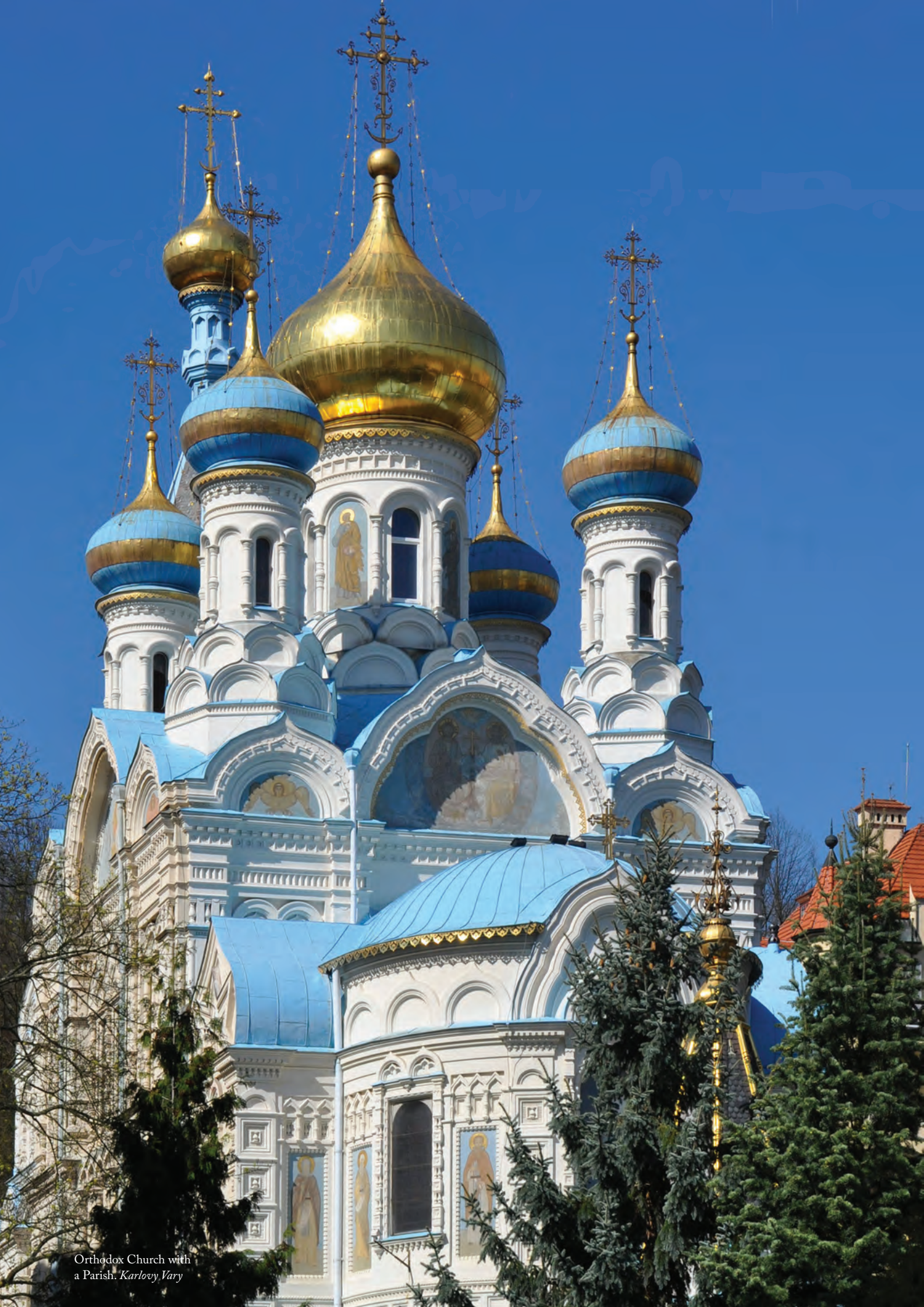


Nomination of
**The GREAT
SPAS** *of Europe*



for inclusion on the
**World Heritage
List**



Orthodox Church with
a Parish. *Karlovy Vary*

4. *State of conservation and factors affecting the property*

The nominated property embraces eleven prominent European spa towns devoted to attracting curists, tourists, and visitors. Therefore, the local authorities, owners and managers of the spa towns, and their specific properties, have always sought to ensure that they are in good condition, attractive and welcoming. A well-maintained town has always been essential for the continued success of the spa, and this is reflected in a general high level of long-term control and continuous and effective care. A large number of key elements in each component part benefit from statutory protection, regular conservation measures, continuous management and daily use.

The eleven spas are complex settlements with many different functions and are all living settlements. There will therefore need to be constant change to meet the developing needs of the communities, always provided that the Outstanding Universal Value of the nominated property is not adversely affected. The overall present state of conservation is good, though inevitably there will always be a few buildings in such a large and complex property which are awaiting or undergoing renovation.

4.a Present state of conservation

4.a.1 State of conservation of the nominated property

Regarding the state of conservation of categories of structures and elements that convey attributes of proposed OUV, the following applies to the nominated property as a whole and uses the same categorisation as used in Chapter 2.a:

1 Springs

The mineral springs are all in good physical and functional condition, the level of their legal protection is high and long standing (in many cases this covers catchments, also), and their level of maintenance, regulatory control and spa-related operational management is appropriately resourced. None is under threat.

2 Urban ensemble of the Spa quarter

The spatial plan and structure of all nominated component parts, as far as this illustrates the distinctive urban typology of *The Great Spas of Europe*, and the specific attributes to each town in this respect, is in a good state of conservation. New projects which are forthcoming in all component parts are subject to appropriate controls that have great respect for this acknowledged attribute. None are under threat.

Building ensembles connected to curative waters

Spa buildings, in use, are in a (very) good state of conservation. Those that are out of use and, in some cases, are currently only in a medium state of conservation are, almost all,

awaiting projects already planned and funded, or awaiting funding, or in one or two cases awaiting a viable alternative adaptive reuse. In such cases the state of conservation is not allowed to deteriorate, and appropriate short-term measures are taken. None is under threat.

Buildings for leisure and pleasure

Theatres, casinos, ballrooms, various halls, etc., are in good condition and almost all in use, though some not always for their original purpose, which is inevitable. Where new uses have been found, this is the result of a positive and collaborative approach to conservation that has focussed on actively managing change whilst conserving and reinforcing historic significance. Such an approach has ensured future economic viability, whilst successfully securing conservation of the fabric and appearance to a high standard. Most key buildings in this category are statutorily protected and subject to strict controls.

Accommodation

Overall the state of conservation is good. Many hotels throughout the property remain in their original use and are conserved and maintained to very high standards. Some hotels have been converted into apartments due to a decline in demand from their heyday, but in most cases their important façades have been sensitively conserved and the character of the property preserved. The number of key inventoried hotels under threat is limited and these are being prioritised. Villas form an important category, and almost all are in a good state of conservation.

Religious facilities: churches and cemeteries

Churches and other religious buildings are all in a good state of conservation, as are cemeteries.

3 The green environment of the ‘therapeutic and recreational spa landscape’

Formal gardens, urban parks and promenades are all in a good state of conservation and very well maintained. Walks and rides that access the landscape surroundings of the spa quarter and which are historically part of ‘taking the cure’ are, in general, in a good state of conservation, well-maintained and in frequent use for their original purpose. The greenery is commonly subject to nature protection and management, whilst towers, pavilions and other features are generally in good condition, well-conserved and maintained. None are under threat. Where the setting is predominantly woodland, threats are only from natural factors, such as storms and fires, whilst the common presence of rivers throughout the property means that there are always potential flood risks. These threats are detailed in section 4.b.

4 Spa infrastructure

Railways remain in use at most of the spa towns, but with conservation control when it comes to historic structures. Industrial structures (such as bottling plants) are mostly in good condition, though their use is commonly not for their original purpose (an inevitable outcome). In most such cases, the properties have been either conserved and used as museums or new uses sympathetic to their historic values have been found. In those cases in which spa infrastructure is not in a good condition there are plans to take action which are defined in the LMPs. Possible threats to some structures are detailed in section 4.b.

5 Scientific, artistic and literary values, events and cultural tradition

Buildings associated with scientific, artistic and literary values, events and cultural traditions are generally in a good state of conservation, and many of them are still used for their original purpose.

6 Setting

The setting of the nominated property is generally in good condition, having an appropriate level of protection and, where relevant, management. The aesthetics of the setting has always been a consideration of spa towns and long-term effective protection is usually the case. Where the setting is predominantly woodland, threats are only from natural factors, such as storms and fires, whilst the common presence of rivers throughout the property means that there are always potential flood risks. These threats are detailed in section 4b).

During conservation, repairs or more substantial renovations of any buildings and structures, heritage protection legislation and local authority planning controls apply and historic significance is respected in any change. Traditional construction materials are being used to the optimum degree, and the surface and colour modifications of buildings and public open spaces are based on careful on-site inspections and study of relevant documentation.

4.a.2 State of conservation of component parts

1. *Baden bei Wien*

AUSTRIA

The overall present state of conservation is very good, with public and private initiatives, maintenance and repair-work being undertaken on a regular basis.

The widely optimal conservation status is the result of awareness among the owners, civil society and political bodies. Various initiatives are backed by an appropriate legal framework together with efficient management of the site including financial support through public bodies.

Civil society's engagement for the protection of historically remarkable buildings goes back to the 1960s. Thanks to the intervention of civil society, sometimes organised as citizens' initiatives, not only the demolition but also the restoration of buildings, which form part of Baden's identity, could be achieved. Citizens' groups were formed and became involved, for example, against the demolition of the Weilburg (1964 - not successful), the upgrading of the road B210 and the blasting of the rock "Urtelstein" in Helenental (1972-1976 – successfully prevented) and the demolitions of the Villa Hahn (1983) and of Villa Orsini-Rosenberg (2005 – both protests were successful). Today at least two citizens' groups are engaged in the protection of green areas where apartment buildings are planned.

Historically, lack of money in the first half of the twentieth century contributed to the preservation of the town's spatial plan, as lack of funds prevented major development works. Following the period after World War II (especially after Austria regained full sovereignty in 1955) with increased investments in the building sector, the "European Year of the Preservation of Monuments" in 1975 contributed substantially towards the

creation of a favourable attitude towards renovation and revitalisation. This initiative of the Council of Europe paved the way to a series of legal instruments and planning tools. Moreover, the Austrian Federal Monuments Protection Authority (Bundesdenkmalamt – BDA) placed a considerable number of buildings under monuments protection. The BDA monitors to a certain level the buildings and monuments which are under monuments protection.

Generally, the buildings – either listed under monument protection or not – are well maintained and are in an excellent state of conservation. However, with regard to poor state of conservation, the “Sommerarena” has to be mentioned. Built in 1906 by the architect Rudolf Krausz in the Art Nouveau style, it replaced the previous timber edifice. The retractable glass roof makes it possible to hold performances (like operettas) under the open skies in fine weather. The renovation of the building is scheduled for 2018.

State of conservation of principal features

No*	Element	State of Conservation	Note
1.1	Springs	Good	
1.2	Urban Ensemble of the Spa Quarter		
1.2.1	<i>Building ensembles connected to ‘curative’ waters</i>		
1.2.1.1	Frauenbad baths	Good	Restoration and careful conversion into the Arnulf Rainer Museum 2007
1.2.1.2	Josefsbad baths	Good	Last restoration in 2006; since 1975 hosting restaurants
1.2.1.3	Leopoldsbad baths	Good	Today tourist information
1.2.1.4	Franzensbad baths	Good	Refurbished in 2006; today a hammam
1.2.1.5	Engelsbad baths	Good	Refurbished in 2015
1.2.1.6	Sauerhof hotel	Medium	Restoration in planning stage
1.2.1.7	Hotel Badener Hof	Good	Restoration 2017
1.2.1.8	Trinkhalle (‘drinking hall’) pump room	Good	Refurbished in 1992-1995
1.2.2	<i>Buildings for leisure and pleasure</i>		
1.2.2.1	Kurhaus	Good	Renovation in 1992-95
1.2.2.2	Sommerarena	Poor	Renovation 2019-21
1.2.2.3	Stadttheater	Good	Renovation in 2015-17
1.2.2.4	Music pavilion in the Kurpark	Good	

*Numbers of elements in this and subsequent tables correspond to numbering in Chapter 2.a

No*	Element	State of Conservation	Note
1.2.2.5	Rollett Museum	Good	
1.2.2.6	Thermalstrandbad Lido	Good	
1.2.3	<i>Accommodation</i>		
1.2.3.1	Magdalenenhof	Good	
1.2.3.2	Residences of the Habsburg Family: Kaiserhaus Baden	Good	Restoration 2010-13, imperial apartments used as museum
1.2.3.3	Residences of the Habsburg Family: Flö rastöckl and Augustinerkloster	Good	Senior High school
1.2.3.4	Schloßhotel Gutenbrunn	Inside good, outside medium	Restoration 2008-10
1.2.3.5	Hotel Herzoghof	Good	Renovation in 1992-94
1.2.3.6	Hotel Esplanade	Fair	
1.2.3.7	Carl Michael Ziehrer Haus	Good	
1.2.3.8	Villa Erzherzog Rainer	Good	Restoration 2014-15
1.2.3.9	Villa Erzherzog Wilhelm (Eugenvilla)	Good	
1.2.3.10	Villa Hauser	Good	
1.2.3.11	Villa Strecker	Good	
1.2.3.12	Villa Hahn	Good	Restoration in 2013
1.2.3.13	Kaiser Franz Josef Ring	Good	
1.2.4	<i>Religious buildings: churches and cemeteries</i>		
1.2.4.1	Frauenkirche church	Good	Refurbished in 2008
1.2.4.2	Evangelical church	Good	Restoration 2016-17
1.2.4.3	Herzoghof chapel	Good	Renovation in 1992-94

1.3 The green environment of the 'therapeutic and recreational spa landscape'

No*	Element	State of Conservation	Note
1.3.1	Kurpark 1796	Good	Refurbished in 2007
1.3.2	Kurpark – Krupka gardens and Beethoven temple	Good	Beethoven temple partly renovated in 2016
1.3.3	Weikersdorfer court garden – Doblhoff-park	Good	Refurbished 2010-15
1.3.4	Helenental parklands; ruins of Rauhenstein Castle	Medium/poor	Restoration 2020-21
1.3.5	Alexandrowicz Anlagen gardens	Medium	Partly wild
1.4 Spa Infrastructure			
1.4.1	Tunnel Urtelstein	Good	
1.4.2	Kinderbewahranstalt Marienkindergarten	Good	Restoration 2011
1.4.3	Kurpark – Glasshouses	Good	
1.5 Internationalism, scientific, artistic and literary values, events and cultural tradition			
1.5.1	Beethovenhaus Baden	Good	Restoration 2012-14, Museum of Ludwig van Beethoven; original wall paintings of the composer's apartment discovered in 2012.
1.5.2	Landhaus Ossolinski	Good	

Current and forthcoming major conservation works:

Renovation of the Sommerarena: after finishing the renovation of the Stadttheater (costs: €3,200,000), in 2019 the municipally construction administration is starting the refurbishment of the Sommerarena-theatre. €2,900,000 will be invested by the City of Baden and the Government of Lower Austria. The works will be finished in 2020.

Renovation of the “Bienenteich”: (“Bee basin”) in the northern part of the Kurpark. This ensemble is an early example of concrete park elements poured. The basin must be sealed again, and its surrounding will be renewed in original style during winter 2018/2019.

Renovation of the “Undine Brunnen”: the famous Jugendstil-jet fountain was restored in 2007 but there is now major water leakage. The pipe system must be renewed and submerged parts of the basin must be rehabilitated. Costs: €70,000.

Renovation of the main façade of the Thermalstrandbad (Thermal Lido): after about 40 years since the last refurbishment, the Art Deco style main façade of the Thermalstrandbad will be restored during the winter 2018/2019. Costs: €90,000.

2. *Spa*

In general, the overall present state of conservation of *Spa* is considered satisfactory to good. For more than two centuries (since the fire of 1807), the city has not experienced major disasters and, unlike other Walloon towns, has been relatively spared by industrial and economic development. *Spa* has been able to maintain its urban structure and many buildings can be described as authentic. The topography is an important part of the development of the city; the steep northern slope naturally limited the urban extension. The city developed around the spring, Pouhon Peter the Great. The fire of the early nineteenth century which destroyed much of the city gave rise to new development and urban improvements that shaped the city today. In the twentieth century, urbanization developed on the southern slope. Initially, it affected the direct vicinity of the historic heart, most often along the existing roads. In the second half of the twentieth century, it extended to the periphery with a residential habitat: the houses are surrounded by vast gardens bordered by hedges. More recently, there has been an increase in land pressure and scarcity of available land. Therefore, urbanization tends to expand by filling voids or by the division of larger properties where sometimes historic villas are found.

The development of car traffic has had a negative impact on public spaces. In response, the city has defined a planned program for redefinition of these spaces where pedestrians are the core concern. The mobility plan adopted in 2017 addresses the parking problem with the goal of dissuading motorists from entering the core city area.

In the eighteenth century, large avenues were designed to allow the spa guests to travel in carriages to the springs located in the forest to the south of *Spa*. Pedestrian walks were also created from the nineteenth century and all of these are preserved, although their aesthetic and architectural features are in need of conservation and some restoration, which is the subject of current planning.

The quality of the water is a constant concern of the City of *Spa*. Its preservation has been the subject of continuous regulations since the eighteenth century. This concern motivated the City of *Spa* to be the first city in Wallonia to have an emergency response plan. For its part, the water marketing company applies sustainable water management, abstracting no more water than can be renewed naturally each year by rain and snow.

State of conservation of principal features

No*	Element	State of Conservation	Note
2.1	Springs		
2.1.1	Sauvenière	Good	
2.1.2	Groesbeek	Good	
2.1.3	Géronstère	Good	
2.1.4	Tonnelet	Good	
2.1.5	Barisart	Good	
2.1.6	Reine	Good	

No*	Element	State of Conservation	Note
2.2	Urban Ensemble of the Spa Quarter		
2.2.1	<i>Building ensembles connected to 'curative' waters</i>		
2.2.1.1	Anciens thermes – old thermal bath	Medium	Building permission is in approval process
2.2.1.2 (=2.5.1)	Pouhon Pierre-le-Grand	Good	Totally refurbished in 2012
2.2.2	<i>Buildings for leisure and pleasure</i>		
2.2.2.1 (=2.5.2)	Waux-Hall	Good	Exterior building envelop refurbished in 2009
2.2.2.2	Casino complex	Good	
2.2.2.3	Léopold II Gallery and its pavilions	Good	
2.2.3	<i>Accommodation</i>		
2.2.3.1	Hôtel d'Irlande	Good	Totally refurbished in 2008
2.2.3.2	Hôtel Bourbon	Good	Totally refurbished in 2012
2.2.3.3	Grand Hôtel – Hôtel de Ville	Good	
2.2.3.4	Hôtel du Midi, later Villa Royale	Medium	Museum project under consideration
2.2.3.5	Hôtel du chalet du Parc	Good	Refurbished in 2016
2.2.3.6	Hôtel Britannique	Good	
2.2.3.7	Hôtel Balmoral	Good	
2.2.3.8	Villa des Fleurs	Good	
2.2.3.9	Château de la Terrasse	Good	
2.2.3.10	Château d'Alsa	Good	
2.2.3.11	Villa San Antonio	Good	
2.2.3.12	Villa White House	Good	
2.2.3.13	Villa Le Freuheux	Good	
2.2.3.14	Château du Neubois	Good	
2.2.3.15	Château de la Fraineuse	Good	

No*	Element	State of Conservation	Note
2.2.3.16	Villa Le Soyeureux	Good	
2.2.4	<i>Religious facilities: churches and cemeteries</i>		
2.2.4.1	Protestant temple	Good	Refurbished between 2013 and 2018
2.2.4.2	Parish church	Good	
2.2.4.3	Cemetery	Medium	As the system of perpetual concessions no longer exists in Wallonia, the municipality has developed a system for the reuse of heritage graves. The updating of the inventory of heritage graves is included in the Local Management Plan.
2.3	The green environment of the ‘therapeutic and recreational spa landscape’		
2.3.1	Parc de Sept Heures	Good	
2.3.2	Promenade Grünne and the “champignon”	Medium	The “champignon” will be restored by the municipal workers
2.3.3	Promenade des Montagnes russes and “de Hesse-Rhinfels” pavilion	Good	Refurbished in 2005
2.3.4	Promenade Annette and Lubin	Medium	A former vista will be restored
2.3.5	Promenade Reickem and Felix Bernard pavilion	Good	
2.3.6	Promenade d’Orléans	Medium	Project with the Wildlife and Forest Department to improve the aesthetic of the river along the promenade
2.3.7	Promenade des Artistes	Medium	Project with the Wildlife and Forest Department to improve the aesthetic of the river along the promenade
2.3.8	Promenade Meyerbeer	Medium	Project with the Wildlife and Forest Department to improve the aesthetic of the river along the promenade
2.3.9	Fountain Tour	Good	
2.4	Spa Infrastructure		
2.4.1	Train station	Good	
2.4.2	Tram shelters	Good	Three of the four shelters refurbished between 2005 and 2011
2.4.3	Ice rooms	Good	

No*	Element	State of Conservation	Note
2.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
2.5.1 (= 2.2.1.2)	Pouhon Pierre-le-Grand	Good	Totally refurbished in 2012
2.5.2 (= 2.2.2.1)	Waux-Hall	Good	Exterior building envelop refurbished in 2009
2.5.3 (= 2.2.3.6)	Hôtel Britannique	Good	
2.5.4 (= 2.3.8)	Promenade Meyerbeer	Medium	Project with the Wildlife and Forest Department to improve the aesthetic of the river along the promenade

Major forthcoming conservation projects:

- Old thermal bath: restoration project under approval process. The project will consist of restoration of listed parts, demolition of some non-listed parts and construction of an extension. The building will be used as high-standard hotel and shops. The creation of an underground car park is also planned.
- Waux-Hall: restoration works of the interior of the monument is under study. The listed building part will be used for a business club and a restaurant. The non-listed building part will be used for the Academy of Fine Arts.
- Villa royale: museum project is under consideration. The project includes restoration of the building and its use with a new scenography of the museum regarding the history of the thermal town. The archival collection of the city will also be moved there.
- Leopold II Gallery and its pavilions: restoration project under study. The entirety of the gallery and the two pavilions will be undertaken. The “Petits Jeux” pavilion will be used for a microbrewery and the “Marie-Henriette” pavilion will be used for a restaurant.
- Parc de Sept Heures: in parallel to the restoration of the Leopold II Gallery, the restoration of the Parc de Sept Heures is planned. The restoration of the two historical major tree-lined driveways is also planned. The wish is to maintain all the activities taking place in the park all year long.

3. *Františkovy Lázně*

The overall present state of conservation is satisfactory, thanks to more than 60 years of preservation of the urban area. Similarly, the park and forest park promenade area has received long-term increased care, because it is considered a natural part of the cure offered to spa guests and residents. The authentic character of many of the valuable buildings has been preserved without any serious or irremovable defects. Fully preserved are the historical structures of façades, including architectonic and construction details, and the main parts of historic windows and door panelling. The basic layout of the main buildings of the spa heritage including the historical and artistic appearance of their interiors also remains intact.

After the Second World War, *Františkovy Lázně* suffered from inadequate maintenance for several decades, but the town buildings on the whole were not significantly changed, and the urban structure basically remained intact; without any significant and irreparable interference. Despite the fact that the Cheb municipal bath was removed after 1945, the integrity of surroundings was not damaged as this spa building was built outside the area of the planned town. In the 1980s, increased investment started to flow into *Františkovy Lázně*, thanks to which more demanding repairs of historical features could be done. New interventions have not detracted from the architectural character of the town. New residential buildings were built in Dolní Lomany, outside the property, so they do not disturb the character of the historic spa town. In 1974, a ring road from Cheb to Aš was finished and the centre of the spa town was closed to traffic and modified into a pedestrian zone, which contributes to the town's integrity.

Development after the politic and economic changes in 1989 meant a fundamental break. As a consequence of ownership changes a new wave of activities focused on repairs came in the 1990s, hand in hand with a new interest in the spa town of *Františkovy Lázně*. The central part of *Františkovy Lázně* spa area was declared an Urban Heritage Reserve in 1992 giving the spa town the highest possible area protection in the Czech Republic. This prominent legal protection has been substantially amended in 2017 when other parts of the historic urban structure and especially large intentionally landscaped areas adjoining the spa centre were added to this protected reserve which now covers the whole area of the component part.

The property has been stabilised and the preservation of its historical image is being respected and monitored. In the field of conservation care, the town council of *Františkovy Lázně* has managed to establish cooperation with the public and private owners of cultural heritage while implementing the interests of protection. With the contributions from various grant schemes (see Chapter 5) it has been possible to save many valuable historical buildings and over the years to carry out a number of restorations and repairs to historically and artistically valuable buildings and connected public areas and parks. The restoration of the Assembly House with sensitive additions and alterations to its vicinity is a good example. The joint stock company Lázně Františkovy Lázně repaired a number of spa buildings, for example the Royal, Goethe, Pawlik, Belvedere and Metropol buildings. The repairs of the Imperial Spa hotel and the Hotel Harvey were demanding. In 2005, the spa company Lázně Františkovy Lázně opened a new Aquaforum, which with its use of classical architectural styles returns to the tradition of ancient spas and suitably fits into the context of Classicist spa architecture. A particular emphasis was placed on its material connection to the current street front.

A sensitive approach is also applied to the revitalisation of greenery, parks and forest parks within the inner and outer spa landscape. The greenery is regularly maintained and opened to the public. In the spa area, trails connecting important spa gardens and parks were restored. Since 1994, a gradual enhancement of the public greenery of central parks (alterations of communications, lighting, movables, artistic decoration and flowerbeds) has been in progress. Previously removed monuments of prominent Austrian personalities, such as the emperors Franz I, Josef II, as well as Franz Josef I, were reinstalled in the parks thus enhancing historic integrity. The town has gradually enhanced four spa trails marked by hearts (Heart trails), leading to the surrounding forest parks. In the town's therapeutic landscape, paths in the forest park Amerika were altered and a petting farm was created there.

State of conservation of principal features

No*	Element	State of Conservation	Note
3.1	Springs		
3.1.1	Františkův (Franz's Spring)	Good	Restored
3.1.2	Luisin pramen a Studené Vřídlo (Louisa's Spring and Cold Hot-spring]	Good	Restored
3.1.3	Solný pramen (Salty Spring)	Poor	Restoration planned
3.1.4	Luční pramen (Meadow Spring)	Medium	Restoration planned
3.1.5	Adlerův (Adler's Spring)	Good	
3.1.6	Nový pramen (New Spring)	Medium	
3.1.7	Glauber III	Good	Restored along with the interior of the Glauber Springs Hall
3.1.8	Glauber IV	Good	Restored along with the interior of the Glauber Springs Hall
3.1.9	Kostelní (Church Spring)	Good	Restored along with the interior of the Glauber Springs Hall
3.1.10	Natalie	Poor	Restoration planned
3.1.11	Glauber I	Medium	
3.1.12	Sluneční (Sun Spring)	Good	Restored in 2012 and 2018
3.2	Urban Ensemble of the Spa Quarter		
3.2.1	<i>Building ensembles connected to 'curative' waters</i>		

No*	Element	State of Conservation	Note
3.2.1.1	Franz's Spring Pavilion	Good	Restored 2013-2014
3.2.1.2	New Colonnade with the Gas Baths	Good	Gas baths refurbished 2014
3.2.1.3	Luisa's Spring and Cold Spring Pavilion	Good	Refurbished 2014
3.2.1.4	Colonnade of the Salty and Meadow Springs	Good/medium	Refurbished 2009-2013, the pavilion of the Salt spring will need some refurbishment due to the corrosive quality of the water
3.2.1.5	Glauber Springs Hall	Good	Restored 2005
3.2.1.6	Spa Pavilion of Natalia's Spring	Poor	Awaiting restoration and opening of the hall to the public Awaiting new restoration
3.2.1.7	Luisa's Spa	Poor	
3.2.1.8	Imperial Spa	Poor	The main building partially restored, the swimming pool is waiting to be restored and opened to the public
3.2.1.9	Moor Spa	Poor	Awaiting restoration and opening of the hall to the public
3.2	<i>Buildings for leisure and pleasure</i>		
3.2.2.1	Assembly House*	Good	
3.2.2.2	Božena Němcová Theatre	Good	Refurbished 2014
3.2.3	<i>Accommodation</i>		
3.2.3.1	The House at the Three Lilies*	Good	
3.2.3.2	The House at the Roman Emperor (To the Imperial Crown of Austria)	Good	
3.2.3.3	The House at the Black Eagle (today part of Hotel Slovan)*	Poor	Awaiting new restoration and opening to the public
3.2.3.4	The Beethoven House (At The Two Golden Lions)*	Good	
3.2.3.5	The Beseda House (Archduke Stephen, Russian House)*	Good	

No*	Element	State of Conservation	Note
3.2.3.6	Spa Hotel Savoy (The Town of Leipzig)*	Good	
3.2.3.7	The J. W. Goethe Spa House (The Grand Duchess of Russia)*	Good	
3.2.3.8	The May Spa House (The Golden Well)	Good	
3.2.3.9	The Windsor Spa House*	Poor	Awaiting new restoration and opening of the hall to the public
3.2.3.10	The Rubeška Spa House (Belle Alliance)	Good	Refurbished 2007
3.2.3.11	The Metropol Spa House	Good	
3.2.3.12	Hotel Pawlik (Royal Villa)	Good	
3.2.3.13	Villa Imperial*	Good	
3.2.3.14	Villa Steinsberg	Good	
3.2.3.15	Municipal Museum – The Fire Brigade Villa	Good	
3.2.4	<i>Religious facilities: churches and cemeteries</i>		
3.2.4.1	Church of the Exaltation of the Holy Cross	Good	Restored 2011-2012
3.2.4.2	Evangelical Church of St. Peter and St. Paul	Good	
3.2.4.3	Orthodox Church of St. Olga	Medium	External cladding restored, further work in progress (bottom part of the bell-tower)
3.3	The green environment of the ‘therapeutic and recreational spa landscape’		
3.3.1	Městské sady (City Park)	Good	
3.3.2	Jižní zahrady (Southern gardens)	Good	

No*	Element	State of Conservation	Note
3.3.3	Bedřich Smetana Park	Good	
3.3.4	Parks of the Salty and Meadow springs	Good	
3.3.5	Westend Park	Medium	
3.3.6	Lesopark Amerika (Amerika forest park)	Medium	
3.3.7	Lesopark u Nataliina pramene (Forest park near Natalia's Spring)	Medium	
3.3.8	Amerika Restaurant	Good	
3.3.9	Salingburg Lookout Tower	Good	
3.3.10	The Zámeček (Château) Tourist Restaurant (Dankwarte)	Good	
3.4 Spa infrastructure			
3.4.1	Spa Health Centre (Mineral Water Bottling Plant)	Good	
3.5 Internationalism, scientific, artistic and literary values, events and cultural tradition			
3.5.1	Guesthouse Stadt Dresden	Good	
3.5.2	Guesthouse Palace hotel (Deutsches Haus)	Good	Partially restored in 2018

Major forthcoming conservation projects

- Renovation and extension of the Luisa's Spa: the planned restoration will include the use of the premises for a rehabilitation clinic with 200 beds. Balneology services will be retained in the building; in the southern part (now a parking lot) a new building is planned which will not harm the structure of the historical part.
- Renovation of the Imperial Spa: the restoration will concern mainly the historic circular pool in the courtyard and access to it from the building's vestibule. Historical balneology services will be fully maintained here.
- Restoration of the Moor Spa: a new museum documenting the historical development of peat treatments in *Františkovy Lázně* should be opened here. The reopening of the balneological operation is not planned.
- Spa Pavilion of Natalia's Spring: the pavilion and the spring source will be restored and opened again to the public. The historical status of the object as well as the adjacent area will be fully respected and maintained.
- The House at the Black Eagle (Hotel Slovan): The planned repair of two historical spa houses will keep their original historical structure including all the valuable preserved items.
- Restoration of the Old Colonnade: the old Colonnade burnt down in 1914 and was not restored. At present, its restoration is being planned in correspondence with its historical appearance.
- Hotel Atlantis: on the site of the historic house of Atlantis, a new hotel is planned which will respect the original urban design/ volume and the height level of the surrounding buildings.

These and further projects are detailed in the Local Management Plan.

4. *Karlovy Vary*

The overall present state of conservation is good or satisfactory, thanks to more than twenty-five years of preservation of the urban area. Similarly, the park and forest park area ("therapeutic spa landscape") has been the long-term subject of increased care, because it represents a natural part of the cure offered to spa guests. The authentic appearance of a major part of the listed and other valuable buildings has been preserved without any serious or irremovable defects. The historical façades, including many authentic architectural and construction details, have been fully preserved. Similarly, the main parts of historic windows and door panelling are preserved. The basic layout of the most important buildings of spa heritage including the historical and artistic decorations of their interiors is intact and in good condition.

After the World War II, *Karlovy Vary* suffered from several decades of inadequate maintenance, but the town buildings on the whole were not significantly changed. The Vřídelní (Hot Spring) Colonnade and Hotel Thermal introduced larger, new buildings into the townscape in the third quarter of the twentieth century, at a time when important

urban complexes in the Czech Republic, such as *Karlovy Vary*, were not yet protected by conservation law. Nevertheless, both these buildings were designed with the aim of implementing contemporary ideas of modern architecture and reflect increasing international popularity of this spa even in the era of the Iron Curtain. Hotel Thermal, serving as the base for the International Film Festival, is nowadays especially considered to be a significant building designed by prominent architects.

Development after the political changes in 1989 meant a fundamental break. Large changes in ownership and a new wave of building and restoration activities came in the 1990s, hand in hand with general development and new interest in the spa town. The majority of listed buildings as well as other architecturally and historically valuable buildings have been repaired, and gap sites, which emerged in the second half of the twentieth century, have been filled according to the regulations of materials and architectonic solutions resulting from conservation principles applied since 1992 (see Chapter 5.b and 5.c). Alterations were also carried out to improve the condition and appearance of public areas, streets, promenades, woodland paths etc.

During the last twenty years, there has been a qualitative change in the approach to caring for the tangible and intangible spa heritage of the town. Positive results in shifting the understanding of values have been brought through initiatives from civic associations, which have been active in the town and the *Karlovy Vary* region. They have helped state and local authorities to face-up to, and mitigate, unsuitable building alterations. The preservation of *Karlovy Vary* is defined by the system of legal regulations, which are mutually interconnected and respect each other, thereby creating good conditions for preserving all functions and values of the spa town (see Chapter 5.b and c).

The state of the property has been stabilised and the conservation of its historical image is being respected and monitored. In the field of heritage care, the town council of *Karlovy Vary* has managed to establish cooperation with the public and private owners of cultural heritage while implementing the interests of protection. With contributions from various grant schemes (see Chapter 5.f) it has been possible to save many valuable historical buildings and to carry out a number of restorations and repairs to historically and artistically valuable buildings and connected public areas and parks. All restoration works are subject to supervision by the heritage preservation authorities.

As recent successful examples of heritage care, the following restoration projects can be mentioned: the restoration of the Municipal Theatre, the restoration of the Castle tower, the restoration of the Market, Mill and Park Colonnades, the restoration of the Military Spa Institute and the restoration of many spa houses situated in the centre of the *Karlovy Vary* Urban Heritage Reserve. However, the state of conservation of several important buildings is poor and extensive restoration works will be necessary in the future (see the Management Plan).

A sensitive approach is also applied to the revitalisation of greenery, parks and forest parks within the inner and outer spa landscape of *Karlovy Vary*. The greenery is regularly maintained and opened to the public. There is a large number of gazebos, follies, memorial sites and other tiny structures standing on the nodal points of a net of ca. 120 km of maintained walking paths in the outer spa landscape. During last 25 years, tens of such objects contributing to the spa milieu were repaired including the Charles IV lookout tower, the chapel and tourist restaurant of St. Linhart, or the Peter the Great monument.

State of conservation of principal features

No*	Element	State of Conservation	Note
4.1	Springs		
4.1.1	Vřídlo (Hot Spring)	Good	Restoration of the Hot Spring Colonnade has been prepared, the outflow of the Hot Springs has been temporarily moved in front of the colonnade, it is in a good state.
4.1.2	Karla IV. (Charles IV Spring)	Good	Restored 2017-2018
4.1.3	Horní zámecký (Upper Castle Spring)	Good	Restored 2000-2001
4.1.4	Dolní zámecký (Lower Castle Spring)	Good	Restored 2017-2018
4.1.5	Tržní (Market Spring)	Good	Restored 2017-2018
4.1.6	Sadový (Park Spring)	Good	
4.1.7	Mlýnský (Mill Spring)	Good	Restored 2001-2002
4.1.8	Rusalka	Good	Restored 2001-2002
4.1.9	Libuše	Good	Restored 2001-2002
4.1.10	Knížete Václava (Prince Václav Spring)	Good	Restored 2001-2002
4.1.11	Skalní (Rock Spring)	Good	Restored 2001-2002
4.1.12	Svobody (Spring of Freedom)	Good	
4.1.13	Dorotka	Medium	
4.1.14	Hadí (Snake Spring)	Good	Restored 2000-2002
4.1.15	Železnatý (Iron Spring)	Good	
4.2	Urban Ensemble of the Spa Quarter		
4.2.1	<i>Building ensembles connected to 'curative' waters</i>		
4.2.1.1	Císařské lázně (Lázně I) [Imperial Spa]*	Poor	The operation was closed down after 1989. Currently a complete restoration is being prepared.

No*	Element	State of Conservation	Note
4.2.1.2	Lázně III (Kurhaus)	Medium	After a fire in 2002 it was partially repaired in 2004, the interior of the Dvořák Concert Hall was renovated.
4.2.1.3	Vojenský lázeňský ústav [Military Spa Institute]	Good	
4.2.1.4	Alžbetiny lázně (Lázně V) [Elisabeth's Spa]	Poor	Restoration of the building has been prepared.
4.2.1.5	Pavilon Svobody [Liberty Spring Pavilion]	Good	
4.2.1.6	Mlýnská [Mill] Colonnade*	Good	
4.2.1.7	Tržní [Market] Colonnade*	Good	
4.2.1.8	Sadová [Park] Colonnade	Good	
4.2.1.9	Zámecká [Castle] Colonnade	Good	
4.2.1.10	Vřídlo [Hot Spring]	Poor	The restoration of the building has been prepared. The basement of the Hot Spring was repaired and opened to the public.
4.2.2	<i>Buildings for leisure and pleasure</i>		
4.2.2.1	The Municipal Theatre*	Medium/good	Buildings for leisure and pleasure Roof is being repaired
4.2.2.2	The Art Gallery	Good	
4.2.2.3	Slavnostní sál at Grandhotel Pupp [Festivity Hall]	Good	
4.2.2.4	Poštovní sál [Postal Hall]*	Poor	The restoration of the building has been prepared.
4.2.2.5	Hotel Ambassador – Národní dům*	Good	
4.2.3	<i>Accommodation</i>		
4.2.3.1	Peter Bathhouse (The Golden Ox)	Good	
4.2.3.2	Bathhouse The Maltese Cross	Good	

No*	Element	State of Conservation	Note
4.2.3.3	The Mattoni Trinkhalle	Good	
4.2.3.4	Zawojski Bathhouse	Good	
4.2.3.5	House of Three Moors*	Good	
4.2.3.6	Bathhouse and Café Elephant	Good	
4.2.3.7	Grandhotel Pupp*	Good	
4.2.3.8	The Imperial Hotel and Sanatorium	Good	
4.2.3.9	The Bristol Palace Hotel and Sanatorium	Good	
4.2.3.10	Villa Lützow	Good	
4.2.3.11	Villa Artemis (Villa Stainl)	Good	
4.2.3.12	Villa Chopin (Villa Schäffler)	Good	
4.2.3.13	Villa Becher	Good	
4.2.3.14	Trocnov Sanatorium	Good	
4.2.4	<i>Religious facilities: churches and cemeteries</i>		
4.2.4.1	Decanal church of St. Mary Magdalene	Good	
4.2.4.2	St. Andrew's Church	Good	
4.2.4.3	Evangelical Church of St. Peter and Paul	Good	
4.2.4.4	The Anglican Church of St. Lucas	Medium	It was repaired and re-opened to the public in 2014, there is a permanent display opened in the interior.
4.2.4.5	Orthodox Church with a Parish	Good	
4.2.4.6	Catholic, Protestant and Jewish cemeteries		

4.3 The green environment of the 'therapeutic and recreational spa landscape'

No*	Element	State of Conservation	Note
4.3.1	Gloriette of Dorothea von Biron*	Medium	
4.3.2	Pavilion of Lord Findlater	Good	
4.3.3	Maier Gloriette	Good	
4.3.4	Vyhlídká Karla IV [Charles IV Lookout]	Good	
4.3.5	Goethova vyhlídka [Goethe Lookout]	Poor	The restoration of the building has been prepared.
4.3.6	Diana Lookout	Good	
4.3.7	Garden restaurant Small Versailles	Good	
4.3.8	St. Linhart's Church	Good	
4.3.9	Dvořákovy sady [Dvořák's Park]	Good	
4.3.10	Goethova stezka [Goethe's trail, Poplar Alley]	Poor	Complete restoration is being prepared.
4.3.11	Chotkova pěšina [Chotek's Footpath]	Good	
4.3.12	Labitzkého a Findlaterova stezka [Labitzky and Findlater paths]	Good	
4.3.13	Odpolední cesta (Čtyřhodinová promenáda) [Afternoon path, Four-hour promenade]	Good	
4.3.14	Turgeněvova a Gogolova cesta [Turgenev and Gogol paths]	Good	
4.3.15	Stará pražská silnice [Old Prague Road]	Poor	Restoration in progress

No*	Element	State of Conservation	Note
4.4	Spa infrastructure		
4.4.1	Filling Plant and Distribution of Mineral Water	Poor	Complete restoration is being prepared
4.4.2	Old Basement of the Vřídelní [Hot Spring] Colonnade	Good	
4.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
4.5.1	House Walter Scott	Poor	
4.5.2	Hotel Savoy Westend	Good	Restored between 2004 and 2005
4.5.3	Hotel Bristol Vila Tereza	Good	Restored to fulfil a function of a wellness hotel
4.6	Spa landscape	Good	

Note: asterisk (*) denotes the buildings and features which also provide the evidence and demonstrate scientific, artistic and literary values, events and cultural traditions.

Major forthcoming conservation projects:

- Hot Spring Colonnade: it was decided that the existing modern colonnade which is exposed to the strong corrosive effects of the Hot Spring will be maintained and repaired. A tender for restoration works is being prepared.
- Imperial Spa: a complete restoration is being planned with preservation of all heritage values including the Peat pavilion. The building should serve cultural purposes.
- Elisabeth Spa: the Elisabeth Spa will be restored while maintaining the original balneological facilities.
- Repair of the Goethe Lookout: The structure will serve its original function as a lookout tower. Additionally, a restaurant next to it should be newly built according to the original plans of the late nineteenth century.
- Restoration of the Postal Hall: the Postal Hall including the historic building and the two garden pavilions will be restored; a small brewery is envisaged in the sala terrena.
- Vřídelní street: the extensive gap in the Vřídelní street, which can be traced back to the 1960s, is planned to be filled with new houses respecting the historical urban structure.

These and further projects are detailed in the Local Management Plan.

5. *Mariánské Lázně*

The overall present state of conservation is good or satisfactory, thanks to more than twenty-five years of preservation of the urban area. Similarly, the park and forest park area (“therapeutic spa landscape”) receives long-term increased care, because it represents a natural part of a cure offered to spa guests. The authentic appearance of a major part of the valuable buildings has been preserved in, without any serious or irremovable defects. The historical façades, including architectural and construction details are fully preserved. The basic layout of the principal spa buildings including the historical and artistic decorations of their interiors is also intact.

After the World War II, *Mariánské Lázně* suffered from several decades of inadequate maintenance, but the town buildings on the whole were not significantly changed. The spa area of the town, cleared of the traffic load, has gradually been recovered since the 1970s. An annex of hotel Krakonoš was built, the Monty convalescence home with its annex Děvín was refurbished, and a rehabilitation centre for the Traffic company (Střelnice) was built. Considerable attention was also paid to park maintenance and their extension. The more vigorous entry of larger new buildings into townscape happened in the third quarter of the twentieth century, including the demolition of the block of the Teplá House, which opened the previously enclosed Mírové Náměstí (Peace Square). This was at the time when urban complexes in the Czech Republic such as *Mariánské Lázně* were not yet protected by conservation law. The complete restoration of the colonnade in 1976-86 was extremely demanding; and a new element – the Singing Fountain – was incorporated. Being harmonious with the colonnade and promoting the spa atmosphere, it has become a phenomenon of the spa town.

Development after the political changes in 1989 meant a fundamental break. Large ownership changes and a new wave of building and restoration activities came in the 1990s, hand in hand with new interest in the spa town of *Mariánské Lázně*. The majority of cultural sites as well as other architecturally and historically valued buildings have been repaired, and gap sites, which emerged in the second half of the twentieth century, have been filled in, following the conservation regulations of materials and architectural solutions applied since 1992 (see Chapter 5.b and 5c). Alterations were also carried out aimed at improving the condition of public areas, streets, promenades, and wood paths.

During the last twenty years, a qualitative change has occurred in the approach to the care of the tangible and intangible spa heritage of the town. Care regarding the component part is defined by the system of legal regulations, which are interconnected and mutually respect each other, thereby creating conditions for preserving all functions and values.

As a whole, the property is stabilised and the preservation of its historical image is being respected and monitored. In the field of conservation care, the town council of *Mariánské Lázně* has established cooperation with the public and private owners of cultural heritage while implementing the interests of protection. With contributions from various grant schemes (see Chapter 5) it has been possible to carry out a number of restorations and repairs of historically and artistically valuable buildings and connected public areas and parks. These include the restoration of the Central Spa, New Spa with Roman baths, Moor Baths on Maria Spa and many spa houses situated in the *Mariánské Lázně* Urban Heritage Reserve.

However, the state of conservation of several important buildings is still medium or poor and extensive restoration works will be necessary in the future (see the Management Plan).

A sensitive approach is also applied to the revitalisation of greenery, parks and forest parks within the inner and outer spa landscape of *Mariánské Lázně*. The greenery is regularly maintained and opened to the public, some vistas and lookout points should be renewed within next years. In the spa area, trails connecting important spa gardens and parks have been restored. The town of *Mariánské Lázně* has also gradually enhanced four routes (Edward's, Royal, Goethe's and Metternich's) and other walking tracks leading to the surrounding forest park.

State of conservation of principal elements

No*	Element	State of Conservation	Note
5.1	Springs		
5.1.1	Křížový (Cross Spring)	Good	
5.1.2	Karolinin (Carolina's Spring)	Good	
5.1.3	Mariin (Mary's Spring)	Poor	Restoration planned
5.1.4	Lesní (Forest Spring)	Medium	
5.1.5	Alexandřin (Alexandra's Spring)	Good	
5.1.6	Ferdinandův (Ferdinand's Spring)	Poor	Restoration planned
5.1.7	Rudolfův (Rudolph's Spring)	Poor	Restoration planned
5.1.8	Prelátův (Prelate's Spring)	Good	
5.1.9	Pirátův (Pirate's Spring)	Good	
5.1.10	Medvídě (Baby Bear Spring)	Good	
5.1.11	Balbínův (Balbin's Spring)	Good	

No*	Element	State of Conservation	Note
5.2	Urban Ensemble of the Spa Quarter		
5.2.1	<i>Building ensembles connected to 'curative' waters</i>		
5.2.1.1	Central Spa (Old Spa)	Good	
5.2.1.2	Moor Baths	Good	In 2011 sensitively adapted into a new balneo-therapeutic complex.
5.2.1.3	New Spa	Good	Restored 2008
5.2.1.4	Army Spa Treatment Facility	Good	
5.2.1.5	Colonnade Temple of Cross Spring	Good	
5.2.1.6	Spa Colonnade with the Singing Fountain	Good	
5.2.1.7	Pavilion of Caroline's Spring	Good	
5.2.1.8	Pavilion and Colonnade of the Forest Spring	Medium	Awaiting new restoration
5.2.1.9.	Colonnade of Ferdinand's Spring	Medium	Awaiting new restoration and opening of the hall to the public
5.2.1.10	Pavilion of Rudolph's Spring	Medium	Awaiting new restoration
5.2.2	<i>Buildings for leisure and pleasure</i>		
5.2.2.1	Kursaal – The Casino Assembly Rooms*	Good	
5.2.2.2	Municipal Theatre*	Good	The building has been sensitively renovated in 2009
5.2.3	<i>Accommodation</i>		
5.2.3.1	Golden Grape House*	Good	Converted to Municipal Museum in 1975-1979
5.2.3.2	Green Cross House – today Split	Poor	Complete restoration is being prepared
5.2.3.3	The Kavkaz Spa House (originally Klebelsberg's Palace, later Stadt Weimar, King of England)*(Stern)	Poor	Complete restoration is being prepared

No*	Element	State of Conservation	Note
5.2.3.4	Star Spa House (Stern)	Good	
5.2.3.5	Palladio Spa House	Good	
5.2.3.6	Grand Spa Hotel Marienbad	Good	
5.2.3.7	Hotel and Spa House Pacifik (originally Ott)	Good	
5.2.3.8	Hotel Bohemia (originally Fürstenhof)	Medium	
5.2.3.9	Hotel Esplanade*	Good	
5.2.3.10	Café Egerländer (now Hotel Monty)*	Good	
5.2.3.11	Villa Patriot	Good	
5.2.3.12	Villa Lil (Luginsland)*	Poor	Restoration in progress
5.2.3.13	Villa Turba (library)*	Good	
5.2.4	<i>Religious facilities: churches and cemeteries</i>		
5.2.4.1	Roman-Catholic Decanal Church of the Assumption of the Virgin Mary	Good	
5.2.4.2	Orthodox Church of St. Vladimir	Good	
5.2.4.3	Anglican Christ Church*	Good	
5.2.4.4	Evangelical Church*	Good	Restored and re-opened to the public during 1999-2002
5.2.4.5	Municipal cemetery		
5.2.4.6	Jewish cemetery		

5.3 The green environment of the 'therapeutic and recreational spa landscape'

5.3.1	Skalníkovy sady (centrální park) [Skalník's or Central Park]	Good	
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No*	Element	State of Conservation	Note
5.3.2	Hamelika Lookout Tower	Good	
5.3.3	Golf Course*	Good	
5.3.4	Mecserý's Vista	Good	
5.3.5	Karl's Cross	Good	
5.3.6	Queen Karola's Vista	Good	
5.3.7	Friedrich's Rock – Friedrichstein	Good	
5.3.8	Goethe's Landing	Good	
5.3.9	The Landing of Abbot Clementso	Good	
5.3.10	Path of Prince Schwarzenberg	Good	
5.3.11	Goethe's Path	Good	
5.3.12	Krakonoš and Fairytale paths	Good	
5.3.13	Edward's Path	Good	
5.3.14	Metternich's Path	Good	
5.3.15	Duncan's Path	Good	
5.3.16	Smetana's Alley and Alley of Freedom	Good	
5.4	Spa infrastructure		
5.4.1	Excelsior Bottling Plant (the Saltworks)	Good	Completely restored in 2018
5.4.2	The Kolonáda Spa Wafer Plant	Good	
5.4.3	Town Hall	Good	
5.4.4	Post Office	Good	
5.4.5	Spa Directorate	Good	The building has been sensitively renovated
5.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
5.5.1	Guesthouse Jetelový lístek	Medium	

No*	Element	State of Conservation	Note
5.5.2	Guesthouse U bílé labutě (now Chopin)	Good	
5.5.3	Hotel Anglický dvůr (English Court)	Good	
5.5.4	Bathhouse Balmoral	Good	

Note: asterisk (*) denotes the buildings and features which also provide evidence and demonstrate scientific, artistic and literary values, events and cultural traditions.

Major forthcoming conservation projects:

- The Kavkaz Spa House: having been disused for more than a decade, the hotel complex necessitates a demanding restoration. The project documentation, which envisages preservation of all historical values has already been prepared. The damaged wings in the courtyard will be replaced by new structures. They will again be used for spa guests.
- Green Cross House (Split House): it will be restored in a similar way to the neighbouring Kavkaz Spa House, with which it forms a coherent complex.
- Villa LIL (Luginsland): Restoration of Villa LIL has already commenced. Heritage values will be preserved, in the interior historical furniture will be added based on surviving iconography.
- Hotel Rozkvět (Halbmayer House): project documentation for restoration of this recently burnt-out building has already been prepared. The new building will be constructed according to historical documentation.
- Arnika (Tepl House): the gap on the southern side of the Mírové square is to be filled by new housing which will respect the historic urban structure. The project has not been elaborated yet.

For details see the Local Management Plan.

6. Vichy

FRANCE

The present state of conservation is generally satisfactory. The spa business has never suffered any interruption apart from the four years when it was occupied by the Government of the French State from 1940 to 1944. The second reason for this good state of conservation lies in the fact that Auvergne's relatively late economic development in the second half of the twentieth century meant that *Vichy's* heritage was spared the deterioration associated with recent urbanisation that has afflicted many French towns.

The sole factor affecting the quality of welcome has been the invasion of the historic centre by the motor car since the 1960s. The policy of renovation of public spaces undertaken by the new municipality in 1989 has gradually corrected this situation, restoring a large area to pedestrians, while introducing a quality of landscaping that ensures the continuity of the rich spa heritage.

Meanwhile, the built heritage has benefited from an extensive rehabilitation programme, in particular the Spa Revival Plan launched in 1987 by the State, the Compagnie Fermière de *Vichy*, the Town and the Department, as well as several conversions of historic spa buildings, based on restoring their heritage. In every case, the goal was to promote the facilities for the reception of visitors by providing facilities for activities such as regional neighbourhood tourism, business and congress tourism, sports tourism, teaching French to foreigners, or intermodal exchange. At the same time, the policy of rehabilitation of former hotels and residential buildings, which has been conducted without interruption for 25 years with help from the State and the Region, has rehabilitated a large proportion of the residential buildings and town houses constructed during the great days of water cures. Specifically, 17 Building Restoration Operations are listed relating to derelict hotels or villas since 2002. In parallel, since 1990, 1,300 residential units have been rehabilitated, 566 of them vacant and put back on the market, in the framework of four successive OPAH (Programmed Housing Improvement Operations conducted by the municipality).

In addition to the classification or registration of a considerable number of heritage buildings in the Historic Monuments inventory (49 buildings in the town are currently registered and/or classified), all these actions, both public and private, have been closely supervised by the ZPPAUP (Urban and Landscape Architectural Heritage Protection Zone) set up in 1991 (renamed a SPR – Heritage Site of Special Interest since the LCAP law of 7 July 2016), whose directions have made it possible to conserve this impressive collection of architecture that characterizes the Queen of Spa Towns in its entirety.

In the last few years, this process of renewed control has been extended to include the relationship between the historic centre and its environment, especially by the renovation of the area adjoining the River Allier, which runs past it. This immense programme of ecological and landscaping restoration, which is continuing now in the context of the project for the town up to 2025 embarked upon by Municipality of Greater *Vichy*, gives considerable weight to the development of footpaths and cycle tracks for both visitors and inhabitants.

In conjunction with research in progress on exploiting the energy potential of the underground hydrothermal system, this important orientation in favour of the environment and quality of life is an additional factor in the sustainable development model, whose foundations were laid by the spa resort and include urban compactness, building density, extensive public spaces, and the considerable value attached to vegetation.

In consequence of all the different levels of protection characterizing the various elements in its composition, the property is not under threat. As regards the private heritage within the limits of the property, it can be considered that this is not under threat either, for two reasons:

- the protection legislation and method implemented over the last 25 years by the town planning department of Vichy in collaboration with the Architecte des Bâtiments de France are of proven effectiveness, and have given rise to a movement for the restoration of façades and the rehabilitation of heritage buildings.
- the town's economic and touristic revival is to a large extent, and consensually, based on the quality of its architecture and the highlighting of its historic heritage, which is almost without exception enhanced by owners and investors.

The various spa buildings, parks and springs, on the other hand, are mainly the property of the State, and are covered by the protection measures linked to their classification or registration as Historic Monuments. The fact that they are in the public domain thus constitutes a guarantee of preservation in itself, since the State exercises a dual level of control over the condition of the property: as protector of the historic heritage, through the agency of the Ministry of Culture, and as owner, through the Ministry of Social Affairs and Health. However, it should be pointed out that the State does not play a direct role in the management of the Spa Domain, having delegated its operation and maintenance to a succession of private companies ever since 1853.

From the 1950s, with the decline in the spa business, and taking into account the wealth of assets of a heritage that had become expensive to maintain, the Spa Domain was partly dismantled, with the transfer of some of its heritage elements to the Municipality of *Vichy* and to the Community of Greater *Vichy*. These included the *Vichy* water-bottling plant, the Lardy 3rd-class baths and pastille factory, and the Grand Casino.

It was during this same period that many of the springs vanished from the spa scene, the State and its lessee, the Compagnie Fermière de *Vichy*, preferring to channel them in order to simplify and rationalize the exploitation of their waters (including the Lucas, the Hospital, the Chomel, the Grande Grille springs and others) or simply to eliminate them by blocking them (the Abundant (la Génèreuse), the Lardy, the Fairies' (la source des Fées), the Star (la source de l'Etoile), and others). This trend, which continued until recently throughout the *Vichy* basin, represented a real source of impoverishment of the original character of the spa site, which it is necessary to reverse today. For this reason, in 2015, the Community of Greater *Vichy* commissioned an exhaustively researched inventory of the springs and their associated heritage.

Fortunately, after this long period of relative neglect, the substantial investments made in the framework of the spa revival plan begun at the end of the 1980s have made it possible to remedy delays in maintenance, while at the same time the spa business itself has been successfully revived.

In parallel and after it had taken over responsibility for the Allier Parks (Parcs d'Allier) in the 1980s, the Municipality of *Vichy* followed up by restoring the Grand Casino, converted into a congress centre, and the Opera, together with the Lardy Baths complex and the Célestins Orangery, now reallocated to a university campus. In both cases, the works carried out were founded on the original character of the spa heritage, and all the surviving architectural features and decoration were restored.

Apart from the buildings, sites and most noteworthy urban complexes which elevate the contribution of *Vichy* to the OUV of a transnational property, public spaces have an

important place in the preservation and valorisation of the spa heritage. Parks, passageways, or the streets and avenues of the spa in general, representing the backbone of the spa town, demand a rigorous, high-quality planning and management policy capable of maintaining an optimum state of conservation of the property as a whole.

State of conservation of principal features

No*	Element	State of Conservation	Note
6.1	Springs		None of the springs located in the property (Chomel, Celestins, Grand Grille, Hôpital, Lucas) is at risk of contamination or drying-up
6.2	Urban Ensemble of the Spa Quarter		
6.2.1	<i>Building ensembles connected to 'curative' waters</i>		
6.2.1.1	Pavilion of the Source des Célestins	Good	Spring and pavilion in good condition after complete renovation (pavilion restored in 2018).
6.2.1.2	Pump room of the Source Lardy	Good	Edifice entirely rebuilt as new in 2000. Good condition.
6.2.1.3	"Hall des sources" or "Trink-hall"	Good	
6.2.1.4	Covered galleries in Parc des Sources	Medium	Dilapidated floors and galleries. 'Clean-up' of the gallery in course of completion. Renovation of the monumental arch in 2017.
6.2.1.5	1 st Class Spa Establishment	Good	Façades in good condition. Spa-care part in good condition, but disused wing on first floor south-west neglected.
6.2.1.6	The dome of 1 st Class Establishment	Good/medium	Roof in good condition but maintenance work due soon. Hall under dome in medium/poor condition (water ingress below the dome).
6.2.1.7	Le Bain (The Bath)	Medium	Murals paintings of Osbert in medium condition.
6.2.1.8	Cabines de luxe	Medium/poor	Former luxury cabins in medium/poor condition.
6.2.1.9.	2 nd Class Spa Establishment (now Galerie Napoléon III)	Medium	External condition fair. Interior dilapidated, with no remaining decoration.
6.2.2	<i>Buildings for leisure and pleasure</i>		
6.2.2.1	The Casino	Good	Old Casino in good condition: renovated and converted in 1994 into a Congress Centre complex
6.2.2.2	The New Theatre and Opera	Good	Works recently completed or in progress: Opera theatre entirely renovated, opera stage floor replaced in 2010 (€88,034), restoration of the ticket office and vestibules 2011-2013 (€770,000),

No*	Element	State of Conservation	Note
			restoration of north terrace and steps 2014-2015 (€2,533,000), restoration of the façades of the Relais des Parcs in 2015-16 (€30,187)
			Works planned or necessary: Continuation of the restoration of the walls and roof, wooden floors and interior decoration (assessed at €16,000,000), priority being given to: reconstruction of the roof of the Berlioz room, restoration of the façade of the Gaming Room.
6.2.2.3	Galleries with boutiques	Medium	Dilapidated floors and galleries. 'Clean-up' of the gallery in course of completion.
6.2.2.4	Bandstand	Medium	Renovation of the bandstand under study by the Compagnie de <i>Vichy</i> .
6.2.3	<i>Accommodation</i>		
6.2.3.1	Rue Alquié	Good/medium	General state quite uneven among the 6 lodges, but good general appearance of the façades.
6.2.3.2	Ambassadeurs Hotel, Thermal Palace, Hotel International, Hôtel du Parc	Good	Former Hôtel des Ambassadeurs in good condition: Hall preserved, but light fittings and joinery have disappeared. Chigot glass preserved. Reception rooms converted, with the preservation of elements of decoration, in good condition. Thermal Palace in good condition: Façade clean but some water ingress near the balconies. Former Hôtel International in good condition: Façade recently renovated. Former Hôtel du Par : Façade in good condition
6.2.3.3	Rue Hubert-Colombier	Good	Chalet du gardien (caretaker's lodge): very good condition, completely refurbished in 2014. House known as 'Castel Flamand' very good condition. House known as Villa Charlotte or Villa Victor Hugo: good condition. Villa Paul: good condition Villa Hubert: very good condition; façade renovated in 2016. Villa Saint-Michel Archange: very good condition. Villa Van Dyck: very good condition. Villa le Mesnil: good condition. Villa Jurietti: very good condition (outside and in). Villa Manon: good condition (exterior).

No*	Element	State of Conservation	Note
			Villa Parva: good condition.
			Villa Jacob: very good condition; refurbished in 2016 (inside and out).
			Villa Liberty, Art Nouveau: poorly maintained (inside and out). Major works needed. House empty and for sale.
6.2.3.4	Castel Flamand	Good	Western part in very good condition. Eastern part in course of renovation.
6.2.3.5	Villa Vénitienne	Good	Good external state, with the exception of some sculptures. State of interior unknown.
6.2.3.6	Hotel Astoria	Good	Façades and roofs in very good condition.
6.2.3.7	Passage Giboin	Medium	Fair condition. Renovation of floors and lighting programmed (estimated cost of works: €365,000.00).
6.2.4	<i>Religious facilities: churches and cemeteries</i>		
6.2.4.1	Saint-Louis Church	Good	Very good state, renovation of the roofs in final stages. 2008: restoration of the bellows of the Aubertin organ (€35,888) 2011: restoration of the stained-glass windows in the choir (€37,753) 2011-14: restoration of the upper roof structures and roofing (€576,026) 2013: renovation of the square in front of the church 2015: the façade facing the square cleaned and restored (€20,857) 2016 (in progress): restoration of the roofing and roof structures of the chapels apsidioles, sacristy, etc. (€300,000) 2017: renovation of the rear façades

6.3 The green environment of the 'therapeutic and recreational spa landscape'

6.3.1	Parc des Sources, parks along the river	Good	
6.3.2	The First Park	Medium	Dilapidated floors and galleries, maintenance of the park minimal. 'Clean-up' of the gallery in course of completion. Renovation of the bandstand under study by the Compagnie de Vichy. Complete restoration project to come in the framework of the transfer of the property from State to Town (negotiations in progress).
6.3.3	Parcs d'Allier	Good	The Parcs d'Allier (parc Kennedy, parc Napoleon III) are very well maintained. Good overall health and physical state. Conservation of the character of the landscape. Increasing plant diversity, taking into account the character of the heritage, health and hardiness. Reconstruction of the old Spa Walk No. 7 in the framework of the reclassification of the riverside way on the right bank of the Allier.

No*	Element	State of Conservation	Note
6.3.4	Parc des Célestins	Good	Park well maintained. The oldest park in <i>Vichy</i> . Physical condition and state of health of arboreal heritage quite good. A project for the renovation of the park to be considered.
6.4	Spa infrastructure		
6.4.1	Caretaker's lodge	Good	
6.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
6.5.1	Chalet de l'Empereur and Chalet Eugénie	Good	Façade disfigured with window grilles, no presentation of the building, no recent renovation.
6.5.2	Villa Strauss	Medium	

Alongside the conservation and preservation works on the main spa buildings and spaces (see table above), several other projects have been carried out the last 10 years on the public spaces in the nominated property. These renovation works, by giving more space to the pedestrians, by improving the quality of the visit of the spa town and particularly the promenades and by giving a landscape quality and a unity, contribute to the conservation and the enhancement of the proposed OUV.

2008: The Rue Montaret was made into a pedestrian street; the works only concerned the transformation of the pavement (€334,441) 2013-2014: The walks and the beaches of the Lac d'Allier were upgraded (€9,055,172): upgrading of a 1.7-kilometre length of the pedestrian way situated at the top of the stone facing and, in the lower part, complete upgrading of the beaches situated in the Public Waterways Domain. This project contributed directly to the conservation and the enhancement of the therapeutic and recreational landscape.

2014: The Passage de l'Amirauté is a private and pedestrian passage whose pavement (installation of white stone pavement) and the street lighting were renovated with the support of the Municipality of *Vichy* (€499,756)

2016: The Rue Foch, one of the main shopping street facing the Parc des Sources, was renovated in order to be more comfortable for the pedestrians and to extend the city centre. The works concerned the change of the pavement (installation of white stone pavement) and the widening of the sidewalks (€880,911).

2018: Further renovation works to the Rue Foch were carried out. The works concerned the change of the pavement (installation of white stone pavement) and the widening of the sidewalks (€2,288,000.)

Major forthcoming conservation projects

Apart from major future conservation projects noted in the table above, several other works are planned in public spaces of the nominated property in the coming years:

Passage Giboin (change of the pavement and lighting): €365,000

Passage de l'Opéra (change of the pavement and lighting): €575,000

Rue Lucas (installation of white stone pavement): €800,000

Rue Sornin (installation of white stone pavement): €700,000

Square Leclerc (renovation of the entire square): €1,400,000.

The major enhancement works on public spaces are (see details in the Local Management Plan):

- The upgrading of the Boucle des Isles (city of Bellerive-sur-Allier) and the bridgeheads: re-naturalisation of the riverbanks, redesign and redevelopment of the touristic activities (restaurants, camping), redesign of the pedestrian and cycle paths.
- The redesign of the entrance to the core of the spa town (Avenue Aristide Briand, Rue de la Source de l'Hôpital, Place Victor Hugo, Square Albert I): extension and redesign of the pedestrian areas, redesign of the road crossings, enhancement of the perspective on the Source de l'Hôpital.
- Improvements to Old *Vichy*: extension and redesign of the pedestrian areas.
- The renovation of the urban complex of the Parc des Sources (conditional on the transfer of ownership from state to town): renovation of the pavement, trees and adjacent streets (Rue du parc and Rue Wilson)

7. *Bad Ems*

GERMANY

The overall present state of conservation of buildings and structures is good or satisfactory. The spa park and surrounding spa landscape are in good condition and are carefully maintained. Apart from the blasting of the bridges, *Bad Ems* has suffered no major destruction from war. In the twentieth century, some houses received shop windows on the ground floor, their façades thus being impaired. Most buildings, however, are preserved in their authentic appearance. In the second half of the twentieth century, *Bad Ems* suffered from some inappropriate maintenance measures and conversions. A few nineteenth century buildings were demolished. In two cases, they were replaced by copies to maintain visual integrity. In spite of monument protection, buildings are always threatened in their substance if the owners are not interested in their care or if they are vacant for a long period. More and more buildings however are being restored. Examples of successful recent restoration projects are the “Mainzer Haus”, the “Russischer Hof”, the Kurhaus (Häcker's Grand Hotel), the Kursaal (2016/2017) and the “Hotel de Flandre”.

Since a bypass was built in 2006, transit traffic through the two thoroughfares has been reduced, thus lowering emissions also. As a result of the bypass, *Bahnhofsstraße* and

upper Römerstraße streets are now traffic calmed. This in turn led to an upgrading of residential areas, private investment and restoration of houses. All in all, today the city and the Staatsbad attach great importance to the preservation of the historic cityscape.

State of conservation of principal features

No*	Element	State of Conservation	Note
7.1	Springs	Good	
7.1.1	Kesselbrunnen	Good	
7.1.2	Kaiserbrunnen	Good	
7.1.3	Fürstenbrunnen	Good	
7.1.4	Emser Kränchen	Good	
7.1.5	Römerquelle	Good	
7.1.6	Bohrung ia	Good	
7.1.7	Bohrung i	Good	
7.1.8	Bohrung ii	Good	
7.1.9	Bohrung iii	Good	
7.1.10	Bohrung iv	Good	
7.1.11	Bohrung v	Good	
7.1.12	Neuquelle i	Good	
7.1.13	Neuquelle ii	Good	
7.1.14	Neuquelle iii	Good	
7.1.15	Neuquelle iv	Good	
7.2	Urban Ensemble of the Spa Quarter		
7.2.1	<i>Building ensembles connected to 'curative' waters</i>		
7.2.1.1	Kurhaus	Good	
7.2.1.2	Vier Türme bathhouse	Good	
7.2.1.3	Altes Kurmittelhaus	Good	
7.2.1.4	Quellenturm	Medium	
7.2.2	<i>Buildings for leisure and pleasure</i>		
7.2.2.1	Kursaal ¹	Good	

¹Marble hall in the Kursaal: Jacques Offenbach and his ensemble, Jenny Lind, Clara Schumann, Franz Liszt and others performed here

No*	Element	State of Conservation	Note
7.2.2.2	Colonnade	Good	
7.2.2.3	Kurtheatre	Good	
7.2.2.4	Casino	Good	
7.2.3	<i>Accommodation</i>		
7.2.3.1	Stadt Algier ²	Good	
7.2.3.2	Darmstädter Hof	Good	
7.2.3.3	Europäischer Hof	Good	
7.2.3.4	Stadt Wiesbaden	Good	
7.2.3.5	Braunschweiger Hof ³	Good to Medium	
7.2.3.6	Herzog von Nassau (House of the spa doctor's family Vogler) ⁴	Good	
7.2.3.7	Russischer Hof	Good	
7.2.3.8	Schützenhof	Good to Medium	
7.2.3.9	Herzog von Leuchtenberg	Good	
7.2.3.10	Englischer Hof	Good	
7.2.3.11	Villa Beriot	Good	
7.2.3.12	Schloss Balmoral	Good	
7.2.3.13	Villa Reale (today Parkhotel)	Good	
7.2.3.14	Mainzer Haus	Good	
7.2.3.15	Vier Türme	Good	
7.2.3.16	Alte Post	Good	
7.2.4	<i>Religious facilities: churches and cemeteries</i>		
7.2.4.1	Maria Königin chapel at Spieß	Good	
7.2.4.2	Catholic parish church of St. Martin	Good	

2 Stadt Algier: Fyodor Dostoyevsky worked on A Writer's Diary and The Brothers Karamazov

3 Braunschweiger Hof: Jacques Offenbach worked on Orpheus in the underworld

4 Herzog von Nassau: Example of a spa doctor's house. Four generations of the Vogler family were spa doctors and wrote books on *Bad Ems* and spa medicine

No*	Element	State of Conservation	Note
7.2.4.3	Russian church	Good	
7.2.4.4	Protestant Kaiser-Wilhelm-Church	Poor	It is closed because of structural defects and will be restored.

7.3 The green environment of the ‘therapeutic and recreational spa landscape’

7.3.1	Kurpark		
7.3.2	Bismarksäule		
7.3.3	Malberg with Malberg tower and Henriettensäule	Good	
7.3.4	Bäderlei with Concordiaturm ⁵	Good	

7.4. Spa infrastructure

7.4.1	Railway station	Medium to Poor	It was sold and will be restored
7.4.1	Malbergbahn funicular railway	Upper station: poor Valley station: good	Upper station is waiting for restoration
7.4.3	Altes Rathaus (Old town hall)	Good	
7.4.4	Fountains: Lahnstrasse and Römerstrasse	Good	
7.4.5	Milchkuranstalten (Former whey cure institutes)	Good	

Note: asterisk (*) denotes the buildings and features which also provide the evidence and demonstrate scientific, artistic and literary values, events and cultural traditions.

Major forthcoming conservation projects

- Malbergbahn upper station: measures for its restoration are currently being examined by the city of *Bad Ems*, with the participation of the monument protection authority of the State. The state of Rhineland-Palatinate will support the city of *Bad Ems* with this important refurbishment as well as the association of the friends of the Malbergbahn (Förderkreis Malberg und Malbergbahn e.V.).

8. Baden-Baden

The present state of conservation is very good. The very good state of preservation of the city – both in its urban dimensions as well as in terms of specific urban areas, individual

⁵ The Bäderlei is an example of the picturesque landscape of a health resort. Artists like George Barnard chose the view from the rock to the spa for their engravings. Dostoyevsky compared it to Switzerland and wrote to his wife: “On the rocks, the most picturesque in the world, leans the town ...” Goethe on the Lahn valley near *Bad Ems*: “My eye, trained to discover the picturesque and superhuman beauties of the landscape, reveled in the contemplation of the seams and the distant, the cobbled rocks, the sunny tops, the damp grounds, the enthroned castles, and the blue rows of mountains enticing from afar...”

buildings and green areas – is due to early and permanent protection and maintenance measures from the second half of the twentieth century.

There are 770 listed historic buildings, gardens or ensembles located in the property. They have been appropriately repaired as well as little altered, and require authorization for alterations. The large area of the park and gardens of the spa town is well maintained by the city, and has lately been subject to a revision of the existing concept of the maintenance of park and garden (“Parkpflgewerk”).

The Kurhaus, one of the most important buildings within the property and a key attribute of OUV, has been constantly restored and refurbished since 2008. Restoration works have included the oldest salon, the Weinbrennersaal (2008-10), where lighting and interior painting was done, the historic gambling rooms of 1852-55 (2008) and the Bénazetsaal and Oval Salon (2015). The backstage wardrobes were refurbished in 2017. For the boutiques in front of the Kurhaus, dating back to the 1860s, a new lighting concept was installed in 2013 and all historic shop doors were restored in 2016-17.

Among other recent representative restoration projects is the restoration of the Friedrichsbad in 2014, and the installation of new showers is currently planned. The adjoining Kirchenstaffeln (Church Stairs) are undergoing refurbishment (2018). The ruins of the Roman baths located under the Friedrichsbad have undergone several restorations in the last decade. Protection measures were taken in 2009-10. In 2014 the mural paintings in the colonnades and roof of the Pump Room were restored and renovated. The Pump Room interior was renovated in 2009, the restoration of the façades took place in 2012.

As to the Palace Hotels, they are all in a very good condition due to constant maintenance works. A large restoration of the central historic hotel Europäische Hof has been undertaken recently since 2016 (to 2020), surveyed by the lower protection authority and the State Office for Cultural Heritage Baden-Württemberg. The famous Brenners Park Hotel has undergone renovation since 2008: the balconies were repaired, and also the annex, the so-called Schwarzwaldklinik, was rebuilt and restored in 2011-13. From 2012 to 2016 the facades and historic interiors of the Badischer Hof, the first Grand Hotel at Baden-Baden, built by Friedrich Weinbrenner in 1809, were restored, as well as the hotel park and its historic fencing.

The main churches in the property are mainly in good repair. The interior of the Evangelische Stadtkirche (protestant church) has undergone a huge renovation program from 2013-16. There have been also repairs of the drainage (2011), roof and the exterior of the Stourdza Chapel in 2016. Since 2016 the Convent of Lichtenthal has been subject to restoration works: Recently the Marienbrunnen was restored (2016/17) and an elevator was installed in the main convent building. Currently there are renovation works at the guest houses.

A concept of restoration for the Neues Schloss (New Castle) and its premises exists. The gardener’s building was switched from its historic location to another part of the garden. Recent repair works to the roof (2015-16) keep the building in a good condition. The balustrade and retaining wall of the Castle Terrace were repaired from 2007-11. A concept for the restoration of the park exists. The castle and the park are in private ownership.

Development and division of land parcels in the villa quarters increased during the post-war period. This activity is countered by two preservation statutes and by legally

binding land-use plans. In addition, the latter are being further developed on the basis of a 2015/2016 urban conservation analysis supervised by the State Office for Cultural Heritage Baden-Württemberg. During 2018 a design manual for the historic villa areas is being developed.

Careful concrete renovation of several building sections of the “Paradies” water feature and park on Annaberg (built by Prof. Laeuger 1922-25) was carried out between 2008 and 2015.

Since 1986 traffic management in *Baden-Baden* has been designed to route the traffic using the B500 through the tunnel Michaelstunnel, in order to keep the inner city free of traffic. The Michaelstunnel was reconstructed in 2011/12. Since 2016, planning for a parking guidance system and parking areas outside the nominated World Heritage site in the west of the city has been under way.

Due to permanent maintenance works and restoration programs there are currently no historic structures of importance in a poor state of conservation to be found in *Baden-Baden*.

No*	Element	State of Conservation	Note
8.1.	Springs	Good	
8.1.1	Höllquelle	Good	
8.1.2	Friedrichsquelle	Good	
8.1.3	Judenquelle	Good	
8.1.4	Brühquelle	Good	
8.1.5	Neuestollenquelle	Good	
8.1.6	Ursprungsquelle	Good	
8.1.7	Kühlquelle	Good	
8.1.8	Freibadquelle	Good	
8.1.9	Höllgasquelle	Good	
8.1.10	Kirchenstollen- quelle	Good	
8.1.11	Fettquelle	Good	
8.1.12	Murquelle	Good	
8.1.13	Klosterquelle	Good	
8.2	Urban Ensemble of the Spa Quarter		
8.2.1	<i>Building ensembles connected to ‘curative’ waters</i>		
8.2.1.1	Roman ruins	Good	2004-2018: Regular maintenance costs ca. 170,000€

No*	Element	State of Conservation	Note
8.2.1.2	Baldreit	Good	Change of use and renovation is prepared
8.2.1.3	Prunkbad	Good	
8.2.1.4	Trinkhalle	Good	2009-14: Renovation of the Pump hall 155,000€ 2017-20: Renovation of the Façade 300,000€
8.2.1.5	Altes Dampfbad	Good	
8.2.1.6	Friedrichsbad	Good	2009-10: Partially renovation of windows 160,000€ 2010-13: Renovation of water treatment and changing rooms 1.560.000€ 2014-15: Reshaping of the outdoor facilities 91,000€ 2018: Renovation of the air conditioning, Bathwater Installation of a backwash system 895,000€ 2019: Installation of drinking water showers 1,200,000€ 2020-23: Revision of ventilation systems 550,000€
8.2.2	<i>Buildings for leisure and pleasure</i>		
8.2.2.1	Kurhaus with Casino***	Good	2011-14: Renovation Bénazethall and Partial renovation energysupply 1,015,000€ 2014: Installation Wintergarten 1,750,000€ 2015: Staff Room renovation 303,000€ 2016-18: Successive renovation of technical facilities, such as drinking water and forge water supply, air conditioning, interior restoration of the artists cloakroom, winter garden at the casino 4,702,000€ 2019: Renovation of the Kurhaus reception and the fire brigade access drive 2,380,000€ 2021: Renovation of the foyer and doors 180,000€
8.2.2.2	Theatre***	Good	2011-18 Maintenance work such as technical renovations concerning fire protection, renovation of the façades, renovation of the heating system 1,290,000€
8.2.2.3	International Club***	Good	
8.2.2.4	Konzertmuschel***	Good	
8.2.2.5	Staatliche Kunsthalle	Good	2010-18: Regular maintenance costs ca. 450,000€ 2015: Air conditioning 200,000€ 2016-18: Roof Restoration 1,200,000€

No*	Element	State of Conservation	Note
8.2.2.6	Boutiques	Good	
8.2.2.7	Jesuitenkolleg (later Konversationshaus, today Town Hall)	Good	
8.2.3	<i>Accommodation</i>		
8.2.3.1	Hotel Badischer Hof	Good	2016: Technical modernization and refurbishment of interior, facade renovation and renovation of classicist balconies
8.2.3.2	Hotel Stéphanie les Bains / Brenner's Park Hotel	Good	2012-15: Complete renovation Villa Stéphanie 37,500,000 €, Furniture and Art 5.150,000 €, Outdoor areas € 2,000,000 District heating connection for the entire hotel area over 1,300,000 € Restaurants redesign 3,500,000 € 2008-2018: Maintenance expenditure € 21,500,000, which corresponds on average to a total of € 2,150,000 per fiscal year.
8.2.3.3	Neues Schloss	Medium	
8.2.3.4	Villa Winterhalter (today Villa Trianon) ***	Good	
8.2.3.5	Villa Merck	Good	
8.2.3.6	Villa Turgenev***	Good	
8.2.3.7	Villa Sirius	Good	
8.2.3.8	Schloss Solms	Good	2011-18 Renovation and maintenance work such as fire protection renovation, renovation of the façades, renovation of the gate entrance 747.000€
8.2.4	<i>Religious facilities: churches and cemeteries</i>		
8.2.4.1	Evangelische Stadtkirche***	Good	
8.2.4.2	Stiftskirche	Good	Renovation project in preparation
8.2.4.3	Stourdza-Kapelle***	Good	2012-18 Renovation and maintenance work such as renovation of the drainage, new windows of the rectory, roof renovation 155.000€
8.2.4.4	Anglican Church***	Good	
8.2.4.5	Russian Orthodox Church***	Good	
8.2.4.6	Kloster Lichtenthal	Good	
8.2.4.7	Kloster zum heiligen Grab	Good	

No*	Element	State of Conservation	Note
8.2.4.8	Main Cemetery***	Good	
8.3	The green environment of the 'therapeutic and recreational spa landscape'		
8.3.1	Lichtentaler Allee	Good	
8.3.2	Schlossgarten	Medium	Concept for park maintenance is existing
8.3.3	Kurgarten	Good	
8.3.4	Gönner-Anlage	Good	
8.3.5	Wasserkunstanlage Paradies	Good	2005-14 Renovation works for 2,000,000€
8.4	Spa infrastructure		
8.4.2	Molkenkur	Good	
8.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
	Kurhaus with Casino***	Good	See above
	International Club***	Good	See above
	Theater***	Good	See above
	Konzertmuschel***	Good	See above
	Evangelische Stadtkirche***	Good	See above
	Anglican Church***	Good	See above
	Russian Orthodox Church***	Good	See above
	Stourdza-Kapelle***	Good	See above
	Villa Trianon***	Good	See above
	Villa Turgenev***	Good	See above
	Main Cemetery***	Good	See above

State of conservation of principal features

Note asterisk (***) denotes the buildings and features which also provide the evidence and demonstrate scientific, artistic and literary values, events and cultural traditions.

Major forthcoming conservation projects

- Hotel Europäische Hof: major restoration work has been undertaken since 2016 to be completed in 2020, surveyed by the lower protection authority and the State Office for Cultural Heritage Baden-Württemberg.
- Stiftskirche: a current preliminary survey has been prepared for the renovation of the interior; and works are planned to start in 2019.
- Neues Schloss: concepts of restoration for the castle and its premises, and for its park, exist. The castle and the park are in private ownership.

9. *Bad Kissingen*

The water quality of the four springs is excellent. The Rakoczy spring was rediscovered in 1738 due to the relocation of the Saale river and it was re-encased at its former location. The spring has never run dry and since then its location has not been changed. The Pandur well was tapped in 1616 and has remained at the same place since then. It has never run dry, but has been re-encased several times, as well as the Rakoczy spring. The Max spring has been at the same place for centuries, has never run dry. A re-encasement was made in 1973/1974. The two encasements that existed at that time were then united and replaced by a new re-drill/re-encasement. From time to time, however, the healing effect of the spring water was weakened by intruding water; thus it has been re-encased several times.

The Runder Brunnen is located in an area where brine springs have been known and used since Carolingian times (mentioned for the first time in 823). The springs did not always stay at the same place; and some were backfilled. The Runder Brunnen was discovered in 1788 and has been at the same place since then, although being drilled more deeply. Since 1822 periodical activity has been a typical feature of the Runder Brunnen. Renovation works at and around the “Runder Brunnen“ took place in 2016/2017. A new electronic pumping plant and new well head were installed.

With regard to its stock of historical buildings, the built-up area of the town of *Bad Kissingen* is mostly in a good, occasionally a satisfactory, state. Only in a very few cases is there a need for restoration. The buildings in the spa district are mostly preserved in their original condition, in materials and substance as well as form and design. Repairs have been carried out carefully so that they are preserved in a highly authentic condition.

Most of the buildings in the old town centre are in a good condition. Changes to their form mainly affect the ground-floor premises. In many cases they have been altered continually by the installation of shop fittings and display windows since the late nineteenth and early twentieth century, the heyday of the “Great Spa” of *Bad Kissingen*. These alterations reflect the current and historic function of the old town centre being the commercial centre of the town of *Bad Kissingen*.

The nominated property encompasses a large number of heritage-protected buildings. A total of 235 buildings and structures are listed on the Bavarian list of monuments (Bayerische Denkmalliste). In addition, about a quarter of the total area of the nominated component is listed as a protected ensemble while almost three-quarters of the built-up areas of the spa district and the old town centre are so-listed. Moreover, a design statute and a binding development plan, “Sondergebiet Kurgebiet“, are in place for the entire town. They ensure a very good overall state of preservation for the buildings within the

nominated component. In the case of the valuable spa buildings in particular, this also applies to the fine interior décor preserved from their time of origin.

The nominated property also contains a large percentage of historical green and open spaces, both public and privately owned. Some, such as Luitpoldpark, are listed as protected historical monuments, or they are situated within the nature preserve or the Rhön biosphere reserve, and receive constant and dedicated care. Most recently, in 2016, the Rosengarten was thoroughly overhauled including a reconstruction of the original layout. Those parts of the historic spa landscape that are situated within the nominated component are also in a good state of preservation, and are carefully maintained. This applies especially to the footpaths and the small buildings and memorials lining them.

The spa town of *Bad Kissingen* experienced a phase of dynamic development in the years after World War II. In particular the so-called “Sozialkur” (the spa trip “on prescription”, rather than privately financed), which featured prominently at Kissingen from the 1950s to the late 1980s, resulted in considerable pressure to modernise and adapt spa clinics, sanatoriums and hotels. The town’s function as a service and administrative centre, as well as a regional centre of education and training, resulted in building projects that have impacted adversely on the historic urban structure and layout to some degree. However, for the most part these new structures are situated outside the nominated component, and might in fact be taken as evidence that the town is experiencing a phase of vigorous development still centred on the spa and health business. It must be noted too that at the same time building owners and contractors, both public authorities and private individuals, have invested generously in the preservation of valuable historical buildings.

State of conservation of principal features

No*	Element	State of Conservation	Note
9.1.	Springs		
9.1.1	Rakoczybrunnen	Good	Excellent water quality
9.1.2	Pandurbrunnen	Good	Excellent water quality
9.1.3	Maxbrunnen	Good	Excellent water quality
9.1.4	Runder Brunnen	Good	Renovation works at and around the “Runder Brunnen“, (2016-17) New electronic pumping plant and new well head installed. 2,000,000 € spent by the Free State of Bavaria
9.2.	Urban Ensemble of the Spa Quarter		
9.2.1	<i>Building ensembles connected to ‘curative’ waters</i>		
9.2.1.1	Former Luitpoldbad	Good	Recently restored and renovated (2015-17), conversion into an administrative building 39,000,000 € spent by the Free State of Bavaria

No*	Element	State of Conservation	Note
9.2.1.2	Former Kurhausbad	Good	Is being restored and renovated (2017-20), revitalisation of the Kurhausbad as “house for health management“ 45,000,000 € will be spent by the Free State of Bavaria
9.2.1.3	Maxbrunnen*	Good	Restored
9.2.1.4	Brunnenhalle (Pump Room)*	Good	Restored
9.2.1.5	Wandelhalle (Grand Foyer)*	Good	Restored
9.2.2	<i>Buildings for leisure and pleasure</i>		
9.2.2.1	Kursaal	Good	Restored, 1,100,000 € spent between 2010-17 by the Free State of Bavaria
9.2.2.2	Arkadenbau	Good	Restored
9.2.2.3	Casino	Good	Building measures at the casino: 150,000 € spent by the Free State of Bavaria between 2010-17 7,000,000 € spent by the Free State of Bavaria for renovation works that were concluded in 2005
9.2.2.4	Regentenbau*	Good	Restored
9.2.2.5	Kurtheater	Good	Building measures at the theatre 800,000 € spent by the Free State of Bavaria between 2010-17 Further restoration work is planned to be conducted during the next years
9.2.2.6	Orchestra shell*	Good	Restored
9.2.2.7	Bazare	Good	Partly restored and renovated
9.2.3	<i>Accommodation</i>		
9.2.3.1	Hotel Kaiserhof Victoria	Good	Is constantly being maintained, there are continuously small restoration works being conducted
9.2.3.2	Ballinghaus	Good	
9.2.3.3	Villa Hailmann	Good	Recently restored: façade and roof covering 1,300,000 €
9.2.3.4	Obere Saline*	Good	Restored
9.2.4	<i>Religious facilities: churches and cemeteries</i>		
9.2.4.1	Erlöserkirche*	Good	Restored
9.2.4.2	Russian Orthodox Church*	Good	Good condition though inner mural paintings await restoration.
9.2.4.3	Herz-Jesu Kirche*	Good	
9.2.2.4	Kapellenfriedhof*	Good	Is being maintained as a park, continuously small restoration works being conducted

No*	Element	State of Conservation	Note
9.2.4.5	Jewish cemetery*	Good	Is being maintained as cemetery
9.3	The green environment of the 'therapeutic and recreational spa landscape'		
9.3.1	Kurgarten*	Good	Maintained regularly, 1,500,000 € spent between 2010-2017 by the Free State of Bavaria
9.3.2	Luitpoldpark*	Good	Maintained regularly
9.3.3	Rosengarten*	Good	Maintained regularly, Renovation and Reconstruction (2015/2016): 3,012,000 € spent by the City of <i>Bad Kissingen</i>
9.3.4	Altenberganlage*	Good	Maintenance measures at the Altenberg site 10,000 € spent by the Free State of Bavaria between 2010-17
9.3.5	Kaskadental*	Good	
9.3.6	Bismarck monument*	Good	
9.3.7	Promenade walks	Good	
9.3.8	Golf course*	Good	Maintained regularly
9.3.9	Tattersall*	Good	Renovated
9.3.10	Turniergebäude	Medium	Building measurements are planned for 2019-20
9.4	Spa Infrastructure		
9.4.1	Lower Saline (saltworks)	Poor	Vacant, roofs are being restored, 250.000 € spent between 2010 and 2017 by the Free State of Bavaria Further restoration work has started in 2018
9.4.2	Pumping plant at the Lower Saline (saltworks)	Good	Recently restored 300,000 € spent by the Free State of Bavaria
9.4.3	Krugmagazin	Good	Vacant, Maintenance measures 2014-17: 30,000 € spent by the the Free State of Bavaria
9.4.4	Jetties / landing places for steam-boat and reinforcement/ fortification of river banks	Medium	Some of the reinforcements need restoration
9.4.5	Abattoir	Medium	Vacant, recently there has been elaborated a utilization concept, awaits restoration
9.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
9.5.1	Former Hotel Adam Hailmann, then former Grand Hotel Collard	Good	Nowadays used as apartment building, for holiday flats, with shops and catering on the ground-floor

Note: All elements marked with * demonstrate also tangible proof of intangible cultural values (scientific, artistic and literary values, events and cultural traditions - SALT). To avoid duplicates they are not listed again under 9.5. The cultural values are described in the TD of *Bad Kissingen* (Chapter 2.a).

The development of a new construction on the site of the demolished Kurhaushotel, is at planning stage and aims at continuing the plot's historic function; the building will be carefully designed to blend in with its architectural surroundings.

The main spa buildings Regentenbau, Arkadenbau and Wandelhalle were restored between 2000 and 2010. The Free State of Bavaria invested €34,000,000. The Hotel Kaiserhof Victoria has been thoroughly renovated between 2005 and 2013. The Luitpoldbad was restored, renovated and converted into an administrative building in 2017.

The residential buildings of the salt works of Obere Saline, were restored in 1998; the respective buildings were converted into a museum of spa history.

Between 2010 and 2016 the town of *Bad Kissingen* invested €2,001,000 in the recreational and therapeutic landscape for maintenance and care of the municipal greens along the streets and the parks. Over the same period, the town invested €4,353,000 in renewal and maintenance of different infrastructure facilities concerning streets, parking lots and engineer buildings as well as in the extension of the *Museum Obere Saline* with the department Weltbad (international Great Spa).

Another important investment of €13.900.000 was the installation of technical flood protection by the Free State of Bavaria. Measures to protect the spring water are regularly carried out; between 2010-17 the State of Bavaria invested €6,700,000 for the renewal of the mineral water pipelines and high-level tanks. €1,190,000 were spent by the town on the renewal and maintenance of different infrastructure facilities for the sewage system, groundwater regulation and protection of the mineral springs.

However, there are also structures awaiting restoration and renovation, such as the Krugmagazin, the former bottle warehouse and the Untere Saline, which has been preserved with no physical alteration to the buildings.

Major forthcoming conservation projects

- Kurhausbad from 1927 (Prinzregentenstraße 6): this is currently being restored along with the Königliches Logierhaus (Am Kurgarten 3, back premises) which itself was built in the 1820s and extended in 1927. Both buildings are being converted into offices and laboratories for the Bavarian State Office for Health and Food Safety (Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit).

Building survey will be conducted in consultation with the Bavarian State Office for Monument Conservation. A major concern is the cautious integration of the new function and required technology into the historic building while preserving as many as possible of its architectural, artistic and historical values.

The projected new function of the building combines tangible heritage with intangible heritage. Thus two new institutions, the Bavarian State Office for Health and Food Safety and the institute for spa medicine and health promotion will be situated in the historic building. The project started in 2017 and is expected to be completed in 2021.

- *Neue Altstadt*: the plans of the project “new old town“ (“*Neue Altstadt*”) cover the major part of the pedestrian area and thus the historic city centre which will be reevaluated. A remodelling of the design of streets and spaces smooth paving, as well as a new lighting concept and a modest furnishing of the public space will improve the visual urban qualities and highlight the architectural, artistic, historic and functional qualities of the historic city centre. The project process has started already. Planning documents are being prepared. The overall investment of this project amounts to approximately €25,000,000.

10. *Montecatini Terme*

ITALY

The present state of conservation is generally good, although some buildings are awaiting renovation and future use. Still today, Montecatini has retained the character of a spa town acquired in the eighteenth century, as the result of the urban plan of the Grand-Duke Pietro Leopoldo of Asbugo-Lorena, and further developed as a tourist centre in the nineteenth century, with the discovery of new springs and their healing effects. Besides preserving its original urban plan, the inner city has largely maintained the relationship between buildings, open spaces and the well-preserved hill landscape that is its natural setting.

The body of law on the protection of landscape and monumental heritage as well as specific provisions in the territorial planning instruments at local level (see chapter 5, section 5.b, 5.c) guarantee continuity through time of that state of conservation, both for individual buildings and for the townscape, as well as for the broader landscape context in which it is perfectly integrated.

Obviously, the city has required maintenance over the years. The state of conservation of roads and public areas, private and public buildings, with particular regard to façades and elements that contribute to the overall aesthetic, is good.

Montecatini was developed around the thermal centre represented by late eighteenth century neo-classical buildings, and one of its important features is the urban layout delineated at the beginning of the twentieth century with eclectic tastes: the enrichment of important architectural structures in the first half of the twentieth century contributed to create a veritable contemporary *ville d'eaux*. The subsequent interventions, implemented up to the years 2000 and designed by world-renowned architects, have respected the historic significance and identity of the town.

The identity of Montecatini is further defined by the creation of essential structures for the community: the municipal hall created by Raffaello Brizzi in collaboration with Luigi Righetti, the rooftop garden at the Terme Tettuccio, the open-air museum of the Scalabrino Academy of Art, and several gardens attached to hotels and private residences designed by Pietro Porcinai, the greatest landscape architect of the century. Other examples of relevant contemporary architecture the works of other designers, often honoured, such as Aldo Rossi (designer of the *Kursaal*), Italo Gamberini (creator of the bank with a number of shops) but sometimes less famous, like Carmelo Pucci, an engineer from Montecatini, the designer of residential buildings and workshops.

Most of the city buildings and historical sites are still in use (hotels, spas, urban villas, theatres, the auditorium, the casino, exhibit halls for art shows, walks, parks) and most of the art nouveau decorations (ceramic tiles, coloured glass, windows, wooden furniture, etc.), have retained their original setting. Restoration, when needed, has been done with care in relation to the original elements.

Through the centuries, large parts of the architectural heritage have been retained from the most monumental thermal buildings to those dedicated to social services and located in the nature, reception and leisure complexes, sports facilities and public buildings, luxury commercial buildings and residential cottages, industrial buildings, places dedicated to arts and culture, the colonnades and the promenades for walks. Specifically, the conditions of buildings and parks in public ownership included in the extension of the area are good. The conditions of currently active thermal buildings (Terme Tettuccio, Terme Regina, Terme Tamerici, Terme Excelsior, Terme Redi, Terme La Salute and the Palazzina Granducale (Regia)), as well as their related parks and gardens, are generally good.

The infrastructure provided in the second half of the nineteenth century is preserved in its original forms and is still fully-functioning: the funicular railway connects the thermal zone to Montecatini Alto, and the primitive railway station is still active even after the building in the 1930s of a new terminal of architectural value, by Angelo Mazzoni, a prominent figure of the Italian Rationalism.

A number of thermal facilities are no longer in use due to the decreased number of customers. These include the Terme Torretta, the Grocco Thermal Institute, the former establishment for the bottling of thermal waters and salt extraction (treatment), warehouses, the mechanical workshop, the carpenter's shop, the printing house, the laundry, the Institute for Care, and the free Beverages establishment. These form, at urban level, an unique industrial archaeological assemblage, and an example of architecture designed for activities associated with high-quality spas, both aesthetically and functionally. In general, the current condition of this ensemble has been partially affected by the loss of original functions, and it requires preservation and restoration.

For some, this process has already begun (Terme Torretta, the free Beverages establishment); for others, privatized or still owned by SpA, the evaluation of financially viable solutions is ongoing. The existence of a thermal or sanitary restriction on use guarantees continuity of use for the future, preventing any risk of speculation. Particular mention should be made about the Terme Leopoldine, which is undergoing an important renovation during the last few years, using the design of the architect Massimiliano Fuksas. The project includes the installation of an exterior thermal pool and a wellness centre, paying special attention to the original constructions of the end of the eighteenth century and beginning of the twentieth.

The "Sali Tamerici" pavilion, located in front of the City Hall, on viale Verdi, has been recently renovated; during that work, several paintings dating back to the first years of the twentieth century have been uncovered.

The Terme Redi were renovated in 2009. Currently, there are more than one hundred rooms on the ground floor, used for mud and water treatment, with water from the springs Leopoldine and Rinfresco. The upper floor is used for the inhalation therapy, while the basement holds a department of physiotherapy.

The former Free Baths establishment was renovated in 2014 in order to host the "Data Medica": a private healthcare facility assigned as a laboratory for analytical and

instrumental diagnostics and as a specialized medical centre (specialist paediatric surgery), that has an agreement with the National Health Service.

The former Hotel “Villa Ortensie”, built at the end of the nineteenth century, and turned into the “Dino Scalabrino Academy of Art” in the second half of the twentieth century, has been recently purchased by the bank “Fondazione Credito Cooperativo della Valdinievole” in order to enhance the museum, which possesses a huge civic artistic and cultural heritage. The intervention (restoration works began in September 2017 and will end in 2019) includes the preservation of the building and the reactivation of the outdoor museum, installed in the 1970s by Pietro Porcinai.

Another project presented by the Municipality is the purchase the Palazzina Regia to create a cultural centre for exhibitions. This currently belongs to the society of Terme di Montecatini Spa. Originally the residence of Pietro Leopoldo, it is a building of undeniable artistic and cultural value hosting a wealth art works, ancient books, thermal archives, iconography and various objects connected to the thermal activity which are excellent evidence of the history of the spa. The covered market, built in the 1930s, is under process of restoration. This includes the introduction of rooms addressed to culture and gastronomy (“slow food”).

Other buildings have been modified in the past. The Kursaal ensemble was adapted in the 1990s by the architect Aldo Rossi, who created several residential and commercial buildings in the area; the ensemble now consists of a square framed by colonnades on the ground floor, evoking the spa town and maintaining only the historical façade of the Kursaal.

The Verdi Theatre, built in the 1930s and dedicated to Giuseppe Verdi, was transformed in the 1980s, and still hosts highly significant events.

State of conservation of principal features

No*	Element	State of Conservation	Note
10.1	Springs	Good	
10.2	Urban Ensemble of the Spa Quarter		
10.2.1	<i>Building ensembles connected to ‘curative’ waters</i>		
10.2.1.1	Tettuccio Thermal Bath	Good/medium	General good state of conservation. The paintings of the Temple of Music, and of the café, require restoration. The structure of the open gallery behind the café needs interventions due to water infiltrations. The Technical Office of the Terme di Montecatini has developed a conservative restoration project for the Tettuccio and Regina Thermal Baths, now approved by the Superintendence
10.2.1.2	Regina Thermal Baths	Good	

No*	Element	State of Conservation	Note
10.2.1.3	Leopoldine Thermal Baths	Medium/poor	The Terme Leopoldine is being conserved for the last few years, to a design by Massimiliano Fuksas, a prestigious design studio. The project, includes the installation of an outdoor thermal pool and a wellness centre, pays special attention to the original construction from the end of the eighteenth century and the beginning of the twentieth. The roof has been renewed and the building consolidated. The structural apparatus is new. The Technical Office of the Terme di Montecatini has developed a conservative restoration project for the Leopoldine baths, now approved by the Superintendence
10.2.1.4	Tamerici Thermal Baths	Good/medium	The hall of the beverage with the works of Galileo Chini has been restored, as well as the pouring bars. The surrounding park needs to be renovated.
10.2.1.5	Torretta Thermal Baths	Poor	The building, the loggia and the English garden need interventions. The main hall needs recovery work and the false ceiling needs to be restored.
10.2.1.6	Rinfresco Thermal Baths	Medium/poor	A restoration of the interior is required. The Technical Office of the Terme di Montecatini has elaborated a project for the maintenance and restoration of the temple of the Rinfresco spring now approved by the Superintendence
10.2.1.7	La Salute Thermal Baths	Good	
10.2.1.8	Excelsior Thermal Baths	Good	
10.2.1.9	Ex-“Bagni Gratuiti” Thermal Baths	Good	The building was renovated in 2009.
10.2.1.10	Redi Thermal Baths	Good	
10.2.2	<i>Building ensembles connected to ‘curative’ waters</i>		
10.2.2.1	Kursaal	Good	The surviving elements of the original building are the facade, the portico and the opposite garden. A new commercial/residential complex was built in the area formerly occupied by the historic building.
10.2.2.2	Tennis Torretta	Good	
10.2.2.3	Gambrinus Lodge	Good	
10.2.2.4	Cinema Excelsior	Good	
10.2.2.5	Cinema Imperiale	Good	
10.2.3	<i>Accommodation</i>		
10.2.3.1	Grand Hotel & La Pace	Good	

No*	Element	State of Conservation	Note
10.2.3.2	Grand Hotel Plaza & Locanda Maggiore	Good	
10.2.3.3	Hotel Grande Bretagne	Good	
10.2.3.4	Modern Hotel	Good	Private residence since the 1960s
10.2.3.5	Fedeli house	Good	
10.2.3.6	Scalabrino house and garden	Good	
10.2.3.7	Parenti house	Good	
10.2.3.8	Grocco house	Good	
10.2.3.9	Palazzina Regia	Good	The Technical Office of the Municipality of Montecatini will set up the Museo delle Acque in the Palazzina Regia

10.3 The green environment of the 'therapeutic and recreational spa landscape'

10.3.1	Public Park	Good	The Technical Office of the Municipality of Montecatini is leading a project for the maintenance of the Public Park.
10.3.2	Viale Verdi	Good	
10.3.3	Montecatini Alto nineteenth-century path	Good	

10.4 Spa infrastructure

10.4.1	Funicular railway	Good	
10.4.2	Former factory for the extraction of Tamerici salts	Poor	The building needs restoration works.
10.4.3	Thermal Institute Grocco	Medium/Poor	The building needs restoration interventions.
10.4.4	Pavilion of the Tamerici salts	Good	
10.4.5	Former laundry room and coatroom	Medium/poor	The building needs restoration interventions.
10.4.6	Old greenhouses Allaa Torretta	Poor	The glass structure needs restoration works.
10.4.7	Palazzo dei Congressi	Good	

No*	Element	State of Conservation	Note
10.4.8	Dino Scalabrino Academy of Art	Medium/poor	Restoration currently underway. A local bank group has financed the restoration and museographic outfitting of the Scalabrino Academy of Art, in collaboration with the Superintendency and the participation of the Porcinai association.
10.4.9	New greenhouses	Medium	The tiepidarium is in a good state of conservation. The building needs some restoration works.
10.4.10	Montecatini railway station	Good	
10.4.11	Former care Institute and scientific research centre	Poor	The building needs restoration works.
10.4.12	Town Hall	Good	

11. City of Bath

UNITED KINGDOM

The overall state of conservation is good. The value of most properties has been constant or has increased and this has encouraged regular maintenance and investment in the buildings. The elements identified as contributing to the proposed Outstanding Universal Value of the nominated property are generally in good condition, and all are listed buildings or in the City of Bath Conservation Area. The Cleveland Pools ensemble is a Listed Building and presently vacant and it has been identified on the Historic England Buildings at Risk Register. Proposals are being brought forward for the restoration of the pools.

State of conservation of principal features

No*	Element	State of Conservation	Note
11.1	Springs		
11.2	Urban Ensemble of the Spa Quarter		
11.2.1	<i>Building ensembles connected to 'curative' waters</i>		
11.2.1.1	King's Spring and Bath	Good	refurbished 1981-87
11.2.1.2	Cross Bath Spring and Bath	Good	refurbished as part of Bath Thermae 2003
11.2.1.3	Hot Bath (Hetling Spring)	Good	refurbished as part of Bath Thermae 2003
11.2.1.4	Grand Pump Room ensemble	Good	refurbished 1986-87

No*	Element	State of Conservation	Note
11.2.1.5	Cross Bath Pump Room	Good	refurbished 1993-2003
11.2.1.6	Hetling Pump Room	Good	refurbished 1993-2003
11.2.1.7	St John's Hospital	Good	refurbished 2016
11.2.1.8	Leper Hospital and Mary Magdalen Church	Good	refurbished with Gainsborough Hotel 2015 refurbished with Gainsborough Hotel 2015
11.2.1.9	Bellot's Hospital	Good	
11.2.1.10	St Catherine's Hospital	Good	
11.2.1.11	General Hospital (now Royal National Hospital for Rheumatic Diseases)	Good	refurbished in 2014-2015
11.2.1.12	Former United Hospital (now Gainsborough Spa Hotel)	Good	refurbished 2003
11.2.1.13	Thermae Bath Spa	Good	restored in 1963
11.2.2	<i>Buildings for leisure and pleasure</i>		
11.2.2.1	Orange Grove	Good	
11.2.2.2	Terrace Walk	Medium	
11.2.2.3	Queen Square	Good	Private high-end offices and hotel
11.2.2.4	North and South Parades, Duke Street Pierrepoint Street	Good	Private high-end houses
11.2.2.5	The Circus	Good	private high-end houses
11.2.2.6	The Royal Crescent	Good	private high-end houses and 1 & 1a restored as a museum in 2015
11.2.2.7	Bath Street	Good	refurbished 1988-89
11.2.2.8	Pulteney Bridge	Good	restored 1975
11.2.2.9	Great Pulteney Street	Good	private high-end houses
11.2.2.10	Sydney Place	Good	private high-end houses

No*	Element	State of Conservation	Note
11.2.2.11	Lansdown Crescent	Good	private high-end houses
11.2.2.12	Camden Crescent (Camden Place)	Good	private high-end houses
11.2.2.13	Assembly Rooms	Good	restored in 1963
11.2.2.14	The House of Antiquities 8 Bath Street	Good	part of Thermae Bath Spa 2003
11.2.2.15	Masonic Hall	Good	
11.2.2.16	Bath Royal Literary Institution (18 Queen Square)	Good	
11.2.2.17	Cleveland Pleasure Baths	Medium	restoration now in hand
11.2.2.18	Bandstand – Garden loggia in Sydney Gardens	Good	now part of a house
11.2.2.19	Bandstand Royal Victoria Park	Good	
11.2.2.20	Bandstand Parade Gardens	Medium	
11.2.3	<i>Accommodation</i>		
11.2.3.1	Royal York Hotel	Good	
11.2.3.2	Sydney Hotel	Good	
11.2.3.3	Empire Hotel	Good	
11.2.3.4	Representative Villas Prior Park	Good	high-end properties in good condition
11.2.4	<i>Religious facilities: churches and cemeteries</i>		
11.2.4.1	Abbey of St Peter and St Paul	Good	subject to quinquennial inspections; restored in 1987 refurbishment in hand 2017
11.2.4.2	St Michael Within, Hot Bath Street	Good	subject to quinquennial inspections
11.2.4.3	The Countess of Huntingdon's Chapel	Good	now a museum
11.2.4.4	The Octagon Proprietary Chapel	Good	Now a restaurant

No*	Element	State of Conservation	Note
11.2.4.5	St Swithin London Street Walcot	Good	subject to quinquennial inspections
11.2.4.6	St Mary the Virgin Raby Place	Good	subject to quinquennial inspections
11.2.4.7	Walcot Methodist Church	Good	subject to regular inspections
11.2.4.8	St John's Roman Catholic Church	Good	subject to regular inspections
11.2.4.9	Abbey Cemetery	Good	
11.2.4.10	Lansdown Tower and Cemetery	Good	Maintained as a nature reserve
11.2.4.11	Smallcombe Cemetery	Good	
11.3	The green environment of the 'therapeutic and recreational spa landscape'		
11.3.1	Parade Gardens	Good	
11.3.2	Sydney Gardens – last of the Vauxhalls	Medium	Trees are ageing
11.3.3	Gravel Walk	Good	Trees are ageing
11.3.4	Beckford's Ride	Medium	Trees are ageing
11.3.5	Beechen Cliff footpath	Medium	footpath good but trees are ageing
11.3.6	Royal Victoria Park	Good	Trees are ageing
11.3.7	Representative golf course on High Common	Good	
11.3.8	Representative cricket ground Bathwick Meadows	Good	
11.3.9	Representative tennis courts in Sydney Gardens	Good	
11.4	Spa infrastructure		
11.4.1	Great Western Railway Engineering structure	Good	maintained to operational standard
11.4.2	Bath Spa Railway Station	Good	refurbished 2014

No*	Element	State of Conservation	Note
11.4.3	Green Park Station	Good	restored 1982-84
11.4.4	The Guildhall ensemble	Good	
11.4.5	Former City Laundry Swallow Street	Poor	Restoration now in hand 2016
11.5	Internationalism, scientific, artistic and literary values, events and cultural tradition		
11.5.1	No 9 St John's Place	Good	now a restaurant
11.5.2	Linley House No. 5 Pierrepoint Place	Good	
11.5.3	Theatre Royal Sawclose	Good	
11.5.4	The Huntsman and Bridgwater House	Good	Bridgwater House refurbished 2018
11.5.5	No. 19 New King Street	Good	
11.5.6	No. 29 Great Pulteney Street	Good	
11.5.7	No. 2/3 Trim Street	Medium	
11.5.8	No. 14 South Parade	Good	
11.5.9	No. 8 Gay Street	Good	
11.5.10	No. 16 The Royal Crescent	Good	
11.5.11	Widcombe Lodge	Good	
11.5.12	No. 76 Great Pulteney Street	Good	
11.5.13	Alfred House Alfred Street	Good	
11.5.14	No. 4 Sydney Place	Good	
11.5.15	No. 9 Gay Street	Good	
11.5.16	No. 13 Green Street	Good	
11.5.17	No. 9 Walcot Parade	Good	
11.5.18	Lambridge House	Good	

No*	Element	State of Conservation	Note
11.5.19	No. 29 the Circus	Good	
11.5.20	No. 27 the Circus	Good	
11.5.21	No. 17 The Circus	Good	
11.5.22	Nos. 5/6 Edgar Buildings	Good	
11.5.23	Doric House Sion Hill	Good	
11.5.24	2 Alfred Street	Medium	

Major forthcoming conservation projects

Projects relating to the conservation of six elements are coming forward and negotiations are being undertaken to secure funding. Namely:

Sydney Gardens: Proposals to conserve and refurbish the gardens with a funding bid being prepared;

Archway Project: Proposals and a funding bid are being prepared to introduce a World Heritage Interpretation Centre in close association with the Roman Baths;

Abbey Footprint: Refurbishment of the Abbey is progressing;

Beckford's Tower: Proposals and a funding bid are being prepared for the conservation of the Tower;

Cleveland Pools: Proposals for the renovation of the Pools are well advanced and agreements on property matters are being completed;

Bathscape: a funding bid and proposals are being prepared for the interpretation and management of the immediate countryside surrounding the city.



4.b Factors affecting the property

Introduction

This chapter responds to the requirements of the nomination format by considering factors affecting the property under the four headings provided there - development pressures, environmental pressures, natural disasters and risk preparedness, and responsible visitation at World Heritage properties. However, for other World Heritage monitoring processes the World Heritage Committee has adopted a different classification of factors affecting World Heritage properties using 13 principal headings. For ease of reference, therefore, particularly in the use of this nomination dossier in future protection and management activities, a brief summary with table has been added at the end of the chapter to assess the overall position of the nominated property in terms of the 14 factors.

Sections 4.b (i) to (iv) assess the impact of the four factors identified by the nomination format, summarising the overall impact of each one and supported by assessments of each factor for the individual components. For the detail of legislation and regulation which protects the individual components of the property, please see Sections 5.b – 5.e.

4.b (i) Development pressures

All spa towns of the nominated series benefit from a wide range of legal instruments and planning and strategic policies which effectively reduce potential development pressures and guarantee that new development projects as well as restoration projects must comply with strict regulations from the point of view of heritage care, nature and landscape protection including mineral springs, and spatial planning. As a result, no major development pressures have been identified within the nominated property.

Moreover, owing to geographic and historic constraints, the nominated property's potential for further urban expansion is naturally limited. In most cases, new housing projects are restricted to areas outside the nominated property. There are no major industrial plants on the territory of its component parts which could lead to additional development pressure. Likewise, the spa therapeutic landscape enjoys effective protection at local, regional or national levels which prevents conversion of green space to urban uses.

The rise in traffic density is a matter of concern in several components. However, adopted measures are capable of keeping the traffic under control. These are further discussed in the Local Management Plans.

1. *Baden bei Wien*

AUSTRIA

Baden bei Wien forms part of one of the most successful and dynamic economic areas of Austria. As a consequence, the region is characterised by high employment, good salary conditions and easy access by public and private transport. However, an efficient and comprehensive management in the field of infrastructure and spatial planning prevent adverse impacts caused by this prosperous situation.

Thanks to the strict implementation of legal instruments and planning tools on different administrative levels (provincial level: development concept REK; community level: area designation plan, construction plan), development pressures (like urbanisation, high-density housing) and intensive traffic can be reduced and kept under control. Green areas (as part of the spa therapeutic landscape) enjoy effective protection through several nature protection regulations of provincial or international provenance (e.g. Biosphere Reserve, Natura 2000 areas). Thanks to this broad protection regime in the fields of spatial planning, monuments protection and nature, the protection of the environment is at a high level.

Challenges that may have an adverse effect on the state of conservation of the historic city-centre are development projects which aim at transforming buildings to new functions by enlarging the building height and construction-dimensions, thus modifying – *inter alia* – visual relations. However, the town-administration has appropriate controls, mechanisms and tools, including heritage impact assessments (HIA), for building projects located in the property and its buffer zone.

2. Spa

BELGIUM

The City of *Spa* has an area of 3,984 ha of which 75% is not zoned for urban development in the sector plan. In the part considered as available for development, many urban extensions already exist and are an important part of the urban area between the historic heart of the city and the forests. Therefore, the land available for development is limited so that strong real estate pressure is observed on areas which are still available areas and on built-up plots big enough for division to be considered.

In the historic centre, the general town planning regulation on protected areas has kept a general coherence in terms of size, colour of materials and roads but does not guarantee the architectural quality of new projects. Since the entry into force of the new Territorial Development Code on 1 June 2017, this regulation has become a planning guide and has lost its regulatory value. At the local level, the urban planning regulations on signage set out rules for commercial fronts in order to preserve the heritage quality of the buildings concerned. It also concerns the development of Horeca terraces and aims at a greater harmony of these spaces. It is now a guide and has lost its regulatory value.

Based on the principle of integrated conservation, Walloon legislation promotes the reuse of buildings, sometimes with a modification of their function. These modifications may overshadow the original function of the property and complicate the understanding of its historical and urban importance.

In terms of built heritage, the least protected neighbourhoods are neighbourhoods of villas which are unregulated and whose quality is based on the heritage sensitivity and commitment of the property owners.

Issues related to mobility, and the parking of cars in the city are taken into consideration in the city's mobility plan which includes the programme for rehabilitation and enhancement of the quality of public spaces.

In the buffer zone, due to the large part of non-building land defining in the sector plan, the risk linked to the development pressure is relatively low. In addition the protection of the water catchment area constrains and frame human activities. Finally the Parc

Naturel des Sources recognised by the Walloon Region in 2017 including the municipality of *Spa* and *Stoumont* is a tool that contribute to the territorial development and take into account the nature and human kind.

3. *Františkovy Lázně*

CZECH
REPUBLIC

Building development has long been regulated by town planning as well as by other laws and legislative provisions. Since the second half of the nineteenth century, town planning has primarily aimed at fostering the spa function, and there are no industrial or craft establishments. Currently the area is in a stabilized condition. The system of traffic and technical infrastructure is functioning without any critical issues. The long-distance traffic has been reduced by means of the bypasses outside the nominated area.

The potential building of new structures on so far empty plots or gaps is controlled by the town's urban plan study for space regulations for the historical core of the town of *Františkovy Lázně*. Building activities disturbing the historic structure of the built-up area in the Urban Heritage Reserve are prevented by numerous regulations. The town's development is regulated by the mutually interconnected instruments - Integrated Development Plan for *Františkovy Lázně*, the Urban Heritage Reserve Conservation Plan and the Urban Heritage Reserve Regeneration Programme.

4. *Karlovy Vary*

Town planning and building development in the spa town of *Karlovy Vary* has long been regulated by town planning as well as by other laws and legislative provisions. Since the second half of the nineteenth century, town planning has given preference to spa functions only, and there are no industrial or craft establishments. Due to the large capital inflow after 1989, an extensive building boom occurred. The legal heritage protection of the property since 1990 has substantially helped to face many challenges and currently the area is in a stabilized condition. The most significant town development today impacts the area of the Lower Railway Station and the relating area alongside the *Ohře* river which is located mostly outside the boundaries of the component part.

The potential new construction on so far unbuilt plots or in gaps is regulated by the town's urban plan study. Building activities disturbing the historic structure of the built-up area in the spa zone are prevented by the Spa Status of *Karlovy Vary*. Regulation conditions for building in the Urban Heritage Reserve are determined by the planning authority in accordance with the advice of the heritage conservation authority. The town's development is regulated by the mutually interconnected instruments – Integrated Development Plan for *Karlovy Vary*, the Urban Heritage Zone Conservation Plan, and the Urban Heritage Zone Regeneration Programme.

The biggest issue for the spa town is the increasing traffic density. The long-distance traffic has been solved long ago by the regional bypass north of the property but there is still relatively lively traffic connected with the popularity of this town and the numerous spa and accommodation facilities. Currently notices and traffic signs prevent cars and trucks from entering certain parts of the property, and at the same time they restrict through traffic. Car parks outside the central spa zone are in the planning phase as well as plans for multi-storey car parks outside this area.

In the past, the springs in *Karlovy Vary* faced risks stemming from the mining of raw mineral materials (coal and mainly china clay used for the well known local china ware) to the north of the town (outside the component part and its buffer zone) until the nineteenth century. This risk has been eliminated a long time ago. The current operation of china clay mines around Sedlec and Otovice to north of *Karlovy Vary* does not affect the *Karlovy Vary* thermal springs. Mining of raw mineral materials, which could have negative results on the natural healing resources, is carefully monitored by the specific state authority called the Czech Inspectorate of Spas and Springs. Any mining activity is also limited by the urban plan of the town of *Karlovy Vary*.

5. *Mariánské Lázně*

Building development in the spa town of *Mariánské Lázně* has long been regulated by town planning as well as by other laws and legislative provisions. Since the second half of the nineteenth century, the town's plans have focused primarily on strengthening the spa function of the town, and there are no industrial or craft establishments. The system of traffic and technical infrastructure is functioning without any critical issues and the long-distance traffic has been reduced long ago by means of the bypass south of the nominated area.

New potential constructions on so far unbuilt plots or in gaps are regulated by the town's urban plan study. Building activities disturbing the historic structure of the built-up area of the component part are prevented by regulations determined by the planning authority in accordance with the advice of the heritage conservation authority. The town's development is regulated by mutually interconnected instruments – the Integrated Development Plan for *Mariánské Lázně*, the Urban Heritage Zone Conservation Plan and the Urban Heritage Zone Regeneration Programme (since 2018, the property has a status of an Urban Heritage Reserve - see Chapter 5.b. - but all these instruments remain in force).

6. *Vichy*

FRANCE

Since the establishment of the ZPPAUP (Urban and Landscape Architectural Heritage Protection Zone) in the 1990s, the urbanisation pressures bearing on the historical architecture have been overcome and a general movement in favour of heritage rehabilitation has grown naturally. Before then, due to the economic decline of *Vichy*, only a few demolitions and 'modern' buildings had impaired the whole historic built fabric, at once diverse and coherent in character.

Most of these architectural insults are situated outside the bounds of the property, with the notable exception of the Novotel (now the Hôtel Mercure) in the 1970s, inappropriately constructed between the northern and southern parts of the Grand Etablissement Thermal.

Fortunately, that excessively interventionist period is now past, and the only remaining source of development pressure is the domination of public spaces by motor cars, which have been increasing in numbers in parallel with the re-energisation of the town and the resulting demographic revival over the last twenty years. This automobile pressure has been well contained and even considerably diminished with the construction of three underground car parks providing a total of 1,300 parking spaces, which has accompanied

the parallel transformation of several streets and squares to form a large pedestrian area, which is still being extended today.

Nevertheless, the presence of motor cars is still a considerable burden on the Parc des Sources zone, in the heart of the property. For this reason, in parallel with improvements in the availability of public transport and the development of cycle tracks designed to limit the use of the motor car, it will be essential that the renovation project for the Parc des Sources zone and the surrounding area incorporates the fourth underground car park provided for in the town-centre improvement project.

This is the price that will have to be paid in order to be able to reduce the number of parking spaces above ground and to liberate the surroundings of the Parc des Sources while maintaining an attractive welcome and level of service in the historic heart of the town. These facilities, offered for the benefit of visitors (tourists, people taking the waters, congress participants, etc.), will be complemented by park-and-ride sites at two locations outside the zone but convenient for the town centre (behind the railway station and at the bridgehead on the left bank), intended primarily for people working there.

7. *Bad Ems*

GERMANY

All urban development measures taken at *Bad Ems* are subject to regulations pertaining to building and monument protection law. The binding land-use plan of the Verbandsgemeinde (association of municipalities), and the development plans of the municipality of Bad Ems, provide the framework for all building activities. Buildings listed as historical monuments enjoy additional protection. There are no industrial plants or firms at *Bad Ems*.

The nominated property is located entirely within the historical town centre. Owing to its situation in a narrow valley, the protected area's potential for urban expansion is naturally limited. Since the 1970s, new neighbourhoods have been developed mostly on the surrounding hilltops. Within the protected area, new buildings are permitted only in a few individual cases, and must comply with strict regulations. On the outskirts, urban development has resulted in some building, notably in the vicinity of the former Villa Balzer on Villenpromenade, and on Bahnhofplatz. Further densification in the villa quarter is not to be expected. Only one more building is expected in the Wilhelmsallee.

Just to the east of the property, a building site has been designated in the area formerly taken up by the rail freight yard. In the past, building on the plateaus of "Auf der Platte" and "Auf dem Ehrlich" to the west of the centre has been considered; both sites are outside the buffer zone but clearly visible from the observation points of the spa landscape (Concordiaturm), and thus the property. The municipality has no intention to allow building projects to spoil the views from the property. *Bad Ems* will work to ensure that the intangible and tangible values of the property are preserved.

The building of a relief road and the shifting of most of the through traffic on Bundesstraße 260 out of the town centre has allowed for a redesign of Römerstraße street, which in turn has had a very positive impact on the entire property. Nevertheless traffic leaving and arriving to the town as well as stationary traffic in the town centre still pose a problem that needs addressing by the spa town.

8. *Baden-Baden*

As a result of the city's economic strength, its attractive environment and demographic changes, housing needs have steadily increased while the residential density has diminished over the last few years. The conservation area designated according to §19 of the Heritage Protection Act Baden-Württemberg ("Satzung zum Schutz der Gesamtanlage Baden-Baden") will be enlarged by the end of 2018 and will cover the whole nominated property.

An urban conservation analysis as well as a design handbook for the villa quarters of Annaberg and Beutig-Quettig is in preparation and will be finished at the end of 2018. It is intended to improve the binding land-use plans in the affected historic villa quarters by recognition of values such as historical structures and to anchor the results accordingly in the city planning and urban development.

Two construction projects within the nominated property are described here:

Vincentiareal

The development of a new residential district on Annaberg is based on the results of an urban planning and architectural competition. Its concept is to define adequately a building structure for this topographically exposed situation, at the location at the interface between the closed urban structures of the old town and the adjoining residential area of the Annaberg. Thus the visual and structural integrity is not affected and no effect on OUV is expected by this project. The legally binding development plan has gained legal force.

New Castle

The former residential castle of the margraves of Baden is a cultural monument of particular importance because of its historical association with the former state of Baden and architectural history. Because of its prominent location at the Florentinerberg, the castle shapes the cityscape of *Baden-Baden* to a large extent. In order to guarantee a preservation of this historically significant building, the city of *Baden-Baden* and the state of Baden-Württemberg approved a structural extension in 2001 with a development plan under strict preservation requirements.

9. *Bad Kissingen*

Development pressure and springs

Within the boundaries of the qualitative medicinal spring protection area extending across the old town and the central spa quarter nearly all constructional measures need a special approval concerning the water rights. This approval determines the conditions and terms of the execution of the work and requires an evidence collection program at the mineral springs. These regulations have very effectively guaranteed the protection of the mineral springs; they are able to also secure it in the future in respect to urbanistic developments in the area of influence of the mineral springs.

In order to avoid a future loss of the mineral water quality by the intrusion of groundwater into the pits constant checks guarantee an early detection of such factors. The most important parameters (pH-value, electrical conductivity, temperature, fluid quantity, depression) are sent online to the control room of the Bayerisches Staatsbad *Bad Kissingen* GmbH and are thus constantly checked. During pump changes (Max, Rakoczy,

Pandur), checks by a camera are made in order to find out possible damages in time. Additional geophysical examinations are sometimes made then. To test the chemical nature of the mineral water regular analysis made by an certified analytical laboratory are executed.

The pipes are made of PE or PVC and correspond to the legal guidelines of the drinking water supply. When new lines are being laid the providers of the pipes get an analysis of the mineral spring these pipes are meant for; they have to confirm the stability and compatibility in order to exclude a chemical transformation (or even contamination).

Development pressure and tangible heritage

The nominated property and the buffer zone comprise parts of a living city which are constantly subject to social, cultural, economic and ecological changes. Recognizing the dynamic nature of living cities it has to be stated that developments in the property and buffer zone are necessary for the positive development of the town. The City of *Bad Kissingen* will make full use of opportunities to shape these developments in a way as to preserve the tangible and intangible values of the protected property. Important instruments are The Bavarian Act for the Protection of Historic Buildings and Monuments (BayDSchG), basic and strategic development plans (Rahmenpläne), municipal town planning (kommunale Bauleitplanung), charters and statutes (Satzungen).

One development pressure arises out of future building activities within the component and the buffer zone. One example is the installation of wind engines outside of the town boundary. In order to protect these areas with regard to their contribution to the perception of the nominated property they need to be integrated into regional planning strategies.

Development pressure the component includes potential measures of redensification in the villa quarters which are characterized by wide open green spaces and a low-density layout. Another example of development pressure is the potential for new buildings to reduce the high percentage of green spaces within the component and the buffer zone and the smooth transition between inner-city green areas and the spa landscape. Building activity could also disturb visual axis and vistas. Their preservation is to be secured by including them into the municipal town-planning (kommunale Bauleitplanung) and by regularly checking them on behalf of a monitoring with the help of reference points. Respective design charters and development plans will be established.

Modernisation pressure

Within the nominated component which is in large part characterized by residential areas and guest houses and guest rooms, another pressure is to adapt buildings to changing living standards. In principle this development factor is regulated by the Bavarian Act for the Protection of Historic Buildings and Monuments (BayDSchG). Existing plans partially to break up the compact and dense pattern of the old town in order to increase its attractiveness can also lead to the demolition of some buildings. Modernisation can also be an issue for the historic interiors of the numerous private villas, hotels and guest houses, especially in those cases where only the area protection is valid. In order to guide building activity in that area, the City of *Bad Kissingen* will establish a restoration/renovation consultant for the areas of the old town centre lying within the boundaries of the extended re-development plan of the old town and the Sondergebiet Kur (special area, spa area) (including the Frühlingsstraße). For the same purpose the City of *Bad Kissingen* will also establish an expert advisory board *Bad Kissingen* for the World Heritage, urban preservation and development.

Investment pressure

Investment pressure cannot be denied in World Heritage sites. This may be of major concern especially when restoring or revitalizing vacant buildings or when developing new building projects. One of the latest examples is the redevelopment of the area between Kurhaus and Kurgarten. A new building within this urban context should not merely integrate visually into the townscape, but should also respect and reflect the outstanding cultural, social and economic (historical) function at that place. In spite of, or especially because of investment pressure, the check for sustainability and socio-cultural integrity of town development projects should be a fixed part of the planning process.

Traffic

Further development factors which could be of more importance in the future are traffic, hygiene regulations and societal changes in general. In the future an increased traffic volume may put a certain pressure on the urban structure of a town. Preventive measures will be taken by establishing a sustainable traffic and mobility concept by the City of *Bad Kissingen*.

Hygienic regulations

New European hygiene regulations could exert a pressure for modernisation on historical spring encasements and/or water services or tap systems. Among other factors the changing hygienic rules caused, for example the end of the historic bathing functions in the 'Kurhausbad' or 'Luitpoldbad'.

Development pressures and intangible heritage

In *Bad Kissingen*, the major part of the built-up area is located within the borders of the local plan for development and house building called "Sondergebiet Kur" (special area for buildings and installations related to cure treatment) in which the use and application of these buildings is only permitted for the traditional cure treatment and for tourism purposes. The functional qualities of the town can be thus preserved by this development plan.

Other development pressures

However the town is also particularly influenced by external development factors such as societal or economic changes. Evidence of these factors are given by the several buildings dating from the 1950s to 1970s built within the context of the "social health treatment" ("Sozialkur"); they are mainly situated in the buffer zone of the nominated property.

In this case, by using the planning instrument of the designation of re-development areas, financial incentives can be created to encourage the preservation of buildings protected as monuments as well as of buildings which characterize the urban landscape and townscape.

10. Montecatini Terme

ITALY

Within *Montecatini Terme*, the urban layout (zoning predictions) of the municipality prevents new buildings, while existing constraints assure continuous monitoring of interventions to be carried out, and a careful preservation of the urban and natural landscape. All these prevent potential damage deriving from new areas of building expansion or from incongruous transformations of the existing heritage.

The urban plan assigns thermal functions to the proposed site, with due regard for existing historical, architectural and environmental characteristics. No building or other part of

the heritage included in the candidacy is at risk of destruction. At the same time, no new constructions are planned on the site.

The area is not subject to any particular activity of building abuse. The current urban planning regulation makes it very unlikely that any negative impact on the site will arise from developments within the buffer zones or more widely, since the expansion areas are located south of the motorway axis and have been allocated a very limited building capacity, in order to ensure respect of the most recurring type of construction (single-family buildings or semi-detached houses of two or three storeys).

Accessibility to the site from outside and inside is already guaranteed by the existence of an efficient, partly historical transport system, and there are no plans for new interventions in the transport infrastructure. *Montecatini Terme* already has the benefit of every mode of transport: the trunk road no. 435, the Florence-Lucca-Viareggio railway, and the Autostrada Firenze-Mare (the motorway from Florence to the Tyrrhenian Sea). There are also two airports close by at Pisa and Florence, that guarantee communication with every part of the world.

11. *City of Bath*

UNITED KINGDOM

Bath is an attractive place to live in an area enjoying economic growth and so it is facing strong pressures for development and Government targets to deliver new housing. These may have an impact on the Outstanding Universal Value. Development within the city is managed by a wide range of planning policies and strategies. Principal amongst these is the Core Strategy of 2014 used when determining planning applications. This strategy provides an up to date basis for key decision making and with other documents it takes full account of the existing World Heritage Site.

Design of contemporary buildings has been identified as an issue for the city. The character of the centre of the city is sustained and the values of the *City of Bath* World Heritage Site are protected through policies in the emerging Placemaking Plan which sets out guidance and design values for the district. The height of new buildings and their impact upon views and the character of the City are acknowledged as an issue and may offer a potential risk to the Outstanding Universal Value. The Council's 'Bath Building Height Strategy' of September 2010 informs the Local Development Framework and ensures that the heights of new buildings are properly managed.

Planning policies in the statutory Development Plan and in Supplementary Planning Guidance direct development to where it is acceptable and needed. Generally, development is resisted if it would harm the openness of the statutory Green Belt, and character of the Area of Outstanding Natural Beauty. The policies resist development in the city that would harm the reasons for the inscription of the Bath on the World Heritage List and/or would harm the character or appearance of the Conservation Area. Some 5,000 buildings in the city are listed buildings and development that would harm these buildings or their setting is resisted.

Bath and its setting remain vulnerable to change from pressure of increased transport activity so that moving around the city efficiently has become now a major issue. Principal road routes pass through the centre of the city resulting in congestion, pollution and other detrimental impacts on residents and businesses. Car ownership levels are high so that parking of cars is problematic. Topography and planning constraints mitigate against introducing a ring road or by-pass.

The comprehensive traffic management strategy ‘Getting Around Bath’ has been adopted by the Council and contains a range of management measures including expansion of existing park and ride facilities. The strategy recognises harm that comes from heavy traffic passing through the City and the impact this has on air quality. Accordingly, alternative routes are being sought to divert long distance heavy goods vehicles moving between south coast ports and the motorway network.

Surrounding countryside

Few other English cities have such a special relationship of their surrounding landscape to their built fabric as Bath. Here open countryside lies close to the city centre. This green landscape setting remains vulnerable to change and the threats to its character include pressure from development; lack of management of woodlands and grasslands leading to loss of wildlife habitats; poor stewardship of farmed land; insufficient recognition and care for some heritage features; and overgrown views and vistas. A bespoke management plan and the ‘Bathscapes’ Partnership intend to halt the decline in landscape quality of the surrounding landscape and reconnect the people of Bath with their landscape.

4.b (ii) Environmental pressures

In general, none of the component parts faces any significant environmental pressures resulting from climate change, air, soil or water pollution. The overall environmental conditions are very good as care for the environment is part of the long-term goals of all nominated spa towns. Protection of the environment is enforced by numerous legal instruments and local policies. Air pollution caused by increasing traffic is an issue; in all component parts measures have been adopted to counteract this potential negative trend. One long-term consequence of climate change may be a need to review the tree and plant species used in future planting and landscaping schemes if present species no longer flourish in changed climatic conditions.

1. *Baden bei Wien*

AUSTRIA

The impact of environmental pressures on the nominated property is low. A direct link between climate change and the biodiversity of the green areas cannot be observed. With regard to pollution, air pollution caused by traffic plays a minor role, but this does not affect the property.

Woodland located west of the property, Wienerwald, exerts a mitigating impact on the air quality. This vast area is protected through various protection instruments provided under national and international provisions:

- Landscape Protection Area Wienerwald,
- Biosphere Reserve Wienerwald,
- Natura 2000 area: Wienerwald-Thermenregion (on the basis of the Birds Directive as well as on the Habitats Directive).

Thanks to these different protected areas a broad and comprehensive set of provisions for environmental protection can be applied.

2. Spa

BELGIUM

There is no known environmental pressure significantly jeopardising the component part *Spa*.

A policy for protection, risk prevention and emergency response has been developed concerning water. The catchment and groundwater protection legislation drastically limits the activities permitted in the property and its buffer zone. It thus contributes greatly to reducing environmental risks, whether in terms of soil or air pollution.

Spa is not located in an industrialized region and borders the Hautes Fagnes, Belgium's largest nature park. Air quality is therefore mainly affected by road traffic and is concentrated mainly in the city centre and during peak hours. The municipal mobility plan should help to improve the situation.

Climate change should not have any impact on built heritage and forest management incorporates these concerns.

3. Františkovy Lázně

CZECH REPUBLIC

In general, the environmental pressures are low, no major environmental pressures (climate change, air and soil pollution, groundwater quality) have been identified; there are no emission-producing industries in the area of the component part and its buffer zone.

Legal protection of the environment is enforced by a number of instruments and policies. The town has strict requirements for preserving natural values of the area, the landscape quality and individual environmental components. The responsible local and state authorities pay attention to the protection of the landscape, its aspects and typical features, namely the preservation of natural healing resources. Surveillance over the conservation of the environment, nature and landscape, atmosphere and waste management is provided by the Environmental Department of *Františkovy Lázně* Municipality. Besides issuing permissions or decisions in administrative proceedings it performs inspections aimed at enforcing the relevant laws. *Františkovy Lázně* has compiled a local urban system of ecological stability, which is incorporated into the Town's plan. The revitalisation of the inner and outer spa landscape, carried out for more than 20 years, serves to prevent unsuitable pressures on the environment. Also carried out are passive provisions to protect the atmosphere, such as the maintenance of greenery and silvicultural measures, planting trees, shrubs, perennial and annual plants, alleys and parkways. A lot of care is given to the conservation of natural healing resources as the whole area is characterised by a high number of outflows of mineral water, gases and peloids (therapeutic muds).

Františkovy Lázně has good air quality, which significantly improved during the second half of the 1990s, thanks to the desulphurization of large sources of pollution in the neighbouring districts, gas installation, heat distribution in the town and regulation of traffic in the town.

4. *Karlovy Vary*

In general, no major environmental pressures (climate change, air and soil pollution, groundwater quality) have been identified; there are no emission-producing industries in the area of the component part and its buffer zone.

The responsible local and state authorities pay high attention to the conservation of the landscape, its aspects and typical features, namely the natural healing resources. Conservation of the environment in *Karlovy Vary*, conservation of nature and landscape, conservation of atmosphere, and waste management is the responsibility of the Environmental Department of *Karlovy Vary* Municipality. Besides issuing permissions or decisions in administrative proceedings it performs inspections aimed at enforcing the relevant laws. *Karlovy Vary* has compiled a document called “a territorial system of ecological stability” which has been incorporated into the Town’s plan. *Karlovy Vary* has compiled a local urban system of ecological stability, which is incorporated into the Town’s plan. Overall the town has adopted strict requirements for preserving natural values of the area, the landscape quality and individual environmental components.

The revitalisation of the component’s inner and outer spa landscape, carried out for more than 20 years within the Czech and Bavarian cross border co-operation, serves to prevent unsuitable pressures on the environment. Also carried out are passive provisions to protect the atmosphere, such as the maintenance of greenery and silvicultural measures, planting trees, shrubs, perennial and annual plants, alleys and parkways. Most of the area of the component part and its buffer zone benefits from the status of the Slavkovský les Protected Landscape Area whose management is also focused on keeping all landscape qualities.

One possible risk is land erosion, which might affect the output of *Karlovy Vary* hot springs in the town’s spa area (historical inrushes into the Teplá river and wild springs in house basements). Inrushes of thermal water can directly endanger the stability of buildings or break the thermal plate and damage the springs outflow area. To eliminate these risks, it is necessary – when performing terrain interventions or building activities in the protected zones of natural healing resources – to obtain binding opinions according to the Act No. 164/2001 Coll. (the Spa law) from the Czech Inspectorate of Spas and Springs.

Karlovy Vary has good air quality, which has significantly improved since the second half of the 1990s thanks to the desulphurization of large sources of pollution in the neighbouring districts and thank to changes of local heating means from coal to mainly gas and centralised heat distribution in the town. However, the overall improvement of the air conditions is negatively affected by increasing car traffic causing noise and exhaust pollution. These negative impacts have been partially relieved by building a through road behind the river Ohře in 2007 (outside the property). The town perceives the unpolluted air as a part of its credo and endeavours to eradicate traffic as much as possible out of the spa area.

5. *Mariánské Lázně*

In general, no major environmental pressures (climate change, air and soil pollution, groundwater quality) have been identified; there are no emission-producing industries in the area of the component part and its buffer zone.

Legal protection tools ensure good protection of the environment. The responsible local and state authorities pay attention to the conservation of the landscape, its aspects and typical features, namely preserving the integrity of natural healing resources. Conservation of the environment, nature and landscape, atmosphere and waste management are provided by the Environmental Department of *Mariánské Lázně* Municipality. Besides issuing permissions or decisions in administrative proceedings it performs inspections aimed at enforcing the relevant laws. *Mariánské Lázně* has compiled a local urban system of ecological stability, which is incorporated into the Town's plan. Overall the town has strict requirements for preserving natural values of the area, the landscape quality and individual environmental components. The whole component part and its buffer zone benefits from the status of the Slavkovský les Protected Landscape Area whose management is also focused on keeping all landscape qualities.

The revitalisation of the component's inner and outer spa landscape, carried out for more than 20 years, serves to prevent unsuitable pressures on the environment. Also carried out are passive provisions to protect the atmosphere, such as the maintenance of greenery, planting trees, shrubs, perennial and annual plants, alleys and parkways.

Mariánské Lázně has good air quality, which has significantly improved since the second half of the 1990s thanks to the extensive forests in its vicinity and thanks to changes of local heating means from coal to mainly gas and centralized heat supply in many hotels and spa facilities in the town.

6. *Vichy*

FRANCE

No source of environmental degradation that could affect the heritage of the property has been identified with certainty. Indeed, the town of *Vichy*, built on the large, still mainly untamed River Allier, between the slopes of the Bourbonnaise Mountain and the Limagne plain, is advantageously located in a relatively unspoiled environment.

This situation, 50 kilometres away from the only town of significant size, the former regional capital, Clermont-Ferrand, and well away from the A71 and A89 motorways, spares it from these possible sources of pollution.

The only risk on this score is pollution of groundwater that could be caused by intensive farming on the Limagne plain, though it is not known at this date whether this could have harmful effects on the quality of the spa waters.

With regard to climate change, this does not at the moment seem to be affecting the mass of vegetation in the parks or the avenue trees, which constitute one of the fundamental features of the spa town's heritage. However, this aspect will have to be taken into consideration in the choice of the tree varieties that will be planted during renovation operations, especially the crucial renewal of trees in the Parc des Sources.

Another point that must be mentioned in this connection is the need for the complete replacement of the rainwater collection system in the Parc des Sources, whose malfunctioning, already regularly observed, can only get worse with the increases in precipitation that can be predicted as a consequence of climate change.

7. *Bad Ems*

The relief road has helped to reduce town-centre traffic, and consequently noise and exhaust pollution, very considerably. There are no emission-producing industries in this area, merely the evaporation plant of Siemens & Co. (brine-based health products) to the south-east of the property. Mining in the area was abandoned in 1945; the resulting soil pollution is limited to the western part of the municipal area and does not impact on the protected area. No further adverse effects from it are expected.

Since 1998 the co-operative project KLIWA has been surveying the local impact of climate change on the water management in southern Germany. KLIWA (*Klimaveränderung und Konsequenzen für die Wasserwirtschaft*, english: "Climate change and consequences for water management"), is a co-operative project of the German Meteorological Service (DWD) and the three German Federal States of Baden-Württemberg, Rhineland-Palatinate (since 2017) and Bavaria. An increasing number of days with temperatures of more than 30° C has been predicted along with heavier rainfall, milder temperatures during winter, and even possible periods of droughts during summer. Such a development will have effects for the water balance of the region: this could mean increasing threats due to shortage of water for the gardens and for the surrounding countryside which is relevant to the cure treatment, and it could also mean – particularly in the surrounding recreational and therapeutic spa landscape – an increased risk of forest fires which, however, will probably remain within a controllable level.

Climate change may have an effect on the vegetation in the Kurpark and the surrounding spa landscape in the shape of storms or heavy rain; owing to the spa town's situation in a narrow valley, but these are infrequent occurrences. The air quality is being monitored by German Meteorological Service (DWD), and has been classified as "good". *Bad Ems* is registered as a climatic health resort. The Verbandsgemeinde of *Bad Ems* has adopted an integrated climate protection policy.

Owing to its situation in the property of the nature preserve of Nassau, the entire surrounding landscape enjoys special protection. The densely forested hillsides serve to balance the local climate.

8. *Baden-Baden*

Within the framework of the state recognition of a therapeutic spa status, control analysis for climate assessment and air purity is carried out at regular intervals. There is no risk anticipated for *Baden-Baden*.

Since 1998 the co-operative project KLIWA has been surveying the local impact of climate change on water management in southern Germany. KLIWA (*Klimaveränderung und Konsequenzen für die Wasserwirtschaft*, english: "Climate change and consequences for water management"), is a co-operative project of the German Meteorological Service (DWD)) and the three German Federal States of Baden-Württemberg, Rhineland-Palatinate (since 2017) and Bavaria.

According to the prognosis of the KLIWA report "*Der Klimawandel in Baden-Württemberg*" (English: "Climate Change in Baden-Württemberg") an increasing number of days with temperatures of more than 30° C has been predicted along with heavier

rainfall, milder temperatures during winter, and even possible periods of droughts during summer.

It is expected that there will be no impact of climate change on the building stock of the spa town. *Baden-Baden* is located in the warm-temperate climatic zone. The climate change to be expected may be reflected as a growing intensity of storms and storm periods. It is assumed that higher temperatures will prevail in summer, and milder temperatures with stronger precipitation in winter. Within the framework of the state recognition of a therapeutic spa status, control analysis for climate assessment and air purity is carried out at regular intervals. There is no risk anticipated for *Baden-Baden*.

9. *Bad Kissingen*

Bad Kissingen is situated within the transition area between Western Europe's maritime climate and Eastern Europe's continental climate. Since 1998 the joint project KLIWA has been surveying the local impact of climate change on the water management in southern Germany. KLIWA (*Klimaveränderung und Konsequenzen für die Wasserwirtschaft, English: "Climate change and consequences for water management"*), is a co-operative project of the German Meteorological Service (DWD)) and the three German Federal States of Baden-Württemberg, Rhineland-Palatinate (since 2017) and Bavaria.

According to the prognosis of the KLIWA report "*Der Klimawandel in Bayern für den Zeitraum 2021–2050*" (*English: "Climate Change in Bavaria 2021–2050"*) an increasing number of days with temperatures of more than 30° C has been predicted along with heavier rainfall, milder temperatures during winter, and even possible periods of droughts during summer. Such a development will have effects for the water balance of the region: this could mean increasing threats due to shortage of water for the gardens and for the surrounding countryside which is relevant to the cure treatment, and it could also mean – particularly in the surrounding recreational and therapeutic spa landscape – an increased risk of forest fires which, however, will probably remain within a controllable level.

Air pollution

Official control analyses with reference to climate certificates as well as to clean air are carried out regularly in the spa town. The most recent survey report of climate and air purity certifies an excellent air quality.

Water pollution

The potential for future contamination of the mineral springs is small, as the medicinal spring protection areas were designed to protect the mineral water well and broadly. The mineral springs are protected by decrees as well as by the fixed medicinal springs preserves. The common qualitative medicinal spring protection areas of the Kurgarten springs as well as for the 'Runder Brunnen' have been valid since the 1980s. The common quantitative medicinal spring protection areas of all the *Bad Kissingen* mineral springs and the Bad Bocklet mineral spring was fixed in 1922.

Within the boundaries of the qualitative medicinal spring protection area extending across the old town and the central spa quarter nearly all constructional measures need a special approval concerning the water rights. This approval determines the conditions and terms of the execution of the work and requires an evidence collection program

at the mineral springs. These regulations have very effectively guaranteed the protection of the mineral springs; they are able to also secure it in the future in respect to urbanistic developments respectively to human impacts in the area of influence of the mineral springs.

10. *Montecatini Terme*

ITALY

Flora and fauna ecosystems

The hill system that forms the site's landscape context preserves very well its natural features. Although in the plain, the well-established effects of human settlement and urban transformations have long since modified the original ecosystems of flora and fauna, the historic urban areas are marked by a broad presence of thermal parks and green areas that have an important ecological function. For the maintenance of the pinewoods, research has been carried out to identify and characterise the tree heritage, and to produce a preliminary survey. All the trees are examined through a summary visual evaluation to ascertain any existing issues (agronomic, structural, phytosanitary issues) and to outline guidelines for the restoration and enhancement of tree species. The vegetative, sanitary and structural stages of the existing natural heritage are recorded, and observations are made on specimens that exhibit abnormal characteristics.

Water system

The importance of water quality in a spa town such as *Montecatini Terme* has entailed a tight regulation of geognostic drilling or any intended use of well waters, and of chemical and physical analyses of the detected water. Any direct or indirect interference with the thermal springs are under strict control.

Air pollution

As concerns air pollution, the monitoring by the regional detection network (ARPAT) has placed the Municipality of *Montecatini Terme* in Zone B. This means that there is a risk of exceeding the permitted limit for two or more pollutants, or, as a Municipal Rehabilitation Zone insofar marked by exceeding the permitted limit for at least one pollutant, and therefore subject to specific air quality improvement plans or programs.

Through the Strategic Environmental Assessment (VAS), in conjunction with the Structural Plan, DGC (Decree of the Head of the Government) n. 199/2011 approval for the coordination of Valdnievole related to the "*Reduction of PM10 (fine particles) emissions and the prevention of atmospheric pollution in the province of Pistoia*", and the DGC n. 249/2011 approval of the "*contingency plan to be adopted to limit the risk of exceeding PM10 emission limit values*", the following suggestions and interventions for environmental health are proposed below:

1. Reduction by 2°C of the air temperatures of rooms and buildings for all heating systems, and two hours reduction of daily functions;
2. Prohibition of outdoor fires;
3. Prohibition of warming up motor vehicles engines when stationary, while engines must be switched off in vehicles parked or in a prolonged stop, especially in the inhabited areas;
4. Reduction of the maximum speed limit in the municipal area to 20 km/h compared to the current limit;

5. Traffic ban on the most polluting vehicles, in some areas determined by the Municipalities at certain times;
6. Increase of road cleaning service in order to minimize fine particles in the atmosphere;
7. Establishment of an “ecological Sunday” after five consecutive days exceeding the air quality limit, in order to reduce fine particles in the reference station.

The Municipality of *Montecatini Terme* in 2003 signed a specific Memorandum of Understanding, with the Tuscany Region, Anci (National Association of Italian Municipalities) and other municipalities, for the adoption of a PAC, a Municipal Action Plan, aimed at reducing the risk of overcoming the limit values of PM10 (fine particles). A series of actions, measures and interventions are scheduled, aiming at the reduction of fine particles.

11. *City of Bath*

UNITED
KINGDOM

Hot springs

The hot springs of Bath are the only springs of their kind in the United Kingdom to be classified as ‘hot’. Nevertheless, there is a threat to them from possible exploration nearby for hydraulic fracturing or ‘fracking’ to secure a supply of methane from shale rock deep underground. British Geological Survey⁶ has conceded in their report of 2012 that whilst the exact flow of the underground water is not fully understood, fracking in the zone of influence of the springs may cause harm. Any disruption to the flow of ground water may not become apparent until sometime after any diversion had occurred and this is likely to be irreversible. Measures to prevent harmful drilling action will be through the use of planning policies and lobbying central government who are responsible for issuing licences for exploration.

As well as fracking, the hot springs could be at risk also from deep quarrying of road stone in the Mendip Hills and from any excavation in or near to the city. To this end, the County of Avon Act will continue to be enforced, development proposals at the quarries scrutinised and monitoring the flows of hot water.

Pollution

Air quality is important for human health. Much of the decline in air quality in the centre of the city can be attributed to vehicle emissions from cars, railway engines and some other sources so that there are locations in the city where nitrogen dioxide levels exceed statutory limits. Here, particulates and other pollutants can affect people and does affect Bath Stone used in almost all historic buildings in the City. An Air Quality Management Area has been declared for the city centre and its approaches. The transport strategy proposes also a range of options to address this issue, including a potential Low Emission Zone, alternatives to car use and removal of traffic from more parts of the city centre.

⁶ <http://www.bathnes.gov.uk/services/environment/bath-hot-springs/hydraulic-fracturing-fracking>

4.b (iii) Natural disasters and risk preparedness

The risk of natural disasters is generally low within the property as also evidenced by historical records.

As most component parts are situated in river valleys, the lowermost parts of the spa towns may be vulnerable to flood risk, this risk, however, is largely alleviated by effective flood protection installations.

All spa towns of the nominated series dispose of fire brigades which are well trained and equipped with specific tools to combat fire hazards.

Most of the spa towns are located in areas of very low or low earthquake risk. The only exception to this is *Montecatini Terme* which is in part situated in an area of medium to high seismic risk, however, the municipal territory itself has a low seismicity and there are no major historic earthquakes recorded.

1. *Baden bei Wien*

AUSTRIA

The impact of natural disasters on the property can be regarded as low. During earlier centuries the river Schwechat caused some danger of flooding, however, thanks to torrent regulations the danger could be minimised. Natural disasters, like storm or seismic activities are rare, avalanches do not exist.

Human-made disasters, like traffic-accidents with dangerous cargo pose some threat to life and goods. However, the fire brigades are equipped with specific tools to combat hazards; moreover, they can count on inter-communal and inter-regional cooperation in case of disasters.

Emergency management consists of three steps: before, during and after the occurrence of an irregularity. Depending on the kind of disaster and its severity, emergency plans have been prepared by the municipality, the fire brigades and at provincial level. Close cooperation is established between the emergency unit of the town administration, the local police station, fire brigades in Baden as well as with the emergency centre at provincial level (Landeswarnzentrale).

With regard to fire fighting, the three fire brigades (Stadt⁷, Leesdorf⁸ and Weikersdorf⁹) in Baden are equipped to the highest technical standard and undertake regular training. These fire brigades are organised as voluntary associations (“Freiwillige Feuerwehren”), leading to cost-efficient safety management and high identification of the fire-fighters with their area of responsibility.

2. *Spa*

BELGIUM

The geographical situation of Belgium greatly reduces the risk of natural disasters; the same applies to *Spa*. The main factors affecting the property are of urban and institutional nature.

⁷ <http://www.ffbs.at/blog/>

⁸ <http://www.ff-baden-leesdorf.at/>

⁹ <http://www.ff-baden-weikersdorf.at/>

Risk of fire and protective measures

The fire risk is taken into account in various ways.

In Belgium, a Royal decree sets fire safety standards for all the buildings.

In particular regarding the private housing, regional legislation imposed a legal obligation to fit all housing with fire detectors.

For the public buildings, different measures ensure efficient fire protection and firefighting. For instance each building is equipped, or on the way to be equipped, with a general fire detection system and a lightning conductor. Each building has a box with an emergency key available for the emergency services to allow access to the buildings.

Concerning fire fighting, one of the fire stations for intervention in the event of fire is located in the centre of the city. The water distribution network is equipped with several fire hydrants to guarantee sufficient water resources for fire suppression. This is available even in the network located in the forest to avoid forest fire.

Water-related risks

Spa is located in the rainiest area of Belgium. However, the Hautes Fagnes have a great capacity of absorption and act like a sponge. Warfaaz Lake also plays a role in managing variations in water levels.

The risk of stream overflow and flooding is considered low according to the standards of the Walloon Region. Water-related risks are therefore not zero but can be considered occasional or even negligible.

The wish to preserve the quality of the water motivated the City of *Spa* to be one of the first to be equipped, as early as the 1990s, with an intervention plan in the event of fire or pollution. This plan associates the city, the emergency services, the Spadel company and the services of the Region concerned.

Risks associated with rockfalls

The rock slide risk map drawn up by the Walloon Region identifies 3 small risk zones in the *Spa* area. They are taken into account in the examination of urban planning applications. Incidents are extremely rare.

Seismic hazards

Belgium is in a zone of low seismic activity. Light earthquakes sometimes occur but do not cause significant damage.

3. Františkovy Lázně

Flooding risk and protective measures taken

Flood risk is quite small. It can only be connected with the short-term rising of the water due to summer rainstorms, regional rains or snow melting during the winter and spring period.

The town is effectively protected by a system of hydraulic structures – the Mill Pond (Mlýnský rybník) and the water reservoir Skalka. The reservoir was built in 1962-64 with the purpose of providing water supply and protection from floods for *Františkovy Lázně* as

CZECH
REPUBLIC

well as the town of Cheb. To increase the safety of the hydraulic structure during extreme floods, an additional safety spillway was built during 1998-2000. It is now safe even during the so called ten-thousand-year-flood. In the vicinity of *Františkovy Lázně* there is situated a large number of ponds, which have a retentive character. The biggest one is, with its area of 45 ha, the Amerika pond.

Risk of fire and fire prevention measures

With respect to the character of the component part, the danger of fire damage is mainly in its built-up area. The administrative authorities for fire protection are the Ministry of the Interior of the Czech Republic and the fire rescue service of the *Karlovy Vary* region. The tasks of the state administration are also fulfilled through powers delegated to the town authorities. The *Karlovy Vary* Regional Council issues the fire alarm regional plan and it stipulates the conditions for securing the overall coverage of the region by the fire protection units, water sources for extinguishing fires and providing fire protection in buildings of special importance.

Organisation and the rules of fire protection on the local level are adjusted by the Fire Rules approved by the statutory town of *Františkovy Lázně* in 2005. Registration of alerts of fire, natural disaster or other emergency within the town is secured by a system of fire registration offices. Fire notification and implementation of rescue and liquidation work during natural disasters and other emergency is permanently secured by a volunteer fire brigade unit of the town of Skalná (9 km north of *Františkovy Lázně*). The town of *Františkovy Lázně* has water supplies and other assets for putting out fires. The nearby town of Cheb (7 km to the south) has also its permanent fire brigade. This secures the town's protection from fires in an appropriate capacity and qualitative condition.

Seismic activity in the region

Seismic activity in the whole Czech Republic is continually monitored by the Geophysical Institute of the Czech Republic Academy of Science. Compared with other regions of the Czech Republic, the seismic activity of the Earth's crust is slightly increased in this part of the *Karlovy Vary* region which leads to sporadic occurrences of weak earthquakes (up to a magnitude of 5 on the Richter scale). No catastrophic earthquakes have been recorded in its history.

4. *Karlovy Vary*

Flooding risk and protective measures taken

Flood risk is quite small. It can only be connected with the rising of the water level of the river Ohře or the river Teplá or other smaller watercourses due to short-term summer rainstorms, long term regional rains or snow melting during the winter and spring period. Potential flood areas are specified within the Flood plan of the town, but the town is effectively protected by the system of upstream hydraulic structures. The hydraulic structure "Březová" on the Teplá river and the hydraulic structure "Stanovice" on the Lomnický creek fundamentally regulate flow rates in the Teplá river and eliminate the risk of damaging the spa area by floods. The larger portion of the component part is situated on more elevated areas which are completely free of flood risk.

Risk of fire and fire prevention measures

The danger of fire damage is mainly in the built-up area. The administrative authorities for fire protection are the Ministry of the Interior of the Czech Republic and the fire rescue service of the *Karlovy Vary* region. The tasks of the state administration are also fulfilled

through powers delegated to the town authorities. The *Karlovy Vary* Regional Council issues the fire alarm regional plan and it stipulates the conditions for securing the overall coverage of the region by the fire protection units, water sources for extinguishing fires and providing fire protection in the buildings of special importance.

Organisation and the rules of the fire protection are modified by the Fire Rules approved by the statutory town of *Karlovy Vary* in 2011. The town, besides others, established fire protection units of voluntary firemen and it provides the material and financial means necessary for their activities. Further, in the territory of the town, professional fire protection units work for the Fire Rescue Service of the *Karlovy Vary* region with its headquarters in *Karlovy Vary – Rybáře*.

The sources of water for fire extinguishing are provided by the town of *Karlovy Vary*. The Fire protection law demands that any building owner must provide it with basic fire protection and sets provisions for the fire hydrant network maintenance. This secures the basic town's protection from fires in an appropriate capacity and qualitative condition.

Seismic activity in the region

Compared with other regions of the Czech Republic, the seismic activity of the Earth's crust is slightly increased in the *Karlovy Vary* region, manifesting itself by the sporadic occurrences of weak earthquakes (up to level 5 on the Richter scale). Earthquake occurrence in the whole Czech Republic is monitored by the Geophysical Institute of the Czech Republic Academy of Science. Based on the results of the existing measurements as well as historic data, it can be said that the risk of an earthquake on the area of *Karlovy Vary* is close to zero.

Other possible risk factors

Air traffic

The international airport in Olšová Vrata is situated near *Karlovy Vary*. The working heliport in *Karlovy Vary – Dvory* is used for the needs of the Air Rescue Service and exceptionally for other parts of the Integrated Rescue System. Further there is a small airport for recreational flying in the urban part Hory. All these airports lie outside the component part. Security provisions for the air traffic hazards are provided within the Emergency Plan of the *Karlovy Vary* region.

5. *Mariánské Lázně*

Flooding risk and protective measures taken

Flood risk is quite small. It can only be connected with the rising of the water due to short term summer rainstorms, long term regional rains or snow melting during the winter and spring period. In case of torrential rains and melting spring snow, a temporary rise in the level of Kosí and Úšovický streams can occur.

The areas of potential flood risk are specified in the Flood Plan of the town. The town is effectively protected by the water reservoir of *Mariánské Lázně* dam which is able to decrease the flood peak of the 100-year flood wave.

Risk of fire and fire prevention measures

The danger of fire damage is mainly in the built-up area. The administrative authorities for fire protection are the Ministry of the Interior of the Czech Republic and the fire rescue

service of the *Karlovy Vary* region. The tasks of the state administration are also fulfilled through powers delegated to the town authorities. The *Karlovy Vary* Regional Council issues the fire alarm regional plan and it stipulates the conditions for securing the overall coverage of the region by the fire protection units, water sources for extinguishing fires and providing fire protection in the buildings of special importance.

Organisation and the rules of the fire protection are modified by the Fire Rules approved by the statutory town of *Mariánské Lázně* in 2005. The town, besides others, established fire protection units of voluntary firemen and it provides material and financial means necessary for their activities. Protection of lives, health and properties of citizens from fire, natural disasters and other abnormal events within the town of *Mariánské Lázně* are secured by fire protection units. The fire rescue unit is based in *Mariánské Lázně*. The town has at its disposal water resources and other assets for fire suppression. This secures the town's protection from fires in an appropriate capacity and qualitative condition.

Seismic activity in the region

Compared with other regions of the Czech Republic, the seismic activity of the Earth's crust is slightly increased which leads to sporadic occurrences of weak earthquakes (up to level 5 on the Richter scale). Earthquakes in the whole Czech Republic are monitored by the Geophysical Institute of the Czech Republic Academy of Science. From this monitoring and historic records it is obvious that earthquake risk is very small

6. Vichy

FRANCE

Two types of natural disaster concern the territory of *Vichy*, entailing two types of risk for the built heritage:

- risks relating to differential ground movements linked to the phenomena of shrink-swell of clays,
- flood risks due to rising of the River Allier and its tributaries, the Sichon and the Jolan.

The first type of risk comes under the PPR (Natural Risk Prevention Plan) concerning differential ground movements linked to the phenomena of shrink-swell of clays, approved by order of the Prefect on 22 August 2008. This risk occurs only outside the boundaries.

Flood risk

The second type of risk comes under the PPRi Allier (Allier Flood Risk Prevention Plan) approved on 17 October 2018 on the one hand and the PPRi Sichon-Jolan (Sichon and Jolan Flood Risk Prevention Plan) approved on 9 October 2001, on the other.

Although the property itself delimited is not affected by risks defined in the prevention plans in force, studies in progress on those parts of the territory of *Vichy* at high risk of flooding incorporate the new hypothesis of a thousand-year rise in the level of the Allier. This would be capable of overflowing the dyke constructed by Napoleon III, which would affect the western part of the property.

Furthermore, the risk assessment on the state of this dyke carried out in 2016 by agencies of the State, its owner, raises a number of questions regarding its maintenance. However,

due to the presence of thousands of tonnes of backfill behind this dyke, which make up the Allier parks, it is in reality a mound which protects the historic centre of *Vichy* from all real risk of this dyke system giving way, even considering the exceptional spate of 1866 which was taken as a reference in the prevention plan.

Fire risk

Fire in the landscape is not perceived as a particular risk because the parks are landscaped with large space between each trees which would make the spread of fire very difficult. The ground is flat and the large space between each tree make very easy any emergency intervention.

Seismic activity

Lastly, the relative proximity of Vichy to the Auvergne volcanoes places the town on the periphery of the low seismicity zone defined in 2010 by the Departmental Directorate of the Allier area.

This last type of risk, of which no historical instance has been recorded, is not the subject of any particular measures other than ongoing and precise scientific monitoring of seismic phenomena linked to the volcanoes of Auvergne.

7. *Bad Ems*

GERMANY

The German Institute for Standardization (Deutsches Institut für Normung e.V. (DIN)) classifies areas according to the degree of seismic activity in the region. The standard (DIN 4149) distinguishes four different zones which rank from 0 (no risk) to 3 (high risk). *Bad Ems* is situated in Earthquake Zone 1. Minor earthquakes occur but have never caused significant damage so far. There have been no rockfall events in *Römerstraße* since the sheeting of the *Emser Quellensattel* in 1904. In *Lahnstraße*, safety precautions - in the shape of catch fences - were installed in the early 2000s after several instances of rockfall. During high water, the Lahn river occasionally floods its banks as well as adjacent cellars; however, it is exceedingly rare for the river to flood the riverside roads (most recently in 1984).

Emergency response (outside police responsibility) is regulated by law (Landesbrand- und Katastrophenschutzgesetz des Landes Rheinland-Pfalz, LBKG). Responding to fire risks (fire prevention) and other hazards (general help and assistance) is the responsibility of the local fire department, which is administered by the *Verbandsgemeinde* of *Bad Ems*. Emergency and action plans have been drawn up for vulnerable structures such as the *Kurhaus*, and structures that might pose risks to others; fire risks are covered as well as other hazards (e.g. water). In accordance with the LBKG, the authority in charge of regional fire protection, general help and assistance, and civil protection/disaster management is the district of *Rhein-Lahn-Kreis*.

Public buildings in the vicinity (hotels, *Kurhaus*, *Kursaal*, railway station and others) are fitted with fire detectors in compliance with current building codes. By the same token, all rental properties must be fitted with fire detectors; this is the case for most structures within the core zone (property).

In the event of a forest fire within the property and/or in the buffer zone, the 'Forest fire' ['Waldbrand'] alarm and deployment plan of the *Verbandsgemeinde Bad Ems*. (*Bad Ems*. Municipal Association) applies.

8. *Baden-Baden*

Seismic activity in the region

The German Institute for Standardization (Deutsches Institut für Normung e.V. (DIN)) is the German national organization for standardization. The earthquake zone according to DIN 4149 is a classification of areas according to the degree of seismic activity in the region. The standard distinguishes three different zones which rank from 0 (no risk) to 3 (high risk).

Baden-Baden is located in earthquake zone 1, where minimal earthquakes may occur but are unlikely and have never caused damage.

Flooding risk and protective measures taken

The small river Oos crosses the property in north-south direction. Although there is no flood risk predicted, the Regierungspräsidium Karlsruhe has developed precautionary flood maps. The first flood hazard map Part 1 (PG 9A) was compiled on 9.11.12, part 2 (PG9 B) on 19.3.15 and part 3 (PG8) is available as a draft of 9.7.2015. The city has planned in the long-run to draw up a flood and emergency plan, in which the organisation is regulated in the event of an emergency.

Risk of fire and fire prevention measures

In densely populated historic European cities, not every fire risk can be eliminated completely. However, fire protection and fire defence in the city of *Baden-Baden* is very well prepared according to its risks. Therefore *Baden-Baden* maintains a fire department with 55 full-time and 289 volunteer firefighters. There is a full-time staffed division for preventive fire safety and operational planning. There is a very good water supply system in the city. The existing fire suppression technology is up to date and in a technically perfect condition. The executives and members of the fire department are regularly trained and educated.

A fire service requirement plan exists and the individual buildings are provided with instruction notes in the mission control system. For special cultural-historical buildings a firefighter deployment plan offers object-specific information (e.g. accessibility, extinguishing equipment). The hydrant book contains all water supply points.

Most buildings with public or commercial use have an automatic fire alarm system connected to the fire brigade control centre (including the theatre, Brenners Park Hotel, Kurhaus, Casino, Staatliche Kunsthalle, Kloster Lichtental, Schloss Solms and many more). Other buildings have an automatic extinguishing system with connection to the control centre of the *Baden-Baden* fire department (including the Hotel Badischer Hof and the Hotel Europäischer Hof). All structures with fire alarm systems and extinguishing systems have structure-related operational plans. The existing technology for firefighting is up-to-date and in good condition.

For buildings used by the city, a working group is currently working on the introduction and implementation of training and education of employees in the event of fire and on measures to prevent fires.

The forest areas of the buffer zone essentially consist of a mixed forest which is not very endangered by fire. There is a ban on the use of fire and a general smoking ban outside approved fireplaces in the whole forest area of the buffer zone.

The fire department has large scale mapping of the forest area. Furthermore, there is a plan showing the location and capacity of fire water supply points. In case of a wildfire, the fire brigade keeps special wildfire equipment, such as highly off-road fire fighting vehicles, material for long fire-fighting water conveyor lines and special extinguishing equipment to combat vegetation fires on the normal fire trucks. In addition, there is a call service at the forestry office to advise the chief of operations in forestry matters.

9. *Bad Kissingen*

Seismic activity in the region

The German Institute for Standardization (Deutsches Institut für Normung e.V. (DIN)) is the German national organization for standardization. The earthquake zone according to DIN 4149 is a classification of areas according to the degree of seismic activity in the region. The standard distinguishes three different zones which rank from 0 (no risk) to 3 (high risk).

Bad Kissingen is situated within the earthquake zone O. This means that there will be neither seismic risks nor danger through earthquakes.

Flooding risk and protective measures taken

To a large extent the property is located within the officially determined flood plain of the river Fränkische Saale. A continuous risk and danger of floods will probably arise due to the rainfalls that are predicted as a consequence of future climate change; however, such risks and dangers have been taken care of in a preventive and sufficient way.

In order to protect the built-up areas, extensive flood protection installations were built in 2005 to 2007. In parts these installations are reversible. These flood protection constructions shall guarantee safety in case of a 100-year flood (HQ 100). Should there be any warning announcements, the maximum reaction time available will be one hour at the most. During this period of time, the reversible flood protection walls can be mounted and installed. The crisis management group consists of the lord mayor, mayor, senior legal officer, municipal building officer, municipal fire protection officer, responsible person of police department, person in charge of operations performed by the Bavarian Red Cross, rescue service and water rescue service, director of the public utilities department of the City of *Bad Kissingen*, responsible technical person employed with the civil engineering department, one representative of the municipal administrative department for Public Safety and Order, director of the regulatory authorities' office / of the municipal public affairs office. On the basis of a detailed and scheduled emergency plan in case of high floods, and at a water level of 380 cm, the latter will activate the crisis management group at short notice.

However the spa ensemble and the other individual spa buildings are endangered by more severe flooding events, such as extreme flood events (HQ extreme), which statistically occur rarely, less often than HQ100.

The existing plans concerning the management of flooding risk are in line with the civil protection guidelines and determine the required actions which need to be taken according to the respective water levels. Currently the town council is planning the preparation of an audit concerning flooding events. Furthermore the particular risk of flooding of the Luitpoldbad was taken into consideration in the scope of the recently conducted restoration work.

Risk of fire and fire prevention measures

In principle an adequate fire-protection for the ensembles and the spa buildings is ensured. The fire protection of all buildings is based on the legal guidelines valid at the time of its approval and the required emergency exits are indicated. Individual fire-protection concepts do not exist for all buildings within the property zone. However individually drafted operation schedules for the fire brigade have been established for all those buildings which are classed as special buildings (Sonderbau) according to the building laws. Special buildings (Sonderbau) include e.g. the central spa buildings, the casino and the hotels. The assembly and function rooms are always used in close agreement with the local fire brigade; if required, fire-guards who are familiar with the place are present during events. Large-scale fire-protection plans for public spaces and the parks do not exist. The public hydrants and the river Fränkische Saale are the main technical fire-protection appliances of the town.

Individual fire-protection concepts for the spa landscape do not exist. However the local fire brigade provides several pump water tenders, among them two special off-road vehicles to enter the forest holding 6000 and 2500 litres of water and another special appliance holding 2km long fire-hoses in order to reach the water supplies of the river or hydrants. Furthermore the area of the district town of *Bad Kissingen* provides several fire check points, from which the distance to the closest fire brigade stations can be calculated by a computer. With this tool, up to 99 fire brigades can be informed about the exact location of the fire. Usually a collection of 10 will be pointed out. Before fire fighting the fire incidents are being categorized in degrees reaching from B1 (small fire) to B7 (large fire). In case of a severe forest fire aerial fire-fighting services can be ordered via the ministry of the interior from the police or the military. The closest helicopter is stationed at Roth, at app. 150 km distance from *Bad Kissingen*. External pods which are able to carry between 900 and 5000 litres of water are available at fire brigade stations in Würzburg (60km), Aschaffenburg (100km) and Bischofsheim i.d.Rhön (30km distance).

10. Montecatini Terme

ITALY

Seismic activity in the region

According to the chart of the Areas with Greater Local Seismic Hazard (ZMPSL), different parts of the territory of Montecatini have been defined as local S2 (medium), S3 (high) and S4 (very high) seismic hazard categories. However, areas with a very high danger (S4) are not of large extent, since only areas corresponding to landslide material hill and mountain areas are involved. The whole plain is classified as S2 and the mountain environment is almost entirely S3.

From a regulatory point of view, assigning an area to S3 or S4 class only determines a different level of investigation at the planning stage, that is more accurate in case of high risk. Overall, the municipal territory has a low seismicity. This is confirmed by data of earthquakes with an epicentre near *Montecatini Terme*. Seismic events affecting the territories of Montecatini from 1887 until today are listed below, based on data from the Italian Macroseismic Database 2015 prepared by INGV (National Institute of Geophysics and Volcanology in Italy). The chart also highlights the intensity recorded at the epicentre and epicentre magnitude expressed as Mw moment magnitude.

Perceived Intensity	Year	Epicentre	Epicentre Intensity	Moment Magnitude Mw
II	1887	Fiorentino	VI	4.47
IV V	1895	Fiorentino	VIII	5.50
V	1899	Valle del Bisenzio	VII	5.02
IV	1904	Pistoiese	VII	5.10
III	1913	Corno alla Scale	V	4.18
VI	1914	Lucchesia	VII	5.63
III	1918	Appennino forlivese	IX	5.96
IV	1919	Mugello	X	6.38
V	1920	Garfagnana	X	5.01
V	1969	Appennino pistoiese	VI VII	4.67
V	1974	Appennino pistoiese	V	4.31
III	1995	Lunigiana	VII	4.33
II III	1998	Umbria-Marche		5.26
	2013	Fivizzano	VI	5.36

Hydrogeological risk

Hydrological and hydraulic research on the local area, carried out in 2009 to support the preparation of the municipal urban regulation, evaluated flood risk throughout the local territory. The research proposes two actions to mitigate the identified risk: a flood relief channel running parallel to the Borra Stream in the critical section; excess water will be discharged into a natural flood relief area on lower-lying ground. The proposed risk mitigation measures are currently being considered by the administration, in conjunction with neighbouring municipalities, in order to identify shared technical solutions. It should be noted that in such areas the severity of flood risk is a function of both the depth of flooding and its likely frequency. Here the high danger derives from a high probability of recurrence of flooding.

Fire risk

Fire risk prevention and fire protection are both the exclusive responsibility of the Ministry of the Interior which exercises its competence through the Fire-fighters Department and the National Corp and is regulated at national level, by the Law D.P.R. 1st August 2011, n. 151 which identifies all the activities subject to fire prevention checks. In particular the spas, as public venues for leisure, entertainment and sport activities, are included within the classification 63_83 set out in annex 1 of the law.

At regional level, the law regulates forest fire risk prevention. As the area of Montecatini is considered within the High Risk Class because of the vegetal species and the general climate conditions, a particular plan is foreseen and regulated by the article. 70 of the regional law 39/00. In case of emergency, all interventions are coordinated by the Mayor, who will direct the opening of the Municipal Operations Centre and of the Crisis Municipal Unit.

As a comprehensive risk management strategy is needed, either for prevention or for intervention within emergency, a general plan has been formulated at the site level based upon appropriate use of the building, evacuation routes, and the installation of emergency

equipment such as fire hydrants. The plan is coordinated with the municipality, fire services, and other relevant urban authorities.

11. *City of Bath*

UNITED
KINGDOM

Bath and North East Somerset Council, with its partners including the Avon Fire and Rescue Service and the Avon and Somerset Constabulary are responsible for addressing management of risk and responding to natural disasters and emergencies and particularly those of fire and flooding. Consistent with the Civil Contingencies Act 2004, these authorities with neighbouring authorities in Avon and Somerset area have compiled a Community Risk Register and this has identified agreed profiles of risk of which the top risk is flooding.

Responding to risk of flooding the lead authority is the Environment Agency. The Agency has published a Flood Emergency Plan, guidance for householders and food businesses, plus emergency advice telephone lines and internet advice. Part of the city has been identified as being vulnerable to flooding. Flood Prevention measures were introduced in the 1960s and again from 2007. The Local Authority has published A ten year plan for the management of Flooding (2015-2015). An essential part of addressing risk of flooding is undertaken through the management of development in the flood plain and this is the responsibility of the planning authority with the Agency through the design and control of development.

The lead authority responding to fire emergencies is Avon Fire and Rescue and this works also with the local planning authority to ensure that the design of new development and control of change in existing buildings meets agreed standards of fire precautions. Fire precautions and procedures are assessed regularly, offices, factories, shops, schools and places of assembly.

Consistent with the Flood and Water Management Act 2010, the Council's Emergency Planning Team has prepared a strategy for emergency planning including an assessment of risk and action on prevention and the Council's appropriate response to an emergency.

4.b (iv) Responsible visitation at World Heritage sites

All spa towns of the nominated series have long-term experience with tourism and are capable of accommodating large numbers of spa guests and tourists. The capacity of accommodation facilities is more than satisfactory and at the appropriate level. The same goes for related tourism infrastructure including public transport, parking facilities or waste management. All spa towns of the nominated series are well prepared for potential increase in visitors' numbers, any negative effects due to rising numbers of visitors are not to be expected.

It is clear that all of the components have had higher visitor numbers in the past than now and are generally well-placed to absorb an increase in visitor numbers after inscription on the World Heritage List. As in other historic towns it is not easy to gather fully accurate or even punctual visitor statistics as access to the spa towns is free of charge and to a certain extent unmonitored. Only statistics relating to accommodation or to charged facilities can be used to estimate visitor numbers.

As may be expected also with 11 components spread across seven countries in Central, Mediterranean and Western Europe, the spa cities do not yet have a consistent methodology for measuring visitor numbers. Developing this will be an important priority once the property is inscribed on the World Heritage List. The table below collates as far as is possible the current pattern and summarises information on matters such as tourism services. Further information is then provided as far as it is available for each of the components covering:

1. Existing visitation and use of the component
2. Predicted visitor numbers
3. Carrying capacity
4. Possible threats from visitor pressure
5. Planning for visitor management

These are the areas for which the nomination format seeks information in this section. Overall, on the basis of a survey carried out for all components and on other information supplied in the separate entries for each component below, the following position can be summarised.

It is clear that detailed statistical data is only available for 9 of the spa towns; in 3 towns it is held regionally and not detailed sufficiently. Some present two sets of visitor figures; one for curists (medical/health tourism) and second, other staying visitors, ignoring day visits which are difficult to count in an urban context. Some spas do not count curists separately, which would be difficult as it is wholly privately based and unavailable due to data protection. Individually the average length of stay is monitored for curists and other staying guests.

1 Existing visitation

The figures in the table on page 621 show that in six of the spas the total number of curists is 924,365 staying an estimated total of 3,124,315 overnights. In eight spas, the total number of other staying guests is 2,858,584 staying an estimated 12,863,628 overnights. Six of the spa towns, including the 2 largest (*Baden-Baden & City of Bath*), receive an estimated additional 14,475,000 day visits annually.

2 Predicted visitor numbers

8 of the spa towns have estimated the likely incremental increase in tourism as a result of inscription, with projections of increases ranging from 5% to 10%. Most of these have spare capacity for additional overnight stays. The 2 largest spa towns are building additional hotel capacity and 3 others have additional capacity as one of the strategic goals.

3 Carrying capacity

Only 2 spa towns have conducted capacity carrying studies and one of these was only with the existing hotel sector. There are 2 further studies currently underway.

4 Possible threats from visitor pressure

See the individual entries below for each component but because spas developed as places which people visited in large numbers, they are well equipped to receive large numbers of visitors. Many of them have in the past dealt with much higher numbers than they do now.

5 Planning for visitor management

Not all components have visitor management plans *per se* but all have Local Management Plans which include objectives and actions on the welcoming and management of visitors. The most common themes in strategic development plans are the provision of additional parking, increase in public transport facilities, and general traffic management including clean air zones. The most common tourism marketing objectives are higher spending, staying visitors from domestic, European and international markets.

Spa town	DMO/TiC	CEO	Website: www.	Data: Frequency collected	Curists (guests)
1. <i>Baden bei Wien</i>	✓	✓	tourismus.baden.at	Annual & monthly 2017	13,120
2. <i>Spa</i>	✓	✓	spatourisme.be	Thermes de Spa 2015	
3. <i>Františkovy Lázně</i>	✓	✓	frantiskovylazne.cz	Quarterly 2015	49,988
4. <i>Karlovy Vary</i>	✓	✓	karlovyvary.cz	Quarterly 2017	185,660
5. <i>Mariánské Lázně</i>	✓	✓	marianskelazne.cz	Quarterly 2017	205,608
6. <i>Vichy</i>	✓x2	✓	vichy-destinations.com	Daily 2017	29,500
7. <i>Bad Ems</i>	✓	✓	bad-ems.info	Monthly 2017	
8. <i>Baden-Baden</i>	✓	✓	visit.baden-baden.de	Daily 2017	440,489
9. <i>Bad Kissingen</i>	✓	✓	badkissingen.de	Daily tax	29,014
10. <i>Montecatini Terme</i>	✓ Region	✓	tomontecatini.com	Monthly quarterly annual	
11. <i>City of Bath</i>	✓	✓	visitbath.co.uk	Annual	
Total					924,365
6 of 11					
Spa town	Other stays (guests)	Day visits (people)	Over nights (bed nights)	Carrying capacity	
1. <i>Baden bei Wien</i>	65,351	800,000	425,016	Calcs. only exist: Clinics @ 94% Hotels @ 74%	
2. <i>Spa</i>			215,051	X	
3. <i>Františkovy Lázně</i>			867,539		
4. <i>Karlovy Vary</i>	185,779	600,000	1,828,005	X	
5. <i>Mariánské Lázně</i>	86,011	292,000	1,545,580 est.	Nation data, local study in progress	
6. <i>Vichy</i>			330,200 (2015)	n/a	
7. <i>Bad Ems</i>	45,770		301,963	Large spare capacity	
8. <i>Baden-Baden</i>	429,765	7,000,000	1,054,547	Bed capacity increase	
9. <i>Bad Kissingen</i>	226,135	1,000,000	1,638,083	2019/2020 study available	
10. <i>Montecatini Terme</i>	629,759		1,617,315	Current study sust. indicator	
11. <i>City of Bath</i>	1,161,000	4,783,000	3,410,000	n/a	
Total		2,858,584	14,475,000	12,903,099	
8 of 11		6 of 11	10 of 11		
Spa town	Est. of WH increase	Monitor	Strategy or VMP	Budget € k	
1. <i>Baden bei Wien</i>	Beds + 400 + 50% o/night + 25% day	Monthly	✓ limit on day trips and coaches	1,276	
2. <i>Spa</i>			✓	0,255	
3. <i>Františkovy Lázně</i>	Current beds @ 45% region 30%				
4. <i>Karlovy Vary</i>	+ 50% o/night + 100% day	Quarterly,	City dev. plan, traffic, bus and catering	0,600	
5. <i>Mariánské Lázně</i>	+100% day High % beds free	- ditto - above	-ditto- above	0,260	
6. <i>Vichy</i>	+10%	Daily only TiC	✓	0,998	
7. <i>Bad Ems</i>	+5% o/night + 15% day	Hotels and TiC only	Local action plan/Region strategy/ New parking	0,790	
8. <i>Baden-Baden</i>	+ 5% o/night	City tax data	Strategy New parking Site dispersal	2,800 Est.	
9. <i>Bad Kissingen</i>	+ 5% o/night est. 2019/2020 study available	City tax data	Strategic plan	2,000	
10. <i>Montecatini Terme</i>	X	X	VMP 6 indicator thematic	0,400	
11. <i>City of Bath</i>	Increase hotel cap. +10% o/night	X	Clean air zone/Coach tax/Bed tax	1,500	
Total				10.879M	
10 of 11					

Fig 15: Summary of results of the tourism questionnaire to the spa towns; October 2018.

Apart from these comments responding to the rubrics of the nomination format, it should be noted that all spa towns have a tourism office, identified contact and individual websites, not all translated into different languages. Smaller towns rely on regional tourism offices for strategic plans, product development, overseas marketing and data collection. The collective annual spend (2017) on direct staffing costs and the marketing and product development budgets of the tourism offices in 10 of the spa towns is € 10.879 Million. There is clearly a continuing move away from the public funding of curist health visits to spa towns moving towards private provision and personal payment plans to pay for these services.

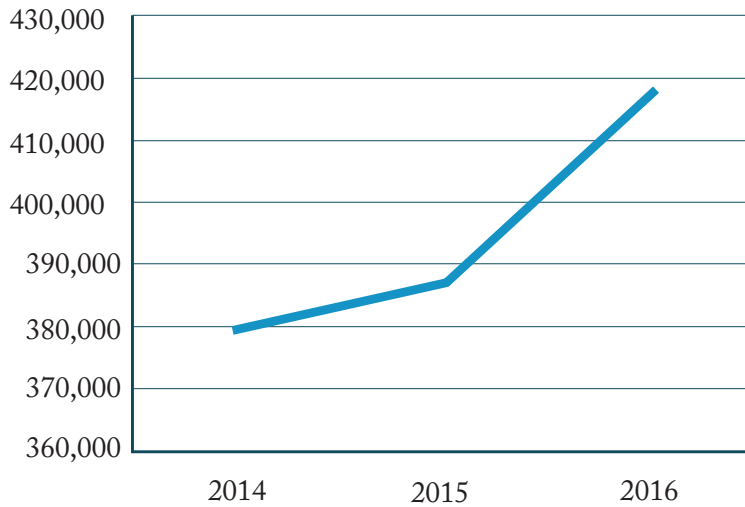
Clearly it will be necessary to develop a more coherent approach to visitor management across the whole property if the nomination is successful. There is already a high degree of informal cooperation resulting from the years spent developing this dossier but further actions will be necessary and are being included in the objectives and actions of the property management plan. These include:

1. *The Great Spas of Europe* Secretariat to set up a standard format for the collecting tourism and spa user data on an annual basic, either by setting up its own 'observatory' or by joining others, such as the European Historical Thermal Towns Association (EHTTA), to participate in existing statistical and financial monitoring methodologies.
2. To monitor with others, such as the European Spas Association (ESPA), the impact of changing social welfare, public health services and private prevention and wellness programmes as relevant to the provision of facilities and services provided in the spa towns.
3. Monitor the construction of new accommodation provision in the spa towns.
4. Create a standardised translation interface between the individual spa town websites and links between these and the over-arching Great Spas website.
5. Develop the brand '*The Great Spas of Europe*' and commissionable products to provide to specialist tour operators and travel consultants.
6. Hold workshops with the strategic planners for tourism in the spa towns, including their regional and national tourism authorities, sharing best practice and experience.
7. Research collective purchasing impact and marketing cooperation to introduce the benefits of economy of scale throughout the 11 component spa towns.
8. Create an annual high-level tourism workshop for those responsible for the tourism marketing, development and service provision in the 11 spa towns.

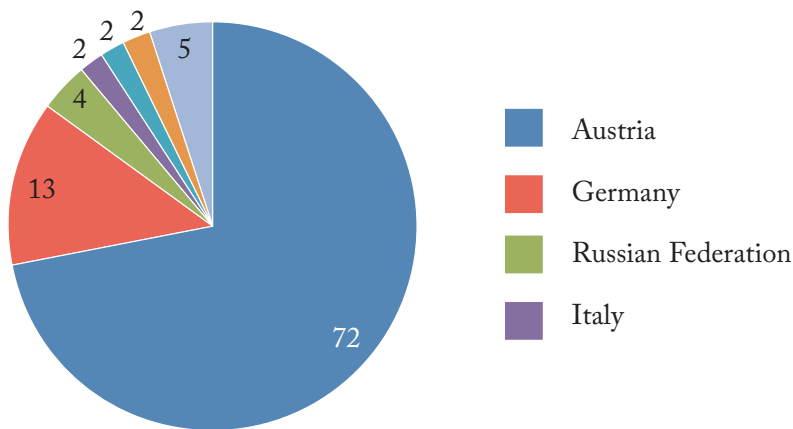
1. Baden bei Wien

AUSTRIA

Existing visitation



With regard to the origin of the guests (in 2015, 68,865 arrivals could be counted), some 72 % are from Austria (43,896). Almost a half of foreign guests come from Germany (7,826 out of 17,141 in 2015), followed by guests from the Russian Federation, Hungary, Poland and Italy.



Carrying capacity

The tourism infrastructure of Baden is prepared to cover a carrying-capacity of some 800,000 overnight stays per year. This amount is clearly beyond the current situation. Consequently, additional guests can be accommodated without problem.

2. Spa

The municipality of *Spa* has the 29th highest number of arrivals in Belgium and the 32nd highest number of overnight stays. *Spa* is fourth in Wallonia for these two categories behind Durbuy, Liege and Charleroi (2015 figures). Like all spa towns, *Spa* was planned to welcome large number of visitors, whether curists or tourists. The end of public reimbursement for medical cures caused a decline of curative activity and an orientation towards tourism and leisure activities.

Existing visitation

Tourism is a major component in the economic activity of the town of *Spa*. *Spa* tourism hinges on several areas: historic town with major architectural heritage, spa and wellness town, green town with omnipresent nature and a dense network of walks, cultural town thanks to the many local and international museums and events and a town for recreational pleasure and family fun.

Visitor numbers to the *Spa* Tourism Centre alone account for about one third of the total for the Province of Liege and 10% for Wallonia.

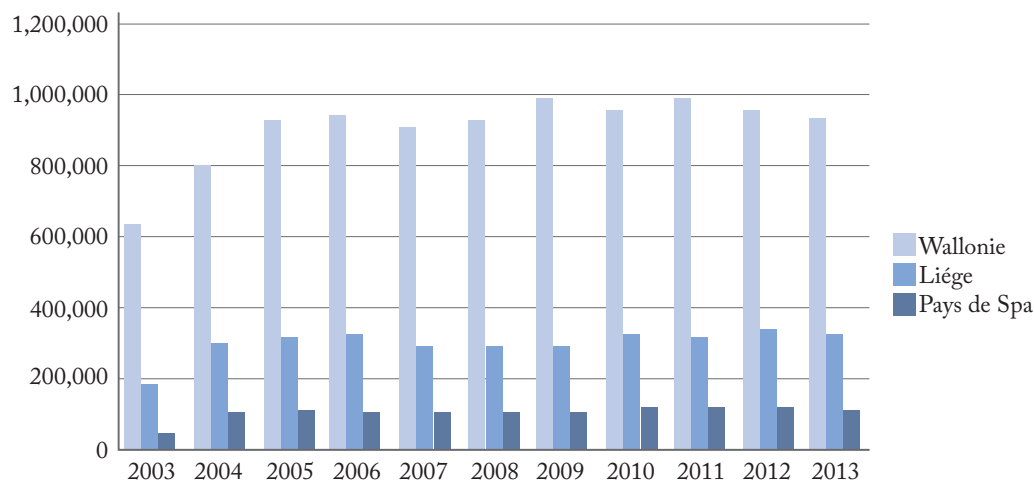


Fig 16: Visitor numbers to tourist centre desks

There is currently no mass tourism that could affect the property or local populations adversely. *Spa* is visited more frequently in the summer. Its main tourist market is Belgium, with 70% of overnight stays. Foreign visitors are essentially Dutch. Then come the to a lesser extent German, Luxembourg, French and English. The tourist population is very largely made up of 26-40 and 41-60 age groups and mainly comprises couples without children or families with children, followed by groups of senior citizens.

There is also a clientèle focused on the conference trade. This is true of certain hotels or self-catering establishments with sufficient accommodation and an infrastructure that includes conference rooms. Some establishments have been oriented towards the organisation of seminars and the reception of particular audiences, participants in these seminars or sports groups linked to sporting events and particularly related to the race track of Spa-Francorchamps.

The majority of visitors have previously stayed in the region. Statistical studies in 2006 and 2007 showed that more than 70% of people coming to our region have already been here, often several times. At least 50% of visitors are coming for at least the third time. In 2006, only 22% of customers were exploring the region for the first time against 29% in 2007.

The two major categories are those staying at least one night and day visitors (locals enjoying leisure activities in the territory). These two groups have different expectations from the site. The average duration of stay is slowly changing. Two-day stays are gaining in popularity with the reduction in the number of one-day excursions. The average duration of stay varies quite strongly according to the type of accommodation. The most common

average stay in a hotel or B&B is two to three days, i.e. fairly short, whereas people stay longer in self-catering accommodation, normally seven days, but *Spa* is clearly positioned at the moment as a very short-stay destination.

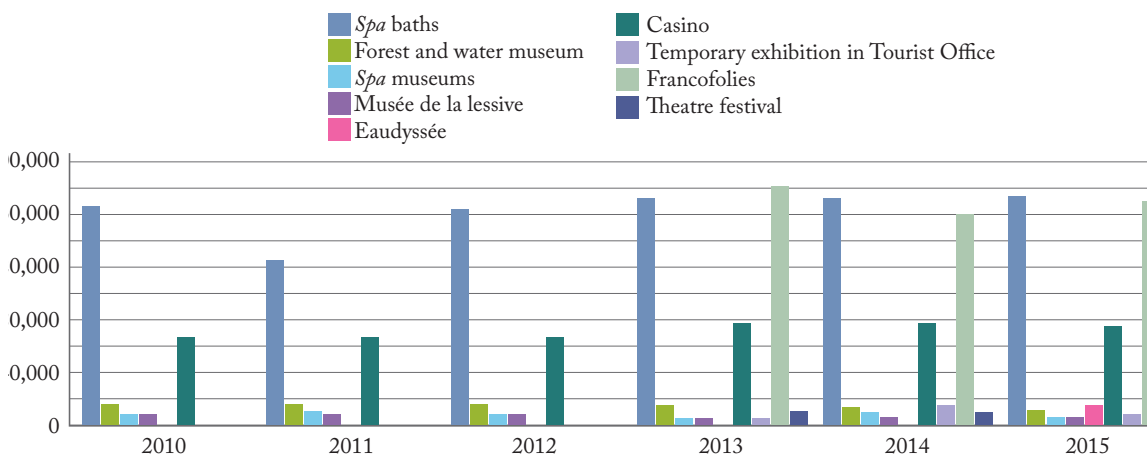


Fig 17: Visitor numbers for tourist attractions

The number of overnight stays seemed to stabilise in the mid-2000s after a major fall off from nearly half a million visitors in 1978 through the 1980s (end of social thermalism) and an irregular curve from the beginning to the middle of the 2000s. Nevertheless, 2013 and 2014 were marked by a major downturn which was confirmed also in the Pays des Sources. With 215,051 overnight stays in 2015, *Spa* accounts for 9.7% of overnight stays in the Province of Liege and 36.7% in the Pays des Sources.

Predicted visitor numbers

Any increase in tourist numbers which would be generated by the inscription on the World Heritage List could be absorbed by the town's reception capacity. It is expected that tourist will spread in the centre and the surrounding. Due to the diversity of the facilities and the scale of the site, there should not be any threats to the site.

3. Františkovy Lázně

Existing visitation

Tourism in *Františkovy Lázně* started to develop massively after 1989 and nowadays the town is among the three most visited spa resorts in the Czech Republic. The tourist industry is a combination of spas, wellness and tourism. Traditionally, the spa guests complete three weeks of treatments whereas wellness activities and tourist stays are usually shorter. *Františkovy Lázně* is visited especially by foreign clientele.

Lázně Františkovy Lázně a.s. (spa company) belongs amongst the largest employers. A majority of businesses in the town specialise in catering and services.

There exist more than 53 accommodation facilities (spa hotels, hotels, guest houses), which dispose of more than 4,268 beds. Despite the fact that during the last few years the demand for a higher level of accommodation has been increasing, the capacity of accommodation facilities is satisfactory and at an appropriate level.

CZECH
REPUBLIC

The occupancy in the accommodation facilities (2015, spa and non-spa guests)	
Total	53
Rooms	2,470
Beds	4,268
Guests – total	105,841
Guests – non-residents	58,853
Overnight stays – total	867,539
Overnight stays – non-residents	491,662

Predicted visitor numbers

In connection with the nomination for inscription on the World Heritage List, tourism can be expected to increase. However, due to the long-term experience with tourism and well-developed infrastructure, the town of *Františkovy Lázně* is well prepared for the potential increase in visitor numbers. The local citizens are used to everyday contact with spa guests and tourists. In addition, the economic benefit from tourism is so noticeable that it eliminates adverse tendencies. The relatively large absorption capacity of the spa town is being proved every year especially during the International Strauss festival, which is visited by tens of thousands of visitors. The higher visitors' occupancy can, on the contrary, have a positive effect on the prosperity and growth in the standards of living and quality of cultural life of the town and the whole region.

4. *Karlovy Vary*

Existing visitation

Tourism in *Karlovy Vary* started to develop greatly after 1989 and nowadays the town is among the three most visited places in the Czech Republic. The tourist industry is a combination of spas, wellness and tourism. Traditionally, the spa stay guests in *Karlovy Vary* complete three weeks of treatments whereas wellness activities and tourist stays are more likely shorter. *Karlovy Vary* is visited especially by foreigners.

Due to the abundant experience and well developed infrastructure, the town of *Karlovy Vary* is very well prepared for the flood of tourists and spa guests. There exists more than 90 accommodation facilities spa (spa hotels, other hotels, guesthouses) with more than 10,000 beds. Despite the fact that during the last few years interest in a higher level of accommodation has been increasing, the capacity of accommodation facilities is satisfactory and appropriate. The local citizens are used to everyday contact with spa guests and tourists. In addition the economic contribution of tourism is so noticeable that it eliminates these tendencies.

The occupancy of accommodation facilities in <i>Karlovy Vary</i> (2014–2015, spa + non-spa guests)						
	2014		2015		2015/2014	
	Guests	Overnight stays	Guests	Overnight stays	Guests	Overnight stays
Total	246,321	1,670,431	269,264	1,538,919	9%	-8%
of which:						
Residents	54,074	199,559	73,809	291,814	36%	46%
Non-residents	192,247	1,470,872	195,455	1,247,105	2%	15%
of which:						
Germany	38,781	190,112	53,570	236,436	38%	24%
Russia	77,215	871,891	50,701	556,693	-34%	-36%
Slovakia	2,693	6,838	4,435	11,721	65%	71%
Ukraine	7,071	68,508	5,468	53,906	-23%	-21%
Other European countries	3,552	33,571	3,705	33,191	4%	-1%
China	5,287	6,042	8,031	9,060	52%	50%
Other Asian countries	25,825	146,195	17,745	143,144	-31%	-2%
Israel	4,014	40,804	4,368	45,085	9%	10%
USA	3,828	24,207	4,860	29,117	27%	20%

Predicted visitor numbers

The large absorption capacity of the town is proved every year at the time of the International Film Festival in the beginning of July which is visited by tens of thousands of visitors. Based on this experience, a further increase of visitor numbers will not have a negative impact.

5. *Mariánské Lázně*

Existing visitation

Tourism in *Mariánské Lázně* started to develop greatly after 1989 and nowadays the town is among the most visited places in the Czech Republic. The tourist industry is a combination of spas, wellness and tourism. Traditionally, the spa guests in *Mariánské Lázně* complete three weeks of treatments whereas wellness activities and tourist stays are more likely shorter. *Mariánské Lázně* is visited especially by foreign clientele.

The town of *Mariánské Lázně* has long term experience with the demands of tourists and it has sufficient capacity. Other possible pressures are regulated by the appropriate legislative regulations. The local citizens are used to everyday contact with spa guests and tourists. In addition the economic contribution of tourism is so noticeable that it eliminates negative tendencies.

There exist more than 82 accommodation facilities (spa hotels, other hotels, guest houses). The capacity of accommodation facilities is satisfactory and at the appropriate level.

The occupancy in the accommodation facilities (2015, spa and non-spa guests)	
Total	94
Rooms	3,892
Beds	7,744
Guests – total	256,623
Guests – non-residents	174,054
Overnight stays – total	1,378,674
Overnight stays – non-residents	978,913

Predicted visitor numbers

Previous experience confirms the relatively large absorption capacity of the town. It has been proved every year at the the International Fryderyk Chopin Festival, the biggest and the most important Chopin festival in Europe, which is visited by tens of thousands of visitors. It can be stated that a further increase of visitor numbers will not have a negative impact.

6. *Vichy*

FRANCE

Existing visitation

Like all spa resorts, *Vichy* was originally planned to accommodate large numbers of people coming to take the waters and those accompanying them: a holiday resort for rich customers, a place where people simply taking a cure could stay for some weeks, and a place providing accommodation for the population of workers who came to keep the resort functioning each season.

For this reason, even if the period of decline of the spa business reduced its reception capacity in terms of accommodation (hotels and furnished lodgings), this is still considerable today, with a total of about 4,980 beds, 2,600 of these in its 33 hotels.

But apart from their simple overnight capacity, its appointments, public spaces and parks display a considerable reception capacity, not only in their size, but in their conception: generously proportioned passageways and staircases, wide avenues, spacious squares, solid materials (metal and stone), etc.

This dual quality of ample size and solidity mean that these facilities (buildings, public spaces and parks), which constitute the wealth of the property, are in a position to receive a large number of tourists with no difficulty and no risk of damage to the property itself. This is already the case today, when this population represents about 330,200 commercial overnight stays (2015), which break down as follows:

- hotels:	234,000
- camp sites:	45,600
- collective accommodation:	13,700

- group and overnight self-catering establishments:	1,000
- guest houses:	11,400
- furnished accommodation:	24,400

Visitor numbers are recorded for the Tourist Information Centre and for those attending the spas for treatment:

Visits to the Tourist Office:

- Number of entries in 2015 (photoelectric detector):	103,833
- Number of contacts at the counter (counted manually by the staff):	19,739

Spa attendance numbers:

Spa customer types	2013	2014	2015
Subsidized patients taking the waters	7,502	7,713	7,709
Wellness/fitness customers	16,446	17,324	16,878

Attendance rates at the principal tourist sites of <i>Vichy</i> and its environs			
Principal sites	2013	2014	2015
<i>Vichy</i> visit by tourist train	22,600	22,600	21,579
Guided tours on foot (Tourist Office)	10,171	7,132	10,387
Museum of <i>Vichy</i> Opera	6,742	6,2062	3,405
Museum of Cusset prison tower and underground works	3,205	2,796	3,131
Valery-Larbaud museum library	539	577	528
Vesse museum at Bellerive-sur-Allier	85	unknown	255
Fortress of Billy	4,967	4,983	unknown
Museum of African and Asian Art	unknown	unknown	unknown

A tourist customer profile was drawn up in 2016 on the basis of 23,556 reception records compiled by the Tourist Office. 20,241 (86%) of these related to French customers and 3 325 (14%) to foreigners.

- The French clientele in *Vichy* originates principally from Auvergne (35%), Rhône-Alpes (14%), Ile-de-France (10%), Bourgogne (5%) and Centre Val de Loire (5%).
- The foreign clientele in *Vichy* originates principally from the Netherlands (20%), Belgium (15%), the United Kingdom (15%), Germany (13%) and Spain (9%).

Predicted visitor numbers

The 10% increase in tourist numbers which could be generated by the inscription of *Vichy* on the UNESCO World Heritage List could be absorbed with ease in the town's reception capacity and would not exert any pressure that could be harmful to the property. On the contrary, recognition of its universal value and the consequent growth in tourist visitor numbers would highlight the already manifest benefit to be had from preserving and restoring the heritage and showing it off to best advantage.

There is no doubt that inscription on the UNESCO World Heritage List would bring its classification in the same guide up to 'Must visit', while the number of visitors would naturally increase following this upgrade.

Possible threats from visitor pressure

The only source of pressure which would require continued control would be vehicle parking: cars, coaches, camper vans, etc. To this end, projects currently under study by *Vichy* Town and the Community of Greater *Vichy* incorporate this objective in parallel with the development of pedestrian routes and cycle tracks, favourable to the reduction of vehicle movements.

Under these conditions, the pressure of foreseeable tourism development should not affect the property in any way, either physically or on the immaterial level.

Planning for visitor management

It will be advisable in the future to strengthen the quality of welcome with a broader spectrum incorporating visits and services and helping to control the effects of increasing attendance numbers. It would also be desirable to develop heritage visits, especially to emblematic edifices such as the former Grand Casino, as well as access to the spa waters which constitute the reason for *Vichy's* existence: showcase the springs, facilitate access to the baths, develop museums, etc.

These two objectives figure in the project developed at regional level for the renovation of the spa resorts, in parallel with the concept of 'health resorts'.

7. *Bad Ems*

Existing visitation

Tourism and the spa business are major location factors at *Bad Ems*. The distinction of being a World Cultural Heritage property would be likely further to boost tourism, and the number of one-day visitors in particular. In 2016, the town featured 24 accommodation providers including 7 clinics, a youth hostel, and a camping site. There are a total of 1,396 hotel/guesthouse/&c. beds (not counting holiday apartments). The wide experience gained from major events such as the annual flower parade suggests that tourism will not have an adverse effect on the town, not even if visitor numbers go up.

The municipality has over many years acquired the necessary expertise in managing and channelling large numbers of visitors.

(including private accommodation and small commercial B&Bs with less than 10 beds, excluding camping sites)							
2016				2015			
Visitors		Overnight stays		Visitors		Overnight stays	
Total	Foreign nationals	Total	Foreign nationals	Total	Foreign nationals	Total	Foreign nationals
44,949	4,506	298,952	11,973	40,647	3,352	290,681	10,359

Source: Municipality of *Bad Ems*, 2016

2017 Visitors (staying overnight): 45770

2017 overnight stays: 301963

Predicted visitor numbers

The number of visitors (guest arrivals) increased by 43 percent over the past ten years. The ways in which recognition as a World Cultural Heritage property will affect guest numbers are difficult to assess. We expect visitors to increase by 5 percent, based on the experience of other small cities.. Tourism in the form of day excursions will presumably increase at a greater rate.

Carrying capacity

The capacity of public transport is currently far from exhausted. Even a considerable increase in capacity utilisation would not pose a difficulty for *Bad Ems* or the surrounding area. An increase in private traffic can be cushioned by the planned construction of another car park on the edge of the property.

Possible threats from visitor pressure

Existing capacities, along with the planned construction of another hotel at the edge of the property, can handle the increase in overnight stays. Risks for the property are not expected.

Tourism /management plan

The interests of the City of *Bad Ems* in the field of tourism are attended to by the City and Tourism Marketing Association. Accordingly, this association also articulates the goals for developments in tourism for the City of *Bad Ems*. The long-term goal is continuously to boost the city's attractiveness to tourists, increase the number of guests and overnight stays and generate added value through tourism in the city. In order to implement the long-term strategy, an action plan is drawn up and carried out year by year. With this action plan in place, stakeholders can respond flexibly to market changes on both the supply and demand sides. A document *Identifying market trends, tapping potentials 'Markttrends erkennen, Potentiale nutzen'* was drawn up in 2015 by the Länder of Rhineland-Palatinate, of which the City of *Bad Ems* is part. This document provides guidance for the action plan and at the same time serves as a substitute for the city's own comprehensive tourism strategy.

It was adopted by the Ministry of Economic Affairs, Transport, Agriculture and Viticulture in Rhineland-Palatinate in 2008 and focuses on four thematic areas: hiking, cycling, wine and health; a continuation for the next ten years is in process. It is a directional strategy with guideline character. The aims of the tourism strategy are on three levels:

- sustainability as an overriding goal and obligation of the tourism sector,
- making added value a central facet of the strategy as well as
- goals deriving from this and revolving around profile, quality, structure and concentration

The goals are fleshed out in six strategic fields: I Focus on the target groups presenting the greatest opportunities; II Profile through regionality, culture and nature; III Growth in foreign markets; IV Quality and a foundation for success; V Organisation and financing; and VI The tourism industry as a key focus of the tourism strategy.

The tourism strategy is constantly being updated to adapt to evolving conditions.

8. *Baden-Baden*

Current visitation

Besides the commercial sector, international tourism has always been a mainstay of the local economy. In 2017, *Baden-Baden* counted 440,489 cumulated arrivals with 1,054,547 cumulated overnight stays. Day-visitors are estimated at around 7,000,000 visitors per year. The tourism intensity, an indicator that compares the number of tourist nights with the residential population (tourism intensity = (number of overnight stays / number of inhabitants) x 100), is remarkably high with 18.281 in 2016.

Predicted visitor numbers

Baden-Baden assumes an increase in arrivals and overnight stays of around 0.5% p.a. without world heritage inscription (2018-2020, *et seqq.*) and approximately 5% p.a. after inscription on the World Heritage List (if so 2020 *et seq.*).

Estimation of carrying capacity

There are 127 accommodation providers offering a total of 4,989 hotel beds and 2,933 rooms in *Baden-Baden*. As of August 2018, *Baden-Baden* had a cumulative bed occupancy of 54.1%. The room occupancy over the year 2017 was approx. 72%. The historic hotel Europäischer Hof is currently being renovated and will reopen with around 170 rooms in 2020. More hotels with around 320 rooms will open in the next few years. If, as expected, tourism grows about 5% per year as a result of the World Heritage inscription, the bed capacity will still be sufficient for overnight and long-term guests.

Possible threats from visitor pressure

Generally, an unexpected high increase of daily visitors could modify the tourism distribution from quality to quantity tourism. An excessive growth in daily visitors could jeopardise high-quality guest experience, because of high frustration due to traffic issues, the loss of the predicate spa due to poorer air quality, a declining public acceptance of

tourism, and the pollution of public, high-quality parks and recreational areas. Therefore Baden-Baden invests in slow and sustainable tourism, which encompasses conscious and enjoyable experience of the destination *Baden-Baden*, multi-day stays to use the diverse cultural offers and also a duality in development to benefit guests and citizen benefits equally.

Tourism Management plan

It is planned to develop a tourism management plan with specific regard to the potential consequences of tourism as a result of a world heritage nomination in 2019. However, *Baden-Baden* has long-term experience with increasing tourism numbers, which is reflected in both the carrying capacity as well as the transportation concept. Recent measures to regulate day visitors include an improved parking and traffic management system as well as new parking facilities, with the main station outside the property in the west of the city with a public bus link to the city centre.

There is just one main traffic axis leading to the property, which accesses the city from the west. The city centre itself has been largely released from traffic since the 1970s. Coaches are not allowed to drive into the city centre, bus parking facilities exist in the Eisenbahnstraße, which are close to but outside the nominated World Heritage Site. Exceptions exist for groups with handicapped people.

Thus, traffic and access of guests to the property can regulated centrally and outside the property.

As the nominated property is not one building or small site but covers almost the whole city it is expected that tourists will spread widely in between both property and buffer-zone, instead of focusing on one place.

9. Bad Kissingen

Current visitation

Tourism (cultural and health tourism) is the main business trade as well as the main business activity in *Bad Kissingen*. In 2017 the city had 255,369 guests staying for a total of 1,611,688 nights overall. The number of daily visitors is estimated to reach 1 million annually.

Data of 2015	Number of accomodation facilities	Number of beds
Hotel	28	2.907
Clinics/Sanatoriums	20	2.807
Pension (B&B)	22	624
Holiday apartments/ holiday houses	86	473
Camping Site	2	236
Privatvermieter (holiday rooms)	21	114
Total	179	7.161

Predicted visitor numbers and carrying capacity

Currently there is no study-related data available to predict visitor numbers after inscription as a World Heritage property. For the moment the City of *Bad Kissingen*

assumes an increase in arrivals and overnight stays of around 0.5% p.a. without world heritage title (2018–2020, et seq.) and around 5% p.a. after inscription on the World Heritage List (if so 2020 et seq). These numbers are only estimated numbers.

A study on potential visitor numbers, carrying capacity and visitor management will be conducted in 2019. However the town can cope with big events and happenings, such as the Rakoczy Fest with around 40,000 guests and visitors per day.

Possible threats from visitor pressure

Even though tourism is the main trade and business activity of *Bad Kissingen*, there are potential threats that might arise from visitor pressure. Excessive tourism is a threat affecting many World Heritage properties. It can easily lead to conflict between different tourism target groups as well as between residents and tourists in general. Within the context of the historic and current significance and function of the town as a spa and health destination, this target group conflict could occur in the relationship between health tourists and individual or bus tourists. In the worst case this might lead to a decreasing number of health tourists and health tourism offers, threatening intangible values such as the continuous spa tradition.

Planning for visitor management.

A visitor management system allows threats to be prevented or reduced. This includes the promotion of the existing thematic heritage routes as well as the creation of further routes, the designation of quiet zones, and/or visitor and resident surveys. Tourist fees need to be taken into consideration as well. The local World Heritage Centre will take a leading strategic role in the development of visitor management strategies. The basis for these will be a study on visitor and traffic management which will be launched by the City of *Bad Kissingen* in 2019.

The Bayerisches Staatsbad *Bad Kissingen* GmbH has a marketing plan in place. It is a strategic planning tool. Strategies concerning the sustainable tourism programme, such as the elaboration of heritage routes in order to improve visitor management will be integrated into the strategic plan. Detailed concepts for heritage tours will be elaborated and presented to potential and scheduled tourists.

Description of desired conditions for visitation

The strategic tourism strategy aims to increase health tourism within the town. Health tourists should continue to enjoy their visits over long time periods. It is desirable, too, that culturally interested tourists should stay in *Bad Kissingen* for several days to enjoy and experience the tangible and intangible values of the spa town to the full. Such visitors would be able to choose from a rich programme of cultural events, activities in the spa landscape as well as health treatments, and be motivated to access the property individually by following the clearly designated heritage routes or with a guided tour.

Based on experience, the majority of visitors, individual tourists and groups will spend half a day in the town and the surroundings of the spa landscape. The desired conditions for half day visitors are based on three pillars: education, gastronomy and retail shopping. Individual tourists can follow one of the established thematic heritage routes and learn about the values and different aspects of *The Great Spas of Europe* World Heritage property as well as the individual contribution of *Bad Kissingen* to the serial

nomination. They will be encouraged to visit also the other Great Spa Towns in the property. Tourists arriving by bus in bigger groups will meet their tour guide directly at the bus. The tour guide will guide them and explain to them several parts of the property. The guided tour will end in the old town where guests will have the opportunity to shop by retail or relax in the parks nearby.

10. Montecatini Terme

ITALY

Existing visitation

Montecatini Terme welcomes over 600,000 tourists per year, with an average stay of 2.7 days (OTD, Target Tourist Observatory, 2015): its area is nearly 18 square kilometres, with around 20,000 inhabitants rising to 31,000 in high tourist season, when hotels are sold out.

Accommodation in the facilities of Montecatini Terme						
	2014		2014		2014/2015	
	Guests	Overnight stays	Guests	Overnight stays	Guests	Overnight stays
Total	649,727	1,666,311	629,759	1,617,315	-3%	-2.9%
of which:						
from Italy	211,271	485,524	201,931	471,619	-4.4%	-2.8%
from abroad	438,456	1,180,787	427,828	1,145,696	-2.4%	-2.8%
of which:						
China	53,989	55,440	76,313	77,673	41.3%	40.1%
France	47,134	125,886	42,957	119,123	8.8%	-5.3%
United States of America	36,665	89,414	36,032	96,752	-1.7%	8.2%
Germany	36,248	185,501	33,172	161,093	-8.5%	-13.1%
Turkey	20,695	35,672	24,848	45,376	20.0%	27.1%
Poland	17,757	32,811	19,059	39,794	7.3%	21.3%
Netherlands	19,612	93,735	18,661	87,787	-4.8%	-6.3%
Spain	18,123	38,930	17,640	36,368	-2.6%	-6.6%
Russia	49,258	95,037	16,190	45,498	-67.1%	-52.1%
United Kingdom	18,831	78,073	15,364	64,467	-18.4%	-17.4%
Belgium	11,590	47,444	11,693	46,024	0.9%	-9.3%
South Korea	5,873	6,358	11,508	13,400	95.9%	110.7%

Predicted visitor numbers

Through time, the number of short-term holidays has increased, at the cost of long stays. Therefore, stays by people who see Montecatini as a centre for visiting other places are growing. To reduce this tendency, the Municipality together with the Tuscany Region, instructed a working group of the University of Florence to produce a document called OTD (Target Tourist Observatory) which outlines guidelines on the matter. There is at present no prediction of future numbers.

Carrying capacity

A research project, due to be completed in 2019, is being carried out in collaboration with the University of Florence to explore carrying capacity and sustainable tourism

indicators. The project aims to develop a trial model to measure and update carrying capacity as the basis for sustainable and competitive tourism.

Possible threats from visitor pressure

The study of the carrying capacity, due to be delivered in 2019, will analyse possible threats by tourist flows.

Tourism/ management plan

There is as yet no special tourism management plan, but the Municipality is committed to developing one. The OTD - Tourist Destination Observatory - will be established as a Regional Platform for planning and monitoring tourism strategies and activities, sustainability and the competitiveness of destinations.

Description of desired conditions for visitation

1. Realisation and support of events and initiatives aimed at the establishment of the town as a multi-product tourist destination:

The Municipal Administration will adopt specific public tenders or specific agreements to support initiatives / projects / events aimed at developing the local tourist offer of various segments: sport, wellness and spa, food and wine etc.

2. Enhancement of projects aimed at including the tourist offer within the “territorial area” context:

Projects and actions linking the city’s tourist reality to the territorial context of the Valdinievole, within the Leonardo da Vinci and Pinocchio projects will be enhanced and supported.

3. Development and implementation of projects / initiatives aimed at supporting and protecting the reception and tourist information system of the municipal area:

The Municipal Administration intends will facilitate the start-up of advanced technological projects aimed at enhancing territorial identity, and/ or agreements with local associations to safeguard the quality of the information service to users, with constant monitoring of the actions.

4. Fulfilment of the provisions contained in Regional Law no. 86 of 20 December 2016 “Unique Text of the Regional Tourist System”:

The provisions of the new regional regulation text with reference to the municipal functions will be adopted. This includes the protection and enhancement of the reception and tourist information services (to be developed also through the drafting of special agreements with local associations/ bodies).

The legislation also envisages the development of tourist reception and information functions with the “territorial context”, with the definition of the following obligations (agreement with the Regional Agency for Tourism Promotion, connection with the digital computer platform, updating of the OTD -Tourist Observatory as a tool for planning and monitoring the strategies and tourist activities of the destination).

5. Realization and support for recurring sports initiative which stimulate the public welfare system:

The municipal administration will support recurring sporting projects, some already in place, which can bring benefit to specific targets (children, elderly, disabled people etc.).

6. Realisation and management of major national and international sporting events through the promotion of partnerships with sports federations, sports promotion organisations and associated sports organisations:

The Municipality intends to achieve participate in major national and international sporting events and promote agreements for the granting and use of municipal sports complexes and for recreational sports activities.

This tourism planning aims at developing a territory, which can be able to respond to modern tourism demand: “Tourism = Environment + Cultural Heritage + Creation of Events + Sport + Wellness + Enogastronomy”.

11. City of Bath

UNITED
KINGDOM

Tourism is a leading industry for Bath. The *City of Bath* has managed visitors from the eighteenth century and has established a robust tourist management strategy over the thirty years since the City was inscribed as a World Heritage Site in 1987. The inscription of *The Great Spas of Europe* as a World Heritage Site will provide opportunities for the City to refresh its tourist offer and attract new visitors particularly those interested in the values of Bath as a spa.

Existing visitation

In 2016, some 4.8m visitors came to the Bath and North-East Somerset district, and the *City of Bath* is the principal attraction¹⁰. The number of visitors can vary markedly depending on the value of sterling against overseas currencies. There were 334,000 international visitors in 2016 showing an increase compared to the previous year. (2015 - 323,000 visitors. The United States remains a key inbound market for the city with European territories of Germany, France and Ireland remaining a strong market. Australia and the Far East have become an increasingly important potential for growth. The tourism industry accounts for approximately 9,300 jobs and this represents approximately a tenth of employment in the district and generates an estimated £411 million spent by visitors (in 2016) in the local economy.

Most of the listed buildings in the city are in use. Many are used as hotels or holiday lets and the income derived from their visitors contribute towards the upkeep of those buildings. However, many visitors arrive at the city by coach or private car and this cannot be held now to be sustainable. The Council has acknowledged this by discouraging visitors from using cars and granting planning permission for new hotels with no car parking.

Planning for visitor management

New solutions are being explored to address the siting of drop-off and pick-up points for day visitors. Tourism in Bath is managed principally by the organisation, *Visitbath* (Bath Tourism Plus). This is a destination management organisation responsible for strategic leadership of tourism in Bath and has a role to grow and support the visitor economy¹¹.

10 Source: Visit Bath website; Value of Tourism Survey 2016, South West Research Company Ltd. (sources UKTS - United Kingdom Tourism Survey, GBDVS – Day Visitor Survey, IPS – International Passenger Survey. ‘Cambridge Model’ applied)

11 Visitbath.co.uk attracted 3.1m visits in 2014 (Google analytics).

It is preparing a Destination Marketing Strategy for Bath. This aims to promote growth in the value of tourism rather than continued growth in the numbers of visitors to the city.

This is expected to be followed by a Sustainable Tourism Strategy.

4. b (v) Number of inhabitants within the property and the buffer zone*

The number of inhabitants within the nominated property lies below 5,000 in most component parts. The exception to this is *Baden bei Wien* with 7,285 inhabitants, *Karlovy Vary* with 16,883 inhabitants, and especially *City of Bath* with 88,859 inhabitants. The total number of inhabitants in all component parts amounts to 136,391, and in the buffer zone to 71,022.

In most component parts, the number of inhabitants has been stagnating during the past few years or even slightly decreasing. Measures to counteract this trend have been adopted by several spa towns of the nominated series aimed at strengthening the function of residential housing. New development projects are mostly planned outside the property itself.

Number of inhabitants within the property and the buffer zone			
Component part	Property	Buffer zone	Total
<i>Baden bei Wien</i> ¹	7,285	11,242	18,527
<i>Spa</i> ²	4,828	4,930	9,758
<i>Františkovy Lázně</i> ³	3,164	778	3,942
<i>Karlovy Vary</i> ³	16,883	9,399	26,282
<i>Mariánské Lázně</i> ¹	2,273	10,951	13,224
<i>Vichy</i> ¹	2,239	11,245	13,484
<i>Bad Ems</i> ¹	1,161	2,280	3,441
<i>Baden-Baden</i> ⁴	4,729	7,737	12,466
<i>Bad Kissingen</i> ³	1,684	6,375	8,039
<i>Montecatini Terme</i> ³	3,106	6,085	9,191
<i>City of Bath</i> ²	88,859	-	88,859
Property as a whole	136,191	71,022	207,233

1 as of 2016, 2 as of 2011, 3 as of 2017, 4 as of 2015

Conclusion to Section 4.b

As noted above, a different, more detailed set of 13 factors affecting World Heritage properties is used for the monitoring processes of the Convention, Periodic Reporting and State of Conservation reporting. It is therefore helpful to summarise the overall impact of those factors at the time of nomination since this provides a baseline aligned with the future management systems for the property.

Potential threats i.e. threats that could impact on the OUV of the nominated property in the future are summarized in the table below on the scale from 1 to 6 (1 = major threat, 6 = no threat), and are followed by a commentary. No major or significant threats have been identified.

Potential risk factors						
Component part						
	1	2	3	4	5	6
	Buildings and development	Transportation infrastructure	Services infrastructure	Pollution	Biological resource use/modification	Physical resource extraction
<i>Baden bei Wien</i>	5	5	5	5	6	6
<i>Spa</i>	4	5	6	5	6	6
<i>Františkovy Lázně</i>	4	6	6	6	6	6
<i>Karlovy Vary</i>	4	5	5	6	6	6
<i>Mariánské Lázně</i>	4	6	6	6	6	6
<i>Vichy</i>	6	6	6	6	6	6
<i>Bad Ems</i>	4	6	6	5	6	6
<i>Baden-Baden</i>	5	6	6	5	6	6
<i>Bad Kissingen</i>	5	5	5	6	6	6
<i>Montecatini Terme</i>	5	4	5	6	5	6
<i>City of Bath</i>	4	5	6	5	6	5

Potential risk factors							
Component part							
	1	2	3	4	5	6	7
	Local conditions affecting physical fabric	Social/cultural uses of heritage	Other human activities	Climate change and severe weather events	Invasive/alien species or hyper abundant species	Sudden ecological or geological events	Management and institutional factors
<i>Baden bei Wien</i>	6	5	5	6	6	6	4
<i>Spa</i>	6	4	6	6	6	6	5
<i>Františkovy Lázně</i>	5	6	6	6	5	6	5
<i>Karlovy Vary</i>	6	5	5	6	6	6	4
<i>Mariánské Lázně</i>	6	6	6	6	6	5	5
<i>Vichy</i>	6	6	5	6	5	5	5
<i>Bad Ems</i>	6	6	6	5	5	6	6
<i>Baden-Baden</i>	6	6	6	6	6	6	6
<i>Bad Kissingen</i>	6	6	6	6	6	6	5
<i>Montecatini Terme</i>	6	5	5	6	5	6	4
<i>City of Bath</i>	6	6	6	5	6	6	6

1. Buildings and development – the extent of development pressure on the spa town and the pressure for demolition, rebuilding or new construction, the adaption of existing buildings for new uses which would harm the authenticity or integrity. Not all development is bad and some schemes can revitalise original buildings to their original use or ensure their continuing function by upgrading systems and facilities.

2. Transportation infrastructure – the pressure for major transportation infrastructure impacts within the urban situation of the spa town such as new road improvement schemes. If pedestrianisation of urban zones and the alleviation of car parking pressure for example are the results then not all schemes are bad and may improve integrity.

3. Services infrastructure – as with 2 above, many of these schemes, whilst being disruptive in the short term, bring lasting environmental improvements. Many involve underground activity and excavation which can be harmful to archaeological remains and evidence. Threats, for example, could include overhead power cables and the visual impact on the setting.

4. Pollution. These factors are generally under strict control and management in a European context and do not present a major threat. Air pollution in some cities and towns is an issue whilst threats to water supplies are generally very well managed. Emergency incidents through chemical spillage are managed by the emergency services, who have prepared contingency plans for such major events, and these are very rare events.

5. Biological resource use/modification. This is considered to be a most unlikely threat in a European context. Habitat modification or destruction is well managed and unlikely to offer any threat to the spa towns.

6. Physical resource extraction. This is often an ongoing threat with the ever-increasing pressure for resources. The most obvious impacts are those for mining or quarrying and the processing of the materials gained. There are sometimes new pressures to re-open previously abandoned extraction plants but European levels of control and remediation if permitted to proceed are usually strictly enforced.

7. Local conditions affecting physical fabric. This subject covers a wide range of local impacts, for example a spa town where previous underground activity concerning water courses or material extraction has left foundations and the stability of the buildings above vulnerable. Or, the need for continuing economic activity within the spa town which results in increased traffic and heavy vehicle deliveries and the resulting increase in air pollution and pressure on car parking provision. Pressure to provide additional and improved local housing can be a further example of this.

8. Social/cultural uses of heritage. In a European context, this will focus predominantly on the impact of visitors and the tourism economy and also on the impact resulting from the need for improvement of visitor and user facilities in cultural properties. Issues of access will also have repercussions relating to transportation infrastructure as in 2 above.

9. Other human activities. In a European urban framework, this is not a significant area of threat where, for example encroaching agriculture activity is not an issue. However, the pressure for change of use of buildings, such as homes converted to hotels and guest houses, can produce significant shifts in the makeup of the local population over time. Changes in retail activity due to increasing visitor activity can also impact on local businesses with incoming national chains and brands. The loss of traditional industry and activity within the spa towns will also impact on employment opportunities including any subsequent local economic impact.

10. Climate change and severe weather events. This relatively new concern presents a problem of prediction and risk assessment. The impact is real but the consequences are far reaching and difficult to understand and plan for in the future. However, certain changes to weather patterns have already had severe impacts on physical fabric, such as the advent of heavier and sudden rainfall, leading to flash flooding and water disposal capacity problems in some areas.

11. Sudden ecological or geological events. Climate change can result in ecological change but this is unlikely to be a sudden and no such events are anticipated. The collapse of a water table or the loss of aquifer output due to a sudden event is most unlikely but water extraction is an increasing problem in certain areas. The most severe geological event would be that of an earthquake and most of the spa towns are in areas of very small risk.

12. **Invasive/alien species or hyper abundant species.** This subject refers to the introduction, deliberately or accidentally, of alien or exotic species which disrupt natural ecological processes, creating new centres of population on or near properties so as to harm them or their settings. This is subject to strict control and management in Europe and is most unlikely to present a major threat.

13. **Management and institutional factors.** This reflects the vulnerability of local spa town management to changes in democratic control and priorities which can have a significant impact on the resources available for the protection, conservation and management of the property. These changes can often be sudden with an often immediate impact. However, such changes are very difficult to anticipate and to plan to minimise any impacts.

