

Strasbourg, 13 August 2021 [files63e\_2021.docx] T-PVS/Files(2021)63

# CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

# Standing Committee

41<sup>st</sup> meeting Strasbourg, 29 November – 3 December 2021

# New Complaint: 2021/02

# Alleged threat to birds and protected sites due to the proposed construction of windfarms (Norway)

# - REPORT BY THE GOVERNMENT -

Document prepared by Royal Norwegian Ministry of Climate and Environment



Ursula Sticker c/o Ms Ursula Sticker

Your ref

Our ref

21/535-10

Date

13 August 2021

# Government report - Complaint No. 2021/2 Alleged threat to birds and protected sites due to the proposed construction of windfarms

We refer to your letter dated 12 February 2021, where you ask for the position of Norwegian authorities on Complaint No. 2021/2 filed by Birdlife Norway. We also refer to your e-mail of 16 April 2021 regarding updates to the complaint. The proposed wind power plant Havsul I was rejected by the Norwegian Ministry of Petroleum and Energy on 26 March 2021. Birdlife Norway informed in an e-mail dated 15 April 2021 that it is not necessary to include Havsul I in the follow-up. The focus of this report is consequently on the licensing system for wind power plants in Norway in general, and on the process relating to Haram wind power plant.

1. The licensing system for wind power plants in Norway

The Energy Act<sup>1</sup> establishes the legal framework for Norway's wind power supply system. Wind power projects with more than 1 MW installed effect, or more than 5 wind turbines, needs a license from the <u>Norwegian Water Resources and Energy Directorate</u> (NWRED). Projects smaller than this can be handled by Norwegian local municipal authorities, according to the Norwegian Planning and Building Act<sup>2</sup>.

The licensing procedure consists of several steps<sup>3</sup>. In the first step<sup>4</sup> (*notification phase*) the project is presented in a notification. Through a public hearing of the notification with a proposed assessment program, relevant parties get to comment on what needs be assessed in an environmental impact assessment (EIA). After the hearing, NWRED approves an assessment program, which describes the initiative, environmental and social impacts that must be described and assessed, alternatives and the application process.

<sup>&</sup>lt;sup>1</sup> Official version (Norwegian): <u>https://lovdata.no/dokument/NL/lov/1990-06-29-50.</u> Unofficial translation: <u>https://www.regjeringen.no/globalassets/upload/oed/vedlegg/lover-og-</u>reglement/act\_no\_50\_of\_29\_june\_1990.pdf

<sup>&</sup>lt;sup>2</sup> Official version (Norwegian): <u>https://lovdata.no/dokument/NL/lov/2008-06-27-71.</u> Unofficial translation: <u>https://www.regjeringen.no/en/dokumenter/planning-building-act/id570450/.</u>

<sup>&</sup>lt;sup>3</sup> The process is illustrated in the figure in Appendix 1.

<sup>&</sup>lt;sup>4</sup> Projects with less than 10 MW installed effect starts on the second step with an application and EIA.

In the second step (*licensing phase*) relevant parties get to comment on the project and the EIA and propose changes. The end of this phase is the final licensing decision. If a license is granted, the license holder must present a detailed design plan and an environmental, transport and construction plan (MTA) (*detailed design phase*). If the plant described in the detailed design plan can cause other impacts compared to the EIA, this must be described and assessed in the detailed design plan.

In December 2020, the Norwegian Parliament decided that changes are to be made in the licensing procedure<sup>5</sup>. This includes a higher level of details in the framework stated in the licenses, more/stricter deadlines for the detailed design phase and the realisation of the power plant, better environmental impact assessments, and procedural changes, one of which is that wind power plants will be subject to a permit process according to the Planning and Building Act. The licensing process for new wind power plants in Norway is currently onhold whilst awaiting the details of the upcoming changes.

#### 2. Haram onshore wind power plant

### 2.3.1 Emerald Network sites

Haramsøya is part of an archipelago with several Emerald Network sites<sup>6</sup>. The Emerald siteson Haramsøya/Ullaholmen are *Ullasundet* (NO0000290)<sup>7</sup> and *Haramsøya vestside* (NO0000337)<sup>8</sup>. The Emerald sites on the adjacent Flemsøya are *Bakkedalen* (NO0000303)<sup>9</sup> and *Rogneholmen* (NO0000305)<sup>10</sup>. The Emerald site on the nearby Fjørtoftøya is *Fjørtoftneset* (NO0000301)<sup>11</sup>. The impact of the Haram wind power plant on surrounding Emerald sites, and other protected areas, has been considered and addressed in all phases of the licensing process. The protected sites mentioned in the complaint were nominated as Emerald sites in  $2013^{12}$ , but their values and functions were subject to evaluation in the license decisions due to their national status as protected areas. Section 2.3.2 to 2.3.4 gives brief overview of how Emerald sites, other protected areas, and avian fauna have been taken into consideration in the licensing process<sup>13</sup>.

### 2.3.2 The notification phase

NWRED adopted an assessment program for the project in 2003. The program demanded a description of avian fauna in the area and known migration routes, an overview of rare, endangered or vulnerable bird species in the plant area as well as their biotopes and known migration routes, an assessment of how the plant may affect rare, endangered or vulnerable bird species through disturbance, collisions and deteriorated habitats during construction and operation, and an assessment of mitigation measures that could reduce conflicts with birds. The EIA also had to include a

<sup>&</sup>lt;sup>5</sup> The Norwegian Parliament considered the white paper <u>Meld. St. 28 (2019–2020) Vindkraft på land</u>

*Endringer i konsesjonsbehandlingen* (translation: Onshore wind power – changes in the licencing procedure) in December 2020. In this white paper, the government proposes amongst other things to update the requirements for studying the impacts of power plants, that impacts on the environment shall be described clearly and be put more emphasis on, and that the basis for assessing the total impacts shall be strengthened through an overall, region-wise processing of license applications.

<sup>&</sup>lt;sup>6</sup> See map in Appendix 2.

<sup>&</sup>lt;sup>7</sup> <u>https://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=NO0000290&release=3</u>

<sup>&</sup>lt;sup>8</sup> https://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=NO0000290&release=3

<sup>&</sup>lt;sup>9</sup> https://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=NO0000303&release=3

<sup>&</sup>lt;sup>10</sup> https://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=NO0000305&release=3

<sup>&</sup>lt;sup>11</sup> <u>https://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=NO0000301&release=3</u>

<sup>&</sup>lt;sup>12</sup> <u>https://search.coe.int/bern-convention/Pages/result\_details.aspx?ObjectId=09000016807465d4</u>

<sup>&</sup>lt;sup>13</sup> See Appendix 3 for a general overview of the licensing process related to the Haram wind power plant. The licensing phase

description of possible conflicts between the plant and protected areas and an assessment of how the plant may affect the conservation purposes.

### Initial license application and EIA

NWRED received the license application<sup>14<sup>14</sup></sup> and EIA in 2004. The application included turbines at both Haramsøya and Flemsøya<sup>15</sup>. The application was based on several subject reports, including an impact assessment regarding avian fauna from the Norwegian Institute for Nature Research<sup>16</sup>. The subject report considered the conservation values and functions, mainly related to birds, of surrounding protected areas (amongst others *Ullasundet*, *Rogneholmen* and the proposed *Haramsøy vestside*). The report included an appendix<sup>17</sup> from Birdlife Norway with information and assessments concerning fauna on Haramsfjellet and Flemsøya.

The complainant argues that the developer did not consider all tasks imposed in the assessment program, more specifically the instruction to describe migration routes in the area. We would like to point out that the subject reports highlighted the area as an important migration route, and both NWRED and MPE considered this in their license decisions.

In 2005, thematic conflict assessments (TCA) were introduced as part of the licensing process. The Norwegian Environment Agency (NEA) conducted a TCA for the project, in which the conflict category for natural environment was set to D. This indicates major conflict with national environmental targets, where the level of conflict can only be reduced through comprehensive adjustments<sup>18</sup>. The conflicts were related to breeding areas at the mountain slopes and close distance between infrastructure and breeding sites. According to the TCA, species and population decline for raptors had to be expected. Peregrine falcon, which there were most of on Flemsøya, was particularly exposed. The avian fauna at the tidal and shore areas were expected to be less affected. The TCA recommended removing the turbines on Flemsøya to mitigate negative impacts on avian fauna.

### Additional EIA and adjusted license application

On the basis of the inputs from NEA, the developer was instructed to conduct an additional EIA and consider an alternative layout with turbines on Haramsøya only. An additional EIA and adjusted application were delivered in 2005. The figure in Appendix 4 shows the initial layout and the three alternative layouts explored in the additional EIA. The developer included alternative 3 in their application<sup>19</sup>, which included 17 turbines á 4 MW located only atHaramsøya, with several exposed turbines retraced from exposed sites at amongst others *Ullahornet*.

The additional EIA and adjusted application were subject to a new public hearing, and NEA conducted an updated TCA. NEA found that the alternative layout reduced the level of conflict with avian fauna, mainly due to turbines at Flemsøya being excluded and turbines at Haramsøya being removed from exposed positions. The project could, however, still cause conflicts with biodiversity related to avian fauna, including potential population decline for raptors, especially peregrine falcon. Birds using the tidal and shore areas were expected to be less affected. The conflict category for the alternative layout was set to C, which indicate intermediate conflicts with national environmental targets, and that the level of conflict can bereduced through adjustments.

<sup>14</sup> https://webfileservice.nve.no/API/PublishedFiles/Download/200202714/3205772

<sup>&</sup>lt;sup>15</sup> See illustration of initial layout in Appendix 4.

<sup>&</sup>lt;sup>16</sup> Follestad, Arne. 2004. Fugl i aktuelle utbyggingsområder for vindkraft på Haramsfjellet og Bergedalen på Flemsøy. Notat. NINA 22.03.04

<sup>&</sup>lt;sup>17</sup> Folkestad, Alv Ottar. Fugleliv og annan fauna i aktuelle utbyggingsområde på Haramsfjellet og Bergedalen på Skuløy. Statusoversikt 2002-2003.

<sup>&</sup>lt;sup>18</sup> The scale ranges from A-E, where A = no conflict and E = the highest level of conflict

<sup>&</sup>lt;sup>19</sup> Bottom right picture in figure in Appendix 4.

T-PVS/Files(2021)63

#### The license decision and adjusted siting

NWRED issued the license for Haram wind power plant, layout alternative 3, in 2008<sup>20</sup>. Considering all aspects, including impacts on natural environment, NWRED found the negative effects of the project to be acceptable, and that the benefits (i.e. increased production of renewable electricity and improved security of supply in the region) outweighed the disadvantages.

In NWREDs decision, impacts on birds in and outside of protected areas were thoroughly discussed NWRED acknowledged the potential conflicts between the project andplant and avian fauna, including cumulative effects of several plants, and the knowledge gaps and uncertainties regarding impacts of wind power plants on birds in Norway. NWREDfound that the plant could cause negative impacts on avian fauna in the area. Some species would be exposed for collision risk, white tailed eagle, eagle owl and peregrine falcon especially. Disturbance from wind turbines, construction work and human activity related to roads could add to the severity of the negative impacts. NWRED found, however, that a layout that included wind turbines on Haramsøya only, seemed to reduce the conflict level and the level of conflict regarding important tidal and shore areas appeared to be small. Thelicense stated several terms and conditions that were decisive for the benefits of the project to outweigh the disadvantages, amongst others that roads had to be closed for motorised vehicles to reduce disturbance on avian fauna and implementation of a pre- and post-construction monitoring plan for peregrine falcon.

NWREDs decision was appealed to MPE. MPE found that the plant could have negative impacts on avian fauna in the area. When considering all aspects of the project, however, MPE found that the benefits of the project outweighed the negative impacts and upheld the license with a new condition<sup>21</sup>. The condition instructed the developer to implement a monitoring program for relevant avian fauna, especially seabirds, and statedthat the authorities could instruct additional monitoring or mitigation measures if the monitoring reveal negative effects.

### 2.3.3 The detailed design phase

In the detailed design plan, the plant was reduced to 8 turbines, each with an installed capacity of 4,2 MW, rather than 17 turbines á 4,0 MW. When NWRED assessed the detaileddesign plan, changes in environmental impact were considered. Because the final license decision and location of the plant was fixed at this point, NWRED did not assess the values and functions of *Ullasundet* and *Rogneholmen*. The layout could however cause direct impacts on *Haramsøya vestside*, and possible impacts on this area were assessed. NWRED found that the reduced number of turbines, reduced total turbine sweep area and fewer windturbines at the western edges reduced the negative impacts on birds and *Haramsøya vestside*<sup>2222</sup>. The layout was considered to reduce the risk of collisions and disturbance of local birds and reduce impacts on migratory birds.

The detailed design plan and MTA were approved by NRWED with conditions to mitigate effects on avian fauna. NWREDs approval was appealed to MPE. MPE instructed Haram Kraft to consider possibilities to adjust the siting of the turbine closest to the edge of the plateau and *Haramsøya vestside*, to reduce conflict with breeding birds in the upper slopes of the hillside. A revised plan was approved by MPE in June 2021<sup>23</sup>. In this plan, theturbine closest to the edge of the plateau

<sup>&</sup>lt;sup>20</sup> <u>https://webfileservice.nve.no/API/PublishedFiles/Download/200708130/121836</u>

<sup>&</sup>lt;sup>21</sup> https://webfileservice.nve.no/API/PublishedFiles/Download/200708130/265184

<sup>&</sup>lt;sup>22</sup> <u>https://webfileservice.nve.no/API/PublishedFiles/Download/201901315/2883563</u>

<sup>&</sup>lt;sup>23</sup> <u>https://webfileservice.nve.no/API/PublishedFiles/Download/2728865e-aa3c-44c3-82b4-</u>9c00a55b3d95/201901315/3423995

(T01 in figure in appendix 5) is moved 102 m. southeast to increase the distance to *Haramsøya* vestside.

### 3. Conclusions

### The licensing system for wind power plants in Norway

Our position is that the licensing system for wind power plants in Norway complies with the obligations of the Bern Convention, including commitments to the Emerald Network of Areasof Special Conservation Interest.

Every wind power plant needs a license. EIAs must be carried out for all larger wind power plants, and the impacts revealed by an EIA and associated consultative statements, are important issues that are always considered in the licensing process. Public hearings and local/regional consultations are obligatory, and include local and regional authorities, landowners, and stakeholders such as NGOs representing environmental interests. The objective of the licensing process is to ensure that the benefits are greater than the disadvantages for projects that are granted a license. If the total environmental impact is considerable, the likelihood of a plant to be granted a license is reduced. Emerald Network sites are of key importance to the conservation of species and habitats. Potential negative impact on such sites or enlisted species, and the possibilities to avoid or minimise such impact, are important elements in these considerations.

In the assessment of license applications, the authorities must apply the principles set out in the Nature Diversity Act<sup>24</sup> section 8 to 12. Section 8 states that decisions that affect biological diversity shall, as far as reasonable, be based on scientific knowledge. Section 9, 10 and 11 establish the precautionary principle, the ecosystem approach including assessment of cumulative environmental effects, and the user-pays principle, as guiding principles for public decisions-making that may affect nature diversity. Section 12 states that to prevent or limit damage to biological diversity, use shall be made of such methods and techniques and siting of industrial and other activities as produce the best results for society at large.

The details of the upcoming changes in the licensing procedure for onshore wind power plants are not settled. For this reason, it is not possible to give a full or precise account of how the system will comply with the obligations of the Convention. However, the changes include better EIAs, and licensing decisions will still be required to apply the principles of the Nature Diversity Act. Our position is that the procedure also in the future will ensure that the values and functions of Emerald sites, as well as of other protected areas and enlisted species, are thoroughly considered and taken into account.

### The licensing process relating to the Haram onshore wind power plant

The licensing of the Haram wind power plant has been in accordance with the procedures required by Norwegian law and regulations. As described, the conservation values and functions of surrounding Emerald sites and other protected areas, as well as avian fauna ingeneral, have been considered and addressed throughout the process.

The main purpose of  $Bakkedalen^{25}$  is protecting an area of intact blanket bog. The plant did not directly affect this area, and in their licensing decision NWRED found that wind turbines would not

<sup>&</sup>lt;sup>24</sup> Official version (Norwegian): <u>https://lovdata.no/dokument/NL/lov/2009-06-19-100.</u> Unofficial translation: <u>https://www.regjeringen.no/en/dokumenter/nature-diversity-act/id570549/</u> <sup>25</sup> https://doudota.no/dokumenter/nature-diversity-act/id570549/

<sup>&</sup>lt;sup>25</sup> <u>https://lovdata.no/dokument/LF/forskrift/1996-12-13-1215</u> (Norwegian)

T-PVS/Files(2021)63

significantly affect the purpose of the protection. The purpose of *Ullasundet*<sup>26</sup> and *Rogneholmen*<sup>27</sup> is to protect important wetlands with associated plant communities, birdlife and other wildlife. The EIA stated that the primary motivation for protection was breeding, migrating, and overwintering birds associated with wetlands<sup>28</sup>. Theassessment did not find it likely that avian fauna in tidal and shore areas would be significantly affected by a wind power plant at the mountain plateaus<sup>29</sup>. The authorities took this into account when issuing the license.

*Haramsøya vestside*<sup>30</sup> shall, amongst others, protect an area with a distinct biodiversity, including endangered, rare, and vulnerable nature. The area is regarded as an important breeding site for seabirds. The EIA found it probable that the proposed plant would pose a direct threat to the values at the western edge of Haramsøya, especially white-tailed eagle, peregrine falcon and eagle owl<sup>31</sup>. This was also emphasised in the TCA. These conflicts were addressed in the license decisions and the process relating to approval of the MTA and detailed design plan<sup>32</sup>.

To minimise as far as possible the negative effects on Emerald sites and protected areas, as well as the natural environment in general, adjustments have been done in all phases of the project. The Nature Diversity Act entered into force in 2009, and MPE's final license decision included considerations based on the general principles in sections 8 to 12. The considerations concluded that the plant would not threaten bird populations on a national or global level.

The knowledge gaps and uncertainties regarding the impacts of the plant on avian fauna and ecosystems have been addressed in the process. The developer has been instructed to implement a monitoring program for avian fauna. If the monitoring reveals negative effects, the authorities can instruct the developer to carry out additional monitoring or mitigation measures. This gives the authorities the necessary tools to ensure that targetedmitigation measures are applied during the operation of the plant, if the studies indicate that this is required to protect e.g., enlisted species<sup>33</sup>. Various mitigation measures can be relevant, e.g., turbine shutdown on demand, operation restrictions during certain weatherconditions or physical strategies like painted blades etc.<sup>34</sup>

As the area and surrounding Emerald sites have a function for migrating birds, it is possible that birds passing the plant will be at risk of collision. Consequently, the developer has been directed to include migrating birds in the post-construction monitoring program. The developer has also been instructed to monitor the breeding population and breeding successof peregrine falcon, white-tailed eagle, eagle owl and shag, and to register all bird collisions with the plant. This information will be used to assess the necessity of applying targeted mitigation measures. The post-construction monitoring program is yet to be approved by NWRED.

<sup>&</sup>lt;sup>26</sup> <u>https://lovdata.no/dokument/LF/forskrift/1988-05-27-397?q=ullasundet (Norwegian)</u>

<sup>&</sup>lt;sup>27</sup> https://lovdata.no/dokument/LF/forskrift/1988-05-27-398?q=rogneholmen (Norwegian)

<sup>&</sup>lt;sup>28</sup> Folkestad, Alv Ottar. Fugleliv og annan fauna i aktuelle utbyggingsområde på Haramsfjellet og Bergedalen på Skuløy. Statusoversikt 2002-2003

<sup>&</sup>lt;sup>29</sup> Follestad, Arne. 2004. Fugli aktuelle utbyggingsområder for vindkraft på Haramsfjellet og Bergedalen på Flemsøy. Notat. NINA 22.03.04

<sup>&</sup>lt;sup>30</sup> <u>https://lovdata.no/dokument/LF/forskrift/2010-05-28-864?q=haram (in Norwegian)</u>

<sup>&</sup>lt;sup>31</sup> Folkestad, Alv Ottar. Fugleliv og annan fauna i aktuelle utbyggingsområde på Haramsfjellet og Bergedalen på Skuløy. Statusoversikt 2002-2003.

 $<sup>^{32}</sup>$  E.g., the adjustments in the layout/location of turbines in figures in Appendix 5 and 6.

<sup>&</sup>lt;sup>33</sup> As well as conditions related to the MTA and detailed design plan regarding birds

<sup>&</sup>lt;sup>34</sup> Marques, Ana Teresa, et al. "Understanding bird collisions at wind farms: An updated review on the causes and possible mitigation strategies." *Biological Conservation* 179 (2014): 40-52.

Yours sincerely

Torbjørn Lange Deputy Director General

> Maline Salicath Gordner Adviser

This document is signed electronically and has therefore no handwritten signature

Copy:

Miljødirektoratet Norsk Ornitologisk Forening Norwegian Ministry of Local Government and Modernisation Birdlife Norway

Attachments:

Thematic Conflict Assessment from the NEA (2005) Additional Thematic Conflict Assessment from the NEA

# Appendix 1:



The licensing process and following design phase for on shore wind powerplants

Figure: The licensing process and the following design phase for on shore wind power plants in Norway.

# Appendix 2:

# Protected areas and Emerald Network sites on and nearby the Haram onshore windpower plant



Figure: Protected areas (left) and Emerald Network sites (right) on Haramsøya and nearby islands.

# Appendix 3:

### Overview of the licensing process concerning Haram onshore wind power

### plant

### The notification phase

In June 2002, the company *KraftmontasjeAS* sent a notification to NWRED regarding whatwas then referred to as Haramsfjellet and Flemsfjellet wind power plant in Haram municipality (now Ålesund municipality), Møre and Romsdal county. In accordance with the Planning and Building Acts Regulations on impact assessments, NWRED approved an ESIA-program in January 2003 for the project based on the notification and input from the conducted hearing.

### The application phase

In November 2004, NWRED received an application and the results of the conducted ESIAprogram from *Haram Kraft*, a company which at the time was owned by *Kraftmontasje AS* and *VardarAS*, with the intent to establish Haram wind power plant. NWRED then granted Haram Kraft a license to build and operate Haram wind power plant, with the necessary infrastructure and 66 MW installed capacity, on the 24<sup>th</sup> of June 2008. NWREDs decision was appealed, but later upheld by the MPE. The final licensing decision was thus taken by the MPE on the 14<sup>th</sup> of December 2009.

The detailed design phase

In the license given by MPE in 2009, the deadline to complete Haram wind power plant was the 1<sup>st</sup> of July 2013. In 2012 the license holder Haram Kraft applied for this deadline to be extended. On the 7<sup>th</sup> of August 2012 NWRED granted Haram Kraft an extended deadline for completing the project, from 1.7.2013 to 31.12.2014.

In June 2013 NWRED received a new application from Haram Kraft, in which the license holder applied for the deadline to be further extended. On the 30<sup>th</sup> of January 2014, NWRED granted Haram Kraft a new extension of the deadline for completing the project, from 31.12.2014 to 31.12.2020.

On the 25<sup>th</sup> of January 2019, NWRED granted Haram Kraft permission to adjust the grid connection to a 33 kV underground and submarine cable, and permission to build a dock by *Håneset*, and a new deadline extension to 31<sup>st</sup> of December 2021. This decision was not appealed. The current valid license for Haram wind power plant with necessary infrastructure is dated the 7<sup>th</sup> of February 2019<sup>35</sup>.

As a part of the process with environmental, transport and construction plan (MTA) and detailed design plan, Haram Kraft applied to extend the duration of the operation period stated in the license from 25 to 30 years (until 31<sup>st</sup> of December 2051). NWRED granted Haram Kraft this extension in our decision of 30<sup>th</sup> of August 2019, applying the Energy Act section 3-1. On the same date, NWRED approved the MTA and detailed design plan for Haram wind power plant. The approval was appealed but was upheld with certain conditions of adjustments by MPE on the 24<sup>th</sup> of March 2020. MPE decided that Haram Kraft had to

<sup>&</sup>lt;sup>35</sup> <u>https://webfileservice.nve.no/API/PublishedFiles/Download/200708130/2667855</u>

make a revised version of the MTA and detailed design plan with these adjustments, and have the new documents evaluated and approved by NWRED. However, MPE granted Haram Kraft permission to start construction work in the areas of the wind power plant which were not affected by the conditions.

## The construction phase

Haram Kraft started the construction phase of the wind power plant on the 25<sup>th</sup> of May 2020. The revised plan was approved by NWRED the 18<sup>th</sup> of September 2020. The approval was appealed but upheld by the MPE on the 4<sup>th</sup> of June 2021.

Haram Kraft is planning to mount and install the wind turbines in the late spring/early summer of 2021. For recollection, according to Haram Kraft's valid license, the deadline to complete the project and put the wind power plant into operation is the 31<sup>st</sup> of December 2021.

# Appendix 4:

### Haram onshore wind power plant - alternative layouts



Figure: Upper left: Initial layout with 19 wind turbines on Haramsøya and 5 on Flemsøya (all 2,75 MW).Upper right: Adjusted layout alt. 1 with 21 wind turbines on Haramsøya and none on Flemsøya (all 3 MW). Bottom left: Adjusted layout alt. 2 with 17 wind turbines on Haramsøya and 4 wind turbines on Flemsøya (all 3 MW). Bottom right: Adjusted layout alt. 3 with 17 wind turbines on Haramsøya and none on Flemsøya (all 4 MW).

# Appendix 5:

# Haram onshore wind power plant – layout in the adjusted license application andlayout in the detailed design plan



Figure: The layout from the adjusted license application (left) compared to the layout of the detailed design plan (right).

# Appendix 6:

# Haram onshore wind power plant - revised environmental, transport and constructionplan and detailed design plan



Figure: The revised detailed design plan (left) and the first detailed design plan (right).

# Attachment 1

# Tematisk konfliktvurdering for vindkraft - tema Miljø og kulturminner

	-			-	
Prosjekt:	Haramsfj./Flemsfj.	Kommune:	Haram	Fylke:	Møre og Rømsdal

ekt som vil gi stor endring av landskapsbilde på kyststrekningen. Størst ikt knytter seg til naturmiljø og landskap. Kulturmiljøene som blir "t ligger i hovedsak på strandflatene på øyene, og det vil være sterk Il påvirkning av kulturmiljøene over sundet på disse.	
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Undertema	Naturmiljø	Kulturminner og kulturmiljø	Landskap	
Beskrivelse Rikt fugleliv på de to øyene, men i stor grad knyttet til fjæra. Hekkende rovfugl i fjellsidene. Kystlynghei og myr i planområdene + dyrka mark. Myrreservat inntil planområdet på Flensøya. Edelløvskogreservat nær traséen for kraftlinja. Planområdet på Flemsfjellet brukes til turgåing.		En rekke kjente kulturminner og kulturmiljøer på strandflatene på Haramsøya og Flemsøya med stor tidsdybde. Her finnes sjøbruk, kombinert med jordbruk, fiskefyret Ulla som er fredet, rester av gårdsanlegg og graver fra jernalder/middelalder hvor bl.a. en av Nord-Europas største gullskatter er funnet.	Kommunen ligger i landskapsregion 20 <i>Kystbygdene på Vestlandet.</i> Øyene fra Vigra til Harøy ligger forholdsvis tett og har mange like trekk. Haramsøya og Flemsøya er karakteristiske med fjellet som omkranses av forholdsvis brede strandflater. Strandflatelandskap. Fjellsidene har et til dels goldt og urørt preg. Dyrka areal på platåene.	
Verdi	Unikt å finne så mange som fem bekkende par av jaktfalk innenfor planområdet. Flere rødlistearter. Dette gjør at verdien for fugleliv blir stor. Viktig friluftslivsområde for øyboerne – ikke alternativer.	Strandflatene på øyene har store kulturhistoriske verdier. Små verdier innenfor planområdene på fjellet.	Store kulturhistoriske kvaliteter på strandflatene til øyene i dette landskapet. Verdifullt landskap, men ikke unikt. Oppfattelsen av verdi vil kunne endres dersom mange av de andre vindkraftprosjektene blir realisert.	
Konflikter	Tiltaket ligger så nært fjellsidene at det kan påvirke hekking. Bestandsnedgang for rovfugl må påregnes. Vandrefalk vurderes som mest utsatt. De fleste av disse er på Flemsøya. Fuglelivet i fjæra blir lite påvirket direkte. Fem møller på Flemsøya beslaglegger populært turområde. Visuell konsekvens.	Indirekte konflikt med viktige kulturmiljø innenfor influensområdet. Flere av møllene på Haramsfjellet er tenkt plassert så langt ut mot kanten av fjellet at de kan bli godt synlige fra strandflatene på Haramsøya	Stor kontrast til kystlandskapet. Tettheten mellom øyene gjør at vindkraftanlegget får stor visuell effekt for landskapskvaliteter på naboøyer. Plasseringen oppe på fjellet på to ulike øyer midt i øygruppen gjør at den visuelle effekten berører alle øyene.	
Konfliktkategori	D	С	D	

Prosjektendring/ avbøtende tiltak	Ta bort de fem møllene som er tenkt lokalisert på Flemsøya. Dette reduserer konfliktnivået i forhold til både ornitologi og friluftsliv.	Fjerning av vindmøllene på Flemsfjellet og plassering av møllene litt lenger inn på Haramsfjellet, avbøter noen negative konsekvenser for kulturmiljøene på	Fjerning av møller på Flemsfjellet minsker den visuelle effekten lengst nord i øygruppen, og fra den nordlige strandflaten på Haramsøy.
		strandflatene på Haramsøya.	
Mulig	с		С
konfliktkategori			
etter endring		l	
Kunnskaps-	OK fagrapporter, litt unøyaktige.	Konsekvensutredning med dårlige	Influensområdet er for snevert avgrenset. Rapporten
grunnlag	Konklusjoner på fuglefauna noe skjevt		mangler visualisering, landskapsfaglig analyse og
	framstilt i KU-rapporten.	Undersøkelsesplikten kml. § 9 ikke	konsekvensvurdering av hele anlegget. Kunnskap
		gjennomført for tiltaket.	om kumulative effekter vil være særdeles viktig i
		]	denne regionen med omfattende utbyggingsplaner.

# Attachment 2

HARAM, Møre og Romsdal

Tematisk konfliktvurdering for vindkraft - tema Miljø og kulturminner Skjema søknad, Haram Alt. 3, Tilleggsutredning, 30.03.06

Prosjekt	Haram, Alt. 3 (Haramsøy)	Kommune	Haram	Fylke	Møre og Romsdal
Utbygger	Haram Kraft AS	Antall møller	16	Planområde	
Produksjon	Inntil 225 GWh	Størrelse møller	Inntil 4,5 MW	Annet	132 kV kraftlinje

Konflikt-	Vurderingen gjelder gjennomføring av prosjektet med plassering av møller	Konflikt-	С
beskrivelse	kun på Haramsøya, jfr. alt. 3 i konsesjonssøknaden. For de øvrige alterna-	kate gori for	<b>U</b>
tema miljø og	tive ne opprettholdes den tidligere konfliktvurderingen av 30.09.05. Prosjekt-	tema Miljø og	
kulturminner	et vil gi stor endring av landskapsbildet på kyststrekningen. Forventet	kulturminner	
	bestandsnedgang for rovfugl. Visuell påvirkning av områder for friluftsliv.		
	Visuell påvirkning av kulturmiljøene. Konfliktpotensialet er betydelig		
	redusert ift. opprinnelig søknad. Redusert konfliktnivå i forhold til fugleliv		
	har medført endret konfliktkategori fra D til C for hhv. naturmiljø og og		
	landskap. Redusert konflikt, men uendret konfliktkategori, for kulturminner		
	og kulturmiljø. Virkninger av kraftlinjen er bare i liten grad trukket inn i		
	konfliktvurderingen.		

Undertema	Naturmiljø	Kulturminner og kulturmiljø	Landskap
<b>Beskrivelse</b> Rikt fugleliv på øya. Hekkende rov-		En rekke kjente kulturminner og kultur-	Kommunen ligger i landskapsregion 20 Kyst-
	fugl i fjellsidene. Kystlynghei og myr i	miljøer med stor tidsdybde på strandflaten.	bygdene på Vestlandet. Øyene fra Vigra til Harøy
	planområdene + dyrka mark. Edel-	Her finnes sjøbruk, kombinert med jordbruk,	ligger forholdsvis tett og har mange like trekk.
	løvskogreservat nær traséen for	fiskefyret Ulla som er fredet, rester av	Haramsøya og Flemsøya er karakteristiske med
	kraftlinja.	gårdsanlegg og graver fra jernalder/middel-	fjellet som omkranses av forholdsvis brede strand-
		alder hvor bl.a. en av Nord-Europas største	flater. Strandflatelandskap. Fjellsidene har et til dels
		gullskatter er funnet.	goldt og urørt preg. Dyrka areal på platåene.

Verdi	Unikt å finne så mange som fem	Strandflatene har store kulturhistoriske	Store kulturhistoriske kvaliteter på strandflatene til
	hekkende par av vandrefalk innenfor	verdier. Små verdier innenfor planområdet.	øyene i dette landskapet.
	planområdet. Flere rødlistearter. Dette		
	gjør at verdien for fugleliv blir stor.		
	Viktig friluftslivsområde for øyboerne.		
Konflikter	Tiltaket ligger så nært fjellsidene at det	Indirekte konflikt med viktige kulturmiljø	Vindkraftverket har en eksponert plassering.
	kan påvirke hekking. Bestandsnedgang	innenfor influensområdet. Direkte konflikt	Tettheten mellom øyene gjør at anlegget får stor
	for rovfugl må påregnes. Fuglelivet i	med fredete kulturminner kan oppstå i	visuell effekt for landskapskvaliteter på naboøyer.
	fjæra blir lite påvirket direkte. Visuell	forbindelse med utbedring av adkomstveier,	
	konsekvens for friluftslivet.	kraftledninger og sjøkabel som kan komme i	
		direkte konflikt med marine kulturminner.	
		Stort potensial for marine kulturminner i	
		Longvafjorden.	
Konfliktkategori	С	С	С
Prosjektendring/			
avbøtende tiltak			
Mulig			
konfliktkate gori			
etter endring			
Opplysninger om	Havsul II er planlagt i sjøområdene like u	utenfor Haramsøya, og de visuelle influensområ	ådene vil overlappe.
ove rlappe nde			
influensområde			
med andre			
vindkraftverk			
Kunnskaps-	OK fagrapporter.	Konsekvensutredning.	Influensområdet er snevert avgrenset.
grunnlag		Undersøkelsesplikten kml. § 9 er ikke	Kunnskap om kumulative effekter vil være særdeles
5		gjennomført for tiltaket, verken for	viktig i denne regionen med omfattende
		planområdet eller kraftlinjetraséer.	utbyggingsplaner.

Direktoratet for naturforvaltning / Riksantikvaren 2006