

ICOMOS Technical Review

Property	Royal Domain of Drottningholm
State Party	Sweden
Property ID	559
Date inscription	1991
Criteria	(iv)
Project	Phase II of HIA of Stockholm Bypass and Ekero Road projects

1. BACKGROUND

In July 2012 ICOMOS provided a review of the *“Heritage Impact Assessment. The potential impact of the Stockholm Bypass and Ekero Road project on the Outstanding Universal Value of the World Heritage Property of Royal Domain of Drottningholm, Phase 1”*, as part of the monitoring process of interventions at the site. A new bypass was to be built, affecting the existing Ekero Road crossing through the property, which was also to be enlarged.

The Heritage Impact Assessment (HIA), in accordance with the ICOMOS *Guidance on HIAs for Cultural World Heritage properties* (2011), was to be drafted in two phases. The first phase of the HIA included the evaluation of impacts of both infrastructure projects on the attributes and recommended that *“producing the HIA phase II report should therefore be of high priority.”*

In February 2013, following a reminder from the World Heritage Centre requesting Sweden’s comments on the ICOMOS evaluation of the HIA, the State Party provided further information on the process. It included information on the Swedish legislation for public consultancy and about the works that had followed for the roads and bypass:

- Road plan for Ekero Road still in process (end scheduled for end 2013)
- Stockholm Bypass in process of reviewing (final decision scheduled for end 2013)

Information was also included about the establishment of a natural or cultural reserve in Lovön-Kärsön, a large area enclosing the World Heritage property (designation of area scheduled for spring 2013).

Regarding Heritage Impact Assessment Phase II, it was stated that it would focus on the impact of the final design plans for both road works, and scheduled to be finalised by beginning of 2014.

In February 2014, ICOMOS requested information on all the above mentioned issues - road plans, bypass, protected area, buffer zone and Phase II of the HIA - that were meant to be finished by end 2013.

In June 2014, an update on the process and issues was sent by the State Party. As a general preamble, it informed on how Phase I of the HIA has influenced the planning and design processes of both the Stockholm Bypass and the Ekerö Road, with regards to securing the Outstanding Universal Value (OUV) of the property, and the development of an overall Esthetic Design Program.

The report also informed on the following:

- The plan for the Stockholm Bypass had been finalized and had become legally binding, but still had to continue via the process through the Land and Environment Court of Nacka District Court. The main hearing was scheduled for autumn 2014.
- As for Ekerö Road, a first plan was finished by May/June 2013, but further suggestions were developed. An Environmental Impact Assessment was to be finished in mid 2014, and the final version of the EIA was scheduled for autumn 2014. The plan was also to be examined by other Swedish institutions and the final proposal to be presented to the Swedish National Heritage Board was scheduled for late 2014/early 2015.
- The Lovön Nature Reserve, that was suggested to act as buffer zone, was still undergoing the process to be definitely established and legally valid. It was currently being evaluated by the Department of Environment. No final time was scheduled.
- As a summary, the information stated that *“no irreversible decisions have yet been made... The potential for reaching positive results for the World Heritage property lies in the work that is currently underway with these two projects, as described above this regards the planning processes and the supportive documents, including the Cultural Heritage Evaluation and the Esthetic Design programme.”*

Regarding Phase II of the HIA, it estimated that it was not to be finished until autumn 2015 at the earliest.

In October 2015 ICOMOS Technical review pointed out that no further information had been received and that the plans, final projects and HIA Phase II seemed to be delayed. However, recommendations included in HIA Phase I seemed to have been taken into consideration. ICOMOS recommended that further information should be requested, notably on HIA Phase II.

2. HERITAGE IMPACT ASSESSMENT PHASE II

In December 2016, the State Party submitted the *Heritage Impact Assessment - Phase 2 The potential impact of the Stockholm Bypass and Ekerö Road project on the World Heritage Property 'Royal Domain of Drottningholm'*. The report is very comprehensive and clear, including relevant information on the two projects, especially on the remodelling of Ekerö Road that crosses the property. It follows the methodology proposed by the *2011 ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*.

The report (dated November 2016) begins with an excellent summary that explains the background and goals of the HIA report, the baseline for the evaluation of impact, its scope, methodology and assessment process, the result of the HIA and finishes with conclusions and recommendations. Throughout the following text, these main points are developed, including specific data, plans and visualizations. The report has been drafted by an independent German expert in collaboration with a Swedish expert, and a second opinion will be provided by another English Expert.

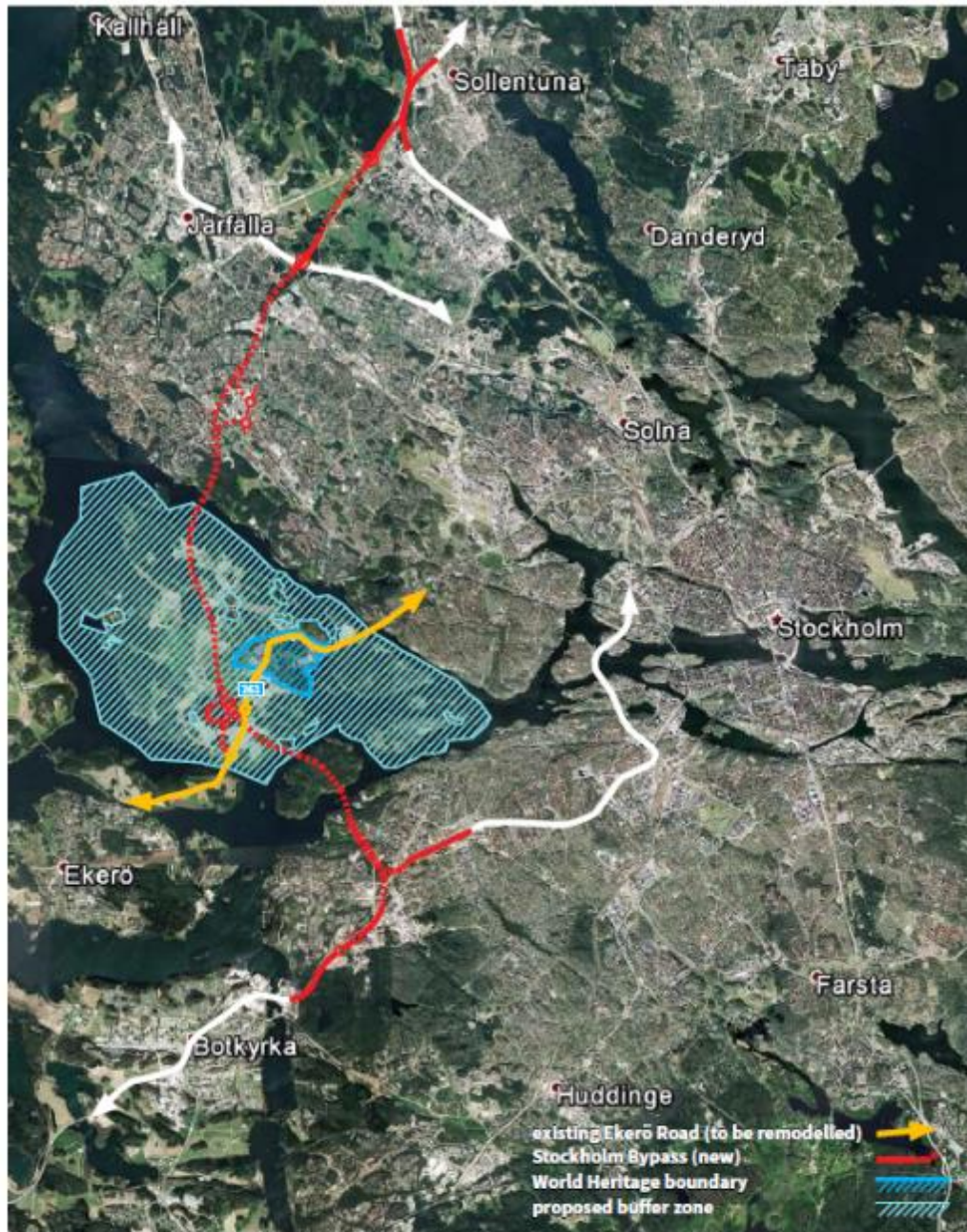


Fig. 1.1: Stockholm Bypass (red) and Ekerö Road (Road 261, orange) site limits and proposed proposed buffer zone of World Heritage property „Royal Domain of Drottningholm“ (cyan). (© Google Earth, Philipp Tebart)

Plan of the proposed construction of Stockholm Bypass and Ekerö Road, included in the HIA Phase II.

The summary begins with an explanation that the World Heritage property of Drottningholm “is subject to changes due to the planned new Stockholm By-pass and the planned remodelling of Ekerö Road”, this last element already crossing the property at the time of its inscription, and includes extracts of the Retrospective Statement of Outstanding Universal Value, adopted by the World Heritage Committee in 20016. The property was inscribed under criterion (iv), with the following key values and attributes identified:

(iv). “The ensemble of Drottningholm is the best example of a royal residence built in the 18th century in Sweden and is representative of all European architecture of that period, heir to the influences exerted by the Chateau of Versailles on the construction of royal residences in western, central and northern Europe” (WHC716/40.COM/8E.Rev.p.82).

- Significance of the whole ensemble and the continuity of use and function of the Royal Domain, and highlights the context with the surrounding agricultural landscape
- Key components (architectural elements, gardens, Malmen and the surrounding area)
- Integrity and authenticity are justified referring to the absence of significant changes since the time of inscription,
- Protection and management requirements are justified by the Swedish legislation, but the statement includes:

“A buffer zone has been proposed where the boundaries coincide with the Nature reserve at Lovön, which was established at the end of 2015. The area of the Nature reserve will strengthen the level of protection for the area.

Current developments in the infrastructure of Greater Stockholm will affect the Drottningholm area in the future. Road 261 passed through the World Heritage property long before Drottningholm’s nomination, but the traffic situation has changed significantly. Preliminary assessments indicate that adverse impacts, defined as functional, visual and noise disturbances during the construction of the Stockholm Bypass and Ekerö Road extension, are expected to affect to different degrees the attributes of the property, as well as create permanent visual changes in the pastoral landscape when the road is completed.

Given these conclusions, all involved parties will aim to limit the negative impacts and work to identify new possibilities and solutions for improved accessibility to the area in conjunction with the developments related to the ongoing Stockholm Bypass and Ekerö Road extension project.

The parties will also consider the Heritage Impact Assessment which has been done in connection with the infrastructure projects. The recommendations and the results of this assessment will assist in identifying potential courses of action to maintain the attributes of the property, its authenticity, and its integrity.” (WHC716/40. COM/8E. Rev, p. 83).

In conclusion, this report is carried out following the already established process but also the mandate of the World Heritage Committee. And, as specified in the summary, all these aspects have been taken as a starting point for the impact assessment”.

As for the methodology and the working process, it included meetings with the Swedish Transport Administration, the National Property Board, the Drottningholm Palace Administration and also with representatives of NGOs concerned about the planned projects. It is important to point out that during the process the Ekerö Road Project was further developed so that the assessment could also take into account the changes carried out.

As a result, the HIA highlights several key points:

- Conflicting interests regarding the Ekerö Road concerning either the need of transportation for the expected Ekerö growing population and stakeholders closer to the World Heritage’s property cultural and natural values. These interests are also in relation to the planned Stockholm Bypass that in the future is expected to diminish the increase of traffic on Ekerö Road. Although there are several alternatives for the junctions between both on Lovön Island, the HIA takes as a starting point the plans that were adopted in 2011.
- The spatial barrier formed by Ekerö Road in the WH property that was already existing at the time of the inscription, so the assessment of impacts has been done comparing the existing and the planned one.

The assessment has focused on:

- Environmental impacts: noise and vibration, road surface water management and expected impacts on the proposed buffer zone;
- Cumulative impacts: potential increase of through traffic (until completion of Stockholm Bypass and after its completion);
- Visual impacts: with and without traffic.

The assessment of the above impacts leads to the conclusion *“that the existing situation of Ekerö Road in the World Heritage property has been improved in comparison to the existing situation with regard to the following aspects:*

- Noise will decrease due to speed limits;
- Pollution of water system will be lowered due to new drain water management;
- A monitoring vibration program has been started although impacts of the planned construction are not yet established;
- The planned road design will be of better quality between Drottningholm Bridge and Hemmet;
- The entrance area at Malmen and the visitor management will be improved with the modifications;
- Karusellplan will be also improved thanks to the planned dislocation of the park and ride facilities;
- The visual coherence of the tree alleys Lovö Kyrkallé and Skolallén could be enhanced.

Even so, the assessment points out several issues that have not been addressed by the project proposal:

- Although the comprehensive monitoring program has been initiated, the potential impacts of the vibrations are still not determined
- There will be an increase of through traffic on Ekerö Road until the completion of the Stockholm Bypass in 2026 (from 23.000 veh/weekday at present to 27.000 veh/weekday in 2025).
- Traffic will increase on Ekerö Road after the completion of the bypass.
- There is still a negative visual and functional impacts due to Ekerö Road in the section of the road between Vilan and Canton.
- Several questions regarding the spatial development and organization of visitor’s traffic, in relation to the property’s management.

Consequently, the HIA Summary ends with conclusions and recommendations:

1. Prolongation of the vibration monitoring program during construction period of the Stockholm Bypass
2. Reduce negative cumulative impacts to the largest extent possible / Informing the World Heritage Committee and its Advisory Bodies regularly about all states of development and planned counter measures. It is important to note that there will be a negative impact due to the increase of through traffic for some 9 years until completion of Stockholm Bypass, which is expected by 2026. A threshold has been established with 27.000 veh/weekday before completion and 23.000 after, and options such as ferry connections and strictly monitored speed limits will be implemented during and after construction of Stockholm Bypass. HIA phase II therefore recommends to :

- a) immediately implement a traffic monitoring program along with immediate measures to decrease traffic flow as much as possible;
 - b) control measures should be implemented to limit traffic;
 - c) the State Party should provide annually to the World Heritage Committee and ICOMOS with a detailed report at least up to year 2026.
3. Decrease negative impact of Ekerö Road between Vilan and Canton, as the Ekerö Road will be widened, by reducing the speed limit to 40 km/h in that section to avoid building additional bus stops.
 4. Elaborate a Spatial Development Plan that takes into consideration the qualities of the domain as a whole, including the pastoral landscape around the property, as the management of the property is strongly focused on the area of the landscape garden and its historic building stock. Thus, the Spatial Development Plan should help in supporting the sustainable development of the World Heritage property in its setting and context, with all stakeholders involved, including Ekerö Municipality. Moreover, based on the Vardplan and the World Heritage Management Plan 2007-2012, the property's location in a Natural Reserve and proposed buffer zone, should be taken as a unique chance to define concrete spatial measures and guidelines for the future development. The Plan should aim to:
 - Support the understanding and visibility of the property and its connections to the proposed buffer zone
 - Rethink the access from Ekerö
 - Improve the negative impact of Ekerö Road between Vilan and Canton
 - Improve the traffic and management in the World Heritage property.

The report follows with a fully detailed text on all the above-mentioned points, which are well explained and developed.

3. CONCLUSIONS AND RECOMMENDATIONS

ICOMOS acknowledges the Heritage Impact Assessment Phase II provided by the State Party in relation to the projects regarding the World Heritage property of the Royal Domain of Drottningholm, especially considering the adoption of the Retrospective Statement of Outstanding Universal Value by the World Heritage Committee in 2016, which concludes that the results and recommendations of the HIA *“will assist in identifying potential courses of action to maintain the attributes of the property, its authenticity, and its integrity.”* (WHC716/40.COM/8E. Rev).

The HIA Phase II includes useful information and recommendations regarding the safeguarding of the Outstanding Universal Value including the authenticity and integrity of the property, which should indeed be considered and implemented in the following phases of the working process, and in the detailed projects for the construction of the Stockholm Bypass and Ekerö Road.

ICOMOS considers it useful that a second independent opinion has been commissioned and will expect to receive its outcomes.

ICOMOS understands that the HIA Phase II is based on the evaluation of the proposals regarding the projects included in the 2011 agreement by the Swedish National Heritage Board, the Swedish Transport Administration, the National Property Board and Ekerö Municipality.

However, ICOMOS would have appreciated that other alternatives to the one chosen by the relevant State Party authorities were evaluated. Ekerö Road already crossed the property at the time of its inscription and had an evident negative impact on it, nevertheless ICOMOS regrets that no alternative as to totally minimize or even suppress this impact has been agreed on, and that all other alternative solutions suggested previously to the agreement of April 2011 have not been assessed. In fact, the need for a revision of the road network to improve traffic conditions could have been picked up by the State Party to reconsider it wholly and in view of proposing a solution that could also achieve the enhancement of the integrity of the World Heritage property. This opportunity is being missed.

ICOMOS regrets that there is no final decision yet on the proposed buffer zone. In 2014 the Lovö Natural reserve was created, protecting the natural and cultural landscape. Although the management plan has taken it into consideration, as the proposed buffer zone, ICOMOS encourages the State Party to facilitate and speed up the process to submit the minor boundary modification request so that the area can act as the buffer zone of the World Heritage property.

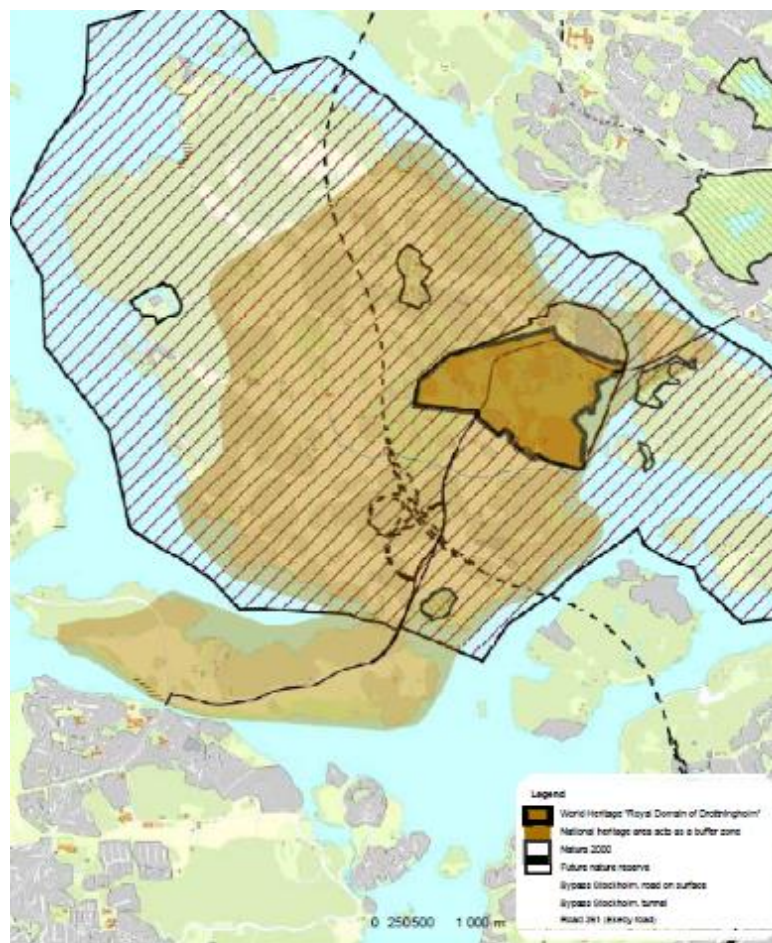


Fig. 3.20: Designated protected areas. (Source: HIA Phase I, p.19)

Designated protected areas. HIA, p. 42

ICOMOS concurs with the HIA II report which points out the surrounding area of the property as a key element component and would like to stress that the “pastoral” landscape is not only the result of the way it was farmed to support the Crown’s need of supplies, but it must be also considered as a key element of the baroque art of landscaping and gardening. Versailles, of which Drottningholm is heir, cannot be understood without the extension of the axis up to the ‘unlimited’ horizon. It is one of the symbolic expressions of the absolute power of the Crown and one of the defining elements of this artistic gardening style, as it is the blending of the

gardens with the nature around in the landscape garden of later centuries. Therefore, in ICOMOS' view, the need for an extensive buffer zone for this property is absolutely essential. This may also refer to the protection and need of minimizing negative impacts on the tree alleys Lovö Kyrkallé and Skollallén that link to Canton, and their visual coherence, as recommended by the report, as they are also a highly symbolic element of the mastering of man over nature and territory, ideology tightly linked to the artistic style of which the Royal Domain of Drottningholm is considered an outstanding example.

Furthermore, the importance of the surrounding area and context of any heritage property has been outlined and is sustained by the *Xi'an Declaration on the conservation of the setting of heritage structures, sites and areas* (ICOMOS, 2005) that acknowledges the contribution of setting to the significance of heritage sites (2.2. *"They also derive their significance and distinctive character from their meaningful relationships with their physical, visual, spiritual and cultural context and setting."*). In this sense ICOMOS totally agrees with the HIA report that *"it is essential to preserve not only the World Heritage property's area enclosed by Ekerö Road, but also its context and setting on Lovö island, because this relationship is a vital element for the understanding and the function of the whole Royal Domain"* (HIA, p. 46).

ICOMOS also concurs with the HIA point of view for the management of the property in relation to the entrance area at Malen, the area of Karusellplan and its surroundings and Canton Village, that are not only visually and functionally negatively impacted by Ekerö Road but also by a weak visitor management program.

Information provided in the HIA Phase I allowed for the modifications of the junctions and technical buildings (ventilation shafts, etc.) for the Stockholm Bypass during the process so as to minimize their impact on the property. However, ICOMOS express its concerns about the information included in HIA Phase II regarding the major change of the widening of Ekerö Road, the objective being to provide more functionality and to improve traffic circulation. ICOMOS welcomes the measures planned to reduce the negative impacts, but strongly encourages the State Party to consider all recommendations included in the HIA Phase II report as well as those provided in the present Review. ICOMOS, however, insists on the need of the assistance of the National Heritage Board and other possible consultants to improve spatial interrelations and to reduce noise.

ICOMOS notes that other stakeholders have been contacted during the HIA process, as suggested by the ICOMOS Guidance on HIA, such as the Lovö Local Heritage Association, Friends of Drottningholm Palace Park, and former president of ICOMOS Sweden, who have expressed their concern about the damage to the World Heritage property, and proposed other alternatives such as a new location for the junctions between the Bypass and Ekerö Road, further away from the World Heritage property.

ICOMOS also notes that the HIA main purpose was to study the impact of the expected increase in traffic and, as a result, the new road design through the World Heritage property. The expected increase in traffic has multiple reasons but an important factor is the location of the junction between the Stockholm Bypass and the Ekerö Road to the west of the World Heritage property. It is therefore unfortunate that the conditions for the HIA have been limited and the consequences of an alternative location of the junction have not been studied.

The HIA clearly explains that the new plans for Ekerö Road clash with the values of property, which is also expressed in the Retrospective Statement of Outstanding Universal Value. However, in the meanwhile, construction works have already been started in 2015, so the HIA focus in the planned remodelling of the Ekerö Road, *"with the goal to improve both encountered shortcomings in the quality of the road design and the traffic and visitor's management"* (p. 66).

ICOMOS acknowledges the assessment of the environmental impacts and reduction measures on noise (positive), vibrations (monitoring), road surface (positive), and water management (positive), but encourages the State Party to carefully monitor all the programs to prevent any unexpected outcomes. As for the overall impact assessed for the proposed buffer zone (large-moderate), ICOMOS would like to highlight its concern as it considers of key importance its contribution to the significance of the property, as has been mentioned before.

ICOMOS shares the concerns included in the HIA about the temporary negative impact on the World Heritage property during phase I, when Ekerö Road will be the only access from Ekerö to Stockholm, with an increasing traffic flow of 2.0 percent to 2.5 percent annually until 2025.

In ICOMOS' view, the fact that the Swedish Transport Administration's own forecasts show that traffic volumes may increase to more than what is specified as maximum volume in the HIA, calls for further investigations and alternative solutions to ensure that the limits for maximum traffic numbers will not be exceeded. Measures for traffic monitoring and regulation should be also implemented during Phase II, after completion of Stockholm Bypass, when the impact is evaluated as moderate.

However, the long-term predictions will have to be carefully and periodically examined, and before a final decision is made, ICOMOS recommends to carry out a detailed plan showing how the amount of traffic through the World Heritage property after the completion of the Stockholm Bypass will not exceed the current levels, but preferably be lower than today. To ensure that future traffic volumes will not exceed the specified numbers, more extensive measures (like a tunnel) could be analysed before the final decision is made, and include a new study of what impact of the location of the junctions between the Stockholm Bypass and the Ekerö Road can have on future traffic volumes.

ICOMOS appreciates the visualisations carried out for the better understanding of the visual impacts, and agrees with the HIA in that the existing road already highly compromises the OUV of the property, and that *"the starting point for the assessment is that all measures taken in the context of the modification of Ekerö Road should contribute to the improvement of the existing situation"* (p. 79). 10 model views are analysed visualising the road re-modelling and the impact of modifications (Drottningholm Bridge – neutral, Malmen to theatre – positive, Malmen to entrance area – positive, to Hemmet – neutral, from Hemmet – neutral, from Vilan – slight-moderate, from Gothic Tower – slight moderate, to Canton from Lovö Kyrkallé – positive, from canton to Lovö Kyrkallé – positive, from Ekerö Road to the ideal landscape garden – moderate. Therefore, modifications in many cases will affect positively the impact of the existing road that in some cases is very large. ICOMOS agrees with the Conclusions of the Visual Impact Assessment in that the impact varies much in the different sections of the road, and that a future increase of the traffic volume should be strictly avoided so as to prevent that the OUV of the World Heritage property is further compromised in most of the sections. Moreover, ICOMOS recommends that in order to reduce the road's negative impact on the landscape, considerations should be made and its design should be conceived for the planned amount of traffic after the completion of the Stockholm Bypass and not for the temporary increase in traffic expected over the next 10 years, until the Bypass is built.

As for the conclusions, mitigation measures and recommendations included in the HIA Phase II, ICOMOS notes that the HIA highlights the existing conflict of interests, and includes in the conclusions perspectives and solutions proposed by other consulted stakeholders, such as to integrate elements as roundabouts at Canton Village or underpasses for pedestrians and cyclists, or that all measures to remodel Ekerö Road should be reversible and eventually taken back after completion of Stockholm Bypass. It is also important to note once again that the key issue is that the existing Ekerö Road, in place since the nomination of the property, has a negative impact on

the OUV of the World Heritage property and that all planned modifications should either improve or at least be neutral.

ICOMOS recommends all stakeholders involved, especially the Swedish Transport Administration, to give consideration to the following recommendations:

- A. Study the consequences in term of impacts, of an alternative location for the junction between the Stockholm Bypass and the Ekerö Road to the west of the World Heritage site; this is motivated by the fact that an important factor of the expected increase in traffic is the location of the junction;
- B. Carry out further investigations and explore alternative solutions to ensure that the limits for maximum traffic numbers will not be exceeded in the next 10 years, during the completion of the full extent of the bypass, and develop a plan showing how the amount of traffic through the World Heritage site after the completion of the Stockholm Bypass will not exceed the current levels, but preferably be lower than today;
- C. Explore further solutions and measures that may ensure that future traffic volumes will not exceed the specified numbers, before the final decision is made; this should also include a renewed study of what impact of the location of the junctions between the Stockholm Bypass and the Ekerö Road can have on future traffic volumes;
- D. Ensure that the design of the road is conceived for the planned amount of traffic after the completion of the Stockholm Bypass and not for the temporary increase in traffic expected over the next 10 years, until the bypass is built.

ICOMOS further recommends that the above-mentioned stakeholders take note of and implement the recommendations included in the Heritage Impact Assessment Phase II throughout the whole text, and specifically those highlighted in the last chapter:

- Recommendation 1. Prolongation of vibration monitoring program during construction period and Stockholm bypass. ICOMOS suggests extending the program after the opening of the bypass, as there will not only be the vibrations caused by construction works but also probably afterwards due to the increase of traffic.
- Recommendation 2: Reducing negative cumulative impacts to the largest possible extent and informing the World Heritage Committee and its Advisory Bodies regularly about all stages of planned counter measures and of their implementation;
- Recommendation 3. Decreasing negative impact of Ekerö Road between Vilan-Canton (future working progress). Immediate research is needed to minimize the impact in this section
- Recommendation 4: Develop Spatial Development Plan to support an integrated management of the whole area of the World Heritage property and its immediate setting. In this sense, ICOMOS recommends that the Ekerö municipality should be involved to participate actively in the work.

ICOMOS remains at the disposal of the State Party for further clarification on the above or assistance as required.

ICOMOS, Charenton-le-Pont
May 2017