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# OUTSTANDING TERRITORIES AND ENERGY TRANSITION

Proceedings of the seminar of 25 January 2017

# OUTSTANDING TERRITORIES AND ENERGY TRANSITION:

how can the development of wind power  
and the preservation of outstanding  
territories be reconciled?

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# EDITORIAL

**Yves DAUGE,**

Chairman of the Association of French World Heritage Sites



Energy transition, just like the protection of World Heritage, are both issues of a planetary dimension. The emergence of wind power projects in close proximity to a World Heritage Site or a Grand Site de France raises concerns, because the stakeholders of these projects (managers, examining authorities, wind-power developers) still lack the tools and methodology to structure and focus the debate on their compatibility.

The definition of exclusion zones is not the only solution. Therefore, how can one build a doctrine which allows one to characterise and spatialise the values of the outstanding territories potentially impacted by wind farm projects, so as to qualify the impact assessments carried out by the developers, provide tangible and impartial elements to managers and enable the examination of requests by the State services?

Our territories registered on the World Heritage List or labelled as “Grand Sites” must be at the forefront in terms of methodology, work and exemplarity so that solutions found for these sites can be reproduced elsewhere. That is why, after the reflection initiated in 2014 on urban planning for the benefit of the protection and management of World Heritage sites, the members of our Association have decided to examine the ways and means of reconciling the development of wind power and the preservation of outstanding territories.

This day, organised by the ABFPM [Association of French World Heritage Sites] and the Réseau des sites majeurs Vauban [Network of Major Vauban Sites], in collaboration with the Réseau des Grands Sites de France [Grands Sites de France network] and ICOMOS [International Council for Monuments and Sites] France and with the support of the Ministry for Ecological and Solidarity Transition and the Ministry of Culture, has two objectives:

- Present the latest political, legal and practical developments in the wind power field, through French and European case studies;
- Identify the issues that arise for managers of World Heritage and French Heritage properties: the need to go beyond the for/against divide on the basis of objective and shareable doctrine and methodology; the desire to reconcile public policies with the necessary preservation of the integrity of World Heritage properties and the establishment of a common culture between managers, and in examining the policies of the various State services.

We hope that all the case studies presented during the course of this day and the discussions that arise will help to contribute to the development of a constructive, positive and strategic vision of the wind power question, while affirming our commitment to preserve our heritages, as well as the wealth and the values that they convey.

Thank you.



## OPENING COMMENTS

**Paul DELDUC,**

Director General of Planning, Housing and Nature of the Ministry for Ecological and Solidarity Transition



Hello everyone. Thank you for being here today.

I would like to begin by thanking our organising partners: The Association of French World Heritage sites and its Chairman, Yves DAUGE, the Network of Major Vauban Sites, the Grands Sites de France network and ICOMOS France.

I would also like to thank all of the presenters, notably those from the French, German, Dutch and British sites. Thanks also to the representatives of these three countries who really wanted to join us. My sincere gratitude to the managers of the outstanding territories, the State services and local authorities and finally, to the professionals from the wind power and heritage conservation sectors.

Why have we chosen this issue? Of course, wind power is a form of renewable energy which presents many qualities, including a not insignificant economic efficiency. At the same time, it is probably the first time, in our memory, that one has seen such gigantic objects appear in our landscape, all in the space of just a few years. In a certain way, we are faced, due to this sudden occurrence, with an unprecedented issue that we have never encountered before. We have seen other things: shopping centres, motorway networks, but these were not as big, and they didn't appear as quickly nor on such a scale.

We therefore needed to think about this totally unprecedented situation. As the question obviously arises on a national scale, the impact of wind energy projects on our outstanding territories pushes us to reflect more intensely and more quickly. With, perhaps, a stronger sense of the need to find ways of reconciliation and, with actors who are committed, to think and to act.

In the term "outstanding territories", we have included both the French World Heritage Sites and the French Heritage Sites - a label that a certain number of you know and which, in some respects, is very close, in spirit, to the World Heritage Sites.

It is apparent that in the thinking related to the emergence of wind power in the vicinity or in the heart of the outstanding territories, there are a few prerequisites that must be respected. It always involves knowing precisely the elements that characterise the territories in which the wind power field appears: the heritage, landscapes and the visual and functional relationships - which is what the work of any reflection about the countryside is, but also of any thinking about planning.

Then, there is a need to have a more precise idea of the economic functioning of the population in the concerned areas. The question therefore arises whether certain territories are meant to receive wind turbines, while others, considered to be "beautiful", are to deny them. While this being asked, how can economic solidarity between these two groups be created?

This is a very familiar subject, identical, in some respects, to that of floods, where some territories are destined to become expansion areas while others must not be develop too much, in order to preserve the areas.

With wind power, we can struggle with the same issues of ecological solidarity and economic solidarity between territories. It is another major subject that we will probably be tackling during the day.

This subject of solidarity is also linked to territorial governance. What is the correct scale? How can it be put in place? What tools can these territories use? How can they exchange and create partnerships?

The objective of this day is also to gather good practices, to make known what has worked, and to exchange with territories which have managed to reconcile the energy transition and the preservation of heritage, as much in the most traditional meaning of the term, as well as in the sense of economic value.

The sharing of methodologies is essential. It is great to experiment in order to learn, and this is also the best way of learning, but if all the world permanently reinvents things, it does not move forward very quickly. If we were to share nothing, we would still be in the Stone Age!

The day has been organised to clarify all these subjects in a fairly simple way. You will have presentations of French case studies, then, in the early afternoon, presentations from the three countries that I have just mentioned, namely Germany, the United Kingdom and the Netherlands. And finally, a round table which will provide the opportunity for some discussion, I hope, because despite everything, if we are meeting today, it is also because there are subjects to discuss.

Please do not hesitate to ask questions. These are sensitive issues of essential importance for the nation, and for the outstanding territories: identity, landscape, beauty, aesthetics, tourist attractiveness, energy transition - a subject of the first order for our country. The day is to be interactive, with the objective that you all get something from it and I count on you to ask provocative questions too. Have an excellent day.

## Laurent MICHEL,

Director General of Energy and the Climate  
for the Ministry for Ecological and Solidarity Transition



Thank you, Paul DELDUC, for this introduction and for the invitation extended to me a few weeks ago to participate in the opening of this symposium. As the Director General of Energy and the Climate, I will focus my remarks on the place of wind turbines and the issues of their insertion in the environment.

You know that in France, but also in the world, there is a strong movement in favour of energy transition and the development of renewable energies. Here, these topics are supported by the law of 17 August 2015 relative to the energy transition for green growth, with objectives listed in an operational document released last October on the multi-annual programming of energy. The objectives are ambitious, as they are to increase the share of renewable energies, out of total consumption including transport, from 16-17% today to 32% in 2030. For the production of electricity, we are, today, at a little less than 20% and the objective is to move to 40%.

In this development of renewable energies, in France and elsewhere, land wind energy - today, we will talk less about offshore projects - is, in the French context of our development potential of renewable energies, one of the cornerstones. This is a cornerstone, Paul DELDUC has mentioned it, which has a number of benefits, including economic ones. Wind power is considered both as a mature energy, that is to say, non-experimental, but also as an energy whose costs are still decreasing. These are mainly borne by investment, namely the improvement of industrial processes, the increase in the size of wind turbines and their performance. Due to this fact, the cost of investment linked to manufacturing is declining and the operating costs are relatively low.

What is also progressing, is the availability of the turbines. Thanks to technological progress, they are able to operate longer, which is important for more regular prediction and power. Another advantage, especially for environmental insertion - I shall mention a few difficulties in a moment -, is that wind turbines allow agricultural exploitation of the occupied land to continue. They do not occupy as much space on the ground as a solar power plant and they are easy to disassemble. It is therefore an important element, because these are intrinsic strengths.

In addition, I would point out that it is an industry that has developed in France, a service and equipment industry, even if a part of the added value - the turbines in particular - is not always produced in France. It is an industry which has experienced growth in our territory of 15% in 2015 in terms of jobs and which represents close to 15,000 jobs according to the France wind energy survey. In national wind projects, the national added value is, today, more than 40%, even if a number of large parts are manufactured abroad.

In terms of the prospects of development and their impact, today, we have just under 12 gigawatts connected, i.e.

around 1,500 wind farms. The multi-annual energy programme provides that, in 2023, we will be at between 22 and 26 gigawatts, therefore a little more than double the current installed power. This means almost doubling the number of farms, but not completely, because the power of wind turbines is increasing.

The other point to take into consideration, is that we have larger rotors. At the beginning of the 2000s, wind turbines had a rotor diameter of about 80 metres for a total height of 120 metres. Today, very easily, we have rotors of 115 metres in diameter for heights of 160 to 180 metres. This implies that the turbines are more effective; fewer masts are needed for the same production, weaker winds can be captured and the turbines can be more productive and turn for longer. The corollary is, of course, a probably more marked presence. At the same time, it also means the possibility of having access to territories with less wind on which there have been no turbines up until now. This may, therefore, be of interest to combat the colonisation by wind turbines of only windy territories. There are, therefore, various points of evolution. In contrast, territories which have never had wind turbines will see them arrive, which therefore poses a problem of acceptability.

This brings me to say that for the Ministry, including the General Directorate of Energy and the Climate, which is very fond of wind turbines, the problem of environmental and societal insertion is fundamental. We cannot, in the medium term, impose by force and no matter how, with uncontrolled impacts, a sector, whether it is wind, ground solar or any other one. There are real environmental and feasibility issues, in terms of landscape impacts among others, but also of conflicts of uses with radars or air traffic.

We therefore have the very strong conviction that one must advance on these subjects by taking into account, early on and ambitiously, the issues in the projects and the improvement of knowledge on the ways of limiting the impacts. It is also important that there be a general dialogue like today, a territorial dialogue upstream of projects or, of course, a dialogue over specific projects between the actors, i.e. the stakeholders such as the local residents, local authorities and people who are impacted.

Marc MORTUREUX will talk much better than I, about the procedures, and especially about the Ministry's approach. From our point of view, the issues are multiple in terms of impact, both on remarkable landscapes, as well as on ordinary landscapes, that are equally important.

We need a comprehensive approach to landscape integration and several questions to be addressed: that of flying wildlife - birds and bats; that of acoustics - even if we have measures which aim to keep wind turbines away from homes, the acoustic impact must be checked - the impacts on radars, air traffic and other immediate activities. More generally, there is a question

of local acceptability. It is not only about the technical treatment of environmental issues, it is a mixture between good technical treatment, the insertion of the equipment in a project, a territorial identity and the understanding of the project too. And then the result, which is not always guaranteed, of the quality of a dialogue. On the other hand, what is certain, is that if we do not all have a dialogue upstream, in an open and constructive manner, the result can be quite poor.

I would like to conclude by saying that all this is framed by procedures. The authorisation procedure around the impact assessment/public inquiry pairing is really important to allow the projects to be improved, to define how they can be modified and have additional requirements. All of this takes place when a project is presented, but there may be other anticipatory approaches. There may be a territorial development plan through SCoT [French municipal planning documents], there may also be reflections around outstanding sites.

### **Marc MORTUREUX,**

Director General of Risk Prevention,  
Ministry for Ecological and Solidarity Transition



Hello to everyone. I am Marc MORTUREUX, the Director General of Risk Prevention. Wind power is certainly a matter of great importance. With Paul DELDUC and Laurent MICHEL, we are working a lot on the question.

I am here, because it is my office which is responsible for the regulation on classified facilities for the protection of the environment, the regulation known as ICPE [Environmental Protection Classified Site], to which wind turbines are subject. And we are particularly attentive so that, in the framework of this regulation, the development of wind energy, which is a very important issue for energy transition, is achieved according to extremely clear and specific rules, with transparency, in respect of the populations concerned and the environment.

Classified facilities are an important regulation.

There are approximately 500,000 facilities covered by this legislation. But today, the subject of wind turbines has become, for the inspectors of classified facilities, on the ground and also at the level of the regions, an extremely important topic, involving a lot of people.

The installation of turbines on a territory is subject to different stages that ensure consultation and participation of the public. The assessment procedure for a request for authorisation for a wind farm provides, as Laurent MICHEL has said, the carrying out of an environmental impact assessment and a study of the danger which assess the effects of the project on the environment, including criteria such as the natural and cultural heritage, the landscape impact, the noise and the risks for the local residents. It is therefore quite broad. These studies must take into account the configuration of the proposed wind farm, the different characteristics of the turbines themselves, including the height, as well as local issues: landscape, presence of historical monuments, properties included on the World

The message that I will bring, which is, I think, the spirit in which the question is treated by our Ministry, the Ministry of Culture and the actors, is that, of course, we cannot do just anything. We are not going to put up a wind turbine 1 kilometre away from the ramparts of Provins. For all that, I do not think that it is necessary to create a total exclusion zone with a radius of 60 kilometres to adjust things. We can have other approaches, on a case by case basis. There are places where an exclusion zone of 10 kilometres will be sufficient and others where it will be necessary to do otherwise. Therefore, I believe that we must avoid falling into a rigid planning system, which could enclose us in a blueprint where protected outstanding sites and all other places, where you could find wind turbines and shopping centres, would cohabit.

That is what I would say. So it really is important that there are these dialogues about the projects, but also upstream of them. To this end, today is an essential day.

Heritage List, protected species, etc.

The requests are examined with what is reputed to be sufficient rigour by the State services, in terms of the DREALs [Regional Departments of the Environment, Planning and Housing] and submitted to a public inquiry. In addition, all requests are presented to the departmental Commission for Nature, Landscapes and Sites, in its sites and landscapes committees, on which people who are competent in the field of protection of the sites sit.

In the framework of this ICPE regulation, after reviewing these studies and the conclusions of the public inquiry, the Prefect, who is the administrative authority, makes her/his decision by way of a prefectural decree. Authorisation may only be granted if the dangers or disadvantages likely to be generated can be prevented by measures that are specified by the prefectural decree. Among the dangers or disadvantages involved, the Environmental Code very explicitly cites: the convenience for the neighbourhood, the protection of nature, the environment and landscapes, the conservation of sites and monuments... And in the framework of the decision, in the case of authorisation, the Prefect may set, in the prefectural decree, additional and compensatory requirements such as measures of remoteness, planting, maintenance of screens, etc.

Therefore, the achievement of impact assessments is not an administrative formality at all, it is really an essential means for project sponsors to create, often through an interactive approach, projects that fit well into their environment and are acceptable. And this is obviously essential. The importance of these environmental impact studies has also led the Ministry to develop a guide to assist project sponsors in the realisation of these studies.

The learning, which we have now acquired after a number of years, has led us to embark on an update of this guide. It will also contain a specific part devoted to landscapes and heritage, as well as a chapter devoted to World Heritage. In this framework, a working group dedicated to heritage has been set-up and is steered by our Ministry's services, in collaboration with the Ministry of Culture. The draft that has been developed, since it is well advanced now, was also the subject of a consultation of all stakeholders, in particular the Association of French World Heritage Sites, the Network of French Heritage Sites, the Federation of Regional Natural Parks, the Association of State Council Landscapers and the professional wind power federations. There was, therefore, a broad consultation. This guide will specify the expected elements in the impact assessment, the methodology to be followed and the objective criteria for developing the landscape component of the study. We are at the end of this process since this guide is being published. I think that this work successfully illustrates the particular attention given to the topic of heritage and landscape and the importance of the collaboration and exchanges between the services of the Ministry of the Environment and those of the Ministry of Culture [Guide published in April 2017].

Moreover, this collaboration is not limited only to this guide and is also reflected by the collaboration within the working groups, during the setting-up of the assessment services and especially by the exchanges organised at the local level between the different services of the DREALs on the one hand, and the DRACs [French Regional Cultural Affairs Agencies], on the other hand. I think it is very important that there are these joint training and exchange sessions. I would like to finish by telling you that we have quite a significant change, that is fully relevant today, in the establishment of what is called environmental authorisation. To simplify the procedures as much as possible, we are going to put "the single environmental authorisation", the regulatory procedures provided for classified facilities, "water law" authorisations, as well as everything concerning the classified sites, protected species and a whole series of other regulations under the same authorisation, in order to assist the project sponsors to have a single point of contact and an application assessment that will cover all of the components

### **Emmanuel ETIENNE,**

Deputy Director of historical monuments and protected spaces,  
General Directorate of Heritage, Ministry of Culture



I would like to thank, in my turn, the Association of French World Heritage Sites, the Network of Major Vauban Sites and the Network of French Heritage Sites who are responsible for the organisation of this day. I would also like to warmly thank the Ministry of the Environment, for having welcomed us. On this occasion, I would like to emphasise that the services of the Ministry of the Environment and the Ministry of Culture will cooperate on many topics, both at central and decentralised levels: on the protection of the heritage landscape, on the management of sites, on town planning law, on planning, but also on the subjects that concern the

concerned by the project.

This change, which is very significant, will not be with the slightest reduction in the level of environmental requirements, but is really designed to coordinate all the procedures necessary for the successful completion of a project.

This is a topical subject, since the decree that will put in place this single environmental authorisation is being made today in the Council of Ministers. This is the result of trials that have already taken place and which concerned, in particular, the subject of wind turbines. It is therefore a new measure which will enter into force from 1 March in a transitional way, and in a definitive way from 1 July 2017.

What it is important to know, is that the different authorisations to which land turbines are subject, will be grouped into a single authorisation, this "single environmental authorisation". In addition, it will be valid for turbines and the construction permits. There will, therefore, be no more specific construction permits, as the corresponding provisions will be incorporated in the single environmental authorisation. For wind turbines, this new authorisation will thus be the equivalent of a special authorisation in the framework of the Heritage Code, as the construction permit was initially. You see, we will therefore have an integrative approach of the various issues. For the State services, it is a significant change which aims to truly integrate all the issues related to a given project in a comprehensive manner. The trials which have been previously conducted have shown the benefit of such a change in a desire to reconcile, with the greatest simplification possible for the project sponsors to meet the requirement which fully covers all of the aspects of a project. That is, in a few words, what I wanted to say to you about this regulatory framework. I hope you have a great day; I think it is important to discuss these subjects in an extremely open and direct manner. It must be said, that on the ground, this is not simple. For the inspectors of classified facilities, it often involves highly complex cases, not so much in technical terms, but to ensure a genuine dialogue, a real debate on the basis of impact assessments. This is, indeed, an absolutely essential step and I think that a day like today will contribute to that. Thank you very much.

natural parks - national parks, regional natural parks -, on major infrastructural projects, etc.

Therefore, we have the opportunity to rub shoulders many times.

Since the beginning of the 2010s, which coincides with the important development of the wind power sector in our country, the question of the integration of renewable energies in landscapes and their possible consequences on heritage has been a matter of ongoing concern for our two ministries and, beyond that, for all of the actors who are gathered here today. This concern encouraged us to put in

place, in 2013, an inter-ministerial working group, which has already been mentioned, on this question. It has also led us to collectively revise the guide related to land wind farm impact assessments for professionals from the sector and assessment services. It is therefore key to underline the importance of this day which brings us together on this theme, that we wanted to be open to all the actors concerned by this problem: the officials from the State services of course, at the decentralised level in particular, the representatives of local authorities, the managers of World Heritage sites and French Heritage sites and the associations which are concerned about heritage and the environment - they are, moreover, often linked and sometimes, they are the same -, I would really like to thank them for their presence today.

The Directors General of the Ministry of the Environment have reminded us that the energy transition was an obligation for all, and in particular, for all the State services. The cultural sector is no exception and I remind you that the concern related to energy savings also applies to old buildings, including historic monuments, whether at heritage sites or elsewhere. The natural and sustainable qualities of old buildings are sometimes ignored, obviously not by building specialists, but perhaps by some of the actors. Before considering and undertaking improvement work, it is often necessary to understand the construction better and to acquire a detailed knowledge of the energy behaviour of old heritage.

I would also like to remind you of a few important elements about the importance of heritage in our economy. Generally, culture contributes 3.2% of the national wealth and employs nearly 680,000 people, i.e. 2.5% of the jobs in our country. The number of direct and indirect jobs in the heritage sector is estimated at 280,000 people, including the tourism businesses that are related to this sector. These jobs cannot be relocated; it is important to remember that. Heritage tourism, as a whole, alone generates close to €5 billion of revenue every year, all sectors combined.

It should also be noted that tourism is not the only sector to benefit from the economic benefits of our heritage, there are also some 700 companies which are involved with heritage buildings. Thus, building companies specialising in heritage alone employ more than 30,000 people. This is to give you some figures, some elements of magnitude about the economic importance of cultural heritage.

Heritage is therefore a real resource for France, and it is not renewable. Therefore, if heritage is destroyed, this resource would disappear. One should also examine the impact that the urban sprawl into the countryside and the destruction of heritage could have. And the question of the urban sprawl into the countryside, which concerns not only the question of renewable energies, is a very important topic that has already been mentioned in the previous speeches.

As regards World Heritage, out of the 42 sites registered in our country at this particular moment in time, there are 38 cultural ones, three natural ones and one mixed. 15 sites have been or are involved, from near or far, in wind power issues. We had some news on this point again recently. And I would like to remind you that UNESCO is particularly vigilant on this point, as you know. I would also like to emphasise that the World Heritage Committee has recently issued a decision on the state of conservation of the registered sites around the world. We obviously think first of the dramatic situations of armed conflicts that are happening in Syria and Iraq. But the Committee also wished to underline the importance that it attaches to the conservation of registered sites in economically prosperous and politically calm countries like ours, where World Heritage can be submitted to other types of threats such as dams, mining and extraction industries, as well as major infrastructure. A number of these sites have sometimes been of concern to the reactive monitoring procedure, or even placed on the List of World Heritage in Danger, in particular in countries other than France.

The presence of European speakers during this day should help us to understand how the countries, which have developed the wind power sector before us, have attempted to reconcile the energy transition with the protection of heritage. The example of World Heritage Sites which are subjected to the same obligations in all signatory countries of the 1972 Convention seems particularly interesting to me in this regard. The inclusion of a site on the World Heritage List, the labelling as a French Heritage Site, the classification as a remarkable heritage site or of a site under the Environmental Code engage the responsibility of the State which is obliged to best reconcile two or several public policies: the protection of our cultural or environmental heritage, our landscapes and the implementation of energy transition.

To conclude, I would say that it is for this reason that this day is particularly useful and welcome. The sharing of experiences at national and European level should help us to find a set of methods that will enable us to reconcile the imperatives which are finally converging. We do not wish to bequeath to our descendants a world that would be subject to climate imbalance, nor do we wish to leave them a world without memory. In this sense, heritage and the energy transition, far from being contradictory, must participate in the same objective of sustainable development. I thank you.



# FRENCH & EUROPEAN CASE STUDIES

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# THE TERRITORIAL ENERGY POLICY SEEN FROM THE SUMMIT OF A FRENCH HERITAGE SITE



Bibracte © Aurélien IBANEZ

I am very honoured to be able to take the floor this morning and even more to be the first to do so, to bring you the testimony of a Manager of a heritage site, that of Mont Beuvray, labelled as a French Heritage Site.

## **Vincent GUICHARD,**

Director General of the Bibracte EPCC [Cultural Cooperation Public Establishment].

Mont Beuvray is located in the Regional Natural Park of Morvan. The site has important historical components: its summit houses the remains of the Gaulish city of Bibracte, abandoned two thousand years ago, in favour of a new town created at the dawn of the Roman era in the area of Autun. The site itself is listed under the law of 1930 and the summit is also classified as a historical monument. Therefore, a priori, the site has all the protection possible, to which are added various biodiversity zones.

Until the beginning of 2016, we therefore did not consider wind power as a priority issue. We targeted our attention on other activities having a strong impact on the landscape: agriculture, with a continuous decrease in labour which ends up in the abandonment of the most difficult plots to farm, and forestry, with the systematic conversion of the climactic forest (beech wood) into industrially-managed softwood stands. The wind power issue emerged in the spring of 2016, at the time when several projects which had been in development for several years were launched at the same time. This involved, more specifically, three projects supported by distinct operators, which totalled approximately 80 generators, opposite the most remarkable viewpoints from the summit of Mont Beuvray and at a distance of between 18 and 30 km. These projects are not designed in a concerted manner, quite the contrary.

Moreover, as Mr. DELDUC said earlier, we are in a region where the wind is not strong and where you have to go high up to find it. The generators that are foreseen are therefore machines of a virtually unprecedented type in France: between 180 and 210 metres in height depending on the developers, with masts of 10 to 12 metres in diameter at the base, anchored on very large concrete slabs.

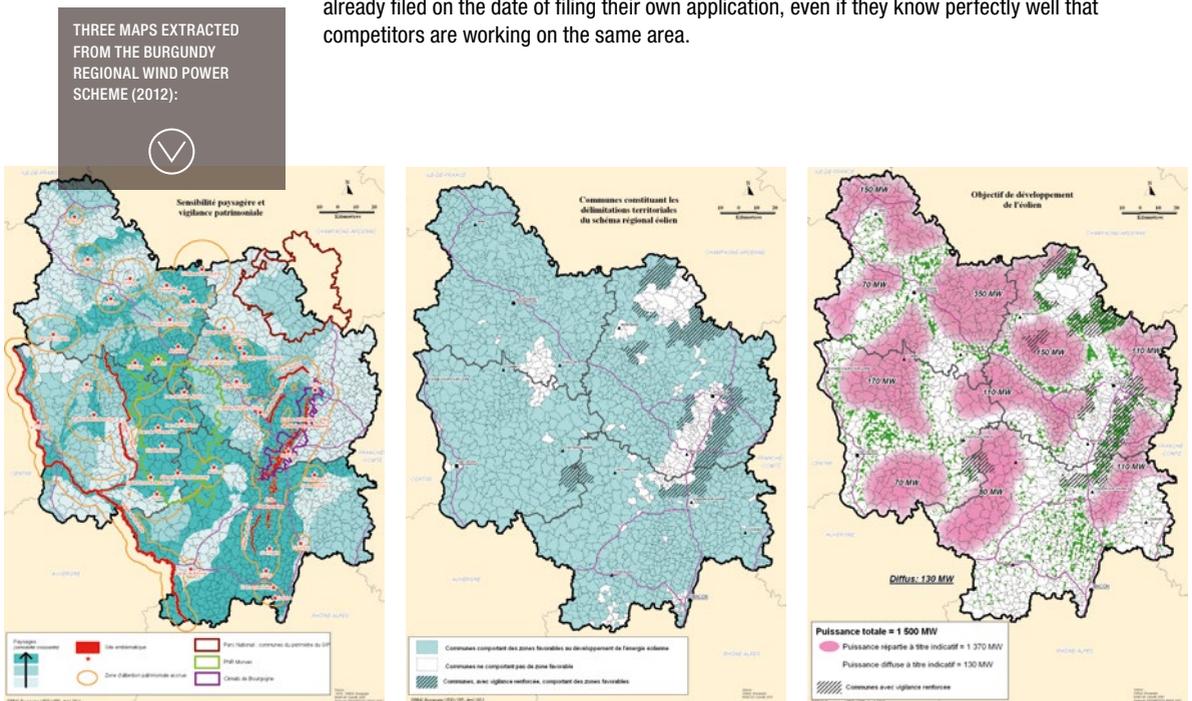
After having initially displayed a favourable position in overall terms, the local authorities have adopted a far more qualified stance in the face of the controversies caused by these projects. I note that, for their part, the State services now find themselves forced to assess applications on an ad-hoc basis, without having a real framework for reflection.

The Regional Wind Power Scheme seems to me to have played an important role in the genesis of this situation, even if this document has been cancelled by the administrative courts (end of 2016).

The Burgundy Regional Wind Power Scheme created in 2012 was based on a completely honest landscape analysis, which mapped the important elements of the landscape and the historical heritage, with several levels of sensitivity. As we see on the corresponding map (*Figure 1a*), the more the blue is pronounced, the stronger is the sensitivity of the landscape. The south of the Morvan is part of such an area of high sensitivity, but the next map (*Figure 1b.*), which indicates the communes “with areas favourable to the development of wind energy”, is also almost entirely covered with blue, with here, the blue meaning for the wind developers: “A priori, there is nothing banning you from going there”. The south of the Morvan is thus included on this second map in a totally blue area, with, however, indicating a few communes where one must be particularly attentive to landscape issues. The next map (*Figure 1c.*), which outlines the objectives of wind power development, shows a supplementary slip, since the zone to the south of the Morvan corresponds to a pink pocket, amongst a dozen, where the public authorities envisage electrical production, estimated here at 80 MW. We note that the projects which concern us are concentrated in this pocket.

Why these, rather than others? One can suggest several reasons: avoidance of the Regional Natural Park of Morvan, whose elected representatives are already adversely positioned towards wind power; or even the fact that the area is relatively sparsely populated and located at the administrative borders, between the departments of Nièvre and Saône-et-Loire.

One of the consequences of this unrestrictive, or even encouragement, is therefore, the simultaneous emergence of various projects that appear to be unaware of each other. This is an additional problem, because their implementations take absolutely no account of the overall impact, since the project sponsors are supposed to take into account only the projects already filed on the date of filing their own application, even if they know perfectly well that competitors are working on the same area.

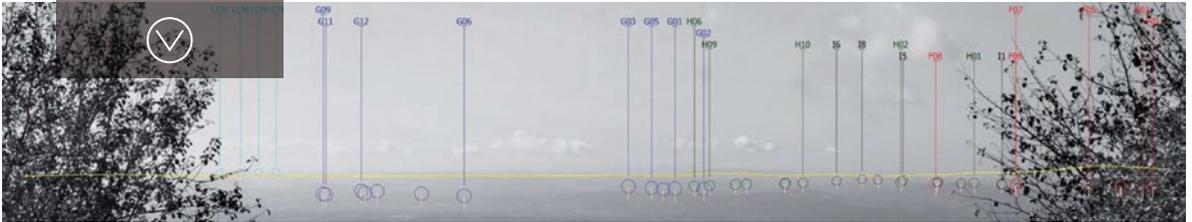


**Figure 1a.** Map of the “Landscape sensitivity and heritage vigilance”.

**Figure 1b.** Map of the “Communes constituting the territorial boundaries of the Regional Wind Power Scheme”.

**Figure 1c.** Map showing “the wind power development objective”.

VISUAL SIMULATION OF THE WIND FIELD ENVISAGED BY THE COMPANY GLOBAL WIND POWER TO THE SOUTH-WEST OF MONT BEUVRAY, FROM THE SUMMIT OF THE MOUNT.



© Global Wind Power ATER Environment, June 2016

The practical issue which arises today for us is the acceptability of several dozen large generators 20 or 30 kilometres from the viewpoints of the Heritage Site, whereas the simulations proposed by the developers suggest a real visual impact in this landscape of gentle hills (*simulation below*), which will also have a major impact on the nocturnal ambience - what we often forget to mention - in the form of red flashing lights which the generators will be equipped with. Are we ready collectively and socially to accept this intrusion into our landscape?

Our responsibility, as managers of the Heritage Site, is to ensure that the landscape seen from the summit of Mont Beuvray does not become a landscape where turbines are the most important and identifying feature.

In facing these questions, the supporters of the French Heritage Site, namely my institution and the Regional Natural Park of Morvan, have questioned the State services, in this case the Prefect of the region, to share our concerns with them, to warn them about the lack of foresight concerning wind power projects and to propose reflections on the acceptability of these projects with them. The establishment of an exclusion zone, as it has been defined, around some of the prestigious sites, would obviously be a comfort for us, but the request that we have made is only to be able to anticipate and to participate in the reflection.

Where are we at this today? Irreparable damage has not yet been made, if I can say, since the largest project was assessed by the State services during the summer of 2016 with a protective refusal accompanied by a long list of criticisms, regarding the impact on the landscape and other arguments. A considerably reduced project of four, but equally tall masts, had been favourably assessed by the State services, but the chief assessor has just issued an unfavourable opinion and therefore I do not know what will happen to it. Finally, the submission of the technical file of the third project to the State services is expected for 2018.

Another question, in this I will momentarily forget my responsibility for the Mont Beuvray site, and to speak as a simple inhabitant of the Morvan. The landscape which must accommodate the wind fields mentioned above is a wooded one, with small hills. Very clearly, if the projects mentioned above come to fruition, wind turbines will be the most dominant elements of this landscape, as the developers' visual simulations show (simulation below). The presence of many landmarks in this landscape (farms, churches, hedges...) will magnify the vertical dimension of the generators, much more than would be the case in a treeless plain.

PARTIAL VISUAL SIMULATION OF THE WIND FIELD ENVISAGED BY THE COMPANY GLOBAL WIND POWER TO THE SOUTH-WEST OF MONT BEUVRAY, FROM THE OUTSKIRTS OF THE VILLAGE OF LUZY.



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Clearly, in this specific context, the day-to-day landscape, whose heritage value is attested to by the very large commitment the inhabitants and the many visitors have for it, will be transformed into a landscape of wind turbines.

As we said earlier in the introduction, we are going to install quantities of wind turbines in France, it is inevitable, but, in doing so, the risk of trivialising our landscapes by transforming them into vast wind farm landscapes is considerable. Is it socially acceptable? Is this compatible with other State policies? For example, as was mentioned by the representative of the Ministry of Culture earlier on, at the same time as the massive installation of wind turbines, it is hoped to double the numbers of tourists visiting the country. However, we are not going to increase visitor numbers to Mont-Saint-Michel or the centre of Paris, which are already saturated. So this means that there is a need to spread tourism all over the nation, which can only be done if we reinforce the value of the territories that have a proven heritage quality, beyond the emblematic sites protected by the law. Clearly for me, there, you have two policies in perfect contradiction.

In the end, I can only campaign, as others do (see, for example, the questions of the collective of the post-oil landscapes), in favour of the regionalisation of energy policy. In so doing, I am stressing my belief that the question of the landscape has the capacity to provide a leverage effect on territorial policies. There are two reasons for this. The first is that reflections on the future of the landscape has the ability to mobilise many territorial actors, including those who no longer expect anything from public action, because everyone is sensitive to the evolution of their environment. The second is that the establishment of the conditions for evolving the landscape towards a desired future requires ensuring the consistency of the various sectoral policies that contribute to its modification. This is the type of approach defended by our networks of heritage site managers, beyond the sole protection of the most emblematic sites.

**Note:** *Since the holding of the meeting of 25 January 2017, the Prefect of the region of Bourgogne-Franche-Comté has jointly entrusted the DREAL and the DRAC with the task of defining an "Area of Landscape Influence" around Mont Beuvray, since this document is intended to facilitate the assessment of wind farm projects. Bibracte EPCC, the Regional Natural Park of Morvan and the Network of French Heritage Sites are involved in the review, of which the conclusion is expected during 2018.*

# VAUBAN FORTIFICATIONS

Outline of the spatialisation method of the OUV of a chain of properties: anticipating the question of wind turbines



Aerial view of Besançon © Marc PERREY



**Marieke STEENBERGEN,**  
Director of the Vauban Network

**Aline LE CŒUR,**  
Landscape Architect

The “Vauban Fortifications” chain of properties (*cf. map*) is composed of 12 sites in eight regions and ten different departments - in more or less windy areas. In light of the Regional Wind Power Schemes, one can potentially expect that out of about half of them, the wind power question will arise one day or another in co-visibility with our property. In anticipation, the Vauban Network which federates these twelve sites has chosen to prepare itself, precisely because the complexity of this serial World Heritage property requires a specific approach to interpret the declaration of Outstanding Universal Value of 2008 which is one page long. This document gives, nonetheless, a few significant indications as to the relationship between the Vauban fortification and its territory and in particular, on how to interpret the concept of integrity for this property.

In order to refine the spatial characteristics justifying the Outstanding Universal Value, the chosen starting point is that of the criteria which have led to the selection of twelve sites

as the most representative among the 160 places where Vauban intervened. The main criterion in the framework of the topic of wind power is the geographical typology: the property is composed of seaside, plain and mountain sites, each requiring an adaptation of the architectural characteristics to the geography in response to each situation, whether being dominant or being dominated. With the support of the Ministry of the Environment and the Ministry of Culture, a multidisciplinary project team has been put together, composed of landscape architects, architects, urban planners and historians of the fortification, whose first field mission relates to the Besançon site. Our presentation today reports on the first highlights of this experimental mission and should not be interpreted as a definitive conclusion.



The Besançon site illustrates the genius of Vauban very well. The city is sited in a loop in the River Doubs in a low point, extending from the other side of the river on the slopes of Battant. The citadel is located in the tightening of the loop of the River Doubs, dominated on both sides by the hills of Chaudanne and Bregille. The old plans express this outstanding territory, within an agricultural area. The city today extends onto cultivated land, but the countryside has remained in its setting around the citadel. The citadel is organised on a masterful anticline, with two defensive lines. One on the city side, the other, a fall-back line, on the hill side.

“The citadel, captured in many images where one can clearly see its extraordinary geographical situation, has become an outstanding, recognised and picturesque site.”

This World Heritage Site encompasses the whole site of the fortified citadel, the enclosure of the loop of the River Doubs with its bastion towers typical of Vauban as well as the Battant district, with Griffon Fort. A buffer zone has been designated, including the hills on both sides of the citadel and the slope on the fall-back line side towards the hills to the south.

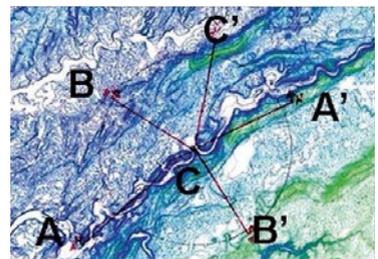
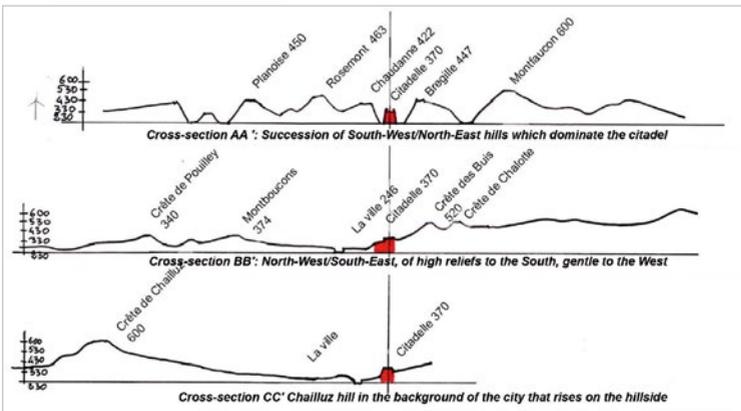
On a scale of 10 kilometres, we see that the whole construction carried out by Vauban, was supplemented by new defences at the end of the eighteenth century and at the beginning of the nineteenth century, with small forts and lunettes. The range of fire was then 1500 metres, characterised by bidirectional firing, toward the citadel and toward the outside. From 1870, Séré de Rivières fortifications were built all around the territory, in a 10-kilometre circle. They have a range of 10 kilometres, and defend each other and protect the city.

Two axes are important for the defence of this fortified territory. In a dominant position on the hills, on the east-west side, the bombardment line lets you fire on the citadel, without being able to assault it, since the river protects its access. The other north-south line is an attack line from where you can reach as far as the city and the citadel on foot. The south side is the most important, because it is from there that one can attack most easily, without having to cross the River Doubs. It is therefore the most protected line on the citadel, the one where Louis XIV attacked in 1674 and it is there that the assaults of the Austrians in 1814 and the Americans in 1944 took place.

Our group went to visit the Besançon site in early December 2016, with conditions of good visibility. On the 1/100,000 IGN maps, we plotted a circle of 30 kilometres to consider this territory on a large scale, with its geography, its landscapes and its hills conducive to wind projects. We also looked at the territory on a scale close to 10 kilometres with the incoming and outgoing views to and from the citadel. The hills which are entangled along the meanders of the River Doubs are very important in the landscape. In the north, Chailluz ridge is another hill which restricts the territory of the urban city of Besançon.

On schematic cross-sections (*Cross-sections of the relief of Besançon, below*), we can measure the differences in heights in the hills of 50 to 70 metres, in the face of wind turbines of 100 to 200 metres. One cross-section shows the whole series of east-west hills, the Citadel being located slightly below the adjacent hills of Chaudanne and Bregille. Another cross-section shows the high hills to the south of the citadel and the city which extends on the slope up to the ridge of Montboucons.

CROSS-SECTIONS OF THE RELIEF OF THE CITY OF BESANÇON.

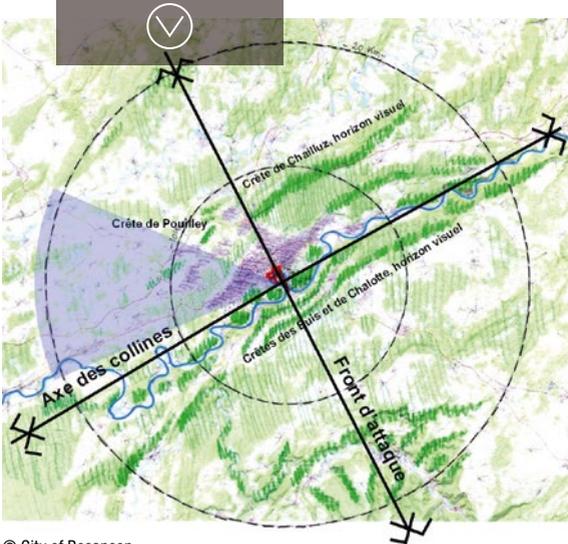


© City of Besançon

The landscape is structured in the south-west/north-east direction following the direction of the course of the River Doubs and the hills, like the bombardment line. The city has developed toward Chailluz ridge and Pouilley ridge, surrounded of a green backdrop, which represents a living environment that is greatly appreciated by its inhabitants.

In the outskirts near the city, there are many incoming views toward the citadel, views identified from a three-dimensional map of the city. The territory to take into account is nevertheless more extended. In the 10 km perimeter, we have identified several key locations with incoming views toward the citadel. We have interpreted the photographic panoramas by sketches to detect the angles of visual sensitivity.

SYNTHESIS OF THE SPATIAL ANALYSIS



© City of Besançon

We have, from the beginning of our work, considered the outgoing views from the citadel of Vauban to the city and to the hills. We found that some of the hills sometimes mask the views. One could therefore ask whether wind turbines could be placed behind these screens. To the south, the establishment of a housing development harms the perception of the still preserved landscape toward Buis ridge, located outside the buffer zone.

The key spatial characteristics (*Synthesis of the spatial analysis, below*) of the Besançon site are summarised in this specificity: “he who holds the high ground holds the low ground”, the adaptation of the constrained terrain and the optimisation of the natural defences that Vauban generated. He had an understanding of the geography of the site and was assisted by nature, took advantage of the rivers, mountains and very steep cliffs. Won't the scale of wind masts compete with that of the morphology of the landscape respected by Vauban?

The principle of “he who holds the high ground holds the low ground” is valid both for the fortification of Vauban and wind power. Therefore, necessarily, we are at the heart of the question.

The OUV of the Fortifications of Vauban lies not so much in the aestheticism, but in the strategic and functional attributes. A last element which really emerged in the course of this first field mission is the analysis of the integrity of the property and therefore, this setting and landscape that are, in the case of Besançon, very strongly marked by the green hill which frames the urban landscape and allows one to see the defended site. This backdrop is also a marker of the evolution of the defence system with the construction of the Séré de Rivières forts in the nineteenth century in a radius of 10 kilometres and demonstrates that the strategic choices of Vauban were pursued by his successors. This first step therefore creates interesting prospects for more in-depth work to continue this exploratory work. It will involve checking if these first elements of analysis are confirmed on other components of the property in other geographic configurations.

# AREA OF LANDSCAPE INFLUENCE OF THE HILLSIDES, HOUSES AND CELLARS OF CHAMPAGNE:

a response to the compatibility of the cultural landscape of Champagne regarding the development of wind power



Fan of vines © Michel JOLYOT



**Amandine CREPIN,**  
Director of the Coteaux,  
Maisons et Caves de  
Champagne

**Hélène GAUDIN,**  
Inspector of sites,  
DREAL Grand Est

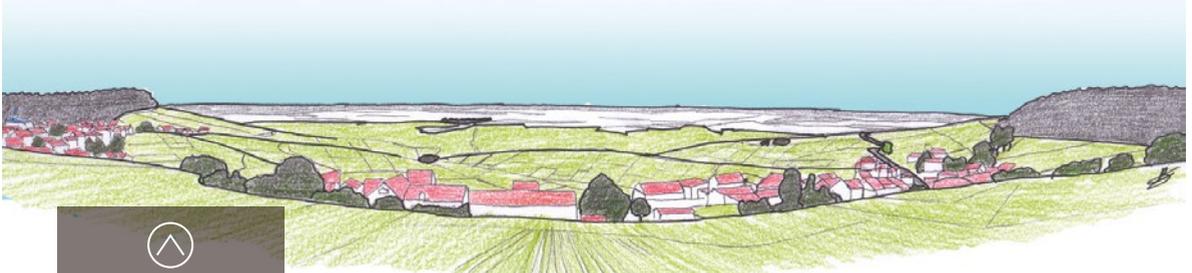
**Virginie THEVENIN,**  
Head of the territorial  
architecture and heritage  
department, Marne STAP

**Amandine CREPIN** – To begin with, I would like to clarify that the Marne department is the leading department in wind energy in France, because currently, 500 turbines are present on our territory. Unlike the major Vauban sites, our heritage is therefore located in a perimeter where the development of wind power is already a reality.

In the first part of this presentation, I will try to explain to you the context of hillsides, houses and cellars of Champagne, quickly itemise its Outstanding Universal Value so that you can grasp and understand our problem in relation to the development of wind power, and then the methodology that we used to try to develop tools for reflection, consultation and sharing to preserve the OUV and the integrity of the site, faced with wind power infrastructure projects.

The Outstanding Universal Value of the Hillsides, Houses and Cellars of Champagne resides in these few words: these are the places where a wine that has become the model of sparkling wines and a universal reference of celebration was born, is produced and distributed around the world. What does this mean in more concrete terms? We are in a cultural landscape; the landscape dimension is therefore important. We also have an important industrial dimension; we are an innovative wine which began to be exported around the world very early on, with industrial processes that are related to it, whether it involves the method of producing the wine or of its translation into the architecture. That is to say that the site contains neighbourhoods of the city that have been constructed with urban planning dedicated to the production of wine, but also an entire underground heritage commensurate with a global market. Finally, we have an entire symbolic dimension since champagne, the product that results from this cultural landscape, provides meaning for humanity. In moments of celebration, moments of sharing, champagne is a benchmark.

Its inscription on the World Heritage List was acquired on the basis of three criteria: criteria 3, 4 and 6. Without going into too much detail, criterion 3 is found in all the elements making reference to the know-how, innovation and social patronage that the trading of champagne has generated, including the role of women. Criterion 4 is the more material criterion that translates this industry into town planning, the architecture and the landscape components. Criterion 6 relates to all of the intangible dimension conveyed by the wine of Champagne.



© Caroline BAUDEZ - Collection of CMC, Champagne

It is true that the decryption of the criteria of the OUV, of the integrity and authenticity of the heritage, has, perhaps, been a little easier for us, because we are a recent site and that we have, in this work that preceded the inscription, placed great emphasis on the definition of concrete attributes, on their location and their typology. There has been an approach, in the very successful regional and international comparative analysis, with a methodology on which we have been able to rely, to then define the analysis and comprehension criteria regarding the development of wind power.

There is also an element that perhaps differentiates us from other World Heritage sites in France, which is our perimeter and the understanding that one has of it. Thus, we have a core zone and a buffer zone - everyone knows of the difference in these perimeters. But we also have what we have called a commitment zone in which we have tried to integrate all the wine-producing towns and villages. It is not, therefore, not a zone of co-visibility, it is a zone in which everyone can commit themselves to preserving know-how (which makes reference to criterion 3), to preserving a cultural landscape (which makes reference to criterion 4), but also an intangible dimension (which makes reference to criterion 6). In fact, it is the OUV of the World Heritage Site, but perhaps in a less significant manner that forms the commitment zone.

But, in 2008 - and here I come back to the beginning of the inscription process since our presentation shows you a historical path - at the time of putting together this approach, we still did not have a clear vision of the Outstanding Universal Value of the property and we had not defined the perimeters. On the other hand, what we knew was that the development of wind power was a very important subject for our territory. Therefore, we knew we were going to have to, in our management strategy, settle this question, or at least anticipate it to try to converge towards a virtuous balance. We had, at that time, common reflection in all regions: A Regional Wind Scheme, which was enforceable, but now no longer so - we have all known the changeability of these documents.

At the time, as an association supporting the UNESCO World Heritage candidature project, we tried to have a debate with the State services on the subject. But, as a candidate, it was difficult to have any input (we will talk to you about this a little later in the presentation). To be clear, we already had, at the departmental level, mobilised local authorities and a wind power vade-mecum supported by the Prefect who took an interest in these questions very early on to try to organise this development. And, since the heritage asset concerns several departments - Haute-Marne, Aube, Marne, Aisne and Seine-et-Marne -, we have also been able to rely on a small guide, a manual, that the Department of Aisne had.

Therefore, as I said to you, we had already, in 2009, observed the existence of projects in the vineyards, which roughly corresponds to our commitment zone. We already have, in certain parts, coexistences between cultural champagne-growing landscapes and wind power. The core zones are still distant, since the first wind farm is 20 kilometres away. There is therefore

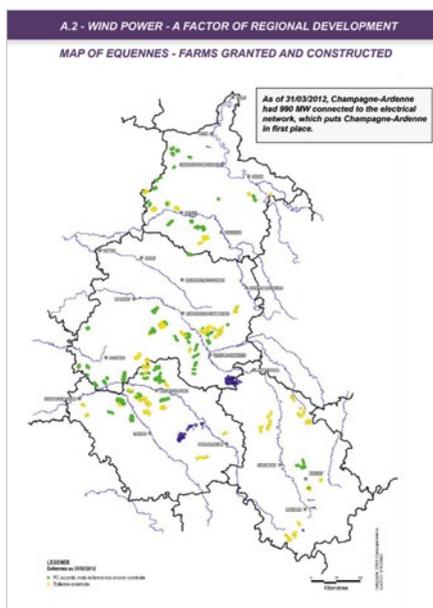
co-visibility, but which does not erase the cultural wine-growing landscape; the dialogue remains consistent. By contrast, we have some sectors, such as Vitryat, around Vitry-le-François, where we do not have a Cuesta ridge, with closer areas very favourable to wind power since we must be 5 kilometres from the vineyards.

The association which federates this UNESCO project in the region then decided to do its bit by getting involved in the drafting of a wind power charter to establish recommendations regarding this development. Here, you have two small sketches (*cf. opposite page*) which summarise the situations that can be seen in Champagne. We therefore have hillsides: the vineyards are located on the Cuesta most of the time, on these bowls of the Parisian Basin (the best known being the Ile-de-France Cuesta). Then, opposite, we have a plain, the Champagne Pouilleuse plain which is, today, occupied by cereals, but which maintains a dialogue with the wine-growing landscape, since the latter occupies only the hillsides. And above, we generally have a wooded hilltop to complete this landscape.

This charter was established considerably in advance and it is difficult without characteristics, without a OUV, to establish very precise recommendations. We therefore focused on the classic landscape, the everyday landscape, on what was already known about landscape impact assessments. And we therefore advocated an exclusion zone, in 2009, taking into account the breaks of the slopes of the hillsides, the lower limits of the vineyard parcels and the edges of the plateaux depending on the height of the hills and on the size of the machines located on the whole of the commitment zone in order to maintain the development in the immediate vicinity of the Champagne appellation.

I will now hand over to H el ene GAUDIN who will talk about, in this upstream phase of the inscription, the development of the Champagne-Ardenne Regional Wind Scheme.

**H el ene GAUDIN** – In Champagne-Ardenne, there was already a Regional Wind Scheme in 2005, which Amandine CREPIN referred to earlier, which was revised in 2012. On this map (*cf. State of the development of wind farms in 2012 below*) you have the state of wind power development at that time with, in yellow, the wind farms that had been built, and in green the farms that had been authorised, but not yet built. You can therefore see a wind power pressure that was developing more and more.



I would add that we had already taken World Heritage into account in the scheme at that time, since we already had heritage properties that had been inscribed (monuments) in Reims, the Cathedral, the Palace of Tau and the Abbey of Saint-R emi and then two buildings that are on the routes of Santiago de Compostela: Notre-Dame-en-Vaux in Ch atons-en-Champagne and the Notre-Dame de l'Epine Basilica. To preserve these sites, we created a buffer zone, as Amandine CREPIN said earlier, 10 kilometres of wind farm exclusion, and in areas beyond, we would consider the projects on a case-by-case basis.

At that time, the Hillsides, Houses and Cellars of Champagne heritage property had not yet been inscribed on the World Heritage List. It was therefore jointly decided by the Prefect and the President of the Regional Council not to take it into account, because it had not yet been validated. However, we did register the wine-growing landscape as one of the major landscape issues. You will notice, in particular in the Marne department, all of the pink part which corresponds to the Ile-de-France Cuesta and the Reims Massif, which includes the vineyards. It is in this way that we were able to take into account a priori the future inscription of the Hillsides, Houses and Cellars of Champagne, though, only, the landscape. We will see afterwards that it is not only the landscape that counts in the Outstanding Universal Value, as Amandine CREPIN has already mentioned.

State of the development of wind farms in 2012  
  SRCAE Bourgogne

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**Virginie THEVENIN** – I will continue. The history is that wind power has grown in importance in our thinking, with the filing of a building permit for the Champignol and Pocancy sites, which was done before the World Heritage inscription. Therefore, in the analysis of the State services for the single authorisation - since we were already in the experimental phase of the single authorisation referred to earlier - we had to get this case examined, without taking into account the Outstanding Universal Value, since it did not exist officially. The State services in charge of the case thus examined the project outside the UNESCO framework.

But along the way, UNESCO got involved, or more exactly the ICOMOS inspection mission. We then went to one of the major sites that is known as the birthplace of Champagne, in the commune of Hautvillers, which offers an absolutely remarkable point of view of this plain, which already contains wind farms. We all trembled a little because the ICOMOS inspector told us that he could see the machines, and that he wanted to know their distance and whether there were other projects of this type. We then mentioned the building permit for this project which is located less than 10 kilometres from this heritage property and as a result, following this inspection, we had to respond to a supplementary question on the wind power projects to explain our positioning and the recommendations of the management plan in the field of wind power. And more precisely on the Champignol and Pocancy sites. ICOMOS also formulated a recommendation to transmit the impact assessment of this building permit to the World Heritage Centre.

This therefore posed a difficulty for us since the impact assessment was carried out before the inspection and before the registration. Therefore, the wind power project sponsor did not have to make reference to the UNESCO site since it did not yet exist. Accordingly, to respond to the ICOMOS recommendations - that is to say to analyse the possible impact of this project on the OUV, which was itself being studied by ICOMOS -, myself, as a Bâtiments de France architect for the department and Hélène GAUDIN, an Inspector of sites, and our landscape expert from the DREAL, we had to analyse the impact assessment on the OUV of the candidate site, for it to be sent to ICOMOS.

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**Hélène GAUDIN** – Fairly quickly, we are going to present the way we have treated this study to you. We have presented the regulatory context, since in the vicinity of the wind power project, there was the Montagne de Reims Natural Regional Park and that we had AVAPs [areas promoting architecture and heritage] and a classified site in the course of being considered in accordance with the UNESCO heritage management plan. We then used the definition of Outstanding Universal Value in detailing the following criteria: integrity, authenticity, management system and landscape, in a very detailed way, to then be able to properly analyse the impact of the wind power project on the OUV.

We also described the Pocancy and Champignol project and its characteristics - 13 wind turbines 250 metres high at the tips of the blades. And finally, we detailed the impact of this project in terms of visibility. We thus created - what is the most interesting thing in this study - an analytical table where we provided variations of the OUV according to the three criteria that were selected for the registration, namely criteria 3, 4 and 6 and the key attributes that contribute to the definition of these criteria.

We defined different levels of sensitivity in the attributes: in red, the attributes that have a very high sensitivity in terms of a wind project, in orange, a high sensitivity, in green, a lesser sensitivity. What remains in black is not affected by the wind power project at all.

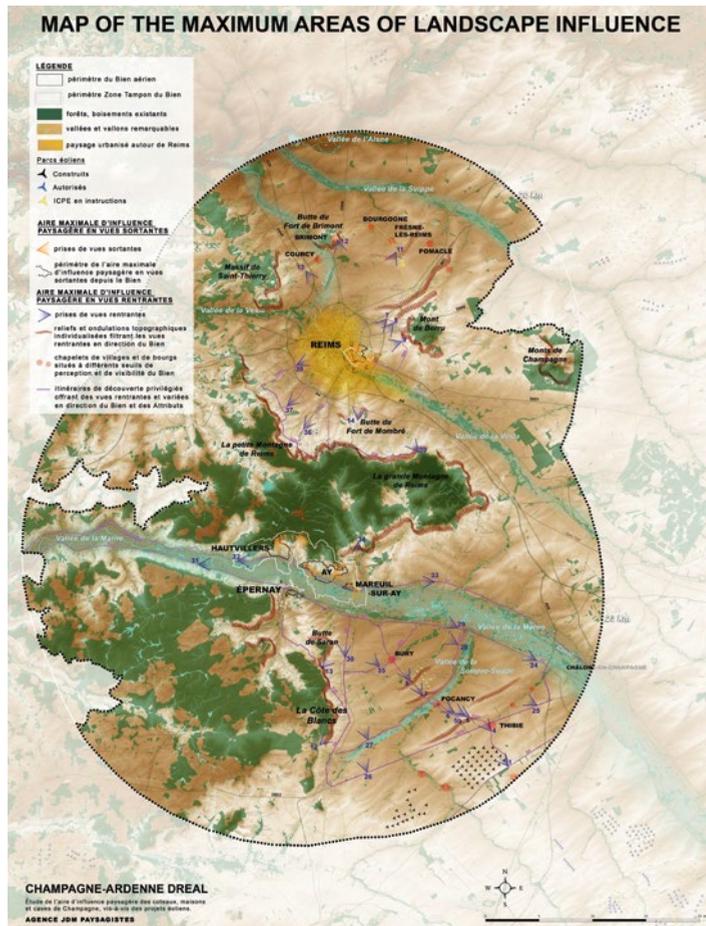
Let us take the example of criterion 3, “know-how refined over the generations”, represented by the Benedictine Abbey of Hautvillers. We considered that there was a very high impact from the wind power project, since, from the abbey, we have a very nice view over the vineyards below and the chalky plain of Champagne beyond. On the other hand, for Fort Chabrol, and the interprofessional Champagne buildings which are located in the town of Epernay, we considered that there was a lower impact.

Another example: “Product-related innovations”. This is an intangible attribute on which the wind power project has no impact.

It is therefore from this table and from the way in which we worked at the same time on the criteria, on the authenticity, integrity and the different sensitivities of the attributes, that we were able to analyse the impact of this project. This study was delivered to the Ministries of the Environment and Culture and was intended to respond to the recommendation from ICOMOS. Since the project is still being examined, I will not, therefore, go further than what I have just told you.

Today, the pressure is even stronger. We see, especially in the south-west of the Marne department, finished projects that really begin to approach the vineyards. We are not close to the central zone, nor the buffer zone, but we are however close to the commitment zone.

Since mid-2016, the DREAL has been steering the execution of an Area of Landscape Influence study (*see map below*), on the model of what has been done at Mont-Saint-Michel. We are at the end of the first phase which consists of delineating the maximum area of influence, which roughly corresponds to the area of study. For the moment, we have not yet detailed the issues and we are awaiting the final results for the end of the first half of 2017.



© DREAL Grand Est - GEOPHOM

**Amandine CREPIN** – A last word on the examination of the case. We wish to clarify that all the elements that we have been able to achieve, that is to say the studies which have been conducted, have been made available to the sponsor of the projects. They therefore have our analysis and can respond to it. The State services and the Mission have worked in complete transparency.

# AREA OF LANDSCAPE INFLUENCE OF VÉZELAY AND WIND FARMS



Overview of Vézelay © Municipality of Vézelay



**Annabelle  
MARECHAL,**

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Department, Biodiversity  
Water Heritage Department,  
Manager of the “Territories  
Sites Landscapes”  
Department of the  
Bourgogne-Franche-Comté  
DREAL

I am going to present our work on the Vézelay area of landscape influence in relation to wind farms. This is a study under the project ownership of the Bourgogne-Franche-Comté DREAL, conducted with the assistance of the DRAC, the UDAP [Departmental Union for Architecture and Heritage] 89 and the Ministries of the Environment and Culture.

The site at Vézelay includes a Basilica and a Hill which have been inscribed on the UNESCO World Heritage List since 1979. The Vézelay Basilica is also inscribed as part of the routes of Santiago de Compostela World Heritage serial property. The Vézelay site is composed of 18 towns and villages and has also been an inscribed site since 1989 and classified in part since 1998. It has several listed historical monuments and a heritage protected area at Vézelay. A French Heritage Site operation has been in progress since 2011 and the site is very busy, with almost a million visitors per year, especially for pilgrimages.

First of all, the context of the study. As you know, the French State is the guarantor of the preservation and good management of heritage properties inscribed on the UNESCO World Heritage List. On this site, taking into account the multiplicity of projects which were beginning to emerge (not in the immediate vicinity of Vézelay, but 15-20 kilometres away), the heterogeneity of the impact assessments, and the case law, we felt it necessary to have a more complete and well-argued analysis, to ensure the proper protection of the property. That is why it has been proposed that an AIP [Area of Landscape Influence] study is conducted on this site, which, we hope, will be a benchmark for future decisions.

The objective of the study was not to draw a 60-kilometre exclusion zone around Vézelay, but to try to find the right balance between the protection of the asset in terms of what it essentially contains, particularly in the light of its Outstanding Universal Value, and the development of the territory. Therefore, beyond this area, there is an area of lesser influence that could allow the development of wind power.

Now let's look at the methodology that includes three stages. The first relates to the translation of the Outstanding Universal Value of the asset. Then, we tried to identify and analyse what we called the incoming views on the asset, i.e. the views towards the hill and the Basilica. And then, thirdly, we analysed the outgoing views, namely the views from the Basilica and the terraces. We then identified criteria of acceptability or unacceptability, to ultimately obtain: an

“A French Heritage Site operation has been in progress since 2011 and the site is very busy, with almost a million visitors per year, especially for pilgrimages”

area of preservation in which one considers that a wind turbine would impact the OUV of the asset; an area of vigilance in which the impact is possible, requiring a comprehensive study of the projects in the light of the elements that are described in the study; and then, by deduction, areas without significant influence in relation to the Vézelay asset. We then identified criteria of acceptability or unacceptability, to ultimately obtain: an area of preservation in which one considers that a wind turbine would impact the OUV of the asset; an area of vigilance in which the impact is possible, requiring a comprehensive study of the projects in the light of the elements that are described in the study; and then, by deduction, areas without significant influence in relation to the Vézelay asset.

I would point out that it involves a study funded in full by the State and controlled by the Steering Committee of the OGS [French Heritage Site operation] in its UNESCO heritage asset management committee.

Let's examine the different stages of the study in detail.

Firstly, the translation of the Outstanding Universal Value.

We started out with the elements which we had for this property which was inscribed in 1979, under two criteria. Criterion 1, the Basilica, a “masterpiece of Romanesque Burgundian art” and Criterion 6, “Vézelay hill was, in the 12th century, a chosen place where, brought to a kind of fever pitch, medieval spirituality gave birth to diverse and specific events, ranging from prayers and epic poems to the Crusades”. Without forgetting the dimension of integrity which Vézelay presents, like the eternal hill which keeps intact the landscape qualities of the site where its abbey was founded in the Middle Ages.

The objective was to try to translate this OUV with regard to what we were interested in, namely the great landscape, and to spatialise it to direct our study.

The Basilica, spatially, is quite easy to understand. The landscape integrity of the hill, is linked to the discovery of the hill and its Basilica. This therefore led us to identify the places that had a special point of view of the landscape of the hill and the Basilica.

Concerning the centre of spirituality, we translated this in two ways:

On the one hand, by identifying the places having had a link with pilgrimages in the Middle Ages: the routes of Santiago de Compostela of course, the cross, the churches, the abbeys, the villages and the historical northern route. As an example, the commune of Asquins north of Vézelay had a particular importance since it was a place where the pilgrims, upon their arrival, would have something to eat and would wash before going up to the holy place. We have been able to reconstruct, thanks to the elements available to the UDAP 89, the history of these sites and therefore identify these places which had a link with pilgrimages. The Northern route which connects Asquins with the Cure valley was particularly important for the arrival of the pilgrims.

On the other hand, by considering the centre of spirituality as a place of contemplation and meditation. Here, we really touch on the outgoing views from the site, in particular from the terraces of the Basilica, but also from the cemetery and the ramparts.

Second stage: the work conducted on the incoming views.

Two principles were selected: we worked on a study area of 30 kilometres around the Basilica with wind turbines of 180 metres at the tip of the blades. The choice was difficult regarding which height should be taken into consideration for the height of the wind turbines -150, 180, or 200 metres? We carried out the simulations with different heights and we made the choice of using 180 metres.

We needed, first of all, to identify the landscape view points from where we could see the Basilica well. We therefore proceeded to calculate the visibility of the Basilica that we cross-referenced with the main routes around Vézelay - the main roads, the secondary roads, the hiking trails and the routes of Santiago de Compostela. We thus obtained a series of points to which we added the points identified for the OUV, with some being common. We then compared these calculations to the reality on the ground.

In light pink on the map (*Below*), you have the area of visibility of the Basilica cross-referenced with the paths and all of the points, around a hundred at the start, which present a view of the Basilica

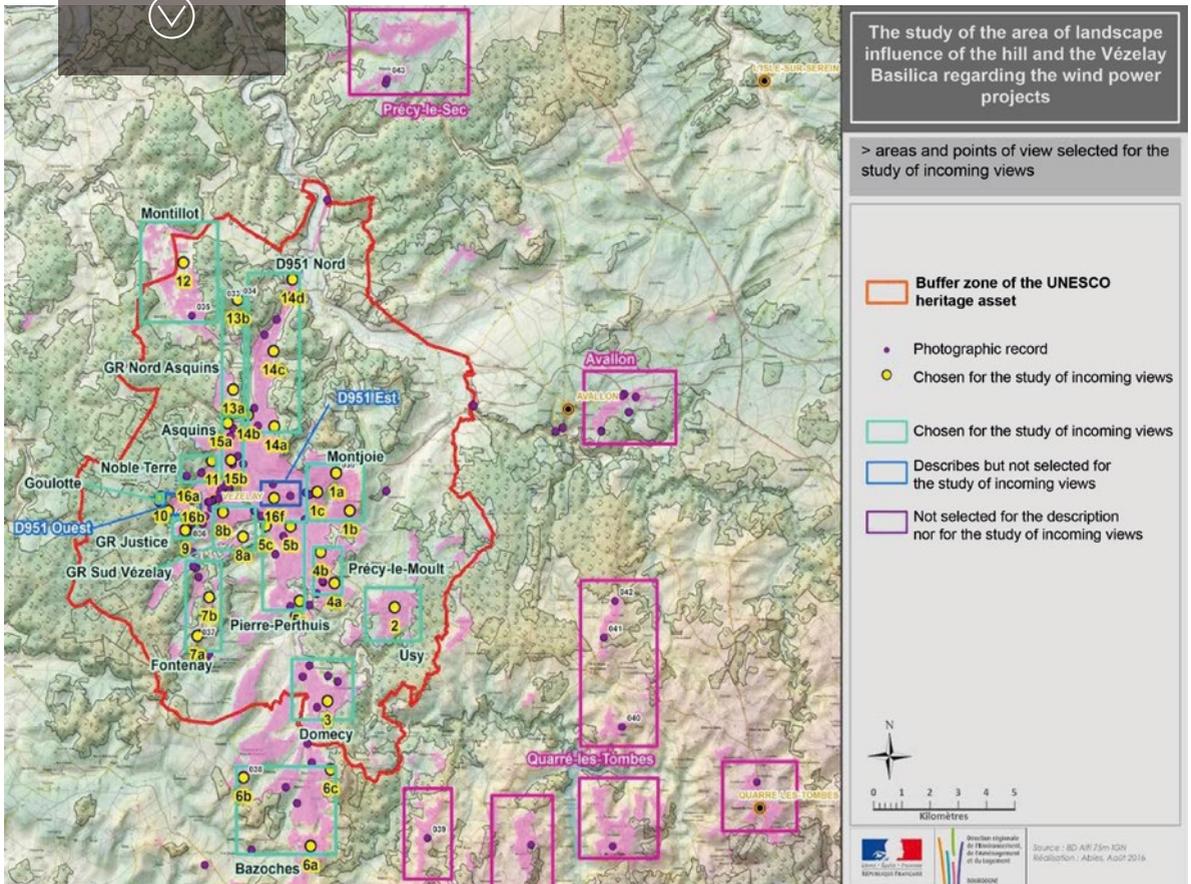
and the hill at Vézelay. Then, we had to select these points in relation to the view that they offered of Vézelay and consolidate them into sectors. In the end, we selected 15 sectors with one to three representative points in terms of visibility and a privileged view of the Basilica.

These sectors were then described (description of the sector, location, distance, attendance, type of view and contribution to the OUV), and this work led us to define, for each sector, the potential impact as: moderate, important or very important. In turquoise blue, the 15 selected sectors, in dark pink, the points which, in the end, were not selected. It can be seen that these are often distant and do not offer a privileged view of the hill and the Basilica. Other sectors were not selected because they represented a duplicate.

From these points and sectors, we had to define the criteria of acceptability. We first conducted an empirical study by establishing, for each point, a zone of co-visibility between the 180-metre wind turbines and the Basilica. Then, from the Winpro software normally used to calculate the impact of the wind turbines, we placed wind turbines a little bit everywhere to see what the impacts were. We also based our work on concrete cases, an existing wind farm 20 kilometres from Vézelay and other farms in the planning phase.

Finally, we selected the criteria which appeared most frequently in our analysis - namely, the angle of view and the distance, which were truly the two overriding criteria, but also more landscape-oriented criteria such as the visual competition, the scale, the horizon line and, occasionally, the masking effects or pre-existing elements with environmental impacts.

MAP OF THE SECTORS  
SELECTED FOR THE INCOMING  
VIEWS STUDY.



We thus obtained an initial empirical zoning. We then sought a more rational and reproducible approach in trying to define a model of visual perception based on the two most determining criteria - which were the angle of view and the distance - with other criteria used later to further refine the results. Here is the model that we have developed (*Figure 2*). At the tip of the model, we have the point of perception and then, depending on the distance and the angle of view, placing the Basilica in the axis of the zero angle, we established a zoning. In red: unfavourable, in yellow: vigilance and in green: the other zones.

This model was established based on the norms of human sight and then compared with the empirical tests that we had conducted previously with the WinPro software. We have refined the red zone to the maximum so that it is the lowest common denominator between all of the points and so that it constitutes an unfavourable zone that is as unquestionable as possible.

We then applied the model to all of the selected points, in overlaying it onto the zone of co-visibility between the wind turbines and the Basilica. We thus obtained a red, yellow and green zoning. I will not go into detail, but the model has been applied in a slightly differentiated way according to the sector's issue and its contribution to the OUV.

Secondly, we reworked the yellow zones, this time, with a second level of analysis taking into account the issue of the sector. Again, we used the WinPro software with simulations of wind turbines by testing the second series of criteria mentioned previously, namely the visual competition and the line of the horizon. The yellow zones thus became red, remained yellow or became green, as indicated on the map (*Figure 3*). For information, the buffer zone was red from the outset.

By applying this work - we are looking at the views in the direction of the asset - to all of the points which have been identified, we obtained a first summary map of incoming views.

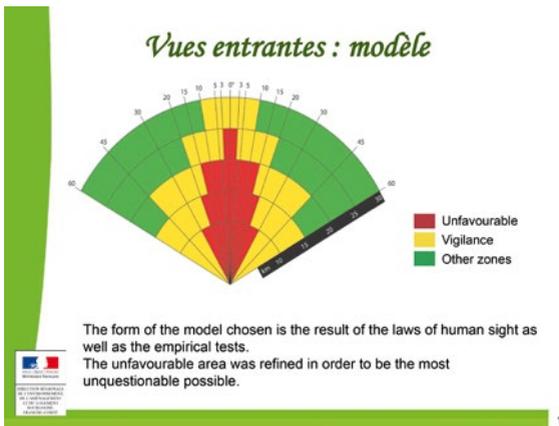


Figure 2. © DREAL Bourgogne-Franche-Comté

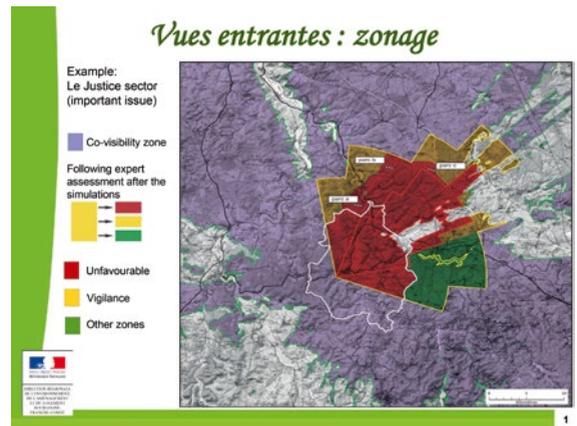


Figure 3. © DREAL Bourgogne-Franche-Comté

Thirdly, the work conducted on the outgoing views.

We then did fairly similar work on the outgoing views. We did not use a model of visual perception as a starting point because we did not have an object of focus, as it concerns a large landscape. The objective was not to see wind turbines from the vicinity of the Basilica, but to limit their visual impact on the landscape from the main points of view.

We therefore selected three particularly important points from the Basilica:

- the terraces which are extremely important. They accommodate a lot of visitors and constitute a place of contemplation which has inspired many artists;
- the top of the cemetery, a very important implication on the historical axis that I referred to earlier;
- the North-West ramparts with a moderate implication.

We performed simulations taking into account the following criteria: scale, horizon line, distance, key element of the landscape and modification of the organisation of the landscape. Again, we obtained an initial zoning.

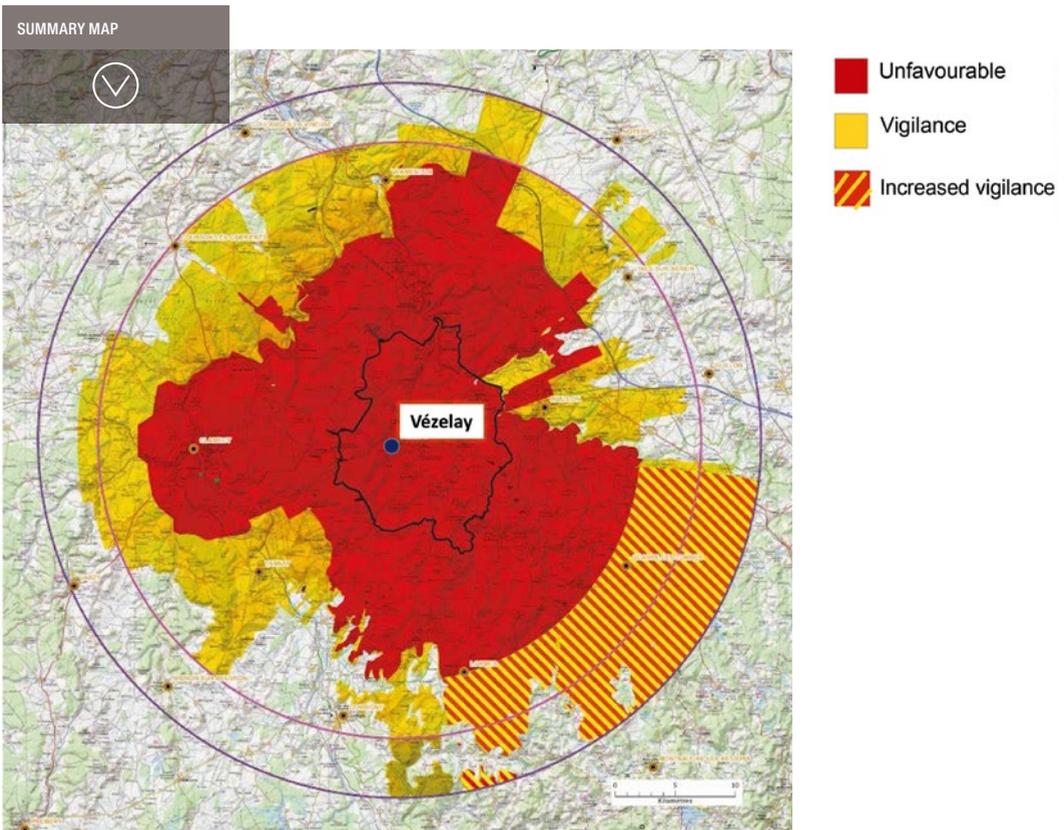
To this first zoning, we applied the decisions. It should be known that from the terraces, we have a very distant view, with at the rear, the foothills of the Morvan.

We could therefore have put red up to 30 kilometres, all the more so as we have a landscape without a key element, a landscape that is truly open to the whole perspective. We decided to stop the red zone at 20 kilometres, an optical threshold beyond which we can only see the wind turbines if the weather is good.

By contrast, between 20 and 30 kilometres, we applied a zone of heightened vigilance with some strong constraints, in particular in relation to the noise at night. We have only taken this noise into account from the terraces, which represent a well-frequented place also used for meditation, including at night. We also used the criteria on the overall horizon and its saturation.

On the cemetery, we went up to a zone of 20 kilometres in red, except at the level of the North axis which presents a very interesting opening out onto the landscape. We have therefore tried to preserve it. And then, in terms of the ramparts, a more moderate impact, we maintained yellow and red zoning up to 20 kilometres.

By overlaying the inbound and outbound views, one obtains a summary map (*below*) which constitutes our Area of Landscape Influence with unfavourable red zones, yellow zones of vigilance and red and yellow zones of increased vigilance. There was no green.



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# WORLD HERITAGE AND ENERGY TRANSITION IN GERMANY: LEGAL PANORAMA



Limburg Cathedral - Limburger Dom - © DAVYDOV



**Dimitrij DAVYDOV,**  
Head of the national  
network of regional  
services in charge of  
heritage in Germany

In Germany, the State and the regions have not stopped developing renewable energy in recent years. The share of renewable energies in the total gross final energy consumption was 13.7% in 2015. According to the forecasts, the increase is even expected to reach 60% by 2050. As part of the climate change objectives of the federal government and the regional governments, the aim is to develop wind energy in addition to solar. The question of the protection of cultural heritage, the protection of the landscape and the protection of UNESCO World Heritage is very often part of the discussions in the era of “energy transition”.

## 1. CULTURAL HERITAGE VS. RENEWABLE ENERGIES

In Germany, it is estimated that objects declared in one way or another as classified monuments number some 1 million: whether single monuments or the constituent parts of a whole. Because of the cultural sovereignty of the regions, the protection of cultural heritage is not governed in a uniform manner throughout the country. The 16 laws protecting monuments in the regions are the central point of the system for the legal protection of buildings. On some essential points such as the definition of the concept of buildings, they have many similarities, while having retained, nonetheless, a certain number of differences. It can actually be seen that the taking into account of UNESCO World Heritage is part of these differences. In addition, the important principles of land planning and the construction code apply in the framework of the protection of heritage in the planning and permissions processes.

In federal law, the protection of cultural heritage and the preservation of resources are all as important, like, for example, in the law on land development. This legislation ensures a sustainable spatial framework designed to ensure harmony between the social and economic aspects of the space as well as its ecological functions. German land development law provides for, on the one hand, the conservation of the historic cultural landscape with its

main characteristics and its cultural monuments as well as its natural sites (§2 para. 2 no. 5 sentence 2 ROG) and on the other hand, the guarantee of a supply of affordable, safe and ecological energy with the development of energy networks (§2 para. 2 no. 4 sentence 5 ROG).

As part of spatial development at the federal level, it is essential to preserve monuments and protect the climate at the federal level as well as at the regional level. The legal value of the corresponding principles remains, however, different depending on the nature of the interests, if it involves a goal or a basic principle of spatial development. The objectives of spatial development must be respected and its principles must be integrated in spatial planning decisions (§4 para. 1 sentence 1 ROG). This means that when the maintenance of the visual integrity or the characteristics of a cultural landscape are, for example, part of the spatial development, all the elements that could put at risk the visual integrity or these characteristics must imperatively be excluded from the planning and construction measures. When the same concern serves as a benchmark for spatial development, this means that they will have to be reconciled with the other public interests, such as the protection of the climate. This same principle also applies to the “development of renewable energies”. If one of the main objectives of the spatial development of a regional plan is focused around wind energy, this requirement must be ahead of the public interest in the planning processes and downstream authorisation.

“In all cases, each town or village remains responsible for the definition and the assessment of the environmental consequences [...]”

In terms of the planning of construction work, generally the responsibility of the towns or villages, the legal situation is comparable. The German construction code requires sustainable urban development combining social, economic and environmental principles. In the framework of urban development, the protection of historical monuments and the climate also plays a role of equal importance: during the definition of construction plans, the principles and the requirements of architectural construction, of the protection and maintenance of monuments, streets and squares and important neighbourhoods from a historical, artistic and urban development point of view, as well as the improvement of the landscape and sites must imperatively be taken into account and respected (§1 para. 6 no. 5 BauGB), as well as the principles of environmental protection of the use of renewable sources of energy (§1 s. 6 no. 7 BauGB).

During the definition of construction plans, an environmental audit is generally conducted by the local authority concerned in order to ensure the fulfilment of environmental protection requirements - such as the environmental consequences of cultural properties (§2 s. 4 BauGB). The areas of concentrated wind energy use and the elements enabling the evaluation of locations in the context of the assignment of sites dedicated to the installation of wind turbines should be identified on the territory of the town or village. The town or village in charge of the planning must specify the foreseeable impacts of wind farms on cultural properties and issue an environmental report with a study of the environmental situation, forecasts of the future development and verification of measures to avoid, prevent or balance the negative consequences (§2a sentence 1 no. 2 BauGB). The town or village may consult the service responsible for the protection of buildings and monuments as soon as the scope and level of detail of the project are defined in order to obtain advice. This service can also intervene as part of the definition of the current state of the gaps in relation to environmental properties. In all cases, each town or village remains responsible for the definition and the assessment of the environmental consequences and is responsible for the corresponding costs of so doing. The environmental report that is prepared must be submitted as the basis and rationale of the planning project forwarded to the service responsible for the protection of monuments.

## 2. TAKING ACCOUNT OF UNESCO WORLD HERITAGE IN THE FRAMEWORK OF PLANS AND MEASURES

### a) Legal base

The State law on spatial planning and the construction code define the principles of heritage protection, preservation of monuments and maintenance of historical landscapes. They do not, however, clearly evoke UNESCO World Heritage<sup>(1)</sup>.

(1) An amendment of the ROG law is, however, in progress, in order to integrate the protection principles of the World Heritage Convention with those of spatial planning in accordance with §2 para. 2 no. 5 ROG, cf. Federal Council, ref. 656/16.

For regional heritage protection laws, we note that in certain laws, such as for example in North Rhineland-Palatinate, no specific mention is made of UNESCO World Heritage. In the other laws on the protection of buildings, the responsibility of the State is indicated in relation to UNESCO World Heritage, without concrete protection measures and instruments being specified. The law on the conservation of buildings in Schleswig-Holstein (DSchG SH) serves as a model of this. In it, the World Heritage sites are defined as protected areas as long as it is not a question of cultural monuments (§2 para. 3 DSchG SH). It is clearly indicated that in the framework of the public plans and measures, the interests of cultural monuments - which includes the protection of the buffer zone and the visual perspectives - must also be taken into account, in ensuring the respect and the maintenance of the Outstanding Universal Value (§4 DSchG SH).

The law on the conservation of buildings in the Hesse region (HDSchG) specifies the objective which is to take into account, in the same way, public interests in the era of the energy transition. In accordance with §1 para. 1 of HDSchG, the objective is the following: “the cultural monuments which are sources and witnesses of human history as well as of development must be protected and preserved, they must also be integrated into the principles of urban development, spatial planning and maintenance of historico-cultural characteristics”. The law clearly specifies that UNESCO World Heritage is the subject of specific protection in Hesse (§ 3 para. 1 HDSchG). In addition, the legislation requires, in §9 para. 1 sentence 3 of HDSchG, for all the authorities with responsibility for monuments, that they pay particular attention to and take into account the principles of the protection of the climate and resources in all their decisions and permissions.

## b) Adapted measures

Therefore, what do “the adapted legislative management measures” ensuring the maintenance of the status and the survival of cultural heritage, in accordance with the provisions of article 5 of the UNESCO Convention now look like? In terms of regional planning, the principles can be defined in such a way as to protect the UNESCO sites such as, for example, ensuring their development in the buffer zone. In terms of planning the work, it is possible via the construction plan to define a specific zone in order to secure and develop a cultural monument of character. In the framework of the special authorisation procedure, the principles and requirements applied to UNESCO cultural heritage can be integrated, for each monument concerned, into the weightings and administrative procedures.

Management focused on the World Heritage concept of a wind farm has, notably, been applied with the example of the UNESCO World Heritage of the “Upper Middle Rhine”.

The regional development programme of Rhineland-Palatinate has defined, as spatial planning objective no. 163, the exclusion of the installation of wind farms in the key areas of World Heritage sites such as the “Upper Middle Rhine” and “the limes of Germania Superior and Rhetia”, as well as in the buffer zones, when their World Heritage status is not compatible with the projects in question. In the spatial development programme of the Middle Rhine-Westerwald, this objective was achieved in the following way: in the buffer zones of the two World Heritage sites, it is, in principle, prohibited to install large wind farms. They are allowed only on a case-by-case basis when their compatibility with World Heritage status can be proven.

The taking into account of the requirements of UNESCO World Heritage in terms of regional planning was confirmed in the judgement of the Administrative Tribunal of Koblenz of 28 October 2015<sup>(2)</sup>. A local authority wished to define locations for the siting of wind turbines and filed a complaint against the region of Rhineland-Palatinate, stating that it wanted to participate in the World Heritage Committee in order to edit and correct the border of the buffer zone of the “Upper Middle Rhine” World Heritage site. For the tribunal, the UNESCO World Heritage Convention could not be transformed into national law<sup>(3)</sup> and the decisions of the World Heritage Committee did not, therefore, have a binding effect from a legal point of view at the national level. The tribunal did, however, stress that it was still possible in regional planning law to take account of the recognised borders of a World Heritage site and to define the level of reliability of wind turbines in the key zones and buffer zones. It pointed out that these provisions are legally binding in a programme of spatial planning, in the planning of the construction work and also in the framework of some authorisation procedures.

(2) VG Koblenz, judgement of 28/10/2015 - 1 K 2315. KO.

(3) The Federal Republic of Germany certainly ratified the Convention of 23/11/1976. Despite everything, the question of national scope remains controversial. For the Elbe Valley, declared a World Heritage site by UNESCO, the Higher Administrative Court (OVG) of the Saxony region has disputed the fact that the Free State of Saxony is linked to the provisions of the Convention: OVG of the Saxony region, decision of 09/03/2007 - 4 BS 216/06.

### C) Inclusion in the authorisation procedures

The installation of wind turbines is the subject of an extensive procedure of authorisations according to the federal law relating to protection against emissions (BImSchG); and more rarely to a procedure for the authorisation of constructions. If the authorisation is granted in accordance with the federal law relating to protection against emissions, all public interests potentially concerned will be added to ensure that the authorisation integrates all of the other administrative decisions (§13 BImSchG). It is the responsibility of the competent authorities to verify, on the one hand, that the procedure is compatible with the principles of each regional law on the protection of heritage, including those in the field of protection of the environment, and they must also specify if the approach is admissible at the level of planning construction work, despite the prohibition to build outside.

An impact assessment can also be organised in the framework of the authorisation procedure.

Depending on the number of wind turbines, a pre-study specific to the site (para. 3) or a general one (para. 6) is necessary; it must allow it to be specified whether an impact assessment is essential given the risks of negative impacts. If 20 wind turbines or more are planned, the study is mandatory. It is then incumbent upon the applicant to arrange, at its own expense, the study to assess and specify the potential consequences for environmental properties, notably cultural properties, to define measures to prevent and reduce these impacts, and to provide for any compensation measures.

The procedure for authorisations relative to the protection against noise is provided for in a very similar manner, despite the great federal diversity. If the investor addresses its request to a competent authority (authority for the control of pollution), it will make, according to the regional law, the authority responsible for the protection of historical monuments intervene, which is usually a special regional commission<sup>(4)</sup>. Its mission is to ensure that the documents transmitted are complete or to verify if any documents are missing according to the law for the protection of monuments, such as, for example, the perspective or visualisation studies. If this is the case, the responsible authority will require additional documents from the applicant. The investor assumes all costs related to the production of these documents because it must prove that its construction project is consistent with the public interest and the legal provisions in force.

If all of the documents justifying the impacts of the project in terms of cultural heritage have been transmitted, the authority responsible for the protection of historical monuments will issue an opinion to the authority which is responsible for assigning authorisations. This opinion is only advisory: the authority with responsibility for authorisations must authorise the project with or without specific justifications or refuse it. It is not obliged to respect the opinion of the consultative authority. Nor is it obliged to refer to the specific and technical advice of the consulted authority, nor to rely on or adopt the legal assessment of the case. The authority with responsibility for authorisations conducts an independent study and must analyse the public and private interests of the projects. The result of this study may be different from the recommendation of the consultative authority.

What is the legal relevance of UNESCO World Heritage status in the framework of the authorisation procedure? In 2005, nearly 7.5 km away from the World Heritage Site at Wartbourg, two wind turbines (average height of 100 m and rotor dimensions of 82 m) were to be built on Milmesberg in Thuringia. The Meiningen administrative tribunal had, initially, stopped the project in the framework of emergency interim proceedings<sup>(5)</sup> before authorising it by a second decision of 28 July 2010<sup>(6)</sup>. Contrary to the Koblenz administrative tribunal, the Meiningen administrative tribunal is of the opinion that the status of a classified monument as a UNESCO World Heritage site presents a legal importance and that the threshold of susceptibility of the object has a tendency to decrease in the face of negative external impacts. The tribunal noted that the registration of a monument on the UNESCO World Heritage List presents a public interest in planning law, and that its binding effect exceeds the provisions of the law for the protection of monuments in force at the regional level. However, the site associated with the wind turbine project, with its topographic elements, must not infringe on the monument in terms of history or architecture. In the case of Wartbourg, with the description of the Outstanding Universal Value, the visual relationship between the castle and

(4) For German law on the protection of monuments, a difference exists between the authorities responsible for the protection and the management of monuments. The authorities for the protection of monuments are, in principle, responsible for policy measures on construction projects related to protected monuments and the authorisations associated with the protection of monuments. The authorities with responsibility for the management of the monuments have, on the other hand, a role that is focused more on advising and technical expertise.

(5) VG of Meiningen, decision of 25/01/2006 - 5 BS 386/05 Me.

(6) VG of Meiningen, judgement of 28/07/2010 - 5 E 670/06 Me.

the town was noted, and it was noted that the visual relationship with Milmesberg was only secondary. Admittedly, the circumstances played a role in the recognition of the World Heritage title, because Wartbourg “integrates perfectly into the environment”. It is for this reason that the tribunal did not prohibit the Milmesberg project 7.5 km from the site.

### 3. SUMMARY

In summary, in Germany, public interest plays an equally important role at the legal level whether it involves the maintenance of the natural and cultural heritage, or the development of renewable energies. In other words, projects to create wind farms can, in some cases, take precedence over the interests of the protection of monuments. The UNESCO World Heritage Convention is, for the time being, only partially integrated in the legislation of the country and the regions. That is why the opinions concerning the legally binding nature of the decisions of international associations/groups on the use of all classified sites as well as the legal relevance of the specific status may be different. In all cases, in terms of spatial development, precautionary measures should be taken to protect UNESCO World Heritage, which can have direct impacts and limiting effects on urban development and the authorisation processes.



© DAVYDOV

Opposite:  
Town of Bamberg from afar  
and below:  
Rheingau region



© DAVYDOV

# WHAT IS THE BALANCE BETWEEN THE ISSUES OF WORLD HERITAGE AND THOSE OF ENERGY TRANSITION IN THE NETHERLANDS?



Network of windmills at Kinderdijk-Elshout © Land Id



**Loes  
VAN DER VEGT,**  
Consultant, manager of the  
Land-id Agency

I thank you for this introduction and for your invitation to participate in this event. I will try to enlighten you on the experience of the Netherlands in the field of energy transition and heritage impact assessments. I will be looking into the following subjects: World Heritage in the Netherlands, our planning process and the way in which we are working on the issues of energy transition. I will give you also 2 examples of wind power projects located on World Heritage sites - two case studies which may be of interest to you.

In the first place, here are a few facts and figures in relation to World Heritage. There are 10 sites registered on the World Heritage List in the Netherlands: a natural property located in the North of the country and 9 cultural sites. The Netherlands has more than 60,000 national monuments; some are provincial monuments and a small number of them are municipal. Approximately 50% of these are housing. There are also 400 protected landscapes which are in accordance with a national policy.

The World Heritage properties are managed by different entities. Some are managed by a foundation, others by a province or a town. The Dutch World Heritage Foundation is composed of a network of managers who share their experience and know-how, like the ABFPM.

Within the Dutch government, the responsibility for heritage is distributed as follows: The Ministry of Education, Culture and Science has full responsibility for World Heritage in the country. The Ministry of Economic Affairs, Agriculture and Innovation is responsible for natural sites and wind power objectives. The cultural heritage agency plays an important role since it advises on all subjects linked to heritage and provides the connection between the Government and the local councils in the area of national policies. The national section of ICOMOS is responsible for communications and publications relating to World Heritage in the Netherlands and ensures the connection between the Government, ICOMOS International and UNESCO.

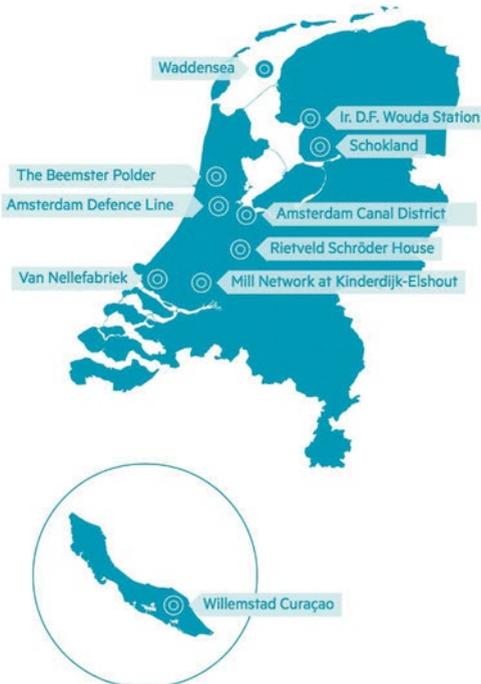
The administrative organisation in the Netherlands is structured around a central government, 12 provinces and 390 municipalities. There are approximately 44,000 people who live in each of the municipalities. The Netherlands has adopted a “Spatial Planning Act” with structuring by strata. The national level governs the country as a whole, the provinces administer the regional level and the municipalities operate at the local level. The process starts at the national level with a comprehensive policy that is implemented at the levels of the different administrative layers and which is reflected by the local zoning plans. In terms of planning, cultural heritage, like World Heritage, is highly integrated in national policies. These policies are translated into provincial plans which are implemented at the municipal level through zoning plans. The municipalities are obliged to safeguard cultural heritage when they prepare their zoning plans. In theory, everything is perfectly clear and well organised, but sometimes in reality, things do not work well and I will illustrate this with my remarks.

We must bear in mind that energy transition is a subject of increasing importance in the Netherlands. We are still a little behind, but we intend to achieve our objectives in the area, even if we are now finding some tensions as the pressure rises; we must face growing opposition.

In the Netherlands, wind power is the renewable energy that we wish to exploit the most. Most of our projects are located offshore, but if we want to achieve our objectives, we must also locate wind turbines on land. The overall objectives are set by the Government, which gives the different provinces the task of implementing them. This means that each province has objectives to be achieved in the field of terrestrial wind power on its territory. The Government does not indicate where these projects must be precisely located; it is therefore up to each province to determine the most suitable locations for these wind turbines.

The first wind project which I would like to talk to you about is that of the Woudagemaal Steam Pumping Station (*Photo below*). It is located offshore in the North of the country on one of our registered sites. The project provided for the establishment of more than 80 wind turbines on the southern boundary of the site.

In the Netherlands, 10 sites are registered on the World Heritage List:



© Land Id

D.F. steam pumping station Wouda © Land Id

The pumping station is very important both in relation to the technology that is developed there (it is a supply system that is essential for the country), and its architectural design, which is the reason for its inclusion on the World Heritage List. The development of this project was planned close to IJsselmeer, more than 2.5 km from the listed site. When the implementation project was prepared, the officials carried out an environmental impact assessment (EIA) to allow for its integration and to determine if the project was compatible with the OUV of the site.

The conclusion was that the wind turbines would not affect the registered property. These turbines have now been built and have formed one of the first projects of this type, for which we sent a proactive conservation report to ICOMOS under paragraph 172 of the guidelines for the implementation of the Convention. We then received no response, and the project therefore went ahead. Finally, we learned that the recommendations of ICOMOS were a little critical regarding the conclusions of our study. I think that ICOMOS was dissatisfied because, in this study, the cultural heritage was overshadowed by other issues and considerations.

The second project which I would like to talk to you about is that of the wind farm at Kinderdijk Elshout which was built in 2013 (*Photo page 32*). There again, a prior impact assessment was conducted. We followed the new recommendations of ICOMOS on the subject dating back to 2011 to measure the impact of the project on the site. Kinderdijk is located in the south-west of the country, near Rotterdam. It has been distinguished for its hydraulic system, its windmills and its landscape of the high and low polders shaped by man. As the Province of South Holland had to identify locations likely to host wind turbines, the study was therefore conducted on the scale of the whole province to ensure the best locations. The wind farm project was located approximately 5 kilometres from the UNESCO site. At the outset, the Province considered that the location was perfect, but the manager of the site requested evidence that the project would not have a negative impact on the site. The Head of the Province therefore requested an impact assessment and wanted us to conduct it as an independent third party.

An heritage impact assessment determines the extent to which the future developments may affect the OUV of a property. We followed the advice of ICOMOS and this allowed us to guarantee perfect transparency in the process of evaluation and decision-making. There are four steps in an EIP [Heritage Impact assessment]: The first is to examine the OUV of the property. It is up to us to make it more intelligible and more specific, because it is generally relatively abstract, in order to clarify the uniqueness of the place and define the attributes of the site. The second step consists of assessing the initial situation for future developments. The third consists of imagining alternatives or options, in the assumption that the project would negatively impact the property. The fourth is to reassess the different solutions. In some projects, this phase may also include combinations, when there is more than one development proposed for the site.

In a general way, we evaluate the integrity and authenticity of the site and of all of its attributes or its values. We then assess the way in which each of them is affected by the project. The project may have a positive or negative impact. For example, a positive aspect which could, a priori, seem strange to you is a situation in which some buildings that are not representative of the OUV of the property must be demolished. In this type of scenario, the authenticity and integrity of the OUV will be strengthened.

For this EIP that we carried out, we studied the location of the wind turbines and defined the major views, considering that the wind turbines can have a significant impact on the visual integrity of the site. The project affected the rhythm of the old windmills and the famous historic Dutch landscape. These new elements certainly affected the OUV and have been mentioned as such. The conclusion of this study requested by the Province was therefore the confirmation of a negative impact of the project on the registered property. The location has therefore been abandoned and the wind turbines will be built elsewhere.

What we have learned in the last year is that the EIP is a very effective method for evaluating the projects in a transparent and objective manner. The impacts on each of the attributes can be perfectly defined and when a negative impact is identified, it is possible to consider other options or solutions.

In the Netherlands, EIPs are voluntary. They are not part of a standardised process; it is up to the developer to decide whether s/he wishes to do one or not. All the stakeholders of the project must therefore be in agreement to launch the study. They must also validate the results of the study, which means that developers are taking a risk. After this, it is up to the policy-maker to take the decision to carry out the project as it is or to change it.

In the Netherlands, collective solutions are part of our culture. We always try to maintain the dialogue until an agreement and a solution are obtained. This is a typically Dutch approach. What is also important is that there is always an expert or an independent researcher in the process and that the conclusions are approved and respected by all. Sometimes, we are asked to change the red lights into green lights, but it is up to us to remain firm and to assert the independence of our conclusions and our commitment to them.

D.F. STEAM PUMPING  
STATION WOUDA



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# WORLD HERITAGE AND RENEWABLE ENERGY IN THE UNITED KINGDOM



Westmill Wind Farm, Watchfield © Brian Robert Marshall CC BY-SA 2



Today I am going to talk primarily about the management of the impact of wind turbines but it is important to remember that, in the UK at least, other forms of renewable energy can also impact adversely on heritage. Solar photovoltaic farms are an issue; biomass can be an issue, although it does not particularly affect World Heritage sites, as far as I am aware. I am also talking primarily about the situation in England because, while we are a United Kingdom, we have devolved government in three parts of it, and each has its own slightly different approach.

Wind energy has been an issue in the UK now for more than 20 years. I was dealing with individual cases on Hadrian's Wall in the mid to late '90s. Wind farms range from individual turbines supplying a single consumer, up to big ones with more than 100 turbines. They are both onshore, on land, and offshore, in the sea. They get bigger and bigger all the time. The major growth now is offshore since onshore wind turbines tend to be very unpopular with local communities, mainly rural, and they have had great success in lobbying against individual developments and also lobbying government to change policy, and I will come back to that. I think that onshore we are getting more solar and photovoltaic farms and most wind is going offshore now. The exceptions to this are a few communities based projects which are actually owned by local communities or otherwise benefit local communities. The Westmill community project in Watchfield which combines photovoltaic farm and wind turbines is actually owned by the local community. The idea of having it was generated by the local community; they created it and got it. That seems to work quite well if it does not adversely affect heritage. Otherwise, onshore wind turbines are not popular

The UK as a whole now has nearly 8000 turbines around the country, with a total installed capacity of just under 14.5 gigawatts. At the moment about two thirds of that capacity is onshore and a third is offshore but the offshore component is increasing. That has big implications for the impact on heritage and, on the whole, these are positive. Wind turbines operate at about 30% of their rated capacity of what they will produce over the year. Most of the websites in the UK which are not in favour of wind at the moment are saying that, in really cold weather with high pressure, wind energy does not produce any energy at all because there is no wind, just cold.

Wind turbines are situated all over the UK. There are big gaps in the National Parks such as the Lake District, the Yorkshire Dales, and the North York Moors. A lot of the areas where they are not found are in areas where there is much cultural or natural heritage and in areas which are specially protected. Other areas where they are not found are urban or low lying areas where there is not too much wind.

The World Heritage properties, of which the UK has 30, most likely to be greatly affected are Hadrian's Wall (part now of the Frontiers of the Roman Empire), the Cornwall and East Devon Mining Landscape in the southwest peninsula, which tends to be very windy, and the Dorset and East Devon Coast, known as the Jurassic coast, and I will come back to these. These are the big rural sites with a lot of space and quite a lot of wind.

From a heritage point of view, we have been fortunate that, for example, on Hadrian's Wall, we have other factors affecting decision-taking. We had proposals to build large farms about 12 kilometres north of that area but they were rejected because of Ministry of Defence concerns over the impact of such installations on use of a bombing practice range used by NATO just to the north of Hadrian's Wall. In effect, a combination of such circumstances prevented the development of this wind farm.



Television mast, Cornwall and West Devon Mining Landscape © Christopher Young

*The Cornish mining area* has a big open landscape with a lot of wind. There are television masts already in situ which are at a height greater than any wind turbine will be. The Jurassic Coast along the cliff faces of the Dorset coast, a geological site, is another area an area application for onshore or offshore wind farms might be expected. Other World Heritage sites in the UK could be affected by wind turbines but probably not on an enormous scale. It is important to remember that it is not just the turbines which can have an impact. Delivering the power from the remote areas where it is generated to the areas which have the need for it are also potentially damaging because long lines of high pylons carrying cables through remote areas will be required, together with all the ancillary installations such as transformers, switchgear, and so on. If these are put in the wrong place, it can have an adverse impact on a World Heritage site or on other heritage.

One of the issues around offshore maritime wind farms is where the power comes ashore and the plant and the cables that go from that landing place. That needs to be carefully planned as well to avoid potential damage to heritage assets, cultural or natural along the coast. There is also necessarily a potential risk to underwater archaeological sites from underwater cables between the turbines and the land.

Installation of wind turbines is dependent on government spatial planning policies and also on any policy incentives they give to renewable energy, such as subsidies. For a long time, a subsidy scheme was operated to make the cost of wind energy competitive with the cost of energy using more traditional methods. In the UK energy market, its generation and distribution are largely privatised. For many years the government encouraged wind farms onshore and offshore through financial support.

There are two government departments involved: The Department of Energy and Climate Change, which deals with the policy of providing renewable energy and minimising the impacts of climate change, and the Department of Community and Local Government, which deals with actual spatial planning. As I said before, onshore wind turbines tend to be very unpopular with local communities and others. The government responded to this in June 2016 by removing the main subsidy sources for onshore wind. It said that the cost of providing wind turbines had dropped sufficiently and therefore it no longer needed to incentivise them against conventional sources of power.

At the same time, all of the decision taking powers on onshore wind turbines were delegated to local authorities. Previously, anything above 50 megawatts had been dealt with by the government. Local authorities were advised that they should have community support for proposals, which must in any case be sited only in areas that had been zoned in spatial plans as appropriate for wind energy. The effect of this has been a huge reduction in the rate of applications to produce onshore wind turbines. Now a lot of the emphasis is being placed on providing wind energy offshore. That is the government policy on wind energy per se.

The policy and advice then have to be implemented within the overall English spatial planning policy system which is based on a commitment to sustainable development. Sustainable development is classically defined here, as elsewhere, as having three components: economic, which is what people mainly think about; social, making strong, vibrant local communities; environmental, contributing to and protecting cultural and natural heritage. This last component can be forgotten in decision making.

In England, decisions on major infrastructure on projects such as the high speed railway line (HSR2) proposed to go from London to the North are taken by the government through a body called the National Infrastructure Commission in order to prevent undue delay. Large wind farms (for example major offshore developments) may go through this route. Other decisions are made locally for most developments and local authorities have to balance these three needs of sustainable development. This means that decisions depends very much on the judgement of the decision-makers. In my view, most of the problematic heritages planning cases in the UK are the result of differing judgements on what is the appropriate balance between the three components of sustainable development. This is due to the fact that a lot of our planning system is advisory rather than mandatory. A decision-maker with two conflicting sets of advice as to what should be done, must make a judgement between them. This has led to problems for World Heritage sites in London, for example, and in Liverpool. It does not, however, seem to affect wind energy so much.

The key documents we have are the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). This was a great consolidation of English planning policy and advice into just two documents. As the latter document is web based, it means that it needs to be checked regularly for changes. These comprise government advice, not hard legislation. They have what is called weight in the planning system but they are not definitively legally binding. However, they do have legal impact if ignored without good reason. It is a very British approach to application of the law. It could not happen in France.

The planning system is meant to contribute both to the protection of the natural environment and cultural heritage. For natural heritage, it should protect and enhance valued landscapes, geological conservation interests, and soils; recognise the wider benefits of ecosystem services; minimise impacts on biodiversity and provide net gains in biodiversity where possible. Both new and existing development should be prevented from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water, or noise pollution or land instability. Despoiled, degraded, derelict, contaminated and unstable land should be remediated or mitigated, where appropriate. A lot of this is dependent on EU directives such as Birds and Habitats Directives so there may be changes in the long term after 2019.

For cultural heritage, we have a positive strategy to protect it and to use it sustainably. In developing this strategy, local planning authorities should take into account the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation. Factors to be taken into account should include the wider social, cultural, economic, and environmental benefits that conservation of the historic environment can bring, the desirability of new development making a positive contribution to local character and distinctiveness, and opportunities to draw on the contribution made by the historic environment to the character of a place. The policy recognizes that cultural heritage is not replaceable.

Developers and local authorities are advised to deal with this by taking in to account the significance of the heritage assets affected by a development. The whole system is now values led in the same way as World Heritage properties should be managed to protect their outstanding Universal Value. The more important the significance, seen very often in terms of the level of designation, the more important it is to protect it. Government policy says that sustainable harm to assets of a higher significance, such as World Heritage sites, should be wholly exceptional. Normally, damaging development within a World Heritage property or any other top level national designations should not be permitted. Sometimes the balance goes the other way and what happens outside of but close to the designated areas can be a different matter. As part of the process, the developer should produce an assessment of the impact of a proposal on the significance of heritage assets affected by it. This means not just assets over which the development takes place but also assets that are close to the development. Increasingly, what is being asked for in smaller applications is what is known as a heritage statement and this is basically a mini heritage impact assessment. Larger applications which fall within EU rules get environmental impact assessments but we are beginning to see people doing separate heritage impact assessments for the same reasons outlined by Loes Van Der Vegt in her presentation.



View of Tower from Shard with Shard shadow © FeinFinch - Own work, CC BY-SA 3.0

*English Heritage* also provides technical advice within the context of government policy. The key issue, perhaps, is known as 'setting' in English, which is basically dealing with the impact of a proposal on the visual aspects of heritage assets. Setting can, in fact, be affected in other ways but, principally, it is seen as visual. It can be very important when dealing with wind farms.

One example of setting is found close to the one remaining clear view of the historic Tower of London, a World Heritage property. From the path along the south bank of the Thames for a few hundred metres, it is possible to appreciate the dominant character of the Tower as a fortress because it is seen against a clear sky. Either side of Tower of London, there are tall buildings which prevent such clear views from most other viewpoints. Another example is The Shard in London, which has a massive visual impact on Tower of

London. This shows how something outside a heritage asset can greatly damage the ability to appreciate it. One of my former colleagues described it as 'A spike driven through the heart of London'.

There is also English Heritage guidance on windfarms and heritage which again looks very closely at setting and recognises that a wind turbine within the setting of a heritage asset may cause substantial harm to its significance. The guidance is all there. Where does this leave us and where are we going with wind energy and World Heritage properties in England? Thus far there has been no disastrous impact on Outstanding Universal Value of an English World Heritage property from the installation of renewable energy systems. We have offshore wind turbines in the Solway Firth, which is the stretch of water between Scotland and England, lying close to Hadrian's Wall. Those are there primarily because of a lack of coordination on one particular proposal between authorities on either side of the Anglo-Scottish border which runs down the middle of the Solway Firth. The turbines are on the Scottish side of the border. Fortunately, their impact is limited. Elsewhere applications potentially affecting World Heritage properties have been turned down for other reasons such as risks to low-flying aircraft. It is most likely in the future that problems will arise with regard to offshore wind farms. Local authorities which have World Heritage sites have policies in their local spatial plans to protect them.

One major recent case was that of Navitus Bay. This was a planning application to put 121 turbines measuring 193m tall, some 20kms from the nearest point on the Jurassic Coast, the natural World Heritage site mentioned earlier. The windfarm would have been located across the Solent between Hampshire and the Isle of Wight. Strictly speaking, it can be argued that it would not have affected the Outstanding Universal Value which is purely geological, particularly since, when the site was nominated, the UK proposal to have it inscribed also for natural beauty was turned down by the World Heritage Committee on the advice of the International Union for Conservation of Nature (IUCN). Natural beauty is therefore not recognised as part of the property's Outstanding Universal Value. In 2012, English Heritage, which was the government's principal advisor on World Heritage at the time, and the Department for Culture Media and Sport, agreed that the Outstanding Universal Value was not affected because the site was primarily about geology.

There were many local objections for a variety of reasons and there was much correspondence with the World Heritage Centre and IUCN. IUCN at international level objected, saying that the project was likely to have some adverse impacts on the underlying geomorphological processes. By that they meant that the turbines might slow down the sea currents and thereby reduce coastal erosion. This is an important cause of the continuing revealing of geological features because the erosion causes cliff falls and exposes new fossils. This argument was debatable. Their principal objection was the likely impact on the natural beauty of the site, despite the agreed Outstanding Universal Value of the property. There was a lot of opposition for other reasons also and, in the end, the application was turned down. Refusal of the planning application was in part because of the deleterious effect the wind farm would have had on the setting of the World Heritage property. This is a good and useful statement that can be used as a precedent.

For the foreseeable future the development of wind farms in the UK is likely to be offshore. However, the situation could change rapidly with a different government or with a change to the subsidy rules. If a future government decided it wanted onshore energy, it could change the planning regulations and it could offer incentives to make it more profitable to build onshore. At the moment, that is not going to happen.

For the present, the Crown Estate, which owns the seabed around the UK, is letting concessions for building windfarms or inviting bids to do so. Some of these, such as the Dogger Bank, are far out to sea and are not going to affect any World Heritage property; others may do. Some offshore sites may have the potential to impact on some World Heritage properties visually and possibly through the cables bringing the power ashore, but the risk is relatively low. Navitus Bay is an example of a good decision which provides a good and positive recognition by the government of the importance of World Heritage properties and we will have to hope it is respected in the future.

This paper was originally prepared in January 2017 and has not been updated to reflect minor changes in the English spatial planning system since then.



# ROUND TABLE TAKING STOCK, LOOKING AHEAD

**Sébastien CROMBEZ,**

Director of Projects, DREAL Bourgogne-Franche-Comté.

**Régina DURIGHELLO,**

Director of the Advisory and Monitoring Unit at ICOMOS International.

**Vincent GUICHARD,**

Director General of the Bibracte EPCC.

**Alain de LA BRETESCHE,**

Chairman of the Association Patrimoine-Environnement.

**Guillaume WENDLING,**

WPD Environment and Technical Director, Head of the France Energie Eolienne (FEE)  
“Environment” Working Group.

**Bertrand FOLLEA – Moderator,**

Landscaping Artist-Urban Developer- Representative of the Energy and Landscape Chair,  
École nationale supérieure de paysage de Versailles.



# OUTSTANDING TERRITORIES AND ENERGY TRANSITION:

## how can the development of wind power and the preservation of outstanding territories be reconciled?

### Bertrand FOLLEA

Let us now try to take stock of the situation and open up new prospects.

When I look back fifteen or twenty years, I feel like the issue of the landscape, heritage and wind energy were clearly underestimated. At that time, we did not see the scale of the issues and challenges ahead; today, however, I see that some progress has been made. We have started to build something around the landscape issue, even though some village communities have been torn apart by the question of wind energy and have not been able to preserve their social cohesion.

Yet where are we headed? How can we learn from everything that has been said today, to make progress in the way we wed the energy transition with heritage preservation?

Mrs. DURIGHELLO, as Director at ICOMOS International, you may be able to enlighten us as to the ground we have covered in France, compared to situations with which you are familiar elsewhere in Europe (we have seen some of them), and perhaps also in the world. What can you tell us about the current situation?

### Régina DURIGHELLO

Let me first seize this opportunity, since this is the first time I am speaking, to thank the organisers for inviting ICOMOS International to this Round Table. I see that the thinking on wind power in France is on the right track. It is part of a much more comprehensive thought process on heritage impact studies.

As you are aware, ICOMOS International is an advisory organisation of the World Heritage Committee. Our work is carried out within the framework established for us by the World Heritage Convention. We focus on analysing the impact of infrastructure development on sites considered unique, with Outstanding Universal Value.

All the work carried out on evaluating the impact of wind turbines will be carried out from the perspective of the qualitative, based on the value of the site.

We saw this morning, in the case studies presented, how fine-grained these analyses are. In my opinion, it would be desirable if such a detailed approach could be conducted throughout the territory, and not only on World Heritage

sites. I think that value is a very promising reference point, as Christopher YOUNG described with England.

I also note that France has already been at work for some time now, publishing this guide on wind power. I also hear that an updated version is being prepared. This is a welcome effort. We believe it is important that the chapter on cultural heritage – with a specific section on World Heritage – be given sufficient space.

I also feel there is a certain scientific rigour and expertise in France, in terms of study and work on heritage, as well as on the landscape, which needs to be showcased. The aim is to be able to guarantee respect for the landscape and see to what extent it can integrate wind power.

The definite impact of wind power on World Heritage sites should not be denied. That impact can be more than visual. Other attributes of a site's value are affected, as we saw in the studies shown this morning.

We saw in the cases presented that the impact of these large structures goes beyond what the World Heritage Committee has defined as the "buffer zones" and that the impact studies go beyond what is considered as "World Heritage territory". This is a very important aspect, brought out in this context.

### Bertrand FOLLEA

Thank you. Sébastien CROMBEZ, as someone in charge of reviewing cases for your Prefect, do you share Régina DURIGHELLO's view that there is greater earnestness in approaching the matter, based on what you see?

### Sébastien CROMBEZ

I do not want to offer an idealistic view of the subject; these are issues that need to be analysed overall. Yes, the State services and project owners have made strides. I would even tend to say that one cannot do without the other.

If we, in the State services, had not made progress in our requirements, we would perhaps not have stirred project owners to make progress in analysing the issues at stake. All the discussions which they are currently carrying out have been sparked by actual problems on the ground, which the services and project owners have had to tackle head-on.

However, I think there is still a long way to go.

My work at DREAL consists of preparing decisions and to be, precisely, at the heart of these policies which are sometimes a bit antagonistic: the development of renewable energies, the protection of biodiversity and the environment, etc.

I take away two main points from today's discussions. This morning, the presentations dealt primarily with how technical aspects of projects can be taken into account through studies. This afternoon, we have seen through the examples presented that the way in which we can take into account and act on decisions also depends on the regulatory corpus at our disposal.

Ultimately, what we are trying to do today is to find technical foundations to substantiate and support the decisions that are taken, in a very clear way.

### Bertrand FOLLEA

Thank you. Guillaume WENDLING, I would like to ask you the same question. Did you work on the draft methodological guide that will be coming out?

### Guillaume WENDLING

Yes, I was fortunate enough to work on the guide. Two years ago we requested an update. That request went unheeded for a year and a half, until the Architecture and Heritage Act and the Biodiversity Act were adopted, followed by all the ordinances recently published. The regulatory part is most definitely important. We are particularly aware of this in wind power, because we are perhaps the industrial sector that is undergoing the most regulatory changes – and the most frequent.

With regard to the guide, the aim was, as others have stated, to have a better approach to all the aspects around our key subject. We already mentioned this, but environmental impact assessment needs to take a broad view of the environment. When I talk about the environment, I am referring to everything that might touch on our projects. It is at the same time the people, the landscape, the ecology, the technical constraints, etc. We really have a large number of components, which we cannot isolate from one another.

I think the main novelty of this update is the focus on global heritage. I am also an ecologist and I see parallels with Natura 2000, the Habitats Directive and the Birds Directive.

In my opinion, with regard to World Heritage, we are somewhat in the same line of thinking. The aim is to focus on properties on UNESCO's World Heritage List, for which there are very specific criteria and methodologies to be developed. All this is also done within the framework of the Landscape and Heritage Study, which is broader and takes into account social aspects, in particular the social perception of the territory – one of the speakers mentioned earlier of the European Landscape Convention, which discusses territories as perceived by the populations.

This is extremely important for us, as we carry out sustainable development projects in which the three pillars mentioned by Mr. Christopher YOUNG must be balanced. We are not going to do a wind project just because there are no technical constraints. We will do so because people want a project. It is dialogue that determines whether the project comes to fruition.

However, there is one point on which I am reluctant, and perhaps fearful. Being more of a technician, I felt very much at home during the first part of the day. My fear, however, is that we have remained with general, rather subjective principles. We talked about incoming views and outgoing views, which is all fine and well. However, concretely, how are we going to implement them? I think it would be essential – we discussed this during the day – to make the connection with the ground. We mentioned, for example, the study on Vézelay, a city I know very well. However, we will not be able to transpose this study to the Besançon site. It's not the same thing.

In the same way, it is important to be on the ground and to multiply the points of view; we cannot be content to receive a study from the services of the State, the project leader and the experts with whom they work also need to be able to play a part upstream.

Moreover, if we freeze an AIP - Landscape Influence Area - on a monument, how long can that last? We need to remember that the landscape is changing. We also talked about decommissioning, as wind farms produce entirely renewable energy for twenty years. With regard to the sites on the World Heritage List, which have been there for centuries, could twenty years not be an acceptable period of time? I ask the question very openly. I am not saying that we will only be here for twenty years. Our sector aims to set deadlines for 2020, 2030 and 2050. Nevertheless, it is a reflection on the dynamics of the territory that I would like to introduce here. We talked about the dynamics of perception, with perceptions of movement that can narrow the angle of vision, perceptions of movement that can widen the angle of vision. Can we also talk about the dynamics of the territory over time? You were talking about the path, Bertrand FOLLEA. I do see a path, which needs to integrate the changes in the territory wanted by a certain number of players.

I believe that heritage preservation must also be integrated into this development of the territory in general.

### Bertrand FOLLEA

What you are talking about is interesting, I just have one question. I get the impression that there is still a lot of work to be done before we can build a language that is understandable to everyone.

Over the last few years, we have tried to open up this debate, in order to move out of the passionate, the ideological and the dogmatic. In a sense, we needed to reconcile positions that initially seemed irreconcilable

by developing a kind of common language around the question of the landscape, which we share and understand among ourselves, amongst “professionals”: State services and developers in particular (since things ultimately take place between developers and the State, in more or less direct contact).

You say that this is still too subjective, but let us look at the terms I noted in the impact studies presented to us: “Visibility angles, visibility fields, calling-in point, focal point, horizon occupancy index, density index on occupied horizon, breathing space index, Landscape Influence Area, incoming view, outgoing view, etc.”.

We have developed the vocabulary that was necessary to frame the debate in a rational way, and remove the drama from it. However, this vocabulary is becoming increasingly technical, which raises the question of participation and the populations. How can we share this vocabulary beyond the circle of the “informed”, the professionals, those who know the heritage, landscape and development issues of wind power inside out?

Furthermore, this morning we heard Vincent GUICHARD say, “we read about these wind projects surreptitiously, by chance”. Does that mean that you were not consulted directly on the matter? Maybe Alain de LA BRETESCHE can give us his perspective on the place of the populations in this debate. Before that, though, Vincent GUICHARD, would you like to say a word?

### Vincent GUICHARD

I will repeat what I have said before. The issue of energy in the landscape is only one facet of land use planning. This can therefore only be taken into account in an integrated territorial project with a methodology which is that of today, along with the social obligations that are those of today and which are very well stated in the European Landscape Convention, for one.

As we have seen in England, certain choices have been made under pressure from the population, which is increasingly rejecting wind power.

This is not necessarily what we need to do in France. However, in terms of involving people in decisions, we have a great deal of progress to make. We have new tools. We talked about the so-called “landscape plan”. Rather, it is a process or a method, not a plan that we are going to implement once and for all. Some new tools are being tested out now, and I think we should put our hopes on them. I see it on the ground: learning through newspapers that projects are being set up is not the best way to start a project. Whether the project is carried out or not, it will leave social scars on the village communities. So the situation is unsatisfactory, and we need to go further.

### Alain de LA BRETESCHE

I found that the opening statements this morning took place in quite an interesting atmosphere: two Ministries felt that they had finally found solutions for working

together, which was not necessarily the case not so long ago.

Let us steer clear of lip service, however. We need to focus on the World Heritage spaces, which are today’s theme. Yet today, we are in a country that engages in a kind of binge-consumption of World Heritage which, in the next few years, is expected to only grow stronger.

I agree with what was said this morning. The Outstanding Universal Value of a site does not lie in the way we, as neighbours, look at our petty interests. It is about the way the world sees our heritage. For example, we can ask ourselves whether people from foreign countries who come to us want to see wind turbines around Mont-Saint-Michel. Is that compatible with the universal value of the site, in their eyes? That is how we need to approach this issue, not, as we usually do, in our solely French circles. We are a little incorrigible in that sense.

At the same time, there are the necessities that emerge from energy policy. I was very struck during the debate on the so-called LCAP Act, which was ultimately ratified on 16 July 2016: we heard very technical and even theological discussions between those who wanted wind turbines not to be built any closer to homes and those who felt that this was of no importance whatsoever. At one point, the Minister of Culture, who was in the room, made this statement, which I do not consider to be lip service: “My Government supports two policies: heritage and energy transition. As it happens, in this particular case, the instructions I have received are to give priority to the energy transition”. That seems pretty true to me and puts us face to face with reality.

There are trade-offs that need to be made regularly.

Which brings me to your question. Who decides on these trade-offs? How is this discussed? I am very attached to this 2005 reform, which enabled us to incorporate an environmental charter into the constitutionality block of French law – a charter that emanates from the areas which you all represent and incorporates the principles of the Aarhus Convention.

Article 7 of the Convention states that when a decision impacts the public’s living environment, the public must be involved in developing the decision. This does not mean that the public should make the decision, but that it must be part of the decision-making process. The idea of ‘participating in development’ is of prime importance in my eyes. It implies a level of democracy with which we were not really familiar.

Of course, one question arises. It is important that at some point we call upon this audience to discuss what is being done and ask for their opinion sufficiently upstream from the Prefect’s or elected representatives’ decision. As it happens, honestly, we are a long way from that in France today. It is, in a way, the contribution we need to make, we who represent what is today somewhat pompously called civil society, in this whole debate.

While everything that was said this morning was interesting, it has to be said: the demonstration given to us on the Area of Influence in Vézelay was, in my opinion, absolutely remarkable. Vézelay is a typical, rather complicated case: the city has very few inhabitants, 90 tax households, ramparts as far as the eye can see, and somewhat older people who are a bit frightened by all this. How can we involve them in the issue we want to address, along with the people in the surrounding areas? What is their perspective? When you hear an outstanding demonstration like the one delivered this morning, you realise that it is possible to get people talking, and open up the real issues. You see that it is possible to take multiple views into account.

I think there is a lot to be said and done here. These Landscape Influence Areas, which are derived from the UNESCO vocabulary, can speak to many people, provided that they are followed up by legal effects. Some of you cannot imagine how many wind farm lawsuits there are in this country. They account for approximately 30% of the cases submitted to the administrative courts.

That is a staggering figure. So yes, it would appear that we can do things differently.

To conclude, I will say that what I find most interesting is when the people, in my area, start to come on-board themselves, saying: "I'm against wind turbines, I'm against this, I'm against that" (how many of us haven't said as much?) and start to work with decision-makers to try to make something happen together. We may not have an immoderate love for wind turbines, but I have always said that we cannot be against wind turbines as a source of energy. That is a fact. I am, however, totally against wind turbines that disrupt the landscape. I am also against wind turbines that are financed in a dubious manner. You know that the Directorate for Criminal Affairs and Pardons is starting to pile up a large number of case files on mayors who have favoured one person or another when granting contracts.

All of this is part of reality too, and I personally do not want those two phenomena to continue.

On the other hand, it is very interesting to think that we will be able to discuss how we want to organise the road ahead. Since we do need wind turbines, where do we install them? If possible, without disrupting the landscape.

During the Parliamentary debates on the LCAP Act, how many times did we have to hear MPs say: "If you add up all the protected zones in France, there is nowhere left to install a wind farm". How stupid! I have in front of me one of the people responsible for the protected zones in France. She knows that there are places where there are many protected sectors, and in contrast, others where there are none at all. So there is room for everything. We need to try to be more precise and concrete in deciding where to install wind turbines. Today it is a question of society, and social issues are being discussed with the public.

## Bertrand FOLLEA

With regard to participation on the part of the public, the populations, etc., what Alain de LA BRETESCHE says is that, in this vocabulary, this common language we have learned to use between services and developers in order to open up the debate is a vocabulary and a language that will have to be taught to populations as well. They are perfectly capable of engaging with the complexity and richness of landscape issues.

## Guillaume WENDLING

Yes, I am in the habit of saying that, in wind power, some questions may seem simple and some answers simplistic. When we step in at the public information offices to provide further data, or at public meetings, we try to bring a perspective on our projects – a perspective that is intellectually more honest, more complete and more documented. I think the people also need to be encouraged to learn more about these issues. That being said, we did not wait for the August pre-consultation order to set up working groups with the elected representatives. As I often say – and the French Ethics Charter on Wind Power reiterates this – in any given municipality, no project is carried out without the agreement of the elected representatives. We also make presentations to the municipal councils. Very often there are local residents, informed by posters or word of mouth, often small villages, who come to attend these presentations.

We have set up working groups (I am speaking on my own behalf, for my company), at the request of the municipal councils, to present our progress on these projects. Wind power has a very technical side to it; as a project owner, we try to put forward the best possible proposal, and that takes time. When the environmental study takes one year and the landscaping study takes six months, we cannot give answers immediately after the start of the study.

People have to accept that this process is iterative.

This has incidentally been written into the Impact Assessment Guide. One part is our responsibility as project owner, specifically the technical sizing of the wind farm; the rest is open to discussion.

I have organised working groups in a good number of municipalities. We see real interest from elected representatives and local residents, sometimes even from associations, when they exist, in understanding the approach. It is true that in the Impact Study, as in the Guide and in the documents produced by the DRACs or the DREALs on World Heritage Sites, when you are not familiar with the approach, or the intellectual reasoning that led to a map or a series of recommendations, the issues are much more difficult to understand.

We were talking about Outstanding Universal Value. When it is summed up in two lines and we were not aware of all the discussions between the French State and UNESCO that led to the inclusion to include something on the World

Heritage List, it is very difficult to take ownership of the decision. The same applies to a wind project: there must be local consultation processes. We implement a national policy, but wind developers do not make the national policy, we only proceed from a framework. I think it is important that this be emphasised.

I would also like the Government to strive to simplify the framework. We need a simplification shock – we have been talking about it since the beginning of the five-year term. We are coming to the end of it now, a number of good things have been done, and this deserves to be acknowledged. This is particularly the case with the simplification that is coming up, with the Single Environmental Permit. It and similar procedures allow for greater clarity and, precisely, better understanding of the project approach. I am not talking about landscaping projects; a topic we will be able to address shortly. I am talking about industrial projects.

The fact that the permits have been divided up into distinct groups and partitioned off from each other may have led to some confusion. It makes good sense to work in project mode with contacts in the State services dedicated to each project, as well as to have stronger consultation processes with a public inquiry that can be amended, reopened, etc. I think this is progress. This is also our approach: we identify a territory based on the restrictions and local intentions, then try to build a project there.

I admit that there are always bad projects. We are the first to point them out, as they harm the whole industry. However, on the current projects we are undertaking, we have taken into account the lessons of all past projects. This process, which takes place locally and with knowledge of the field, is quite effective.

When we carry out a social survey on the perception of the landscape, when we question all the local players, tourist offices, hiking federations, etc., who are on-site locally, we manage to break away from the purely traditional heritage vision of registered sites, listed sites, classified monuments and listed monuments. We are able to see that, possibly, a water reservoir, or a recreational base with landscaping on the banks, is of interest to the population. We can see that a water tower can also serve a function as a landmark, being very prominent in the territory, to the point that a music festival can be created bearing the name of the water tower. We have seen such examples in the territories, things that we would not have suspected by looking at a map, a Mérimée inventory or other planning documents on a much broader scale. I think this is interesting in the consensus-building process. It is always a matter of coming back to the local level and integrating people while having slightly more distance, in particular the State services, the managers of UNESCO sites and heritage in particular. The aim is to involve them in this very local vision of projects, to make a concrete contribution to a sustainable and environmentally friendly approach.

## Sébastien CROMBEZ

I would like to respond to the question on the role of the project owner and consensus-building.

On this aspect, we are working within a very specific framework, the 1972 Convention. A project owner should not normally need local consensus-building to identify a World Heritage site and estimate its Outstanding Universal Value. I think local consultation has many benefits and is very useful, but its major contribution does not fall within the remit of taking into account World Heritage.

On the other hand, when we talk about impact assessment studies, we are within the scope of the project leader's responsibility. So why are all the studies we saw this morning carried out by the State? That is, indeed, something I believe can be greatly improved today.

As Annabelle MARECHAL very effectively stated this morning, one of the reasons the Vézelay study was launched was the considerable heterogeneity identified in the way cases were handled. The approach therefore stemmed from a desire on the part of the State to ensure that all requirements are addressed at least to a minimum degree. It is also a question of ensuring there is more objective consideration for each operation, based on these criteria and the language we discussed.

What do we do with that, now? The question was raised many times this morning and is being asked again at our Round Table. Why don't we make this a regulatory tool? Again, with regard to the Vézelay study, which is the most advanced, Annabelle MARECHAL explained all the assumptions specific to this particular case.

Everyone has in mind the map presented at the end of the intervention; this map is shown with simulations given at mast height. However, if tomorrow we have a project that is twenty metres more or less, the limits will no longer be the same.

Today, we simply have elements that will help with decision-making, which are brought to our attention and which we believe will be sufficiently solid from a technical point of view to justify a decision and to defend it if they manage to attach it to a regulation (either a regulatory text or a guide). However, we are talking about mapping the constraints linked to World Heritage on specific sites, for which an in-depth analysis has been carried out.

There is a fantasy that it will be possible to make maps across the territory that would determine where we could develop wind power or not. Yet for the time being, this is impossible. This is why we are continuing to work on a case-by-case system supported by a study, in which the State provides a certain reference framework.

The mere fact that the State is carrying out these studies shows that we are getting involved and that we want to take this into account in a particularly serious way.

## Bertrand FOLLEA

Do you really control the way your landscape changes, by working project by project? How do you deal with accumulation? That is an important aspect.

## Sébastien CROMBEZ

You're correct, that is a real issue. I did not talk about challenges in planning, but in translating requirements into strict regulatory constraints, which is different from planning. We are not able to produce a scheme where, on every point in the territory, we would be able to say, 'Here, we can put up a wind turbine. Here we cannot'.

Today, we have a system in which the initiative for projects rests largely with the developers. However, we see that some territories are doing more and more to try to organise this development. This is very positive because today, we are still somewhat at a loss in the face of a project that is poorly organised, or when we see projects emerging at the same time, or not always eligible for approval, since the territory still has, by definition, a limited capacity to accommodate wind projects.

Yes, we have tools - the Guide, the regulations - to avoid overly large cumulative impacts. We are not necessarily comfortable with this. If we had local planning initiatives that were better taken on by the elected representatives, this would be positive.

Instead, as we have seen, wind is a very divisive subject. It is very difficult today for territories to reach a consensus on developing wind power.

## Bertrand FOLLEA

Is there possibly an elected representative in the room who wants to respond?

## Erick GOUPIL, Mayor of Isigny-le-Buat

I am mayor of a small town with 3,400 inhabitants. It is more precisely a former new municipality, since we have been involved since 1973.

I am also Chairman of the SCoT of the Mont-Saint-Michel Bay Country, today representing the Inter SCoT of the Bay Country, which is composed of three SCoT: The Saint-Malo SCoT PETR, the Fougères SCoT and the SCoT of the Country of the Bay in the South Channel in Normandy.

I wanted to respond regarding the LCAP Act. We made a modest contribution to the amendment process by bringing together all the networks that might be able to work on the law. We were able to ensure that not only the public expressed itself by drafting management plans, but the local authorities, and therefore public representatives. It is our job, as elected representatives, to involve populations, chambers of commerce and all stakeholders on a territory.

Some of those who were able to participate in amending the laws are present here, in particular the Association of French World Heritage Sites represented by Yves DAUGE and Denis GRANDJEAN. The SCoT federation also helped

us a great deal by engaging in a bit of lobbying. As well, by ensuring that our parliamentarians and all local elected representatives can be mobilised. Today, Article 23 provides that the local authorities should be involved in drawing up management plans and, by definition, that they be able to work on the energy transition on their territory.

On this subject, since we are talking about wind power and heritage, UNESCO has responded with regard to Mont-Saint-Michel, which it was inscribed since 1979. Following a project that came up in 2011, an official mission team came, clearly identified the problem and said: "There will be no wind power project in the Mont-Saint-Michel area over the forty kilometres that are in co-visibility with the Mont". I do not wish to develop wind power at the foot of Mont-Saint-Michel, let us be clear on that. However, I do not see why our territory should not have the right to an energy transition.

We will have to find solutions, not necessarily in drafting the management plan, but in the co-visibility strata, so that we also can develop our territory and ensure that the energy transition can take place. Otherwise, like everyone else, we will continue to produce energy with the nuclear power stations we have in The Hague.

## Sébastien CROMBEZ

I would like to respond to that. I sensed an underlying criticism from a representative of the federation this morning, who felt that, overall, the whole Vézelay study was more aimed at saying: "No". If we compare the red zone of the map presented this morning and the UNESCO buffer zone, the former is indeed much wider. However, if we compare this area to a circle of thirty kilometres that could have been traced around the site, we have effectively identified areas in which - I am weighing my words and I hope that Annabelle MARECHAL will share this view - a well-designed project could have its place. Instead of freezing huge parts of communities of municipalities, this has the merit of allowing wind power projects to be set up on the territories we have identified, provided that they are well justified and designed. We are thus avoiding such difficulties.

I am not saying that this applies in the same way to Mont-Saint-Michel, but I am saying that even if the perimeter that is excluded or that we want to exclude from the development of wind power is relatively large, it is much more advantageous from the territorial point of view than a somewhat brutal approach with 30-kilometre zones that preclude any development.

## Alain de LA BRETESCHE

It is quite clear that elected representatives, in particular local council members and EPCIs, are the public's main counterparts. It is absolutely essential that they be involved in one way or another and that is not easy, because the tools do not always exist to be able to do so in due time.

We all agree that we need to look for places that are

compatible with the energy transition in France, that's for sure. However, what was done after the Grenelle Act was truly a disaster. I recorded the statistics for a long time, but most of the regional wind power plans have been cancelled by the administrative courts. We have also very much criticised the infamous SRE for the fact that the impact studies were not in line with what was planned. I believe that this work can be resumed at the territorial level with the interested parties. I think that Landscape Areas approach is a much smarter way of doing things than we imagined in the past.

I think we should try to find something to replace these Regional Wind Power Plans, which are now useless.

Of course, projects have to be studied on a case-by-case basis, but there still needs to be a minimum of land use planning, in my opinion. This is a big enough problem.

Furthermore, specifically with regard to World Heritage, a few of us (and I am proud to be one of them) have been working for years to ensure that the buffer zone and the management plan are recognised in national law.

We were satisfied with the LCAP Act and are now in the process of implementing it by decree. Nevertheless, concerns remain. Many of you are on the roads, where you can see the Cathedral of Chartres and everything around it. So we still have things to do in this area.

## Guillaume WENDLING

We tend to agree that planning tools need to be reshaped to make them more appropriate for the territories.

We continue to use very "red light, green light, orange light" thinking (yellow for the English). We stay with this intellectual approach, which might be a bit static, putting everything under a glass bell. I think we are losing a sense of dynamism.

In the SREs - Regional Wind Power Plans - which depended on the Climate, Air and Energy Plans, I think there may have been an error from the outset: the lack of methodological framework. This has led to a tremendous lack of clarity. I know, having worked on some of them in the consultative bodies.

This methodological vagueness may have led to a half-baked result, somewhere between here and there. I don't think you can be satisfied with this. We are not very satisfied either, because the risk we take by investing in the development of a wind project rests entirely on us, as project owners and private companies - the State does not finance the development side at all. It is thus not necessarily reassuring for us either to have to work around elements that have been set in stone for twenty years, knowing that the sector is rapidly changing, both in terms of technologies and the methods used for approaching the session.

What struck me in the Vézelay AIP was that the assessment methods are the ones we use. Winpro is a

software tool dedicated to wind power. However, creating a visual influence zone with Winpro in 2D is complicated. We need to know whether the terrain has been taken into account or whether it is an elevation model with afforestation, etc. We use horizontal and vertical angles of perception. I think we now have even more sophisticated tools. We, as wind developers, are trying to implement them to respond to increasingly complex issues concerning the saturation, perception and visual influence of wind turbines. I would have liked us to have the State services benefit not from the N-1 version, but from the N+1 version of our tools. I think there are interesting reflections on these Landscape Influence Areas. I do not know whether locking up the result in this way is the right answer. That being said, I do think that the method is in line with the project approach I mentioned earlier.

Having a critical perspective, we managed to discuss with the Ministry of Culture. We experienced some friction, perhaps even more than in this Round Table, but we appreciate getting together again, all the same.

I do not think that it is necessarily unproductive to gather people whose points of view may seem opposite from the start. We are here to move the sector forward and also see that the Government's objectives must reconcile different aims.

Lastly, we, too, find ourselves in the shoes of the people who do not feel that they have been consulted at this stage, on the technical aspects and on what we are capable of contributing to improve the understanding of the monuments' environment.

I am not saying that we know all there is to know about monuments. We really need you, the State services, and site managers to do that. Precisely determining the Outstanding Universal Value of each site and its corollaries in terms of authenticity and integrity is no easy task. We need specialists to determine this, because we are not experts in World Heritage.

However, couldn't we establish a semantic link and the link in terms of human development and exploitation of the landscape, as well as natural resources, over a longer period and within the context of change in our history that is consistent, from the coal mining in the natural deposits in the 19th century and the current energy transition which the French government wants to bring about?

## Bertrand FOLLEA

I would like to build from the term "energy transition". It was the term used by Mr. GOUPIL when he referred to the right to an energy transition on his territory. This brings me back to the road covered, as mentioned earlier, and the construction of a common language based on the concept of value - to borrow the term used by Régina DURIGHELLO, who spoke of this anchoring around value. I think we effectively understood that today. This is a methodological gain, in my opinion, because in the end

we can clearly see that, by laying down the terms of the debate and rationalising them, we can potentially agree on the part that energy development can play, even in the most sensitive sectors, a priori.

Let us move on to the issue of the energy transition, not only that of wind power, but also of other renewable energies, connecting it up with the question of the territory with all the values that it can bear.

If we use this common language developed around the landscape, can we not ask ourselves the question of the “desire for an energy transition landscape” and put ourselves in a situation of “intent” rather than a passive one? The aim is to build this energy transition so that it is an intended and desired choice, not something that has to be undergone as it is implemented, drop by drop, or in a piecemeal manner.

### Vincent GUICHARD

I think it is very rare for a population to request a wind power project. The operator goes out and determines whether it is opportune to do so.

I do not agree with Mr. WENDLING who perhaps sees the world through rose-coloured glasses, and I would like us to be able to do what Mr. FOLLEA has just said. However, it is up to us to work to demonstrate that this is possible.

### Guillaume WENDLING

It is not that I am wearing rose-coloured glasses. When we develop wind projects, a number of municipalities and communities of municipalities do what we refer to as calls for projects – beauty contests, so to speak. Developers effectively identify technically favourable areas and deliver their studies to local authorities.

At present, several municipalities or communities of municipalities are thus called upon by several operators. Ultimately, they seize on this opportunity and choose the areas on which they wish to develop wind power.

It may not be the ideal world that you thought was presented in my speech, but this participation is becoming increasingly frequent. The municipalities and communities of municipalities (since the Energy Transition Act and the possibility for public inter-municipal cooperation institutions to acquire a stake in the project companies so that there is a direct link between the community and the energy transition) have seized the opportunities offered to them to take back ownership of the projects.

It is important to stress that we are project owners, solution providers and, as such, we propose things. However, we are also prepared to hear the counter-arguments and to see projects rejected at times.

We must be honest about the risk we are able to take. We are entrepreneurs, not philanthropists or managers. We must therefore succeed in bringing together the interests

of the entrepreneur, whose role is important for the economic and sustainable development of our country, and those of the managers of a territory or a heritage site.

The entrepreneur will often talk about the contrast between a dynamic vision of a territory and this tendency of putting things under a glass cover, while the manager will denounce the excessively rapid and poorly controlled development of his territory.

It is important to understand that the two have always co-existed. However, if there are no entrepreneurs offering things, nothing will happen in our country. That is my position.

We are trying to propose things, to be part of the process, and I think the fact that we are engaging in dialogue is positive.

### Bertrand FOLLEA

I would like to give the floor to Régina DURIGHELLO.

We are going to have to move to the conclusion, which will be presented by Denis GRANDJEAN.

### Régina DURIGHELLO

I note that there is a lot of debate, which is very interesting. I understand that this project is under way. This is all the more interesting for us because we see projects coming through UNESCO. We can also see how France's attachment, in my opinion, to its landscape and cultural heritage is reflected in the assessment given to us of projects relating to renewable energy, particularly wind power.

It would also be interesting, in my opinion, to extend the debate, as you did Mr. FOLLEA, to renewable energy that is not limited to wind power alone.

### Bertrand FOLLEA

I thank our speakers of the Round Table. Many thanks to all of you who also participated in this meeting.

It was indeed the idea of drawing on the example of the methods developed using outstanding territories to move toward for more ordinary territories. I would like to give the floor to Denis GRANDJEAN, as the time has come to conclude.



# CONCLUSION

## Denis GRANDJEAN,

Member of the Board of Directors of Arc-et-Senans Saltworks and the ABFPM

A few closing words to wrap up the day. The first thing to emphasise is our presence at the Ministry of the Environment, where this seminar has brought many of us together to deal with a difficult and often conflict-ridden subject. It is significant that it is being held here, at this Ministry, with an opening session involving each of the Central Administration Directors concerned: it is a positive sign of openness and dialogue.

The second characteristic point of this meeting is that, along with the Association of French World Heritage Sites and the Grands Sites de France network, we have focused the discussion on the outstanding territories, recognised at the national and international level. This recognition calls upon us to take up all our responsibilities to maintain their values into the future with clarity over these sites. Does this mean that are they bubbles on the national soil? Certainly not. Outstanding territories must be laboratories that foster advances in reproducible thinking and fieldwork that is replicable beyond that. We might want to recall that certain heritage areas such as the safeguarded areas were first perceived as exclusively protected, in line with their initial vocation. Then, thanks to the intelligence mobilised, they proved to be laboratories for a newly-discovered urbanity whose lessons can be very widely disseminated. Today, they embody a new generation of urban projects, just as remarkable sites must be at the forefront of economical, yet based on careful and precautionary management of our territories.

Therefore, by working together on World Heritage sites and the Grands Sites de France, we are not operating in a closed circuit, we are aware that we are carrying out work, whose relevance can and must serve as examples.

I believe that we must do so without too many doubts, but with the aim of constantly justifying the legitimacy of our action. We cannot preserve the readability and sustainability of a site, with binding arrangements that this implies, without constantly striving to explain and as far as possible, convince, with the awareness that this is a task that needs to be constantly taken up anew. Moreover, through the various experiences presented this morning, in Burgundy as well as in Franche-Comté or in the Champagne hills, this concern was very present.

We saw here all our colleagues try to substantiate protections and easements, so that everyone can understand, barring instances of bad faith, that it is the general interest that is at stake.

However, there can be competition, and even conflict between divergent and sometimes contradictory public interests.

We all agree on the need for renewable energies; however, we also have a heritage that is in many cases fragile and vulnerable, whose managers are accountable to the national community for the Great Sites of France, and to the international community for World Heritage. The economic issues at stake can also be in opposition: heritage is increasingly recognised as a vector for a specific type of economy that can be weakened by another economy, that of energy.

We are therefore faced with public policies that are legitimate, but sometimes incompatible. Is this new? Not really. To come back to the safeguarded areas, which were set up in the context of urban renewal in a rather expeditious way, but necessary given the on-going industrial and urban development that did not pay any attention to old neighbourhoods, all the more disregarded as the hygienist and functionalist dogmas of the modern movement in architecture risked their disappearance.

There was therefore a clash between public policies, just as the creation of national parks was a kind of competitor to the Snow Plan implemented by the State in the 60s to equip the French mountains with ski resorts. It is no coincidence that the first national park is La Vanoise, protecting mountains that would otherwise be completely equipped. You are all familiar with the debates and conflicts on the Bonneval-sur-Arc Val-d'Isère interconnection, a significant example of the contradicting aims of development and protection, which lasted until the 2000s and could well re-emerge.

Can we have a single Ministry that manages the energy transition with one hand and the protection of the Grand Sites, those of World Heritage and all sites that deserve to be preserved in France, on the other? In reality, this is nothing new. In 1979, Valéry GISCARD D'ESTAING invented the Ministry of Environment and the Living Environment. Michel D'ORNANO therefore brought the Ministries of the Environment and Infrastructures into one. And it worked, formidably well, in fact: The Coastline and Mountain Directives were applied by the Departmental Infrastructure Directorates and had a tremendous impact on the preservation of these fragile and coveted spaces. This Ministry, which bridged the gap, knowing how to manage the development of the territory as well as its protection. I would like to point out that we have never witnessed an equivalent impetus and such a courageous experiment, which unfortunately disappeared when the Government fell from power in 1981, and the subsequent decentralisation process was rolled out. The Coastline and Mountain Acts

have nevertheless survived, and we know that they are regularly called into question to make them more flexible.

That period has left behind a number of technical measures from which we can draw inspiration. We have spoken a lot today about “salami-slicing” projects, the lack of visibility regarding their starting dates and the fact that we were in territories faced with scattered initiatives. This was precisely the case for ski resorts. This is why an entirely original town planning provision has been created: the UTN (New Touristic Units). They are intended to globalise all the permits required for ski lifts and beds on ski resorts, so as to avoid sectioning that masks the overall visibility of projects. Consequently, what we invented decades ago for the mountains, we can very well implement today for wind power,

Many have insisted on the planning side of wind projects, and this needs to be emphasised. There is necessarily a site-specific analysis, but we cannot side-step the planning process. While the Environmental Regional Plans, as Alain de LA BRETESCHE said, might be outdated, the realities differ from region to region and there must be a suitable form of planning. Failure to plan is exactly what leaves the door open to risky projects, windfall effects and even clientelism, all of which are heightened by the small scale of the municipalities in France and by decentralisation.

Lastly, I think we have perhaps wrongly said that ministries and services work in isolation, according to the logic of their administration alone. Today’s seminar shows that, on the contrary, the central departments of the ministries want to build relationships between themselves and with the ground. It is quite clear that the experiments and work presented here are of interest to central administrations and are likely to inspire their action. We are working toward a strategy of best practices to be shared and the operators themselves seem to have understood that their interest is to proceed with this same logic.

A meeting like today probably calls for more of the same kind. This is a work in progress in which there should be no taboos, including wind exclusion zones. We will need to ask and refine these questions that stir a great deal of debate.

These machines have power, elegance and monumentality that impose themselves on the landscape; these great signals can find their place, at their scale, on many sites, while they can disfigure others.

It must be admitted that the criteria are not only technical, not only functional, but also aesthetic, identity-related, cultural, etc. The importance of a landscape is the result of an accumulation, an organisation of outlines and routes linked to its history and current uses. The landscape is like the link between periods of time and generations and, of course, some areas are more likely to concretely bear this history that connects us to the present.

In other words, the approaches we need to take can be based on such perspective and on culture, not just on technical grounds. We all, including the operators and the elected officials, need to understand that. Consequently, I invite us all to continue this march forward. I believe that the Association of French World Heritage Sites, the Grands Sites de France network and the Ministries involved can consider this the first in a series of colloquia which should be increasingly precise in developing a method for analysing and seeking consensus.

Thank you all for having participated. Hats off to those who organised this event.



# GUIDE TO DEVELOPING IMPACT STUDIES FOR ONSHORE WIND FARM PROJECTS

Onshore wind farms are governed by the legislation on facilities classified for the protection of the environment in application of Act No. 2010-788 of 12 July 2010 establishing a national commitment to the environment known as the “Grenelle II” Act. The guide on the development of environmental impact studies for onshore wind farms was revised in December 2016 in order to take into account the latest regulatory changes, incorporate feedback from case review and incorporate lessons from available case law.

In 2015, the Directorate General of Risk Prevention (DGPR) launched this project to update the guide. This revision was carried out in consultation, bringing together all the stakeholders concerned around three thematic working groups: “biodiversity”, “landscape” and “World Heritage”.

Several meetings were held in 2015 and 2016, bringing together representatives of the various Ministries involved, the wind industry and environmental protection associations.

The draft guide resulting from this collective effort was the focus of consultation with administrations, associations and bodies dedicated to protecting nature and the architectural and landscape heritage.

This latest update to the guide introduces for the first time the issues relating to the preservation of World Heritage sites and sets out methodological recommendations for taking them into account in impact studies.

It aims to meet the long-term objective of preserving the Outstanding Universal Value of World Heritage properties in France in conciliation with the objectives of wind energy deployment set by the Energy Transition Act for Green Growth and by the European Directive on Renewable Energies. This guide is intended to be revised periodically, particularly in accordance with regulatory changes.



## DEFINITIONS

- ABF** / Architecte des Bâtiments de France (French Architectural Review Board)
- ABFPM** / Association des Biens Français du Patrimoine Mondial (Association of French World Heritage Sites)
- AIP** / Landscape Influence Areas
- AVAP** / Architectural and Heritage Enhancement Area
- BTP** / Construction and Public Works
- COFIL** / Steering committee
- DRAC** / Regional Directorate of Cultural Affairs
- DREAL** Direction Régionale de l'Environnement, de l'Aménagement et du Logement – Regional Directorate for the Environment, Land Planning and Housing
- EIP** / Heritage Impact Study
- RWE** / Renewable energy
- EPCC** / Public Establishment for Cultural Cooperation
- EPCI** / Public Establishment for Intermunicipal Cooperation
- ICOMOS** / International Council on Monuments and Sites
- ICPE** / Listed Facility for the Protection of the Environment
- IUCN** / International Union for the Conservation of Nature
- LCAP** / Freedom of Creation, Architecture and Heritage (Act)
- NPPF** / National Planning Policy Framework
- OGS** / Great Sites Operation
- NATO** / North Atlantic Treaty Organisation
- PETR** / Territorial and Rural Equilibrium Hub
- PLUi** / Local Urban Planning Scheme
- PPG** / Planning Practice Guidance
- SCoT** / Schéma de Cohérence Territoriale – 'Local planning continuity' documents
- SRE** / Regional Wind Power Schemes
- UDAP** / Departmental Architecture and Heritage Unit
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- OUV** / Outstanding Universal Value



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## ACKNOWLEDGEMENTS

Network of Major Vauban Sites  
 Grands Sites de France network / ICOMOS France



as well as all contributors.

Special thanks to Minja YANG for her precious help.

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With the support of the Ministry of Ecological and Solidarity  
Transition and the Ministry of Culture