development, but also offers visitors comprehensive information on the cultural landscape of the Middle Rhine.

Together, the Rhineland-Palatinate's Ministry of Economic Affairs and Ministry of the Interior contributed 70% of the investment costs (some DM 6.7 million) associated with the establishment of the landscape park and the visitors' center which was opened in May 2000.

### **Development of the historical, medieval city wall around Oberwesel for tourism**

This is a joint project entailing close cooperation between the Rhineland-Palatinate Ministry of Economic Affairs, Transport, Agriculture and Viticulture and the Oberwesel City Office for Monument Conservation (*Landesamt for Denkmalpflege und der Stadt Oberwesel*). This project, funded at federal state level, attractively presents the history, culture and daily lives of the inhabitants of the Rhine Valley in the Middle Ages. At the same time the project is also a contribution towards the conservation of the most striking city walls in the Middle Rhine region.

**Castle concept**

Amongst other things, the Castle Concept of the Rhineland-Palatinate State Office for Monument Conservation details possible approaches by tourists and implements them in conjunction with the respective monuments' owners, most of whom are private individuals.

**Railway tourism**

Ever since the mid-19th century, the railways have been an important mode of transport in the Middle Rhine Valley. Not only do trains take passengers through the valley, but they also laid the foundations for the development of tourism. The improvements in regional passenger transport brought in by Rhineland-Palatinate in 1994 by providing regular and more frequent services and switching to modern vehicles led to a renaissance of rail transport in the Middle Rhine region. Further improvements currently at the planning stage are intended to encourage tourists, local visitors and business commuters to make greater use of the railways and thereby reduce road traffic.

**Pleasure cruises**

The Middle Rhine Valley continues to be a major setting for pleasure cruises. There has been considerable growth in this sector in recent years. For instance, the number of pleasure craft climbed from 51 back in 1982 to 72 in year 1990 and 80 in 1996. The turnover of the pleasure cruise sector has risen accordingly from DM 7.2 million in 1982 to DM 15.7 million in 1990 and DM 21.3 million in 1996.

**Bicycle tourism**

The improvement of cycle paths in the Middle Rhine region is a high priority with a view to promoting bicycle tourism. The cycle routes along both banks of the Rhine constitute a key element of the extensive network of cycle paths in Rhineland-Palatinate and Hesse and are particularly valuable for environmentally aware tourism. Some gaps still exist, but in the years to come these will successively be closed and existing cycle paths will be renewed as required. The construction and extension of cycle paths not only improves the available infrastructure, but also boosts the safety of transport. In addition, the possibility of taking bicycles on local rail services and on board pleasure cruises for free is helping to make the Upper Middle Rhine Valley an attractive place for environmentally-friendly bicycle tourism.

### **Expansion of the Rhineland-Palatinate computer-based information and reservation system**

The expansion of this system has improved the ease with which tourist activities in the Rhine Valley can be booked, giving the Middle Rhine region a chance to bring home to a broader public its importance as a unique cultural landscape and tourist region and to do so rapidly, with the help of modern communications technology. The system is to be complemented by information and additional options with a view to using public transport to reach or leave the area and to enabling tourists to move around using local public transport services, bicycles, pleasure boats or combinations of these different transport modes.

### **Regional agency**

Of capital importance is the establishment of a joint Rhine Valley Regional Agency, which should serve to bundle various interests in a more efficient way than has been the case in the past.

In Hesse's portion of the Middle Rhine region tourists' needs are attended to primarily by the supralocal Rheingau-Taunus County Society for Tourism and Culture.

### **Museums**

Because tourism in the Middle Rhine region has a long tradition, there are a large number of museums devoted to the culture and history of the landscape. For example, there is an extensive selection of paintings portraying Rhine Romanticism on display at the Middle Rhine Museum in Koblenz, and a wide selection of prints devoted to the same topic at the riverside *Historisches Museum am Strom* in Bingen. The Raftsman and Shippers' Museum (*Flößer- und Schiffermuseum*) at Kamp-Bornhofen reminds visitors of a sector that used to be important in the region, while the Blücher Museum in Kaub is devoted to the Franco-German struggle for control of the river in the early 19th century. The *Landesmuseum* in Koblenz is primarily devoted to technological cultural monuments and documents historical production processes that were – and in some cases still are – typical of the region. The Rheingau Wine Museum in Rüdesheim focusses on all aspects of viticulture.

### **Forts and castles**

The castles rebuilt in the heyday of Rhine Romanticism and now serving as museums include Lahneck, Reichenstein, Rheinstein, Sooneck and Stolzenfels. The Marksburg and

Burg Pfalzgrafenstein offer visitors the chance to see intact examples of medieval castles, whereas the fortifications at Ehrenbreitstein are one of the outstanding ensembles of the early 19th century as well as being one of the biggest fortress complexes in Europe. Meanwhile, the hunting seat of Niederwald and Schönburg Castle in Oberwesel offer visitors hotel accommodation and fine cuisine. There are also local museums in the Stadtburg in Boppard (featuring exhibits on the forest and the work of Michael Thonet) and in Rheinfels Castle overlooking St. Goar.

At Ehrenbreitstein and Pfalzgrafenstein the administrative body responsible for the forts, castles and antiquities of Rhineland-Palatinate offers guided tours on specific themes or for special groups of visitors (e.g. children). Numerous castles in the Middle Rhine region host events staged as part of the Rhineland-Palatinate's cultural programme for the summer (*Kultursommer Rheinland-Pfalz*), such as the "*Burgenzauber*" (castle magic) series and the foundation *Stiftung Villa Musica's* "Music in forts and castles" (*Musik auf Burgen und Schlössern*).

## **j) Staffing levels**

With financial help from the federal states in question, during the year 2000 the Middle Rhine Valley Forum hired a full-time cultural landscape manager to coordinate the various cultural activities within the region. Otherwise, the staffing levels within the respective authorities in both Rhineland-Palatinate and Hesse are regarded as sufficient for fulfilling the duties required in connection with the region's inscription on the World Heritage List.

## **5. Factors affecting the cultural landscape**

The cultural landscape of the Middle Rhine Valley owes its unique character not only to the tremendous natural spectacle of a mighty river flowing between steep rocky formations, but above all to the way it has been transformed by human intervention. Indeed, since the Middle Ages, Man has carved out steep terraced vineyards on the hillsides, built up picturesque towns and constructed a large number of well-fortified castles.

However, the Middle Rhine Valley has also suffered from less beneficial intervention, some of which was caused by the selfsame geographical particularities associated with the antecedent valley. Throughout their history the river and its valley have served as a main thoroughfare from southern Germany to the North Sea. The associated development of transport infrastructure (by water, road and rail) significantly changed the valley, and its impact is still visible today.

### **a) Development pressures**

On the one hand, tourism has developed into a major economic factor in the Middle Rhine Valley. Other site-specific economic sectors, in particular quarries, managed to gain a foothold owing to the local transport infrastructure (shipping). On the other hand, the railway lines and roads, both as transport routes and sources of noise, and also the now sprawling quarry at Trechtingshausen 'spoil' the landscape of the narrow Middle Rhine Valley; moreover, they are regarded as a nuisance by some local inhabitants.

The practice of modern and in some cases intensive viticulture is resulting in the loss of biotopes and the abandonment of traditional wine-growing or coppice forest management techniques. What is more it is endangering xerothermic biotopes on open land and resulting in the loss of one of the oldest systematic and sustainably managed forms of forestry practised anywhere in the world. For economic reasons it will be difficult to prevent the development of the coppice forest into high forest. The discontinuation of forest management and the accumulation of undergrowth would impact on the variety of species living there, and change the appearance of the landscape.

What is more, the limited potential area for new housing developments in the Middle Rhine Valley, not to mention the lack of appreciation of the value of the cultural landscape, have meant that in individual instances the scope of such developments and the type of buildings erected have not always been satisfactory from the town-planning point of view or with respect to their integration in the landscape. Examples of this include the harbour facilities at Bingen and Lahnstein and some of the camp sites in the Rhine Valley.

Consequently, the respective regional governments, local communities, private owners and other parties involved will have to seek acceptable solutions for any such unsightly developments affecting the cultural landscape of the Middle Rhine Valley.

To decrease noise pollution in the Middle Rhine Valley the two regional governments concerned have already started implementing a programme aimed at minimizing the noise generated by the railways.

Further details, particularly about factors requiring special attention and for which individual solutions have to be found, are provided in the management plan.

## **b) Environmental pressures**

There are no environmental factors which are seriously endangering the cultural landscape of the Middle Rhine. The quality of the water in the Rhine has improved dramatically over the last 20 years as a result of the extension of the relevant sewage plants. The numbers of small organisms and fish life today is almost the same as it was a century ago. Higher species that used to be found in the river, like salmon, have already re-established themselves in tributaries. Initiatives taken by the International Commission for the Protection of the Rhine Against Pollution (ICPR), such as "Salmon 2000", "Network of Biotopes in the Rhine Corridor" and "Rhine 2020 – Sustainable Development of the Rhine" and their implementation in the EU Member States will help to improve the situation further.

## **c) Natural disasters and preparedness**

The largely unprotected sites along the Middle Rhine constantly face the threat of flooding. The ICPR's Action Plan on Flood Protection, which was adopted at the 12th Conference of Rhine Ministers on 22 January 1998, is intended to provide the Rhine with better protection against flooding. Because the topography of the Middle Rhine region does not permit preventive flood defence measures such as the reclaiming of retention areas, the inhabitants of the region have to live with this eventuality and prevent major damage by taking their own precautions.

#### **d) Visitor/tourism pressures**

Some forms of tourism can lead to high consumption of natural resources. Consequently, when taking action to develop tourism in a sustainable manner, issues related to protecting the landscape and nature conservation, transport and the region's identity all have to be worked into a coherent overall concept. The basis for doing this is Rhineland-Palatinate's long-term concept for tourism such as the "Tourist Scenario for the New Millennium". One strategic approach also being taken in the Rhine Valley consists of expanding sustainable forms of eco-tourism. Examples worth mentioning in this context include attempts to boost bicycle tourism in the Rhine Valley and tourist accommodation in vineyards and on farms. Other elements of the strategic approach being adopted with a view to promoting eco-tourism in the Middle Rhine Valley are the careful selection of measures regarding landscape interpretation, which also cover guidance of and information for tourists and the running of a visitors' centre.

Many of the camp sites in the Rhine Valley are in exposed settings, and some of them are set out in a very open manner. For instance, there is often hardly any greenery to shield camp sites from the gaze of motorists or passers-by. To improve this state of affairs, an situational analysis is planned that will involve the relevant professional associations and bodies responsible for the preservation of natural resources in the region. A raft of promotional measures and an action programme will be drawn up on the basis of this analysis. In this context an attempt will be made to ascertain whether subsidies for the creation of greener camp sites can be introduced.

#### **e) Number of inhabitants within the cultural landscape/buffer zone**

Including the relevant parts of the city of Koblenz, the number of inhabitants in the core and buffer zones of the cultural landscape is approximately 170,000.



## **6. Monitoring**

### **a) Key indicators for measuring the state of conservation**

Data on the space taken up by housing, transport facilities and other uses of the land are the main indicators from the point of view of regional planning and planning at federal state level for evaluating processes of change affecting the cultural landscape.

### **b) Administrative arrangements for monitoring the cultural landscape**

Numerous disciplines are involved in recording, researching, conserving and managing the historical heritage of our landscape, so it is absolutely essential that the people involved and the institutions they represent work together effectively.

The regional planning authorities serve as coordinators and liaison offices in this connection, gathering and compiling economic, cultural, social and ecological data on the Middle Rhine Valley.

As a rule, the three-tiered administrative structure in Rhineland-Palatinate and Hesse guarantees a transparent exchange of information on relevant plans and measures implemented by the representatives of a wide range of disciplines.

In addition, the establishment at federal state level of the interministerial "Middle Rhine Valley Project Management Body" and the inception of the Middle Rhine Valley Forum at regional or local level have created two institutions focusing exclusively on the development of the Middle Rhine Valley. This will ensure close monitoring of the cultural landscape.

Moreover, the existing multi-stage planning system (federal state development programme and plan, regional plan and building plan), the procedures governing town and country planning and other specialized plans (landscape framework plans and the landscape plans themselves) and the associated approval procedures constitute a firm basis on which to keep track of and record any changes made to the nominated area.

These formal planning procedures will be complemented and fleshed out by the completed analysis of the Middle Rhine Valley region from Bingen/Rüdesheim to Koblenz. Here, by outlining the present situation, the spatial situation is assessed from the qualitative point of view, enabling the detection of any intrusive change. Furthermore, it provides some pointers for planning with a view to ensuring the sustainable development of the Middle Rhine Valley.

The respective regional planning registers (*Raumordnungskataster*) kept by the relevant authorities in Rhineland-Palatinate and Hesse constitute a key instrument for providing information on monitoring the nominated area. In an up-to-date and flexible manner they serve, on the one hand, to meet the growing need for information about increasing demands being made on the available space, whilst on the other they take account of the various constraints on land use against the backdrop of the existing situation by using geographical information systems. Maps drawn to a scale of 1:25,000 plot the digital data on administrative borders, the natural potential of the region and the degree of protection it merits as well as all the major uses to which the area is put.

This information system constitutes an important basis for guaranteeing the sustainable development of the Middle Rhine Valley in a manner compatible with the cultural landscape within the context of harmonizing programmes and plans as well as in connection with decisions governing projects and measures that will have an impact on the area.

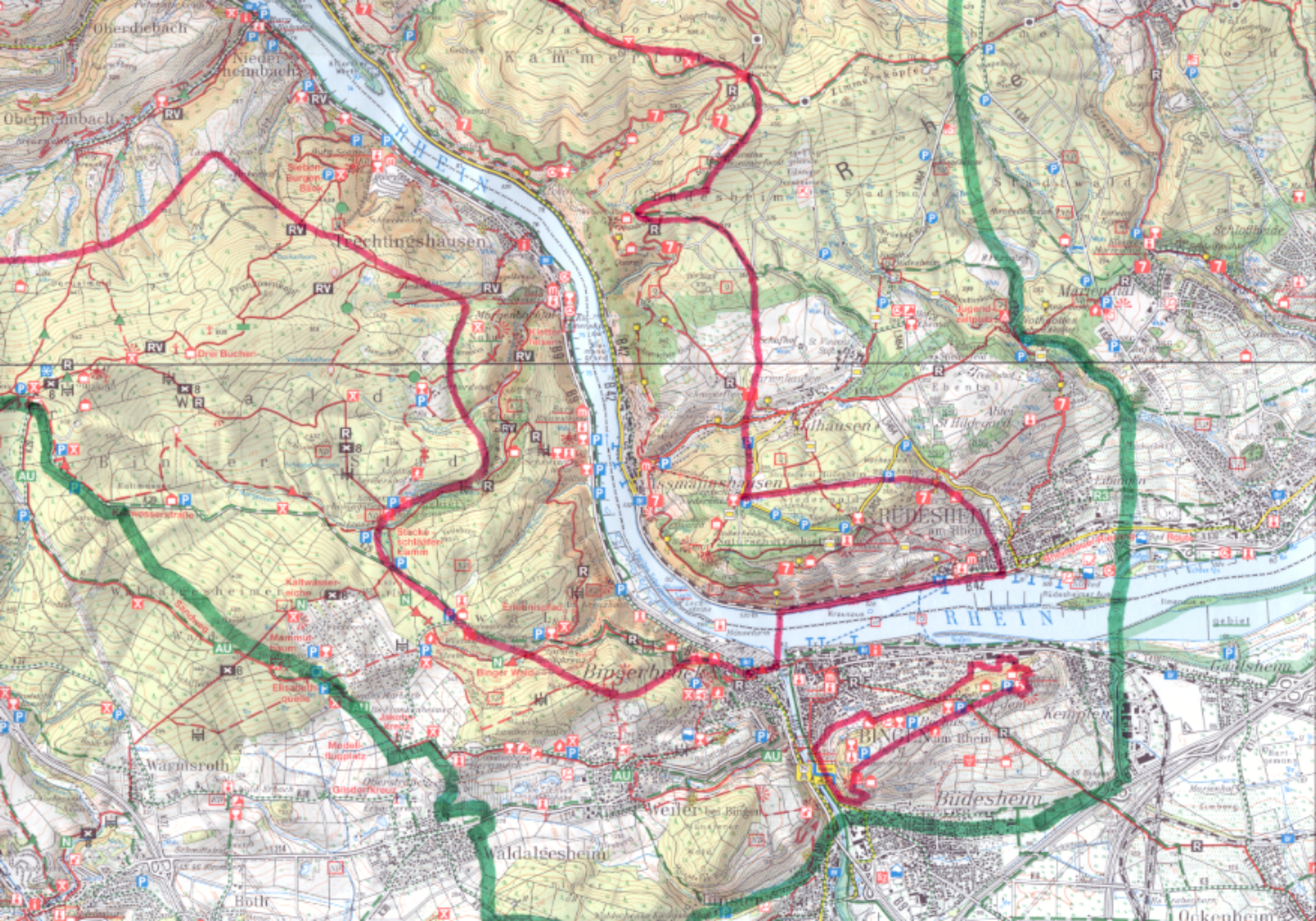
The federal states of Rhineland-Palatinate and Hesse intend to make extensive use of the results of HELP and FUL assessments of the success of measures implemented within the area nominated for inscription on the World Heritage List.

## **7. Annex (documentation)**

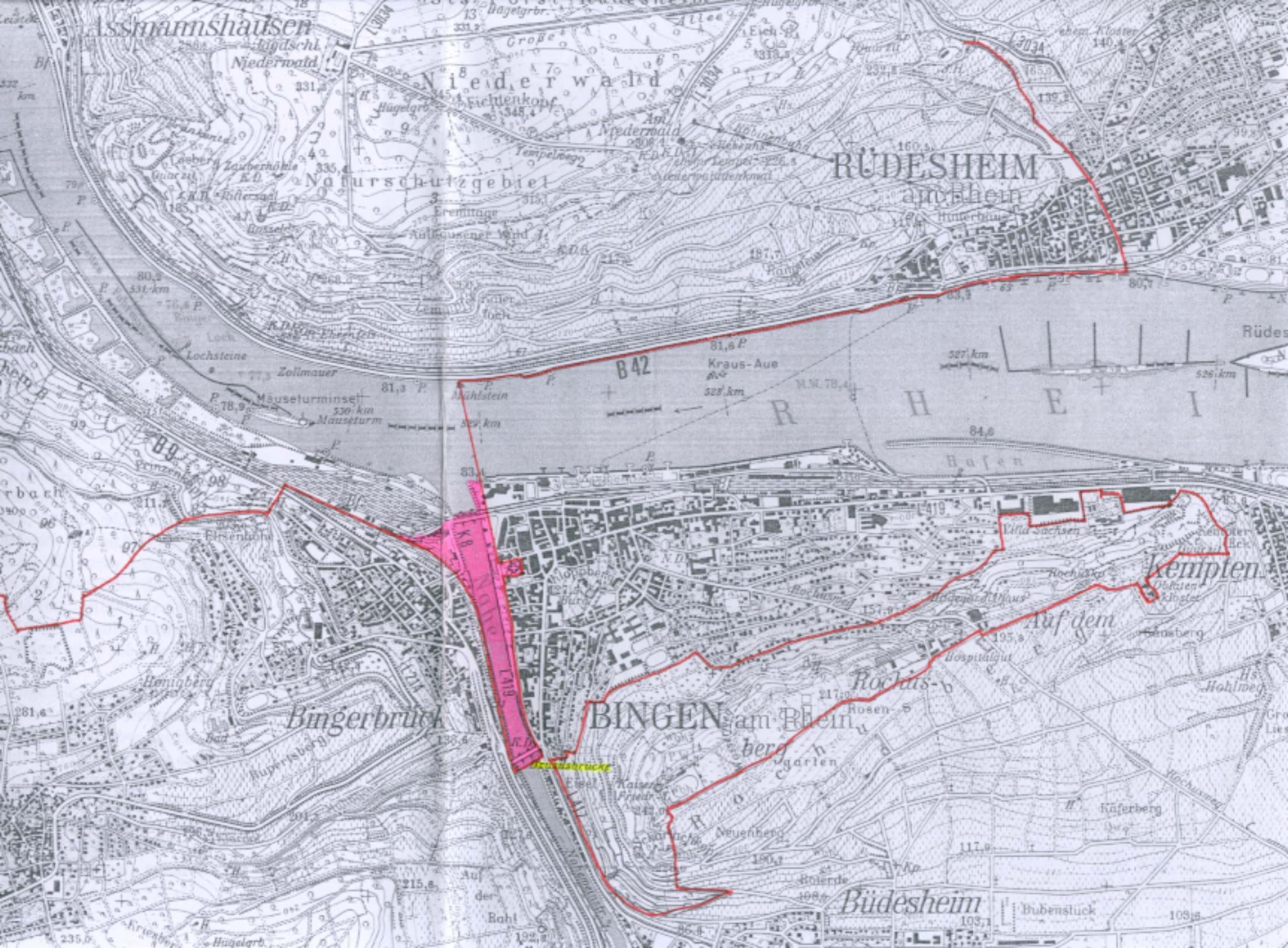
- I. List of cultural monuments (can be submitted on request)
- II. List of nature conservation and FFH areas (can be submitted on request)
- III. Rhine Valley Charter; Development Programme III of the Federal State of Rhineland-Palatinate (other legal texts and ordinances can be submitted on request.)
- IV Schematic overview of administrative structures in Hesse and Rhineland-Palatinate
- V. Maps and photographs
- VI. Bibliography (see section 3c of the nomination)
- VII. Book: **"The Rhine Valley from Bingen and Rudesheim to Koblenz. A European cultural landscape."** In press, due to be published in May 2001. A copy will be submitted in due course.
- VIII. Booklet: **"The Rhine: Yesterday, Today, Tomorrow 1947-1997"**

**8. Signature on behalf of the State Party**  
(see next page)









Assmannshausen

Niederradt

Niederwald

Naturschutzgebiet

RÜDESHEIM  
am Rhein

B42

Kraus-Aue

529 km

81,8 P

529 km

R H E I

Hafen

Kemiplen

Auf dem

Rochus-

BINGEN am Rhein  
berg  
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Bingerbrück

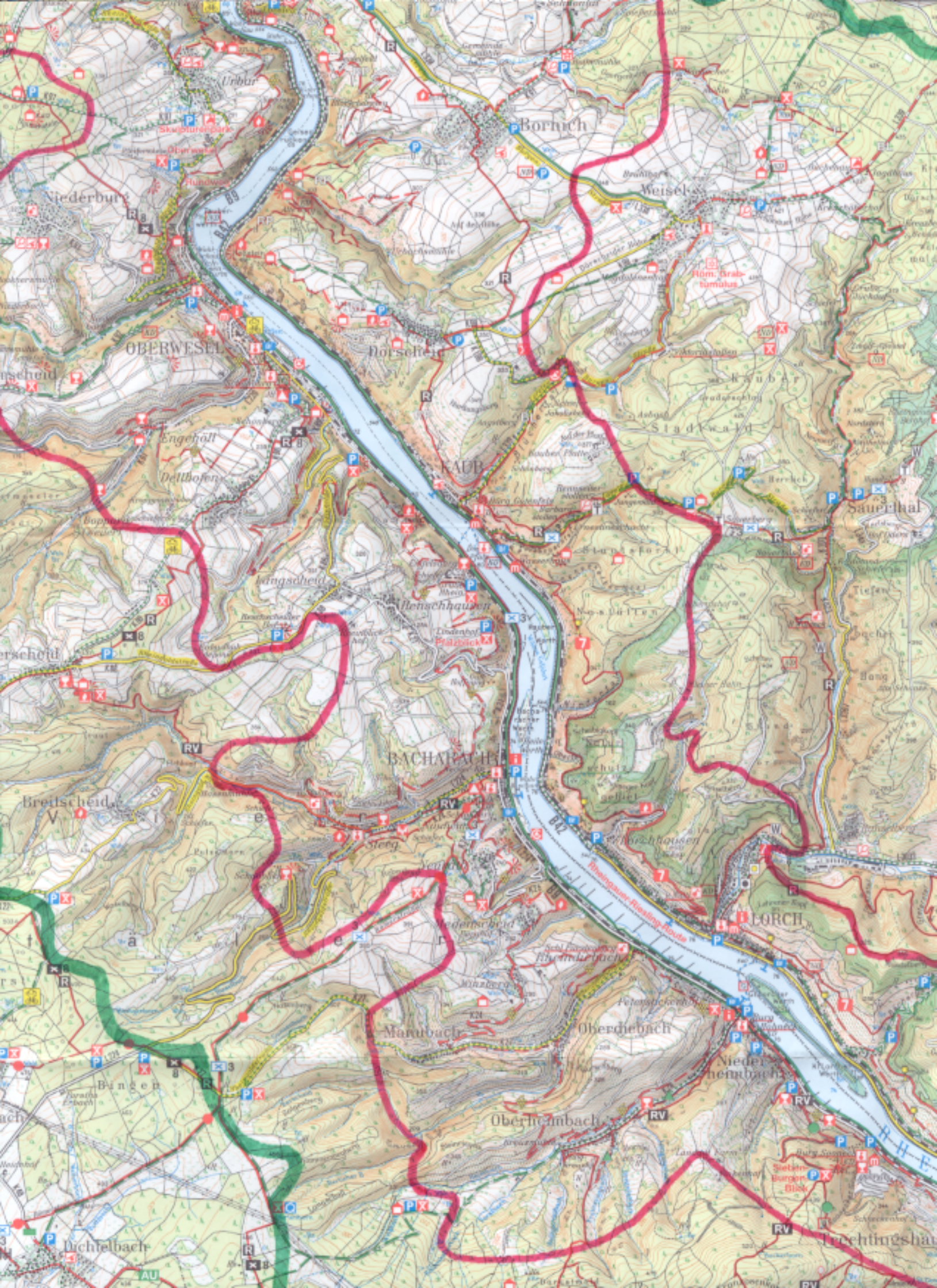
Büdesheim

Bubenstück

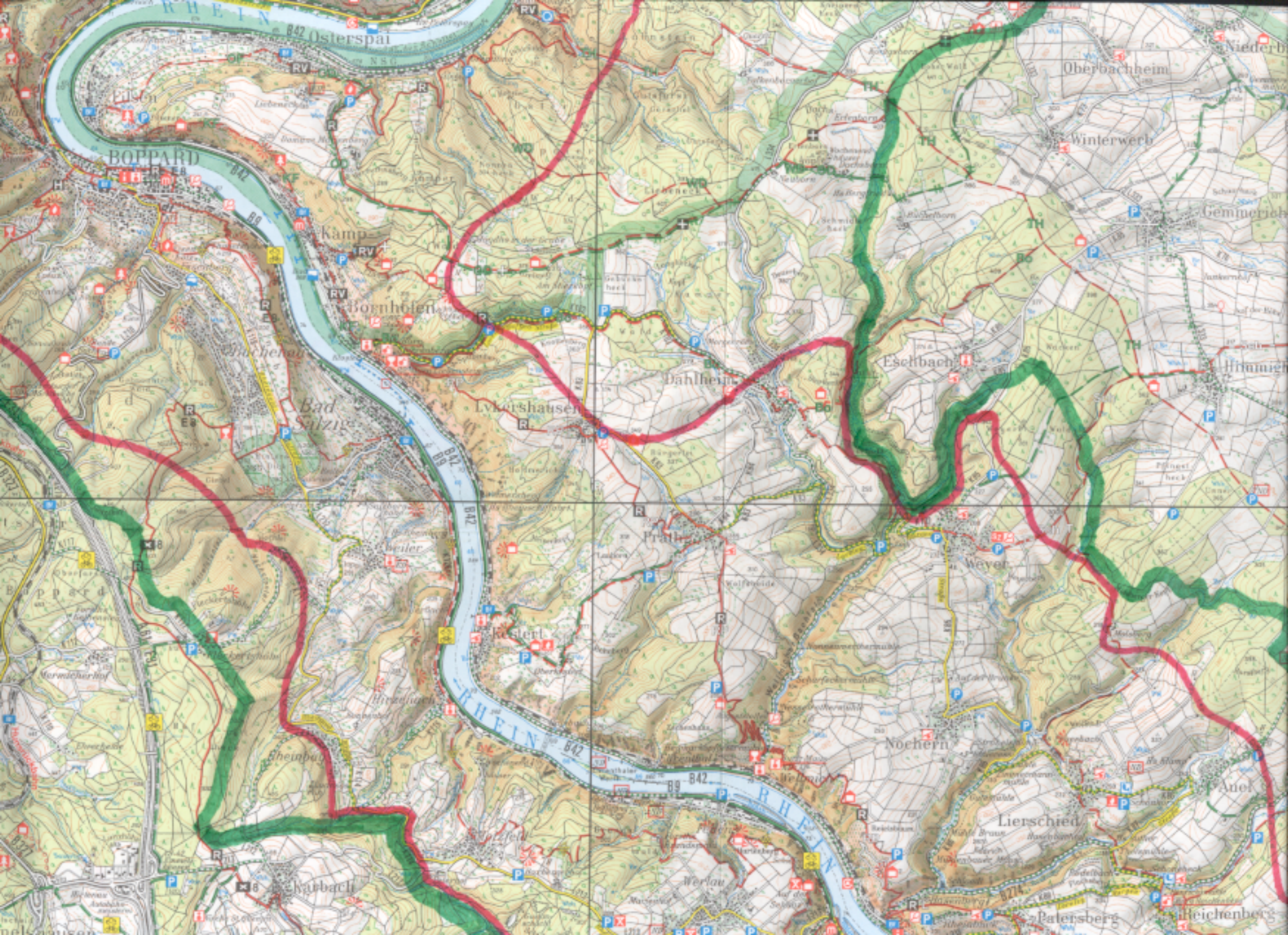
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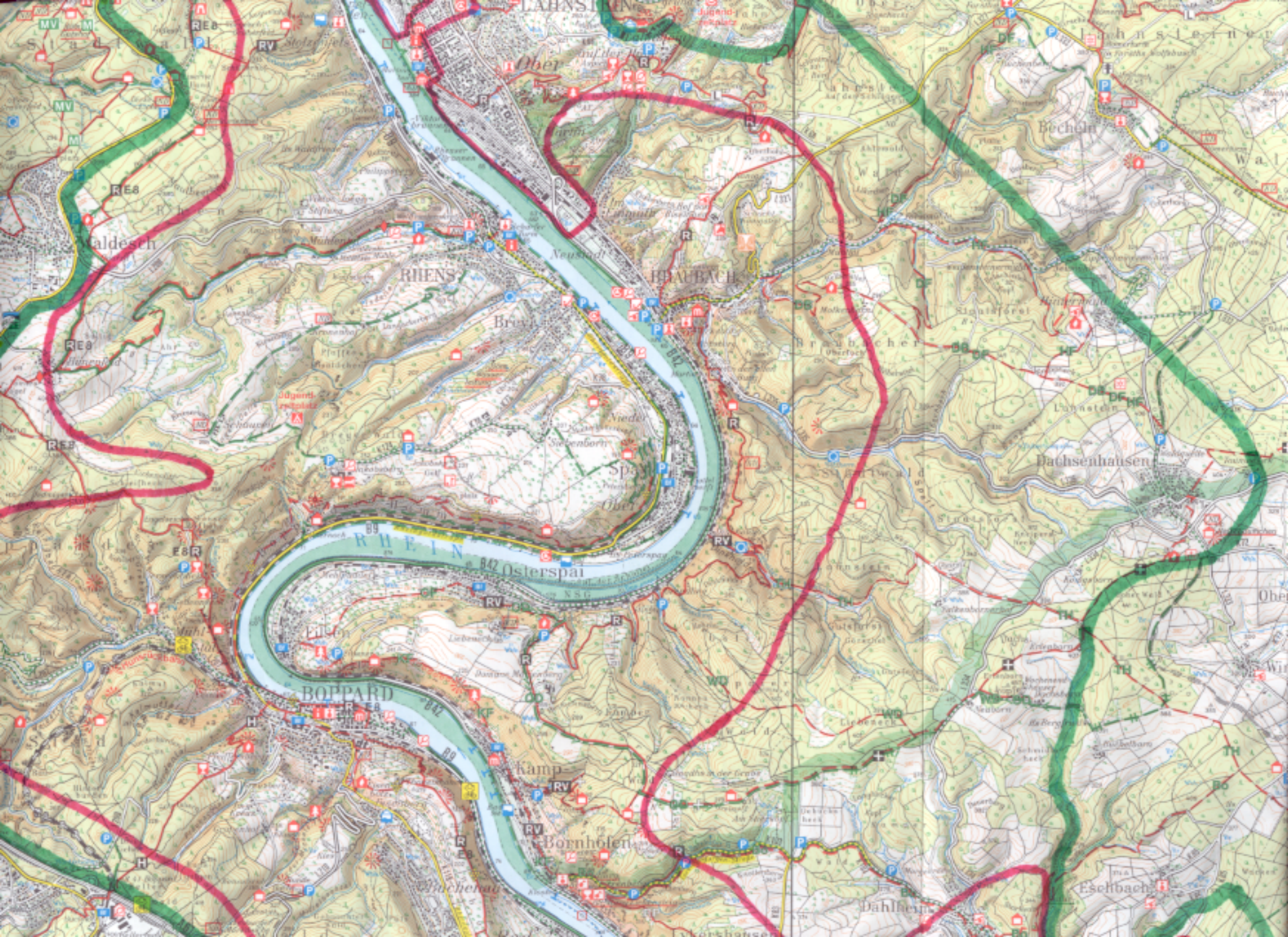




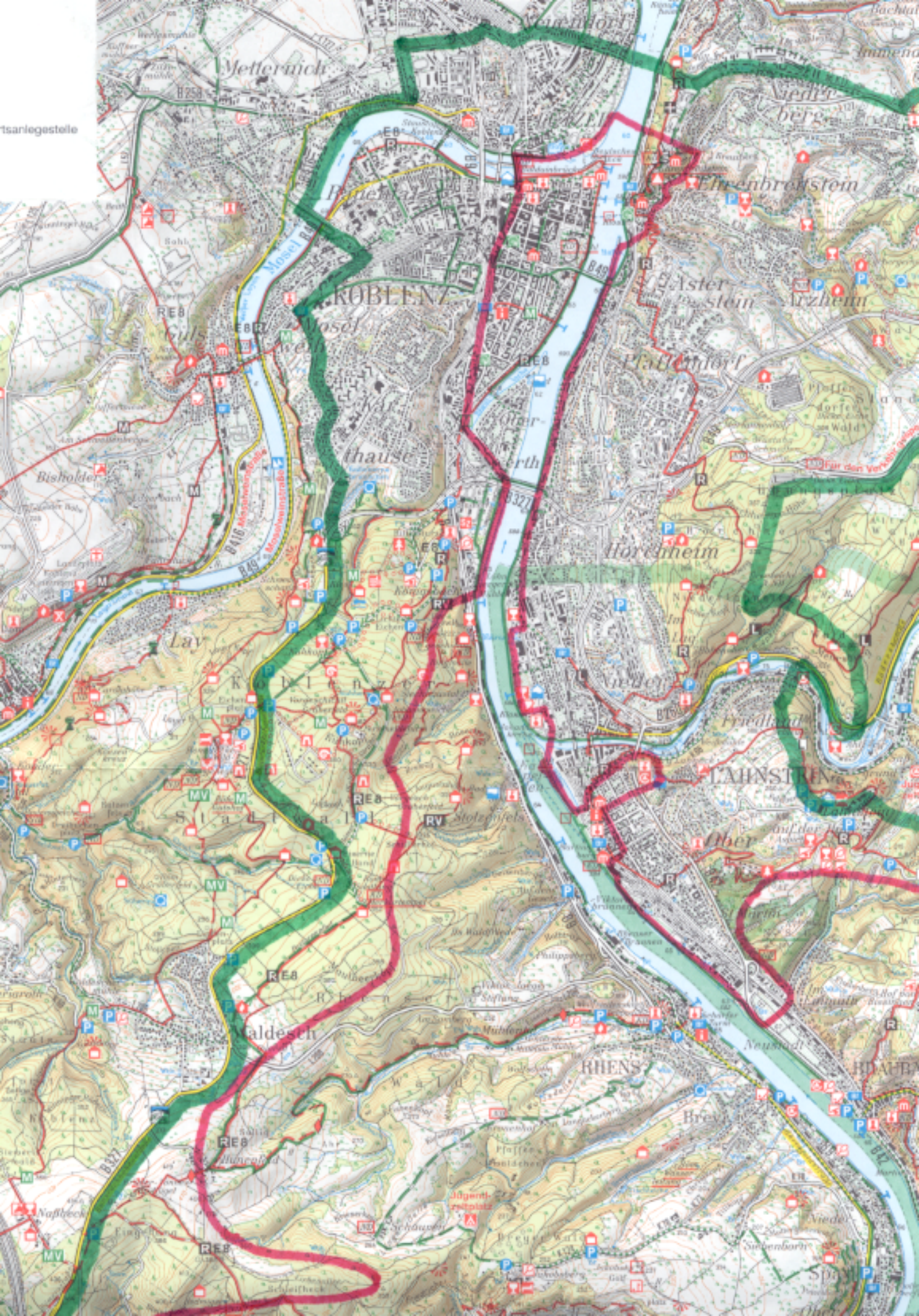














Nomination of the Middle Rhine Valley  
(Germany, Länder Hessen and Rheinland-Pfalz)

- C 1066 –

Additional Information

1. Supplements to the points 4 (Management) and 6 (Monitoring) of the nomination of the cultural landscape Upper Middle Rhine Valley
2. Supplement to point 2 of the nomination concerning the geological and geomorphological significance
3. Overview of the historic town centres officially listed as legally protected monument preservation zones (Rheinland-Pfalz) or ensembles (Hessen) and of monument preservation zones currently being listed
4. An additional list of hessian ensembles protected as cultural monuments
5. The review of the boundaries of the heritage area (core zone) in Bingen suggested by Mr. Robert de Jong (with map)
6. Reasons for the inclusion of the town of Koblenz in the core zone asked by Mr. Robert de Jong
7. Detailed information about the debate on bridges across the Rhine
8. Information about the current situation and prospects for viticulture in the Middle Rhine Valley
9. Noise abatement measures in the Rhine Valley

Federal State of Hesse  
 Ministry of Economics, Transport, and State Development  
 - Supreme State Planning Authority -  
 12 - 93 b 02/05 - 2001

Ministry of the Interior and Sport  
 Rhineland-Palatinate  
 - Supreme State Planning Authority -  
 14 146-75 .2/3751

Wiesbaden/Mainz, 19 October 2001

**World Heritage Initiative Middle Rhine Valley  
 Tour of the area by an expert commissioned by ICOMOS, Mr Robert de Jong, 16-20  
 September 2001.**

**Here: Enquires regarding Item 4 (Management) and 6 (Monitoring) of the application  
 for inscription on the UNESCO World Heritage List of the Middle Rhine Valley  
 from Bingen/Rüdesheim to Koblenz (Upper Middle Rhine Valley).**

I would like to suggest the following additions to the above items:

Item 4:

The conservation measures, institutions, authorities, and plans relating to the cultural landscape cited here (in Item 4: Management of the Cultural Landscape/Legal Data) constitute a **well-organized**, but complex **system** for ensuring the conservation of the cultural landscape. This system is based primarily on **institutions with administrative authority and official plans qualifying as standards**. The registered association known as the Middle Rhine Valley Forum constitutes an institutional addition to this system, as does the **Rhine Valley Charter** at the programme and planning level, even though it is not yet legally binding. In addition, there is the **Spatial Analysis for the Middle Rhine Valley**, which serves as a management plan. The provisions of the spatial analysis only become legally binding and acquire external impact when incorporated into official plans.

The vertical coordination of the system described above depends on each higher body exercising **supervisory and legal authority** over the body immediately subordinate to it. Institutions outside the state administrations of Rhineland-Palatinate and Hesse (cities and municipalities, regional planning groups) are subject to the **legal authority of the Länder**. By contrast, the system for horizontal coordination - the coordination of various specialist interests at the same administrative level - depends on the **competence of bodies charged with integrating spatial planning matters** to coordinate, consider, and take final decisions in the various disciplines concerned.

Plans made at the lower level must take account of the **requirements of the overall plan**. Compliance with this obligation is guaranteed through their **mandatory approval** by the superior planning authority. Final authority to implement plans is therefore vested in the **regional governments of Rhineland-Palatinate and Hesse**, which have been given ultimate responsibility for cultural and spatial-planning matters by the Federal Republic of Germany.

The government authority in charge of the recognition process, Rhineland-Palatinate's Ministry of Science, Continuing Education, Research and Culture (MWWFK), is the chief

**contact and coordinator** for the management of the cultural landscape project. **Overall control** of the project thus rests with the federal state of **Rhineland-Palatinate**.

The **chief coordination body** is the **Inter-Ministerial Project Group** entitled "Middle Rhine Valley Project Management Project Management", the activities of which are monitored by the Supreme State Planning Authority of Rhineland-Palatinate's Ministry of the Interior and Sport (MIS). The federal state of Hesse and the Middle Rhine Valley Forum are also represented in the Inter-Ministerial Project Group.

The Middle Rhine Valley Forum is the **chief coordinator** in the region and is responsible for involving community organizations and establishing contacts between regional administrative bodies. The overall organization is illustrated in some detail in the attached figure.

According to the system described above, funding for the management of the cultural landscape project (Item 4 g) is - or will be - provided in the medium-term financial planning of the *Länder*, the double budget of the federal state of Rhineland-Palatinate for 2002/2003, the budget of the federal state of Hesse for 2002 and also funding agreements. Funding allocations are based on the budget statements of the Middle Rhine Valley Forum which fleshed out the proposals for action contained in the management plan and set out a time-frame for their implementation.

Re Item 6 (Monitoring):

The administrative provisions governing monitoring also follow the system as described above under Item 4:

On the basis of the **Spatial Planning Register for Rhineland-Palatinate and Hesse**, the Rhineland-Palatinate **Structural and Approval Directorate North** in Koblenz will collect in digital form all the data necessary for monitoring the Middle Rhine cultural landscape and then categorize this data and supplement it with contributions from the respective authorities in specialized areas. The result will be a new, **comprehensive cultural landscape inventory** for the Middle Rhine Valley that includes data from both *Länder* involved. Contributions from state monument conservation authorities will play a central role in this undertaking.

The impact of specific measures on or changes to the cultural landscape will be evaluated using factors such as the benefits they produce and their impact on the environment as well as the way in which they exploit natural resources.

The **Inter-Ministerial Project Group** entitled "Middle Rhine Valley Project Management" will examine this assessment, formulate goals and measures on the basis of it, and present its monitoring report to UNESCO (see figure) via the central coordination office of the federal state of Rhineland-Palatinate and the German federal government.

# Kulturlandschaft Mittelrheintal von Bingen / Rudesheim bis Koblenz

- Antrag zur Aufnahme in die Welterbeliste der UNESCO -

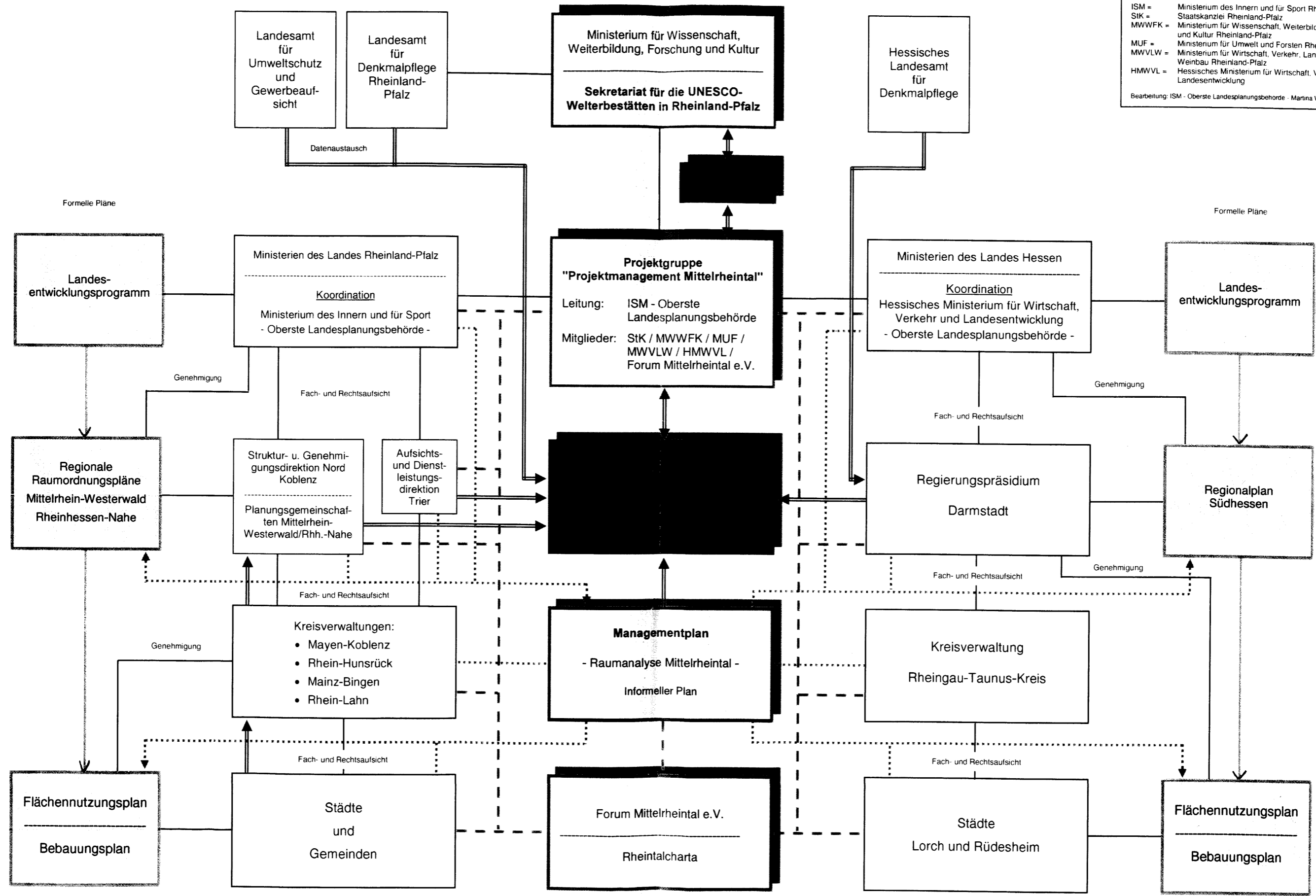
Management der Kulturlandschaft und Monitoring

**Legenden und Abkürzungen:**

Formelle Kooperation: ————  
 Informelle Kooperation: .....  
 - - - - -

ISM = Ministerium des Innern und für Sport Rheinland-Pfalz  
 StK = Staatskanzlei Rheinland-Pfalz  
 MWVFK = Ministerium für Wissenschaft, Weiterbildung, Forschung und Kultur Rheinland-Pfalz  
 MUF = Ministerium für Umwelt und Forsten Rheinland-Pfalz  
 MWVLW = Ministerium für Wirtschaft, Verkehr, Landwirtschaft und Weinbau Rheinland-Pfalz  
 HMWVL = Hessisches Ministerium für Wirtschaft, Verkehr und Landesentwicklung

Bearbeitung: ISM - Oberste Landesplanungsbehörde - Martina Wolf



## Chapter 2: Justification for inscription on UNESCO's World Heritage List

p. 21 end of first paragraph:

### *ac, Geological/geomorphological significance*

The Rhine lends its name to the terms "Rhenish Slate Mountains", "Rhine Massif", and "Rhine Trough", which have been used in the earth sciences since the 19<sup>th</sup> century to describe the occurrence of Palaeozoic strata in the central highlands of western Germany.

This is an indication of the major importance of the Rhine Valley and its side valleys for knowledge of the strata sequences exposed here in cross-section. This applies in particular to the southern slate mountains, where an excellent view is offered of Lower Devonian strata in the Upper Middle Rhine canyon between Bingen and Koblenz. Were it not for this downcut, there would be major gaps in our knowledge of the composition of these strata and tectonics in cross section, as the upper surfaces of the slate mountains are covered by a thick tertiary weathering crust.

The origins of the Rhine Valley were recognized as long ago as 1844 by C.F. Roemer, a prominent geologist. On the basis of the presence of river gravel on the flat, morphological steps of the valley sides, he deduced that it was not, as previously assumed, a fissure valley but rather a pre-determined valley formation deriving from erosive fluvial action during the elevation of the mountain range over an extended period.

The Rhine Valley offers geologists a window onto evidence of the Earth's history over a period approximately 405 to 355 million years ago. Even though the valley is only about 200 metres deep, it exposes a sequence of strata up to 10 kilometres thick. This is so because, unlike the Grand Canyon in the United States, the strata do not lie flat, but rise, with varying degrees of steepness, towards the southeast, sometimes vertically or even overturned, as a result of Variscan folding during the Carboniferous Period (about 300-330 million years ago), which according to the plate tectonics model was determined by the collision of the two megacontinents, Laurussia and Gondwana.

Earth scientists have shown a keen interest in several aspects of the natural heritage preserved in the Upper Middle Rhine Valley. To begin with their interest was focussed on the composition of different rocks and the conditions under which they formed sedimentary layers. Closely associated with this was research into fossils discovered in these strata, their classification and ecological interpretation.

Roofing slate from Kaub, for example, attracted attention as early as the second half of the 19<sup>th</sup> century, because of the excellent state of preservation of the fossils it contained.

Basic biostratigraphic research was undertaken by Fuchs in the Loreley area (1899) in order to determine the age sequence of fossil communities based on their respective stages of evolutionary development. The importance of this research extended beyond the region, as it could also be employed in other areas of the slate mountains, as far away as the Ardennes, for instance. This same research also demonstrated that without knowledge of the folds and faults that arose during the Variscan orogeny, no account could be given of supraregional development over the ages.

The Loreley area, the section of the valley that has been most extensively studied, represents an outstanding example of developments in geological viewpoints up to the present day. Extensive geological study of the Rhine Valley began in the second half of the 19<sup>th</sup> century, and the results of that research have been presented in some 400 publications, occasionally accompanied by maps and cross-section diagrams.

Numerous fossils were described and illustrated for the first time on the basis of specimens taken from the Rhine Valley. In European geological literature, the term "Rhenish facies" was coined by analogy with "Hercynian facies". "Facies" is the term used to denote the sum of all primary petrographic and paleontological characteristics of a sedimentary body (Gressly 1838). The Rhenish facies is composed of sandy clay and silt slate, as well as sandstone with a low calcium content. The biofacies is characterized by prominently ribbed brachiopoda, lamellibranchia, trilobites and a few individual corals. This lithofacies and biofacies is characteristic of a shallow or shelf sea environment on the southern edge of the ancient northern continent.

The importance of Middle Rhine Valley strata sequences for geological research is reflected by the fact that the standard international designation for the upper stage of the Lower Devonian is "Emsium" (See Annexes 1 and 2).

Since the region is of worldwide importance in determining the stratigraphy of the Lower Devonian, in 1982 the Sub-Commission on Devonian Stratigraphy of the International Union of Geological Sciences visited Oberlahnstein to view the strata profile. A total of 170 fossil levels from the lower and middle Upper Emsium can be seen in cross section. This is the best fossil record in the world for this period of geological history. It was decided at a recent international conference that the biostratigraphy of the Emsian stage should be further subdivided, so this area will remain particularly important for geological research in the future as well, and will require long-term protection.



Property nominated for World Heritage Area status: Upper Rhine Valley

**Historic town centres officially listed as legally protected monument preservation zones or ensembles (Hesse).**

Assmannshausen  
Koblenz (Ehrenbreitstein)  
Lorch  
Lorchhausen  
Oberwesel  
Presberg  
Ransel  
Rüdesheim

**Monument preservation zones currently being listed:**

—  
Bacharach  
Bornich  
Braubach  
Kaub  
Niederheimbach  
Niederwallmenach  
Oberspai  
Osterspai  
Patersberg  
Rhens  
St. Goar  
St. Goarshausen  
Weisel  
  
—

**Memorandum****Middle Rhine Valley World Heritage Initiative  
Tour of the area by the expert commissioned by ICOMOS, Mr Robert de Jong  
16-20 September 2001.****Additional listings of ensembles protected as cultural monuments**

Article 2, Paragraph 2, No. 1 of the Hesse Monument Conservation Act, stipulates that so-called **ensembles** are to be protected and preserved. Ensembles include streets, squares, and the overall appearance of a town, as well as its associated plant life, open spaces and bodies of water. The following cultural monuments in the towns of Lorch and Rüdesheim have been officially declared such ensembles.

- Town of **Lorch** - the **town centre**, including parts of the former wall surrounding it.
- The part of Lorch known as **Lorchhausen - old town centre** including the garden area along the Rhine and (hillside) vineyards close to the town.
- The part of Lorch known as **Ransel** - ensemble in **core area** between the two village streets.
- Town of **Rüdesheim** - **Old town centre** including the vineyards rising up behind the old town centre with its old paths and cultivatable land designated as a conservation area.
- Town of **Rüdesheim** - **Niederwald nature reserve**
- The part of **Rüdesheim** known as **Assmannshausen - Town centre**
- The part of **Rüdesheim** known as **Presberg - Town centre**

With these additions, **all town centres** in the proposed **core area** of a world heritage site will be listed as ensembles, as will all the town centres in the peripheral area, except for Aulhausen and Eibingen in Rüdesheim.

These cultural monuments and ensembles are officially included on the monument map (see Volume 2, Page 798 ff. of the documentation).

According to the Hesse Monument Conservation Act, **no additional registration or listing procedure is needed to declare a monument protected**. Protection is also extended to cultural monuments that have only recently been recognized as such, provided they meet the material requirements for this status.

(Orth)

5

Rhineland-Palatinate  
State Office for Monument Conservation (LADP)  
Schillerstraße 44,  
Erthaler Hof  
D-55116 Mainz

Office hours: Tuesday and Friday from 9 a.m. - noon

Department of Building and Artistic Monument Conservation

Project officer: Dr Schüler-Beigang  
Direct line: 2016-240  
Office/diary no:  
Date: 15 Oct 2001

State Office for Monument Conservation (LADP), Schillerstraße, D-55116 Mainz

FAO Mr Neugebauer  
Ministry of Science, Continuing Education, Research and Culture (MWWFK)  
Postfach 3220  
D-55022 Mainz

**Review of heritage area boundaries resulting from the tour by the ICOMOS expert on 17-20 September, 2001.**

Re: Middle Rhine Valley World Heritage application

Dear Mr Neugebauer,

At Mr De Jong's suggestion, I hereby send you details of the enlarged Bingen core area he proposed:

The following is a written presentation of the new borders:

(See p. 14 of the German application)

2. Deviating from the boundaries drawn on the basis of natural landscape features, the eastern edge of the proposed World Heritage Area will be considered the **right** bank of the mouth of the Nahe River, so that the Bingen Gap as entrance to the World Heritage Area is amply included. **The riverbank between the Nahe-Eck in the north and Drusus Bridge in the south, including the Catholic parish church of St. Martin, will constitute the border area. The border itself will run around the Drusus Bridge to the south, cross the Nahe, and follow the railway line on the left bank of the Nahe to the railway land in Bingerbrück.** The border on the left bank of the Rhine will **include** the large railway embankment between the mouth of the Nahe and the Rhine, cross the clearly defined rock ridge west of the youth hostel, then follow a dry ditch down the slope, where it joins up with a forest track near the 300-metre contour line.

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Archaeological Monument Conservation - Mainz Office - (06131 - 2016 300 – Geographical Department

**Justification:**

The enlargement of the core area on the riverside on the right-hand bank of the Nahe to include the church of St. Martin and the Drusus Bridge is based on a suggestion made by the ICOMOS expert Mr Robert de Jong, who proposed in the course of his visit to the Middle Rhine Valley that the Drusus Bridge be included in the core area. The Drusus Bridge, one of the oldest medieval stone bridges in Germany, stands on the site of a Roman predecessor. It has a counterpart at the northern end of the proposed World Heritage Area, the Balduin Bridge dating from the 14<sup>th</sup> century, which also had a Roman predecessor. The road on the left bank of the Rhine between Mainz and Cologne, which was strategically important for securing the borders of the Roman Empire, crossed the Nahe and Moselle Rivers respectively via these bridges. The existing bridges are rare examples of medieval stone bridges spanning several arches. Taking the new boundaries as a basis, the church of St. Martin's in Bingen can also be included in the core area, as it forms part of the medieval context. Like the northern border of the area near Koblenz, where the land around the mouth of the Moselle River is included in the territory nominated for World Heritage status, the area around the mouth of the Nahe, the other important left-bank tributary of the Rhine, can now be included as well.

Along with my letter, I enclose five maps showing the new boundaries in detail. One is intended for you; the others are intended for Mr De Jong and the World Heritage Centre in Paris.

Best regards,

p.p.

[signed]

(Dr Christian Schüler-Beigang)

Enclosure: 5 maps

Rhineland-Palatinate State Office for Monument Conservation, Schillerstraße 44, D-55116 Mainz – Tel. 06131 2016 0 Fax 2016 111

### **Reasons for the inclusion of Koblenz in the core area of the Middle Rhine World Heritage Area**

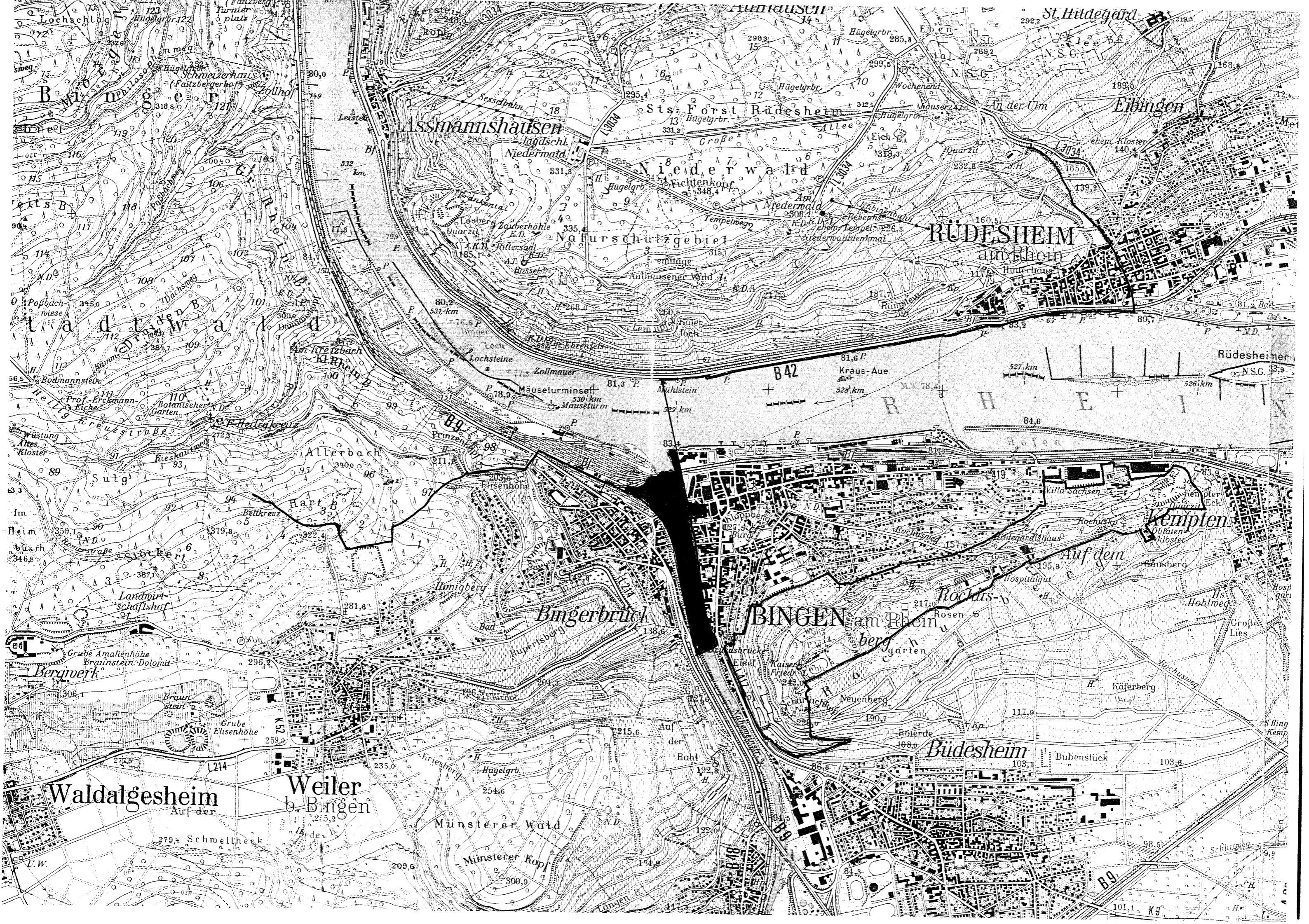
It was owing to the important place taken up by Koblenz in the Upper Middle Rhine Valley region, once as the property of the princes of Trier and later as part of Prussia, that the city's historical old centre and southern suburbs were included in the core area of the nominated UNESCO World Heritage Area. Despite the extensive destruction of the old city in the final stages of the Second World War, this seems justified in several respects, for the following reasons.

Since time immemorial, Koblenz - with its impressive facades overlooking the Moselle River - has graced the view of the northern end of the Upper Middle Rhine Valley (cf. the view of the city in the *Cosmographia* by Sebastian Münster in 1549). Although the city's medieval churches have since been joined by other high buildings, they still form a distinct element of its silhouette. In fact these ancient edifices, some of which were built on the sites of Roman remains, not only characterize the city's silhouette, but also served as models for a whole series of churches in the Middle Rhine Valley region. However, they should not be viewed in isolation, but belong in the context of the city's structure, a structure which still makes itself felt today, despite the loss of many historical buildings. In actual fact, World War II constituted the third major destruction of Koblenz, which had been ravaged by the Thirty Years War (destroyed 50%) and was then laid waste by French troops in 1688 (70%). Nonetheless, the city still boasts remains of a Roman castle, a medieval city wall and a whole series of other historical buildings. The fabric and street layout of the medieval city can still be made out. Urban development in the 18<sup>th</sup> and 19<sup>th</sup> centuries, with the addition of a princely residence and a whole new part of the city, the ring road lined with official buildings erected by the Prussians, and the southern outskirts of the city which are still pretty much in their original state are also still in evidence. The southern outskirts of Koblenz, the development of which was rendered possible after the city's deconsolidation starting in 1890, are a fine example of architecture dating from the *Gründerzeit*, a period of promoterism extending from around 1871 to 1895. The plans for this part of the city were drawn up by the celebrated town planner Joseph Stubbien.

The complex of buildings of both historical and art historical significance and the way they are closely woven into an urban fabric the development of which down the centuries remains in evidence was a decisive factor in including not only the part of Koblenz overlooking the river and stretching up to the mouth of the Moselle at the Deutsche Eck in the core area, but extending it to cover the entire historical old city. Details of the monuments in the southern part of Koblenz and Oberwerth were published in 1986, and another publication focussing on the old city centre is due to be published next year (*Denkmaltopographie Bundesrepublik Deutschland, Kulturdenkmäler in Rheinland-Pfalz* (A topography of monuments in the Federal Republic of Germany - Cultural monuments in Rhineland-Palatinate), volumes 3.1 [1986] and 3.2 [2002]).

Dr Christian Schüler-Beigang





Lochschlag

Hügelgrbr. 122

Assmannshausen

Sts. Forst Rüdesheim

St. Hildegard

Eibingen

Niederwald

Niederwald

RÜDESHEIM

am Rhein

Waldalgesheim

Auf der

Weiler b. Bingen

Bingerbrück

BINGEN am Rhein

Büdesheim

Waldalgesheim

Auf der

Weiler b. Bingen

Münsterer Wald

Münsterer Kopf

Büdesheim

Bubenstück

103,6

Rhineland-Palatinate  
Ministry of Economics, Transport,  
Agriculture and Viniculture (MWVLW)

Mainz, 19 September 2001

**Middle Rhine Valley World Heritage site  
Status of the debate on bridges across the Rhine between St. Goar and St. Goarshausen,  
and also between Bingen and Rudesheim**

**1. Current situation**

- There has been no bridge connecting Mainz and Bingen since the Bingen-Rudesheim railway bridge (which was located outside the core area of the World Heritage site) was destroyed at the end of World War II.
- The local authorities are currently engaged in intense discussions with regard to the need for a bridge over the Rhine between St. Goar and St. Goarshausen.
- The discussion about building an additional bridge over the Rhine is nothing new. Indeed, there were plans along similar lines in the 1980s and 1990s, although back then the federal road planning authorities consistently concluded on the basis of cost-benefit analyses that a bridge between St. Goar and St. Goarshausen could not be deemed viable in terms of transport-related and economic considerations.

**2. Current discussion about a bridge between St. Goar and St. Goarshausen**

- A bridge between St. Goar and St. Goarshausen would cost at least DM 60 million.
- According to the Rhineland-Palatinate authorities, the project raises a large number of questions with regard to the need for a bridge from the transport point of view and the project's economic viability, as well as various ecological and conservation-related issues.
- Where the transport requirements are concerned, a study commissioned by Rhineland-Palatinate's Ministry of Economics, Transport, Agriculture and Viniculture concluded that fewer than 1,000 vehicles a day cross the Rhine by ferry between St. Goar and St. Goarshausen.
- Rhineland-Palatinate would consider a publicly financed bridge project, possibly a public-private partnership with toll charges if there were a demonstrable transport need, provided that the project was not associated with any ecological or landscape preservation problems.

### 3. Feasibility study

The Middle Rhine-Westerwald regional planning authority has decided to commission a feasibility study for such a bridge to establish a basis for an objective discussion at the local government level. This study will consider the transport-related, economic, structural, and financial aspects of such a project as well as considering concerns to do with ecological factors and landscape and monument preservation objectives. Compatibility with the World Heritage project must also be guaranteed.

The results of the feasibility study based on the above framework conditions - particularly with respect to the demonstrated transport-related, economic, and financial requirements – have not yet been published. The regional government will in any case insist that the only possible solution is one that is compatible with the Middle Rhine Valley World Heritage project.

### 4. Bridge between Bingen and Rudesheim

A bridge between Bingen and Rudesheim would lie **outside the core area of the World Heritage site application**. The following considerations are expressly underlined in this connection:

- The regional governments of both Rhineland-Palatinate and Hesse support this project. Plans for a bridge between Bingen and Rudesheim were therefore included in Rhineland-Palatinate's Regional Development Programme III. The anticipated solution as outlined in that development plan is a toll bridge owned by the local authorities with a weight limit of 7.5 tonnes.
- A spatial planning application must now be submitted to establish the legal basis for the collection of toll charges by local authorities. This would be a project scheduled for realization in the medium term.



Rhineland-Palatinate  
Ministry of Economics, Transport,  
Agriculture and Viniculture (MWVLW)

Mainz, 24 September 2001

**Middle Rhine Valley World Heritage site  
Current situation and prospects for viniculture in the Middle Rhine Valley**

**1. Analysis**

Viniculture in the Middle Rhine Valley has been in decline for several years due to the predominance of the area's steep hillsides and the disadvantages this entails in terms of costs and competitiveness for vineyards situated there. Whereas in 1964 there were still 843 hectares of planted vines, by 1989 there were just 631 ha left, and by 1999 this figure had dropped to just 552 ha.

A survey of enterprises with viniculture as their main or secondary activity showed that in 1979, 417 ha of vineyards were still under cultivation by 214 full-time wine-makers. By 1999 this figure had dropped to 86, and the growers in question were cultivating just 316 ha of vineyards. There has also been a clear decline in the number of part-time wine-growers. In 1979 there were 421 part-time wine-growers using 358 ha of vineyards; but by 1999 there were just 193 part-time vintners cultivating 178 ha. These last figures are not entirely comparable with those from 1979 because the basis on which vineyard cultivation was assessed had changed. In 1979, all firms that maintained vineyards and sold products of viniculture were included, but the 1999 figures only included business units larger than 0.30 ha in the survey (which also explains the discrepancies between the data on the area covered by the vineyards in question).

Since the 1970s, considerable efforts have been made to consolidate the cultivatable land in the Middle Rhine Valley. With 95% of land now redistributed, the Middle Rhine Valley has the largest percentage of re-parcelled land in the wine-growing areas of Rhineland-Palatinate. The resulting boost in efficiency has helped prevent an even greater reduction in the area devoted to wine-growing. Due to the consolidation measures, most vineyards can now be maintained using cable winches, and to a lesser degree, direct winches. Today, about 5% of wine-growing land in the Middle Rhine Valley consists of terraced vineyards, while 85% can be tended using a cable winch, and 10% with a direct winch.

The grape variety determining the taste of most wines grown in the region is Riesling. This variety is grown on 75% of the vineyard area currently under cultivation. The second most important grape is the Pinot Noir (or *Spätburgunder*), grown on 32 ha, just under 6% of the area cultivated by wine-growers. A slight bias in favour of growing red varieties of grape in particular (about 9% of cultivated vineyards) as opposed to than other, white varieties has emerged.

## 2. Future prospects

Rhineland-Palatinate's regional government supports the preservation of as much viticulture as possible in the Middle Rhine region. Wine-growing on the terraced hillsides here has been a major feature of the cultural landscape of the Middle Rhine region for centuries and accounts for a significant share of its attraction to tourists. Wine-growing in the Middle Rhine region must be preserved for both economic and ecological reasons. It is not only important as a means of securing vintners' livelihood, but by preserving an open landscape it also makes a significant contribution towards safeguarding the existence of flora and fauna that thrive in warm temperatures.

## 3. Support for viticulture in the Middle Rhine region

The subsidies for wine-growers currently provided by the ministry responsible for viticulture in the Middle Rhine Valley are intended primarily to shore up enterprises whose main occupation is vineyard cultivation and encourage mechanization as a means of reducing the competitive disadvantages of wine-growing on steep-sided hills.

The following subsidies are awarded to this end:

### (1) EU restructuring aid

This measure helps enterprises convert to marketable grape varieties and streamline their business structures. Vintners can apply for investment assistance (up to 30% of investment costs).

This is the second year that EU restructuring grants have been available, and they have been used primarily by enterprises whose main activity is wine-growing in an effort to improve their business structures. In its implementation of available restructuring measures, Rhineland-Palatinate has followed the recommendations of the Middle Rhine Wine-Growers Association (*Weinbauverband Mittelrhein*) and increased the number of different measures available for the year of the application (2001-2002). (Change from stake to wire-frame vine cultivation with simultaneous clearing of every second row).

### (2) Investments in rationalization measures

The purpose of these measures is to boost profitability by providing grants for investment. The companies in question duly receive funding from the federal state to improve the state of any existing vineyard walls in particular.

### (3) Machinery subsidies for steep hillside vineyards

Higher investment subsidies are being offered to companies chiefly engaged in wine-growing to give them the opportunity to exploit modern technology when cultivating their steep hillside vineyards. For example they are encouraged to use mechanized systems for vineyards situated on steep slopes (the subsidy provided totalling up to 35% of the overall investment).

(4) Cultivation subsidies

Wine-growers who cultivate hillside vineyards can still receive a premium to compensate them for the steepness of the area under cultivation. However, vintners must use environmentally-friendly methods of cultivation in order to qualify for such aid, which to a certain extent offsets the competitive disadvantage of cultivating such vineyards.

(5) Sporadic measures for resuming cultivation in discontinued vineyards

If several vintners are interested in resuming cultivation in neglected vineyards, the ministry responsible for viticulture is, in some cases, prepared to provide aid by initiating and promoting a reparcelling process. Such action is currently being considered for the Patersberg area below Kaub Castle.

(6) Promotion of marketing campaigns by bolstering cooperation between restaurants and vintners in the region

Rhineland-Palatinate's ministry responsible for viticulture is supporting the marketing of Middle Rhine wines via campaigns like the "*Bester Schoppen*" (Best glass) initiative, under which prizes were awarded to hotel and restaurant owners along the Middle Rhine who serve good regional wines. The aim was to motivate restaurant owners to sell more regional wines by the glass.

4. **Monitoring by drawing up a digitized viticulture map**

A digitized viticulture map is currently being drawn up. This will enable instant access to up-to-date information on vineyards for use in spatial planning, as well as for planning by individual companies.

Rhineland-Palatinate's ministry responsible for viticulture expects the implementation of the above measures to succeed in halting the decline in the area under vineyard cultivation in the Middle Rhine Valley in the medium term, or at least to slow down this process, and in that way preserve viticulture as an essential characteristic of the Middle Rhine landscape.

Rhineland-Palatinate  
Ministry of Economics, Transport,  
Agriculture and Viniculture (MWVLW)

Mainz, 19 September 2001

**Middle Rhine Valley World Heritage site  
Noise abatement Measures in the Rhine Valley**

**1. Present situation and legal liability**

Traffic noise in the Middle Rhine Valley stems primarily from rail traffic, but also from road traffic on the region's two federal highways, the B 9 and the B 42. There is practically no air traffic noise from Frankfurt airport as the main air corridors bypass the Rhine Valley, and any aircraft that do fly over the Rhine Valley do so at very high altitudes.

**Road noise**

Obligations to implement noise abatement measures in the vicinity of federal highways are the responsibility of the federal authorities. By the end of 2001, the federal government will have provided about DM 7 million in subsidies for noise abatement measures, mainly for windows that provide acoustic insulation and for ventilation units for buildings adjoining federal highways in Rhineland-Palatinate.

**Rail traffic noise**

The legal obligation to implement noise abatement measures along railways applies exclusively to the German state railway company *Deutsche Bahn AG* (DB AG) and the federal government. In principle, DB AG is obliged to implement noise abatement measures along railways only when new construction work or substantial alterations to existing railway line result in noise levels in excess of 64 dB(A) during the day and 54 dB(A) at night.

**In principle, DB AG is under no obligation to implement noise abatement measures for existing railway lines.**

Despite this present legal situation, due to the very high level of noise pollution in the Middle Rhine Valley, the federal states of Rhineland-Palatinate and Hesse have for years been jointly lobbying the federal authorities to allocate funds for noise abatement measures in the region. To this end, the respective transport ministries of Rhineland-Palatinate and Hesse commissioned an expert study on railway noise that was co-financed by DB AG. The resulting report, examining the overall situation with regard to transport noise between Wiesbaden and Rheinbreitenbach, submitted proposals for noise abatement measures when it was published in spring 2001.

Overall, the report concludes that noise abatement measures costing about DM 208 million are necessary in the Rhine Valley. Rhineland-Palatinate's share of the cost amounts to DM 165 million, while Hesse's totals DM 43 million.

### **Special federal programme for noise abatement along railway lines**

The aforementioned efforts made by the regional governments of Rhineland-Palatinate and Hesse prompted the federal government to set up a special nationwide programme, funded to the tune of DM 100 million per annum, for noise abatement along railway lines. In the first phase of this programme aimed at alleviating noise pollution in the Rhine Valley, the federal states of Rhineland-Palatinate and Hesse will receive around DM 83 million.

## **2. Noise abatement measures in the Middle Rhine Valley**

The following measures are planned in connection with the aforementioned project:

- More grinding of rail profiles at regular intervals;

Regular grinding of certain stretches of track (so-called "specially monitored tracks") can considerably reduce track noise, especially from freight trains.

- Active noise abatement measures

For the most part, such measures involve the construction of noise barriers. DB AG submits proposals regarding such noise barriers and discusses them with the local authorities to ascertain whether the authorities in question are willing to implement such sound-insulation measures. If a community gives its consent for the construction of a noise wall, a planning review process is initiated, which takes account of all public interests associated with such an undertaking, including with respect to the preservation of natural resources, monument conservation and the views of concerned local citizens. As a rule, the review process takes at least a year. At the current stage of planning, it can be assumed that about 40 noise barriers of various types will be erected in the Middle Rhine Valley.

- Passive noise abatement measures

Such measures mainly involve the installation of windows providing acoustic insulation and/or fitted with ventilation units. The application of passive noise abatement measures is considered in instances where noise barriers would detract from the appearance of a town or landscape and are therefore not considered feasible. The owners of apartments or buildings in which acoustic insulation windows or ventilation equipment is installed receive subsidies as high as 75% of the cost of the associated investment.

**The noise abatement programme was launched in July 2000. Since May 2001, there has been extensive installation of acoustically insulated windows.**

### **3. Further developments in railway noise in the Rhine Valley**

The noise abatement programme mentioned above certainly represents a breakthrough with regard to improving the noise situation in the Rhine Valley, where most problems stem from railway noise.

The following aspects, which will also tend to further reduce noise pollution in the Middle Rhine Valley, are also worth mentioning:

- Once the new ICE (intercity express) Cologne-Rhine/Main rail link is operational, there will be two fewer intercity trains running along the left-bank of the river. And although the federal state of Rhineland-Palatinate is pushing for additional fast regional trains in some situations, the overall number of passenger trains, and hence the level of noise pollution in the Middle Rhine Valley, will be reduced.
- Much of the present noise pollution can be attributed in particular to the high volume of freight traffic transported along the Rhine by rail. The freight cars fitted with old 'shoe brakes' are especially loud. According to DB AG, these old wagons are now gradually being phased out in favour of considerably less noisy new goods wagons.
- DB AG also claims that for years now the volume of freight transported by rail has been stagnating or is even on the decline, which it takes to suggest that there is no reason to anticipate additional noise being generated by rail freight traffic along the Rhine routes in the medium term.
- For several years now, the federal state of Rhineland-Palatinate has been subsidizing purchases of modern rolling stock (including double-decker coaches) to replace older, noisy passenger cars. The federal state of Hesse has similar programmes.
- Starting at the end of 2003, new passenger coaches for regional trains will be procured in connection with a reorganization of passenger services in the Rhine-Neckar area. The quiet-running passenger vehicles (double-decker coaches) currently in use there will be transferred to the Rhine route, thereby further reducing the noise level there.

#### **4. Summary**

On the whole, the noise abatement programme for railway traffic initiated by the states of Rhineland-Palatinate and Hesse and the measures already under way to renew rolling stock will considerably reduce the level of noise endured by the local population and visitors to the area within the cultural landscape of the Middle Rhine Valley.

Dr Kaufmann