# İSTANBUL WIND POWER PLANT PROJECT

# UNIVERSAL WIND ENERJI A.Ş.

## Environmental and Social Due Diligence Study

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|---|---|
| **Riskonet ref:** | **0821_CABA Grup_İstanbul RES** |
| Prepared by: | Prof. Dr. Feryal Turan (Social Expert)<br>Okan Can (Biodiversity Expert)<br>Özlem Emgen (Environmental and Safety Expert) |
| Peer Review by: | Ron de Bruijn |
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## Abbreviations

| Abbreviation | Explanation |
|---|---|
| DD | Due Diligence |
| GN | Observation Point |
| E | East |
| EHS | Environmental Health and Safety |
| EIA | Environmental Impact Assessment |
| EMRA | Energy Market Regulatory Authority |
| EP | Equator Principles |
| ES or E&S | Environmental and Social |
| ESAP | Environmental and Social Action Plan |
| ESDD | Environmental and Social Due Diligence |
| ESIA | Environmental and Social Impact Assessment |
| ESMS | Environmental and Social Management System |
| HR | Human Resources |
| IUCN | International Union for Conservation of Nature |
| IFC | International Finance Corporation |
| ILO | International Labour Organisation |
| KBS | Key Biodiversity Area |
| Lender/Lenders | BayernLB, Euler Hermes and DZ BANK AG – DEUTSCHE ZENTRAL-GENOSSENSCHAFTSBANK, FRANKFURT AM MAIN (”DZ BANK”) |
| LTA | Lost Time Accident |
| MWe | Megawatt electrical |
| MWm | Megawatt mechanical |
| N | North |
| NA | Not Applicable |
| Nartus | Nartus Enerji ve Çevre Yat. Müş. Mad. San. Dış. Tic. Ltd. Şti. |
| NGO | Non-Governmental Organisation |
| OSGB | Ortak Sağlık Güvenlik Birimi – Common Health and Safety Unit |
| PPE | Personal protective equipment |
| PSs | Performance Standard(s) |
| SEP | Stakeholder Engagement Plan |
| SKHKKY | Industrial Air Pollution Control Regulation |
| T | Turbine |
| UWE | Universal Wind Enerji Elektrik Üretim A.Ş. |
| WDS | Wildlife Development Site |
| WPP | Wind Power Plant |

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# 1 Executive Summary

This report is prepared for environmental and social due diligence of new wind power plant of Universal Wind Enerji Elektrik Üretim A.Ş. ( hereafter referred as 'UWE'). The İstanbul Wind Power Plant (hereafter referred as 'İstanbul WPP') is located at Province of İstanbul, District of Çatalca in forest area.

In order to carry out this due diligence study, an approach including review of the available data provided by UWE per the document request list shared, site visits to observe the present condition of İstanbul WPP site and interviews with the stakeholders including the UWE and contractor staff, and village headmen of the nearby villages to assess their view on the environmental and social impacts of the plant. During the due diligence study presence of reasonable measures to avoid, minimize or mitigate any adverse change in environmental and social conditions and impacts on public health and safety has been assessed in line with Turkish environmental and social legislation and IFC guidelines and performance standards as well as Equator Principles and ILO conventions.

This due diligence report includes information about İstanbul WPP, the region it is located, findings of the document review, interviews with the stakeholders, and the site visits, which are executed on August 27, 2021 and September 1, 2021. Findings are supported by photographs.

An Environmental and Social Action Plan (ESAP) is prepared per national legislation and international best practices and included in the due diligence report. A gap analysis is performed to identify the gaps with necessary measures and actions required, and/or including items inserted in the gap analysis to maintain the sustainability of the environmental and social subjects in the future. It is important to comply with the requirements in these tables.

İstanbul WPP has a total capacity of 211,2 MWm/200 MWe capacity with 44 Nordex turbines. The plant will produce 700.000.000 kWh/year upon completion.

UWE has acquired the project in early 2021 with T19 completed and the transmission line corridor and poles ready. UWE continues the project with construction, erection, commissioning and operation of remaining turbines and installation of the electric transmission lines. The switchyard area is completed and in use. There are safety signs posted.

Existing forest roads with widening some of the roads and opening new roads to exact turbine location had been executed. It is important to arrange the road drainage to prevent any damage.

The construction and operation of the turbines are ongoing at the same time. The operation team is working in shift structure of 12 hours in 3 shifts. The construction activities are carried out between 08:00 to 18:000 for 6 days by UWE's contractors. UWE is trying to support local employment as long as the job and applicant has matching qualification and working with local companies and suppliers as much as possible. There are no disabled and/or female employee. Employment process is ongoing.

No alternative location was assessed for the project since project was acquired from another party. During the environmental impact study of the İstanbul WPP, no alternative was assessed mainly due to capacity of the project.

The İstanbul WPP is located in a region where there are other wind power plants either in operation, under construction and/or in design phase. Therefore, it is important to evaluate the cumulative impact of the project. All necessary studies for noise, flicker and biodiversity shall cover cumulative impact. Modelling studies for flicker impact, blade/ice throw, visual and noise are completed, and the selective risk assessment report shared concluded that İstanbul WPP is not expected to have negative impact. In addition, stakeholder management is also important due to increasing numbers of wind plants in the region.

The Electricity Generation License Update, Forestry Permit and Environmental Impact Assessment Approval, Master Plan Approval have been secured for İstanbul WPP, which is positive for the continuity of the project. However, there are two court cases about İstanbul WPP. One of the cases, which is about EIA approval of the project, is rejected by the administration court and upper court has approved the decision of local court on September 14, 2021. The other one is regarding the forestry permit and use of forest area. The court is waiting for the expert report to determine about the case. It is crucial to follow-up the progress of the cases and receive immediate information on these upon progress.

İstanbul WPP is continuing to receive necessary permits and licenses. There are certain opinion letters that needs to be submitted per the commitment of environmental impact assessment process. The deadlines shall be closely followed for the permit and license related studies.

There is no residential and/or livestock areas in the immediate vicinity of İstanbul WPP since the plant is totally placed in forest with no expropriation and/or land acquisition requirement, which makes it easier to manage the stakeholder expectations. There are closeby villages to the project. The most affected village can be considered as Binkılıç due to the access road passing through the village and camp site being located there. Meeting has been organized at Binkılıç and Yalıköyt villages. Activities to keep public informed will continue. Stakeholder Engagement Plan has been prepared.

İstanbul WPP area is very close to Çilingöz Wild Life Development Site making the biodiversity studies for the project crucial. The biodiversity and sustainable management of living natural resources are going with limited outcomes issued yet. Communication of these studies are important to evaluate the status of the studies and comment on the further measures required for İstanbul WPP, if needed.

There are no cultural and historical heritages in the İstanbul WPP area, which will bring no impact on cultural heritage. Nevertheless, İstanbul WPP has necessary preparation for chance find to take action in case of meeting any cultural and/or historical heritage during the construction phase.

There are ongoing trainings about health and safety as well as some biodiversity trainings. The trainings shall continue with adding environmental trainings and other safety and biodiversity trainings to have a corporate culture on environmental and social subjects.

There is a common health and safety unit giving compulsory health and safety services. İstanbul WPP is getting support and service from Nartus for environmental and social subjects. One of the site staff

has been temporarily assigned to carry out the environmental and social activities with the support of project team at the headquarters. A full time environmental and social expert has been assigned at the headquarters on December 1, 2021.

Forest fires is another important subject for İstanbul WPP due to being located in the forest. It is also important for the team to be ready to respond the forest fires.

Environmental and social document review subjects are presented in details in Section 5 of this report. Observations made during the site visit are summarized in Section 7 with highlighting the parts that requires action in bold and italic.

In addition, a media search has been executed for İstanbul WPP to assess the presence of project in news and understand the approaches. Findings are presented in Section 6 of the report.

All of the gaps identified are presented in Section 8 of this report while the environmental and social action plan prepared in line with IFC performance standards are presented in Section 9.

One of the main basis for this study is IFC performance standards a summary of the status of İstanbul WPP against the performance standards is presented below:

| **IFC Performance Standard** | **Status of İstanbul WPP** |
|---|---|
| PS 1: Assessment and Management of Environmental and Social Risks and Impacts | The project is in line with PS 1 requirements for the moment. |
| PS 2: Labor and Working Conditions | The project is in line with PS 2 requirements for the moment. |
| PS 3: Resource Efficiency and Pollution Prevention | There are deviations from the PS which needs further action to be taken. |
| PS 4: Community Health, Safety and Security | There are deviations from the PS which needs further action to be taken. |
| PS 5: Land Acquisition and Involuntary Resettlement | Not applicable |
| PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources | There are derogation from the PS which needs further action to be taken. |
| PS 7: Indigenous People | Not applicable |
| PS 8 Cultural Heritage | Chance Find Plan is ready .<br>There is no cultural heritage in the region. |

The main findings for İstanbul WPP can be summarized as

- Stakeholder engagement plan has been prepared. UWE has started acting on this item with organizing a public participation meeting at Binkılıç and Yalıköy. These meetings shall continue with participation of all affected parties.

- Grievance mechanism started to be use more efficiently with internal and external logs including the action taken.
- Development and implementation of environmental and social management system is required for İstanbul WPP with documentation, trainings and team. Document development of the system has been completed and their initial implementation is in place. The documentation is shared with staff and contractors. Implementation of the system shall continue with the actions required and proper record keeping for having a sustainable system.
- The initial studies to comply with international best practices such as IFC is in place. It is more important now to continue taking action to comply with the remaining items and continue implementation of the actions.
- The selected risk assessment report date 25.10.2021 concluded that flicker impact, visual impact, blade/ice throw impact and noise impact are not expected under realistic condition and no negative impact is expected from İstanbul WPP on sensitive receptors in the environment.
- Completion of the biodiversity related studies and continue the studies.

UWE has taken several actions upon the issue of the initial version of this due diligence report. This report has been updated according to actions shared. UWE has committed to improve the system per the requirements of ESAP and aware that the Lenders have right to ask additional measures according to performance of the implementation of the environmental and social management system.

Considering the subjects evaluated under this scope of work health and safety has more advance system compared to other subjects followed by management of social impacts, then environmental subjects. Biodiversity is the last item since the studies take time collect data and write report. Further implementation of the environmental and social management system with employment of the senior environmental and social staff at the headquaters to coordinate these studies will facilitate an efficient and sustainable management system.

This report is prepared on behalf of Bayern LB, Euler Hermes and DZ BANK AG – DEUTSCHE ZENTRAL-GENOSSENSCHAFTSBANK, FRANKFURT AM MAIN (”DZ BANK”) (All together referred as Lender) .

# 2 Introduction

## 2.1. General Information

UWE is constructing, is and will be operating İstanbul WPP, which is located in Atatürk neighborhood of Binkılıç Village of Çatalca District of Province of İstanbul. Location of the power plant from Google Earth is presented in Figure 1.

Caba Group owns 100% of the shares of UWE. Caba Group has acquired İstanbul WPP project from Dirkshof on 13.01. 2021. The Turbine T19's temporary acceptance was made; transmission line corridor was opened with the poles erected and the electrical transmission lines installation work remaining when Caba Group acquired the project.

The power plant will have a total capacity of 211,2 MWm/200 MWe capacity with 43*4,8 MWm/4,55 MWe and 1*4,8 MWm/4,35 Mwe turbines. The project will produce 700.000.000 kWh/year. The site has a license area of 26.359.314,662 $m^2$.

The project life cycle started with 100 turbines in the same region. There were changes made in the turbine models employed for the power plant with the available new technology within time. The final approved design of the project, which is subject to this due diligence, has 44 turbines in total. With the number reduction of turbines, the license area of the project reduced to 26.359.314,662 $m^2$ from 92.494.938,368 $m^2$, which is very positive for the impact area of the project since İstanbul WPP is located in forest area which needs forest clearance. All turbines are supplied from Nordex.

There are 15 poles with the total transmission length of 4,835 km. The 380 kV transmission line is connected to Hamitabat-Alibeyköy transmission line with a branch circuit. The transmission line poles, and the transmission line corridor can be seen from Figure 2.

The workplace notification for UWE was made on 25.03.2021.

Ataseven Group is performing the project management for the construction period. There are several contractors carrying out various tasks at the site. These include Nordex (turbines), Mudo İnşaat (construction), Taşkınlar (foundation), BCK İnşaat (construction), Çavuşoğlu İnşaat (excavation), Eldis (cabling) and Güngör Elektrik (electrical work-completed).

## 2.2. Location Card

| | | |
|---|---|---|
| Name | Universal Wind Enerji Elektrik Üretim A.Ş. | |
| Address | Atatürk Mah. Binkılıç Mevkii Çatalca | |
| City | İstanbul | |
| Country | Türkiye | |
| Age of Facility | Under construction | |
| Fuel Used | Operation Period: Only for emergency generator<br>Construction Period: For construction equipment, machinery and vehicles. | |
| Number of Employees | **Construction Period**<br>UWE: 12 (operation team has already started)<br>Nordex: 20<br>Contractors: 78 | **Operation Period**<br>UWE: 16 - forecasted<br>Nordex: 5 (maintenance) |
| Working Hours<br>Number of Shift | **Construction Period:**<br>6 days a week<br>Turbine erection according to wind condition.<br><br>**Operation Period:**<br>Turbines are in operation according to wind condition.<br>Staff is working in shifts 7*24 hours | |
| Coordinate * | Latitude<br>$41^0$25'50.76'' N | Longitude<br>$28^0$15'37.49'' E |

*: It is taken from Google Earth at the location of switchyard.

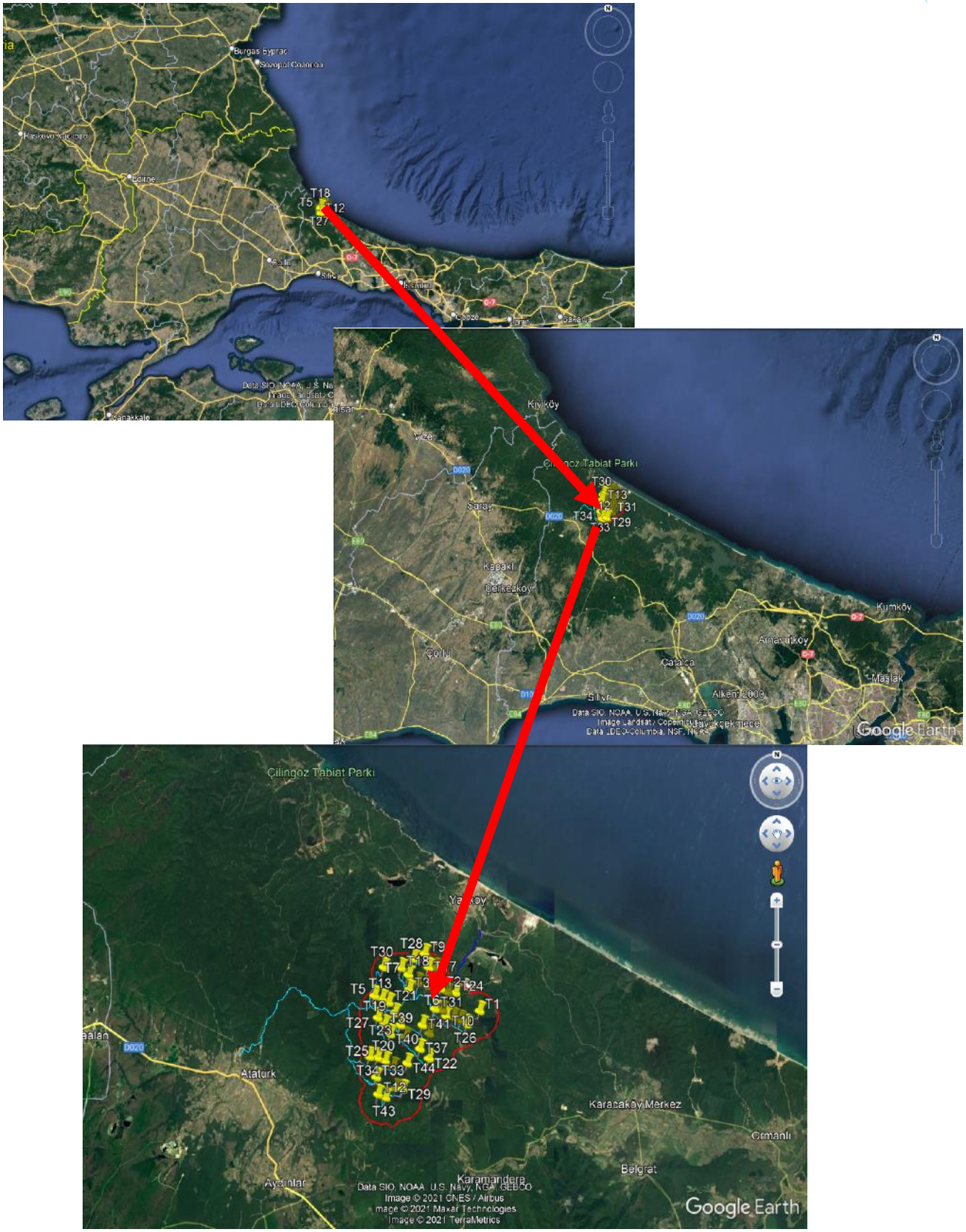



**Figure 1. Location of İstanbul Wind Power Plant**

(Google Earth - September 2021)

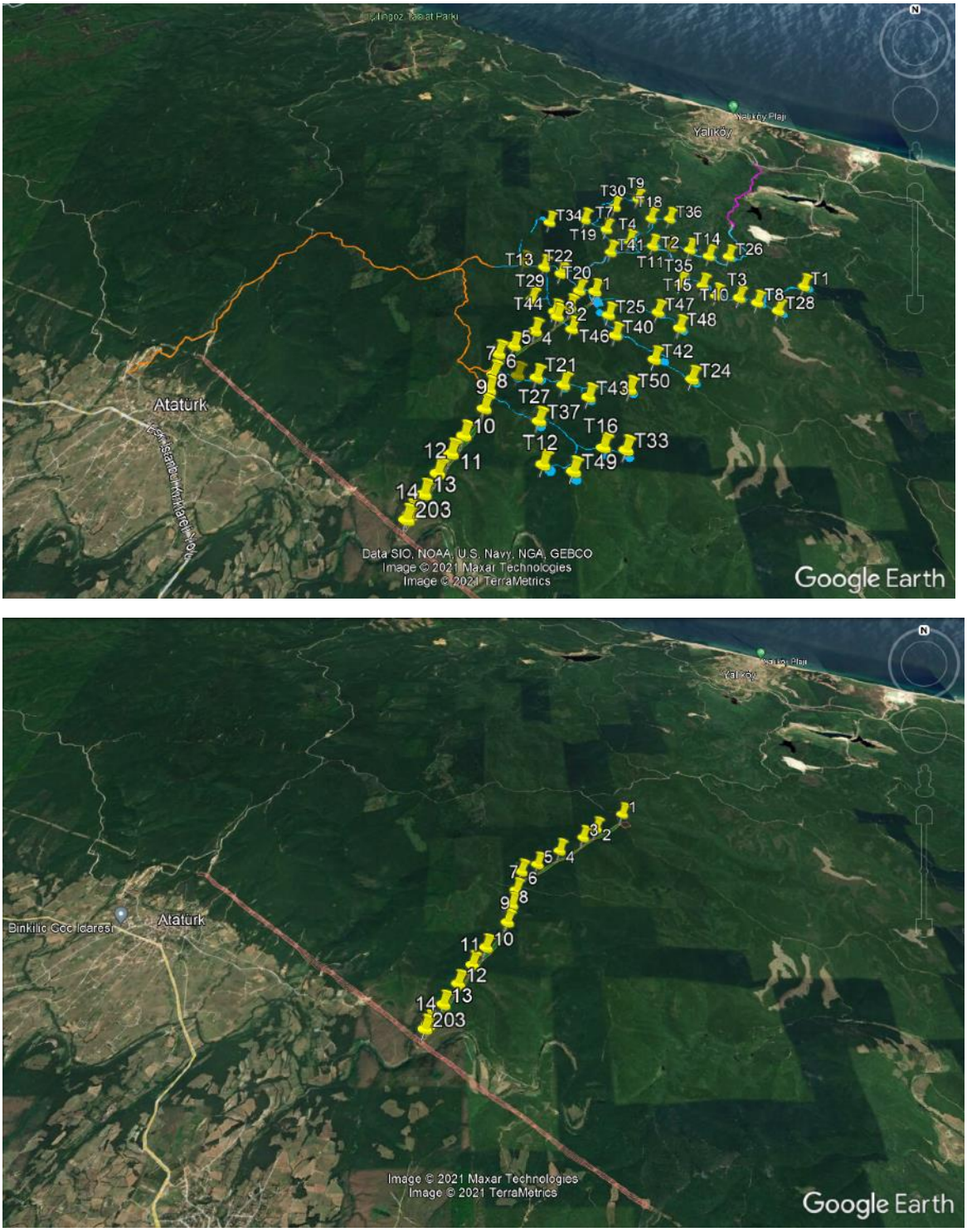



**Figure 2. Transmission Line of İstanbul WPP**

(Top: With the Turbine Locations. Bottom: Without Turbines)

The basis for the study is a site visit with the attendance of following people:

| Contact Name | Company | Function |
|---|---|---|
| Serkan Ekiz | CABA Group | Mechatronic Engineer |
| Aslı Pınarcı | CABA Group | Survey Engineer / Permit Specialist |
| Cihat Evliyağlu | CABA Group | Construction Coordinator |
| İsmail Kaynarsoy | UWE | İstanbul WPP Manager |
| Bertan Korkmaz | Ataseven Group | General Manager<br>UWE Project Management |
| Emre Leventoğlu | Ataseven Group | Project Manager<br>UWE Project Management |
| Battal Beştaş | BETA OSGB | Safety Expert<br>UWE and Contractors' |
| M. Berkay Şahin | Nartus Enerji ve Çevre Yat. Müş. Mad. San. Dış. Tic. Ltd. Şti. | Biologist<br>UWE E&S Consultant |
| Özge Öcalan | Nartus Enerji ve Çevre Yat. Müş. Mad. San. Dış. Tic. Ltd. Şti. | General Manager / Biologist<br>UWE E&S Consultant |
| Okan Can | Sigun Ekolojik Danışmanlık Şirketi | Riskonet Biodiversity Expert |
| Özlem Emgen | Riskonet Danışmanlık ve Eğitim Ltd. Şti. | Environmental and Safety Expert |

In addition to above listed people, some staff of UWE and contractors were randomly interviewed during the site visits.

Sedat Durgun, who is the village headman of Atatürk neighbourhood of Binkılıç location, is also interviewed during site visit.

Village headmen of Binkılıç, Yalıköy, Karacaköy and Karamandere were contacted to get their view on their project by telephone. One of them do not want to talk about project. The others shared their view on the project. Istıranca Forest Chief was interviewed on telephone as well.

Tuğba Yaşar, who is the human resources manager of CABA Group is also interviewed on telephone regarding the HR issues of UWE.

Feride Altıntaş, attorney of Caba Group was consulted via telephone about the existing court cases of UWE.

Emre Tanrıverdi, new environmental and social expert of Caba Group is also introduced on the telephone.

This report is prepared by using the documents shared (please refer to Annex I). The results of interviews and site observations are included in the related sections of this report .

## 2.3 Objectives

The objective of the assignment is to conduct an environmental, social and human rights due diligence (”ESDD”) of the Project.

Due to the coverage to be granted by Euler Hermes, OECD Common Approach for the Environmental and Social due diligence process will be followed for this Project. According to OECD Common approaches the Project is in Cat A and it is an explicit pre-condition for the cover to share the ESIA, ESMS and ESAPs as well as Stakeholder Engagement Plan and get their feedback and final approval.

In line with the “Guidance for Consultants on The Contents of A Report for an Independent Environmental and Social Due Diligence Review” (http://equator-principles.com/wp-content/uploads/2017/03/ep_guidance_for_consultants_independent_review_march_2014.pdf), the objectives of the Assignment will be to critically assess the existing documentation for Project against the requirements of the Equator Principles (EP) IV, and the IFC Performance Standards 2012(PSs), General EHS Guideline, EHS Guideline for Wind Energy, ILO Conventions signed and ratified by Turkey, all ILO conventions covering core labor standards and all ILO conventions covering basic terms and conditions of employment. In addition, applicable local, national and international environmental, social and human rights legislation and standards of Turkey will be followed. This includes the following:

- Review the plans of the Project, help assess project site sensitivities and in conjunction with the Project category.
- Comparison of the existing EIA’s, ESMS, EMAP, and available documentation, etc. to the IFC PSs. The most significant differences are likely to be related to the Social and Biodiversity provisions as set forth in PSs.
- Review of land acquisition and potential involuntary resettlement and economic displacement impacts that may occur, or have occurred, as a result of the Project. Verify Project documentation relating to land acquisition for compliance with IFC PS5, if required;
- The review of the environmental and social documents will require a critical assessment of the social and environmental baseline data to ensure these are robust enough to inform Project design decisions, a review of alternatives, to ensure that alternatives were considered for Project design as well as application of the mitigation hierarchy, and the development of mitigation measures (local EIAs often do not provide enough detail in the development of mitigation measures); and,
- Based on the above for the Project being considered for financing:
  - clearly identify any gaps in the existing documentation and processes relative to the IFC PSs and relevant EHS Guidelines;
  - identify a scope of work that would be required to fill the gaps;
  - develop an Environmental and Social Action Plan (ESAP) for planned WPP Project;

## 2.4. Scope of Work

Lender request the preparation of an ESDD study for the Project, which will be based on the available data/information/document to be provided by the Company and include appropriate site visit(s) to observe the recent present condition of the site. The Project shall include all reasonable measures to avoid, minimize or mitigate any adverse change in environmental and social conditions and impacts on public health and safety, especially with respect to any disproportionate impacts on any group of people as a result of their gender, age, ethnicity, disability, socio-economic status and/or other personal characteristics.

The Consultant will carry out the following tasks within this scope of work:

### 2.4.1. TASK 1: REVIEW OF AVAILABLE DATA

The Consultant will:

- Review corporate data
- Review the existing EIA and other relevant Project documentation available, including (but not limited to) those related to: scoping assessments, site selection, route alignment, land expropriation, cultural heritage, information/study of deforested area, protected and designated areas, bird survey and habitat reports, bat survey and habitat report, environmental noise and acoustic report, report on impact assessment on bees, report on cumulative ecological impact, ecosystem assessment report, floristic assessment report, public disclosure and consultation, zoning, planning and construction permit applications, supporting documentation and permits, various permitting processes (especially for forest areas), community impacts and risks;
- Identify and assess relevant regional and strategic environmental and social assessments or studies that affect the Project. Where regional or strategic assessments or studies are identified and assessed, these will be documented in the report (for instance cumulative impact assessment, shadow affect, etc.). Any relevant gaps shall be addressed in the ESAP.
- Complete a media search about the Project and Company to determine the extent to which there has been relevant news coverage and, if so, whether any of the issues will require additional verification during the initial review and site visit. If no relevant issues are identified through this process the Consultant will include a statement to this effect within its results.
- Review the project preparation activities and procedures undertaken following the EIA preparation to date, to assess whether or not all potential environmental and social impacts, issues and risks have been assessed and mitigated. Activities and procedures to be reviewed could include (but are not limited to) those related to selecting the site, land expropriation, labor management, stakeholder engagement, biodiversity and cultural heritage issues;
- Review the environmental, health and safety and social obligations that have been defined to manage environmental and social risks and meet the IFC PSs; including the status of relevant permits and authorizations; and,
- Review records of the Company's stakeholder identification results and engagement activities/plans including managing of grievance which may have occurred under the planned project.

### 2.4.2. TASK 2: SITE VISIT

Following the review of background information, the Consultant will visit the site, and carry out the following tasks for the Projects:

- Review the status of site activities, and controls implemented to address environmental, social and health and safety issues by the site contractors and the Company.
- Review such practices relative to good international practice, national legislation and commitments that are presented in the existing EIA document or associated documentation.
- Review the potential for the presence of any historical environmental and social issues present on site.
- Review the sites sensitivity in terms of cultural, ecological and landscape impacts;
- Obtain an understanding of the site setting, in terms of social and environmental issues, to augment the understanding as provided in the background data. It is assumed that various maps and other visual documents will be available from personnel on site to assist on this understanding. This task should include a review of facilities in the proximity of the site and a review of residences, local businesses (including informal activities), public buildings, social/leisure spaces, forms of livelihood and communities located directly adjacent to or near the site.
- Establish further understanding of the Company's stakeholder engagement activities and plans.
- Conduct discussions with site personnel regarding on-site control and management of environmental and social issues. This should cover the mitigation measures and monitoring proposed in the EIA as well as implementation of protection measures by the Company and contractors.

### 2.4.3. TASK 3: REPORTING

Upon completion of Tasks 1 and 2, the Consultant shall prepare the following reports of the findings.

#### 2.4.3.1. Information Review Summary/Red-Flag Report for the Project

On completion of the site visit the Consultant will deliver an Information Review Summary/Red Flag Report to present the initial findings of the work to-date. This report will summarize the key issues that have been identified including site and if necessary, will highlight the need for any additional studies, e.g. in relation to livelihood, social assessment, deforestation, retrenchment, biodiversity, etc.

#### 2.4.3.2. Environmental and Social Due Diligence (ESDD) for Project

ESDD Report (including Gap Analysis) will be prepared. The Consultant shall review:

(a) Analyze the Project documentation and information gathered to assess compliance with:

- National requirements for environmental, social, health and safety, and public consultation issues;

- IFC PSs (2012) including relevant EHS Guidelines.
- Equator Principles (IV)
- ILO conventions

(b) Review the environmental, health and safety and social mitigation measures proposed for adequacy.

(c) Where gaps are identified, assess the extent of risk posed by each identified gap; i.e. what does this mean to the Project and does the presence of this gap pose a significant risk, or is it merely a procedural gap. Any identified gap must be assessed in terms of risk significance (high, medium or low) and an opinion provided as to whether the risk issue should be further assessed and/or considered for avoidance, minimization and mitigation, and how it should be monitored.

(d) Produce a Gap Analysis using the results of the review of available data and site visit. The report shall highlight gaps in relation to the IFC PSs and proposed solutions, which are to be discussed with the Garanti and the Client. The ESDD Report will include Gap Analysis Table and ESAP.

#### 2.4.3.3. Environmental and Social Action Plan (ESAP) for the Project

For the Project, the Consultant shall develop an ESAP to address gaps and issues identified during the Project appraisal. The ESAP should be based on the due diligence findings and will be presented and sequenced by IFC PSs. Actions identified must be numbered, clearly defined, indicate a time frame for completion (with specific reference to those actions that must be completed before financial close if appropriate) and a responsible party specified. Further, each item must contain a description of the factors that will be used to determine when the identified action is closed/completed. The Consultant should also inform the Company about any material budget implications of ESAP items (although this information may not be required in the public domain).

## 2.5 Exclusions

All of the items listed below are excluded from the scope of work.

- Preparation and/or revision of any of documentation not listed in the scope of work and/or any documentation that is identified as missing during execution of any task is out of scope of this work.
- Preparation, application and follow up of permit, license, accreditation and /or certification, etc. is out of scope of this work.
- Any audit, consultancy and training work not mentioned within this scope of work is out of scope of work.
- Sampling, analysis, test, measurement, monitoring, modelling and/or simulation is out of scope of works.
- Design, test, implementation and/or control of any engineering system will not be carried out.
- No additional site visits will be carried out in case any of the related parties could not be interviewed during the agreed timetable.
- Organisation of stakeholder meeting is out of scope of this proposal.
- Ornithological, bat, bee, and flora and fauna related field works are out of scope of this study. (Document based review is included in the study)

## 2.6. Legal Notification

Riskonet performed this study with objectivity and within confidentiality. We do not have any relation with the parties involved in this project other than this scope of work.

The report is prepared with review of the documents shared listed in Annex I, interview with stakeholders and site observations. Observations are limited to the time spent on site.

We assume that all information provided whether it is written, or verbal is correct and reliable unless stated otherwise.

The report has been prepared with thoroughness, but the content is limited since the survey has been conducted within a limited time scale. This report does not replace any legal audit.

## 2.7. Limitations

There was  no limitation faced during the site visits. The available documentation from the document list was shared even in draft form.  There was no restriction to talk to any stakeholder.

# 3 Regulatory Framework – International Guidelines

The regulatory framework and the international best practices referred in this study are listed below.

| Source | Explanation |
|---|---|
| Equator Principles | Equator Principles IV, A financial industry benchmark for determining, assessing and managing environmental and social risk in projects |
| IFC | IFC Environmental, Health and Safety (EHS) Guidelines General EHS Guidelines |
| IFC | IFC Environmental, Health and Safety (EHS) Guidelines, Wind Power Plants |
| IFC | IFC Performance Standards (PS) |
| EU | Environmental Impact Assessment Directive 2011/92/EU |
| EU | Environmental Impact Assessment Amendment Directive 2014/52/EU |
| National Legislation / | Çevre Kanunu /Environmental Law |
| National Legislation / | Çevresel Etki Değerlendirmesi (ÇED) Yönetmeliği /Environmental Impact Assessment Regulation |
| National Legislation / | Çevre İzin ve Lisans Yönetmelik / Environmental Permit and License Regulation |
| National Legislation / | Çevre Denetimi Yönetmeliği / Environmental Audit Regulation |
| National Legislation / | Büyük Endüstriyel Kazaların Önlenmesi ve Etkilerinin Azaltılması Hakkında Yönetmelik /SEVESO Directive |
| National Legislation / | Çevre Görevlisi ve Çevre Danışmanlık Firmaları Yönetmeliği / Environmental Officer and Environmental Consulting Firms Regulation |
| National Legislation / | Atık Yönetimi Yönetmeliği / Waste Management Regulation |
| National Legislation / | Hafriyat Toprağı, İnşaat ve Yıkıntı Atıkların Kontrolü Yönetmeliği /Construction, Excavation and Demolishing Waste Control Regulation |
| National Legislation / | Atık Pil ve Akümülatörlerin Kontrolü Yönetmeliği / Waste Battery and Accumulator Control Regulation |
| National Legislation / | Bitkisel Atık Yağların Kontrolü Yönetmeliği / Waste Vegatable Oil Control Regulation |
| National Legislation / | Tıbbi Atıkların Kontrolü Yönetmeliği / Medical Waste Control Regulation |
| National Legislation / | Ömrünü Tamamlamış Lastikler Yönetmeliği / Old Tires Regulation |
| National Legislation / | Atık Yağların Kontrolü Yönetmeliği / Waste Oil Control Regulation |
| National Legislation / | Ömrünü Tamamlamış Araçların Kontrolü Hakkında Yönetmelik / Old Vehicles Regualtion |
| National Legislation / | Ambalaj Atıklarının Kontrolü Yönetmeliği / Packaging Waste Control Regulation |

| Source | Explanation |
|---|---|
| National Legislation / | Atık Elektrikli Ve Elektronik Eşyaların Kontrolü Yönetmeliği / Waste Electrical and Electronical Equipment Control Regulation |
| National Legislation / | Su Kirliliği Kontrolü Yönetmeliği (SKKY) / Water Pollution Control Regulation |
| National Legislation / | Yeraltı Sularının Kirlenmeye ve Bozulmaya Karşı Korunması Hakkında Yönetmelik Protection of Groundwater from Pollution Regulation |
| National Legislation / | Tehlikeli Maddelerin Su ve Çevresinde Neden Olduğu Kirliliğin Kontrolü Yönetmeliği / Contamination of Water Bodies by Hazardous Material Regulation |
| National Legislation / | Çevresel Gürültünün Değerlendirilmesi ve Yönetimi Yönetmeliği (ÇGDY) / Environmental Noise Assessment and Management Regulation |
| National Legislation / | Poliklorlu Bifenil ve Poliklorlu Terfenillerin Kontrollü Hakkında Yönetmelik / PCB and Polychlorinated Terphenyls Control Regulation |
| National Legislation / | Sanayi Kaynaklı Hava Kirliliğin Kontrolü Yönetmeliği (SKHKKY) / Industrial Originated Air Pollution Control Regulation |
| National Legislation / | Hava Kalitesi Değerlendirme ve Yönetimi Yönetmeliği / Air Quality Assessment and Management Regulation |
| National Legislation / | Sürekli Emisyon Ölçüm Sistemleri Tebliği / Continuous Emission Monitoring System Communique |
| National Legislation / | Sera Gazı Emisyonlarının Takibi Hakkında Yönetmelik / Monitoring of Greenhouse Gases Emission Regulation |
| National Legislation / | Sera Gazı Emisyonlarının İzlenmesi Ve Raporlanması Hakkında Tebliğ / Monitoring and Reporting of Greenhouse Gases Communique |
| National Legislation / | Ozon Tabakasını İncelten Maddeler Yönetmeliği / Regulation on Material Damaging the Ozone Layer |
| National Legislation / | Egzoz Gazı Emisyon Kontrolü İle Benzin Ve Motorin Kalitesi Yönetmeliği / Exhaust Gas Emission Control and Fuel Quality Regulation |
| National Legislation / | Toprak Kirliliğinin Kontrolü Ve Noktasal Kaynaklı Kirlenmiş Sahalar Hakkında Yönetmelik (TKKNKKSY) - Control of Soil Pollution and Contaminated Soil Regulation |
| National Legislation / | İyonlaştırıcı Olmayan Radyasyonun Olumsuz Etkilerinden Çevre Ve Halkın Sağlığının Korunmasına Yönelik Alınması Gereken Tedbirlere İlişkin Yönetmelik / Measures for Non-ionizing radiation Regulation |
| National Legislation / | Koku Oluşturan Emisyonların Kontrolü Hakkında Yönetmelik / Odour Emission Control Regulation |
| National Legislation / | Sulak Alanların Korunması Yönetmeliği / Protection of Wetlands Regulation |
| National Legislation / | Maddelerin Ve Karışımların Sınıflandırılması, Etiketlenmesi Ve Ambalajlanması Hakkında Yönetmelik / Labelling, Categorisation and Packaging of Material and Mixtures Regulation |
| National Legislation / | İşyeri Açma Ve Çalışma Ruhsatları Yönetmeliği / Workplace Opening and Operation License Regulation |
| National Legislation / | İş Kanunu / Labour Law |
| National Legislation / | İş Sağlığı Ve Güvenliği Kanunu / HS Law |
| National Legislation / | İş Sağlığı Ve Güvenliği Hakkında Yönetmeliği / HS Regulation |

| Source | Explanation |
|---|---|
| National Legislation / | İş Sağlığı Ve Güvenliğine İlişkin İşyeri Tehlike Sınıfları Tebliği / HS Hazard Class Communique |
| National Legislation / | İş Sağlığı Ve Güvenliği Risk Değerlendirmesi Yönetmeliği / HS Risk Assessment Regulation |
| National Legislation / | İş Sağlığı Ve Güvenliği Hizmetleri Yönetmeliği / HS Services Regulation |
| National Legislation / | İş Güvenliği Uzmanlarının Görev, Yetki, Sorumluluk Ve Eğitimleri Hakkında Yönetmelik / Regulation on Training, Roles, Responsibilities, Authorities of Safety Experts Regulation |
| National Legislation / | İş Sağlığı Ve Güvenliği Kurulları Hakkında Yönetmelik / HS Committee Regulation |
| National Legislation / | Ekranlı Araçlarla Çalışmalarda Sağlık Ve Güvenlik Önlemleri Hakkında Yönetmelik / HS Rules for Working with Visual Display Units Regulation |
| National Legislation / | İş Ekipmanlarının Kullanımında Sağlık Ve Güvenlik Şartları Yönetmeliği / HS Rules for Work Equipment Regulation |
| National Legislation / | Makina Koruyucuları Yönetmeliği / Machinery Protection Regulation |
| National Legislation / | Çalışanların Patlayıcı Ortamların Tehlikelerinden Korunması Hakkında Yönetmelik / Protection of Labours from Explosive Environment Regulation |
| National Legislation / | Çalışanların İş Sağlığı Ve Güvenliği Eğitimlerinin Usul Ve Esasları Hakkında Yönetmelik / Rules on HS Training of Labours Regulation |
| National Legislation / | İşyerlerinde Acil Durumlar Hakkında Yönetmelik / Emergency Response Regulation |
| National Legislation / | İlkyardım Yönetmeliği / First Aid Regulation |
| National Legislation / | Kişisel Koruyucu Donanım Yönetmelik. / Personel Protective Equipment Regulation |
| National Legislation / | İşyeri Bina Ve Eklentilerinde Alınacak Sağlık Ve Güvenlik Tedbirleri Hakkında Yönetmelik / HS Measures for Buildings and Attachments Regulation |
| National Legislation / | İşyeri Hekimi Ve Diğer Sağlık Personelinin Görev, Yetki, Sorumluluk Ve Eğitimleri Hakkında Yönetmelik / Regulation on Training, Roles, Responsibilities, Authorities of Occupational Doctors and Other Health Staff |
| National Legislation / | Elle Taşıma İşleri Yönetmeliği / Manual Handling Regulation |
| National Legislation / | Kanserojen Veya Mutajen Maddelerle Çalışmalarda Sağlık Ve Güvenlik Önlemleri Hakkında Yönetmelik / Protection of Labour from Cancerogenic and Mutagenic Material Regulation |
| National Legislation / | Kimyasal Maddelerle Çalışmalarda Sağlık Ve Güvenlik Önlemleri Hakkında Yönetmelik / Protection of Labour from Chemical Risk Regulation |
| National Legislation / | Biyolojik Etkenlere Maruziyet Risklerinin Önlenmesi Hakkında Yönetmelik / Protection of Labour from Biological Risk Regulation |
| National Legislation / | Çalışanların Titreşimle İlgili Risklerden Korunmalarına Dair Yönetmelik / Protection of Labour from Vibration Risk Regulation |
| National Legislation / | Çalışanların Gürültü İlgili Risklerden Korunmalarına Dair Yönetmelik / Protection of Labour from Noise Risk Regulation |
| National Legislation / | Sağlık Ve Güvenlik İşaretleri Yönetmeliği / HS Signs Regulation |
| National Legislation / | Asbestle Çalışmalarda Sağlık Ve Güvenlik Önlemleri Hakkında Yönetmelik / HS Measures for Working with Asbestos Regulation |
| National Legislation / | Yapı İşlerinde İş Sağlığı Ve Güvenliği Yönetmeliği / HS Rules for Construction Work |

| Source | Explanation |
|---|---|
| National Legislation / | Tozla Mücadele Yönetmeliği / Measures for Dust Regulation |
| National Legislation / | Tozla Mücadele İle İlgili Uygulamalara İlişkin Tebliğ / Measures for Dust Application Communique |
| National Legislation / | Binaların Yangından Korunması Yönetmeliği / Protection of Buildings from Fire Regulation |
| National Legislation / | Tehlikeli Ve Çok Tehlikeli Sınıfta Yer Alan İşlerde Çalıştırılacakların Mesleki Eğitimlerine Dair Yönetmelik / Vocational Training Requirments for Hazardous and Very Hazardous Work Regulation |
| National Legislation / | Asansör Periyodik Kontrol Yönetmeliği / Periodical Control of Lift Regulatiın |
| National Legislation / | Asansör İşletme, Bakım Ve Periyodik Kontrol Yönetmeliği / Lift Operation, Maintenance and Periodical Control Regulation |
| National Legislation / | Gebe Ve Emziren Kadınların Çalıştırılma Şartlarıyla Emzirme Odaları Ve Çocuk Bakım Yurtlarına Dair Yönetmelik / Pregnant, Breastfeeding Woman and Childcare Facilities Regulation |
| National Legislation / | Kadın İşçilerin Gece Postalarında Çalıştırılma Koşulları Hakkında Yönetmelik / Shift Work of Woman Labour Regulation |
| National Legislation / | Sağlık Kuralları Bakımından Günce Azami Yedi Buçuk Saat veya Daha Az Çalışılması Gereken İşler Hakkında Yönetmelik / Works that require working less than 7,5 hours or less Regulation |
| National Legislation / | Geçici veya Belirli Süreli İşlerde İş Sağlığı ve Güvenliği Hakkında Yönetmelik / Temporary and Fixed Time Work HS Regulation |
| National Legislation / | Yıllık Ücretli İzin Yönetmeliği / Annual Leave Regulation |
| National Legislation / | İş Kanunu'na İlişkin Çalışma Süreleri Yönetmeliği / Working Hours Regulation |
| National Legislation / | İş Kanunu'na İlişkin Fazla Çalışma ve Fazla Sürelerle Çalışma Yönetmeliği / Overtime Regulation |
| National Legislation / | Postalar Halinde Çalışılarak Yürütülen İşlerde Çalışmalara İlişkin Özel Usul ve Esaslar Hakkında Yönetmeliği / Working Rules for Shift Work Regulation |
| National Legislation / | Hazırlama, Tamamlama Ve Temizleme İşleri Yönetmeliği / Works to prepare, finish and Cleaning Regulation |
| National Legislation / | Asgari Ücret Yönetmeliği / Minimum Salary Regulation |
| National Legislation / | Çocuk ve Genç İşçileri Çalıştırma Usul ve Esasları Hakkında Yönetmelik / Employment of Child and Youth Labor Regulation |
| National Legislation / | Özel Güvenlik Hizmetlerine Dair Kanunun Uygulanmasına İlişkin Yönetmelik / Security Law Application Regulation |
| National Legislation / | Alt İşverenlik Yönetmeliği / Contractor Regulation |
| National Legislation / | İş Sağlığı ve Güvenliği ile İlgili Çalışan Temsilcisinin Nitelikleri Ve Seçilme Usul Ve Esaslarına İlişkin Tebliği / HS Employee Representative Qualtiy, Election Communique |
| National Legislation / | İnsani Tüketim Amaçlı Sular Hakkında Yönetmelik / Human Consumption Water Regulation |
| National Legislation / | Tek Kullanımlık Maske, Eldiven gibi Kişisel Hijyen Malzeme Atıklarının Yönetiminde Covid-19 Tedbirleri Genelgesi (2020/12) / Circular on the Measures of Covid-19 in the |

| Source | Explanation |
|---|---|
| | Management of Wastes Arising from Use of Personal Hygiene Equipment such as masks, gloves |
| Management System | ISO 14001 |
| Management System | OHSAS 18001 / ISO 45001 |
| Management System | ISO 50001 |

www.mevzuat.gov.tr is used for checking the latest version of the applicable legislation.
www.equator-principles.com is used for referring Equator Principle requirements.
https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/ is used for project categorization, IFC Performance Standards and IFC Guidelines.

# 4 Project Details

## 4.1. Region and Site Properties

İstanbul WPP is in Çatalca District of İstanbul Province of Marmara Region. The site is approximately 65 km Central İstanbul and 27 km to Central Çatalca.

The economy of the area is based on forestry, agriculture and livestock. There are industrial premises; nevertheless, there are no major industrial and commercial premises near the project site. However, there are several other wind power projects and mines in the region.

All of the İstanbul WPP project site is in forest area.

The area is under mixture of Mediterranean and Black Sea climate with precipitation and snowfall during the winter, sunny and hot during the summer.

The site is (please refer to Figure 3)

- In forest
- Very Close to Çilingöz Wild Life Development Site (EIA area is 300 m to the boundaries of this area, making biodiversity studies crucial)

There is no cultural heritage and/or archeological (SİT) in the project area according to letter of Cultural Heritage and Museum General Directorate of Ministry of Culture and Tourism dated 28.01.2020 and No. 39682869-165.02.02-E.87763. The letter requires notification of authorities in case of finding any heritage.

The project site is not in any protection area of water resources according to the letter of State Water Works General Directorate of Ministry of Agriculture and Forestry dated 28.02.202 and No. 47153325-045.01-137763.

The project area is not in any of the areas protected under the conventions of Barcelona (regarding Mediterranean Sea), Bern (marine turtle and Mediterranean seal) and Ramsar (wetlands).

There is one natural monument (Subaşı Havuzlar Tabiat Anıtı) in Çatalca District, and it is approximately 28 km away from İstanbul WPP project site, which is out of the impact area of the project.

There is no assigned grassland and any areas that are under the coverage of Grassland Law (Law No:4342) in the project area.

The project area is not under the coverage of Olive Cultivation and Reclamation (Law No: 3573).

There is honey forest at a distance of 9 km to the license area of İstanbul WPP.


TP: Natural Park, YHGS: Wild Life Development Area, Proje Alanı: Project Area, TKA: Natural Conservation Area, Gölü: Lake

**Figure 3. Project Area, Natural Parks and Protection Area**

(Supplied by Nartus)

There are no water bodies protected in the Project area. There are side creeks feeding Binkılıç Creek in the Project area. The nearest water body is Dağdelen Natural Mineral Water Resource, which is 13 km to the EIA license area.

There is no military facility, military security zone and prohibited military zone in the region. There is a letter (dated 17.07.2019 and No. 47741811-340.01-260135) of Ministry of National Defense General Staff indicating that there is no restriction for İstanbul WPP.

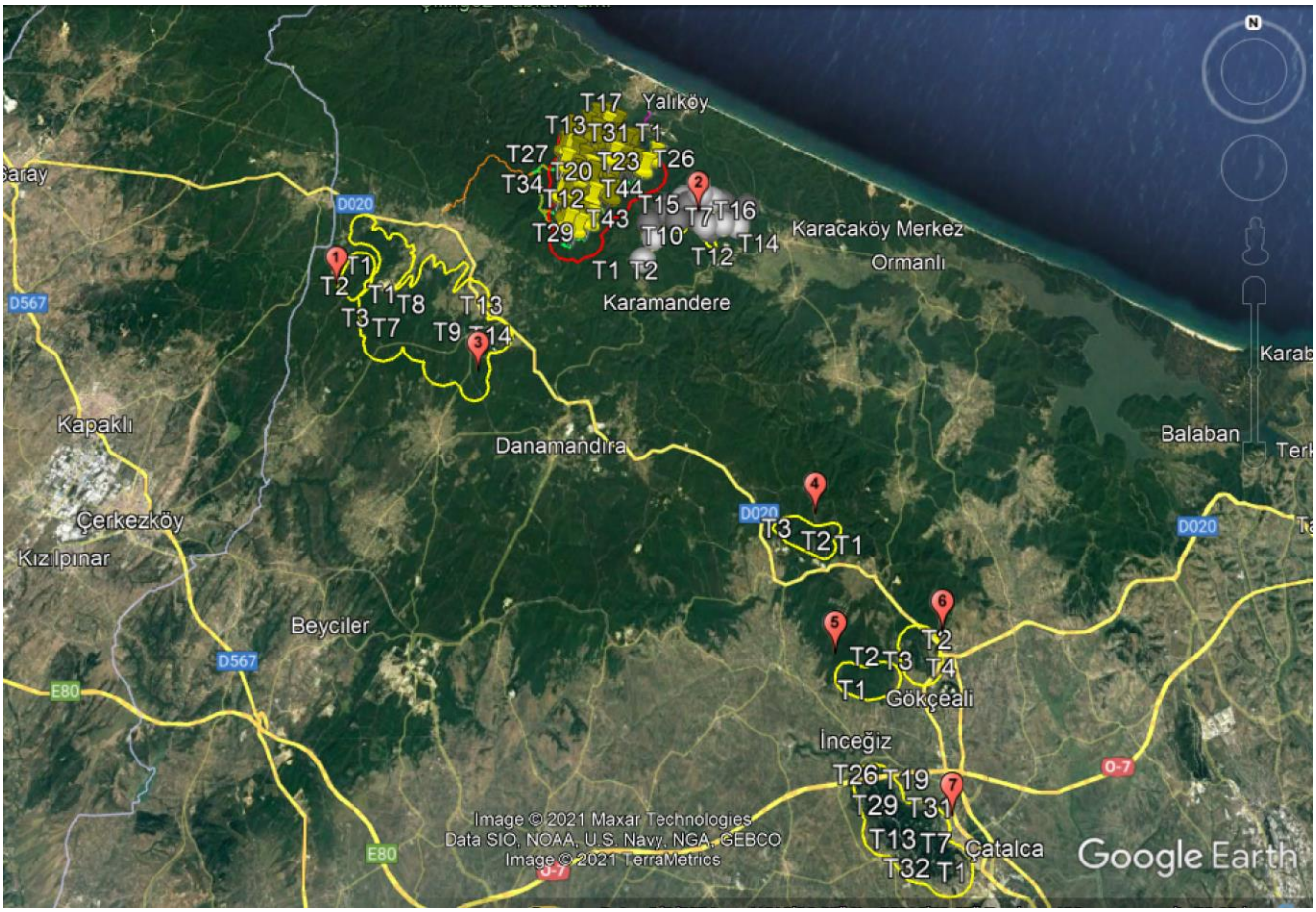
İstanbul region is an area where there are lots of wind power investments. The wind power plants in the region are shown in Figure 4, 5 and 6.

The nearest wind power plant project close to İstanbul WPP license area belongs to Bali Rüzgar Elektrik Enerjii Üretim A.Ş., which is around 700 m. The other nearest is Istres, which is 4 km and Ertan Enerji which is 8.6 km. The distance between these projects is less  than 10 km hence cumulative impact is expected from the projects, therefore noise modelling shall be carried out considering at least these wind power plants. Biodiversity studies shall also consider the impact of these wind power plants.


**Figure 4. Wind Power Projects in İstanbul and Kırklareli**

(Reference: Tureb, Wind Power Plants, January 2021)

In addition to the neighborhood plants in the province of İstanbul, there is another plant in the province of Kırklareli, which is Kıyıköy located at approximately 13 km to site. This plant with some other plants is shown in Figure 6.




| Red Ballon No | Company* | Number of Turbines | Distance to İstanbul WPP License Area, km** |
|---|---|---|---|
| 1 | Ertan Enerji | 2 | 8,6 |
| 2 | Bali Rüzgar (Hacıbey) | 18 | 0,7 |
| 3 | İstres (Tayakadın) | 15 | 4 |
| 4 | Serbest Enerji | 4 | 15 |
| 5 | Simay Elektrik (Küptepe) | 4 | 23 |
| 6 | Süper Elektrik (Çataltepe) | 4 | 23 |
| 7 | Sanko Enerji | 38 | 27 |
| *: Neighborhood Plants are given by UWE<br>**: Distances are approximate distances from Google Earth. | | | |

**Figure 5. Neighborhood Plants in the Province of İstanbul**

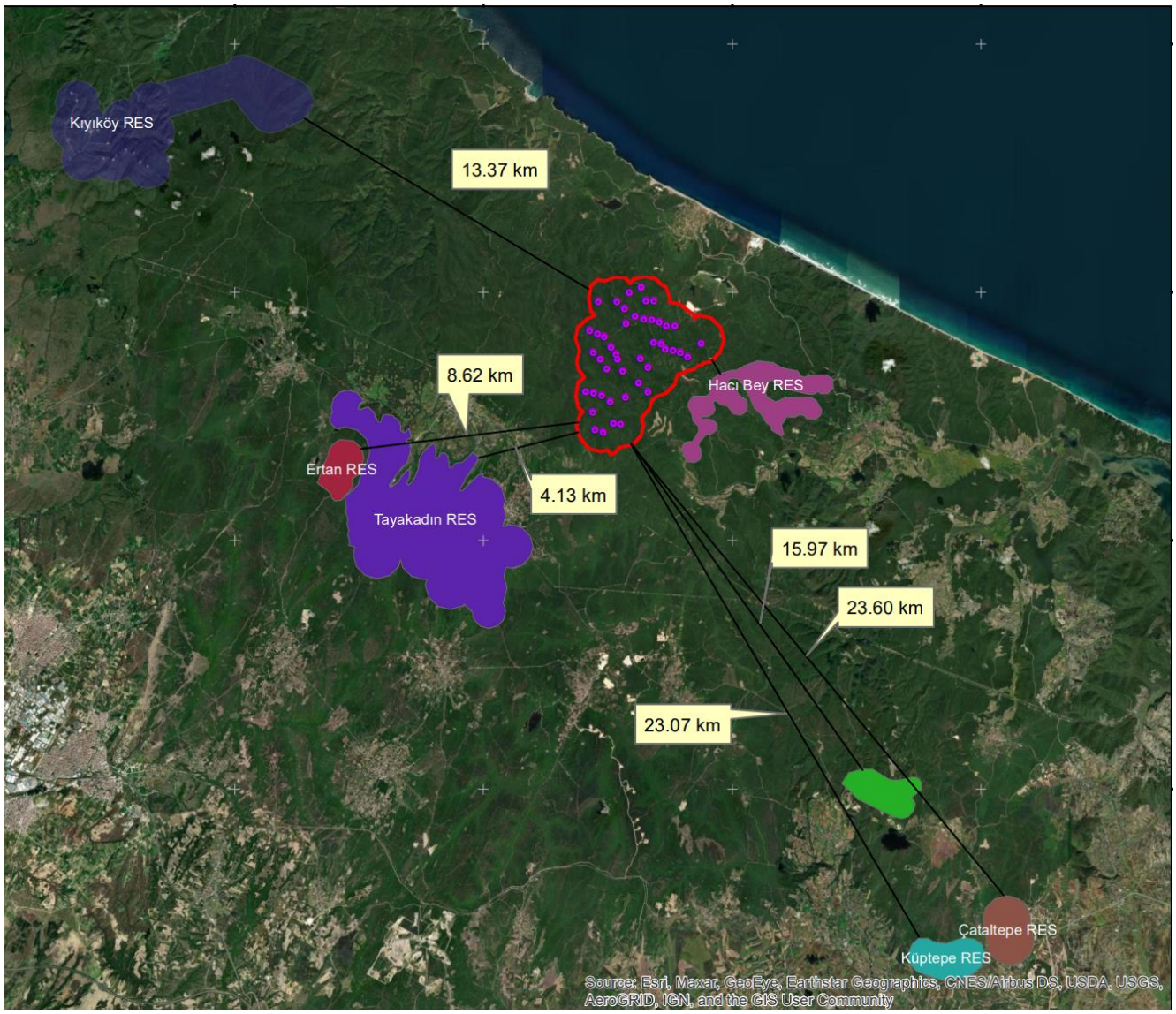



**Figure 6. Neighbourhood Wind Power Plants**

(Supplied by Nartus)

## 4.2. Brief Description of the Project

İstanbul WPP is located in the forestry area (permit process is completed. Please refer to Section 5.3). The site clearance had been carried out by the Forestry Department.

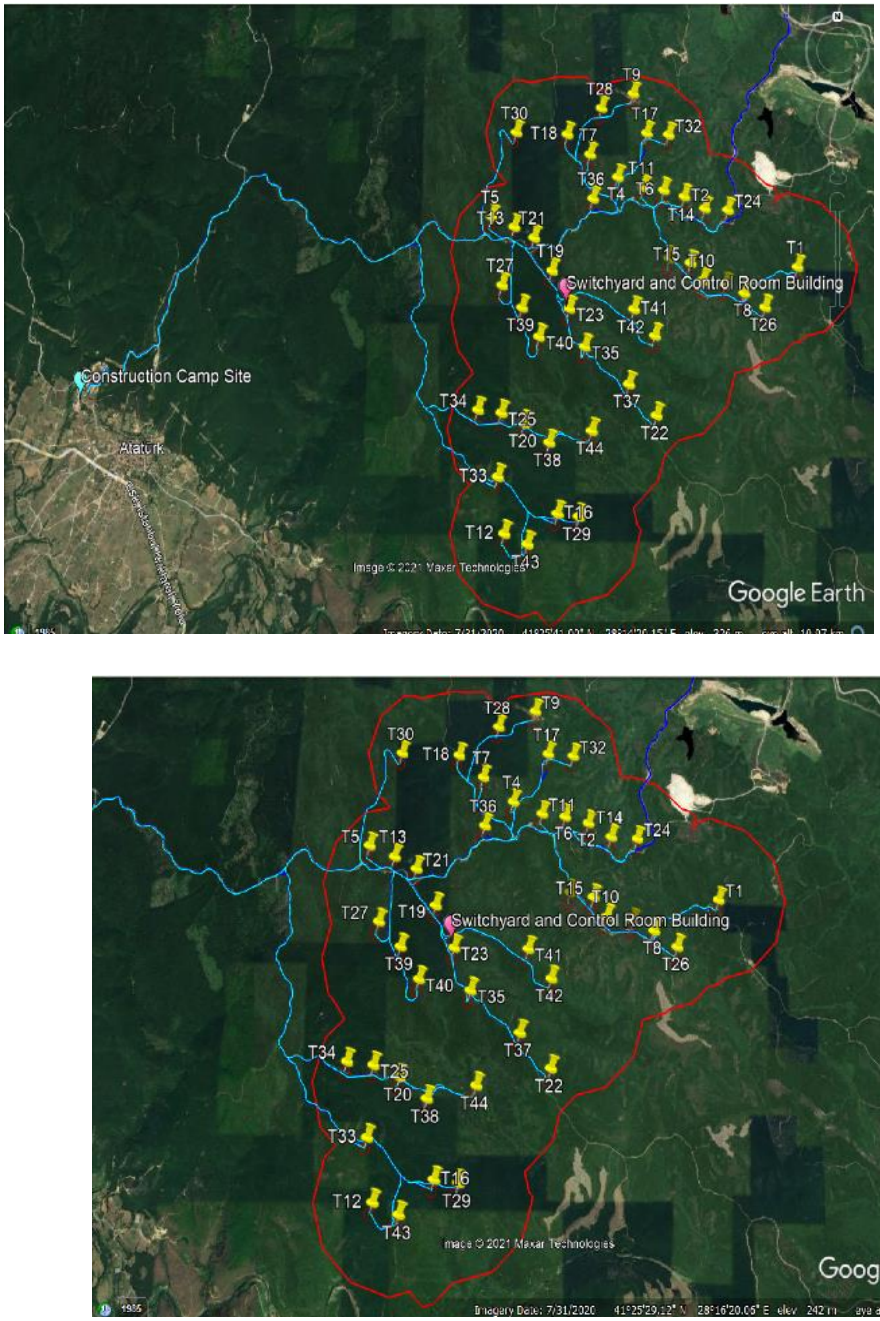






**Figure 7. Project Area and Camp Site**

*(Google Earth, September 2021)*

Unfortunately, the number of trees cleared actually is not available with UWE. The forestry department determines the trees to be removed and forest workers cut and removes them from field and hands over the site to UWE***. The number of the trees removed actually shall be learned and recorded from the authority.***

The project area and the camp site with the nearest residential area of Binkılıç can be seen from Figure 7. Being located in the forest area, there is no nearby residential houses and/or livestock areas in the project area. The distance between camp site and switchyard area is approximately 12 km.

The closest villages are Binkılıç, Yalıköy and Karamandere. These can be seen from Figure 8. The distances between Binkılıç, Yalıköy and Karamandere and the İstanbul WPP are approximately 2,5 km, 2 km and 4,3 km respectively (from Google Earth). Binkılıç can be evaluated as the most impacted village due to the transportation route passing through the village and the main construction camp being located in the village.

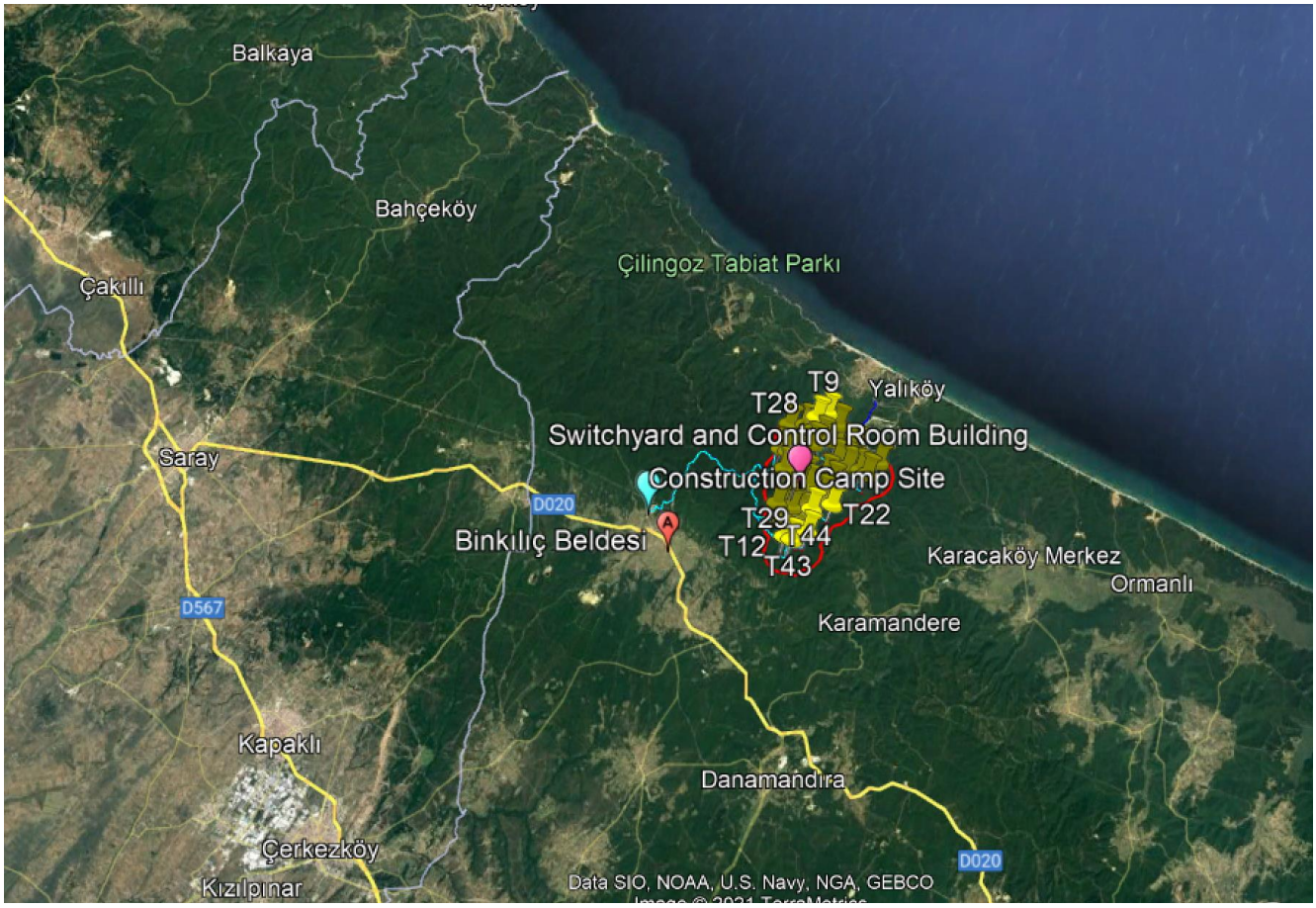



**Figure 8. Project Area and Nearest Locations**

(Google Earth September 2021)

The project does not require any resettlement and/or land acquisition of private land. Therefore, the project has any involuntary resettlement impacts. Any agricultural land has not been affected by the project.

The fishing communities are not affected because the project site is located far from the coastline.

The license area of İstanbul WPP is 26.359.314,662 $m^2$. 9.952,546 $m^2$ of the 13.731,00 $m^2$ permitted area for each turbine is used with a reduced number of tree clearance.

The İstanbul WPP has approved master plan of 1/5.000 scale and implementation development plan of 1/1.000 scale from the Ministry of Environment and Urbanization, Directorate General of Spatial Planning dated 18.08.2020 with No. 50892535-305.99-E.172885.

A “49-year Electric Power Generation License” (License No. EÜ/9535-1/04604, dated September 10, 2020) for the İstanbul WPP has been issued by the Energy Market Regulatory Authority (EMRA).

There is a consent letter of Ministry of Energy and Natural Resources, General Directorate of Mineral Resources on 29.01.2020 with No. 65116061-045.99-E.7839.

There is a nearby mine whose license area coincides with UWE license area. During the permitting process of İstanbul WPP, a consent was obtained from the owner of the mine dated 26.12.2018 with No.134695.

There is a series of communication between UWE, Ministry of Transport and Infrastructure, General Directorate Of State Airports Authority Department of Electronics, and Directorate General of Civil Aviation due to Istanbul Airport (which is approximately 38 km to İstanbul WPP according to Google Earth) and the turbines being in the impact area of radar system of the airport (there will be further studies for the radar system upon completion of the project by the authorities and İstanbul WPP may have to cover the cost of additional measures that need to be taken per the consent). A technical report from TÜBiTAK was prepared and approval of each authority was obtained for İstanbul WPP. There is opinion letter of Ministry of Transport and Infrastructure General Directorate of State Airports Authority Department of Electronics on 11.05.2020 with no. 44334596-455.99-E.38171 stating that there is no restriction for the project. The letter requires UWE to notify General Directorate of State Airports Authority Department of Electronics upon being operational. There is a consent letter of Ministry Transportation and Infrastructure, Directorate General of Civil Aviation on 20.05.2020 with No. 467/5750-105.03-E.8587 and another letter dated 14.05.2020 These letters require notification about completion of turbines. UWE has notifed the authority on 16.11.2021 for the turbines in operation and stated that the authority will also be informed about the other turbines. No response received back yet.

There is no direct requirement from the General Command of Map but as a common practice to submit the turbine information to the General Command of Map. The application to General Command of Map was made on October 5, 2021 and the information about turbines is submitted to the authority.

There is consent of İstanbul Water and Sewage Works Administration on 04.03.2020 with 11255029-310.01-E.20200113497.

There is consent of State Water Works 14. Regional Department on 28.02.2020 with 47153325-149-345302 with indicating that site is within protection zone of Karamandere Dam; therefore, all works

carried out shall take the water level of the dam as 130 m. State Water Works also required site to act for protection creek beds, whether or not with flow and do not dump any waste to them. During site visit no creek beds were observed near the turbine locations and site is constructing drainage to prevent any damage in the region. There was no waste dumping around the site as well.

There is consent letter of Ministry of Agriculture and Forestry General Directorate of Nature Conservation and National Parks dated 06.02.2020 with No 22802673-754-E.441767 indicating that site is very close to Çilingöz Wild Life Development Site and on the bird migration route; therefore, requiring site not to make any activities in the development area and carry out biodiversity studies.

There are alternative access roads to arrive Binkılıç village; from where the İstanbul WPP site access is. The road used by the project is through Danamandıra to Binkılıç and then to Saray. From Binkılıç the forest road, which is the existing road between Binkılıç and Yalıköy villages, is used to access to project site with some renovation works on the existing roads and opening roads to exact turbine location.

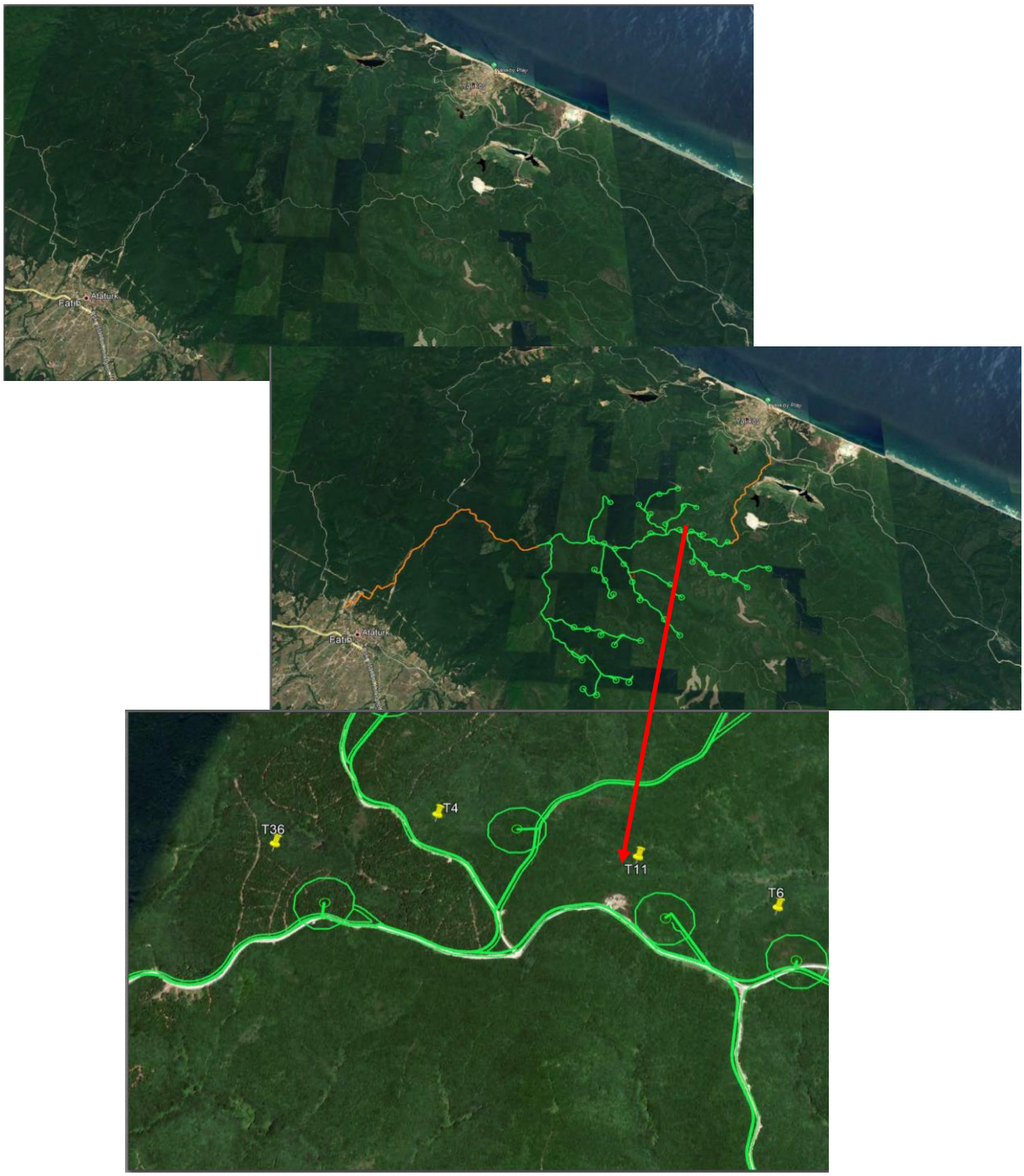
Having alternative roads/routes to access Binkılıç, unfortunately, there is no alternative access road other than Binkılıç and Yalıköy road to site (please refer to Figure 9). The access to turbine locations and switchyard area is through the branches from Binkılıç-Yalıköy/forest road. Its worth's mentioning that some of these branches are also existing forest roads. In case of not being able to use this road, there is no alternative route available.

The details of the works executed about the roads are shared by site management and given in Table 4.1. New road of 6.807,00 m was made, 31.190,00 m's of existing forest road was used, and extension was made on 21.764,00 m of existing forest roads for the needs of transportation of turbine parts. These road amounts are in line with the areas given in forestry permit (please refer to Section 5.3)

The maps showing the impacts of the roads on the forest area are presented in Figure 9. Visual is supplied by UWE.

The necessary work on the roads were determined by consultation with Nordex and Nordex's transportation company (Hareket). Hareket has prepared a route survey report which assessed the obstacle and what is needed to overcome the obstacle safely.

Turbine 19 (T19), whose temporary acceptance was done on 30.12.2020 was the first turbine to be completed with 4,8 MWm/4,55 MWe capacity. The completed turbines acceptances are made upon completion by the Ministry of Energy and Natural Resources. In addition, construction permit is secured for the turbines which are completed. Currently, 13 turbines have construction permits available. The Table 4.2 shows the status of the turbines and their capacity. Erection work continues according to the weather conditions. UWE still aims to finish the commissioning until the end of December. However, there can be shift due to weather conditions.




(Top: View of area without the new roads, Middle: View of Area with the roads of İstanbul WPP Orange is the existing village road; green ones are the roads used by İstanbul WPP. Some part of the green section is also exiting roads though. Bottom: Closer Look to One of the Road Branches)

**Figure 9. Roads of İstanbul WPP**

(Supplied by UWE)

**Table 4-1 Roads of İstanbul WPP supplied by UWE**

| New Roads Made in the Forest | | | |
|---|---|---|---|
| **Roads** | **Average Width (m)** | **Length (m)** | **$m^2$** |
| **T33 Road** | 7,5 | 36 | 270 |
| **T43-T12 Road** | 7,5 | 35 | 262,5 |
| **T16-T29 Road** | 7,5 | 200 | 1500 |
| **T25 Road** | 7,5 | 438 | 3285 |
| **T20 Road** | 7,5 | 55 | 412,5 |
| **T38Road** | 7,5 | 145 | 1087,5 |
| **T13 Road** | 7,5 | 160 | 1200 |
| **T21 Road** | 7,5 | 135 | 1012,5 |
| **T27 Road** | 7,5 | 180 | 1350 |
| **Switchyard T42 Road** | 7,5 | 1660 | 12450 |
| **T35 Road** | 7,5 | 75 | 562,5 |
| **T37 Roads** | 7,5 | 165 | 1237,5 |
| **T22 Crane Road** | 7,5 | 210 | 1575 |
| **T11 Road** | 7,5 | 130 | 975 |
| **T31 Road** | 7,5 | 141 | 1057,5 |
| **T10 Crane Road** | 7,5 | 170 | 1275 |
| **T26 Road** | 7,5 | 280 | 2100 |
| **T1 BOM Road** | 7,5 | 200 | 1500 |
| **T2 Road** | 7,5 | 88 | 660 |
| **T14 Road** | 7,5 | 54 | 405 |
| **T17 Road** | 7,5 | 152 | 1140 |
| **T17 Junction- T32 Road** | 7,5 | 600 | 4500 |
| **T7 Road** | 7,5 | 198 | 1485 |
| **T18-T9 Road** | 7,5 | 1000 | 7500 |
| **T30 Road** | 7,5 | 300 | 2250 |
| **General Sum** | | **6.807,00** | **51.052,50** |
| **Existing Roads Used** | | | |
| **Roads on the Existing Roads** | **Length (m)** | **Average Width (m)** | **$m^2$** |
| **T33-T34 Junction T16 Road** | 2480 | 3,5 | 8680 |
| **T33-34 Junction T44 Road** | 2455 | 3,5 | 8592,5 |
| **Main Road-T33.T34 Junction** | 2600 | 4 | 10400 |

| | | | |
|---|---|---|---|
| **T21-T1 Road** | 5131 | 4 | 20524 |
| **T11 Junction -24 Road** | 1442 | 4 | 5768 |
| **T36 Junction -17 Road** | 900 | 4 | 3600 |
| **T36 Junction T18 Road** | 930 | 3,5 | 3255 |
| **T19-T23 Road** | 530 | 4 | 2120 |
| **T30 Road** | 1620 | 4 | 6480 |
| **T18-28 Road** | 560 | 4 | 2240 |
| **T23-T22 Road** | 1400 | 4 | 5600 |
| **T16-T29 Road** | 256 | 3 | 768 |
| **T13-T40 Road** | 1460 | 4 | 5840 |
| **BİNKILIÇ Camp Site – T19** | 9426 | 8 | 75408 |
| **General Sum** | **31.190,00** | | **159.275,50** |

| **Extended Roads** | | | |
|---|---|---|---|
| **Roads with Extension** | **Length (m)** | **Average Width (m)** | **Extension m2** |
| **T33-T34 Junction T16 Road** | 2480 | 4 | 9920 |
| **T33-34 Junction T44 Road** | 2455 | 4 | 9820 |
| **Main Road-T33.T34 Junction** | 2600 | 3 | 7800 |
| **T21-T1 Road** | 5131 | 3 | 15393 |
| **T11 Junction -24 Road** | 1442 | 3 | 4326 |
| **T36 Junction -17 Road** | 900 | 3 | 2700 |
| **T30 Road** | 1620 | 4 | 6480 |
| **T19-T23 Road** | 530 | 4 | 2120 |
| **T23-T22 Road** | 1400 | 3 | 4200 |
| **T18-28 Road** | 560 | 4 | 2240 |
| **T16-T29 Road** | 256 | 4 | 1024 |
| **T13-T40 Road** | 1460 | 4 | 5840 |
| **T36 Junction T18 Road** | 930 | 4 | 3720 |
| **General Sum** | **21.764,00** | | **75.583,00** |

## Table 4-2 Status of Turbines (as of 25.11.2021)

| No. | Turbine No | Nacelle Set | Blade Set | Tower Set | Mechanical Erection | Electrical Erection | Commissioning | Capacity MWm/Mwe | Ministry Acceptance* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | T19 | 09.12.2020 | 07-10.12.2020 | 06.12.2020 | 08-13.12.2020 | 15-22.12.2020 | 25-27.12.2020 | 4,8/4,55 | 30-12-20 |
| 2 | T21 | 10-11.05.2021 | 11-12.06.2021 | 28-29.05.2021 | 07-13.06.2021 | 14-22.06.2021 | 25-28.06.2021 | 4,8/4,55 | 09-Jul-21 |
| 3 | T13 | 25-26.05.2021 | 07-10.05.2021 | 23-25.05.2021 | 17-21.06.2021 | 23-28.06.2021 | 30.06.2021 | 4,8/4,55 | 09-Jul-21 |
| 4 | T5 | 23-24.05.2021 | 10.05.2021 | 04-05.05.2021 | 26-30.05.2021 | 02-23.06.2021 | 29-30.06.2021 | 4,8/4,55 | 09-Jul-21 |
| 5 | T23 | 21-22.06.2021 | 24-27.06.2021 | 05-08.06.2021 | 25-27.06.2021 | 30.06-02.07.2021 | 06-08.07.2021 | 4,8/4,35 | 09-Jul-21 |
| 6 | T35 | 10-Jul-21 | 11-Jul-21 | 10-Jul-21 | 15-Jul-21 | 30-Jul-21 | 9-Aug-21 | 4,8/4,55 | |
| 7 | T37 | 12-Jul-21 | 13-Jul-21 | 12-Jul-21 | 16-Jul-21 | 7-Aug-21 | 12-Aug-21 | 4,8/4,55 | 18-Sep-21 |
| 8 | T22 | 16-Jul-21 | 16-Jul-21 | 16-Jul-21 | 29-Jul-21 | 10-Aug-21 | 12-Aug-21 | 4,8/4,55 | 18-Sep-21 |
| 9 | T41 | 29-Jul-21 | 30-Jul-21 | 30-Jul-21 | 4-Aug-21 | 14-Aug-21 | 26-Aug-21 | 4,8/4,55 | 18-Sep-21 |
| 10 | T42 | 30-Jul-21 | 2-Aug-21 | 31-Jul-21 | 10-Aug-21 | 19-Aug-21 | 30-Aug-21 | 4,8/4,55 | 18-Sep-21 |
| 11 | T27 | 2-Aug-21 | 4-Aug-21 | 3-Aug-21 | 10-Aug-21 | 17-Aug-21 | 3-Sep-21 | 4,8/4,55 | 18-Sep-21 |
| 12 | T39 | 4-Aug-21 | 7-Aug-21 | 7-Aug-21 | 17-Aug-21 | 26-Aug-21 | 7-Sep-21 | 4,8/4,55 | 18-Sep-21 |
| 13 | T40 | 6-Aug-21 | 18-Aug-21 | 21-Aug-21 | 27-Aug-21 | 3-Sep-21 | 10-Sep-21 | 4,8/4,55 | 02-Oct-21 |
| 14 | T36 | 13-Aug-21 | 13-Aug-21 | 14-Aug-21 | 24-Aug-21 | 2-Sep-21 | 9-Sep-21 | 4,8/4,55 | 02-Oct-21 |
| 15 | T4 | 25-Aug-21 | 30-Aug-21 | 26-Aug-21 | 31-Aug-21 | 7-Sep-21 | 14-Sep-21 | 4,8/4,55 | 02-Oct-21 |
| 16 | T34 | 25-Aug-21 | 5-Sep-21 | 31-Aug-21 | 7-Sep-21 | 14-Sep-21 | 21-Sep-21 | 4,8/4,55 | 12-Nov-21 |
| 17 | T25 | 31-Aug-21 | 13-Sep-21 | 8-Sep-21 | 15-Sep-21 | 22-Sep-21 | 29-Sep-21 | 4,8/4,55 | 12-Nov-21 |
| 18 | T20 | 4-Oct-21 | 6-Oct-21 | 25-Sep-21 | 7-Oct-21 | 14-Oct-21 | 21-Oct-21 | 4,8/4,55 | 12-Nov-21 |
| 19 | T38 | 5-Sep-21 | 30-Aug-21 | 15-Sep-21 | 22-Sep-21 | 29-Sep-21 | 6-Oct-21 | 4,8/4,55 | 12-Nov-21 |
| 20 | T44 | 9-Sep-21 | 7-Sep-21 | 18-Sep-21 | 27-Sep-21 | 4-Oct-21 | 11-Oct-21 | 4,8/4,55 | |
| 21 | T33 | 29-Aug-21 | 27-Aug-21 | 7-Sep-21 | 15-Sep-21 | 22-Sep-21 | 29-Sep-21 | 4,8/4,55 | 12-Nov-21 |
| 22 | T16 | 11-Sep-21 | 8-Sep-21 | 20-Sep-21 | 30-Sep-21 | 7-Oct-21 | 14-Oct-21 | 4,8/4,55 | 12-Nov-21 |

| No. | Turbine No | Nacelle Set | Blade Set | Tower Set | Mechanical Erection | Electrical Erection | Commissioning | Capacity MWm/Mwe | Ministry Acceptance* |
|---|---|---|---|---|---|---|---|---|---|
| 23 | T29 | 6-Oct-21 | 20-Sep-21 | 27-Sep-21 | 15-Oct-21 | 22-Oct-21 | 29-Oct-21 | 4,8/4,55 | |
| 24 | T43 | 3-Sep-21 | 31-Aug-21 | 12-Sep-21 | 21-Sep-21 | 28-Sep-21 | 5-Oct-21 | 4,8/4,55 | 12-Nov-21 |
| 25 | T12 | 7-Sep-21 | 4-Sep-21 | 16-Sep-21 | 27-Sep-21 | 4-Oct-21 | 11-Oct-21 | 4,8/4,55 | 12-Nov-21 |
| 26 | T8 | 16-Sep-21 | 15-Sep-21 | 3-Oct-21 | 13-Oct-21 | 20-Oct-21 | 27-Oct-21 | 4,8/4,55 | |
| 27 | T26 | 18-Sep-21 | 17-Sep-21 | 5-Oct-21 | 13-Oct-21 | 20-Oct-21 | 27-Oct-21 | 4,8/4,55 | |
| 28 | T1 | 19-Sep-21 | 20-Sep-21 | 7-Oct-21 | 17-Oct-21 | 24-Oct-21 | 31-Oct-21 | 4,8/4,55 | |
| 29 | T31 | 21-Sep-21 | 22-Sep-21 | 9-Oct-21 | 20-Oct-21 | 27-Oct-21 | 3-Nov-21 | 4,8/4,55 | 12-Nov-21 |
| 30 | T10 | 22-Sep-21 | 25-Sep-21 | 10-Oct-21 | 20-Oct-21 | 27-Oct-21 | 3-Nov-21 | 4,8/4,55 | |
| 31 | T15 | 1-Oct-21 | 27-Sep-21 | 12-Oct-21 | 24-Oct-21 | 31-Oct-21 | 7-Nov-21 | 4,8/4,55 | 12-Nov-21 |
| 32 | T3 | 3-Oct-21 | 29-Sep-21 | 14-Oct-21 | 27-Oct-21 | 3-Nov-21 | 10-Nov-21 | 4,8/4,55 | |
| 33 | T11 | 4-Oct-21 | 1-Oct-21 | 17-Oct-21 | 27-Oct-21 | 3-Nov-21 | 10-Nov-21 | 4,8/4,55 | |
| 34 | T6 | 6-Oct-21 | 4-Oct-21 | 19-Oct-21 | 31-Oct-21 | 7-Nov-21 | 14-Nov-21 | 4,8/4,55 | |
| 35 | T2 | 7-Oct-21 | 6-Oct-21 | 23-Oct-21 | 4-Nov-21 | 11-Nov-21 | 18-Nov-21 | 4,8/4,55 | |
| 36 | T14 | 16-Oct-21 | 9-Oct-21 | 25-Oct-21 | 4-Nov-21 | 11-Nov-21 | 18-Nov-21 | 4,8/4,55 | |
| 37 | T24 | 18-Oct-21 | 11-Oct-21 | 27-Oct-21 | 7-Nov-21 | 14-Nov-21 | 21-Nov-21 | 4,8/4,55 | |
| 38 | T7 | 19-Oct-21 | 14-Oct-21 | 3-Nov-21 | 11-Nov-21 | 18-Nov-21 | 25-Nov-21 | 4,8/4,55 | |
| 39 | T18 | 21-Oct-21 | 16-Oct-21 | 3-Nov-21 | 11-Nov-21 | 18-Nov-21 | 25-Nov-21 | 4,8/4,55 | |
| 40 | T28 | 22-Oct-21 | 19-Oct-21 | 7-Nov-21 | 15-Nov-21 | 22-Nov-21 | 29-Nov-21 | 4,8/4,55 | |
| 41 | T9 | 24-Oct-21 | 21-Oct-21 | 11-Nov-21 | 18-Nov-21 | 25-Nov-21 | 2-Dec-21 | 4,8/4,55 | |
| 42 | T17 | 25-Oct-21 | 24-Oct-21 | 17-Nov-21 | 25-Nov-21 | 2-Dec-21 | 9-Dec-21 | 4,8/4,55 | |
| 43 | T32 | 27-Oct-21 | 26-Oct-21 | 24-Nov-21 | 2-Dec-21 | 9-Dec-21 | 16-Dec-21 | 4,8/4,55 | |
| 44 | T30 | 28-Oct-21 | 29-Oct-21 | 28-Nov-21 | 6-Dec-21 | 13-Dec-21 | 20-Dec-21 | 4,8/4,55 | |

*: Some rows are empty since the date of Ministry Acceptance is not done yet.

There is a construction permit available for the control room/administration building in the switchyard area. There is also a fire report dated 29.06.2021 for the control room/administration building in the switchyard area from the Çatalca Municipality License and Inspection Directorate with No. E-33305494-622.01-10987 indicating that there are fire measures available and there is no blockage for the access of fire brigade. Fire measures both at the switchyard area and the turbine area are important for preventing forest fires as well.

The forecasted construction and commissioning time for the project is given as approximately 8 (eight) months including the commissioning period according to the project time schedule verbally shared and confirmed by the data given in Table 4.2. The construction activities started on May 2021 and is expected to be finished in November 2021 and last commissioning activities to be completed in December 2021 depending on the turbine deliveries of Nordex and weather conditions. Site management is working in close contact with Nordex to keep the site ready for the turbine deliveries in order not to face any delays in the project schedule.

The characteristics of the Nordex turbines used at İstanbul WPP Turbines are summarized and presented in Table 4.3. The Nordex turbines are painted with a matt, non-reflective finish. There are red strips available on the blades. There is anti-collision light on the turbines.

**Table 4-3 İstanbul WPP Turbines**

| | |
|---|---|
| **Turbine Supplier** | Nordex GmbH |
| **Turbine Model** | N133/TS125 4800 kW Delta Tin |
| **Serial Number** | NX 87776 |
| **Production Year** | 2020 |
| **Maximum Blade Width (m)** | 4,201 |
| **Pitch Angle at Maximum Blade width (Degrees)** | 90 |
| **Turbine Height Including Blade** | 191 |
| **Hub Height (m)** | 125 |
| **Rotor depth (front to back) (m)** | 4,5 |
| **Rotor Length (m)** | 64,4 |
| **Rotor Diameter (m)** | 133 |
| **Average one full Rotation Duration (sec)** | 5 |

The site has 2*125 MW oil transformers with containment at the switchyard to connect to grid. There are 2*250 kVA internal use transformers. There is a diesel emergency generator of 206 kVA at the switchyard site. There is no separate fuel storage for the generator. The acceptance of the switchyard and transmission line were done 18.05.2021 by the Ministry of Energy and Natural Resources.

The concrete for the construction work is supplied from a firm named Atılım Beton which has facilities at Çerkezköy and Saray. Unfortunately, no permit, license of Atılım Beton is checked and filed stating that it is the largest and reliable concrete firm in the region. UWE started keeping log of the suppliers. ***At least files of large suppliers shall be kept.*** There is no batch station at the construction site.

## 4.3. Project Alternatives

The project was developed in late 2000s and passed through environmental impact assessment (EIA) process in 2015 (please refer to Section 5.1 for EIA) with employment of 100 turbines initially. There was no alternative project site assessed during this EIA process due to capacity of the project and suitable meteorological measurements at the region. The other reasons for not evaluating alternative sites were listed as follows in the approved EIA report:

- being located in forest area with no expropriation and resettlement,
- nearest residential area being 1000 m to project site (valid for they layout of the project that time),
- employment opportunities for the residents of the close by residential areas,
- presence of no historical and cultural areas at the project area.

With the development of turbine technology, there was design changes in the project yielding to employment of 44 turbines in the project (generating the same amount of electricity) subject to this due diligence study. With this change there is not only a reduction in the number of turbines but also in the area used for the project. The changes from the first version to the last version can be seen from Figure 10.

This change also helped to reduce the amount of land used. The licensed area for the turbines was 604.164,00 $m^2$ while the actual used area is given as 240.070,42 $m^2$ by the site management.

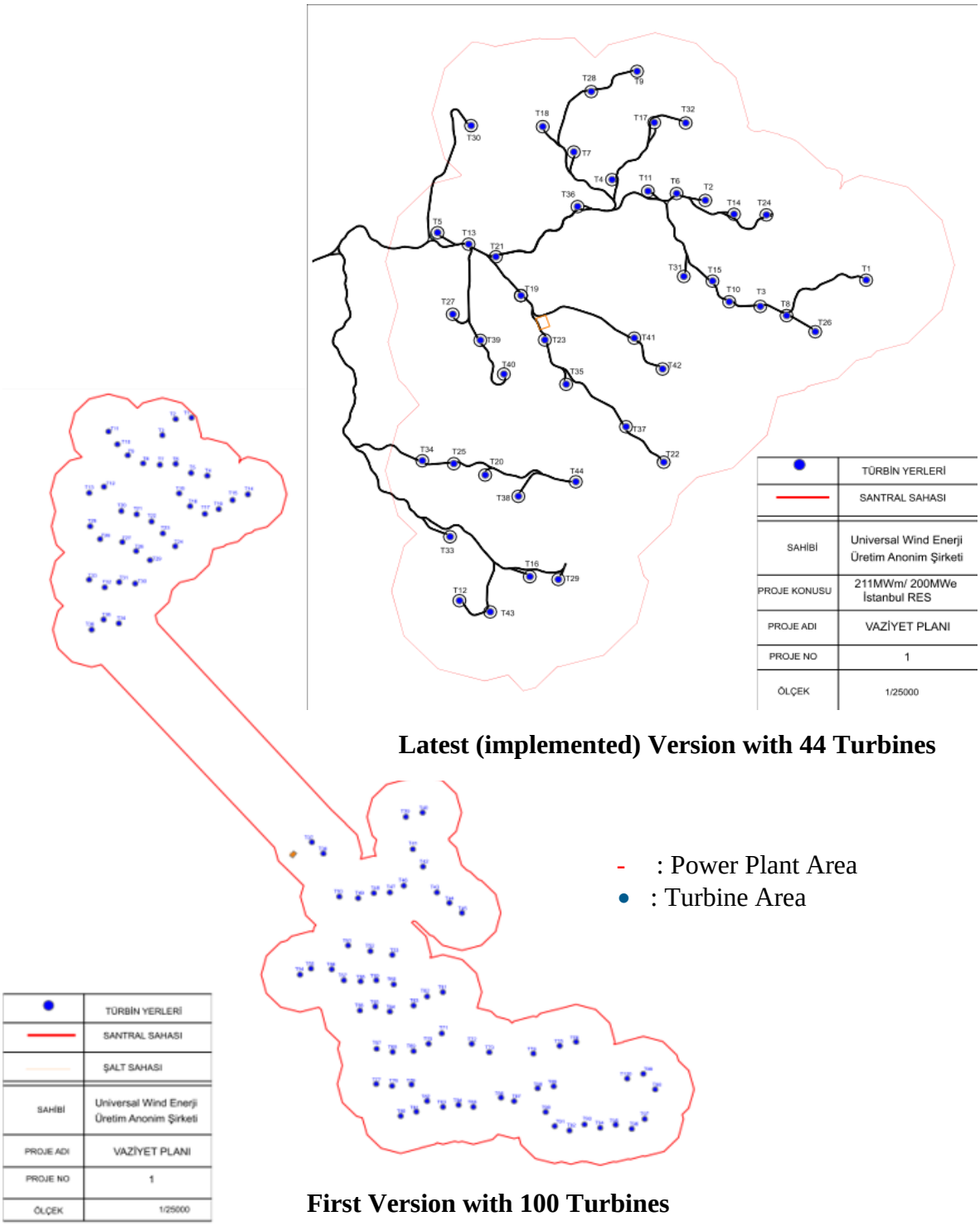



**Figure 10. Layout of the Initial Version of the Project (Bottom) and Latest (Implemented) Version of the Project (Top)**

## 4.4. Organization and Management

The construction activities are carried out between 08:00 to 18:000 for 6 days. However, during summer time the worked continued until 21:00 with the longer daylight availability. The installation work for turbines is planned according to wind condition.

The operation team is working in shift structure of 12 hours. There are three groups for shift. The first shift is working between 08:00 to 20:00 and second shift is working between 20:00 to 08:00. UWE is planning to employ around 15 staff for the operation phase. However, the organization structure is not final yet. Caba Group HR is working on the subject. The site will have an operation manager, operators, maintenance staff, driver and security guards in UWE team for İstanbul WPP.

10 of UWE employs comes from the region. One of the employees of Ataseven is from Binkılıç, 17 of the staff of other contractors are from region (Binkılıç, Saray, Çerkezköy, Aydınlar) as well. The project has created employment opportunity as well as support to local trade due staying in nearby hotels, shopping at local chops.

There is no disabled staff working due to sector during construction period. HR manager of Caba Group informed that UWE has applied for assignment of a disabled staff for operation team from General Directorate of Turkish Employment Agency but have not received any reply yet. There is no women employment and there are no plans to employ female due to location of the plant, but this condition may also change during operation phase.

Caba Group HR is also working on the job descriptions of the staff for UWE. Job descriptions has been completed and signed by the staff.

There are various HR related documents available including the Human Resources Policy, Human Resources and Training Plan, Internal Regulation, Staff Employment Procedure, Discipline Committee Working Principles.

Ethic Code and Working Principles has been developed and announced.

There is reward and punishment procedure developed and announced.

There is indefinite period labor contract signed with all employees. Health and Safety related documents are also handed over to staff during employment.

Health and safety services for UWE and all its contractors (except Nordex) are carried out by a Common Health and Safety Unit (OSGB) called Beta OSGB. Safety expert and Medical Doctor are giving services for the required time. The same establishment will continue for the operation period for UWE. Nordex has its own Health and Safety (HS) structure.

Maintenance activities of turbines will be carried out by Nordex. Nordex will have a dedicated team for the project.

There is no management system certificate available for UWE; therefore, İstanbul WPP. However, Caba Group has ISO 9001:2015 and ISO 14001:2015 valid until 03.10.2021 and ISO 45001:2018 valid until 22.10.2023 from International First Certification for Caba İnşaat Turizm San. Ve Tic. A.Ş. The HR manager informed that there are plans to receive management certificates for UWE. It should be kept in mind that EMRA requires power plants to secure ISO 27001 certificate as well. ISO 50001 shall also be on the agenda.

There is a personal satisfaction questionnaire employed during July and August 2021. This questionnaire is also valuable to collect feedback from the employees. The responses to the questionnaire are seen, the results generally indicate satisfaction with some suggestions. There is no log to follow up the questionnaire. An evaluation report has been submitted for the first the questionnaire. ***The questionnaire shall be done annually.***

There is security management plan of UWE defining roles and responsibilities.

## 4.5. Project Categorization

As part of the review of environmental and social risks and impacts of a proposed investment, IFC; therefore, Equator Principles uses a process of environmental and social categorization to reflect the magnitude of risks and impacts.

The resulting category also specifies IFC's institutional requirements for disclosure in accordance with IFC's Access to Information Policy.

These categories are:

- Category A: Business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.
- Category B: Business activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
- Category C: Business activities with minimal or no adverse environmental or social risks and/or impacts.
- Category FI: Business activities involving investments in financial institutions (Fis) or through delivery mechanisms involving financial intermediation.

Doing the categorization of the project, İstanbul WPP can fall into Category A and Category B. İstanbul WPP has

- no major social impacts with no land acquisition and economical loss of residents and can be managed with effective stakeholder management.

- limited environmental, health and safety impacts which can be prevented and minimized with mitigation measures
- has impact on avifauna, whose exact impact will be seen during operation phase.

Basing on the document review of the available information, the potential impacts of İstanbul WPP are evaluated as limited and generally site specific, largely reversibly and readily addressed through mitigation measures and willingness of UWE to take further measures, **İstanbul WPP project is categorized as Category B.**

# 5 Documentation Assessment Findings

The list of documents reviewed are presented in Annex I of this report.

## 5.1. Environmental Impact Assessment

Any investment listed Environmental Impact Assessment (EIA) Regulation shall go through Environmental Impact Assessment process and secure either an EIA approval or EIA not required decision to start investment. Listed investments cannot start investment without EIA approval or EIA not required decision per Environmental Law.

According to the EIA Regulation published in the Official Gazette No. 29186 dated November 25, 2014, the wind power projects with 20 and higher turbines and a capacity higher than 50 MWm are listed in the Annex I of the Regulation, which requires the EIA process to be handled by the Ministry of Environment and Urbanization with the preparation of an EIA report.

The historical EIA status of the İstanbul WPP is summarized below:

- An EIA report was prepared covering the wind farm, switchyard and its access roads for İstanbul WPP. An EIA approval was received on 30.06.2015 with No. 3923. The report is prepared for installation of 100 turbines with a total capacity of 200 Mwe.
- There has been project changes and installation of 50 turbines each with a capacity of 4 Mwe yielding the project total capacity to 200 Mwe/ 240 MWm was decided and a pre-generation license from EMRA was secured. An application for the confirmation of the validity of the existing EIA approval was made to Ministry of Environment and Urbanization. Saving the measures and requirements in the existing EIA report, the Ministry of Environment and Urbanization decided that existing EIA decision is valid for İstanbul WPP on 01.04.2019 and No. 48331039220.01-E.75225.(the basis for the decision is the use of new technology, reduction in the land use, increase in the production capacity per the Article 24 of EIA Regulation)
- An application for validity of the existing EIA report for the change of switchyard location due to requirement of State Water Works and expanding the access roads due to longer blades was made to Ministry of Environment and Urbanization. A letter of Ministry of Environment and Urbanization, General Directorate of Environmental Impact Assessment, Permit and Inspection indicating that there are no requirements to be carried out for this new situation since all the works will be within the statements in the existing EIA report on 12.07.2019 with No. 48331039-220.01-E.160744.
- Another change was employed for the project with installation of 44 turbines with a total capacity of 211,2 MWm/200 Mwe. The validity of the existing EIA approval (dated 30.06.2015 with No. 3923) is confirmed by the Ministry of Environment and Urbanization, General Directorate of Environmental Impact Assessment, Permit and Inspection on 02.09.2020 with No. 48331039-220.01-E.181825. This decision was given per the Article 24 of the EIA Regulation with the basis of newer technology, less impact on environment with the need of less land for the access roads and turbine foundations. Commitments and measures listed in the EIA report are valid for the changes.

According to EIA Regulation Article 14.4, EIA approval decision is cancelled in case the investment does not start within seven years for any reason other than act of God. The investment started in 2020, which is within this time limit even considering the first EIA approval date.

The project owner is required to comply with the measures and commitments stated in the EIA report. In case of determination of noncompliance with these, Ministry of Environment and Urbanization may give up to one year period to comply with commitments in the EIA report for once. If the project owner does not comply with the commitments within this period, Ministry of Environment and Urbanization stops the investment per Article 19. B of EIA Regulation. Investment cannot continue until commitments are complied with.

The commitments of İstanbul WPP in the EIA report can be summarized below:

- Protect environment and take necessary measures
- Do not create nuisance conditions for the receptors
- Take measures for fauna protection per legislation and train staff
- Comply with applicable environmental and safety legislation

***It is important for İstanbul WPP to comply with these requirements***.

The electrical transmission line of İstanbul WPP which is 4,835 km is not subject to EIA regulation being less than 5 km (per regulation 5 to 15 km is subject to project description file, lines above 15 km is subject to EIA process).

Per EIA regulation, the facilities which are subject to EIA process cannot receive incentive, approval, permit and building license. Even though there is a court case (please refer to Section 5.5) against cancellation of the EIA approval decision, İstanbul WPP continues to receive building licenses for the turbines and switchyard.

EIA Approvals of İstanbul WPP are presented in Annex III of this report in chronological order.

Any change in the project will be subject to EIA approval process in the future.

There is a court case regarding EIA process please refer to Section 5.5.

## 5.2. Environmental License and Permit

According to Environmental License and Permit Regulation published in the Official Gazette No. 29115 dated September 10, 2014, wind power plants are not required to obtain an environmental license or permit. Therefore, İstanbul WPP is not required to secure an Environmental License and Permit.

Although İstanbul WPP is not required to employ an environmental officer or have an environmental management department due to being not required to secure an Environmental Permit, ***it will be a best practice to receive environmental management service or employ an environmental officer to coordinate environmental related studies such as waste and wastewater management, communication, etc. considering its capacity and location.***

## 5.3. Forestry Permit

The project is located on forest area and requires forest opening with tree clearance in the region.

The approval for the use of the forest per Forest Law and related regulation is obtained from the Ministry of Agriculture and Forestry, General Directorate of Forestry, Department of Permit and Access dated 07.10.2020 and No. 2008144. The permit covers an area of 1.016,747,90 $m^2$ and valid from 07.10.2020 to 10.09.2069 in line with the generation license of İstanbul WPP.

The breakdown of the area handed to UWE by forest chiefdom is for the wind power plant part is

- Turbine area: 604.164 $m^2$
- Switchyard area: 14.000 $m^2$
- Underground transmission line embedded: 104.888,60 $m^2$
- Roads: 293,695,30 $m^2$

Upon Ministry approval, İstanbul Regional Forestry Directorate, Çatalca Forestry Chiefdom, Binkılıç Forestry Chiefdom notified UWE about the approval with the letter No. 26247233-255-2186036 dated 09.10.2020 asking to fulfill the requirements (payment of the forestation fee, notary approved commitment letter) to handover the site.

On 03.12.2020, the site was handed over to UWE with allowance and entry protocol by İstanbul Regional Forestry Directorate, Çatalca Forestry Chiefdom, Binkılıç Forestry Chiefdom.

By law, the site clearance is done by the coordination of forestry chief and by the workers assigned by the chief. Hence UWE was not involved in the removal of the trees.

UWE

- is required to work with Chiefdom in case of forest fires by this permit process, which ***makes it important for the team to train the staff on fire measures, firefighting (including their safety) and supply them suitable firefighting protection equipment.***
- is liable for any damage at the forest due to its operation
- has to clean all of the construction sites upon completion of the construction activities; ***therefore, it is important to make a field control and remove any potential wastes from the construction sites upon completion of the construction activities.***

There is a court case regarding forest permit please refer to Section 5.5.

## 5.4. Workplace Opening and Operation License

According to Regulation on Workplace Opening and Operation License published in the Official Gazette No. 25902 dated August 10, 2005, wind power plants are

- listed as II. Class Non-sanitary Establishment and
- required to obtain Opening and Operation License.

The license is mentioned to be secured upon completion of the construction of all turbines***. It is advised not to wait until completion of the project since some of the turbines are in operation and switchyard area is in use. UWE has investigated the potential for application, and they were***

***informed to get the license upon completion of the construction activities. Therefore, application will be made upon completion of the construction phase.***

## 5.5. Court Cases

There are two court case reported by UWE about İstanbul WPP.

1. The case is opened by Istıranca Orman ve Yaban Hayatı Kültür Derneği (Forest and Wild Life Culture Association) against General Directorate of Forestry at İstanbul 3. Administration Court to cancel the forestry permit and stop the work ongoing at field on 31.12.2020. There is court decision to assign an expert team to make a viewing on the field on 16.03.2021 with Decision No. 2020/2050. The court will give decision upon submission of the expert report. (Group attorney informed that the expert team has not been assigned; therefore, the field viewing has not been executed yet with no report issue. The attorney is not expecting any negative decision from the court mentioning the court would have stopped the operations otherwise to prevent any damage. The attorney is waiting for rejection of the case.) UWE is intervenor to this case. The Caba Group attorney informed that there has been no change about the status of the case as of 29.11.2021.

2. The case is opened by the Kuzey Ormanları Platformu (North Forests Platform) against Ministry of Environment and Urbanization for the cancellation of EIA Approval Decision dated 30.06.2015 on 11.02.2021. The case is rejected by the İstanbul Administration Court on 05.05.2021. The reason of rejection is per acquiescence of 30 days application period. The claimant has taken the decision to upper court and upper court approved the decision of local court on 14.09.2021. UWE attorney informed that decision was approved by the 6. Department of Council of State with decision no. 2021/6341E.2021/9511K with no rectification and the case has been closed. UWE is not intervenor to this case.

Legal department of Caba Group is following the first case as intervenor and the second case indirectly.

There are no other court cases that UWE is notified about İstanbul WPP.

The status of the court case will be controlled during the monitoring studies. ***In case of any progress with the court case, immediate notification shall be shared with Lenders.***

Being not binding and concerning above mentioned two court cases, court decisions can include stopping of the operations until required actions by legislation are taken within a determined time table in the worst-case scenario.

## 5.6. Audits

There have been no authority audits reported by site management for environmental, social and safety issues.

There are no internal audits done by either Caba Group or UWE.

***An internal environmental, social and safety audit system shall be formed and implemented***. Management system will also help this system. ***At least annual audits shall be performed, recorded and actions shall be followed. UWE had formed an audit procedure to control the activities, which will be implemented the audits within the required periods. In addition, the procedure covers the external audits that UWE can face.*** UWE has carried out its first internal audit in November as part of its environmental and social committee. UWE will continue carrying out audits both for its activities and contractors. A contractor audit is scheduled for December 2021.

## 5.7. Management System

There is no OHSAS 18001, ISO 45001 (safety), ISO 140001 (environmental) or ISO 50001 (energy efficiency) management system certificates available for UWE; therefore, İstanbul WPP. However, CABA group has secured management permits. HR manager mentioned that there is planning to obtain certificate for İstanbul WPP.

UWE follows environmental, health and safety and social issues with employing a common health and safety unit (Beta OSGB) for health and safety issues. Beta OSGB is preparing necessary health and safety documents, conduct the trainings and medical checks. There are documents available related to these issues. Records are kept.

Environmental issues are followed and coordinated by Nartus Enerji ve Çevre Yat. Müş. Mad. San. Dış. Tic. Ltd. Şti. (Referred as Nartus in this report). Nartus has been working on a list of documents and a certain measurements and monitoring studies for İstanbul WPP. The list of documents and studies that Nartus is working on is listed below:

1. Documents:

    - Environmental Screening Report
    - Environmental and Social Management Plans
    - Legal requirements log
    - Air Quality Control and Management Plan
    - Waste and Wastewater Management Plan
    - Noise Management Plan
    - Change Find
    - Hazardous Material Management Plan
    - Health and Safety Management Plan
    - Reward Punishment System
    - Work Permit Procedure
    - Audit Procedure
    - Emergency Preparedness and Response Plan Training Plan
    - Traffic Management Plan
    - Community Health and Safety Plan
    - Offsite Emergency Response Plan
    - Contractor Management and Monitoring Plan
    - Pandemics Directive
    - Camp Site Plan
    - Ethic Rules and Working Principles

- Cumulative Impact Assessment
- Stakeholder engagement plan

2. Studies:

- Drone recording of the site
- Shadow flicker impact assessment (model results shared)
- Blade/Ice Throw assessment (report shared)
- Noise modelling for construction phase
- Background noise measurement and acoustic report
- Biodiversity monitoring
- Bee impact assessment
- Magnetic field measurements
- Air quality modelling (draft report shared)
- Visual impact assessment and 3D modelling

***All of the above mentioned documents are prepared. It is mentioned that they are all available in the common drive for staff access and İstanbul WPP is notified about the documents on 18.11.2021 with the first meeting of environmental and social management committee. In addition, UWE has shared a mail with its contractors to notify them about the system. UWE is now focusing on the further implementation of the necessities of the plans, procedures and instructions. Developing and initial implementation of these documents is start of an environmental and social management system. UWE shall continue working on the implementation of these systems.***

***Training to UWE personnel on these shall also be executed.***

## 5.8. Social Review

### 5.8.1. Introduction

The main objective of this section of this report is to Identify whether İstanbul WPP Project complies with the International Finance Corporation (IFC)- Environmental and Social Performance Standards (2012) in terms of social aspect. İstanbul WPP was developed in compliance with Turkish law. With this due diligence study, the İstanbul WPP had an environmental and social due diligence in line with IFC requirements.

The research included:

- Interviews with village headmen,
- Checks on files and database.

The survey used the telephone interview method. The coronavirus disease (COVID-19) has been characterized as a pandemic by the World Health Organization. Considering recent developments in regard to COVID-19, there have been changes to the interviews technics and program to ensure the health and safety of the surveyors/interviewers/staff and other people. Face-to-face interview for this study may not be best option in today's environment. There are many meaningful ways to engage with people besides face-to-face interview and telephone interview was considered the best option.

The interview process was qualitative, beginning with open-ended questions about on their experiences about the project activities, grievance mechanism, impacts such as traffic, noise etc. Thus, the headmen were able to raise concerns and express opinions and feelings without being influenced. For evaluation of interviews findings, a desktop study has been carried out and reviewed the information provided by UWE. This section has been developed using information obtained through the interviews with headmen and available data provided by UWE.

### 5.8.2. General Overview

UWE is constructing and will be operating İstanbul WPP which is located in Çatalca district of province of İstanbul. The site is approximately 65 km to Central İstanbul and 27 km to Central to Çatalca. The closest residential area is Binkılıç, Karacaköy, Karamandere and Yalıköy neighbourhood. These can be seen from Figure 11. The distances between Binkılıç, Yalıköy and Karamandere and the İstanbul WPP are approximately 2,5 km, 2 km and 4,3 km respectively (from Google Earth).

The project area and the camp site with the nearest residential area of Binkılıç. Being located in the forest area, there is no nearby residential houses and/or livestock areas in the project area. The distance between camp site and switchyard area is approximately 12 km.

According to the Environmental Impact Assessment (EIA) Regulation, an EIA had been required for the development consent of the proposed project, therefore an EIA Report had been prepared and submitted to Ministry of Environment and Urbanization and secured "Environmental Impact Assessment approval" decision" on June 30, 2015 (Please Refer to Section 5.1 for more information on EIA).

The project does not require any resettlement and/or land acquisition of private land. Therefore, the project has not had involuntary resettlement impacts. Any agricultural land has not been affected by the project. The project will not in any way affect the livelihood systems and culture of the residents of the village.

The fishing communities are not affected because the project site is located far from the coastline.

It is possible to say that the project will not affect any vulnerable group (such as elderly, disabled, female-headed households, etc.).

No historical or cultural monuments/places will not be affected by the project.

A Public Participation Meeting was held in order to inform the public and receive their opinions and concerning the project. Grievance mechanism has been established (Please refer to Section 5.8.4).


**Figure 11. Affected Settlements**

There are some gaps in project such as stakeholder engagement plan, consultation activities, and formal grievance mechanism. These gaps have been identified. The gaps will be closed with implementation of necessary additional procedures or mitigation measures.

### 5.8.3. Stakeholder Engagement

#### 5.8.3.1.Public Consultation

It is known that Company followed the Turkish EIA (ÇED) procedure and complied with all legal requirements. Public participation and access to information in project decision is legally provided by the EIA regulation (Official Gazette Date-Number: 17.07.2008-26939). This includes provisions for public consultation and disclosure of project information. According to the Turkish EIA regulation, it is compulsory to organize a public consultation meeting. In accordance with Article 9 of the Environmental Impact Assessment Regulation (Official Gazette dated 25.11.2014 and numbered 29186), a “Public Participation Meeting must be held in order to inform the public about the project and to receive their opinions and suggestions on the project. Within the scope of the project, “A Public Consultation Meeting in the EIA Process” was held in the province of Çatalca, Kalfaköy Kahvehanesi on 30.10.2011 at 14:00.

According to Article 9 (1a) of the EIA Regulation, newspaper advertisements must be published at least 10 calendar days prior to the date of the meeting. Before the meeting, the place, date and time of the meeting were announced in two separate newspapers: the Türkiye newspaper, which is the national newspaper, and the Gerçek Newspaper, which is published locally. The announcements published in the newspaper are shown below in Figure 12.

A public participation meeting was organized on 23.10.2021 at Çatalca Binkılıç with announcement notices, participation log and presentation available. Participation was limited to Binkılıç, though. Meeting photograph is available in Figure 13. Another meeting is organized at Yalıköy on 19.11.2021. The meeting is announced by the village headmen and a notice to village headmen office has been posted. The logs of the meeting will be kept. ***UWE should continue organizing meeting(s) to keep public informed about İstanbul WPP.***

One headman stated that “our settlement is the most affected place, and nobody has come to us. Any information has not been provided us”. However, other headman said that “we had a good relationship with the company, and they help us”. ***Based on the interviews with the headmen, it is possible to say that regular relations were not established with all settlements. With the start of meetings at villages, this situation started to change. UWE shall continue keeping a good relationship with the affected parties.***

As pointed out before, this due diligence report is prepared in accordance the International Finance Corporation  Performance Standards and Guidelines; therefore, all evaluation is done with the IFC requirements.


**Figure 12.  Local and National Newspaper Announcement**

***From Binkılıç On 23.10.2021*** ***From Yalıköy on 19.11.2021***

***Figure 13. Photographs from Public Participation Meetings***

IFC requires strong dialogue with all stakeholders. IFC (2012) states that "stakeholder engagement is an ongoing process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism, and ongoing reporting to Affected Communities".

Main principle of IFC's performance standard 1 (2012) can be summarized as follows:

- Clients should identify the range of stakeholders that may be interested in their actions and consider how external communications might facilitate a dialog with all stakeholders.
- The client will develop and implement a Stakeholder Engagement Plan that is scaled to the project risks and impacts and development stage, and be tailored to the characteristics and interests of the
- Disclosure of relevant Project information helps Affected Communities and other stakeholders understand the risks, impacts and opportunities of the project.
- The client will provide Affected Communities with access to relevant information on: (i) the purpose, nature, and scale of the project; (ii) the duration of proposed Project activities; (iii) any risks to and potential impacts on such communities and relevant mitigation measures; (iv) the envisaged stakeholder engagement process; and (v) the grievance mechanism.
- When Affected Communities are subject to identified risks and adverse impacts from a project, the client will undertake a process of consultation in a manner that provides the Affected Communities with opportunities to express their views on project risks, impacts and mitigation measures, and allows the client to consider and respond to them.
- For projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation (ICP) process that will build upon the steps outlined above in Consultation and will result in the Affected Communities' informed participation.

There is a stakeholder Engagement Plan (SEP) prepared and announced at the end of November 2021. ***UWE should continue implementation of consultation and disclosure program*** **and to provide regular communication with affected people / communities compliant with IFC Performance Standard 1.**

Sufficient and appropriate information about the project should be shared with the communities prior to the construction phase. Leaflets or brochures could be prepared and distributed to the local people, mosques, and grocery stores in the affected villages. However, this has not been done by UWE.

***UWE's website can be used for sharing project information.*** Website should include basic and technical project information and information on community relations and projects for the benefit of the local communities, etc.

In addition to project information brochure presented in Figure 15, there is a document of Ataseven (project management company) available which is given to visitors during induction training. This brochure includes safety and emergency rules. UWE placed project information brochure with a form to collect views of the public next to the grievance boxes in the villages, which can be seen from Figure 14. ***The Project Information Brochure which is now available for the affected communities shall be kept available next to grievance boxes and grievance boxes shall be controlled periodically (such as once a month). UWE has started controlling the boxes and shall continue keeping available them readily available for the affected parties. UWE reported that there have been no new external complaints received.***

### 5.8.4. Grievance Mechanism

Any problems related to the project activities needs to be solved or mitigated promptly to avoid unnecessary tensions and conflicts***.*** A formal grievance mechanism is established in accordance with the principles of the IFC, which shall be open to all stakeholders that may be affected by İstanbul WPP activities. This grievance mechanism will be responsibility of UWE. UWE has developed grievance form operation method, which describes the team formed to evaluate the grievances and annual questionnaire to check the efficiency of the system. The main purpose of the grievance mechanism is to ensure that the complaints / suggestions / requests submitted by the project stakeholders are answered in a timely and appropriate manner.

IFC Performance Standards on Environmental and Social Sustainability (2012) states that "where there are Affected Communities, the client will establish a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns and grievances about the client's environmental and social performance".


**Figure 14. Project Information Brochure next to the Grievance Boxes**

A formal grievance mechanism has been established. The complaint form was developed and presented in Figure 16.

The awareness of headmen regarding the Grievance Mechanism and communication channels has been questioned during the interviews and it is seen that some headmen are informed about the grievance channels and contact information of İstanbul WPP personnel. However, information about grievance mechanism and contact information was not distributed via printed material to all local communities and all of the headmen. One headman stated that the locals usually prefer to speak with the village headman. The main reason for this is that they think it is much easier for the village headman to reach project authorities. During the meetings held at Binkılıç and Yalıköy participants were informed about the grievance mechanism.

## PROJENİN TANIMI VE AMACI

Planladığımız faaliyet; İstanbul İli, Çatalca İlçesi sınırları içerisinde gerçekleştirilecek İstanbul RES Santrali (RES) projesidir. Proje kapsamında 44 türbin bulunacak olup 700.000.000 kWh enerji üretimi sağlanacaktır.

Projenin Aşamaları

- LİSANS ÇALIŞMALARI
- ÇED RAPORU ÇALIŞMALARI
- KATİ VE UYGULAMA PROJELERİ HAZIRLANMASI
- İMAR PLANLARININ HAZIRLANMASI
- KAMULAŞTIRMA ÇALIŞMALARI
- ARAZİNİN HAZIRLANMASI
- İNŞAAT AŞAMASI
- KABUL İŞLEMLERİ
- TESİSİ DEVREYE ALMA

## PROJENİN YERİ

## PROJEDEN KAYNAKLANACAK BAZI ÇEVRESEL ETKİLER

**Evsel Nitelikli Katı Atıklar Ne Olacak?**

Sızdırmasız çöp konteynırında depolanacak ve ilgili Belediye tarafından belirli periyotlarda alınması sağlanmaktadır.

**Evsel Nitelikli Sıvı Atıklar Ne Olacak?**

Şantiye tesisinde kurulacak olan sızdırmasız fosseptikte toplanarak dolduğunda vidanjör ile çekilmesi sağlanmaktadır.

**Hafriyat Atıkları Nasıl Bertaraf Edilecek? – Toz Emisyonları**

Türbin noktalarında yapılacak çalışmalarda hafriyat malzemesi ortaya çıkacaktır. Oluşacak malzemeler dolgu çalışmalarında kullanılacaktır.

Alanda arazöz ile sulama yapılarak emisyonlar azaltılmaktadır. ÇED Raporu sürecinde modelleme çalışmaları ile etkiler ortaya konmuştur.

**Kamulaştırma İşlemleri Nasıl Yürüyecek?**

Alanda kamulaştırma yapılacak şahıs arazisi bulunmamaktadır.

**Bitki Örtüsü, Kuşlar ve Doğal Peyzaj Öğelerini Korumak İçin Yapılacak Çalışmalar**

Konusunda uzman akademisyenler (Kuş Uzmanı, Peyzaj Mimarı, Yaban Hayatı Uzmanı, Uzman Biyolog) tarafından Bilimsel Rapor hazırlanarak koruma önlemleri ortaya çıkarılmış olacaktır. Bu rapor daha sonra Doğa Koruma ve Milli Parklar Genel Müdürlüğü'ne sunularak uygunluğu değerlendirilecektir. Alanda mevcut durumda bu konuda izleme çalışmaları devam etmektedir.

**Elektromanyetik Alana Etki- Gölge Etkisi**

Rüzgar türbini veya üretim donanımı elektromanyetik alana tesir edip radyo-tv alıcılarında parazit yapabilirler. Fakat engellenmesi basit ve ucuzdur. Gelişen teknoloji sayesinde bu durum ortadan kaldırılabilmektedir.

Proje kapsamında yakın yerleşim yerlerine ve güneş yönüne göre değerlendirmeler yapılarak gölgelenme etkileri ÇED Raporu'nda ortaya konacaktır

## BÖLGEYE KATKILARI

- Projenin inşaat aşamasında farklı aşamalarda 60 kişi, işletme aşamasında 15 kişinin çalışması planlanmıştır. Söz konusu personel mümkün olduğunca yakın yerleşim yerlerinden istihdam edilecek olup, bu sayede yöre halkına yeni iş olanakları sağlanmış olacaktır.
- Yörede bu tür bir faaliyetin yer alması ekonomik anlamda canlılık sağlayacak, yörenin biliniriliğini arttıracak, yeni yatırım ve iş fırsatlarının doğmasına olanak sağlayacaktır.
- Sürdürülebilir bir çevrede birlikte yaşamak için, sosyal ve çevresel konularda yöre halkı ile işbirliği içerisindeyiz.

## RÜZGAR ENERJİ SANTRALİ

- Rüzgar santralleri verimleri yüksek santrallerdir.
- Hammadde girdi maliyetleri yoktur.
- Yenilenebilir kaynak olması nedeniyle temiz (yeşil) elektrik enerjisi ihracatı imkânı meydana getirir.
- Yerli kaynak olması nedeniyle hammadde girdisi bakımından dışarıya bağımlılığı yoktur.
- İş olanağı sağlayarak istihdama olumlu katkıda bulunur.
- İnşaat ve işletme aşamasındaki tüm personel ve şantiye ihtiyacı yöreden karşılanacağı için ekonomiye katkı sağlar.
- HES projeleri gibi yörenin temel ihtiyaçları olan su vb. kaynaklarını kullanımı söz konusu değildir.
- Kömürle çalışan santraller gibi duman, toz vb. oluşturmazlar
- Türbinlerin çalışması sırasında alanda mevcut faaliyetlere (tarım, hayvancılık vb.) devam edilebilmektedir.

## GÖRÜŞ ve ÖNERİLERİNİZ

Dilerseniz görüş ve önerilerinizi bu kısma yazarak toplantı sonrası bize iletebilirsiniz.

UNİVERSAL WIND ENERJİ ELEKTRİK ÜRETİM A.Ş

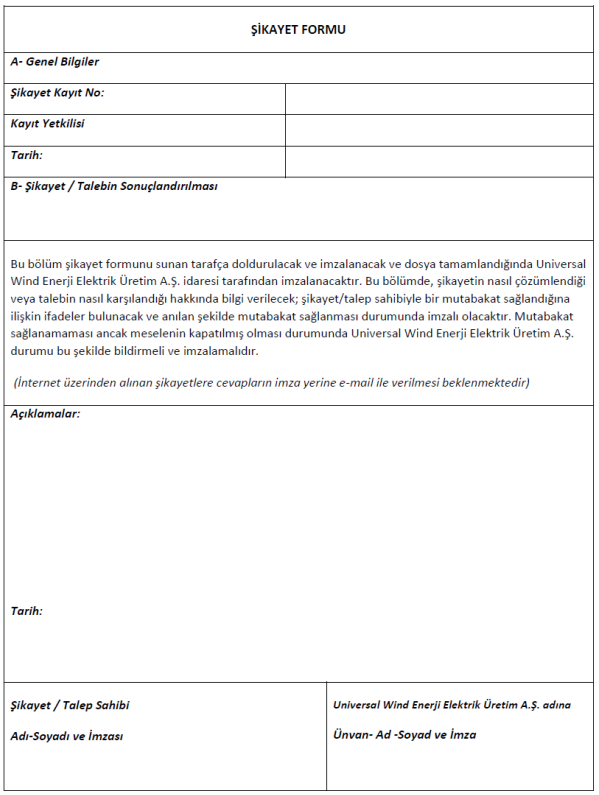
**İSTANBUL**
**RÜZGAR ENERJİ SANTRALİ**

44 Türbin – 211,2 MWm/200 MWe

(43 x 4,8 MWm/4,55 MWe)
(1 x 4,8 MWm/4,35 MWe)

İSTANBUL/ÇATALCA
YALIKÖY, KARAMANDERE,
BİNKILIÇ MAHALLELERİ

**Figure 15. Project Information Brochure**



**ŞİKAYET FORMU**

| | |
|---|---|
| *A- Genel Bilgiler* | |
| *Şikayet Kayıt No:* | |
| *Kayıt Yetkilisi* | |
| *Tarih:* | |
| *B- Şikayet / Talebin Sonuçlandırılması* | |

Bu bölüm şikayet formunu sunan tarafça doldurulacak ve imzalanacak ve dosya tamamlandığında Universal Wind Enerji Elektrik Üretim A.Ş. idaresi tarafından imzalanacaktır. Bu bölümde, şikayetin nasıl çözümlendiği veya talebin nasıl karşılandığı hakkında bilgi verilecek; şikayet/talep sahibiyle bir mutabakat sağlandığına ilişkin ifadeler bulunacak ve anılan şekilde mutabakat sağlanması durumunda imzalı olacaktır. Mutabakat sağlanamaması ancak meselenin kapatılmış olması durumunda Universal Wind Enerji Elektrik Üretim A.Ş. durumu bu şekilde bildirmeli ve imzalamalıdır.

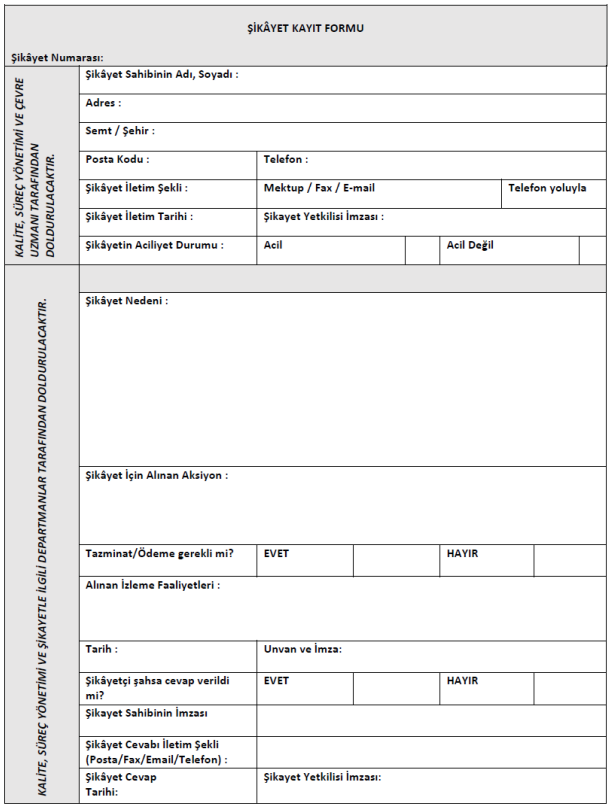
*(İnternet üzerinden alınan şikayetlere cevapların imza yerine e-mail ile verilmesi beklenmektedir)*

*Açıklamalar:*

*Tarih:*

| | |
|---|---|
| *Şikayet / Talep Sahibi*<br>*Adı-Soyadı ve İmzası* | *Universal Wind Enerji Elektrik Üretim A.Ş. adına*<br>*Ünvan- Ad -Soyad ve İmza* |

Şekil 1. Şikâyet Formu



**ŞİKÂYET KAYIT FORMU**

Şikâyet Numarası:

*KALİTE, SÜREÇ YÖNETİMİ VE ÇEVRE UZMANI TARAFINDAN DOLDURULACAKTIR.*

| | | | | |
|---|---|---|---|---|
| Şikâyet Sahibinin Adı, Soyadı : | | | | |
| Adres : | | | | |
| Semt / Şehir : | | | | |
| Posta Kodu : | Telefon : | | | |
| Şikâyet İletim Şekli : | Mektup / Fax / E-mail | | Telefon yoluyla | |
| Şikâyet İletim Tarihi : | Şikayet Yetkilisi İmzası : | | | |
| Şikâyetin Aciliyet Durumu : | Acil | | Acil Değil | |

*KALİTE, SÜREÇ YÖNETİMİ VE ŞİKAYETLE İLGİLİ DEPARTMANLAR TARAFINDAN DOLDURULACAKTIR.*

| | | | | |
|---|---|---|---|---|
| Şikâyet Nedeni : | | | | |
| Şikâyet İçin Alınan Aksiyon : | | | | |
| Tazminat/Ödeme gerekli mi? | EVET | | HAYIR | |
| Alınan İzleme Faaliyetleri : | | | | |
| Tarih : | Unvan ve İmza: | | | |
| Şikâyetçi şahsa cevap verildi mi? | EVET | | HAYIR | |
| Şikayet Sahibinin İmzası | | | | |
| Şikâyet Cevabı İletim Şekli (Posta/Fax/Email/Telefon) : | | | | |
| Şikâyet Cevap Tarihi: | Şikayet Yetkilisi İmzası: | | | |

Şekil 2. Şikâyet Kayıt Formu

(Left: For Collecting Grievance, Right: For Recording Grievance)

**Figure 16. Grievance Form**

As reviewed from the data, grievances from local people have been registered. It is seen that the register includes dates of grievance received & closed, communication channels, settlement and detailed explanation of the grievance. There are 6 complaints in the log, which are presented in Figure 17. No new external complaints are received. In case of complaints, log will be kept.

The site has received 6 letters (recorded in the grievance log) up to now, which are recorded to grievance log. Three of the letters are for asking for employment, two of which are employed at the project. One of the letters is about appreciation for the condition of forest road to Yalıköy and asking for making asphalt. The other is about asking for the completion date of the wedding hall to be before summer. The last complaint is about dust formation with mentioning that there is dust formation even though the roads are sprayed. The complaint is handled with increasing the number of sprayings.

Grievances boxes has been placed to nearby Binkılıç, Karacaköy and Yalıköy settlements. The project information brochure is placed next to these boxes (refer to Figure 14).

ŞİKAYET VERİTABANI

| Kayıt No | Şikayetin Alındığı Tarih | Şikayet Kapsamı | Şikayet Konusu | İlgili Bölüm | Önerilen Faaliyet | Termin Tarihi | Gerçekleşen Faaliyet | Tamamlanma Tarihi | Şikayetin Durumu |
|---|---|---|---|---|---|---|---|---|---|
| 001 | 25.11.[illegible] | talep | Düğü sabv | talep | | 05/03/2021 | | 05/03/2021 | Kapandı |
| 002 | 20.05.2021 | talep | Toz | talep | Şulama | 25/05/2021 | Şulama | 25/05/2021 | Kapandı |
| 003 | 11.06.2021 | talep | Asfalt | talep | Asfalt yapım | — | — | 20/06/2021 | Kapandı |
| 004 | 10.07.2021 | talep | İş talebi | talep | İşe alımı | 17/07/2021 | İşe alınacak | 17/07/2021 | Kapandı |
| 005 | 03.06.2021 | talep | İş talebi | talep | İşe alım | — | İşe alındı | 07/08/2021 | Kapandı |
| 006 | 20.08.2021 | talep | İş talebi | talep | İşe alım | — | İşe alındı | 24/08/2021 | Kapandı |

**Figure 17. Log of Grievance**

No complaints were mentioned by the labors during the site visits. Internal complaint mechanism is in place with the forms. Staff filled in the forms mostly with requests. There have been no complaints received according to the forms and log shared. Actions are in progress.

***UWE should continue to inform the local people about the grievance mechanism on a formal basis. Grievance mechanism should remain active throughout the life cycle of the project.***

### 5.8.5. Job Opportunities

It was said that it has given preference to the local labor during the construction and operation stage of the project. 10 of the UWE employees are from the Project affected settlements. One of the employees of Ataseven is from Binkılıç and 17 of the staff of the other contractors are from the region (Binkılıç, Saray, Çerkezköy, Aydınlar). The company officials stated that any non-technical work preference will be given to the local villagers. During the operation period, 15 people will be employed. However, the number of workers is not final.

### 5.8.6. Opposition to the Project

It is possible to say that there is no strong opposition to İstanbul WPP. However, some NGOs claim that the Project will destroy the natural environment. In recent years, wind energy investments started to increase in Turkey. Rapidly expanding developments cause the opposition of local people and/or NGO. For example, people Kuzey Ormanları Savunması (KOS – Northern Forests Defense) that are against İstanbul wind projects express their ideas as follows: "İstanbul Wind Energy Power Station Project has to be canceled immediately as it will wipe out thousands of old oak trees via infrastructural constructions (such as power transmission lines, wind turbines, and road constructions), thus destroy wildlife and trigger erosion, while inhibiting/interfering with the migration of 300.000 white storks each year". These NGOs claim that there are many wind power projects in Northern Forest area and cumulative impacts of these project become more important. These NGOs, especially Kuzey Ormanları Savunması, want to stop the project. The following summarize their major concerns and opinions:

- The project destroys nature and forest areas;
- There will be loss of some trees;
- Cumulative impacts of the Project is important;
- The Project has negative impacts on wildlife.

Twelve environmental groups have launched an online petition demanding the termination of a wind power plant in İstanbul's Northern Forests in Çatalca district.

One explanation on wind power controversy can be summarized as follows: There is a great difference between wind energy as an idea and wind turbines as acceptable structures in the landscape. This point is very important. People support the general idea of renewables and wind power. But when it comes to actual projects in a local area, the acceptance of wind power seems to vanish. UWE may explain how to mitigate negative impacts of the Project.

## 5.9. Land Acquisition

Based on the existing information, the project is located on forestry land. The project does not require permanent acquisition and/or expropriation of privately owned lands. Thus, there is no need for resettlement and economic displacement.

PS 5 (Land Acquisition and Involuntary Resettlement) is not applicable for the project.

## 5.10. Community Health and Safety

IFC Performance Standard 4 "addresses the client's responsibility to avoid or minimize the risks and impacts to community health, safety, and security that may arise from Project related activities, with particular attention to vulnerable groups" (2012).

The increase in the number of people in the Project area may have some potential negative impacts, including increased insecurity and community conflicts, increased risk of accidents and increased numbers of immigration of construction workers. UWE should take necessary measures to prevent such events.

***A Traffic Management Plan has been prepared and its implementation is ongoing . The logs for traffic load have started to be kept and shall continue.***

There are signs indicating traffic direction and speed limits within the project area.

## 5.11. Community Development

Within the scope of social responsibility, the company provided some aid to Binkılıç including construction of a wedding facility, a community center at Binkılıç on behalf of Çatalca Municipality, and a village headmen office for Binkılıç. UWE has undertaken community development activities based on the demands raised by the local people.

If UWE wants to bring significant social, economic and community related benefits to the Project area, ***UWE can apply some community development program and has prepared a community development plan. UWE shall continue working to support the affected communities.*** These will be manifested in the form of employment and investment in the development of business, purchase of goods and services from local businesses, development and enhancement of local infrastructure.

## 5.12. Biodiversity Conservation and Sustainable Management of Living Natural Resources

İstanbul WPP Project has been evaluated within the scope of the site visit findings and desktop study on available project documents according to IFC Performance Standard 6 which related with Biodiversity Conservation and Sustainable Management of Living Natural Resources.

*IFC 6 is considering following issues;*

- *protecting and conserving biodiversity,*
- *maintaining the benefits from ecosystem services and to*
- *promoting the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities.*

*The implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's Environmental and Social Management Plan/System (ESMP/S), the elements of which are outlined in Performance Standard 1. The risks and impacts identification process should consider direct and indirect project-related impacts on biodiversity and ecosystem services and identify any significant residual impacts.*

As a PS6 requirement, the ESMP should include mitigations for the topics listed in the subheadings below.

### 5.12.1. Protection and Conservation of Biodiversity

For the purposes of implementation of this Performance Standard, habitats are divided into modified, natural, and critical. Critical habitats are a subset of modified or natural habitats.

İstanbul WPP project facilities currently have effects on modified, natural habitats in different levels. İstanbul WPP project area is located in forest area, which is managed by Governmental Forest Administration.

İstanbul WPP Project has forestry permit (for details please see in section 5.3)

The nearest national and internationally important protected area, Çilingöz Wildlife Development Site (WDS), is located adjacent to the project site.

İstanbul WPP is also located in Terkos Key Biodiversity Area (KBA), which is presented in Figure 18. KBA Key biodiversity areas are sites of global importance for biodiversity conservation. Nature Society (Doğa Derneği), Birdlife Partner in Turkey, assessed all potential natural sites according to IUCN and Birdlife criteria and identified 313 KBAs in Turkey in 2004.


**Figure 18. İstanbul WPP Project area inside the Terkos KBA**

İstanbul WPP Project has national legal permits about Protection and Conservation of Biodiversity to fulfil the standard conservation precautions and also following special conditions.

- Continuous bird migration monitoring during spring and autumn migration period with qualified and authorized team member that capable of intervene to turbines in case of emergency for birds.
- Bat survey between April and September with qualified person.
- Breeding bird survey
- Specific monitoring survey for Imperial Eagle (*Aquila heliaca*) and Red Deer (*Cervus elaphus*).

The project should also prove following criteria for IFC PS6 performance standards;

1. *No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical.*

   Since Çilingöz WDS is located to the west of the project site and adjacent, there is no other alternative site in the region. Please see the project alternatives assessment under the section 4.3.

2. *The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values.*

3. *The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species over a reasonable period of time especially.*

   İstanbul Biodiversity WPP Project need to develop "Biodiversity Monitoring Plan" which will have measurements and/or mitigations for adverse impacts. The current reports are not clearly or adequately defined possible adverse impacts on biodiversity with measurements and further monitoring and mitigation studies in time schedule.

4. *Implement additional programs, as appropriate, to promote and enhance the conservation aims and effective management of the area*

There are no implementations or additional special program for biodiversity conservation. ***Meanwhile, supporting the development of honey forests near the project site will be a good opportunity for biodiversity conservation.***

### 5.12.2. Flora

The national EIA Report of the project stated that there are 260 plant species present in the project area. Although there is high plant diversity, there are only 2 endemic species which are described in the report. These are *Centaurea consanguinea* DC and *Veronica multifida* with in the Least Concern (LC) conservation status.

The population status of these two species is not clearly described in the report.

Biodiversity Monitoring studies should cover these two endemic plant species with mitigations if it is necessary. Details are shared in ESAP.

***It is necessary to determine the number of trees cut and to compensate for the lost forest area by supporting or performing afforestation works.***

### 5.12.3. Fauna

The Fauna Report for the Project stated that 3 mammalian and 2 reptile species, which have IUCN conservation priority status, are recorded in the project area.

These are Hermann's Tortoise *Testudo hermanni* (Trakya tosbağası) Near Threatened (NT) and also Spur-thighed Tortoise *Testudo graeca* (Tosbağa), Marbled Polecat *Vormela peregusna* (Alaca Sansar) *, and* Wildcat, *Felis silvestris* (Yaban kedisi) with IUCN Vulnerable (VU) status.

***These species need to be monitored during the construction and operation phases.***

Bird and bat species are evaluated in the separate sections below.

The Fauna Report for the Project stated that the project will have no or minor effects on wildlife. The report also described some possible effects of construction activities on the fauna members as followings;

- The destruction of existing habitats in the areas where turbines are planned in the project site,
- Animals are disturbed by dust and noise caused by soil stripping and excavation activities on turbines and access roads, and they leave the area temporarily,
- Loss of individuals by not being able to escape during soil stripping activities of some animal species,
- Death due to bat collisions and barotrauma (lung explosion as a result of low pressure caused by turbine blade movements) in turbines during operation,
- Illness of wildlife as a result of increased vehicle traffic and death as a result of vehicle collisions.
- In the event that the construction activities coincide with the birth time of the wild animals, breeding and deaths in the offspring in inappropriate places

***Standards precautions are described in the ESAP for all these above possible effects.***

### 5.12.4. Birds

The report stated following findings and mitigations for avifauna of the project site;

59 species of birds have been identified and 2 of them have protection priority according to IUCN criteria. Turtle Dove *Streptopelia turtur* (Üveyik) and Great Spotted Eagle *Clanga* (Büyük orman kartalı) are in Vulnerable (VU) category. The report does not include a specific assessment of how these species will be affected by the project, and no special monitoring program.

Although ornithological monitoring studies were performed at many points, they do not have full or proper coverage and insufficient observation time in terms of Vantage Point Survey methodology.

For this reason, bird-turbine collision risk calculations should be revised, and the methodology should be adapted to the internationally accepted SNH Vantage Point Survey methodology.

***Further studies on ornithology are needed. Studies shall follow Scottish Natural Heritage suggested methods and also carcass research around turbines and through energy transmission lines. Details are shared in ESAP.***

### 5.12.5. Bats

According to field survey and literature studies, the fauna report stated that 16 bat species were reported in the area. Western barbastelle *Barbastellus barbastella* is in the category of IUCN Near Threatened (NT), Mehelyi's Horseshoe Bat *Rhinolophus mehelyii* and Schreibers' Bent-winged Bat *Miniopterus schreibersi* are in Vulnerable (VU) category according to IUCN criteria. In addition, 8 species are included in the Annex-II list according to the European Union Habitat directives and are classified among the species requiring high protection in Europe.

The methodology of bat research is not described clearly in the report. Whether the bat monitoring study's methodology complies with Eurobat standards should be confirmed and a bat and carcass monitoring study should be planned to cover the carcass study during construction and operation.

***Further studies about bats shall be carried out. Details of the studies are shared within ESAP.***

The Fauna Report for the Project stated that the project will have no or minor effects on wildlife. The report also described some possible effects of construction activities on the fauna members as followings;

- The destruction of existing habitats in the areas where turbines are planned in the project site,
- Animals are disturbed by dust and noise caused by soil stripping and excavation activities on turbines and access roads, and they leave the area temporarily,
- Loss of individuals by not being able to escape during soil stripping activities of some animal species,
- Death due to bat collisions and barotrauma (lung explosion as a result of low pressure caused by turbine blade movements) in turbines during operation,
- Illness of wildlife as a result of increased vehicle traffic and death as a result of vehicle collisions.
- In the event that the construction activities coincide with the birth time of the wild animals, breeding and deaths in the offspring in inappropriate places

***Standards precautions are described in the ESAP for all these above possible effects.***

### 12.5.6. Invasive Alien Species

Intentional or accidental introduction of alien, or non-native, species of flora and fauna into areas where they are not normally found can be a significant threat to biodiversity, all introductions of alien species will be subject to a risk assessment (as part of the client's environmental and social risks and impacts identification process) to determine the potential for invasive behavior. The client will implement measures to avoid the potential for accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbor alien species.

Since the construction and energy production processes in İstanbul WPP Project does not consist of live plants and animals, it is unlikely that they have invasive alien species. Invasive species may be transported to the site due to vehicle traffic during the construction and operation phase of the project. Due to habitat change/alteration caused by the project, it may be possible, although unlikely, that invasive species will have an opportunity to spread on the site.

For this reason, whether there are invasive species in the region, invasive species survey should be carried out during the construction phase and within one year during the operation.

If an invasive species is found, mitigation should be developed according to the threat level to be determined by the expert by notifying the relevant institutions.

### 12.5.7. Management of Ecosystem Services

Where a project is likely to adversely impact ecosystem services, as determined by the risks and impacts identification process, the client will conduct a systematic review to identify priority ecosystem services. Priority ecosystem services are two-fold: (i) those services on which project operations are most likely to have an impact and, therefore, which result in adverse impacts to Affected Communities; and/or (ii) those services on which the project is directly dependent for its operations (e.g., water). When Affected Communities are likely to be impacted, they should participate in the determination of priority ecosystem services in accordance with the stakeholder engagement process as defined in Performance Standard 1.

Client requirements in Performance Standard 6 for ecosystem services are applicable only when the client has “direct management control or significant influence” over such services. Therefore, ecosystem services whose beneficiaries are at the global scale, and sometimes the regional scale are not covered under Performance Standard 6.

İstanbul WPP Project are not engaged in the primary production of living natural resources, including natural and plantation forestry, agriculture, animal husbandry, aquaculture, and fisheries, will be subject to the requirements of the paragraphs 26 through 30 of PS6. İstanbul WF facilities do not have “direct management control or significant influence” over ecosystem services obtained from forest ecosystems.

İstanbul WPP Project does not need to develop any management system concerning ecosystem services.

## 5.16. Health and Safety

Energy generation and construction activities are evaluated under high hazard category per health and safety legislation requiring companies to follow certain rules which include

- Employment hours of safety expert and medical staff working hours
- Risk assessment and emergency response plan validity period

Site is complying with these requirements.

There is Health and Safety (HS) Management Plan, Internal HS Regulation, Disciplinary Instructions, Personal Protective Equipment (PPE) Use and Maintenance Rules, Orientation Training, HS General Instruction and Commitment Minute, PPE Handover Minute, Working at Height Instructions, Safety rules for working with chemicals available. In addition, hot work, electrical work, working at height, excavation, heavy load lift and carrying, and confined space instructions has been prepared. Work permit procedure and form has been published.

There is health and safety plan available for construction activities.

There is annual work and training program for 2021 in line with legislation requirement. There are training records available. Induction training for 8 hours was given on 12.08.2021.

There is labor representative and support staff assigned per legislation requirement. These staff are also part of risk assessment team.

There is visitor induction training with visitor safety instructions as a best practice. There is a brochure available and given to visitors. Now, there is a visitor instruction document in place.

There are periodical health check-ups available both for contractors and UWE.

With the existing information on health and safety, UWE has a system in line with the legislation requirements.

There is an occupational hygiene measurement made on 24.08.2021 for noise, illumination, thermal comfort and dust. OSGB is working on the necessities and any required actions about this report. The results of the measurements showed that there is no exposure to dust and excess noise (less than 45 to 50 dBA at offices limit of IFC) at the administration/control room building at the switchyard. There could be opportunities for improvement for thermal comfort and illumination (less than 500 lux limit of IFC). These shall be handled through consultation with workers.

The team has necessary tools for communication. The coordination of work will be executed from the control room/administration building at switchyard. Considering the layout of turbines, being located in a forest, staff will be working remotely***. Hence there shall be a plan to coordinate work in remote locations. The document shall have link to emergency response plan and work permit system.***

Working at height safety will be crucial for operation phase. ***Necessary set-up shall be planned before being fully operational.*** These preparations shall include perf IFC guidelines:

- Ensure all employees working at height are trained and competent in the use of all working-at height and rescue systems in place.
- Provide workers with a suitable work-positioning device; also ensure the connectors on positioning systems are compatible with the tower components to which they are attached.
- Ensure that hoisting equipment is properly rated and maintained and that hoist operators are properly trained.
- When working at height, all tools and equipment should be fitted with a lanyard, where possible, and capture netting should be used if practicable.
- Signs and other obstructions should be removed from poles or structures prior to undertaking work.
- An approved tool bag should be used for raising or lowering tools or materials to workers on elevated structures.
- Avoid conducting tower installation or maintenance work during poor weather conditions and especially where there is a risk of lightning strikes.
- An emergency rescue plan should be in place detailing the methods to be used to rescue operatives should they become stranded or incapacitated while at height.

## 5.17. Risk Assessment

There is a risk assessment which is valid from 14.06.2021 to 14.06.2023 for UWE. There is Covid 19 risk assessment integrated in this risk assessment.

The contractors have their risk assessment as well.

The period and content of risk assessment follows Turkish regulation for risk assessment. ***Risk assessment shall be updated in case of having any changes in İstanbul WPP and in case of no changes it shall be updated in 2023.***

The risk assessment for both UWE and contractors is done with Fine-Kinney method.

## 5.18. Emergency Response

Emergency response plan which is valid from 14.06.2021 to 14.06.2023 was shared for review. The plan includes fire, earthquake, flood, chemical spills, pressurized vessel explosion, first aid, food and gas poisoning, electrocution, sabotage and war. Roles and responsibilities of emergency response teams of fire, first aid, rescue and communication are described. There is a communication chart to be followed during an emergency. There is a section for working at height also covering the equipment choice and rules to be followed. There is a section for fire handbook including fire response .

There is a separate emergency response plan prepared for Covid 19 dated 14.06.2021. The study includes actions to prevent Covid 19, roles and responsibilities and actions to be taken in case of Covid 19 case. In addition, UWE had developed an infectious diseases directive which includes Covid 19 and infectious diseases with measures.

The emergency response plan shall also include protection and protection team roles and responsibilities per legislation.

***The emergency response team members for first aid, fire, rescue, search and evacuation are determined but this is not part of the emergency response plan.***

However, considering the number of staff it will be difficult to respond (even after assigning team members) to emergencies happening at the switchyard area. Hence, ***coordination with external emergency organizations will be one of the critical issues. Emergency response plan shall also include such articles on top of the legislation requirements. Environmental incidents shall be handled in line with IFC Guideline requirements.***

There is a list of the emergency response equipment available but not integrated or referred in the emergency response plan. First aid equipment's are available at the control room/administration building at switchyard as well as the camp site. ***First aid equipment at the switchyard area has been improved.***

***There is another document called Emergency Preparedness and Response Plan. This plan cannot replace the legally required emergency response plan, and it is communicating with this document. Its environmental accident section which covers construction and operation phase will add value to İstanbul WPP management system. Training shall be given to staff.***

There is record of an emergency drill regarding fire response on 10.08.2021. The drill includes evacuation and head count. The participants were also given training about use of portable extinguishers. The drills shall continue annually, and records shall continue to be kept.

## 5.19. Safety Meetings

UWE is out of scope of Regulation about Health and Safety Committee due to having less than 50 employees. Thus, the site is not holding official safety meetings.

***As a best practice it is suggested to have environmental, social and safety meetings and keep the logs and follow-up the actions. Upon this recommendation UWE has established an environmental and social management committee, which held its first meeting on 18.11.2021 with participating of site staff, Nartus, OSGB representatives and HR and Legal staff from headquarter. The meeting minutes are kept and are available with action planning.***

## 5.20. Trainings

Health and safety related documentation for trainings are available.

The legally required health and safety trainings are fulfilled, and records are kept. Records are seen during the site visit.

The annual training plan is available. This plan, which was shared, covers regulation requirements.

***All staff that is going to work at turbines shall have working at height training.*** Some of the staff already got this training from Global Wind Organization. The logs of the trainings shall be kept with refreshing classes.

First aid trainings shall be organized beyond the needs of the legislation since staff will be alone at the power plant. ***UWE had organized a training on Covid 19 and first aid and invited villagers with their staff and contractors. The training was organized at Binkılıç on 22.10.2021. The announcement and a photograph from the training is presented in Figure 19.***

There are biodiversity trainings given to UWE and contractors in June, July and August 2021. An environmental awareness, waste management and sustainability training was organized on 23.10.2021. ***A training schedule and program for environmental issues shall be determined and implemented.*** A training plan has been developed which includes different trainings for safety and environmental subjects. Now UWE is working on transferring these training to annual program. The subjects shall at least include environmental legislation, waste management, communication, chemicals, spills and leakage.

A fire training was organized at Binkılıç and a drill was performed at the construction camp site on 27.10.2021. Training logs and photographs are available, a sample photograph is shared in Figure 20.

A very important subject for training is fire safety being located in forest. Team has received fire ***response training with extinguishers, but this will not be sufficient during a forest fire. In addition, UWE is required to work with forestry department in*** case of a fire. ***Therefore, training modules shall include fire prevention, fire response, forest fires.***

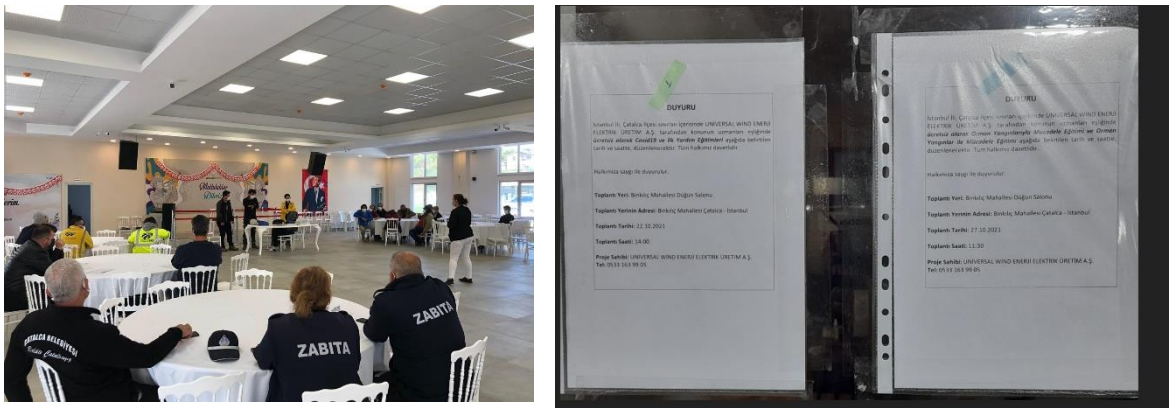



**Figure 19. Covid 19 and First Aid Training held on 22.10.2021**

**Figure 20. Fire Training held on 27.10.2021**

## 5.21. Accidents

There are no fatal and major accidents according to these statistics shared at İstanbul WPP. However, there is one accident happened during the commissioning of the T35 with property damage. There were 2 consultants and 1 authority representative involved in the accident. They were taken to hospital. Luckily there was no injury resulting with lost time. Records are available for this accident.

Accident investigation and record keeping shall continue for the operation phase as well. ***A procedure for this subject shall be formed and implemented. There are sections in the other related documents about recording and requirement of investigation of the accidents.***

There is a system to report near misses during the construction phase. ***These is a log for near miss. Analysis results shall be shared with staff. A similar system shall be implemented for the operation phase.***

## 5.22. Personal Protective Equipment

Health and safety related documentation for UWE shows the personal protective equipment (PPE) handed over to the staff during employment.

In addition, site staff has been supplied with daily masks for Covid and pandemics.

Construction staff and UWE staff is observed to use PPE during the site visits.

***Considering the commitment of supporting forestry chiefdom during a fire, supplying proper fire fighter cloths to UWE staff shall be considered, purchased, maintained. Staff shall also receive training on use of these.***

## 5.23. Explosion Protection Document

There is no requirement for the UWE to obtain explosion protection document due to the amount of fuel-oil present on the site.

There are no blasting activities employed for the construction period.

## 5.24. SEVESO

The site is not listed under SEVESO legislation.

## 5.25. Waste Management

There is no waste management plan prepared for Istanbul WPP, therefore an approval letter for this plan is not secured yet per Waste Management Regulation published in the Official Gazette dated 02.04.2015 and No. 29314. Since the site is not operational yet, there is time to obtain this. ***The plan shall be prepared and approval from the Provincial Environmental and Urbanization Department shall be secured. As an initial step UWE had applied to secure its registration to the Ministries integrated Environmental Information System on 3.11.2021.***

Sites producing more than 1000 kg of waste that will store longer than 6 months ***shall secure a temporary waste storage license from*** Provincial Environmental and Urbanization Department about this. If the waste amount is less than this, then ***a letter to confirm that this license is not required shall be secured.***

Annual waste notifications shall be made.

For construction period, waste management strategy is as follows:

- Solid wastes are sent to Municipality.
- Battery, cartage, toner and electronical wastes from Office will be sent to licensed companies.
- There is no vegetable waste oil produced since there is no cafeteria. Staff brings their own food.
- There is infirmary, the medical waste produced is handled by the OSGB.
- There is no vehicle maintenance at the site. The vehicles are sent to services. All related wastes are handled by the maintenance center.
- The hazardous wastes produced at the turbines and the switchyard are collected separately and sent to licensed facilities.

Similar strategy for the operation phase will be employed. All waste transportation and disposal shall be done through licensed firms.

***A waste and wastewater management plan is issued and implementation has started with the emptying of the septic tank, disposal of wastes, receiving consumption water with record keeping.***

There has been shipment of steel, plastic, paper and wood through a licensed waste disposal company (Erdem Ticaret). There are two receipts for the excavation waste. The site management mentioned that the excavation is mostly stored on site and used during the filling operations. ***The waste disposal records for the construction have started to be kept and shall continue.***

Waste storage area for operation phase has been constructed with some minor works remaining at the switchyard area but its plans are ready. The drawing of the waste storage area is presented in Figure 21. The area has designated zones for waste paper, glass, plastic and hazardous waste. The visual shared, which is presented in Figure 22, indicated that the area is almost finished and ready to be used with spill kit and tags. ***Site will be controlled during monitoring studies.***

Top soil has been stored and used during landscaping of the area.

There is compulsory insurance policy for Hazardous Material and Hazardous Chemicals from Allianz valid from 01.09 2021 to 01.09. 2022. ***This policy shall be renewed annually.***

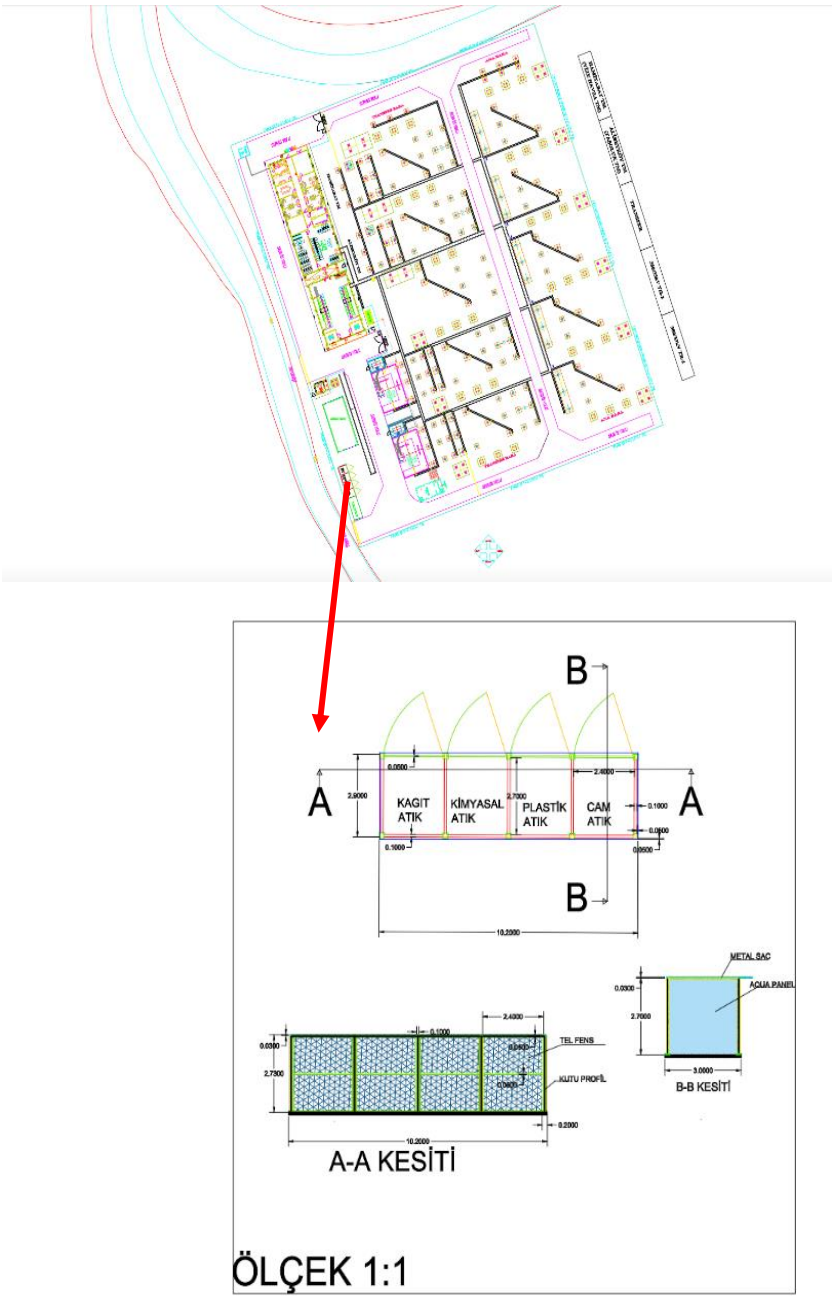



**Figure 21. Waste Storage Area Plan for Operation Phase at Switchyard Area**

**Figure 22. Waste Storage Area**

## 5.26. Emissions

There is no emission source for the operating wind power projects; therefore, there is no legislative and/or IFC requirements for the operation phase.

The construction period of İstanbul WPP will be the source of dust emissions. Both Turkish Industrial Air Pollution Control Regulation (SKHKKY) and IFC guidelines have some articles for this period.

The construction activities include excavation, loading, unloading and transportation operations which will create and is creating dust.

The calculations available in the EIA report is unfortunately not realistic for the existing project details with all the changes made during time and representing the ongoing bulk construction activities**.** Nartus has prepared an air quality report for construction. Since the report is prepared upon completion of most of the excavation work, which is the main source of dust at İstanbul WPP with the traffic, it bases its calculation on three scenario assumptions with using the uncontrolled emission factor for sources other than stacks to evaluate the worst-case scenario. These scenarios include work at 1 turbine site, work at 2 turbine sites at the same time and work at 5 turbines site at the same time. The calculations are done for vegetative soil which is removed to be used for landscaping and excavation work. The report has the result of

- there is no impact for the work at 1 turbine site since the total dust level is below (0,672 kg/h) the 1 kg/h limit of SKHKKY.
- The second scenario exceeds the 1 kg/h limit of SKHKKY with 1,12 kg/h and modelling study is done to compare the results with Table 2.2 of SKHKKY. The model results showed that the dust level is at 50,17 mg/m$^2$day in all directions at 100 m distance to the source, which means that impact will be limited to the work place and there will be no impact on the residential areas especially considering the calculations are done with uncontrolled emission factor.
- The third scenario again exceed the 1 kg/h limit of SKHKKY with 3,36 kg/h and modelling study is done to compare the results with Table 2.2 of SKHKKY. The model results showed that the

dust level is at 150,51 mg/m$^2$day in all directions at 100 m distance to the source, which means that impact will be limited to the work place and there will be no impact on the residential areas especially considering the calculations are done with uncontrolled emission factor.

The air quality report includes the commitments of Istanbul WPP to control the formation of dust during the construction activities, which are listed below:

- Act slowly for loading and unloading activities with controlled action
- Limiting the load of the trucks and covering the trucks
- Follow the speed limits
- Spray the roads

These are in line with IFC guidelines and SKHKKY. It was observed that the team is paying attention to minimize dust formation during the site visit.

***The report has a section for the dust formation due to transportation and for the emissions of the vehicles employed for the project and controlled with the limits of SKHKKY limits with no need of modelling*** According to IFC guidelines, precaution shall be given to minimize the impact of dust formation and spread during the construction period.

Istanbul WPP has its commitment to water spray the area, watch the speed limits. The vehicles used to spray the roads and construction areas were observed to be employed during both site visits. Due to weather conditions being hot and dry, there was dust formation. There are speed limit signs posted to control dust formation due to traffic. Drivers are reminded about speed limits and importance of following them to minimize dust formation. Speed limits will be also applied during the operation phase. The existing speed limit is 30 km/h.

Heating of the administration building is with air conditioner. There is no central heating system therefore no boilers and boiler associated emissions for the operation phase.

The vehicles employed for the project have their exhaust controls. The construction vehicles are periodically controlled and maintained to have them efficiently working. Passenger cars and small trucks either have their exhaust controls done or they are new.

## 5.27. Greenhouse Gases

There is fuel for the emergency generator available at the switchyard area. The generator operates on emergency conditions, so it is not a continuous source of greenhouse gases.

There will be mobile source of greenhouse gases during the construction activities due to construction equipment working temporarily.

There is no plan to receive any certificates for greenhouses management.

## 5.28. Water

The wind powers have impact on the water due to the installation of turbine foundations, underground cables, access roads, and other ancillary infrastructure which may result in increased erosion, soil compaction, increased run-off, and sedimentation of surface waters.

İstanbul WPP is located in a forest area with slopes. The site has been designed considering the slopes to prevent erosion and run-off. The site is constructed with drainage system. Drainage next to access

roads is under construction***. It will be important to keep the drainage system functional during the operation phase.***

## 5.29. Water Use

The main source of water usage during construction phase of İstanbul WPP is due to road spraying. Water for road spraying is supplied via tankers. There is no log to show the amount of water used for this purpose. However, site management can calculate the amount through the delivery receipts. ***Logs for the water used has started to be kept and an agreement with the water supply company has been made. The permit of the company has been also secured, which is positive for tracking supplier.***

The water use at wind power plants is consumption water and potable water for its operation phase. Potable water is received as bottled.

Consumption water is also purchased bottled and transferred to storage tank near the switchyard.

***The water storage tank is new; therefore, there is no records for the cleaning water storage tank. The tank shall be cleaned periodically, and the records shall be kept.***

There is water quality analysis result available dated 23.08.2021 from İstanbul Provincial Health Department. ***Periodical water quality analysis shall be carried out and records shall be kept available.***

***All the activities carried out under this Section is presented in Waste and Wastewater management plan.***

## 5.30. Wastewater

There is no process and/or industrial wastewater produced during operation of a wind power plant. Only domestic wastewater is produced. There is a septic tank available at the management/control room building at the switchyard site. The septic tank is impervious and there is level monitoring.

The construction camp site also employs septic tank. The contractors working on various turbine sites also employs mobile toilets.

Septic tank is emptied for the first time with records available and is planned to be periodically emptied. ***The records shall continue to be kept and recorded.***

All the activities carried out under this Article is collected under waste and wastewater management plan ***.***

## 5.31. Chemicals

There is no need for blasting operations during construction; therefore, there is no need to use explosives during the construction phase of İstanbul WPP.

Majority of the operational chemicals in a wind power plant arise from the oil in the turbine systems. The only potentially toxic or hazardous materials are relatively small amounts of lubricating oils and hydraulic and insulating fluids.

UWE reported that there are no radioactive, ozone layer depleting substances, asbestos and radon involved in the project. In addition, the MSDS shared does not indicate presence of PCB.

There are four transformers at the switchyard with oil. Transformers have containment.

Nordex has informed UWE about the chemicals that will be used; therefore, stored at warehouse for annual maintenance. İstanbul WPP has the MSDS of the oils present in the turbines and the chemicals used for maintenance and repair work of the power plant. These chemicals will be stored according to their characteristics with taking precautions against spills and leakage. ***Spill kits shall be kept on site.*** There are spill kits available on site now. Contractors should be followed for complying the management of handling these chemicals. According to the information shared there will be a designated storage area at the switchyard area, whose construction is almost finished according to photograph shared. ***Storage conditions will be checked during the monitoring site visit.***

***There is a hazardous material management plan and a working with and storage of chemicals instruction available. Chemicals shall be kept, transferred, handled and used in line with the best practices and comply with the requirements of the plan.***

## 5.32. Noise

One of the major impacts of the wind power plants is still the mechanical and aerodynamic noise generated during the operation phase.

The noise levels per Turkish Noise Control Regulation is given in Table 5.1. IFC General EHS Guidelines has the statement of noise impacts should not exceed the levels presented in Table 5.2 or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. The project site shall be evaluated under residential area according to IFC specifications and Noise sensitive receptor training, culture, healthcare and resort and camping area under Turkish Noise Control Regulation.

**Table 5-1 Noise Limits of Environmental Noise Control Regulation**

| Receptors | $Leq_{daytime}$ (07:00-19:00) (dBA) | $Leq_{evening}$ (19:00-23:00) (dBA) | $Leq_{night}$ (23:00-07:00) (dBA) |
|---|---|---|---|
| **Noise sensitive receptor training, culture, healthcare and resort and camping area** | **60** | **55** | **50** |
| Commercial areas with noise sensitive receptors of densely residential area | 65 | 60 | 55 |
| Commercial areas with noise sensitive receptors of densely workplaces | 68 | 63 | 58 |
| Industrial areas | 70 | 65 | 60 |

The İstanbul WPP has to comply with IFC limits since they are stricter.

There are construction period noise calculations in the EIA report. However, the calculation in the report is not representing the current situation of İstanbul WPP with a totally different construction schedule and number of turbines. There are no new calculations available.

**Table 5-2 IFC General EHS Guidelines Noise Levels**

| Receptor | One Hour Leq dBA | |
|---|---|---|
| | Day time 07:00 - 22:00 | Nighttime 22:00 - 07:00 |
| **Residential; institutional; educational** | **55** | **45** |
| Industrial; commercial | 70 | 70 |

Nartus had run a noise dispersion modeling with support of Macom (Macom is a company specialized on measurements and modeling studies) and the results are given in Table 5.3. The initial values supplied by Nartus indicated that the site will comply with both IFC and Turkish Noise limits. However, the parameters such as wind speed, duration and timeframe were not present in this document. GN1 and GN2, which are the locations where the noise impact is assessed are the two closest sensitive receptors to the project with 2 km of impact area. The noise measurements have been completed. The noise measurement equipment is placed on site and its photograph shared by Nartus is presented in Figure 24. Two sensitive locations to carry out the measurements are defined and presented in Figure 25.

**Table 5-3 Noise Dispersion Model Results shared by Nartus**

| Name of the Noise Receptor | Easting (X) | Northing (Y) | Z (m) | Imission Height (m) | Min Noise (dBA) | Sound Pressure Level, Max from WTGs (dBA) | Distance to Noise Demand |
|---|---|---|---|---|---|---|---|
| GN-1 | 607938 | 4591730 | 24.1 | 5.0 | 43 | 31.3 | 1813 |
| GN-2 | 603598 | 4583095 | 121.3 | 5.0 | 43 | 32.4 | 1258 |

A section for background noise measurements and noise modelling is now available in the Selected Risk Assessment Report dated 25.10.2021 by Nartus (Nartus worked with Macom). The main findings are as follows:

- The nearest sensitive receptors were determined based on their distance from the nearest turbines for noise impact assessment. Settlements surrounding the turbines and located at a distance of 2500 m were considered as sensitive receptors. Noise sensitive receptors are selected from residential areas where people live permanently or temporarily, hospitals, schools, sports fields and cultural areas. The sensitive receptors chosen for the noise effect are the living areas around the turbines

- In order to determine existing background noise levels at the nearest sensitive receptor a noise measurement was carried out with respect to ETSU-R-97, IFC guidelines and ISO 1996-1, ISO 1996-2. Svantek 971 Class 1 Sound Level Meter was used for measurement. Measurement was conducted on 15th, 16th and 17th of September 2021, whose locations are shown in Figure 23. Unattended noise measurement has been carried out for 48 hours. During the noise level measurement, height of the bi-directional microphone was kept at 1.5 meters.
- All measurement systems were set to log the Lmin, Lmax, LAeq, LA90 noise levels over the required 10 minutes intervals over the deployment period.
- Precipitation was not observed during the noise measurement done on September 16 to 18, 2021. The results are presented in Table 5.4.
- The commercially available WindPro v3.1 noise propagation model, which is based on ISO 9613-2, is used.
- The results of the model is presented below in Table 5.5 and Figure 23.
- Wind power plants in the license area and its vicinity were examined to evaluate the cumulative noise impact. There is the turbine numbered T4 belonging to Hacı Bey WPP which is currently operating within 2000 m noise impact area. Therefore, cumulative noise impact assessment study for the operational noise was performed and background noise level includes all noise around the project area.

***Table 5-4. Noise Measurement Results between 16-18.09.2021***

| Name of the Settlement Area | Turbine | Location | App. Distance (km) | Coordinates | | 16.09.2021 | | 17.09.2021 | | 18.09.2021 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Longitude East | Latittude North | Day time (07:00-22:00) | Night time (22:00-07:00) | Day time (07:00 - 22:00) | Night time (22:00-07:00) | Day time (07:00 - 22:00) | Night time (22:00-07:00) |
| SSR-1 | T12 | Atatürk Binkılıç | 1.6 | 28.238578 | 41.391099 | 39,5 | 41,00 | 37,8 | 36,9 | 31,3 | 35,5 |
| SSR-2 | T9 | Yalıköy | 2.2 | 28.292027 | 41.468287 | 36,2 | 35,9 | 35,3 | 35,1 | 34,3 | 33,00 |
| Measurement results are in line with the IFC guidelines. | | | | | | | | | | | |

***Table 5-5. Noise Modelling Studies Outputs***

| Name of the Settlement Area | Reference Wind Speed (V10) m/s | | | | | | |
|---|---|---|---|---|---|---|---|
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| SSR1 | 31,2 | 31,3 | 31,3 | 31,3 | 31,3 | 31,3 | 31,3 |
| SSR2 | 32,3 | 32,4 | 32,4 | 32,4 | 32,4 | 32,4 | 32,4 |

Basing on IFC guidelines, following issues shall be followed for the noise monitoring

- The background noise measurements shall be carried out at a series of 10-minute intervals, using appropriate wind screens. At least five of these 10-minute measurements should be taken for each integer wind speed from cut-in speed to 12 m/s.
- Typical monitoring periods should be sufficient for statistical analysis and may last 48 hours with the use of noise monitors that should be capable of logging data continuously over this time period, or hourly, or more frequently, as appropriate (or else cover differing time periods within several days, including weekday and weekend workdays). The type of acoustic indices recorded depends on the type of noise being monitored, as established by a noise expert.
- Monitors should be located approximately 1.5 m above the ground and no closer than 3 m to any reflecting surface (e.g., wall).

According to selective risk assessment report, the noise monitoring requirements of IFC is met.

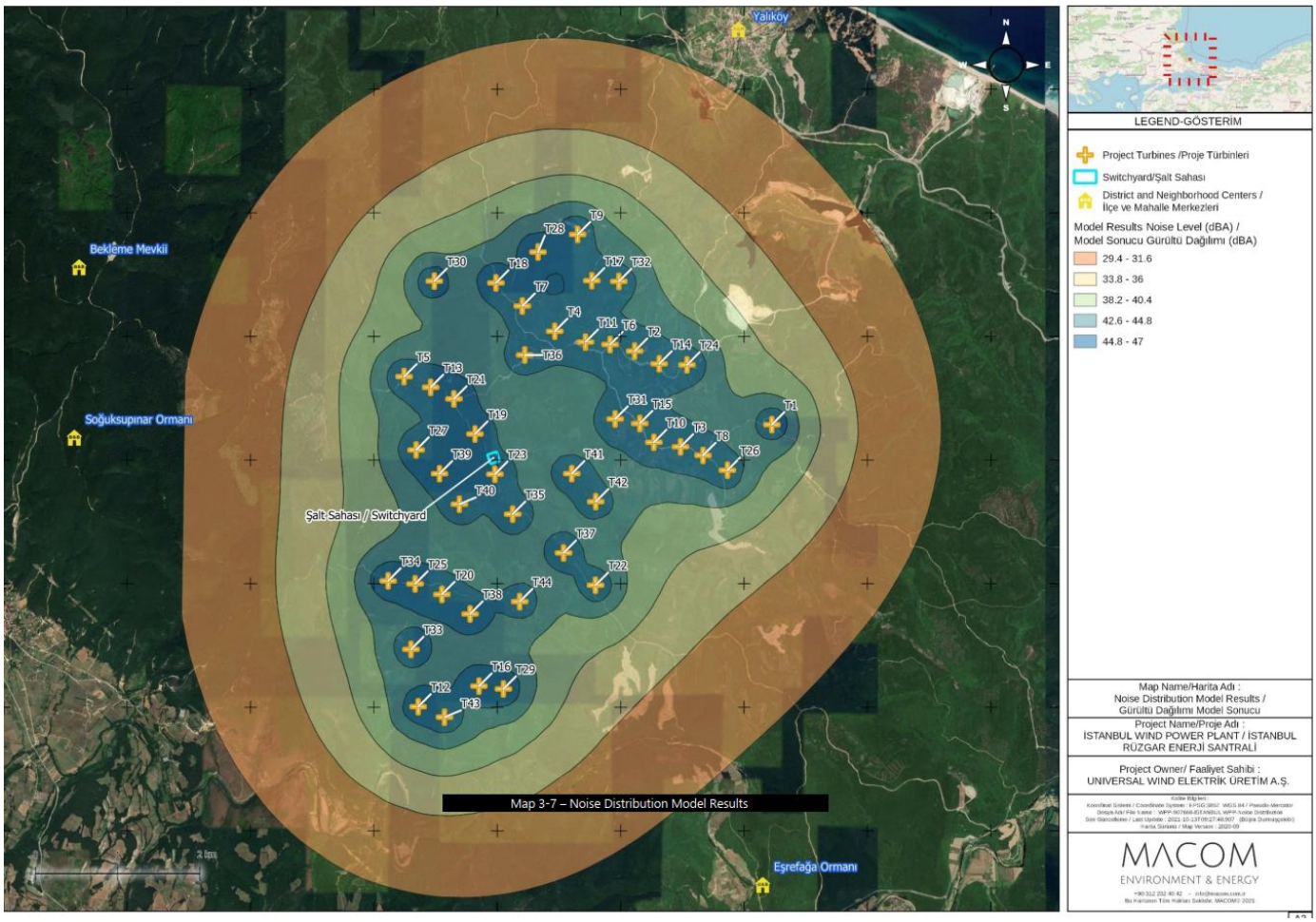



**Figure 23. Noise Dispersion Modelling Result Map**

***Upon completion of the construction phase and being fully operational, operational noise measurements shall be carried out at the sensitive receptors during the first year of operation.***

***This time sensitive receptor number shall be increased including the nearby villages and considering cumulative impact with the neighborhood plants.***

**Figure 24. Noise Measurements at İstanbul WPP Site**

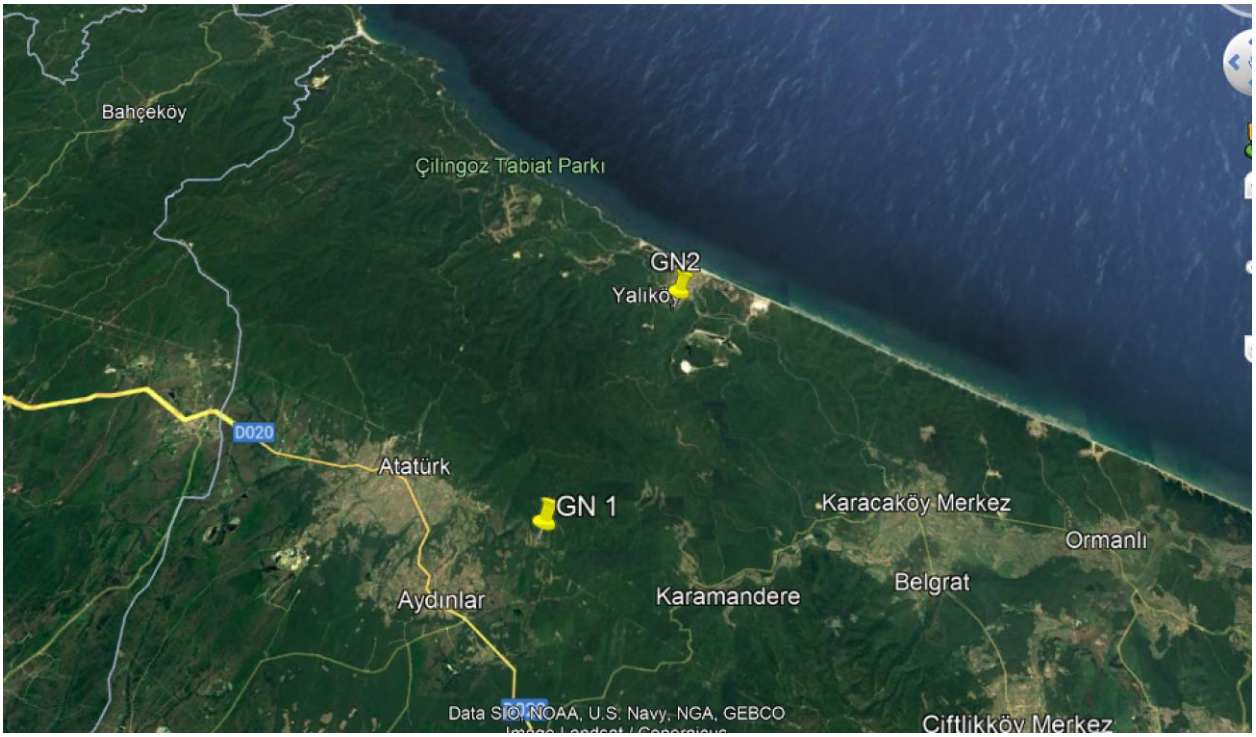



**Figure 25. Sensitive Receptors identified for Initial Noise and Flicker Impact Study**

## 5.33. Vibration

Vibration will be created during construction phase because of using of heavy construction equipment. Proper maintenance of the heavy equipment will control the vibration. Hence maintenance reports of the construction equipment shall be controlled. The site is controlling the maintenance records. All of the maintenance activities are told to be carried out at workshops in a nearby town called Saray. There are records of maintenance done at workshops.

Vibration follow up during the operation is also important to prevent blade throw. This is also important for the lifetime of the turbines and efficiency of the power plant; therefore, it will be regularly monitored. There is an agreement with Nordex to carry out the maintenance of the turbines.

## 5.34. Landscape and Visual Impacts

One of the major impacts of the wind power plants is its visual impacts and its impact on landscape.

Blade or tower glint, which could occur when the sun reflects off a rotor blade or the tower at a particular orientation, was considered to have a potential impact on communities. However, provided that wind turbines are painted with a matt, non-reflective finish, as is typical with modern wind turbines, blade or tower glint is no longer considered to be a significant issue. According to turbine supplier, İstanbul WPP is following these requirements.

***A visual impact assessment has been carried out and presented in the Selected Rİsk Assessment report dated 25.10.2021 prepared by Nartus (Nartus worked with Macom for visual impact assessment). The methodology and results are presented below:***

- Visual amenity is defined as the view or outlook of an identified visual receptor or group of receptors. The assessment determines the degree of anticipated change to visual amenity, considering the elements that would occur because of the proposed scheme.
- Visibility may be obstructed by structures higher than the slope of the earth and the height of view (1.6 meters) or more technical terms, “transmitter elevation”.
- Visual or aesthetic sources are natural and cultural characteristics of an environmental landscape that is visually appealing. The project is not located in a protected area or tourist/resort area, no vegetation, and woods. The license area is mostly covered by steppe formation. The visual impact of the proposed project will be permanent for those living in the nearest settlements throughout the project lifetime.
- Land preparation and construction phase visual impacts are temporary and will not affect the people’s view in dwellings. In contrast, operational impacts arising from the turbines will be long term and permanent until the decommissioning phase.
- The assessment of general potential effects on visual sensitivity is based on the magnitude of change. The potential visual impact of the proposed project is primarily due to changes in visual characteristics in the field of view. The changes in the visual character will depend on the landscape/vegetation structure of the area in the present view and the level of visual contrast with the interaction of these structures with the project.
- The visual impact assessment (VIA) work within the scope of this project was carried out withinthe framework of the “Scottish Natural Heritage Environmental Impact Assessment Handbook"Guidelines for landscape and visual impact assessment 3rd Edition” (Landscape

InstituteI.E.M.A., 2013), and Guide to Evaluating Visual Impact Assessments for Renewable EnergyProjects (U.S. Department of the Interior, 2014). In these guidelines, visual impacts are assessed regarding their degree of visual intrusion on receptors, which are residents, visitors, travelers, and other groups of viewers.

- Visual Impact Assessment (VIA) study area is the area of 20 km (on the land area) radius circles centered on center point of project. The determination of this 20 km study area is based on the project description, site visits, and good practice guidance.
- The topographic structure of the region was determined by the Digital Elevation Model (DEM). ASTER DEM v2 data based on a 30 m x 30 m resolution grid terrain model used to generate Zone of Theoretical Visibility (ZTV).
- In the project area where the average viewing height is 1.6 meters, and the ground is mostly flat; visibility can be obstructed by vegetation. The project area is in an environment within very sparsely vegetated area and elevated area, unlikely to influence the visibility.
- Near the project area, there are many other WPPs to create a cumulative effect within the visual impact assessment study area of 20 km, other than İstanbul WPP turbines.The installation of the 44 turbines of the İstanbul WPP will not majorly change the general appearance in the vicinity of the license area. However, the WPPs within 20 km visual impact area will affect the overall visibility of İstanbul WPP turbines from the settlements. No cumulative impact is expected from the Project.
- It is predicted that the expected Impact Significance at the Aydınlar view point will be Moderate. No significant visual impact is expected at the Fatih, Karamandere and Karacaköy viewing points.
- Mitigation measures to prevent and/or minimize visual impact from wind power plants on the landscape can be summarized as follows;
    - Selection of neutral color and anti-reflective paint for towers and blades,
    - Use underground cables rather than surface cables,
    - Lights for low-altitude flight only for more exposed towers,
    - Increasing the distance between the wind turbines to be placed in the wind power plant area and choosing the turbine color, Further actions will be taken in case of any grievance.

Scala used and sample outcome is shared in Section 11.4, Annex IV for visual impact assessment.

## 5.35. Shadow Flicker Impact

Shadow flicker occurs when the sun passes behind the wind turbine and casts a shadow. As the rotor blades rotate, shadows pass over the same point causing an effect termed shadow flicker. Shadow flicker may become a problem when residences are located near, or have a specific orientation to, the wind farm. Like shadow flicker, blade or tower glint occurs when the sun strikes a rotor blade or the tower at a particular orientation. This can impact a community, as the reflection of sunlight off the rotor blade may be angled toward nearby residences. Blade glint is a temporary phenomenon for new turbines only, and typically disappears when blades have been soiled after a few months of operation.

Prevention and control measures to address these impacts include the following:

- Site and orient wind turbines so as to avoid residences located within the narrow bands, generally southwest and southeast of the turbines, where shadow flicker has a high frequency.
- Paint the wind turbine tower with non-reflective coating to avoid reflections from towers.

Painting the turbines properly and uniform is also an important issue for managing visual impacts of the turbines.

IFC suggests using a software to model shadow flicker in order to identify the distance to which potential shadow flicker effects may extend. The same software can typically also be used to predict the duration and timing of shadow flicker occurrence under real weather conditions at specific receptors located within the zone of potential shadow flicker impact. If it is not possible to locate the wind energy facility/turbines such that neighboring receptors experience no shadow flicker effects, it is recommended that the predicted duration of shadow flicker effects experienced at a sensitive receptor not exceed 30 hours per year and 30 minutes per day on the worst affected day, based on a worst-case scenario. There is no requirement in Turkish legislation.

Flicker impact was assessed in Selected Risk Assessment Report dated 25.10.2021 by Nartus (Nartus worked with a firm called MACOM for flicker impact assessment). The results of the model run are shared in Table 5.6. Locations chosen are presented in Figure 25.

**Table 5-6 Flicker Impact Study**

| Name of the Settlement Area | Turbine | Location | App. Distance (km) | Coordinates | | Total Number of Shadow Hours[1] (annual basis) | | Total Number of Shadow Days[2] (annual basis) | | Total Number of Shadow Minutes[3] (daily basis) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Longitude East | Latittude North | Limit (Hours) | Worst-case scenario results | Limit (Hours) | Worst-case scenario results | Limit (Minutes) | Worst-case scenario results |
| SSR-1 | T12 | Atatürk Binkılıç | 1.6 | 28.238578 | 41.391099 | 30 hr | 0 | 30 hr | 0 | 30 min | 0 |
| SSR-2 | T9 | Yalıköy | 2.2 | 28.292027 | 41.468287 | 30 hr | 0 | 30 hr | 0 | 30 min | 0 |

[1]Shadow hours (per year): It shows how many days and hours in a year.
[2]Shadow days (per year): It shows how many days (regardless of the duration of the effect during the day) the shadow flicker will be exposed.
[3]Max shadow hours per day: It shows how many minutes in a day.

It is a common practice to calculate flicker impact with 10 times of rotor diameter. This simple calculation leads to a distance 1330 m for İstanbul WPP. Flicker impact is not expected for İstanbul WPP.

The flicker impact assessment section of the selected risk assessment report has the following highlights:

- The shadow flicker impact was modelled for every minute of the day for one year according to the worst-case scenario as specified in the IFC Environment, Health, and Safety Guidelines for Wind Energy Projects.
- WindPro software which is more widely accepted by the industry to evaluate the effects of shadow flicker on shadow receptors, is used.
- A shadow flicker analysis has been undertaken for the sensitive shadow receptors within the potential impact area.
- It has been shown that under worst-case scenario conditions, the maximum occurrence of shadow flicker is predicted to yield to higher values than 30 hours per year at a worst-case scenario study according to IFC for some potentially affected dwellings or sensitive receptors.

A shadow flicker analysis has been undertaken for the nearest sensitive receptors within the potential shadow flicker impact area.

- The worst scenario was evaluated, and it was seen that 30 hours per year and 30 minutes per day limit value was not exceeded in both receptors, SSR-1, and SSR-2.
- Information on other wind power plants in the region was obtained and analysed to evaluate the cumulative impacts. Cumulative impact assessment is crucial to conduct to evaluate the potential impacts of similar projects or any other activity that can create the similar environmental impacts on the project. In this regard, information on other wind power plants in the region was obtained and analysed to evaluate the cumulative impacts.
- There are intersections in the shadow flicker impact area of the Hacıbey Wind Power Plant turbines and the Istanbul Wind Power Plant turbines. Since there are no shadow sensitive receptors in the areas where these intersections are located, a cumulative effect is not expected.
- The occurrence of shadow flicker is only possible during the operation of the wind turbine (i.e., when the rotor blades are turning, and when the sky is clear enough to cast shadows). It is important to consider the following facts when making an assessment.
    - Climatic conditions: the sun is not always visible in the sky. Direct sunlight may account for as little as 25% of daylight hours throughout a year. At other times, cloud cover blocks the sun and prevents shadow flicker. While some shadow effect may still occur in slightly cloudy conditions, shadow will not be formed when dense cloud cover prevails. It is anticipated that weather conditions will reduce the actual occurrence of shadow flicker effect by at least half compared to the calculated effects.
    - Objects such as trees or walls or high-rise buildings may unclear the view of the turbines and hence reduce/ shadow flicker.
    - Turbine rotors (blades) change their direction relative to the prevailing wind direction. This means that turbine rotors (blades) will not look towards the affected dwellings or will located near the dwellings. During these phenomena, few blades movement is observed, and shadow flicker potential will decrease significantly.
    - Turbines will not work during all daylight hours due to their working principle. The rotors do not rotate at exceptionally low/extremely high wind speeds or during maintenance. Therefore, any possible effects of shadow flicker are not expected during such periods.
    - The model assumes that each window looks towards the wind turbines. However, there may be some cases when no window looks towards the wind turbines and all windows are susceptible to shadow flicker.
- Taking into factors given above consideration, it can be concluded that the shadow flicker is expected to be less than the worst-case scenario model results.
- Within the scope of the wind turbines planned under the İstanbul WPP Project, the model results were evaluated in the worst-case. In the light of these evaluations, it has been determined 30 hours per year and 30 min per day limit value was not exceeded in both SSR- 1 and SSR-2.
- According to the worst-case scenario results, the limit values given by IFC as suggestions were not exceeded in the shadow receptors. Further action is not required to mitigate shadow flicker impacts based on current model results and assessments.
- Shadow flicker impact results are shared in Figure 26.

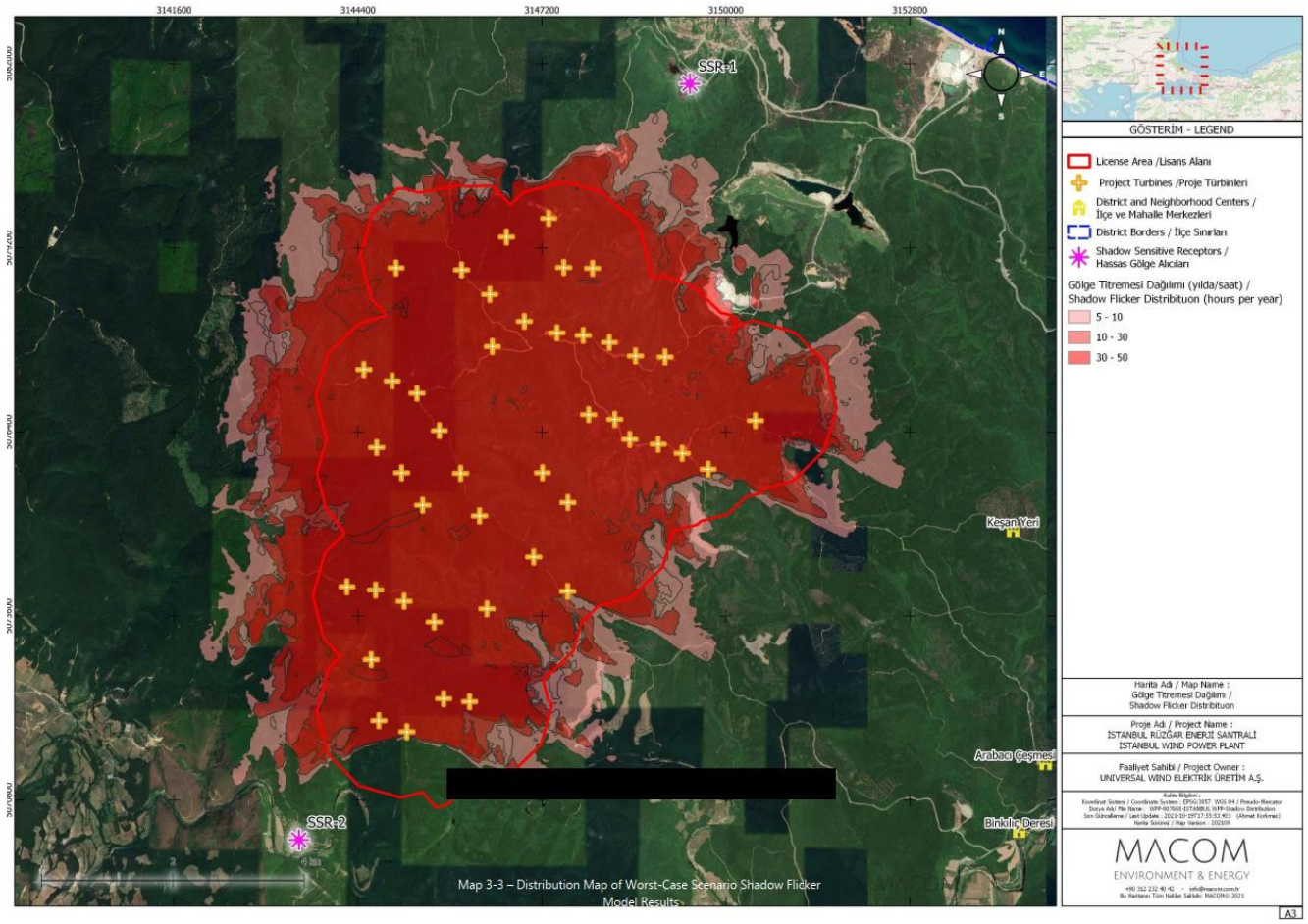



**Figure 26** ***Shadow Flicker Impact Model Worst Case Scenario Results***

***Shadow flicker impact assessment has been completed with no further requirements unless there is complaint and/or change in the Project.***

## 5.36. Blade/Ice Throw Impact

A failure of the rotor blade can result in the “throwing” of a rotor blade, or part thereof, which may affect public safety. If ice accretion occurs on blades, which can happen in certain weather conditions in cold climates, then pieces of ice can be thrown from the rotor during operation or dropped from it if the turbine is idling.

In order to assess blade/ice throw impact a Blade/Ice Throw Risk Assessment study was prepared by Nartus on 14.09.2021. The findings of the report are summarized below:

- For the existing turbines, minimum setback distance is determined as 287.4 m (which is in line with the IFC requirements of 1,5 * turbine height (tower + rotor radius)).
- The Eski İstanbul-Kırklareli main road (D020, which is referred as Binkılıç Saray road in this report) does not pass through the license area, the distance to the license area

is approximately 5 km to the south. It is 4.5 km away from T12, the nearest project turbine. Istanbul-Tekirdağ Road (D567) does not pass through the license area either and the distance to the nearest project turbine, T12 is approximately 23 km to the south. Apart from the intercity roads, there are roads connecting the districts; Karacaköy, Karamandere Road and Karacaköy-Yalıköy Road. The Karacaköy-Karamandere road passes from 4 km east of the license area and distance to the nearest turbine, T22 is approximately 5 km. The Karacaköy-Yalıköy Road passes from 2 km north of the license area and distance to the nearest turbine, T9 is approximately 3 km. Due to the distances to the license area and project turbines, turbines in question do not have the blade/ice throw risk on none of these roads.

- There is a risk of throw to the access roads between the turbines. However, since the use of these roads will only be for periodic maintenance and repair purposes, significance of the risk has been evaluated to be negligible.
- The switchyard of the İstanbul WPP falls into the blade/ice throw risk area. T19 and T23 turbines have potential to throw blade/ice on the switchyard.
- The risk map is given in Figure 27.
- For the blade/ice throw effect, if any likelihood of blade/ice throw is present, then a turbine from another project must be placed at twice its impact area. (287.4 m x 2 = 574.8 m) According to the distance calculated and considering the distances with neighborhood villages, no cumulative effect is expected on the blade/ice throw receptors.
- Mitigation measures suggested against blade/ice throw is listed as follows:
    - The blade heating systems of the turbine, where a temperature below 0 degrees Celsius is detected at the hub height level, is activated to prevent the risk of icing,
    - Visual and technical blade inspections and maintenance work should be done regularly on the turbine blades and hub,
    - In case of a problem in the blade heating system, the turbines should be stopped at temperatures below 0°C,
    - The functioning of the blade heating systems should be checked regularly,
    - Lightning may start a fire by falling into wind turbines or into the forest. Project owner should be ensuring that lightning protection systems are professionally installed, and maintained to minimize lightning risk,
    - Mutual information should be exchanged in case of fire or in risky situations by keeping in constant communication with the closest forest fire extinguishing teams,
    - Minimize the probability of a blade failure by selecting wind turbines that have been subject to independent design verification/certification (e.g., IEC 61400-1), and surveillance of manufacturing quality,
    - Equip wind turbines with vibration sensors that can react to any imbalance in the rotor blades and shut down the turbine, if necessary,
    - Physical and visual warnings must be installed for both site personnel and residentials,
    - When approaching the turbines, personal protective equipment should be used, and vehicles should not be exited unless it is necessary,
    - Those who perform activities such as camping and picnic within 300 meters of the turbines should be warned against the risks,
    - Local people living in the area should be informed about the risks of blade and ice throw. Information boards containing risks and warnings should be placed on the entry routes from villages to the license area,

- T19 and T23 turbines must be sprayed more frequently than the other project turbines to prevent icing and to prevent ice throw on the switchyard.
- There are no residences or buildings in areas with risk of ice throwing. No mitigation measures have been proposed for residences or buildings

Blade/Ice throw is not seen as a major issue to threat public safety but to the switchyard, the roads, hunters (which is restricted), per the report.

***The recommended measures in the report shall be followed.*** In addition, during critical weather conditions, forest chiefdom shall be communicated about the risk.

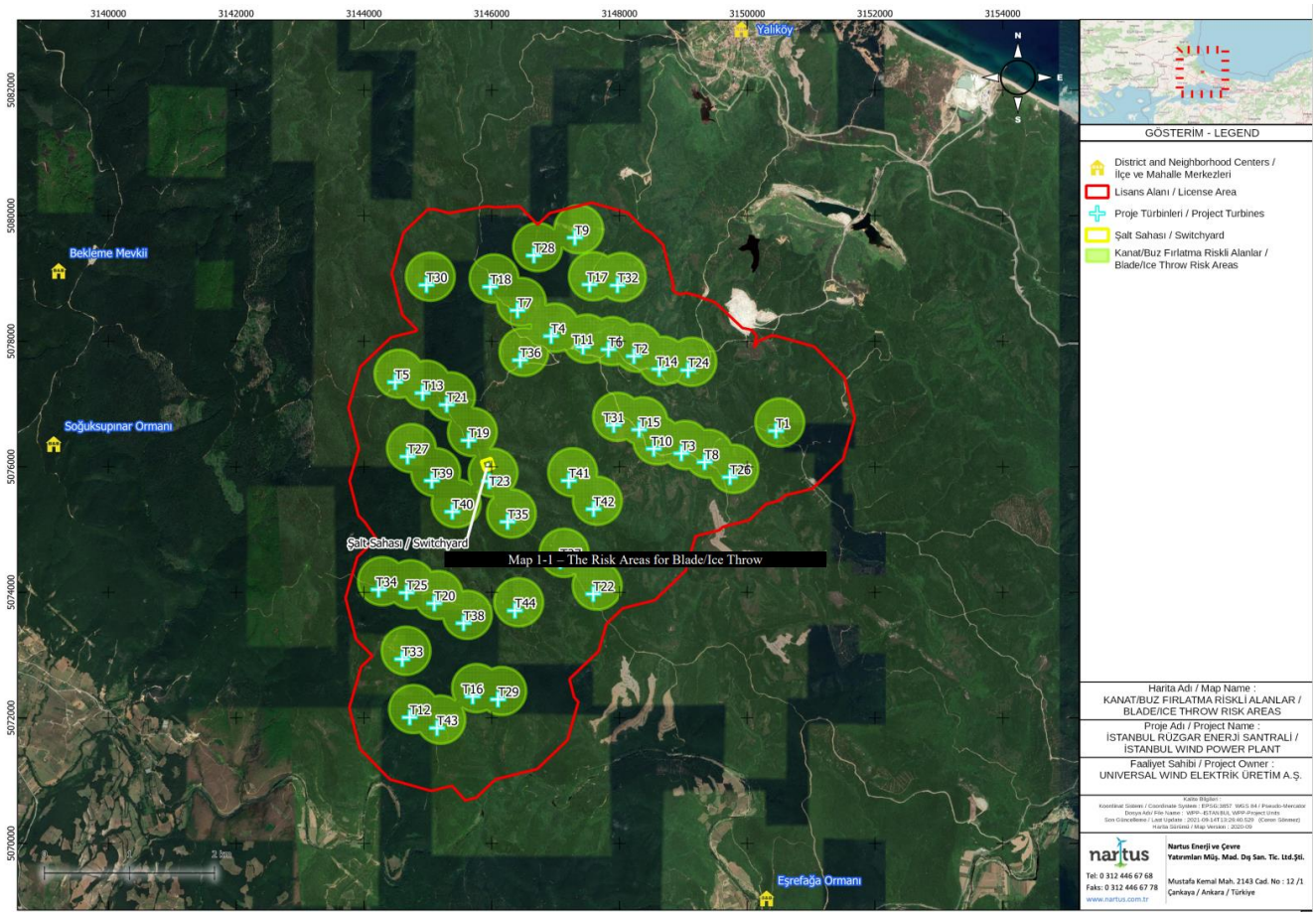



**Figure 27. Blade/Ice Throw Risk Area by Nartus and by Macom**

Selected Risk Assessment Report dated 25.10.2021 by Nartus (Nartus worked with Macom for blade/ice throw risk assessment) has also a section for this item in line with the findings of the initial study. The findings are summarized below:

- A ballistic trajectory model is used to determine the blade/ice throw risk assessment
- According to the results of the ballistic trajectory model, the risk of throwing blade/ice in a flat topography was determined to be 211.8 meters in airline (horizontal leveling). The minimum

setback or risk distance is 1.5 x turbine height (hub height + (rotor diameter x Hub Hight)) is calculated as 387.3 m.

- There are no residences or buildings in areas with risk of ice throwing. No mitigation measures have been proposed for residences or buildings. However, mitigation measures have been provided for forest road users, workers, hunters, and other pedestrians.
- Forest fires in the project area are relatively infrequent; However, fire conditions will be monitored to prevent possible wing firing from the tower burning at a safe distance. The flammability potential of modern turbines is extremely low, and by controlling the systems that detect overheating inside the turbine machines, the control mechanism turns off the turbines when overheating is detected.
- For the blade/ice throw effect, if any likelihood of blade/ice throw is present, then a turbine from another project must be placed at twice its impact area. (287.4 m x 2 = 574.8 m) According to the distance calculated and considering the distances in no cumulative effect is expected on the blade/ice throw receptors.
- Same mitigation measures as above are presented in the Selected Risk Assessment Report.
- In cold climates, there may be a hazard due to ice accumulation on wind turbine blade surfaces. Pieces or sheets of ice can be "ejected" from the rotating blades after the climatic conditions cause the ice to be “thrown”. Static and illuminated warning signs can be used to inform/warn road users by implementing shutdown procedures in cold conditions below 0°C (zero degrees Celsius) and/or conditions that will cause ice formation.
- Risk map of this study is presented in Figure 28

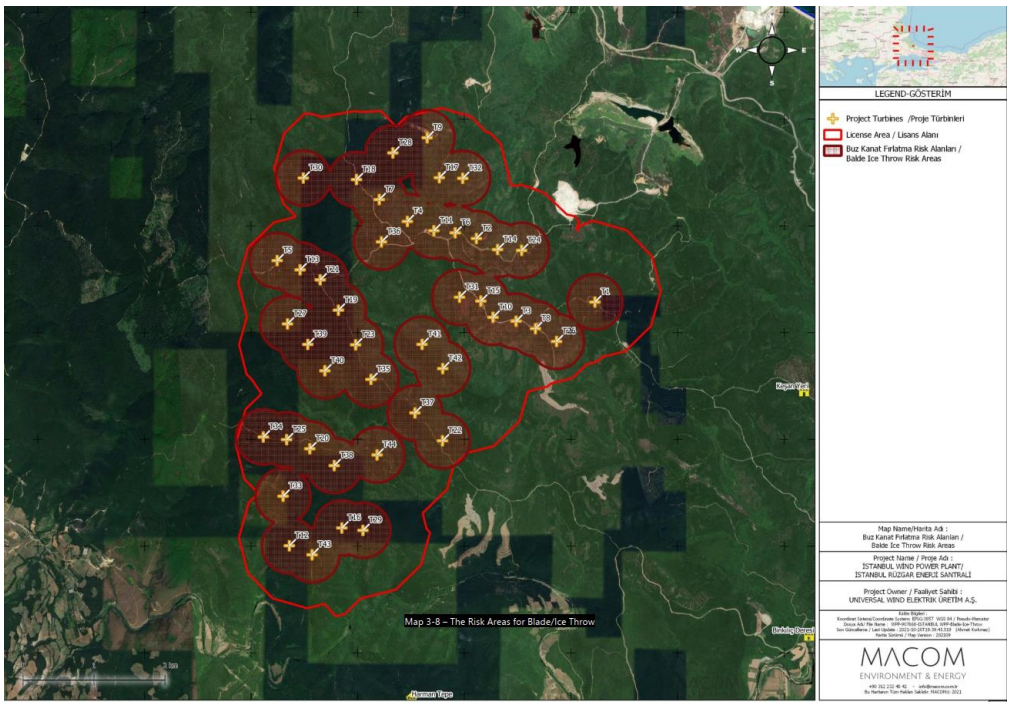



***Figure 28. Risk Area for Blade / Ice Throw from Selected Risk Assessment Report***

## 5.37. Electromagnetic Field

Wind turbines could potentially cause electromagnetic interference with aviation radar and telecommunication systems.

The site has secured approval letter from the Ministry of Transportation and Infrastructure Directorate of Civil Aviation Directorate (refer to Section 4) requiring notification upon completion to further work on the impact on Istanbul airports radar system***. Notification is crucial from public and aviation safety.***

There are electromagnetic field measurements performed between 10-16 September 2021 are completed and report by Üsküdar University is summited for review. Site photos about measurements are presented in Figure 29. The study covers transmission line, turbines, cables and switchyard and a location at Binkılıç Location which is 4888 m to site.

**Figure 29. Electromagnetic Field Measurements at T13**

According to the report,

- There is no nearby settlement that will be impacted from the project's electromagnetic field.
- The electromagnetic field is lower than the limits with no impact in the vicinity of the İstanbul WPP.

## 5.38. Life and Fire Safety

The control room/administration building at the switchyard has dry powder chemical and carbon dioxide extinguishers. There is smoke detection available for the building. There are two fire blankets available. There are push buttons connected to the fire alarm panel.

There are fire extinguishers available at the camp site. Log for controlling the fire extinguishers is in place.

In addition, vehicles have extinguishers as well.

There is smoke detection and portable fire extinguisher available at each turbine per the documentation shared by Nordex.

***The critical period for fire is during the construction activities. Hot works shall be closely monitored. Coordination with Forestry Department is in place.***

***In addition, fire safety is important for the operation phase. All maintenance activities shall give utmost attention to fire safety.***

***Smoking is allowed at designated areas at switchyard. This implementation shall continue.***

## 5.39. Chance Find

Project site is not located close to any historical and archaeological site.

There has been construction work for the İstanbul WPP. There have been no archaeological objects found.

No historical and/or archeological sites was observed at and/or near the project site during the site visits.

The projects have a Chance Find procedure dated 2021, which covers natural, cultural and archeological heritage. There is flow diagram and chance find notification form. The procedure includes requirement of notifying authorities within 3 days,

## 5.40. Decommissioning

The project has a life of 49 years per its generation license. The main decommissioning activities will include

- removal of the turbine systems including blades, tower, etc.
- disposal/reuse of foundation
- removal of cables and ancillary structures.

Considering the life time of the project, the project shall follow the requirements of the legislation at that time. The technology at that time will also applied for removal and reuse of the systems. Although decision for the future of equipment and machinery will be given at time, these will be most probably unsuitable for further use at that time.

Decommissioning activities will

- cause noise levels which will be similar to construction activities. Working hours and methods shall be arranged to minimize noise impact. There will be temporary impact.
- Cause dust formation which will be similar to construction activities. Controlled dismantling activities and water spraying in case of need shall be employed. There will be temporary impact.
- Create wastewater similar to construction activities. No impact is expected as long as septic tanks are handled properly.

- Create need for removal of transformer and lubricating oil. These shall be handled with care not to create pollution. It shall be handled with the requirements of Waste Oil Control Regulation and disposed accordingly with licensed vehicles to licensed facilities.
- Create waste that needs to be transferred to landfill. Proper handling of waste is required with records.
- Create recyclable and reusable waste that needs to be transferred to licensed facilities.
- Create hazardous waste that needs to be transferred to licensed facilities with licensed vehicles.
- All waste related activities shall comply with the requirements of Turkish legislation and IFC requirements during decommissioning time.
- Have negligible impact on soil and groundwater.
- Have temporary visual impact which will be negligible.
- Create temporary employment's
- End-up with pay-off the staff which shall be managed with reemployment plans.

İstanbul WPP shall

- follow the applicable legislation requirement for environmental and social issues at that time
- decide to recycle and reuse of the materials and equipment considering technology, impacts on environment and economy.
- Employ licensed landfill and disposal facilities in case of not recycling and reusing
- Restore soil surface
- Vegetate and/or remain the area as Forestry Department advises
- Have reemployment plans for the staff
- Have traffic management plan
- Communicate with the stakeholders
- Keep the records of all activities

***In case of need of decommissioning during project finance period, Lenders shall be notified about the situation. And the following shall be submitted to the Lenders before decommissioning:***

- Information about decommissioning
- Traffic management plan
- Public disclosure about the decommissioning activity
- Noise level calculations and measures to be taken
- Dust level calculations and measures to be taken
- Waste and wastewater management plan
- Safety management plan
- HR management plan

# 6 Media Coverage

## 6.1. Introduction

News media are an important source of information for the general public regarding environmental issues. It is important to note that media, as a major information source for many citizens, can shape public opinion and expectations about policies that, in turn, influence policy development processes. By covering an issue, the media increases the relative importance of that issue and by reporting on some issues and not others. Thus, the content of news about İstanbul WPP has been examined to understand what issues are considered as important. It is found that newspaper publicize concrete events related to the Project. Negative environmental impacts of the İstanbul WPP appeared to be the most important issues.

### 6.1.1.Method

It is conducted a quantitative content analysis of news in the newspaper or internet source to examine content related to İstanbul WPP such as news slant, appearance of topics and themes related to the İstanbul WPP .

## 6.2. Findings

### 6.2.1.Publication Years

The news/article publication dates ranged from 2014 to 2021, as illustrated in Table 6.1. Peak coverage occurred in 2021, when 10 new/articles were identified, likely due to the construction of the İstanbul WPP . When examining news about the İstanbul WPP over time, news spread throughout 7 years.

**Table 6-1 Publication Years**

| Year | English | Turkish | Total |
|---|---|---|---|
| 2014 | 1 | 3 | 4 |
| 2020 | - | 1 | 1 |
| 2021 | 2 | 7 | 9 |

### 6.2.2.Topics

A range of specific topics are analyzed if there was any mention of the topic in the content of news. These topics are grouped into 3 major topics, as outlined in Table 6.2. The most frequently mentioned topic are the negative environmental impacts of the project. The second most frequent topic is environmental impact assessment and petition by environmentalist. Some news provides general information about the Project.

**Table 6-2 Topics**

| Topics | Number |
|---|---|
| Environmental impact assessment | 9 |
| Negative environmental impacts of the Project | 10 |
| General information about the Project | 4 |
| Economic issues | 1 |
| Petition by environmentalist | 5 |
| Court issue | 4 |
| Cumulative impacts | 2 |

### 6.2.3. Approach and News Slant

The most frequent approach used is a critical approach which encompassed news/articles emphasizing various environmental issues in relation to the project.

The slant of each news is examined showing that 10 news are negative towards the İstanbul WPP and 4 are neutral, which is presented in Table 6.3. Most of the articles about of the İstanbul WPP focus on the negative environmental and the EIA. It is important to note that there is not enough content related to explanation about the company policy in the articles.

**Table 6-3 Article Slant**

| Negative | Neutral | Positive |
|---|---|---|
| 10 | 4 | - |

This negative approach on media makes its crucial to develop relation with stakeholders as the importance of stakeholder engagement is stated in Section 5.8.3 and have a communication strategy.

## 6.3 Media

The news media scanned are presented below for further information.

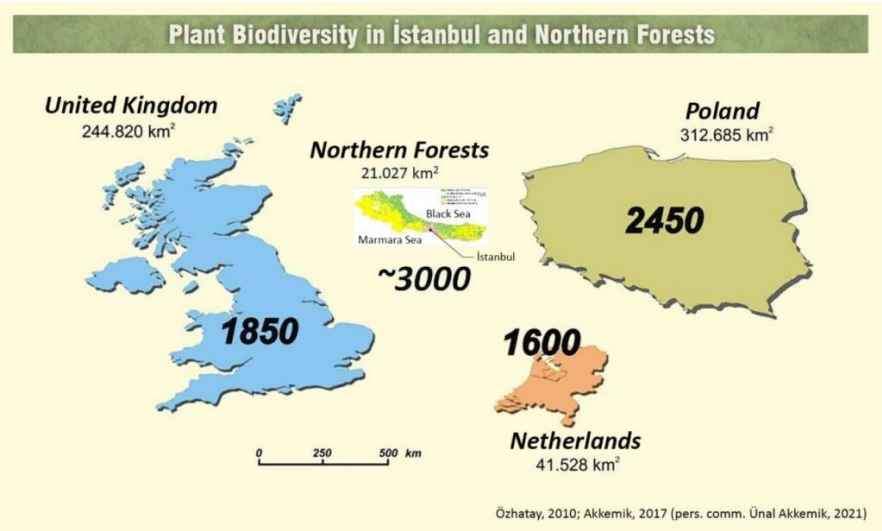
### 6.3.1. News in English

1-https://www.power-technology.com/news/newsturkey-to-have-its-largest-wind-power-project-in-istanbul-4469044/
14 Dec 2014
Turkey to have its largest windpower project in Istanbul
Istanbul will house Turkey's largest windpower plant, which will have an annual generation capacity of 770,800MWh.
İstanbul will house Turkey’s largest windpower plant, which will have an annual generation capacity of 770,800MWh.
Equipped with 88 wind turbines, the power plant, to be called as Istanbul Wind Power Plant, will generate sufficient energy to meet the power requirements of 280,000 homes.

Sixty four of the wind turbines to be installed at the plant will be of 2MW capacity, while the rest 24 will produce 3MW each, adding up to 200MW of renewable power.
To be built in the in the Çatalca district of the Turkish city, the construction for the project is expected to cost $558m.
Universal Wind Energy, the developer for the project, will import the wind turbines, reports Turkish news daily, Daily Sabah.
Pits that are 100m-long and 3m-deep will be dug for the turbines, which will be erected with cranes after the steel and concrete work is completed at the site.

2-https://kuzeyormanlari.org/2021/04/15/dirkhshof-nordex-group-collaboration-istanbul-wind-power-project-destroys-the-wildlife-in-the-northern-forests-istanbul-cilingoz-wildlife-development-area/
15.Nisan.2021
DIRKSHOF – NORDEX GROUP COLLABORATION; "İSTANBUL WIND POWER PROJECT" DESTROYS THE WILDLIFE IN THE NORTHERN FORESTS (İSTANBUL – ÇİLİNGOZ WILDLIFE DEVELOPMENT AREA)
15 Nis 2021


Wind power project in Çilingoz Wild Life Development Area has devastating effects on wildlife and ecosystem of the Northern Forests. Project is under construction on the birds' migration route. Besides, water collecting areas and historical places are under the threaten of this project.
We, as Kuzey Ormanları Savunması (KOS – Northern Forests Defence); would like to inform the public that we have initiated legal action against Turkey's biggest wind power plant (WPP) project, which is being constructed in the Northern Forests **by** Universal Wind Enerji Elektrik Üretim A.Ş (owned by the German energy company Dirkshof Erneuerbare Energien GmbH https://www.dirkshof.de/en/welcome/), in collaboration with Nordex Group https://www.nordex-online.com/en/ as the main supplier of the project.
İstanbul Wind Energy Power Station Project has to be canceled immediately as it will wipe out thousands of old oak trees via infrastructural constructions (such as power transmission lines, wind turbines, and road constructions), thus destroy wildlife and trigger erosion, while inhibiting/interfering with the migration of 300.000 white storks each year.




Regretfully, the Ministry of Environment and Urbanization of Turkey approved this devastating project by the related environmental impact evaluation (ÇED) report, prepared based on the incomplete and controversial data provided by Dirkshof Renewable Energy -Universal Wind. For example, the project presentation file of Dirkshof Renewable Energy -Universal Wind which is taken as the basis for the environmental impact evaluation decision- has been prepared without the signature of an authorized meteorological engineer -which is compulsory. Incorrectly defined meteorological data causes incorrect fire factors, and unsurprisingly, identifying correct fire factors is extremely vital in a mostly windy forestry area. Another example is the missing 'geological – geotechnical study report', which must be submitted according to the rules and regulations of the Ministry of Environment and Urbanization of Turkey. Furthermore, no erosion risk analysis was taken into the consideration in the file which was presented by Dirkshof Renewable Energy -Universal Wind.

Moreover, this devastating Wind Power Plant Project is in a neighborhood with other Wind Power Plant Projects. There exist many other projects located in the same forest territory and their environmental effects should be considered as a whole. Thus, the cumulative environmental effect was not evaluated.

Besides its effects on the northern forests such as deforestation, İstanbul Wind Energy Power Station Project in cooperation of Dirkshof Renewable Energy and Nordex Group is planned to be constructed in the flight corridor of approx. 300.000 white storks. Furthermore, 90% of the world's Lesser Spotted Eagle population fly over the project area. Additionally, the project area is home to i) 200.000 Accipitriformes; ii) at least 34 bird species that belong to Bern List Appex II strict prevention list; iii) at least 17 bird species that belong to Bern List Appex III, prevention list. In this regard, the project is violating Bern, IUCN National Red List, and EU birds directive.

**İstanbul Wind Power Plant Project by Dirkshof Renewable Energy with Nordex Group collaboration** is also in the neighborhood of **Çilingoz Wild Life Development Area.** In the **Dirkshof Renewable Energy Wind Power Plant region**, beekeeping is under strict protection.

Last but not least, the İstanbul Wind Energy Power Station Project by **Dirkshof Renewable Energy** area intersects with the 1700-year-old aqueducts of the water supply system of Roman Empire and Ottoman Empire.

We demand the cancellation of the environmental impact evaluation (ÇED) report, and ‘İstanbul Wind Energy Power Station Project being constructed by Dirkshof Renewable Energy-Universal Wind with Nordex Group collaboration which will pave the way for the collapse of the ecosystem and wildlife of the Northern Forests by deforestation; and create a massive barrier in one of the world’s most important bird migration corridors. We also demand compensation for the destruction created in the Northern Forests by this time.

STOP WIND POWER PROJECTS IN THE NORTHERN FOREST ECOSYSTEM!
*DIRKSHOF* **GO HOME***!* **STOP** *NORDEX GROUP!*
3-https://bianet.org/english/environment/242135-wind-plant-project-in-northern-forests-will-destroy-one-of-istanbul-s-few-natural-areas
08 April 2021,
**PETITION BY ENVIRONMENTALISTS**
Wind plant project in Northern Forests 'will destroy one of İstanbul's few natural areas'
The project site is located in a wildlife development zone and birds' migration routes, environmental groups have warned.
Twelve environmental groups have launched an online petition demanding the termination of a wind power plant in İstanbul's Northern Forests in Çatalca district.
The project comprising 44 wind turbines is undertaken by the Germany-based Dirkshof company and will be the largest wind farm in Turkey if completed.
However, environmentalists say that the project site is in and around the Çilingoz Wildlife Development Zone and it would destroy the 300-year old oak forests, as well as the biodiversity they contain.
The project site is also on the migration route of storks and lesser spotted eagles, the petition says, noting that the route is used by more than 120,000 storks and 90 percent of the lesser spotted eagles in the world every year.
As well as causing the death of migrating birds by pulling gliding birds into their vortex, the wind turbines will also destroy the resting areas of them, according to the groups.
"Also, 34 birds living in this area are under protection by international treaties that Turkey is a party to," says the petition.

The positive environmental impact assessment (EIA) report for the project was not in compliance with laws and EIA procedures, the groups said.
"Putting lives of people in the region at risk, this project will also destroy one of İstanbul's last remaining natural areas and hundreds of thousands of living beings in this region.
"In the area where the İstanbul Wind Power Plant Project is planned to be implemented, there are many other wind power projects located in forest areas as well.
"It is necessary to consider the environmental impacts of similar activities in the region as a whole. The EIA positive decision made by the administration without being subjected to cumulative impact assessment is flawed."
The groups signed the petition: Northern Forests Defense, Foresters' Association of Turkey, Çatalca Nature Defense, Natural Life Conservation Foundation (DAYKO), Saray Natural Life Conservation Association, Ergene City Council, Marmaraereğlisi Environmental Volunteers Association, Silivri Environmental Association, Trakya Environmental Volunteers Association, Return to Nature Association. (TP/VK)

### 6.3.2. News in Turkish

1-https://www.change.org/p/ormanda-res-olmaz-istanbul-r%C3%BCzg%C3%A2r-enerji-santrali-projesi-iptal-edilsin-tctarim-tcenerjiBiz aşağıda imzası bulunanlar İstanbul RES Projesi'nin iptal edilmesini istiyoruz.
**Ormanda RES Olmaz!**
**Kuzey Ormanları'nı ve göçmen kuşları tehdit eden İstanbul Rüzgâr Enerji Santrali (RES) projesi iptal edilsin!**
Almanya merkezli Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş. tarafından **Kuzey Ormanları'nın İstanbul Çatalca mevkilerindeki sık meşelik alanları yok ederek kurulumuna başlanan İstanbul RES Projesinde 44 adet RES tribünü dikilmesi ve tribünleri yerleştirmek için orman alanının tıraşlanarak yok edilmesi planlanıyor.**
Yüz binlerce göçmen kuşun göç yolu üzerinde bulunan Kuzey Ormanları, Türkiye'nin en büyük rüzgâr elektrik santrali (RES) projesinin tehdidi altında. **Bu bölge, leylek ve kartal gibi birçok farklı göçmen kuş türünün Türkiye'ye giriş yaptığı göç yolunun üzerinde bulunuyor.** Proje

sahası, **Istrancalarda ve Trakya bölgesinde** yapılan RES projeleri nedeniyle göçmen kuşların güvenli geçiş yapabilecekleri ve dinlenebilecekleri son alanlardan birisi durumunda.
Proje sahası aynı zamanda Terkos Havzası Önemli Doğa Alanı'nın içerisinde yer alıyor.
Yani **İstanbul'un doğal kalabilmiş son alanlarından birisi** olan bu bölge, rüzgar elektrik santrali projesi nedeniyle yok olma tehlikesiyle karşı karşıya.
Bu proje neden yapılmamalı:
- Proje sahası; sayıları her geçen gün azalan birçok yaban hayvanı türünün yuvası olan **Çilingoz Yaban Hayat Geliştirme Sahası** içinde ve çevresinde bulunuyor.
**- Proje; en az 300 yıllık kadim meşe ormanlarını ve bu ormanların içerisinde barındırdığı biyolojik çeşitliliği yok edecek.**
- Proje sahası her yıl **120 binden fazla leyleğin** kullandığı göç yolu üzerinde yer alıyor. **Küçük orman kartalının dünya nüfusunun %90'nı** İstanbul Boğazı'ndan geçiş yapıyor. Rüzgar tribünleri kuşları girdabına alarak özellikle süzülerek göç eden kuşların ölümlerine neden olmasının yanında leyleklerin ve diğer süzülerek göç eden kuş türlerinin zorlu göç yolculuğunda dinlenme alanlarını yok edecek. Ayrıca bu alanda yaşayan **en az 34 kuş türü**, Türkiye'nin taraf olduğu uluslararası sözleşmelerle koruma altında bulunuyor.
-Proje sahasının kuş uçuşu 2-20 km uzaklığında büyük yarasa kolonilerinin bulunduğu Çilingoz, Yaylacık Mağarası, Kocakuyu Mağarası, Gümüşpınar Mağarası ve İkigöz Mağarası gibi önemli mağaralar bulunuyor. Proje, aralarında küresel olarak tehdit altında olan yarasalar için doğrudan tehdit içeriyor.
- Proje sahasının yer aldığı bölge, arıcılık faaliyetleri mutlak koruma altında bulunuyor.
-Proje sahası, **Tarihi Roma Su Yolu**'na ait su galerisi hattı kalıntıları ile aynı bölgede bulunuyor.
İstanbul RES Projesi için verilen Çevresel Etki Değerlendirme (ÇED) olumlu kararı **tüm bu nedenlerle, ne hukuka ne ÇED işleyişine uygun değil**. Bölgedeki insanların yaşamını tehlikeye atan bu proje aynı zamanda İstanbul'un son doğal alanlarından birisini ve bu bölgede yaşayan yüz binlerce canlıyı yok edecek.
İstanbul RES Projesi'nin hayata geçirilmesi planlanan bölgede, yine tamamı aynı ormanlık alan içinde konumlanmış birçok başka RES projesi bulunuyor. Bölgedeki benzer faaliyetlerin çevresel etkilerinin bir bütün olarak ele alınması gerekli. **Kümülatif etki değerlendirmeye tabi tutulmaksızın idarece verilen ÇED olumlu kararı hatalı.**
Bu yüzden biz aşağıda imzası bulunan kurumlar ve yurttaşlar olarak "İstanbul RES" isimli rüzgar enerji santrali projesinin durdurulmasını, verilen ÇED olumlu kararının iptal edilmesini, başlatılmış olan tahribatın derhal durdurulmasını talep ediyoruz.
**Kuzey Ormanları'nı yok etmeyi değil yaşatmayı seçelim!**

**İMZACI KURUMLAR:**
**Kuzey Ormanları Savunması**
**Doğa Derneği**
**Türkiye Ormancılar Derneği**
**Çatalca Doğa Savunması**
**Çorlu Kent Konseyi**
**Doğal Yaşamı Koruma Vakfı (DAYKO)**
**Saray Doğayı Koruma Derneği**
**Vize İnsan Yaşam Doğa Derneği**
**Ergene Kent Konseyi**
**Marmaraereğliği Çevre Gönüllüleri Derneği**
**Silivri Çevre Derneği**
**Trakya Çevre Gönüllüleri Derneği**
**Doğaya Dönüş Derneği**

2-https://m.bianet.org/bianet/ekoloji/239878-istanbul-res-e-dava-ormanda-res-olmaz
24 Şubat 2021

**KUZEY ORMANLARI SAVUNMASI** İstanbul RES'e dava:
Ormanda RES olmazKuzey Ormanları Savunması, Almanyalı Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş.nin İstanbul Rüzgar Enerji Santrali projesine karşı projenin iptali talebiyle hukuki süreç başlattı.
Kuzey Ormanları Savunması, Almanyalı Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş.'nin Kuzey Ormanlarında kurmayı planladığı Türkiye'nin en büyük Rüzgar Enerji Santrali'ne (RES) karşı hukuki süreç başlattı.
İstanbul RES projesinin iptal edilmesi ve proje için verilen "Çevresel Etki Değerlendirmesi (ÇED) olumlu" kararının kaldırılması için dava açtı.
Kuzey Ormanları Savunmasından konuya ilişkin yapılan açıklamada, santralin Kuzey Ormanlarının Çatalca bölgesindeki kadim meşe ormanlarını ve yaban hayatını yok edeceği 300 bine yakın leyleğin göçünü engelleyeceği belirtildi.
Meteoroloji mühendisi görevlendirilmedi
**"Kuzey Ormanlarında RES olmaz"** denilen açıklamada İstanbul RES projesi için verilen ÇED Olumlu kararı ve bu kararın dayanağı olan proje tanıtım dosyasının hukuka, ÇED işleyişine, kamu yararına ve halk sağlığına uygun olmadığı ifade edildi.

Öte yandan, açıklamada yer verilen bilgiye göre, ÇED olumlu kararının dayanağı olan dosya Meteoroloji mühendisi görevlendirilmeden hazırlandı. ÇED dosyasının yeterli teknik personelce hazırlanıp hazırlanmadığı ise idarece denetlenip araştırılmadı:
**"Bu durum İdarece verilen kararın esaslı hatasını oluşturmaktadır. Meteorolojik verilerin hatalı saptanması sonucu yangını etkileyen faktörler hatalı saptanmıştır. Proje kapsamında yapılan yapılar için Bayındırlık ve İskân Bakanlığı (Afet İşleri Gn. Md.) genelgesi çerçevesinde jeoloji-jeoteknik Etüt Raporu dosyada bulunmamaktadır."**
6 RES ile aynı konumda
Bölgede araştırma yapan Kuzey Ormanları Savunması, söz konusu RES projesinin Kemerburgaz RES, GOP RES, Şile RES, Yamaçtepe RES, Tahakadın RES, Aydost RES gibi RES'lerle de komşu

durumda olduğunu, tamamı aynı ormanlık alan içinde konumlanmış bu projeler nedeniyle bölgedeki benzer faaliyetlerin çevresel etkilerinin bir bütün olarak ele alınması gerektiğini söyledi.

“Telafisi mümkün olmayacak”
Proje sahasının bulunduğu Çatalca’nın Türkiye’deki ana kuş göç rotaları üzerinde bulunduğu kaydedilen açıklamada, **“Bern, JUCN, Ulusal kırmızı liste, AB Kuş Direktifleri mevzuatlarına aykırı olarak gerçekleştirilmek istenen projenin hayata geçmesi halinde kuşların bölgedeki yaban hayatında telafisi mümkün olmayan sonuçlar ortaya çıkaracaktır”** denildi:
**“Kuzey Ormanları’ndaki yaban hayatı ve Kuzey Ormanları Ekosistemini çökertecek olan, Dünya’nın en önemli göç yollarından Kuzey Ormanları’nın göç koridorundaki en büyük bariyerlere dönüşecek İstanbul RES isimli Rüzgar Enerji Santrali’nin iptal edilmesini, proje için verilen ÇED olumlu kararının kaldırılmasını ve bu süreçte Kuzey Ormanları’na yaratılan tahribatın bir an önce telafi edilmesini istiyoruz.”**
Kuş göç yolu, tarım ve hayvancılık alanı
Proje alanı Çatalca’ya
bağlı Karacaköy, Karamandere, Çiftlikköy, Kalfaköy, Gümüşpınar, Belgrat köylerinden oluşuyor. Bu alanlarda birçok insan hayvancılık, arıcılık, çiftçilik yaparak geçimini sağlıyor.

Alanın bir diğer özelliği ise sonbahar ayında 250-300 leyleğin göç yolu olarak kullandığı koridor olması. Dünya üzerindeki Küçük Orman Kartallarının yüzde 90'ı projenin gerçekleştirileceği Kuzey Ormanları üzerinden göç ediyor. Alan aynı zamanda 200 bin gündüz yırtıcısı tarafından göç yolu olarak kullanılıyor.
NOT: Bölgedeki en az 34 kuş türü Bern Listesi Ek-II'de, yani "Mutlak Koruma Altındaki Türler Listesi"ne; en az 17 kuş türü Bern Listesi Ek-III'te, yani "Koruma Altındaki Türler Listesi"nde yer alıyor. Yine İstanbul RES, Çilingoz Yaban Hayatı Geliştirme Sahasına ve Tarihi Roma Su Yolu'na ait su galerisi hattı kalıntıları ve bu hattın güzergahıyla birleşik konumda.


Proje bölgesinde arıcılık da mutlak koruma altında. Trakya arısı 30 Haziran 2010'da ve 29 sayılı olurları ile Tarım Bakanlığınca mutlak korumaya alınmış olup, Yıldız Dağları'nın (Istrancalar) tamamına yakınında Trakya arısı koruma kapsamında.
EPDK izni
Enerji Piyasası Düzenleme Kurulu (EPDK), 10 Eylül 2020 tarihli ve 9535-1 sayılı kararıyla, Universal Wind Enerji Elektrik üretim AŞ'ye İstanbul Rüzgar Enerjisi Santrali için, 49 yıl süreli üretim lisansı vermişti. (TP)

3- https://www.cumhuriyet.com.tr/haber/kuzey-ormanlari-icin-harekete-gectiler-1816063
Cumhuriyet Gazetesi
**24 Şubat 2021**
Kuzey Ormanları Savunması, Alman Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş.'ye karşı harekete geçti. Projenin iptali için hukuki süreç başlatıldı.
300 bine yakın leyleğin göçünü engelleyecek olan İstanbul RES Projesi tartışmalara yol açmıştı. Kuzey Ormanları Savunması yaptığı açıklamayla projenin iptali için hukuki süreç başlattıklarını duyurdu.
İstanbul RES projesi için verilen "ÇED Olumlu" kararına tepki gösterilen açıklamada, projenin ne kamu yararına ne de halk sağlığına uygun olmadığı ifade edildi.
Kuzey Ormanları Savunması'nın açıklaması şöyle:
"Kuzey Ormanları Savunması olarak, Alman Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş. tarafından Kuzey Ormanları'nda kurulması planlanan Türkiye'nin en büyük Rüzgar Enerji Santrali'ne karşı hukuki süreci başlattığımızı duyurmak istiyoruz.
Kuzey Ormanları'nın Çatalca bölgesindeki kadim meşe ormanlarını ve yaban hayatını yok edecek olan, 300 bine yakın leyleğin göçünü engelleyecek olan İstanbul RES Projesi iptal edilmeli, proje için verilen ÇED olumlu raporu kaldırılmalıdır.

Her geçen gün yok edilen Kuzey Ormanları'ndaki bu dev proje Çatalca'daki orman, tarım, sit alanlarının yok olmasına, yaban hayat alanlarının daralmasına, biyoçeşitliliğin zayıflamasına neden olacaktır.

4-https://www.enerjigunlugu.net/universal-wind-istanbul-res-icin-49-yil-uretim-izni-aldi-39412h.htm
12.Ekim.2020
Universal Wind, İstanbul RES için 49 yıl üretim izni aldı
EPDK, Universal Wind Enerji'ye İstanbul RES için 49 yıl geçerli üretim lisansı verdi.

5-https://www.aa.com.tr/tr/ekonomi/istanbulun-elektrigine-ruzgarli-cozum/93024
13.12.2014
İstanbul'un elektriğine rüzgarlı çözüm
**Türkiye'nin en büyük rüzgar santrali İstanbul'a kurulmaya hazırlanıyor. Çatalca'da kurulacak İstanbul Rüzgar Enerji Santrali, yılda 770 milyon 800 bin kilovatsaat elektrik üretecek.**
13.12.2014

6-https://www.hurriyet.com.tr/yazarlar/yalcin-bayer/istrancanin-gobeginde-rant-kokusu-41719136
**Istranca'nın göbeğinde rant kokusu**
20 Ocak 2021
İlk işareti 10 Aralık tarihinde verdik ve dedik ki:
"İstanbul Çatalca ilçe sınırlarında 'Binkılıç' bölgesi Çilingöz Tabiat Parkı'nda 1 milyon 26 bin metrekare Istranca orman alanı üzerinde 'Universal Wind Enerji Üretim AŞ' tarafından 44 adet temel üzerine rüzgâr enerji santralı kurulması için izinlerinin alındığını duyurduk, yürek yakan bir 'yağma' fotoğrafı ile. (Hava fotoğrafını bir kez daha yayınlıyoruz.) Bu bölgede bir rüzgârgülü kulesinin kazısı yapılmış, diğer 43 tanesinin temel kazıları ve ağaç kesimleri hava şartları nedeniyle yapılamadı.
Ancak buna ilişkin orman yol izinleri verilmiş olduğunu kaydedelim.

Yani Istranca bölgesindeki ağaç izinleriyle, ister ‘tahribat’ ister ‘yağma’ deyin, kullanılacak ormanlık alanın 1 milyon 500 bin metrekare olduğunu hesap edebiliriz.
Kaba bir hesap yaparak olayın ne kadar vahim olduğunu göstermek istiyoruz.
Örneğin Taksim Meydanı’nı 20 dönüm sayarsak, bunu 44 adet temel üzerinde rüzgârgülleri kurulacak.
İşte, 1 milyon 500 bin metrekareyi böyle hesap ediyoruz.

## İSTANBUL’DA EN BÜYÜK CİNAYET

2 bin megavat gücündeki RES projesinin gerçekleşmesi için ne kadar ağaç kesileceğini düşünün, bunların boyu yaklaşık 30 metre olarak görülüyor. Temel kazılarını da hesaba katarsak ‘cinayetin’ boyutunu hesap edebilirsiniz.
İstanbul’da ne yazık ki bu konulara duyarlı kişi ve makamları göremiyoruz.
Elimizdeki bölgelere göre, ‘lisans ticareti’ de önümüze çıktı. Lisans izninin, orman izinlerinin alınması ve ağaç kesimlerinin yapılması şartıyla 75 milyon dolara satılmak üzere olduğu olayın en acı tarafı.
Biz şunu söylemek istiyoruz: Istranca ormanlarının Çatalca sınırlarındaki bölümü hangi amaç uğruna feda edilmek istenmektedir? Bunun mantığı yağmadır, ranttır. “İstanbul’un son kalan oksijen kaynağı olan Istranca ormanlarının neredeyse tamamı bu proje yüzünden kalıcı olarak yok edilecek ve tekrar ağaçlandırılıp ormana kazandırılmayacaktır.”
Şunu unutmayalım: Çatalca bölgesinde benzer şekilde birçok rüzgâr enerji santralları kurulmuş ve çalışır haldedir ancak daha önceleri talep edilmesine rağmen dava konusu yerde hiçbir yatırımcıya, bu bölgenin ‘yüzde 70 üstü 3 kapalı sıklıkta’ (üstten bakınca ağaç sıklığından toprağın görünmediği en sık yer) ıhlamur ve kestane ormanı olması ve yaban hayatının korunması gereken alanın koordinatları içinde yer alması, sincap, kızıl tilki, benekli geyik yaşam alanı ve kuşların göç yolu olması nedeniyle orman izni verilmemiştir. Bilin ki, bu yerler orman alanı değil; açık ve çorak alanlarda bulunuyor.

## İZNİ KİMLER VERDİ, KİMLER İMZA ATTI?

Peki alanın koordinatlarını kimler değiştirdi? Söz konusu yere doğrudan Istranca ormanlarını yok edecek bir tahribata izin verdi?
Sevgili ormancım, bürokratım, siyasetçim, bakanım, RES’lere karşı değiliz, ülkemizin kendi kaynaklarımızdan enerjimizi karşılanmasını doğru buluruz tabii ki... Ama hangi akıl, ‘seyrek ve çorak’ alanlar varken, ‘rüzgârgüllerini’ Istranca’nın tam kalbine saplar! Bu güzelim ormana nasıl kıyılıyor? Böyle bir enerji üretiminin ülkeye yararından çok zararı getirileceği niye düşünülmüyor? Kamu yararı var mı, yok!
Bu hava fotoğrafı durumun vahametini gösteriyor. Rant kokuyor burası. Ne yazık ki bölgenin kaymakamı, belediye başkanı, siyasetçisi, muhtarı, çevrecisi genci-yaşlıyı düşünün. Zarar

mı? “Yaklaşık 1 milyon metrekarelik orman ve yüz binlerce ağaç Istranca ormanları ile birlikte yok edilecek ve telafisi mümkün olmayan büyük bir kamu zararı ortaya çıkacaktır.”
Alman kökenli UWE firmasını kimler ‘gıdıklıyor’? Danışmanlık sözleşmesinde neler yazıyor? Biz okurken ürküyoruz, ormancılar, onların müdürleri, şefleri ses çıkarmıyor. Arkada “Bu işleri çabuk bitirin” diyen kim!

7- https://www.enerjigazetesi.ist/turkiyenin-en-buyuk-ruzgar-santrali/
Aralık 2014
Türkiye’nin en büyük rüzgar santrali İstanbul’da kurulacak. Çatalca’daki İstanbul Rüzgar Enerji Santrali, 88 türbinle yılda 770.8 milyon kilovatsaat elektrik üretecek.
Geçen yıl Gama Enerji A.Ş. tarafından satın alınan Universal Wind Enerji Elektrik Üretim A.Ş.’nin RES projesi ÇED raporu için İstanbul Çevre ve Şehircilik Müdürlüğü’ne sunuldu. Universal Wind Enerji Elektrik Üretim A.Ş.’nin kurmayı planladığı RES’in kurulu gücü toplam 200 MWe (64 adet x 2 MWe, 24 adet x 3 MWe) olacak.

8-https://www.milliyet.com.tr/gundem/ormanda-ruzgar-santraline-isyan-6420828
02.02.2021
Ormanda rüzgâr santraline isyan
Çatalca’da kuzey ormanlarının içine kurulacak olan Rüzgâr Enerji Santrali’nin (RES) binlerce ağacın yok olmasına neden olacağına dikkat çeken Kuzey Ormanları Savunması, santralin ormana geri döndürülemez zararlar vereceğini savunuyor.

9-https://www.sozcu.com.tr/2021/gundem/kuzey-ormanlari-simdi-de-res-tehdidi-altinda-6393776/
24.Nisan.2021
Kuzey Ormanları şimdi de RES tehdidi altında
Kuzey Ormanlarını ve göçmen kuşları tehdit eden Çatalca’daki İstanbul Rüzgâr Enerji Santrali (RES) projesinin iptal edilmesi talebiyle çevreciler imza kampanyası başlattı. Yüz binlerce göçmen kuşun göç yolu üzerinde bulunan Kuzey Ormanları’nın, Türkiye’nin en büyük RES projesi nedeniyle tehdit altında olduğuna dikkat çekildi.
Aralarında Kuzey Ormanları Savunması, Doğa Derneği, Türkiye Ormancılar Derneği, Ergene Kent Konseyi, Trakya Çevre Gönüllüleri Derneği'nin de bulunduğu çevre dernekleri change.org sitesi üzerinden “Ormanda RES olmaz! İstanbul Rüzgâr Enerji Santrali projesi iptal edilsin” talebi ile imza kampanyası başlattı. İmzaya açılan metinde; Almanya merkezli Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş. tarafından Kuzey Ormanları'nın İstanbul Çatalca mevkilerindeki sık meşelik alanları yok ederek kurulumuna başlanan İstanbul RES projesinde 44 adet

türbin dikilmesi ve tribünleri yerleştirmek için orman alanının tıraşlanarak yok edilmesinin planlandığı anlatıldı.
“TAHRİBAT DURDURULSUN”
Yüz binlerce göçmen kuşun göç yolu üzerinde bulunan Kuzey Ormanları'nın Türkiye'nin en büyük rüzgâr elektrik santrali projesinin tehdidi altında olduğu belirtilerek “Bu bölge, leylek ve kartal gibi birçok farklı göçmen kuş türünün Türkiye'ye giriş yaptığı göç yolunun üzerinde bulunuyor. Proje sahası, Istrancalar'da ve Trakya bölgesinde yapılan RES projeleri nedeniyle göçmen kuşların güvenli geçiş yapabilecekleri ve dinlenebilecekleri son alanlardan birisi durumunda” denildi. Türbinlerin dikileceği sahanın “Terkos Havzası Önemli Doğa Alanı”nın da içerisinde yer aldığına dikkat çekilerek “Yani İstanbul'un doğal kalabilmiş son alanlarından birisi olan bu bölge, rüzgar elektrik santrali projesi nedeniyle yok olma tehlikesiyle karşı karşıya” uyarısı yapıldı. RES projesi nedeniyle ormanlık alanda başlayan tahribatın durdurulması talep edildi.
120 BİNDEN FAZLA LEYLEĞİN GÖÇ YOLU
RES projesinin neden olacağı tahribat şöyle anlatıldı:
“Proje; en az 300 yıllık kadim meşe ormanlarını ve bu ormanların içerisinde barındırdığı biyolojik çeşitliliği yok edecek. Proje sahası her yıl 120 binden fazla leyleğin kullandığı göç yolu üzerinde yer alıyor. Küçük orman kartalının dünya nüfusunun yüzde 90'nı İstanbul Boğazı'ndan geçiş yapıyor. Rüzgar tribünleri kuşları girdabına alarak özellikle süzülerek göç eden kuşların ölümlerine neden olmasının yanında leyleklerin ve diğer süzülerek göç eden kuş türlerinin zorlu göç yolculuğunda dinlenme alanlarını yok edecek. Ayrıca bu alanda yaşayan en az 34 kuş türü, Türkiye'nin taraf olduğu uluslararası sözleşmelerle koruma altında bulunuyor. Proje sahasının etrafında büyük yarasa kolonilerinin bulunduğu Çilingoz, Yaylacık Mağarası, Kocakuyu Mağarası, Gümüşpınar Mağarası ve İkigöz Mağarası gibi önemli mağaralar bulunuyor. Bölge, arıcılık faaliyetleri mutlak koruma altında bulunuyor. Proje sahası, Tarihi Roma Su Yolu'na ait su galerisi hattı kalıntıları ile aynı bölgede bulunuyor.”

10-https://yesilgazete.org/kuzey-ormanlarindaki-res-projesine-karsi-imza-kampanyasi-baslatildi/
8.4.2021
**Kuzey Ormanları’ndaki RES projesine karşı imza kampanyası başlatıldı**
*Bu bölgenin leylek ve kartal gibi birçok farklı göçmen kuş türünün Türkiye’ye giriş yaptığı göç yolu üzerinde bulunduğuna dikkat çeken örgütler İstanbul Rüzgâr Enerji Santrali projesinin iptalini talep ediyor.*
Kuzey Ormanları’nı ve göçmen kuşları tehdit eden İstanbul Rüzgâr Enerji Santrali (RES) projesine karşı çıkan çevre örgütleri change.org üzerinden imza kampanyası başlattı.
Almanya merkezli Dirkshof şirketinin sahibi olduğu Universal Wind Enerji Elektrik Üretim A.Ş. tarafından İstanbul Çatalca mevkilerindeki sık meşelik alanları yok ederek kurulumuna başlanan İstanbul RES Projesinde 44 adet RES tribünü dikilmesi planlanıyor. Türbinlerin yerleştirilmesi için de orman alanlarının tıraşlanarak yok edilmesi gerekiyor.
Göç yolu üzerinde
Bu bölgenin leylek ve kartal gibi birçok farklı göçmen kuş türünün Türkiye’ye giriş yaptığı göç yolu üzerinde bulunduğuna dikkat çeken örgütler, “Proje sahası, Istrancalarda ve Trakya bölgesinde yapılan RES projeleri nedeniyle göçmen kuşların güvenli geçiş yapabilecekleri ve dinlenebilecekleri son alanlardan birisi durumunda” dedi.

Neden iptal edilmeli?
Proje sahasının aynı zamanda Terkos Havzası Önemli Doğa Alanı'nın içerisinde yer aldığına dikkat çekilen kampanya metninde projenin neden iptal edilmesi gerektiği şu şekilde aktarıldı:
Proje sahası; sayıları her geçen gün azalan birçok yaban hayvanı türünün yuvası olan Çilingoz Yaban Hayat Geliştirme Sahası içinde ve çevresinde bulunuyor.
Proje; en az 300 yıllık kadim meşe ormanlarını ve bu ormanların içerisinde barındırdığı biyolojik çeşitliliği yok edecek.
Proje sahası her yıl 120 binden fazla leyleğin kullandığı göç yolu üzerinde yer alıyor. Küçük orman kartalının dünya nüfusunun %90'nıİstanbul Boğazı'ndan geçiş yapıyor. Rüzgar tribünleri kuşları girdabına alarak özellikle süzülerek göç eden kuşların ölümlerine neden olmasının yanında leyleklerin ve diğer süzülerek göç eden kuş türlerinin zorlu göç yolculuğunda dinlenme alanlarını yok edecek. Ayrıca bu alanda yaşayan en az 34 kuş türü, Türkiye'nin taraf olduğu uluslararası sözleşmelerle koruma altında bulunuyor.

Proje sahasının kuş uçuşu 2-20 km uzaklığında büyük yarasa kolonilerinin bulunduğu Çilingoz, Yaylacık Mağarası, Kocakuyu Mağarası, Gümüşpınar Mağarası ve İkigöz Mağarası gibi önemli mağaralar bulunuyor. Proje, aralarında küresel olarak tehdit altında olan yarasalar için doğrudan tehdit içeriyor.
Proje sahasının yer aldığı bölge, arıcılık faaliyetleri mutlak koruma altında bulunuyor.
Proje sahası, Tarihi Roma Su Yolu'na ait su galerisi hattı kalıntıları ile aynı bölgede bulunuyor
'Hukuka ve ÇED işleyişine uygun değil'
Bu sayılan sebeplerden dolayı proje için verilen Çevresel Etki Değerlendirme (ÇED) olumlu raporunun hukuka ve ÇED işleyişine uygun olmadığı belirtilen açıklamada "Bölgedeki insanların yaşamını tehlikeye atan bu proje aynı zamanda İstanbul'un son doğal alanlarından birisini ve bu bölgede yaşayan yüz binlerce canlıyı yok edecek" denildi.
Açıklamada "İstanbul RES isimli rüzgar enerji santrali projesinin durdurulmasını, verilen ÇED olumlu kararının iptal edilmesini, başlatılmış olan tahribatın derhal durdurulmasını talep ediyoruz" ifadeleri kullanıldı.

Çağrıda bulunan örgütler
Bireysel olarak da imza atılabilen kampanyaya çağrı yapan örgütler ise şu şekilde:
Kuzey Ormanları Savunması
Doğa Derneği
Türkiye Ormancılar Derneği
Çatalca Doğa Savunması
Doğal Yaşamı Koruma Vakfı (DAYKO)
Saray Doğayı Koruma Derneği
Vize İnsan Yaşam Doğa Derneği
Ergene Kent Konseyi
Marmaraereğliği Çevre Gönüllüleri Derneği
Silivri Çevre Derneği
Trakya Çevre Gönüllüleri Derneği
Doğaya Dönüş Derneği
Nisan 2021

11-https://t24.com.tr/haber/catalcada-ruzgar-santrali-icin-dogal-doku-yok-edilecek,280386
Çatalca'da rüzgar santralı için doğal doku yok edilecek

Proje alanında 57 familyaya ait toplam 260 bitki türü tespit edilirken, bölgede 2 endemik bitki türü mevcut.
Yenilenebilir enerji kaynağı olan rüzgâr santralları bile yer seçimi konusundaki planlama hataları nedeniyle doğayı tehdit eder hale geldi.
**Özlem Güvemli**'nin Cumhuriyet'te yer alan haberine göre, Çatalca'da tamamı orman alanında kalan bölgede Universal Wind Enerji Elektrik Üretim Anonim Şirketi tarafından 88 adet rüzgâr türbini yapılacak. Bir rüzgâr türbini için yaklaşık 400 metrekarelik bir doğal doku yok edilecek. 88 türbin üzerinden hesaplandığında 35 bin 200 metrekarelik orman arazisinin tahrip edileceği ortaya çıkıyor. Proje için hazırlanan Çevresel Etki Değerlendirme (ÇED) dosyasına göre bölgede hem yol hem de türbinler için alanda yoğun olarak bulunan meşe, doğu kayını, kestane, ıhlamur, gürgen türleri yok edilecek. Proje alanında 57 familyaya ait toplam 260 bitki türü tespit edildi. Bölgede 2 endemik bitki türü mevcut. Bölgedeki 34 kuş türü de "Mutlak Koruma Altındaki Türler Listesi"nde yer alıyor.

# 7 Site Visit and Findings

Two site visits were made on 27.08.2021 and 01.09.2021. Site observations with best practices observed and non-compliance issues with recommendations are covered in this section. Photographs taken during the site visits are also presented in Annex II of this due diligence report.

İstanbul WPP project is totally in forest area, which is under management of Governmental Forest Administration. Construction work at all turbine areas is ongoing with different level of progress. Since the forest, in which İstanbul WPP is located, is one of the forests in Turkey where the forest workers are continuously working, there are locations where construction teams of İstanbul WPP and forest workers are working near to each other. Having forest workers and representatives of forest chiefdom in the region is an advantage for the project to prevent any harm to forest as a result of construction works. Nevertheless, the construction work is not creating any hazards to forest workers. Forest workers were observed to work at several locations within the forest.

İstanbul WPP camp site is located on the Binkılıç-Yalıköy road which is passing through the forest. The camp site is located outside Binkılıç, which is positive to prevent any nuisance with the village residents. However, the road through which all the transportation of the project is done, passes through Binkılıç which can lead to problems to residents. No issues were raised about traffic problems during the interviews carried out with the stakeholders, though. There are no records kept for the traffic load of the project. Although site may track the number of daily shipments through delivery notes, there is no record showing the duration and number of vehicles impacting not only Binkılıç but also other villages in the region. This impact should have been seen mostly during transportation of blades with heavy vehicles moving slowly. All heavy vehicles were observed to have escort cars to support them on the traffic.

This main construction camp site is used by contractors of UWE except Nordex, which has its camp site at the switchyard area. The area is rented from one of the village residents. The site will be rehabilitated upon demobilization. Construction camp site has offices, meeting room, rest area and infirmary. Heating is supplied by air conditioners. There are designated waste containers available for different waste types. There is grievance box available for the workers. Workers prefer not to fill in the forms, though. Emergency plan is posted. Vehicles are required to be parked facing the exit which is best practice. There is no chemical and material storage at camp site. There is no workshop either. No sign of spill and/or leakage was observed at construction camp site.

There is no accommodation available at the construction camp site. Workers are either local, stay at hotel or at rented apartments.

No visitor is allowed to enter construction site without receiving the induction training by safety expert. If the visitors do not have PPE, they are supplied with necessary safety shoe toes, helmet and reflective jacket. There is cap for hygienic purposes for the helmets, which is a good practice.

Nordex camp site is located opposite site of switchyard area to be close to turbine areas. Nordex camp site has to review its fire safety as well (refer to Section 10.2) with the missing fire extinguisher at the designated place.

The road to turbines and switchyard area is mostly the existing forest roads, where modifications are made according to need of turbine transfer within the boundaries of the forestry permit. There are some roads opened to the exact turbine locations. The roads are neither asphalt nor concrete as expected. Due to condition of the road, the traffic movement is causing dust. In order to control the dust, water spraying is employed. Even though different trucks at different sections of the construction area were observed to spray water, unfortunately dust formation was also seen due to hot and dry weather which leads to quick evaporation of the water sprayed. The main forest road/Binkılıç-Yalıköy road is also used by the residents. There is no restriction for the access.

There are some traffic signs available on the roads, including 30 km/h speed limit and wild life available on the roads. Their number is not sufficient. There are traffic signs ordered and present at the switchyard area, which will be placed. These shall be placed without waiting for the completion of the project. New signs shall be ordered upon need.

There are different works on going at different turbine locations. There were turbines which are completed and in operation such as T19. Commissioning work was ongoing at some other turbines such as T41. There were turbines which are erected such as T40. There were turbines whose foundation (steel work) was ongoing such as T20 and there were turbines whose excavation is done such as T11. All of these means different teams to be present on different turbine areas performing different construction works. Considering the size of the project and locations of the turbines, the teams work does not have impact on others work (except work schedule. from safety perspective) Each team knows their workplace and execute work only at this location. The size of the work ongoing brings traffic load to the internal forest roads. It was a good practice to employ staff to coordinate and guide vehicle traffic on the roads which are densely used.

The electrical transmission line was completed in May 2021; therefore, there was no work in the transmission line corridor.

The switchyard and the control room/administration building were also completed in May 2021. This area has still some work to be completed such as warehouse and waste storage area construction. There are several other works ongoing around this area due to cabling and connection of the ongoing turbine constructions. The cabling is done underground which will minimize visual impact but increase the importance of restoration of the trenched area.

The control room/administration building has emergency exit signs available, designated assembly point, safety signs, emergency response board, safety notices. The parking lots are defined, and vehicles are required to facing the exit. There is pedestrian way available. There are designated waste

containers available for different type of wastes. The waste storage area is not constructed yet, but its location is ready. There is septic tank for the rest rooms. There are carbon dioxide and dry powder portable extinguishers as well as 50 kg dry powder wheeled extinguisher. There are monthly control tags available on the extinguishers, which is a best practice. Extinguisher that are randomly checked are in good condition.

There are two separate battery units in the building with signs, ventilation and emergency eye shower. The entrance is restricted.

The switchyard area is protected by active lighting rod system. Its grounding controls will be important for operational and fire safety. ***Site shall carry out its grounding controls preferably twice a year, one in dry one in wet season.***

There is a designated rest area for the workers. There is no refractory service. Staff brings their own food and can heat up in the rest area. There is sufficient place to work and rest. The heating and cooling of the building is supplied by air conditioners and electrical heaters. The only point that needs improvement is the changing room. ***A designated changing room shall be organized with sufficient number of lockers and chairs (room has been organized). In addition, a grievance box shall be located in the building for workers at a location out of the sight of the cameras (is placed now).*** The staff did not mention any negative issues about the building and facilities available. They are satisfied with the PPE they have and mentioned no problems with the supply of PPE and work cloths.

It was observed that the control room/administration building could not have been organized with opportunities to be improved which are also shared in Annex III. These include

- Fire safety: The detection system shall be controlled for its installation. Operators shall be trained on use of detection panel. The lay out of the extinguishers shall be evaluated for ease of access.
- Storage: The workshop is used to store several different goods and equipment which are delivered leading to housekeeping and safety problems. Each item shall have a proper designated storage area. Access to emergency response equipment shall not be prevented at any time.
- First aid: There is a first aid box available. It will be a good practice to have splint, stretcher and cervical collar. The needs shall be determined with Medical Doctor and the ambulance service in the area.
- Consumption water tank: The tank is in a closed room. The room is full of water bottles which are used to fill the water tank due to problem of delivery of water with tank. The amount of storage leads to housekeeping problems in the room. There is a pit available in the room, which needs a cover. The water bottles are transferred to top of water tank with an improper ladder. A proper platform and stair shall be supplied to this area. Lifting equipment for the bottles and/or pump system shall be supplied due to ergonomics and back health.

- Oil Barrel Storage: The oil barrels of the transformers are kept on the gravel/pebble area next to transformers. These barrels may have remaining oil and may leak. The site has a drainage plan, but it is not possible to confirm from these drawings that the drainage on the side that the barrels are stored goes. It is important to confirm the drainage structure there. In case of having drainage under this area, then an oil/water separator shall be considered in consultation with the authority. In addition, there are two barrels next to emergency generator, these shall also be removed from the area due to fire safety.

- Storage at the Switchyard area: There are wood pallets and some other goods stored outside. These shall be removed from the area due fire risk.

There were no major wastes observed spread to surrounding at any construction site visited. There was no waste dumping. There will be need of cleaning and organizing all work locations upon completion of the construction activities. Records of these cleaning shall be kept.

There are drainage channels construction work ongoing. This is important to protect natural flow of water. The creeks, creek beds, etc. mentioned in the documentation were not observed during the site tour due to weather conditions and locations visited. Site team mentioned that the creeks are mostly in the forests. Periodical control of the roads and drainage channel will be important to prevent any negative impact on the region.

In addition, there were trenches opened for the layout of the cabling. It is important to close them properly not to create water flow problems.

Construction areas were observed to be limited to the turbine areas with average housekeeping. Although the area is a windy area, there was no waste spread to the surrounding. Contractors have their waste storage facilities. It is important to clean the site after completion of the construction activities. There are small camp sites around the turbines with rest rooms which are emptied by the contractors. Unfortunately, there were no disposal records available for these. The assembly points at turbine locations, where there is ongoing work, is determined and tagged. There is extinguisher available at these locations, which is positive for the fire safety.

No storage of any material and equipment was observed other than the designated areas at the construction sites. One improvement that can be applied is locating the emergency diesel generator on a containment for preventing any pollution in case of a problem. There was no sign of spill and/or leakage observed at the construction sites.

There were no spill kits observed at the project site. ***Spill kits shall be placed at switchyard area and shall be readily available for maintenance activities for operation period. Logs shall be kept. Staff shall be trained in the use of response equipment.***

No vehicle maintenance and/or repair was observed to be carried out at the site during the site visit.

All of the workers were observed to use the necessary PPE including helmets, shoes, reflector jackets and where necessary mask and gloves. Necessary safety signs were available.

Areas where cranes are working are restricted for access, which is a good practice.

The side slopes and stages were observed to be arranged according to the need of turbine area and paying attention to the regional characteristics. There were no plants and/or trees observed to be applied to turbine locations, where the work is completed, and at the transmission line corridor as it should be.

There was a grievance box available at the Binkılıç village headmen building which is very close to one of the coffeehouses in the village. Unfortunately, there was no project information brochure (the site has the brochure available, though) and/or a form to fill in was available at this location.

Covid 19 and pandemics measures were available at both switchyard area and camp site with signs, presence of disinfectants.

There were no bee hives or other village uses observed in the forest. There are no camping places, either.

There was no wild life observed at İstanbul WPP project area during the sites visits.

# 8 Gap Analyses

This section includes gap analyses findings for document review, site visit findings and interviews with staff and other stakeholders.

The rating scale used during this gap analyses is as follows:

| Rating | Explanation |
|---|---|
| **High Priority** | It is used for a gap that would result in one or more of the following conditions:<br>• non-compliance with legislation that may hinder the progress of the project<br>• derogation from the international guidelines and performance standards.<br>• a significant environmental and/or social impact<br>• the environmental and social management system is not working<br>• reputational risk<br>Gaps can result in environmental pollution, ecosystem damage, occupational accident, social problems, property damage, court cases and monetary fines.<br>Opinion letter requirements are also evaluated under this category. |
| **Medium Priority** | It is used for a gap that would result in moderate/acceptable environmental and/or social impact.<br>Gaps identified lead to deviation from legislation and international guidelines and performance standards. There are systems and procedures in place with space for improvement.<br>Gaps will have impact on environmental, safety, stakeholders, and property but will be limited and can be reverted. |
| **Low Priority** | It is used for a gap that would result in minor environmental and/or social impact.<br>Gaps identified shall be implemented as a best practice.<br>There are gaps listed under this category for the continuity and/or improvement of the available study. |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| **Permits & License & Management** | | | | | | | | |
| Workplace Opening and Operation License | Workplace Opening and Operation License Regulation<br>IFC Guidelines | There is no license available yet. The site management is planning to apply for the license when the plant is completed. There are turbines in operation and the switchyard building is in use. | | An application letter for the license shall be prepared and submitted to get opinion of the authority since the plant is partially in operation. The road map shall be defined upon their decision.<br>The license shall be secured. | Upon completion of the plant | UWE | Binding<br>Legal requirement | 1.2 |
| Aviation | Opinion Letters | There is an opinion letter of Ministry of Transportation and Infrastructure Directorate of Civil Aviation Directorate which requires informing the authority upon completion of the project to further study the impacts on the radar system of İstanbul airport.<br>There are units in operation and under commissioning. | | Letter has been sent on 16.11.2021<br>Authority shall be informed upon completion of the project. | *<br>Upon completion of the mechanical erection of all turbines | UWE | Binding<br>Legal requirement | 1.2 |
| Environmental and Social Management System | IFC Guidelines<br>IFC PS 1, PS 2, PS 6 | The establishment of environmental and social management system is ongoing. Several documents had been prepared and made available to staff. Implementation of these also has started such as committee meeting, public participation meeting, septic tank emptying.<br>Even though there is no SEP (planned to be completed before end of November), there are organizations for the affected groups. | | Plan and procedure development with instructions and forms have been completed.<br>The documents are announced these to staff and contractors to make them available at the company drive.<br>Implementation has started with record keeping.<br>Implementation is not once a time action. UWE shall continue to implement and improve its system. | Continuous | UWE<br>Nartus is working on this item with UWE. | Binding<br>IFC requirement | 1.1 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Legal and Other Requirements Determination and Compliance Procedure | National legislation<br>IFC Guidelines<br>IFC PS 1 | There is no legal and other requirements determination and compliance procedure. | | A Legal and Other Requirements Determination and Compliance Procedure is prepared, implemented, and followed up. | * | UWE<br>Nartus is working on this item with UWE. | Binding<br>IFC requirement | 1.2 |
| Organization Chart and Job Descriptions | IFC Guidelines<br>IFC PS 1 and PS 2 | Job descriptions are defined and signed by UWE staff.<br><br>Organisation chart has been established. | | Each new staff shall continue to sign the descriptions. | * | UWE | Binding<br>IFC requirement | 1.1 |
| Employment of environmental and social responsible | IFC PS 1 | The project has a large capacity, and it is located in a forest area. There are different subjects to be followed on environmental, social and safety subjects. OSGB is following the health and safety subjects. There is nobody assigned to coordinate the E&S work. | | An environmental and social responsible has been assigned to coordinate the work temporarily at İstanbul WPP. He is working with the project team at headquarters. An environmental and social committee has been established to assess and manage the issues and had its first meeting in November 2021.<br><br>An experienced E&S staff is hired and started working at headquarters on 01.12.2021. | * | UWE | Binding<br>IFC requirement | 1.1 |
| EHS and Social Meetings | IFC PS 1 | As a best practice UWE has established an environmental and social management committee and start meeting. | | The meetings will continue with logs and minutes. | * | UWE | Optional<br>IFC Requirement | 1.1 |
| Internal Audit System | IFC Guidelines<br>IFC PS1 | There is no internal audit system to assess the level of ES aspects to define what is working and what needs improvement and follow the actions.<br>UWE had prepared and audit procedure. | | An internal audit system shall be implemented.<br><br>Records of audits and actions taken shall be kept. | End of December 2021 | UWE | Binding<br>IFC requirement | 1.1 |
| Court Cases | IFC Guidelines | There are two court cases about the project. | | UWE started sharing monthly information supplied to | Continuous | UWE | Binding | 1.2 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | Lenders about the status of these cases. EIA related court has been closed and there has been no progress about the forestry permit related case.<br>Attorney will continue sharing information. | Until the court cases are closed. | | | |
| Decommissioning | IFC Guidelines | IFC requires sites to have plans for decommissioning.<br>There is no decommissioning plan available. | | A data set including the following shall be prepared:<br>• Information about decommissioning<br>• Traffic management plan<br>• Public disclosure about the decommissioning activity<br>• Noise level calculations and measures to be taken<br>• Dust level calculations and measures to be taken<br>• Waste and wastewater management plan<br>• Safety management plan<br>• HR management plan | In case and prior to decommissioning | UWE | Binding<br>IFC requirement | 1.1 |
| **Social Issues** | | | | | | | | |
| EIA | IFC | The EIA does not sufficiently describe social conditions of the project affected people; does not cover the range of potential social impacts and proposes appropriate mitigation and monitoring. | | UWE has developed and started to implement a program of mitigation and performance improvement measures and actions that address the identified social issues, impacts and opportunities in the form of an Environmental and Social | * | UWE | Binding<br>IFC requirement | 1.3 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | Management Plan. | | | | |
| Stakeholder Engagement Plan (SEP) | IFC PS 1 | SEP has been prepared. | | SEP has been developed and implemented. | * | UWE | Binding IFC requirement | 1.3 |
| Consultation | IFC PS 1 | Any consultation activities have not been conducted. | | SEP and community development plan has been prepared.<br>UWE has organized a public participation meeting at Binkılıç on 23.10.2021. Another one was held at Yalıköy on 19.11.2021.<br>The meetings shall include all parties that are impacted and shall continue. | * | UWE | Binding IFC requirement | 1.3 |
| Disclosure of Information | IFC PS 1 | UWE did not disclose information about the Project to the public. | | Meetings with the affected communities started with a meeting at Binkılıç, continued with Yalıköy and these meetings to inform all impacted parties shall continue.<br>Project Information brochure has been placed next to grievance boxes in the villages.<br>These meetings shall continue. UWE shall continue keeping public informed.<br>Company web page can be used to keep public informed. | * | UWE | Binding IFC requirement | 1.3 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Grievance Mechanism for the Stakeholders | IFC PS 1 | There is a grievance mechanism and there are some grievances recorded.<br>However, not everybody is aware of the system | | Forms are placed next to grievance boxes located in the villages.<br>UWE has informed villagers during the meetings at Yalıköy and Binkılıç.<br>UWE shall continue keeping the forms next to boxes, control the boxes and take action in case of complaint and record these. | * | UWE | Binding<br>IFC requirement | 1.3 |
| Grievance Mechanism for the Workers | IFC PS 2 | There is a grievance mechanism.<br><br>A grievance box is placed at the switchyard area at a location out of the camera view.<br><br>A grievance form operation mechanism document has been published. | | Staff has been informed, log prepared to keep track of complaints and suggestions.<br>Grievance's mechanism shall be kept operational. | * | UWE | Binding<br>IFC requirement | 2.4 |
| Development Support | IFC states that clients are required to support development initiatives to reestablish the affected people in significantly improved social and economic conditions. | There is no community development plan/program. | | UWE had developed a community development program. It is now important to implement this plan.<br><br>The company commits to support the local communities. | * | UWE | Binding<br>IFC requirement | 4.3 |
| Community Safety and Risk | IFC PS 4 | There is a traffic management plan related to community safety. | | UWE shall continue implementing the plan and its requirements. | * | UWE | Binding<br>IFC requirement | 3.5 / 4.2 |
| Monitoring and Review | IFC PS 1 | There is no monitoring program for the project. | | All project-related activities including SEP should be monitored.<br><br>UWE should establish monitor program and measure the effectiveness of | End of December 2021<br><br>A third party audit report every three years | UWE | Binding<br>IFC requirement | 1.3 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | the management program/plan and the mitigation measures.<br><br>The company should document monitoring results and identify and reflect the necessary corrective/preventive actions.<br><br>A third-party audit is required every three years following after the first year of operation. | | | | |
| HR | IFC PS 2 | There is a personnel satisfaction questionnaire. There is evaluation of this report. | | The questionnaire shall be repeated each and every year with necessary follow-up. | End of December 2021 | UWE | Binding IFC requirement | 2.3 |
| Social Facilities | IFC PS 2<br>Health and Safety Legislation | There is no designated changing room for workers in the control room/administration building in switchyard building. | | A changing room with lockers and a sofa is supplied. | * | UWE | Binding Legal and IFC requirement | 1.1 |
| Near misses | Health and Safety Legislation<br>IFC Guidelines | There are near misses' forms filled. There are no logs showing how the near misses are handled. | | Near misses' system started to be reported.<br><br>Evaluation of the near miss shall be shared with workers.<br><br>Near misses shall be kept for the operation phase as well | * | UWE | Binding Legal and IFC requirement | 2.5 |
| Fire Training and Equipment | Health and Safety Legislation<br>IFC Guidelines<br>Forestry Permit | The site has commitment to support forestry department in case of a forest fire.<br>The staff has received basic firefighting training which will not be sufficient in case of a forest fire. | | Site staff who will support the forest department shall receive further training to be ready to respond to fires. | End of June 2022 | UWE | Binding Legal Requirement | 3.12 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | The staff does not have firefighting equipment. | | Proper fire brigade cloths shall be supplied for their safety. Fire brigade clothing has been arrived at site.<br><br>Refreshing classes shall be organized annually. | | | | |
| Environmental, Health and Safety Meetings | Best Practice | An environmental and social management committee has been established. | | An environmental and social committee has been established.<br>Committee meetings shall continue. | * | UWE | Optional | 1.1 |
| Supplier List | IFC Guidelines | A list showing contractors, suppliers and local suppliers is present now. | | List shall be updated whenever there is a change. | * | UWE | Binding IFC Requirement | 2.6 |
| **Environmental Issues** | | | | | | | | |
| Waste Management Plan | Environmental Legislation | The site is not fully operational; therefore, there is no three-year waste management plan. There is no approval letter for this management plan.<br>The waste management issues are covered in a draft plan called Waste and Wastewater management. | | The plan shall be prepared and approved by the Provincial Environmental and Urbanization Department.<br><br>As a start application to register to Ministry system was made early November and process is ongoing.<br><br>Waste and Wastewater Management Plan is issued and implemented. | December 2021 (full completion is subject to change according to Ministry response) | UWE<br>Nartus is working with UWE | Binding Legal Requirement | 3.1 |
| Waste Management | Environmental Legislation<br>IFC Guidelines<br>IFC PS 3 | Construction waste management is covered in the draft Waste and Wastewater management Plan.<br>There are not enough records showing how waste is handled. | | Waste and Wastewater Management Plan is issued and implemented.<br><br>Waste records for construction period has started and shall continue. | * | UWE and Contractors | Binding IFC and legal requirement | 3.1 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | Waste records shall be kept for operational period when the site is operational. | | | | |
| Temporary Waste Storage Area | Environmental Legislation<br>IFC Guidelines<br>IFC PS 3 | According to the documents shared a waste storage area is going to be constructed at switchyard area. There is no Temporary Waste Storage Permit or exemption letter available. | | Depending on the amount of waste generated for the project, either Temporary Waste Storage Permit or exemption letter for the Temporary Waste Storage Area shall be obtained from Provincial Environmental and Urbanization Department. | End of December 2021 (subject to completion of the waste storage area) | UWE | Binding<br>Legal Requirement | 3.1 |
| Dust Emissions | Environmental Legislation<br>IFC Guidelines | The dust calculations shared for the construction phase is done for excavation activities and for the transportation. | | UWE shall continue spraying the road to minimize dust formation whenever needed. | * | UWE<br>Nartus is working with UWE | Binding<br>IFC and legal requirement | 3.5 |
| Exhaust Emissions | Environmental Legislation<br>IFC Guidelines | There are no exhaust level calculations for the construction phase. | | Exhaust calculations are done with the conclusion of no exceedance of limits even if all vehicles work at the same time at the same location.<br>Periodical controls of the vehicles will continue. | * | UWE<br>Nartus is working with UWE | Binding<br>IFC and legal requirement | 3.5 |
| Chemical Storage | Environmental Legislation<br>IFC Guidelines<br>IFC PS 3 | There will be a designated chemical storage area, which has not been constructed yet. | | The conditions of the chemical storage area will be checked upon completion of the site during the monitoring studies.<br><br>Utmost attention shall be given to chemical storage, transportation and use at the construction site.<br><br>Spill kits shall be available. (spill kits arrived) | Completion of the Storage Area | UWE and Nordex | Binding<br>IFC and legal requirement | 3.2 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | MSDS shall be present at the storage area. | | | | |
| Chemical Management Plan | IFC Guidelines<br>IFC PS 3 | There is a hazardous material management plan. chemical management plan called hazardous material management plan .<br>Nordex has submitted chemical inventory.<br><br>MSDSs are available. | | | * | UWE<br>Nartus is working on this with UWE | Binding<br>IFC requirement | 3.2 / 3.7 / 3.8 |
| Environmental Emergency Response Plan and Environmental Incidents | IFC Guidelines<br>IFC PS 3 | There is emergency preparedness and response plan.<br>There is also a legally required safety perspective emergency response document. | | Spill kits are present. | * | UWE<br>Nartus is working on this with UWE | Binding<br>IFC requirement | 1.1 / 3.8 |
| Noise Levels Operational | Environmental Legislation<br>IFC Guidelines<br>IFC PS 3 | A program for the operational noise measurements is available.<br>The noise dispersion modelling results concluded that the site would comply with IFC requirements, which is stricker than the Turkish legislation.<br>The modelling study includes cumulative impact with other plants in the region. | | A noise measurement program will be carried out at the nearest receptors for the operational noise levels.<br>Measures shall be followed to prevent negative impact.<br><br>Noise related studies shall include cumulative impact in the future as well. | Measurement: Initial year of operation | UWE<br>Nartus is working with UWE. | Binding<br>IFC and legal requirement | 3.6 |
| Noise Level Construction | Environmental Legislation<br>IFC Guidelines<br>IFC PS 3 | There is noise level calculation for the construction period.<br>Noise measurements are Completed. | | Noise level are calculated for the construction period and filed.<br><br>No further action is required unless there is complaint. | * | UWE<br>UWE is working Nartus | Binding<br>IFC and legal requirement | 3.6 |
| Cumulative Shadow Flicker Impact | IFC Guidelines<br>IFC PS 3 | Selective risk assessment report includes shadow flicker impact assessment. | | An action plan has been formed for the suggested measures. | * | UWE<br>UWE is working Nartus | Binding<br>IFC requirement | 3.10 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
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| | | The report concluded that there is no shadow impact from the project. There is no cumulative impact expected.<br>Mitigation measures are suggested in the report. | | | | | | |
| Blade/Ice Throw Assessment | IFC Guidelines<br>IFC PS 3 | There is blade/ice throw assessment report with measures to be taken. | | An action plan has been formed for the suggested measures. | * | UWE | Binding<br>IFC requirement | 3.11 |
| Wastewater and Water Use Management Plans | IFC Guidelines<br>IFC PS3 | There is a waste and wastewater management plan available.<br>The site is managing its wastewater with records available. | | Plan requirements shall be followed. | * | UWE<br>UWE is working Nartus | Binding<br>IFC requirement | 3.3 / 3.4 |
| Environmental Training | National Legislation<br>IFC Guidelines<br>IFC PS 1, PS 3 | Environmental trainings with environmental awareness, waste management and sustainability has started.<br>The logs are presented. | | Environmental training shall continue with refreshing classes.<br>The training subjects shall include at least legislation requirements, commitments under IFC, waste and chemical management. The training program may be developed further subjects in the future. The training records shall be kept. | * | UWE<br>UWE is working Nartus | Binding<br>IFC and Legal requirement | 1.1 |
| Visual Impact Assessment | IFC Guidelines | There is a visual impact assessment done within the scope of selective risk assessment study. The report concluded that there will be no negative impact from the project. . | | No further action is required unless there is complaint.<br>Mitigation measures suggested shall be followed. | * | UWE<br>UWE is working Nartus | Binding<br>IFC requirement | 1.1 |
| Drainage System Safety | IFC Guidelines<br>Environmental Legislation | There is a drainage system available at the switchyard with its plan available.<br>There are empty barrels stored on this area. In case of leakage and/spills these may impact the drainage system. | | Barrels next to generator and in the transformer area are removed.<br>This area will not be used for storage. | * | UWE and contractors | Binding<br>IFC requirement | 3.7 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Housekeeping | IFC Guidelines<br>Environmental Legislation<br>Safety Legislation | There are goods stored at the switchyard area. These pose fire hazard.<br>There is housekeeping problem at the control room building as well | | The goods stored at switchyard and generator has been removed.<br>The housekeeping at the control room building has been improved and full control will be upon arrival of the rack system ordered. | * | UWE | Binding<br>IFC and Legal requirement | 2.5 |
| Electromagnetic Field | IFC Guidelines<br>Turkish Legislation | Electromagnetic Field Measurements have been finished with the operational turbines and systems. | | A final measurement with all turbines operational shall be done in 2022 until the end of year. | End of December 2022 | UWE<br>UWE is working with Nartus | Binding<br>IFC and Legal requirement | 2.5/3.7 |
| Traffic Impact Assessment | IFC Guidelines | The site started keeping logs of the traffic in September 2021. | | A log shall continue keeping the logs for the traffic impact during construction phase and during major maintenance activities during operation phase. | * | UWE and Contractors | Binding<br>IFC requirement | 4.1 |
| Water Amount | IFC Guidelines<br>IFC PS3 | There are no logs about the amount of water used during construction period. | | Log of the amount of the water started to be kept.<br>The logs shall continue to be kept. | * | UWE and Contractors | Binding<br>IFC requirement | 3.3 |
| Insurance Policy | Environmental Legislation | Site secures compulsory hazardous chemical and hazardous waste policy. | | The policy shall be renewed annually. | * | UWE | Binding<br>Legal requirement | 1.1 |
| **Health and Safety Issues** | | | | | | | | |
| Emergency Response Plan | Safety Legislation<br>IFC Guidelines<br>IFC PS 1 & PS2 | There is an emergency response plan for İstanbul WPP.<br>Emergency response plans of contractors are not available. | | Emergency response plan has been updated accordingly.<br>Files of the contractors are also required.<br>The files shall continue to be kept for each new contractor in the future and updated for the existing ones whenever necessary. | * | UWE<br>Nartus is working on with UWE | Binding<br>IFC and Legal requirement | 1.1 / 2.2 / 2.5 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Training | Safety Legislation<br>IFC Guidelines<br>IFC PS 1 & PS2 | The documents shared indicates that there is a training system available at the site. | | Training requirements shall continue to follow legislation requirements and IFC guidelines. | * | UWE | Binding<br>IFC and Legal requirement | 1.1 / 2.2 / 2.5 |
| Water Tank Cleaning Records and Water Quality Analysis Results | Safety Legislation<br>IFC Guidelines<br>IFC PS 1 & PS2 | There is no record for the tank cleaning available yet since the tank is new.<br>There are bacteriological and chemical water quality analysis results available with no compliance issue | | The water storage tank shall be cleaned at least once a year and records shall be kept.<br>Water quality analysis shall be carried out and records shall be kept available for review.<br>These shall be part of water use management plan. | * | UWE | Binding<br>IFC and Legal requirement | 1.1 / 2.2 / 2.5 |
| Fire Safety | Safety Legislation<br>IFC Guidelines | The site staff is trained on the use of detection system. | | A training has been organized for the team.<br>Periodical maintenance of the system shall be carried out at least annually. Detection system can be tested by staff monthly. | | UWE | Binding<br>IFC and Legal requirement | 3.12 |
| Working at Height | Safety Legislation<br>IFC Guidelines | There are basics of working at height.<br>There are some staff who received work at height training. | | All staff who is going to work at height shall receive training.<br>All staff to work at height shall have protection equipment which are periodically assessed.<br>Working at height documents shall be revised per IFC requirements. | End of December 2021 | UWE | Binding<br>IFC and Legal requirement | 2.5 |
| Working in Remote Locations | Safety Legislation<br>IFC Guidelines | The site is located in a forest area. The team has communication tools and arrangement to coordinate the work. However, there is no written procedure available. | | A plan or a procedure shall be prepared covering the safety measures for working in remote locations. | End of December 2021 | UWE | Binding<br>IFC requirement | 2.5 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Occupational Hygiene Measurements | Safety Legislation<br>IFC Guidelines | There is an occupational hygiene measurement report available for switchyard area. Safety team is working on the report to determine the actions. | | The action plan shall be prepared, and necessary action shall be coordinated with staff participation.<br>Measurements shall be repeated after completion of the necessary actions. | End of December 2021 | UWE | Binding<br>IFC and Legal requirement | 2.5 |
| First Aid Training | Safety Legislation<br>IFC Guidelines | Some staff has received first aid training.<br>Upon this suggestion UWE has organized a Covid 19 and first aid training which is open to staff, contractors and affected parties. | | Refreshing classes for UWE team shall be organized each year to update the knowhow of the staff. | * | UWE | Optional | 2.5 |
| Accident Investigation | Safety Legislation<br>IFC Guidelines | The site keeps the records accidents and do the investigation.<br>There is no formal procedure about this. | | An accident investigation and reporting procedure shall be prepared for operational phase. | End of January 2022 | UWE | Binding<br>IFC and Legal requirement | 2.5 |
| Periodical Controls | Safety Legislation<br>IFC Guidelines | There is annual work program regarding HS. Control of the fire extinguishers are done. Since the plant is ready there is not much needed for controls at the moment. | | Annual control program for fire safety equipment, grounding, water quality analysis, water storage tank cleaning, air conditioner controls, etc. shall be formed and followed. | End of March 2022 | UWE | Binding<br>IFC and Legal requirement | 2.5 |
| **Biodiversity and Living Natural Resources Issues** | | | | | | | | |
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | Appointment of qualified professional(s) with experienced in ornithology and chiropterology. | | Experts shall have experience on Scottish Natural Heritage methodologies and collision risk model calculations. | End of December 2021 | UWE<br>Nartus is working on this item with UWE. | Binding<br>IFC requirement | 6.1 |
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | Monitoring of endemic plant species | | Perform plant survey especially targeting endemic species. | End of June 2022 for construction<br>End of June in 2023 for the first year of operation | UWE<br>Nartus is working on this item with UWE. | Binding<br>IFC requirement | 6.2 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | There are no special surveys for Imperial Eagle and Breeding Birds | | Perform Breeding Bird Survey for all avifauna of the project area and also specific survey for Imperial Eagle | Biannual report is required<br>One in the end of August and one in the end of November for at least 3 years. | UWE<br>Nartus is working on this item with UWE. | Binding<br>IFC requirement | 6.4 |
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | Missing carcass survey under energy transfer lines. | | Baseline Bird Monitoring and Carcass Survey covering breeding and migration periods with concerning IUCN threatened category assessments. | Biannual report is required<br>One in the end of August and one in the end of November for at least 3 years. | UWE<br>Nartus is working on this item with UWE | Binding<br>IFC requirement | 6.4 |
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | Some trees are cut for the project but the number of cut trees are not recorded. | | Keep tree register and develop compensation for tree cut | End of May 2022 | UWE | Binding<br>IFC requirement | 6.7 |
| Assessment of Biodiversity and Living Natural Resources | IFC Guidelines<br>IFC PS 6 | Potential bat fauna list has been prepared.<br>The list does not represent project site fauna properly. | | Acoustic Bat Monitoring and Carcass Survey covering breeding and migrating periods according to Eurobat guidance. | Biannual report is required<br>One in the end of August and one in the end of November for at least 3 years. | UWE<br>Nartus is working on this item with UWE | Binding<br>IFC requirement | 6.6 / 6.3 |
| Conservation of Biodiversity | IFC Guidelines<br>IFC PS 6 | Collision risk was not assessed properly. | | Perform Bird Collision Risk Assessment Research according to Scottish Natural Heritage (SNH) methodology.<br><br>Reassess the monitoring and carcass results in line with the guidance of the collision risk assessment . | Biannual report is required<br>One in the end of August and one in the end of November for at least 3 years. | UWE<br>Nartus is working on this item with UWE | Binding<br>IFC requirement | 6.5 |
| Conservation of Biodiversity | IFC Guidelines<br>IFC PS 6 | Standard safety measures for the protection of fauna elements have been described. | | Revise and implement the safety measures for fauna protection. | End of December 2021 | UWE | Binding<br>IFC requirement | 6.8 / 6.3 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | They are partially covering IFC standards. | | | Continuous submission at the end of December of each year. | | | |
| Ornithological Observation | Ministry of Agriculture and Forestry<br>General Directorate of Nature Conservation and National Parks | Ornithological Monitoring survey was performed during spring and autumn migration season | | Submission of biannual reports to authority. | Biannual report is required<br>One in the end of August and one in the end of November for at least 3 years. | UWE | Binding<br>Legal requirement | 6.4 |
| Seed Collection | Ministry of Agriculture and Forestry<br>General Directorate of Nature Conservation and National Parks | Seeds were collected during spring time, and they are at Trakya University for drying now. | | Submission of the record of seed handover to seed bank to the General Directorate | End of December 2021 | UWE<br>Nartus is working on this item with UWE | Binding<br>Legal requirement | 6.2 |
| Biodiversity Training | Ministry of Agriculture and Forestry<br>General Directorate of Nature Conservation and National Parks | Biologist is giving training to UWE and contractor staff. | | These trainings shall continue periodically | Throughout the construction and operation phases quarterly. | UWE | Binding<br>Legal requirement | 6.10 |
| Establishment of Control Team | Ministry of Agriculture and Forestry<br>General Directorate of Nature Conservation and National Parks | A control team is required to be established to follow up the impacts of invasive species on the ecosystem. | | This team shall be established.<br>The team shall coordinate the studies and report the findings | End of May 2022 | UWE | Binding<br>Legal requirement | 6.8 / 6.9 |
| Afforestation | IFC Guidelines | There is no afforestation plan available. | | An afforestation plan shall be formed and implemented to compensate the trees removed even though the fee for the tree removal is paid.<br><br>The forest is a protected forest; therefore, UWE cannot act alone. All the work shall be coordinated with Ministry of Agriculture and Forestry. The number, | End of May 2022<br><br>Implement throughout the operation phase | UWE | Optional | 6.7 |

| Requirement | Coverage in the National EIA and Other Available Information | Gaps Identified | Rating | Recommended Actions | Recommended Timeline for completion | Responsible Party | Implementation Requirement | ESAP Ref. |
|---|---|---|---|---|---|---|---|---|
| | | | | type and place shall be determined with them. | | | | |

# 9 Environmental and Social Action Plan (ESAP)

**The following Color Code for the ESAP Monitoring Score will employed.**

| Score | Explanation | Color Code |
|---|---|---|
| EC | **Exceeding Compliance:** The project has gone beyond the expectations of IFC PSs requirements. Lenders should be able to use projects rated EC as a role model for positive Environmental and Social effects. | EC |
| FC | **Fully Compliant:** The project is fully in compliance with IFC PSs requirements, and EU and local environmental, health and safety policies and guidelines. | FC |
| PC | **Partial Compliance:** The project is not in full compliance with IFC PS requirements, but has systems, processes or mitigation measure in place which are working towards addressing the deficiencies. | PC |
| MN | **Material Non-compliance:** The project is not in material compliance with IFC PS requirements, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies. | MN |
| NA | **Not Applicable** | NA |

Considering the status and level of construction and some of the turbines being in operation and under commissioning, and the schedule to finish the construction is December 2021, a single table for the construction and operation phase has been prepared.

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **PS1**<br>**Assessment and Management of Environmental and Social Risks and Impacts** | | | | | | | | | | |
| 1.1 | Environmental and Social Management System (ESMS) | Develop and implement an ESMS in line with international good practice and guidelines (i.e., ISO 9001: 2008, ISO 14001: 2004, OHSAS 18001: 2007, ISO 45001:2018, ISO 50001)<br><br>Define and implement an ESMS Policy (including environmental, health, safety and social aspects)<br><br>Prepare and put in place site specific procedures/plans for<br>• Community Health and Safety Management Plan<br>• Security Plan<br>• Human Resources Management Plan<br>• Occupational Health and Safety Management Plan<br>• Waste Management Plan<br>• Wastewater Management Plan<br>• Chemical/Hazardous Material Storage and Handling Procedure<br>• Subcontractor Management and Monitoring Plan<br>• Emergency Response and Management Plan<br>• Risk Assessment | Continuous improvement of EHS performance | IFC PS1/PS2<br>Best practice<br>IFC General EHS Guidelines<br>IFC EHS Guidelines Wind Power<br>National legislation | Management time<br><br>Budget needed for training and staff allocation<br><br>In case of working with third party for the plan preparation, cost of the consultant. | UWE<br><br>UWE can hire a third party. | <u>Completion:</u><br>End of November 2021 | 1. Development and implementation of ESMS in line with IFC PS1/PS2<br>2. An approved and announced ESMS Policy<br>3. Written and approved site specific environmental and social plans/procedures (risk assessments, plans, procedures, control forms, etc.) and their implementation<br>4. An established organizational structure and defined roles for ESMS<br>5. ESMS system records (audit records, measurement records, training and drill records etc.) | 1 Development of ESMS has been carried out and its implementation has started.<br>2 Policy<br>3 All plans listed are prepared and announced to staff. UWE started filling the forms<br>4 One staff has been temporarily assigned for this position. He is working with the support of the project team at the headquarters Employment of experienced staff is done and he started working on 01.12.2021.<br>5 System related documentation has been started to be kept. These documents include grievances, trainings, meetings, water delivery records, waste disposal records. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | • Noise Control and Assessment Plan<br>• Traffic Management Plan<br><br>Establish an organizational structure for the implementation of the ESMS<br><br>Ensure that adequate EHS staff is allocated for the proper functioning of the Project ESMS.<br><br>Provide training for designated staff on environmental and social topics and implementation of the abovementioned site-specific plans | | | | | <u>Implementation:</u><br>Throughout the life cycle | 1. Implementation of ESMS in line with IFC PS1/PS2<br>2. An approved and announced ESMS Policy<br>3. An established organizational structure and defined roles for ESMS<br>4. Written and approved site specific environmental and social plans/procedures (risk assessments, plans, procedures, control forms, etc.) and their implementation<br>5. ESMS system records (audit records, measurement records, training and drill records etc.) | 1.Implementation of the plans started.<br>2.There is ESMS documentation including the policy, announced to staff and contractors.<br>3. There is an environmental and social expert assigned.<br>4. ESMS records started to be kept including measurements, trainings, audits, drills, meetings. | FC |
| 1.2 | Permits, Licenses, Approvals | Prepare and implement a "Legal and Other Requirements Determination and Compliance Procedure"<br><br>Determine legal permits/consents/approvals needed to be obtained<br><br>Obtain and update all necessary permits/consents/approvals | Ensures compliance with national legislation | National legislation<br>IFC PS 1 | Management time | UWE | End of November 2021 | 1. A written and approved "Legal and Other Requirements Determination and Compliance Procedure"<br>2. A comprehensive Legal and Other Requirements Follow-up List<br>3. Records of permits, official letters, licenses, approvals, documents etc. | 1. Procedure is in place.<br>2. List is in place<br>3. Records of the permits, approvals, etc. are kept according to status of the project. | FC<br>(UWE is aware it is a requirement for operation as well) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Implemented throughout construction and operation period. | 1. A written and approved "Legal and Other Requirements Determination and Compliance Procedure" in place<br>2. An updated comprehensive Legal and Other Requirements Follow-up List<br>3. Updated records of permits, official letters, licenses, approvals, documents etc. | 1. Procedure available.<br>2. List available.<br>3. Records are updated as the process goes. | FC for construction phase (UWE is aware it is a requirement for operation as well) |
| 1.3 | Information Disclosure Stakeholder Engagement/ Community Grievances | Develop and implement Stakeholder Engagement Plan (SEP)<br><br>Update and revise the SEP, if required, during life of the Project.<br><br>Ensure SEP is available to stakeholders in an easily readable format<br><br>Disclose the Project related information for all stakeholders<br><br>Maintain a functional external and internal grievance mechanism, including recording grievances in the log and | Helps to maintain good relationship with stakeholders<br><br>Successful stakeholder engagement program | IFC PS1/ PS 4 | Management time<br><br>Budget needed for the social organizations and social responsibility projects | UWE<br><br>Nartus is working with UWE | End of November 2021 | 1. Implementation of SEP and grievance mechanism<br>2. Stakeholder engagement and information disclosure carried out in accordance with SEP<br>3. Document records of consultation and information disclosure<br>4. Evidence of disclosure and availability of documents (i.e., website, flyers, brochures)<br>5. Grievance log and a separate grievance log for the workers. | 1. SEP has been prepared and started to be implemented.<br>2. Stakeholder engagement and information disclosure has started.<br>3. Meeting of Yalıköy and Binkılıç villages with announcements, logs and photos are available.<br>4. Flyers and brochures are available.<br>5. Grievance logs are available. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | resolving them within the established time limits<br><br>Annual reporting to lenders on the implementation of the ESAP and any new impacts/risks identified to affected communities | | | | | Implemented throughout construction and operation period. | 1. Implementation of SEP and grievance mechanism<br>2. SEP updated and revised as required<br>3. Document records of consultation and information disclosure<br>4. Evidence of disclosure and availability of documents (i.e., website, flyers, brochures)<br>5. Grievance log and a separate grievance log for the workers<br>6. Annual reporting to lenders on the implementation of the ESAP | 1. SEP has been prepared and started to be implemented for construction phase.<br>2. SEP will be updated whenever needed.<br>3. Consultation and information disclosure is ongoing with meeting announcements, logs and photos are available.<br>4. Flyers and brochures are available.<br>5. Grievance logs are available.<br>6. Annual report shall be submitted upon completion of construction phase and after each operational year. | FC for construction phase (UWE is aware it is a requirement for operation as well) |
| 1.4 | E&S Monitoring | Monitor the Project activities in line with Project ESMS and ESAP including those of contractors in order to avoid or mitigate any potential impacts. | Improved and timely management of potential E&S risks | IFC PS 1<br><br>Best practice | Management time<br><br>Budget needed for third party audit. | UWE | End of November 2021 | E&S monitoring reports.<br><br>Internal control records (such as trainings, statistics, measurements, cleaning of water tank, water quality analysis) of UWE | 1. Audit procedure has been published.<br>2. Control records have started to be kept and shared. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Implemented throughout construction and operation periods. | E&S monitoring reports.<br><br>Internal control records (such as trainings, statistics, measurements, cleaning of water tank, water quality analysis) of UWE<br><br>Third party E&S audit every 3 years after operation date | Control records such as water consumption water, water quality analysis, trainings, drills, meeting minutes have started to be kept and shared. | FC for construction phase (UWE is aware it is a requirement for operation as well) |
| **PR2**<br>**Labor and Working Conditions** | | | | | | | | | | |
| 2.1 | Employment and Procurement | Provide information on local jobs needed, skills, application timing and locations and disseminate this information to local communities | Help to support local employment and establish good relationship with local people<br><br>Improvement of local livelihood<br><br>Protection of labor rights | IFC PS2 Labor Law | Management time | UWE | End of November2021 | 1. Number of local employees<br>2. Records of procurement of goods and services | 1. Number of local employees are kept.<br>2. Records of procurement of goods and services are kept. | FC |
| | | | | | | | Continuous for construction and operation phases | 1. Number of local employees<br><br>2. Records of procurement of goods and services | 1. Number of local employees are kept, and UWE is committed to hire local staff as long as the qualifications are met.<br>2. Records of procurement of goods and services are kept, and list is available | FC for construction (UWE is aware it is a requirement for operation as well) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.2 | Subcontractors | Include clauses in contracts requiring compliance with the HR Policy, HSE requirements, ESAP and other specific plans<br><br>Develop a Subcontractor Management and Monitoring Plan<br><br>Prepare an approved subcontractor list<br><br>Require subcontractors to manage their workers in line with HR policy and adopt grievance mechanism through contract clauses<br><br>Require subcontractors to report accidents, incidents and safety non-compliances through contract clauses and submit HSE documents | Helps to develop safe working conditions for subcontractors and to improve ESMS | IFC PS1/PS2 | Management time | UWE | End of November 2021 | 1. Subcontractor Management and Monitoring Plan<br>2. Contracts with subcontractors<br>3. Approved subcontractor list<br>4. Records of subcontractor's accidents, incidents and non- compliances<br>5. Subcontractor personnel files<br>6. Subcontractor EHS documents<br>7. Subcontractor training records for EHS<br>8. Evidence of how workers are informed about the grievance mechanism<br>9. Grievance log | 1. Plan is available<br>2. Contracts are available<br>3. There is an approved subcontractor list<br>4. Records are kept.<br>5. Personnel files are kept.<br>6. EHS documents are required from contractors and kept.<br>7. Trainings are followed with their records.<br>8. There is box available, and they are notified.<br>9. Grievance log is kept. | FC |
| | | | | | | | Implemented throughout construction and operation period. | 1. Subcontractor Management and Monitoring Plan<br>2. Contracts with subcontractors<br>3. Approved subcontractor list<br>4. Records of subcontractor's accidents, incidents and non- compliances<br>5. Subcontractor personnel files<br>6. Subcontractor EHS documents<br>7. Subcontractor training records for EHS<br>8. Evidence of how workers are informed about the grievance mechanism<br>9. Grievance log | 1. Plan is available and contractors are notified about the system and informed that an audit will be executed in December 2021<br>2. Contracts are available<br>3. There is an approved subcontractor list (list has to be updated whenever there is change)<br>4. Records are kept.<br>5. Personnel files are kept.<br>6. EHS documents are required from | FC for construction (UWE is aware it is a requirement for operation as well) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | contractors and kept.<br>7. Trainings are followed with their records.<br>8. There is box available, and they are notified.<br>9. Grievance log is kept. | |
| 2.3 | Human Resources (HR) | Develop a HR Policy and ensure all workers are aware of its content<br><br>Develop Human Resources Management Plan<br><br>Develop worker contracts setting out working conditions, terms of employment and EHS responsibilities<br><br>Insure all workers under Social Security Institution (SGK) | Helps to manage workers with compliance with requirements and protect labor rights | IFC PS1/PS2<br>Local Legislation | Management time | UWE | End of November 2021 | 1. HR Policy<br>2. HR Management Plan<br>3. Organization Chart<br>4. Worker contracts<br>5. SGK Records<br>6. Personal Files | 1. HR Policy published.<br>2. HR management plan issued.<br>3. Organisation chart is available according to current plans and will be updated as need.<br>4. Contract with workers are signed.<br>5. SGK records are available.<br>6. Personal files are kept including health reports, trainings, etc. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Keep files of all workers that include their work contracts, training records, medical surveillance records, next of kin contact details and similar<br><br>Develop a database of employees and subcontractor employees that includes information on the age, social security number, identity card number, gender, nationality and hometown. | | | | | Implemented throughout construction and operation period. | 1.HR Policy<br>2.HR Management Plan<br>3. Organization Chart<br>4.Worker contracts<br>5. SGK Records<br>6. Personal Files<br>7.Satisfaction Survey Results<br>8.Staff Turn-over rates | 1.HR policy is in place<br>2.HR management plan is in place<br>3. Organization chart is available.<br>4.Worker contracts present<br>5.SGK records are present<br>6. Personal files are kept<br>7. Satisfaction survey executed and will be repeated.<br>8. Staff turnover rate is kept. | FC<br>for construction (UWE is aware it is a requirement for operation as well) |
| 2.4 | Worker's grievance | Implement a grievance mechanism for workers<br><br>Respond to grievances in a timely manner<br><br>Undertake necessary corrective actions if needed | Ensures good communication and maintains a good ESMS | IFC PS2 | Management time | UWE | End of November 2021 | Documented worker grievance mechanism | There is a document about grievance mechanism with plan and logs | FC |
| | | | | | | | Implemented throughout construction and operation period. | Grievance log including records of grievances, response to grievances and corrective actions | Grievance form is available for workers use.<br>Log is available, whenever action is required, corrective action is taken for construction phase. | FC<br>for construction (UWE is aware it is a requirement for operation as well) |
| 2.5 | Occupational Health and Safety | Develop and Implementation of Occupational Health and Safety Management Plan including but not limited to risk assessment, emergency response plan, periodical controls, industrial hygiene measurements, Personal Protective Equipment (PPE), working at height, remote working | Helps to develop safe working environment<br><br>Comply with legislation requirements | IFC PS2<br><br>IFC EHS Guidelines<br><br>National legislation | Cost: Management time<br><br>Budget needed for health and safety implementations such as trainings, hygiene | UWE | End of November 2021 | 1.Occupational Health and Safety Management Plan (risk assessment, emergency response plan, periodical controls, industrial hygiene measurements, PPE, etc.)<br>2. Records of audit reports, regular inspections, trainings for workers and contractors<br>3. Accident and incident logs | 1. Plan with supporting document is available<br>2. Records has been started to be kept for construction phase including the trainings, inspections, etc.<br>3. Accident logs are kept | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Provide necessary trainings to workers, contractors and visitors<br><br>Record all accidents and incidents<br><br>Comply with health and safety legislation requirements | | | measurements , PPE, etc. | | | 4. Records of corrective actions<br>5.Records of PPE handover and stock monitoring<br>6.Fire safety measures | 4. Corrective action is taken whenever needed.<br>5. PPE hand over records are available and stock is kept.<br>6.fire safety measures are in place | |
| | | | | | | | Implemented throughout construction and operation period. | 1. Updated Occupational Health and Safety Management Plan (to risk assessment, emergency response plan, periodical controls, industrial hygiene measurements, PPE, etc.) implementation<br>2. Records of audit reports, regular inspections, trainings for workers and contractors<br>3.Accident and incident logs<br>4.Records of corrective actions<br>5.Records of PPE handover and stock monitoring<br>6. Fire safety measures | 1. Plan is available and will be updated whenever needed<br>2. Records are kept.<br>3. Accident logs are kept. There has been no new accident since the site visits executed for this report.<br>4. Corrective actions are taken whenever needed<br>5. PPE is handed over with records.<br>6. Fire safety measures in place with equipment list and control forms. | FC for construction (UWE is aware it is a requirement for operation as well) |
| 2.6 | Supply of Material | Supply materials and goods as close as possible to project<br><br>Check license/permits of suppliers | Comply with IFC requirements<br>Support local economy | IFC Guidelines<br>IFC PS2 | Management time | UWE and Contractors | End of February 2022 | Records of suppliers | Supplier records for local and international ones are available In addition list of all contractors are kept. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Implemented throughout operation period | Updated records of suppliers | Supplier records for local and international ones are available and will be updated whenever there is a change.<br>In addition list of all contractors are kept. | FC<br>for construction (UWE is aware it is a requirement for operation as well) |
| **PS3<br>Resource Efficiency and Pollution Prevention** | | | | | | | | | | |
| 3.1 | Waste | Develop and implement Waste Management Plan<br><br>Collect, segregate, label and store, transport, recycle wastes in line with the Waste Management Plan<br><br>Use of excavation, construction and demolition wastes where possible.<br><br>Contact with licensed disposal and transportation companies<br><br>Dispose wastes at licensed facilities according to their category in accordance with regulatory requirements<br><br>Design and construct a designated waste storage area to ensure that wastes | Ensures protection of environment and compliance with legislation | IFC PS3<br>Best Practice<br>National Legislation | Management time<br><br>Budget needed for waste segregation, storage and disposal as well as trainings. | UWE<br><br>Nartus is working with UWE | End of December 2021 | 1.Develop and implement Waste Management Plan<br><br>2.Official correspondence with the relevant authorities<br><br>3.Presence and use of proper waste storage area<br><br>4.Records of waste disposal<br><br>5.Inspection records<br><br>6.Training records | 1. Plan is developed and its implementation has started.<br>2. Correspondence will the authority has started.<br>3. wastes are collected separately for construction phase.<br>Waste area has been recently finished with certain modifications that will be made.<br>4. Construction waste disposal records have started to be kept.<br>5. There is no inspection record yet.<br>6. Trainings records are available. | PC<br><br>There is time for completion of this item: end of December 2021.<br>It is highly possible that this item will not be closed at the end of December 2021 due to response times of the authority. As long as the applications are made, there will be no problems |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | are properly stored and segregated<br><br>Site inspections to increase awareness<br><br>Keep records of waste generation, storage and disposal<br><br>Training of staff and subcontractors on waste management | | | | | Implemented throughout construction and operation period. | 1. Waste Management Plan implementation<br>2.Official correspondence with the relevant authorities<br>3.Presence and use of proper waste storage area<br>4.Records of waste disposal<br>5.Inspection records<br>6.Training records<br>7. Annual Waste Notification Form | 1. Plan implementation is ongoing<br>2. Correspondence will be start with the authority with the application letter to register to the integrated environmental information system.<br>3. Waste storage area has been recently finished for operation phase. There are minor works remaining.<br>4. Disposal records for construction has started to be kept.<br>5. There is no inspection record yet.<br>6. Training records are available and will continue<br>7. Annual waste notification form will be submitted annually latest in March of each year. | PC<br>There is time for completion of this item: end of December 2021.<br>It is highly possible that this item will not be closed at the end of December 2021 due to respond times of the authority.<br>As long as the applications are made, there will be no problems (UWE is aware for the implementation requirements for operation) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| 3.2 | Chemicals / Hazardous Material | Develop and Implement Chemical/Hazardous Material Management Plan<br><br>Prepare an inventory of hazardous materials<br><br>Obtain Material Safety Data Sheets (MSDSs) and provide in relevant locations in in both English and Turkish<br><br>Make Personal Protective Equipment (PPE) available for relevant personnel<br><br>Train relevant personnel<br><br>Take required onsite measures for storage, transportation and use<br><br>Keep chemicals at designated areas with containment, label, ventilation and spill kit<br><br>Locate suitable fire-fighting equipment close to hazardous material storage/usage areas | Ensures legal compliance and environmentally and safe working environment | IFC PS3<br>Best practice<br>National legislation | Cost: Management time<br><br>Budget needed for spill kits, containment, training, etc. | UWE<br><br>Nartus is working with UWE | End of November 2021 | 1.Presence and implementation of Chemical/ Hazardous Material Management Plan<br>2.Designated storage area with containment, labels and ventilation<br>3.Chemical inventory<br>4.Incident records<br>5.Training records<br>6.Presence of spill kits<br>7.Presence of MSDS<br>8.Presence and use of PPE | 1. Plan is in place.<br>2. Storage area is almost ready but there is no storage yet. Construction chemicals are kept in designated places.<br>3. Chemical inventory is present.<br>4. There is no chemical related incident reported.<br>5.Trainings are ongoing<br>6. Spill kits are present for waste area<br>7. MSDS are present<br>8. PPE is present.<br><br>(PC due to chemical storage area for operation phase being not completed. | FC |
| | | | | | | | Implemented throughout construction and operation period. | 1. Implementation of Chemical/ Hazardous Material Management Plan<br>2.Use of designated storage area with containment, labels and ventilation<br>3.Updated chemical inventory<br>4.Site inspection records<br>5.Incident records<br>6.Training records<br>7.Presence of spill kits<br>8.Presence of MSDS<br>9.Presence and use of PPE | 1. Implementation is ongoing since the chemicals for operational phase has arrived. Majority of the chemicals will be stored by Nordex at their own site and will be brought to site on need.<br>2. Storage area is almost finished. Construction chemicals are kept in designated places. | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | | | | | | | 10.Presence and maintenance records of firefighting equipment | 3. Chemical inventory will be updated whenever needed.<br>4. There is no inspection record yet.<br>5. There is no chemical related incident reported.<br>6.Trainings are ongoing<br>7. Spill kits are present for waste area<br>8. MSDS are present<br>9. PPE is present and in use.<br>10. Records of firefighting equipment are present.<br>Maintenance are carried out (with minimal requirement since they are new) | |
| 3.3 | Soil, Surface Water and Ground Water | Implement following plans:<br>• Chemical/Hazardous Material Management Plan<br>• Emergency Preparedness and Response Plan<br>• Waste Management Plan | Ensures compliance with legislation and protection of environment | IFC PS3<br>Best practice | Management time<br><br>Budget needed for trainings and drills | UWE<br>Nartus is working with UWE | End of November 2021 | 1.Presence and implementation of plans<br><br>2.Presence of spill response kits<br><br>3.Training and drill records | 1.Plans are present, and their implementation are ongoing.<br>2. Spill kits are present.<br>3. Training and drill is available for fire extinguishing | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | • Wastewater Management Plan<br><br>Construction management of excavations to avoid the generation of drainage pathways to underlying aquifers.<br><br>Training and drills<br><br>Site inspections to improve site condition | | | | | Implemented throughout construction and operation period. | 1.Presence and implementation of plans<br><br>2.Records of periodical site inspections<br><br>3.Presence of spill response kits<br><br>4.Training and drill records<br><br>5.Site drainage channel visual | 1.Plans are present. Implementation is ongoing.<br>2.Records of periodical site inspections are not available yet.<br>3.Spill response kits are present, and UWE will increase number as needed.<br>4.Training and drill records are present, and UWE commits to continue these activities upon being operational.<br>5.Site drainage channel visuals are controlled (there is a suggestion recorded about drainage channels as well). A control form will help to improve the efficiency of the system. | PC |
| 3.4 | Wastewater | Develop and implement a Wastewater Management Plan<br><br>Disposal of domestic wastewater in line with requirements | Ensures compliance with legislation and best practice | IFC PS3<br>Best practice<br>National legislation | Management time<br><br>Budget needed | UWE<br><br>Nartus is working with UWE | End of November 2021 | 1.Presence and implementation of Wastewater Management Plan<br><br>2.Use of leak proof septic tank<br><br>3.Receipts of wastewater handover<br><br>4.Visual monitoring for leakage | 1.Wastewater Management Plan is present, and its implementation is ongoing.<br><br>2. Leak proof septic tank is employed.<br><br>3.Receipts of wastewater handover is available<br><br>4.Visual monitoring for leakage is done. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | | | | | | Implemented throughout construction and operation period. | 1. Implementation of Wastewater Management Plan<br><br>2.Receipts of wastewater handover from leak proof septic tank<br><br>3.Visual monitoring for leakage | 1.Wastewater Management Plan is present, and its implementation is ongoing.<br><br>2. Receipts of wastewater handover is available<br><br>3.Visual monitoring for leakage is done. | FC (for the moment UWE complies with these requirements) |
| 3.5 | Air Quality | Develop and Implement Air Quality Control and Monitoring Plan for construction phase including dust control measures for construction period (proper stock piling, water spraying, use of equipment with low level of dust production, control of drop heights, parking rules, engine shut down rules, etc.)<br><br>Implement Traffic Management Plan<br><br>Use of well-maintained vehicles, equipment and machinery<br><br>Monitoring of dust producing activities and taking measures during construction activities | Ensures compliance with legislation and best practice and supports protection of environment | IFC PS 1, PS3 National legislation | Management time<br><br>Budget needed | UWE<br><br>Nartus is working with UWE | End of November 2021 | Presence and Implementation of air quality control and management plan | Plan is available and its implementation is going such as with water spraying whenever needed. | PC |
| | | | | | | | Implemented throughout construction and operation period. | 1.Implementation of air quality control and management plan<br>2. Records of site inspections<br>3.Implementation of speed restriction<br>4.Maintenance records of vehicles<br>5. Use of well-known fuel brands | 1. Implementation is ongoing<br>2. Site inspection has started<br>3. Speed restriction is available<br>4. Vehicle maintenance records are available<br>5. Well-known brands in the region are used for fuel supply. | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| 3.6 | Noise | Develop and Implement Noise Control and Monitoring Plan<br><br>Undertake noise measurements at the closest sensitive receptors with the latest layouts of the turbines (the nearest receptors with the latest lay out of the turbines are different than the ones in the existing noise measurement reports) after , and if needed take corrective actions<br><br>Conduct noise modeling study at the nearest receptors<br><br>Use of construction vehicles, machinery, equipment in good condition<br><br>Supply of PPE for the operation phase<br><br>The site shall be assessed under training, culture, healthcare and resort and camping area per Turkish Noise Control Regulation, and under residential; institutional; educational per IFC guidelines. Hence comply whichever is stricter. IFC also allows maximum increase in background levels of 3 dB at the nearest receptor location off-site. Hence background noise | Compliance with IFC guidelines, legislation and best practices<br><br>Protects sensitive receptors | IFC PS3<br>National legislation | Management time<br><br>Budget needed for noise measurements and modelling studies | UWE<br><br>Nartus is working with UWE | <u>Construction Phase:</u><br>End of October 2021 (done) | 1. Records of the noise modeling study at the sensitive receptors including cumulative impact<br><br>2. Noise monitoring in case of complaints during construction and Records of corrective action, if needed.<br><br>3. Training records of workers<br><br>4. Maintenance records of construction vehicles, machinery and equipment<br><br>5. Use of exhaust mufflers on construction equipment<br><br>6. Use of speed restriction<br><br>7. Use of PPE | 1. noise modeling study at the sensitive receptors including cumulative impact is done with no impact reported.<br><br>2. There have been no noise related complaints; therefore no need for noise measurements<br><br>3. Training records of workers are present<br><br>4. Maintenance records of construction vehicles, machinery and equipment are kept<br><br>5. Use of exhaust mufflers on construction equipment is present<br><br>6. Speed restriction is applied<br><br>7. PPE is supplied and used by staff. They are controlled by the HS on site. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | measurement results are important.<br><br>Noise monitoring and measurement studies shall follow the requirements of IFC guidelines and comply with requirements of Turkish regulation.<br><br>Noise related studies shall take cumulative impact of the other power plants in the region. | | | | | <u>Operational Phase:</u><br>Once in the first year of full operation<br><br>And repeat in case of complaints | 1. Records of noise monitoring undertaken by a third-party at the nearest receptors for the operational period when all the turbines are in operation.<br><br>2. Noise measurement in case of complaints.<br><br>3. Records of corrective action, if needed.<br><br>4. Use of speed restriction (recommendation: 30 km/hr.)<br><br>5. Use of PPE | | NA<br>(for this stage of project) |
| 3.7 | Pollution Prevention | Develop and implement following plans:<br>• Chemical/Hazardous Material Management Plan<br>• Emergency Preparedness and Response Plan<br>• Waste Management Plan<br>• Wastewater Management Plan<br><br>Adopt good operation practices for the protection of soil, surface water and groundwater (e.g., storage areas, spill control, spill kits etc.)<br><br>Keep spill response kits at designated areas with specific | Ensures compliance with IFC guidelines, legislation and best practices<br><br>Supports environmental protection | IFC PS3<br>National legislation | Management time<br><br>Budget needed | UWE<br><br>Nartus is working with UWE | End of November 2021 | 1.Development and implementation of plans<br><br>2.Presence of spill response kits | 1.Plans are available, and implementation is ongoing.<br><br>2.Spill kits are present. | FC |
| | | | | | | | Implemented throughout construction and operation period. | 1. Implementation of plans<br><br>2. Records of periodical site inspections<br><br>3. Presence of spill response kits | 1. Implementation of plans are ongoing<br><br>2. Site inspections started in November with the E&S committee meeting and will continue with | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | instructions for their use and train site staff on the use of spill kits.<br><br>Train personnel, workers, subcontractors | | | | | | 4. Records of monitoring of the implementation of the relevant plans<br><br>5. Audit and control results, spillage incident records, measurement results, training records and similar | contractor audit in December.<br><br>3. Spill kits are present<br><br>4. Records of monitoring of the implementation of the relevant plans are developing. It will take time to collect data, assess and take further action.<br><br>5. Training records are available. Audit and control results can be improved. | |
| 3.8 | Environmental Incidents | Record keeping on environmental accidents and actions taken<br><br>Develop and Implement Environmental Emergency Response Plan<br><br>Keeping stock of response equipment | Ensures legal and best practice compliance | IFC PS3 | Management time<br><br>Budget needed | UWE<br>In case of need UWE may hire third party to execute the work. | End of November 2021 | 1.Development and implementation of Environmental Emergency Response Plan<br><br>2.Inventory of response equipment | 1.Plan has been developed and implementation is ongoing.<br><br>2.Inventory of response equipment is in place. | FC |
| | | | | | | | Implemented throughout construction and operation period. | 1.Implementation of Environmental Emergency Response Plan<br><br>2.Environmental accidents and actions log<br><br>3.Inventory of response equipment | 1. Implementation is ongoing.<br><br>2.There has been no environmental incident. A format to record these shall be prepared.<br><br>3. Inventory is available and will be updated whenever needed. Control | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | | | | | | | | tags can be installed on them. | |
| 3.9 | Visual | Project equipment storage area and camp site will be maintained properly to prevent adverse visual impact.<br><br>Visual impact assessment for the operation phase | Minimization of visual impacts | IFC PS3 | Management time<br><br>Budget needed | UWE And Contractors<br><br>Nartus is working with UWE for the visual impact assessment | End of November 2021 | Visual impact assessment report | Visual impact assessment has been done and report concluded no major impact. Housekeeping is controlled by site management. | FC |
| | | | | | | | Continuous | Proper housekeeping | Visuals shared by site management indicate housekeeping has been improved at the switchyard area. Team is working to improve the area and waiting for the rack system ordered to arrive for doing the final touch. | NA (cannot be assessed without site visit; therefore, will be assessed during monitoring) |
| 3.10 | Shadow Flicker Impact | Shadow flicker impact study shall be carried out at the nearest receptors according to the latest turbine lay out; and if necessary, action shall be taken to minimize the impact according to results<br><br>The study shall include:<br><br>• Use software to predict the duration and timing of shadow flicker occurrence under real weather conditions at specific receptors located within the zone | Minimization of shadow flicker impact | IFC PS3 | Budget needed for modelling<br><br>Budget may be required in the future for mitigation. | UWE<br><br>Nartus is working with UWE | End of November 2021 | Shadow flicker impact study report | Report has been prepared and there is no shadow flicker impact expected from Istanbul WPP. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | of potential shadow flicker impact.<br>• If duration of shadow flicker effects experienced at a sensitive receptor exceeds 30 hours per year and 30 minutes per day on the worst affected day, based on a worst-case scenario, action should be taken.<br>• Action includes flicker impact assessment with real operation data (after a year of operation) and installation of light sensor on the receptor and on the worst case not operating the turbines during the exceedance time. | | | | | | | | |
| 3.11 | Blade/Ice Throw | Assess Blade/Ice Throw risk<br><br>Take necessary measures per outcome of the blade/ice throw risk assessment | Control blade/ice throw risk | IFC PS 3 | Budget needed for modelling and can be needed for mitigation | UWE<br><br>Nartus is working with UWE | Assessment Completed.<br><br>Measures continuous during the operation phase. | Blade/Ice Throw Risk Assessment Report<br><br>Operational controls to minimize the risk | Blade/İce throw risk assessment report is present.<br>Action plan has been prepared and will be updated in case of need. | FC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| 3.12 | Life and Fire Safety | Installation of lightning protecting to turbines<br><br>Presence of fire extinguishers at the camp site<br><br>Presence of fire extinguishers at the turbines<br><br>Presence of fire extinguishers at the control room/administration building at the switchyard<br><br>Presence of fire extinguishers with the subcontractors<br><br>Action planning for forest fires<br><br>Training of staff for prevention of fires and responding to fires<br><br>Fire Fighter cloths for supporting response for the forest firers | Ensures life and fire safety, protection of property | IFC PS3 | Management time<br><br>Budget needed for fire safety measures | UWE<br>And<br>Contractors | Throughout the construction and operation period | 1. Records of installation of lightning protection to turbines<br><br>2.Presence of fire extinguishers with periodical control and in good condition<br><br>3.Records of control of fire detection system<br><br>4.Fire prevention and response plan for forest fires (can be part of emergency response plan)<br><br>5.Communication with the local Fire Brigade of Regional Directorate of Forestry<br><br>6.Staff training records<br><br>7. Presence of firefighter cloths in good condition | 1.turbine installation is ongoing. Nordex is controlling the systems. Grounding controls for the switchyard area are executed.<br><br>2.Fire extinguishers are present and in good condition.<br><br>3.Detection system is controlled and operational.<br><br>4. Plan is available with opportunities to improve for forest fires.<br><br>5. UWE is communication with related authorities.<br><br>6. Staff training is ongoing. Basic firefighting training is available for staff.<br><br>7.Firefighter cloths have arrived and will be organized to be ready for the staff use. | PC<br>(due to ongoing installation activities) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | | | | | | Firefighter cloths shall be supplied before June 2022. | Presence of firefighter cloths | Fire fighter cloths has already been purchased and they will be properly located. | FC |
| 3.13 | Site Cleaning | Cleaning of all construction sites and construction camp site<br><br>Rehabilitation of the construction sites and construction camp sites<br><br>Disposal of the construction related wastes | Ensures legal and best practice compliance | IFC PS3 | Management time<br><br>Budget needed | UWE and Contractors | End of December 2021 (Subject to change according to completion of construction and demobilization of contractors) | Site visuals<br><br>Site rehabilitation<br><br>Waste disposal receipts | (there is time for completion of this time.<br>Subject to change according to the completion of construction phase, though) | NA |
| **PS4<br>Community Health, Safety and Security** | | | | | | | | | | |
| 4.1 | Traffic Planning | Develop and implement procedures to protect public safety, to include (but not be limited to):<br>• Implementation of Traffic Management Plan<br>• Public notice of construction areas<br>• Notices/signs/barriers to prevent access to dangerous areas<br>• Notify communities and place signs on public roads prior to periods of heavy use | Protect public health and safety<br><br>Helps good community relation and efficient transportation | IFC PS1 / PS4 | Management time<br><br>Budget needed | UWE and Contractors<br><br>For plan preparation Nartus is working with UWE | End of November 2021 | 1. Traffic Management Plan<br><br>2. Public notices<br><br>3. Sufficient number of traffic signs<br><br>4. Speed limit implementation<br><br>5. Good condition roads | 1. Traffic Management Plan is in place<br><br>2. Public notices are present<br><br>3. Sufficient number of traffic signs are posted<br><br>4. Speed limit implementation is in place<br><br>5. Good condition roads (majority of the road is under | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | Develop a system to minimize the impacts of traffic on the region for the transport of the turbines and related material. | | | | | | | authority responsibility in case of need UWE will support them) | |
| | | | | | | | Implemented throughout construction and operation period. | 1. Implementation of Traffic Management Plan<br>2. Submission of safety inspection summaries<br>3. Sufficient number of traffic signs<br>4. Speed limit implementation<br>5. Good condition roads<br>6. Water spray for construction period<br>7. Water spray on need during operation and in case of decommissioning | 1. Traffic Management Plan implementation is in place<br>2. Submission of safety inspection summaries is missing<br>3. Sufficient number of traffic signs are posted.<br>4. Speed limit implementation is in place<br>5. Roads will be kept in condition<br>6. Water spray for construction period is applied whenever needed<br>7. Water spray on need during operation and in case of decommissioning | PC for construction (only inspection summaries are missing UWE is aware for necessities for operation) |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| 4.2 | Community Health and Safety | Establish preventive and control measures<br><br>Develop and implement a Community Health and Safety Management Plan<br><br>Undertake measures for air and noise<br><br>Disseminate information for the affected communities<br><br>Establish and enforce clear rules for workers to prevent incidents to local people | Protect public health and safety<br><br>Helps good relationship with stakeholders and ensures compliance with best practices | IFC PS 1, PS4 | Management time<br><br>Budget needed | UWE<br><br>Nartus is working with UWE | End of November 2021 | 1.Development and implementation of Community Health and Safety Management Plan<br><br>2. Development and implementation of Traffic Management Plan | 1.Plan is developed, and implementation is ongoing.<br><br>2. traffic plan is in place. | FC |
| | | | | | | | Implemented throughout construction and operation period. | 1. Implementation of Community Health and Safety Management Plan<br><br>2. Implementation of Traffic Management Plan<br><br>3. Report information on complaints and incidents involving workers and locals | 1. Implementation of Community Health and Safety Management Plan is ongoing<br><br>2. Implementation of Traffic Management Plan is in place<br><br>3. Information disclosure has stared and will continue. There is no recent complaint received. | FC<br>For construction phase (UWE is aware of its implementation requirement for operation) |
| 4.3 | Development Support | Develop a community development plan with the cooperation of the affected communities | Improvement of social and economic conditions of affected communities | IFC PS4<br>IFC policy | Budget needed | UWE<br>In case of need UWE may hire third party to execute the work. | End of November 2021 | Development and Implementation of community development plan | Plan has been developed and its implementation is going. | FC |
| | | | | | | | Throughout the construction and operation phases | Implementation of community development plan | Implementation is ongoing.<br><br>There are already projects carried out in the region. UWE will continue them. | PC |
| 4.4 | Security | Develop and Implement Security Plan | Ensures secure working environment and | IFC PS4<br>Best Practice | Management time | UWE<br>In case of need UWE | Plan is available. | Security Plan | Security plan is available and use. | PC |

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| | | Hire adequate, trained security staff who have not been involved in past abuses | minimize impacts on stakeholders | National legislation | Budget needed | may hire third party to execute the work. | Throughout the construction and operation phases | Records of audits and inspections<br><br>Records of credentials of security staff<br><br>Training records of security staff | Audit is needed. (Training programs for the security staff in the future will change this item to FC) | |
| **PS5**<br>**Land Acquisition and Involuntary Resettlement** | | | | | | | | | | |
| 5.1 | The project is located on Forestry Land (Forestry permit process is completed; however, there is a court case on the use of forest roads ). There is no land acquisition and involuntary resettlement involved.<br>Hence, this PS is not applicable. | | | | | | | | | NA |
| **PS6**<br>**Biodiversity Conservation and Sustainable Management of Living Natural Resources** | | | | | | | | | | |
| 6.1 | Biodiversity Monitoring Plan | Appointment of qualified professional(s) with experienced in ornithology and chiropterology.<br><br>Develop Biodiversity Monitoring Plan | The qualified professional(s) will report to on related issues as required in international standards. | IFC PS6<br>Best practice<br>Official regulatory requirement | Budget needed | UWE<br><br>UWE needs to hire experienced people. | Personnel is assigned.<br><br><u>Biodiversity Monitoring Plan Development</u>: End of December 2021 | Assignment of approved expert(s) who has experienced on Scottish Natural Heritage methodologies and collision risk model calculations.<br><br>Development and implementation of Biodiversity Monitoring Plan | UWE is employing staff.<br><br>Plan development is ongoing. | MN<br>(there is time for deadline of completion. The target deadline can be complied) |
| | | | | | | | Throughout the construction and operation phases | Assignment of approved expert(s) who has experienced on Scottish Natural Heritage methodologies and collision risk model calculations.<br><br>Implementation of Biodiversity Monitoring Plan | | MN<br>(Linked to previous action. |
| 6.2 | Flora monitoring | Develop and perform special monitoring survey for the following endemic plant species Centaurea | Endemic Species Protection | IFC PS6<br>Best practice<br>Official regulatory requirement | Budget needed | UWE | Throughout the construction and the first year of | Endemic species are present in the project site after first year of the operation phase. | (Studies are ongoing. | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
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| | | consanguinea DC and Veronica multifida<br><br>Collect seeds of these endemic species and send them to Governmental Seed Bank. | | | | UWE needs to hire experienced people. | the operation phases<br><br>Annual report is required in the end of June. | Monitoring Reports<br><br>Handover documents of the seeds | There is time for the deadline for this item) | |
| 6.3 | Fauna monitoring | Develop and perform special monitoring survey for the following species;<br>- Red Deer Cervus elaphus<br>- Hermann's Tortoise *Testudo hermanni*<br>- Spur-thighed Tortoise *Testudo graeca*<br>- Marbled Polecat Vormela peregusna<br>- Wildcat, *Felis silvestris* | Fauna protection | IFC PS6<br>Best practice<br>Official regulatory requirement | Budget needed | UWE<br><br>UWE needs to hire experienced people. | Throughout the construction and operation phases<br><br>Annual report is required in the end of December each year. | There is no decrease in the population of fauna species with conservation priorities.<br><br>Monitoring Reports | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |
| 6.4 | Ornithological Monitoring | Expert(s) will develop and implement program of monitoring birds during spring and fall migration seasons as well as breeding and resident seasons (primarily spring and summer) and carcass survey under turbines and also covering energy transmission lines as well.<br><br>Focus of ornithological monitoring should be on<br>- Imperial Eagle<br>- Soaring Migratory large birds .<br>- Breeding Bird Survey | Protection of the species<br><br>Impact assessment | Turkish legislation and regulations<br>IFC PS6<br><br>Bird assessment in line the Scottish Natural Heritage (SNH) and Birdlife International Reference documents /guidance. | Budget needed | UWE<br><br>UWE needs to hire experienced people. | Throughout the construction and operation phases<br><br>The monitoring program, which is to continue for at least three successive years with two migration seasons in a year<br><br>Biannual report is required. First report in the end of | Methodologies modified, approved by governmental Institute for Nature Protection and/or independent third-party expert.<br><br>Data collected, compiled, reported<br><br>Compiled data publicly available reporting<br><br>Provide evidence of Institute and/or expert approval of methodology<br><br>Provide summary of survey results | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Make data available to the Ministry. | | | | | August and Second report in the end of November of each year | | | |
| 6.5 | Collision Risk Assessment | Calculate theoretical collision risk for every season and continue monitoring and assessment until expert(s) conclude risk is adequately understood and acceptable | The collision risk assessment will<br>• enable a review of operational and monitoring data and to verify the assessment made in the initial studies.<br>• Ensure methodology compliance with Scottish Natural Heritage guidance note WINDFARMS AND BIRDS: Calculating a theoretical collision risk assuming no avoiding action | Turkish regulations<br>IFC PS6 | Budget needed | UWE<br><br>UWE needs to hire experienced people. | The monitoring program, which is to continue for at least three successive years with two migration seasons in a year<br><br>Biannual reporting for spring in the end of August and autumn period in the end of November is required for each year. | Methodology designed, approved by Institute for Nature Protection in the ministry and/or independent expert<br><br>Additional mitigation implemented, if needed reporting<br><br>Provide evidence of Institute and/or expert approval of methodology<br><br>Provide summary of survey designs and results<br><br>Collision risk assessment report<br><br>Describe any additional mitigation | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |
| 6.6 | Bat Monitoring | Acoustic monitoring of bat species including sampling from adjacent forest site for breeding period and spring and autumn migration seasons in a year.<br><br>Perform bat carcass survey under turbines . | Assessment of Biodiversity and Living Natural Resources needs to define a mitigation strategy for direct and indirect impacts of the Project on | Turkish legislation and regulations<br><br>IFC PS6<br><br>BAT Assessment in line with EUROBAT Guidance | Budget needed | UWE<br><br>UWE needs to hire experienced people. | The monitoring program, which is to continue for at least three successive years with two migration and breeding seasons in a year. | Reassessments/ assessments completed.<br><br>Assessment Reports<br><br>Recommended mitigations, if any.<br><br>Provide summary of assessments, including | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Reassess previous conclusions concerning bird/bat use, residence, and passage on and near the site<br>Reassess potential impacts on birds and bats<br><br>Recommend changes to operating parameters (such as rotation speed or operating hours during sensitive periods/hours) and/or other mitigation needed to reduce risk and mortality. | biological components. | | | | Biannual reporting for spring migration and breeding in the End of August and autumn migration is required in End of November for each year. | cumulative evaluations and recommendations.<br><br>Describe mitigation measures recommended, if any. | | |
| 6.7 | Habitat Assessment | Determine the number of trees cut and to compensate for the lost forest area by afforestation works<br><br>Stripe topsoil and store properly unless authorized organization declared another action for striped topsoil. | Protection of biodiversity around the project site. | IFC PS6 | Budget needed | UWE<br><br>UWE needs to hire experienced people. | End of May 2022 | Records of trees removed<br><br>Afforestation Plan<br><br>Report on status of topsoil and surveys, and of any required mitigations | There is time for deadline of this item. target can be complied with a dedicated effort. | MN |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.8 | Protection of Birds | Take other measures to reduce impacts on birds, including:<br>• Contractor to paint red stripe on blades if required by authorities<br>• Contractor to clear vegetation around all turbines and remove any perching points (fences, bushes, etc.) within 100 m of turbines.<br>• to maintain clearance during operation period<br>• to ensure crop spills are removed from around turbines as soon as practicable<br>• Install bird diverters on all or part of transmission line conductors. | Protection of biodiversity around the project site. | IFC PS6 | Budget needed | UWE<br><br>UWE needs to hire experienced people. | Throughout the construction and operation phases<br><br>Annual reporting in the end of December is required for each year. | Stripes applied, if required<br><br>Vegetation cleared initially and periodically thereafter reporting<br><br>Report highlights of actions taken<br>Bird diverters installed as recommended<br><br>Platforms installed as recommended - Minimal collision and electrocution mortality<br><br>Report status of bird diverters and platforms | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |
| 6.9 | Invasive Species | Perform Invasive species survey<br>If an invasive species is found, mitigation should be developed according to the threat level to be determined by the expert by notifying the relevant institutions. | Protection of biodiversity around the project site. | IFC PS6 | Budget needed | UWE<br>UWE needs to hire experienced people. | After the completion of first year of operation of all turbines including findings of the construction phase | No invasive species reported or invasive species controlled and removed totally | (Studies are ongoing.<br>There is time for the deadline for this item) | PC |
| 6.10 | Education for Biodiversity Conservation | Perform training to UWE and contractor staff by experts about endangered species of the project area and their conservation, illegal hunting and other standards precautions for wildlife protection. | Protection of biodiversity around the project site. | Turkish regulations<br>IFC PS6 | Budget needed | UWE<br><br>UWE is working with Nartus | Training has started and continue throughout the construction and operation phases.<br><br>Biannual reporting for the training programs at the end of July for | All staff are well informed and apply biodiversity precautions. | (Studies are ongoing. Trainings are held.<br>There is time for the deadline for this item) | PC |

| No. | Issue (Management Plans, air, wastewater, etc. | Action | Environmental & Social Risks (Liability/ Benefits) | Requirement (Legislative, IFC PSs, Best Practice) | Budget Estimate | Responsible Party | Time Target | Completion Indicator | Status of Necessary Actions | Color Code |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | first 6 months and at the end of January for last 6 months of each year. | | | |
| **PS7 Indigenous People** | | | | | | | | | | |
| 7.1 | There are no indigenous people in the region. Hence, this PS is not applicable. | | | | | | | | | NA |
| | **PS8 Cultural Heritage** | | | | | | | | | |
| 8.1 | Archaeological Chance Find Management Plan | Develop an Archaeological Chance Find Management<br><br>Contact relevant authorities (i.e., Museum Directorate) in case of chance finds. | Ensures protection of cultural heritage and Company Reputation | IFC PS8 | Management time | UWE and contractors | Plan is in place.<br><br>Throughout construction period in case of change find. | Archaeological Chance Find Management Plan<br><br>Copies of correspondence with authorities<br><br>Monitoring of construction site for chance find | (since the stage of the project which can lead to change find is over. No chance find available) | NA |

# 10 Conclusions and Remarks

This environmental and due diligence report with gap analysis and Environmental Social Action Plan (ESAP) is prepared on the findings of the document review, stakeholder interviews and site visits for İstanbul WPP including both Turkish environmental and social legislation as well as international best practice requirements. The report has gone through several updates due to the actions taken by UWE during this period.

**General Findings about İstanbul WPP**

- İstanbul WPP is located in the Province of İstanbul, Çatalca District, Binkılıç Location.
- İstanbul WPP will have a 211,2 MWm/200 MWe capacity upon completion of 44 turbines.
- İstanbul WPP has turbines in operation, under commissioning and under construction. The forecasted date for completion of the construction is still December 2021. There can be shift in the schedule due to weather conditions. Then the full operational date depends on the acceptance of the turbines by the authority.
- İstanbul WPP is located in forest, which is very close to Çilingöz Wild Life Development Area, which makes the ongoing biodiversity studies important for the project.
- The most impacted village from the village is Binkılıç even though not being closest to the project site since the transportation operation is through this village and construction camp is located there.
- There are other wind power plants in the region, which makes it a necessity to have cumulative impact assessment for flicker impact and noise related studies (the modelling studies concluded that there is no cumulative impact at the moment). In addition, these plants shall be considered in future studies. Communication with the owner and operators of these plants will be necessary to coordinate the studies.
- Equator Principles requires the project to be categorized according to International Finance Corporation's environmental and social risk categorization process basing on the nature, scale and stage of the project and with the level of environmental and social risks and impacts. İstanbul WPP falls into Category B.
- The project being placed in Category B means that the project has potential limited adverse environmental and social risk and/or impacts that are few, generally site-specific, largely reversible and readily addressed through mitigation measures. Implementation of mitigation measures is crucial for İstanbul WPP.
- There have been project design changes after the approval of the EIA report including turbine number and location. Validity of the EIA approval for these changes are secured. EIA report is in not line with international standards. If the project was in the preconstruction phase, then a full environmental and social impact assessment (ESIA) should have been prepared. Considering the status of the project, ESIA will not add value to the project. Measures to be taken to control the environmental and social impacts of the project with measurements, modelling, monitoring studies and document preparation, implementation with proper records

throughout the life time of İstanbul WPP is crucial after this point. That's why complying with requirements of this report with ESAP, and gap analysis is required.

- The forestry permit is secured.
- The forest is under Governmental Forest Administration management; therefore, no work can be executed without their approval.
- Electricity Generation License is secured.
- There is no land acquisition or resettlement involved for the project.
- There are no historical and/or cultural sites on the project area.
- There are no water bodies on the project site.
- The project is not close to wetlands.
- The project area is not in any of the areas protected under the conventions of Barcelona (regarding Mediterranean Sea), Bern (marine turtle and Mediterranean seal) and Ramsar (wetlands).
- There is no military facility, military security zone and prohibited military zone in the region.
- The project has the commitment to fulfil the requirements of the effective environmental, health and safety, social legislation.
- There are two lawsuits against the Ministry of Environment and Urbanization for the approval of EIA (suit is rejected at local court, application to upper court is made and upper court approved the decision of local court on 14 September 2021) and Caba Group attorney informed that the case is closed, and the General Directorate of Forestry about the forestry permit (court is waiting for expert report).
- UWE has started organizing training programs such Covid 19, first aid and fire trainings. The positive part of these trainings is that they are open for the participation of all interested parties. These trainings are announced with the support of two village headmen of Binkılıç.
- Another meeting was organized at Yalıköy village, the meeting was announced by the support of village headman.
- An environmental and social management committee has been established and started meeting. This committee will definitely help and fasten the implementation process of the management system. This is an item showing commitment of UWE to fulfill the requirements of best practices as well.
- Making necessary notifications to authorities are important. The initial notification Civil Aviation due to further assessment need for the impact on Istanbul Airport radar system is made and these notifications and good and timely communication with the authorities shall continue

**Biodiversity Conservation and Sustainable Management of Living Natural Resources Findings and Major Recommendations:**

- Impact of İstanbul WPP on fauna will be minimal during construction and operation phase.

- Impact of İstanbul WPP on bats and birds is expected due to collision. Monitoring studies and their reports will assess the exact impact. Monitoring studies shall continue as required and basing on the findings of these studies, necessary measure shall be taken.
- The exact number of trees cleared for İstanbul WPP shall be learned from the authority.
- Afforestation plan shall be developed and implemented throughout the life time of the project in conjunction with the authorities.

**Environmental Findings and Major Recommendations:**

- The project is maintaining same type of tower and blades for the turbines which is limiting the visual impacts. Selective risk assessment study including flicker impact, blade/ice throw, visual impact and background noise measurement and modelling has been completed on 25.10.2021. The report concluded that there is no negative impact expected from Istanbul WPP. Cumulative impact of the other wind power plants is also assessed within this report. Cumulative impact is not expected from the project.
- İstanbul WPP is applying water spraying to roads to control the dust formation. However, the roads are existing forest roads which are not asphalt and concrete that leads to dust formation during hot summer days.
- Exhaust level calculations are done with the result of compliance with the limits and no need for further modelling.
- Waste management for the construction period is improved with record keeping.
- Waste storage area has been completed with some further modifications to be done. There are different zones for different waste types. Spill kits, labels are placed. The storage area shall be operated with compliance with international best practices.
- Chemical storage area which will be within the warehouse is almost completed and shall be operated with compliance with international best practices. It is informed that minimal chemical stock will be kept, and main stock will be kept by Nordex at their own site.
- Control room/administration building in the switchyard area housekeeping has been improvement with opportunities for further improvement. The team is waiting for the rack system to arrive to finish the housekeeping item.
- There are documents about emergency response.
- Environmental training has started with environmental awareness, waste management and sustainability. The trainings shall continue with refreshing classes. It will be easier to follow all training (environmental, safety, social, technical) requirements with an annual training program.

**Health and Safety Findings and Major Recommendations**

- There are health and safety related documentations available.
- There is a common health and safety unit giving the compulsory health and safety services for UWE and its contractors.
- There are training records.

**Social Findings and Major Findings:**

- For social impacts section of this due diligence study the documents, data and EIA have been reviewed against the IFC social requirements. It is possible to say that the EIA follows national legislation, and it does not make any specific references to the social impacts of İstanbul WPP. The EIA does not adequately identify and assess social impacts and mitigations of UWE.
- It is possible to say that social impacts of İstanbul WPP are site-specific, can be identified and can be addressed through mitigation measures.
- A Stakeholder Engagement Plan is prepared for the effective consultation and the maintenance of the positive relationships with the Project Affected People.
- There is a complaint mechanisms and public has been informed about the mechanism during the meetings held at Binkılıç and Yalıköy villages. The project information brochure has been placed next to grievance boxes in the villages These activities shall continue for all affected parties. There have been no new complaints received since the first version of this report.
- Especially during construction and operation phases of İstanbul WPP needed work force in the region will enable community to benefit from the positive impacts of the Project. In this sense, evaluation of regional sources for employment and specific amount of service procurement from the settlements will be very beneficial.
- It is clear that the project will affect communities who live close to the project area and their attitudes to the project vary. UWE should consult with these communities and their concern or expectation should be understood. A consultation plan has been developed. Public participation meetings have been organized at Binkılıç village and Yalıköy village. The meetings shall continue.
- Social responsibility projects shall continue in the region.
- There is a Honey Forest near the project site. As a social project, bees and these honey forest can be supported.

**Recommendations:**

- İstanbul WPP shall continue securing necessary permits and licenses within required period of time.
- The information asked during the approval/consent process of Istanbul WPP shall be submitted to the authorities in a timely manner.
- Non-compliance issues with the EIA commitments and legislation requirements may end up with monetary penalty with notification to complete the missing items in certain period and breach of this period may end-up with stopping operations per environmental legislation and health and safety legislation. Compliance with requirements is crucial for İstanbul WPP.
- The necessary documents have been prepared and implementation is ongoing. It is highly important to have records to show that the systems are working, and documents are adding value to UWE and its stakeholders. UWE also started sharing documents that shows the system implementation is ongoing as well.
- Further actions to take and further items to comply with, which are not present in this due diligence report; therefore, in the ESAP and gap analysis, may arise for İstanbul WPP from the evaluation of the future actions, and implementation studies and documents.

- The documents shall be revised per legislation change and in case of need.
- İstanbul WPP has finished the documents needed for the environmental and social management system and their implementation for the time being is done with the basics. It is now critical to implement the environmental and social management plans for the system to work efficiently, add value to project and meet the Lenders' expectations. It will be UWE's decision whether or not to certify the system.
- An internal audit system shall be established to add value to the ESMS of İstanbul WPP. As a start an audit procedure has been published. Partial controls, inspections are already in place.
- Training will be important part of ESMS. The existing training system shall be continued with increased number and subjects of training to all employees. The training plan published will definitely add value to this. Having schedules will help the team to coordinate.
- Biologist shall continue giving trainings to staff. As a social project these training programs shall be considered to be shared with the local people.
- Fire safety is another important subject for İstanbul WPP to focus on being located in forest and having commitment to support Forestry Chiefdom in case of fire.
- İstanbul WPP is getting compulsory health and safety services from a contractor but there is no designated staff for environmental and social issues. Nartus is coordinating these studies. Hiring a staff or getting consultancy services to coordinate environmental and social issues for İstanbul WPP shall be considered with considering the sensitivity of the region and scale of the project. One of the staff at İstanbul WPP has been temporarily assigned to coordinate the studies with the support of the project team at headquarters. CABA Group has hired an experienced staff for coordinating environmental and social related studies at the headquarters. He has started working on 01.12.2021. He is responsible of İstanbul WPP:
- Assignment of an environmental and social responsible for İstanbul WPP will ease the coordination, communication, implementation and follow-up of the studies.

**Red Flags**

Its worth's highlighting the red flag areas for the project :

1. Development of the environmental and social management system was one of the red flags in the initial versions of this due diligence report. Documentation is completed including but not limited to waste and wastewater management, traffic, contractor management and monitoring and the related activities for the implementation is focused on . (It is important to prove the system is working and adding value to İstanbul WPP. The certification can be optional). An experienced environmental and social staff is also assigned, which will fasten the implementation and continuous improvement of the system.
2. Lawsuit and its communication with Lenders
3. Carcass studies for the bats and birds, and taking necessary measures according to the findings
4. Compensation of trees cut with afforestation plan
5. Dedication for continuing implementation of the management system is crucial after this stage.

Summarizing findings and remarks about İstanbul WPP above, it can be concluded that there are now less deviations from the IFC guidelines and performance standards. It is important to highlight that the evaluation of the ESAP items was done according to the presence of data (plans, procedures and supporting material) that is feasible to be prepared within this time period. Dedication of the team was also considered during this evaluation. It is obvious that proper implementation of these items will take time with requirement of statistical data, system evaluations, etc. It is now more important for the team to continue taking actions to comply with the remaining items and improve the full system, and to show that this initial dynamic created to have an environmental and social management system is permanent.

The compliance with the legal requirements is in line with the stage of the project.

Health and safety is still identified to be the most mature subject within the scope of these due diligence with the improving performance on especially social issues followed by environmental impact management. It will take time for the system to mature with the data collected, evaluated, analyzed and further improve the system. It is important to continue working on the actions presented in the E&S management system documents' prepared.

Team has been working on improving the system and preparing the necessary documents. Its' worth mentioning that before the preparation of a SEP, grievance mechanism and organization of public participation meetings at two villages were carried out. The second area that worth's' mentioning is document preparation and teams' awareness to implement the necessities of the documents. Upon completion of the initial requirements of an ESMS system, it is more important to have a continuously improving system. UWE team shall continue taking actions, keeping reports and logs, organizing trainings and communicating with authorities and affected parties.

Requirements of the Environmental and Social Action Plan shall be followed. Actions regarding the gap analysis items shall be taken. It is important to remind that all of the actions have deadlines, complying with these deadlines is critical. Moreover, it is important to implement, sustain continuously, and make these studies part of corporate culture.

In order to get more information about the subject and/or content of the report please contact us.

Kind Regards,

Riskonet Danışmanlık ve Eğitim Ltd. Şti.

# 11 Annexes

## 11.1. Annex I: The list of documents and certificates

1. İstanbul WPP Introduction Presentation
2. General Lay-Out
3. 1/1000 and 1/5000 Master Implementation Plans
4. EIA Report and Annexes
5. EIA Approval
6. Construction Permits
7. T19 temporary acceptance file
8. Transmission line temporary acceptance file
9. Chance Find Procedure
10. Air Quality Report
11. Flicker Impact and Noise Model Results
12. Blade/Ice Throw Impact Assessment
13. Protected Areas Report
14. Emergency Response Plan
15. Risk Assessment
16. Emergency Preparedness and Emergency Response Plan
17. Waste and Waste Water Management Plan
18. Ethic Rules and Working Principles
19. Fauna Report
20. Spring 2021 Ornithological Report
21. Project Information File
22. Accident Report
23. 2021 HS Work and Training Plan
24. Water Quality Analysis Results
25. Personnel Satisfaction Questionnaire
26. Health Report
27. Covid 19 Emergency Response Plan
28. Occupational Hygiene Report
29. Waste Storage Area Drawings
30. Waste Disposal Records
31. Septic Tank Drawings
32. Drainage System Drawings
33. Kmz. Files about the Project layout, neighborhoods.
34. MSDS and list of chemicals
35. Hareket Route Survey Report
36. Hazardous Chemicals and Hazardous Waste and Compulsory Insurance Policy
37. Health and Safety Training Logs
38. Near miss records
39. PPE Handover Document
40. Notes about the two court cases
41. Information on social responsibility projects
42. Security plan
43. Contractor List
44. Project Calendar
45. Construction Health and Safety Plan

46. Sample Vehicle Maintenance Logs
47. Fire Extinguisher list
48. Fire Detection system drawing
49. Biodiversity training logs
50. Grievance Logs
51. HS Suggestion Form
52. Information on Roads of Project
53. Series of communication with Ministry of Transport and Infrastructure, General Directorate of State Airports Authority Department of Electronics, and Directorate General of Civil Aviation
54. letter of Cultural Heritage and Museum General Directorate of Ministry of Culture and Tourism dated 28.01.2020 and No. 39682869-165.02.02-E.87763
55. letter of State Water Works General Directorate of Ministry of Agriculture and Forestry dated 28.02.202 and No. 47153325-045.01-137763.
56. Letter of Ministry of National Defense General Staff dated 17.07.2019 and No. 47741811-340.01-260135
57. 49-year Electric Power Generation License" (License No. EÜ/9535-1/04604, dated September 10, 2020
58. letter of Ministry of Energy and Natural Resources, General Directorate of Mineral Resources on 29.01.2020 with No. 65116061-045.99-E.7839
59. consent of İstanbul Water and Sewage Works Administration on 04.03.2020 with 11255029-310.01-E.20200113497
60. consent of State Water Works 14. Regional Department on 28.02.2020 with 47153325-149-345302
61. fire report from Çatalca Municipality License and Inspection Directorate with No. E-33305494-622.01-10987
62. Ministry of Agriculture and Forestry General Directorate of Nature Conservation and National Parks dated 06.02.2020 with No 22802673-754-E.441767
63. HR Internal Regulation
64. Staff Employment Procedure
65. HR Discipline Committee Working Principles
66. Caba Group ISO 9001:2015 and ISO 14001:2015 and ISO 45001:2018 certificates
67. İstanbul Regional Forestry Directorate, Çatalca Forestry Chiefdom, Binkılıç Forestry Chiefdom approval the letter No. 26247233-255-2186036 dated 09.10.2020
68. Grievance Mechanism Note
69. Grievance Log
70. Grievance form
71. Health and Safety (HS) Management Plan
72. Internal HS Regulation HS Disciplinary Instructions
73. Personal Protective Equipment (PPE) Use and Maintenance Rules,
74. Orientation Training
75. HS General Instruction and Commitment Minute
76. PPE Handover Minute
77. Working at Height Instructions
78. Safety rules for working with chemicals
79. Usküdar University electromagnetic field environmental impact assessment report dated 10.10.2021
80. Selective Risk Assessment Report, October 2021
81. Public participation meeting announcement October 2021
82. Public participation meeting logs and assessment forms, October 2021
83. Covid 19 and first aid training announcement and logs, October 2021
84. Fire training announcement and logs, October 2021
85. Yalköy meeting announcement
86. Reward punishment system procedure
87. Working at height instruction for wind power plants
88. Construction site management plan

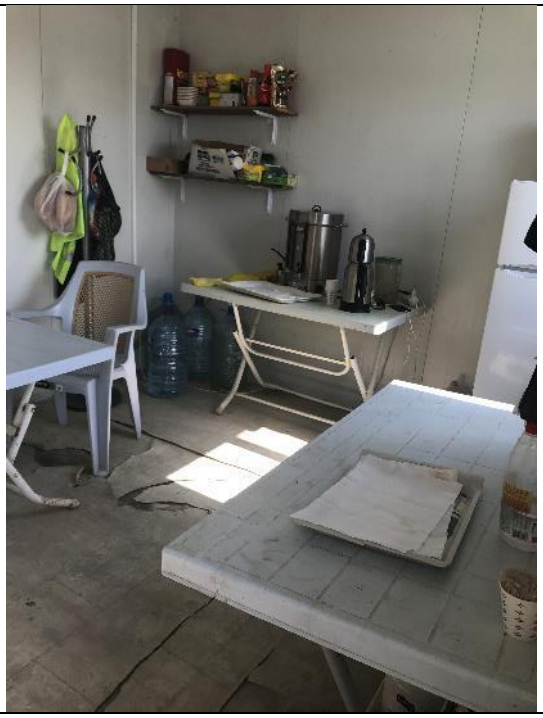
89. Hot work instructions
90. Hazardous material management plan
91. Community health and safety plan
92. Traffic management plan
93. Contractor management and monitoring plan
94. Working at height instruction
95. Visitor instruction
96. Environmental and social management committee meeting
97. Emergency preparedness and response plan
98. Heavy loads lifting and carrying instruction
99. Waste and wastewater management plan (includes water management as well)
100. Infectious diseases plan
101. Environmental and Social Management System Explanation
102. Audit procedure
103. Training plan
104. Electrical work instruction
105. Ethic Rules and Working Principles
106. Work permit procedure and form
107. Confined space working instruction
108. Excavation work instruction
109. Chance find procedure
110. Health and safety management plan
111. Working with and storing chemicals instruction
112. Offsite emergency response plan
113. Septic tank emptying receipt
114. HR Policy
115. Human resources and training plan
116. Grievance form operation mechanism
117. Organization chart
118. Job descriptions
119. SEP
120. E&S Committee meeting minutes
121. Community Development Plan
122. Compliance Procedure
123. Photographs of waste storage area
124. Fire extinguishers control log
125. Emergency equipment list
126. Maintenance records of vehicles
127. Covid19 vaccination log
128. Generator maintenance log
129. Control forms for air conditioner
130. Near misses forms
131. Fuel consumption monitoring
132. Energy consumption monitoring
133. Water supply agreement
134. Grounding controls
135. Fire detection system training
136. Traffic control logs
137. Grievance log (November 2021)
138. Site inspection log prepared after first E&S Committee meeting
139. Air quality assessment report due to exhausts from vehicles
140. Exhaust control for small trucks

141. Letter to General Directorate Of State Airports Authority Department of Electronics,on 16.11.2021 about the operating turbines
142. Application letter for registration of Integrated Environmental Information System of Ministry of Urbanization and Environment on 3.11.2021
143. Site visual supplied on 29.11.2021
144. Commitment letter for hiring and E&S Staff dated 29.11.2021
145. Blade/ice throw and shadow flicker action plan

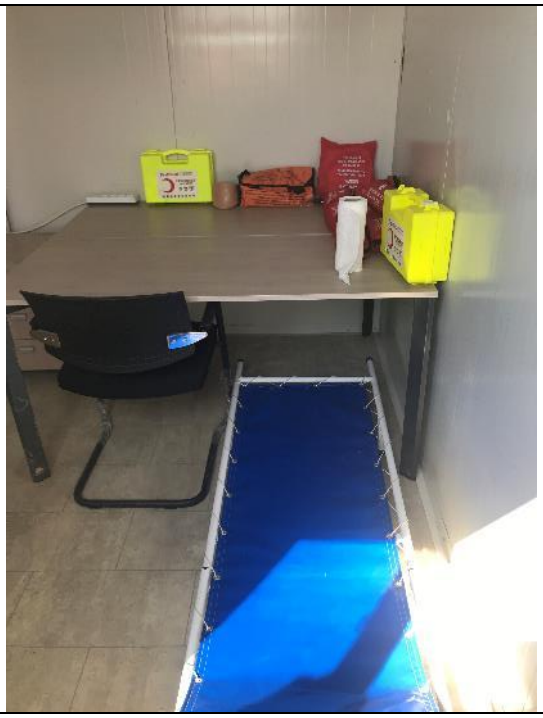
## 11.2. Annex II: Site Photos

| | | |
|---|---|---|
| **Photo No:** 1 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Binkılıç | | |
| **Description:** Village Headmen Office where the grievance box is located.<br><br>There is no project information sheet available. System is not working.<br><br>Grievance boxes are also present at Karacaköy and Yalıköy. | | |

| | | |
|---|---|---|
| **Photo No:** 2 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:**<br><br>First Aid Box and Fire Extinguisher available at the vehicles.<br><br>Vehicle is chosen randomly. | | |

| | | |
|---|---|---|
| **Photo No:** 3 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:**<br><br>Rest Area | | |

| | | |
|---|---|---|
| **Photo No:** 4 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:**<br><br>Extinguisher and one of the regular waste bins at the Camp Site | | |

| | | |
|---|---|---|
| **Photo No:** 5 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:** Infirmary<br><br>Medical staff is available per the legislation required hours. | | |

| | | |
|---|---|---|
| **Photo No:** 6 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:** Emergency Response Plan | | |

| | | |
|---|---|---|
| **Photo No:** 7 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Construction Camp Site | | |
| **Description:** Waste Segregation Station<br><br>(Grievance box and a fire extinguisher are also seen) | | |

| | | |
|---|---|---|
| **Photo No:** 8 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Forest Road | | |
| **Description:**<br><br>Access Road to Turbine Area | | |

| | | |
|---|---|---|
| **Photo No:** 9 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbines Area | | |
| **Description:** Views of Turbine Completed | | |

| | | |
|---|---|---|
| **Photo No:** 10 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbine Area | | |
| **Description:** Cable Channel Work | | |

| | | |
|---|---|---|
| **Photo No:** 11 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbine Area | | |
| **Description:** Construction Equipment Storage<br><br>Woods belong to Forestry Department<br><br>Area shall be cleaned upon completion of the work | | |

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| **Photo No:** 12 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Switchyard Area<br>Control Room/Administration Building | | |
| **Description:** Camera System<br><br>There are cameras seeing inside and outside. Outside cameras can see forest area which is also important for fire perspective. | | |

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| **Photo No:** 13 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>First Aid Box<br><br>First aid equipment shall also include stretcher, neck protection.<br><br>Corona Virus and Covid 19 Notice Disinfectant<br><br>Waste Bins for masks and gloves, and for battery | | |

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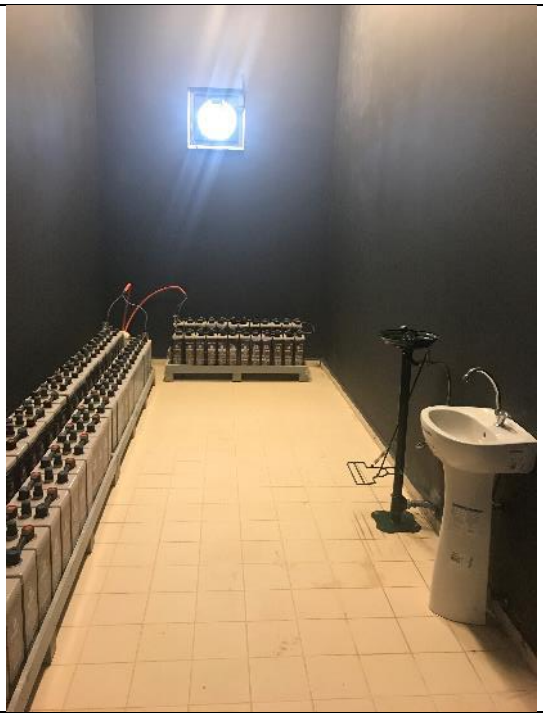
| **Photo No:** 14 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Battery Room<br><br>There is emergency eye shower and ventilation. | | |

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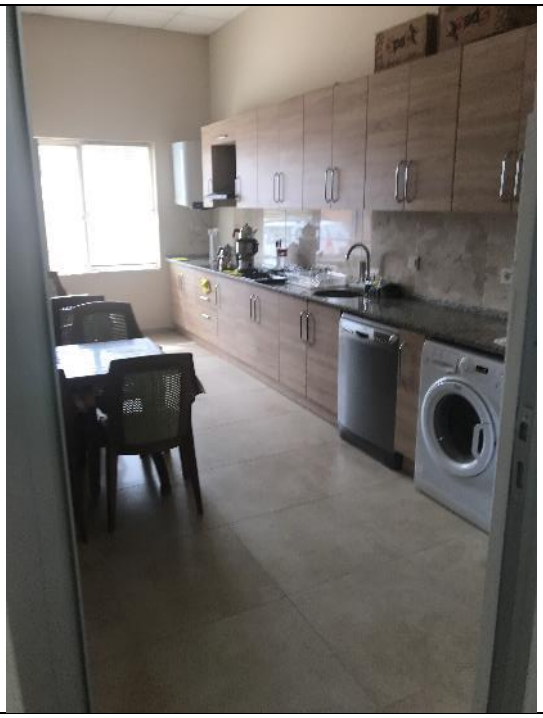
| **Photo No:** 15 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Rest Area and Kitchen | | |

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|---|---|---|
| **Photo No:** 16 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Fire Extinguisher with Instructions and Monthly Control Tag<br><br>The monthly controls are a good practice and shall continue in addition to the legally required periodical controls | | |

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| **Photo No:** 17 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Switchyard Area | | |
| **Description:** Transformers<br><br>Safety signs are available.<br><br>Entrance is restricted. | | |

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| **Photo No:** 18 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Switchyard Area<br>Control Room/Administration Building | | |
| **Description:** Assembly Point next to guard house at the entrance point<br><br>The area to the back of the guard house is designated for the warehouse and waste storage area, which will be constructed. | | |

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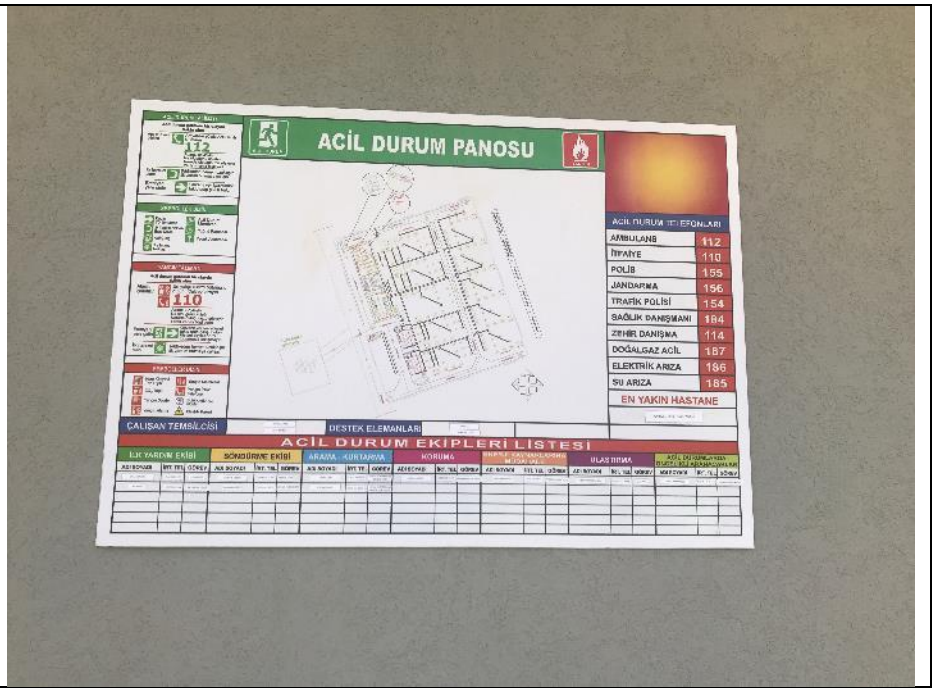
| **Photo No:** 19 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Emergency Notice<br><br>Communication Numbers, Emergency team members, worker representative, support staff are announced. Safety signs for emergency are explained.<br>It is a good practice.<br>(the teams have been updated) | | |

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| **Photo No:** 20 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Traffic Signs ordered to be placed on the roads<br><br>Signs shall be posted without waiting for completion of the work. Additional traffic sign can be ordered upon need.<br><br>Signs also include wildlife notices. | | |

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| **Photo No:** 21 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Waste segregation with different waste collection bins<br><br>Portable fire extinguisher is available next to bins.<br><br>Training about different types of waste shall be organized. | | |

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| **Photo No:** 22 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>First Pole of the Transmission Line from the Switchyard<br><br>Channels/trenches are for cabling. | | |

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| **Photo No:** 23 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** From Access Road | | |
| **Description:** View of Switchyard and Control Room/Administration Building T23 and T 35. | | |

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|---|---|---|
| **Photo No:** 24 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbine Area | | |
| **Description:**<br><br>Dust Formation on the Road and Water Spraying Vehicle<br><br>Frequency: therefore, of number of vehicles employed shall be increased. However due to weather conditions September forward, this may not be necessary. | | |

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| **Photo No:** 25 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbine Area | | |
| **Description:** Excavation is for Cabling<br><br>The area has been cleared by Forestry department and work is executed by UWE | | |

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| **Photo No:** 26 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** T40 Area | | |
| **Description:** Erection Activities<br><br>Access to Site is restricted due to crane operation at the turbine site<br>Safety signs available<br>Staff has PPE.<br>Safety expert was on field. | | |

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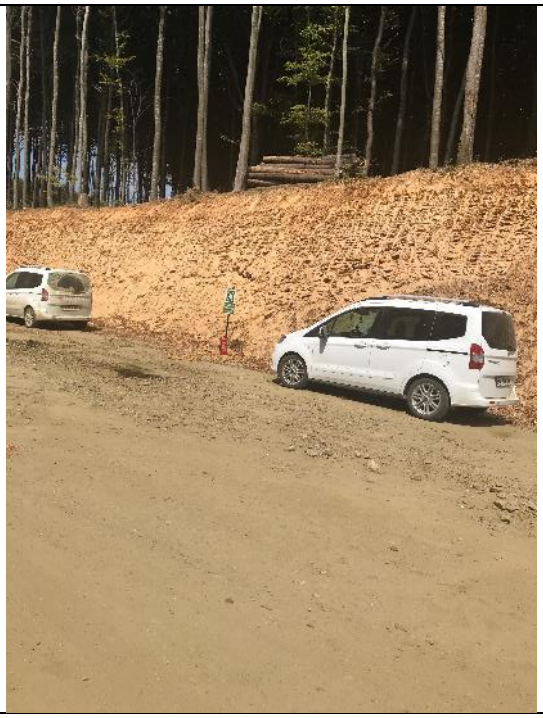
| **Photo No:** 27 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Turbine Area | | |
| **Description:** Assembly point is determined at each turbine area where work continues<br>Portable fire extinguisher is available. | | |

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| **Photo No:** 28 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Transmission Line Corridor | | |
| **Description:** Transmission Line Corridor was opened as one of the first items of the project.<br><br>The work was tendered to Güngör Elektrik by the authority. | | |

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| **Photo No:** 29 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Turbine T 36 Site | | |
| **Description:** The work ongoing at the turbine area is limited to small area<br><br>Safety signs are posted on the turbine<br><br>No waste is spread to area even though there is wind.<br><br>As an improvement generator, etc. which has fuel shall be stored with containment even at construction sites. | | |

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| **Photo No:** 30 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** T6 Area | | |
| **Description:** Foundation Excavation<br><br>Dust level is observed to be controlled | | |

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| **Photo No:** 31 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** T16 Site | | |
| **Description:** Foundation Steel Work<br><br>Staff Uses PPE<br>Construction Equipment have periodical maintenance form<br>Number of portable extinguishers can be increased as a best practice. | | |

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| **Photo No:** 32 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Access Roads | | |
| **Description:** Water spraying on the roads | | |

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| **Photo No:** 33 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Fire Alarm Panel<br><br>The system was tested through the push button. Staff has problem to reset the panel. Zones seem to be defined on the panel.<br><br>Training has been given. Refreshing classes for future is also important.<br><br>Periodical maintenance of the system shall be carried out. (Staff has been trained on the system) | | |

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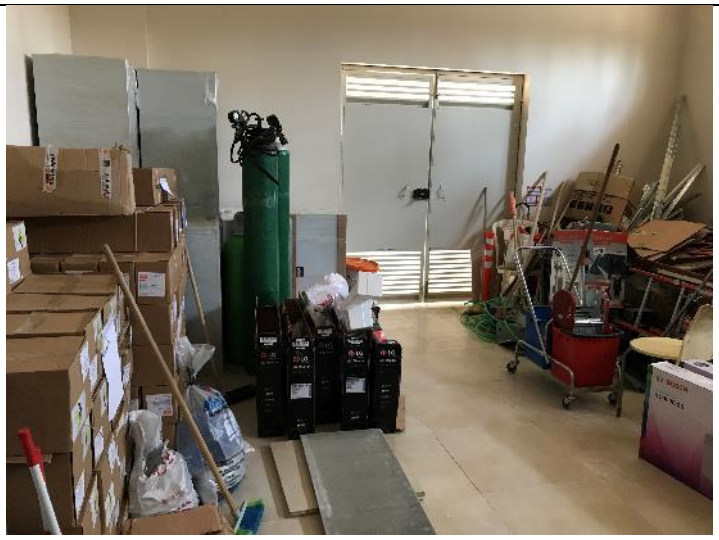
| **Photo No:** 34 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Workshop<br><br>The room needs to be organized. All equipment and goods shall have a designated storage area. Access to fire extinguisher shall not be prevented at any time. Pressurized cylinders shall have a designated area for life and fire safety where they are kept chained.<br>(The room is partially organized waiting for the rack system to arrive. The pressurized cylinders have been removed.) | | |

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| **Photo No:** 35 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Safety Notices | | |

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| **Photo No:** 36 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Consumption Water Tank<br><br>The area shall be organized.<br>The tank shall have a proper platform and ladder to empty water bottles to the tank. Water is purchased bottled due to ease of supply.<br>Opening at the floor of the room (to the right of the room) shall have a cap<br>Room shall be kept clean | | |

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| **Photo No:** 37 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Emergency Generator<br>On concrete floor with Containment<br><br>There is a portable extinguisher. Location of extinguisher shall be considered to be changed due to ease of access.<br><br>Barrels have been removed. | | |

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| **Photo No:** 38 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:**<br>Switchyard Area<br>Control Room/Administration Building | | |
| **Description:**<br>Septic tank | | |

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|---|---|---|
| **Photo No:** 39 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Switchyard Area | | |
| **Description:**<br><br>Drums are from the oil in the transformers.<br><br>These are stored on gravel area to be used in case of need to empty the transformer oil. The drainage of the gravel area shall be controlled to prevent any damages due to leakage.<br><br>In addition, there are wood pallets and other goods stored in the area. They shall be removed from the area due to fire safety.<br><br>(Area has been organized. Barrels have removed) | | |

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| **Photo No:** 40 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Switchyard Area | | |
| **Description:**<br>Nordex Camp Site<br><br>There is a sign for portable fire extinguisher, but the extinguisher is missing.<br><br>The sign shall not be posted on trees. | | |

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| **Photo No:** 41 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Transmission Line Corridor | | |
| **Description:** View of transmission line corridor and Binkılıç | | |

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|---|---|---|
| **Photo No:** 42 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Transmission Line Corridor | | |
| **Description:** Transmission Line and Turbines | | |

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|---|---|---|
| **Photo No:** 43 | **Date:** 01/09/2021 |  |
| **The Site Photo Taken:** Access Road | | |
| **Description:** Drainage for Rain Water<br><br>The channels shall be kept open and clean during operation.<br><br>Drainage channel work is ongoing. | | |

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| **Photo No:** 44 | **Date:** 27/08/2021 |  |
| **The Site Photo Taken:** Switchyard Area<br>Control Room/Administration Building | | |
| **Description:** Control room<br>Exit sign available in the building | | |

## 11.3. Annex III: EIA Approvals

T.C.
ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

**ÇED OLUMLU BELGESİ**

25/11/2014 tarihli ve 29186 sayılı Resmi Gazete 'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin Geçici 1. Maddesi gereğince; **"İSTANBUL RÜZGAR ENERJİ SANTRALİ (100 adet türbinli 200MWe kurulu gücünde)"** projesi hakkında **"Çevresel Etki Değerlendirmesi Olumlu"** kararı verilmiştir.

M. Mustafa SATILMIŞ
Bakan a.
Genel Müdür

Karar Tarihi: 30.06.2015
Karar No : 3923
Proje Sahibi: Universal Wind Enerji Elektrik Üretim A.Ş.
Proje Yeri : İstanbul İli, Çatalca İlçesi, Çifttepe, Yaylatepe, Kirazçukuru Mevkii

T.C.
ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

Sayı :48331039-220.01-E.160744 12.07.2019
Konu :İstanbul RES projesi.

UNİVERSAL WİND ENERJİ A.ŞNE

İlgi : a) 02.07.2019 tarihli ve U.19/21 sayılı yazınız.
b) 01.04.2019 tarihli ve 48331039-220.01-E.75225 sayılı yazımız.

İlgi (a) yazı ile İstanbul İli, Çatalca İlçesi sınırları içerisinde şirketiniz tarafından yapılması planlanan İstanbul RES projesi hakkında Bakanlığımızca 30/06/2015 tarih ve 3923 nolu ÇED Olumlu kararı verildiği, akabinde EPDK tarafından 28/02/2019 tarihinde ÖN/8451-10/04187 lisans numarası ile Ön Lisans verildiği, söz konusu proje kapsamında planlanan değişikliğin (türbin modelinde, kurulu güçte ve koordinatlarda) Bakanlığımız tarafından, ilgi (b) yazı ile uygun görüldüğü belirtilerek, proje kapsamında inşa edilmesi planlanan 50 adet türbin için açılması planlanan 42,453 m (santral sahasına ulaşım ve servis yolu)'lik yol ile ilgili önceleri 5 m olarak öngörülen genişliğin, daha uzun kanat çapına sahip yeni nesil türbinler için yeterli olmayacağı belirtilerek, bu genişliğin 15 metreye kadar çıkabileceği ifade edilmekte ve ilave yol genişliğinden kaynaklanacak hafriyat miktarı hesabına yer verilmektedir. Yazının devamında, şalt sahası için seçilen alanın DSİ tarafından planlanmakta olan Karamandere Barajının mutlak mesafeli koruma bandında olmasından ötürü taşınması zorunluluğunun ortaya çıktığı belirtilerek, projede planlanan söz konusu değişikliklerin ÇED Yönetmeliği kapsamında değerlendirilmesi talep edilmektedir.

İlgi (a) yazı ekleri, ilgi (b) yazı ile uygun bulunan proje değişikliğine ilişkin Bakanlığımıza sunulan bilgi ve belgeler çerçevesinde incelenmiş olup, santral alanı ulaşım yolu ve servis yollarından kaynaklı oluşacak hafriyat miktarının Nihai ÇED Raporunda belirtilen taahhütlere ilave bir yük getirmeyeceği, şalt sahasının yeni koordinatlarının da 30/06/2015 tarihli ÇED Olumlu kararına konu Nihai ÇED Raporunda belirtilen ÇED alanı içerisinde yer aldığı anlaşıldığından, bununla birlikte proje kapsamında açılması planlanan yollarda yapılacak olan genişleme çalışmaları da 25.11.2014 tarihli ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren ÇED Yönetmeliğinin *(Değişik: 26/05/2017 tarih ve 30077 sayılı R.G.)* ek listelerinde yer almadığından, İstanbul RES (200 MWe/240 MWm) projesinde planlanan değişiklikler hakkında ÇED Yönetmeliği kapsamında herhangi bir işlem yapılmasına gerek bulunmamaktadır.

Bilgilerinizi ve gereğini rica ederim.

ASLI GİBİDİR
Ercan AYDEMİR
Orman İşletme Şefi

e-imzalıdır
Ercan GÜLAY
Bakan a.
Genel Müdür V.

Ek : Şalt sahası yeni koordinatları (1 sf).

BELGENİN ASLI ELEKTRONİK İMZALIDIR.
...../...../20..... 17 Temmuz 2019
Erol BARIŞ

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.
Evrak Doğrulama Kodu : MHFIHDTGIQCWCMOQPVE Evrak Takip Adresi: https://www.turkiye.gov.tr/cevre-ve-sehircilik-bakanligi
Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km No:278
Çankaya /ANKARA Telefon No: (0312) 410 10 00 Faks:(0312) 419 21 92

Bilgi için:Selcen GÖRDÜK
Kimyager

T.C.
ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

Sayı :48331039-220.01-E.75225 01.04.2019
Konu :İstanbul RES türbin değişikliği hk.ÇED görüşü.

DAĞITIM YERLERİNE

İlgi : Universal Wind Elektrik Üretim A.Ş.' nin 18.03.2018 tarih ve U.19/08 sayılı yazısı.

İlgi yazı ile İstanbul İli, Çatalca İlçesi sınırları içerisinde Universal Wind Enerji Elektrik Üretim A. Ş. tarafından yapılması planlanan "İstanbul RES (200 MWe/MWm-100 türbin)" projesi hakkında Bakanlığımızca 30/06/2015 tarih ve 3923 karar nolu ÇED Olumlu kararının verildiği, söz konusu projenin kurulu gücünün 200 MWe/240 MWm şeklinde revize edilerek Enerji Piyasası Düzenleme Kurumu (EPDK)'nca 28/02/2019 tarihinde önlisans verildiği, bahse konu revizeyle her biri 2 MW olan 100 adet türbin sayısının her biri 4 MWe/4,8 MWm olan 50 adet türbine düşürülmesiyle, daha önceki ÇED kararına esas üretim lisans sahasının sınırlarında küçültülmeye gidildiği, böylece projenin üretim lisans sahasının 7.388 ha'dan 3.430 ha'ya, türbin sayısının 100 adetden 50 adede, orman arazisinde açılacak yollar ve türbinler arası yeraltı kablolama mesafelerinin de bu oranda düşecek olmasıyla birlikte projenin çevresel etkilerinin de azalacağı ifade edilerek, projenin kurulu gücünün 200 MWe/240 MWm olması yönünde planlanan değişikliğin ÇED Yönetmeliği kapsamında değerlendirilmesi talep edilmektedir.

İlgi yazı ve eklerinde sunulan 1/25 000 ölçekli topografik harita (projenin eski ve yeni durumuna göre türbinlerin işaretlendiği), Eski ve yeni türbin koordinatlarının verildiği liste, eski türbinlerin yenileri ile kıyaslandığı tablo ve kurulu güç artışına konu gerekçeleri de içeren ve mevcut durum ile planlanan durum arasındaki çevresel etkileri ve önlemleri karşılaştıran Teknik Rapor, İstanbul RES (200 MWe/MWm" projesi hakkında Bakanlığımızca verilen 30.06.2015 tarih ve 3923 karar nolu ÇED Olumlu kararına konu Nihai ÇED Raporu ve ekleri ile birlikte bütüncül olarak incelenip değerlendirildiğinde;

- Nihai ÇED Raporunda mevcut Proje kapsamında türbinlerin (100 adet) taşınması için ve türbinler arası ulaşımı sağlamak için yaklaşık 61.000 m uzunluğunda ve 5 m genişliğinde yol yapılacağı belirtilmişken, yeni durumda (50 adet türbin için) türbinlere ve şalt merkezine ulaşım için mevcut yollarda yapılacak iyileştirme ve genişletmeler dahil olmak üzere 5 m genişliğinde yaklaşık 42.453 m santral alanı ulaşım yolu ve servis yollarının açılacağı, **planlanan yeni durumda yol uzunluğunun yaklaşık 20 km kısalacağı,**

- Nihai ÇED Raporunda yüzeyden 65.250 m3 olarak sıyrılacağı belirtilen bitkisel toprağın 47.453 m3 olacağı, **planlanan yeni durumda bitkisel toprak miktarında düşüş meydana geldiği,**



Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km No:278
Çankaya /ANKARA Telefon No: (0312) 410 10 00 Faks:(0312) 419 21 92

Bilgi için:Selcen GÖRDÜK
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ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

Sayı :48331039-220.01-E.75225 01.04.2019
Konu :İstanbul RES türbin değişikliği hk.ÇED görüşü.

- Nihai ÇED Raporunda, 188.125 m3 olarak hesaplanan hafriyat miktarının yeni duruma göre 131.132,5 m3 olarak hesaplandığı ve **hafriyat miktarında da azalma olacağı,**

- Nihai ÇED Raporunda toz emisyon miktarının 1,69 kg/saat bulunduğu ve "Sanayi Kaynaklı Hava Kirliliği Yönetmeliğindeki 1 kg/saat sınırının üzerinde olduğu için toz dağılım modellemesinin yapıldığı, yeni durumda toz emisyon miktarının 0,47 kg/saat hesaplandığı ve Yönetmelikteki 1 kg/saat sınırının altında kaldığından, **toz emisyon miktarında düşüş söz konusu olacağı,**

- Nihai ÇED Raporunda, 100 türbin ile planlanan projenin gürültü değerlerinin, 500 m'den itibaren Çevresel Gürültünün Değerlendirilmesi ve Yönetimi Yönetmeliği'nde belirtilen sınır değerleri (Lgündüz 70 dBA, Lakşam 65 dBA, Lgece 60 dBA) sağlamakta olduğu belirtilirken, yeni durum için (50 türbin) 300 m'den itibaren Yönetmelik sınır değerlerinin (Lgündüz 70 dBA, Lakşam 65 dBA, Lgece 60 dBA) sağlanacağı, dolayısıyla işletme aşamasında oluşacak **gürültü miktarında da düşüş söz konusu olacağı**

- ÇED Olumlu kararına esas proje inceleme alanında (lisans sahasında), her biri 2,0 MWe/2,0MWm'lık güçte (Enercon E82 model) 100 adet türbin yerine, her biri 4,0MWe/4,8MWm'lık güçte (Nordex N133/4,8 model) 50 adet türbin kullanılarak türbin koordinatlarının değiştiği, elektriksel güçte değişikliğe gidilmeden projenin mekanik gücünde 40MWm'lık bir artış olacağı anlaşılmıştır.

Bilindiği üzere; ÇED Yönetmeliği'nin 24. Maddesi'nin (d) bendinde "*Teknoloji değişikliği uygulamak suretiyle, verim artırımına, doğal kaynak kullanımını azaltmaya ve/veya çevre kirliliğini azaltmaya yönelik yapılmak istenilen değişiklikler veya prototip üretim yapan projeler*" hükmü yer almaktadır.

Bu itibarla, projenin üretim lisans sahasının 7.388 ha'dan 3.430 ha'ya düşmesi, türbin sayısının 100 adetden 50 adede, orman arazisinde açılacak yollar ve türbinler arası yeraltı kablolama mesafelerinin de bu oranda düşmesi, bu kapsamda projenin çevresel etkilerinin de azalmış olması, dolayısıyla **proje kapsamındaki doğal kaynak kullanımı azaltılarak, birim ünite başına üretilecek olan enerji miktarının arttırılacak olması nedenleriyle,** "İstanbul RES (200 MWe/MWm-100 türbin)" projesi hakkında Bakanlığımızca verilen 30/06/2015 tarihli "ÇED Olumlu" kararına konu Nihai ÇED Raporunda yer alan çevresel önlem ve taahhütler saklı kalmak koşulu ile projede planlanan teknoloji değişikliği suretiyle meydana gelen verim artırımı neticesinde proje gücünün 200 MWe/200MWm'den (100 adet Türbin), 200MWe/240MWm'ye (50



Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km No:278
Çankaya /ANKARA Telefon No: (0312) 410 10 00 Faks:(0312) 419 21 92

Bilgi için:Selcen GÖRDÜK
Kimyager

T.C.
ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

Sayı :48331039-220.01-E.75225 01.04.2019
Konu :İstanbul RES türbin değişikliği hk.ÇED görüşü.

adet Türbin) dönüşmesi, türbin koordinatlarındaki değişiklik ve 40MWm'lık güç artışına konu proje değişikliği, ÇED Yönetmeliği'nin 24. Maddesi'nin (d) bendi kapsamında değerlendirilmiş ve Bakanlığımızca uygun görülmüş olup, söz konusu değişiklik hakkında ÇED Yönetmeliği hükümlerinin uygulanmasına gerek bulunmamaktadır.

Diğer taraftan söz konusu proje değişikliği ile ilgili olarak 5491 sayılı Kanunla Değişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi gerekmektedir.

Bilgilerinizi ve gereğini rica ederim.

e-imzalıdır
Ercan GÜLAY
Bakan a.
Genel Müdür V.

Ek :
1 - Koordinat Listesi (eski ve yeni türbin yerleri)
2 - İstanbul RES projesine ait 1/25 000 ölçekli topografik harita (projenin eski ve yeni halinin gösterimi)
3 - Eski ve yeni türbin koordinatları, (KML, KMZ dosyası, 1 adet CD).
4 - Proje Değişikliği hakkında Teknik Rapor

Dağıtım:
Gereği:
UNİVERSAL WİND ENERJİ A.ŞNE(Ekler konulmadı)
Ehlibeyt Mah. 1259 Sk. 7/1 Balgat
Çankaya/ANKARA

Bilgi:
İSTANBUL VALİLİĞİNE
(Çevre ve Şehircilik İl Müdürlüğü) (Ek-3 konulmadı)
ÇEVRE ENVANTERİ VE BİLGİ YÖNETİMİ DAİRESİ BAŞKANLIĞINA (Ek-1 konulmadı, Ek-2 konulmadı, Ek-4 konulmadı)
ÇED İZLEME VE ÇEVRE DENETİMİ DAİRESİ BAŞKANLIĞINA(Ekler konulmadı)

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km No:278
Çankaya /ANKARA Telefon No: (0312) 410 10 00 Faks:(0312) 419 21 92
Bilgi için:Selcen GÖRDÜK
Kimyager

T.C.
ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

Sayı : 48331039-220.01-E.181825 02.09.2020

Konu : İstanbul RES türbin değişikliği hk.ÇED görüşü.

UNİVERSAL WİND ENERJİ A.ŞNE
Ehlibeyt Mah. 1259 Sk. 7/1 Balgat Çankaya/ANKARA

İlgi : a) Universal Wind Elk. Ürt. A.Ş.'nin 18.03.2018 tarihli ve U.19/08 sayılı yazısı.
b) 01.04.2019 tarihli ve 48331039-220.01-E.75225 sayılı yazımız.
c) Universal Wind Elk. Ürt. A.Ş.'nin 26.08.2020 tarihli ve U.20/27 sayılı yazısı.

İlgi (a) yazı ile; İstanbul İli, Çatalca İlçesi sınırları içerisinde Universal Wind Enerji Elektrik Üretim A. Ş. tarafından yapılması planlanan "İstanbul RES (200MWe/MWm-100 türbin)" projesi hakkında Bakanlığımızca 30/06/2015 tarih ve 3923 karar nolu ÇED Olumlu kararının verildiği, söz konusu projenin kurulu gücünün 200MWe/240 MWm şeklinde revize edilerek Enerji Piyasası Düzenleme Kurumu (EPDK)'nca 28/02/2019 tarihinde önlisans verildiği, bahse konu revizeyle her biri 2 MW olan 100 adet türbin sayısının her biri 4 MWe/4,8 MWm olan 50 adet türbine düşürülmesiyle, daha önceki ÇED kararına esas üretim lisans sahasının sınırlarında küçültülmeye gidildiği, böylece projenin üretim lisans sahasının 7.388 ha'dan 3.430 ha'ya, türbin sayısının 100 adetden 50 adede, orman arazisinde açılacak yollar ve türbinler arası yeraltı kablolama mesafelerinin de bu oranda düşecek olmasıyla birlikte projenin çevresel etkilerinin de azalacağı ifade edilerek, projenin kurulu gücünün 200 MWe/240 MWm olması yönünde planlanan değişikliğin ÇED Yönetmeliği kapsamında değerlendirilmesi talep edilmiştir.

İlgi (b) yazı ile; ilgi (a) yazı ve eklerinde sunulan 1/25 000 ölçekli topografik harita (projenin eski ve yeni durumuna göre türbinlerin işaretlendiği), eski ve yeni türbin koordinatlarının verildiği liste, eski türbinlerin yenileri ile kıyaslandığı tablo ve kurulu güç artışına konu gerekçeleri de içeren ve mevcut durum ile planlanan durum arasındaki çevresel etkileri ve önlemleri karşılaştıran Teknik Rapor, "İstanbul RES (200MWe/MWm" projesi hakkında Bakanlığımızca verilen 30.06.2015 tarih ve 3923 karar nolu ÇED Olumlu kararına konu Nihai ÇED Raporu ve ekleri ile birlikte bütüncül olarak incelenip değerlendirildiğinde projenin üretim lisans sahasının 7.388 ha'dan 3.430 ha'ya düşmesi, türbin sayısının 100 adetden 50 adede, orman arazisinde açılacak yollar ve türbinler arası yeraltı kablolama mesafelerinin de bu oranda düşmesi, bu kapsamda projenin çevresel etkilerinin de azalmış olması, dolayısıyla **proje kapsamındaki doğal kaynak kullanımı azaltılarak, birim ünite başına üretilecek olan enerji miktarının arttırılacak olması nedenleriyle**, 30/06/2015 tarihli "ÇED Olumlu" kararına konu Nihai ÇED Raporunda yer alan çevresel önlem ve taahhütler saklı kalmak koşulu ile projede planlanan teknoloji değişikliği suretiyle meydana

gelen verim artırımı neticesinde proje gücünün 200 MWe/200MWm'den (100 adet Türbin), 200MWe/240MWm'ye (50 adet Türbin) dönüşmesi, türbin koordinatlarındaki değişiklik ve 40MWm'lık güç artışına konu proje değişikliği, ÇED Yönetmeliği'nin 24. Maddesi'nin (d) bendi kapsamında değerlendirilerek, söz konusu değişiklik hakkında ÇED Yönetmeliği hükümlerinin uygulanmasına gerek bulunmadığı belirtilmiştir.

İlgi (c) yazı ile; bu defa "İstanbul RES" projesinin kurulu gücünün 200MWe/211,2MWm şeklinde revize edilmesinin planlandığı, söz konusu proje revizyonun Enerji Piyasası Düzenleme Kurumu (EPDK)'nca 13/08/2020 tarihili ve 9490-17 sayı ile kurul kararı ile uygun bulunduğu, yeni duruma göre, ilgi (b) yazımız ile uygun bulunan proje revizyonunda her biri 4MWe/4,8MWm olan 50 adet türbin yerine, 4,55MWe/4,8MWm olan 43 adet türbin ve 4,35MWe/4,8MWm'lık 1 adet türbin kullanılacağı belirtilerek, projenin kurulu gücünün 200MWe/211,2MWm olması yönünde planlanan değişikliğin ÇED Yönetmeliği kapsamında değerlendirilmesi talep edilmiştir.

Bilindiği üzere; ÇED Yönetmeliği'nin 24. Maddesi'nin (d) bendinde "*Teknoloji değişikliği uygulamak suretiyle, verim artırımına, doğal kaynak kullanımını azaltmaya ve/veya çevre kirliliğini azaltmaya yönelik yapılmak istenilen değişiklikler veya prototip üretim yapan projeler*" hükmü yer almaktadır.

İlgi yazılar ve eklerinde sunulan 1/25 000 ölçekli topografik harita (projenin eski ve yeni durumuna göre türbinlerin işaretlendiği), eski ve yeni türbin koordinatlarının verildiği liste, eski türbinlerin yenileri ile kıyaslandığı tablo ve İstanbul RES (200MWe/MWm" projesi hakkında Bakanlığımızca verilen 30.06.2015 tarih ve 3923 karar nolu ÇED Olumlu kararına konu Nihai ÇED Raporu ve ekleri ile birlikte bütüncül olarak incelenip değerlendirildiğinde; üretim lisans sahasının, ÇED kararındaki duruma göre; 7.388 ha'dan 2.640 ha'ya düşmesi, türbin sayısının 100 adetden 44 adede, orman arazisinde açılacak yollar ve türbinler arası yeraltı kablolama mesafelerinin de bu oranda düşmesi, bu kapsamda projenin çevresel etkilerinin de azalmış olması, dolayısıyla **proje kapsamındaki doğal kaynak kullanımı azaltılarak, birim ünite başına üretilecek olan enerji miktarının arttırılacak olması nedenleriyle**, "İstanbul RES (200 MWe/MWm-100 türbin)" projesi hakkında Bakanlığımızca verilen 30/06/2015 tarihli "ÇED Olumlu" kararına konu Nihai ÇED Raporunda yer alan çevresel önlem ve taahhütler saklı kalmak koşulu ile projede planlanan teknoloji değişikliği suretiyle meydana gelen verim artırımı neticesinde proje gücünün ÇED karaına göre 200MWe/200MWm'den (100 adet Türbin), 200MWe/211,2MWm'ye (44 adet Türbin), [ilgi (b) uygunluk yazımıza göre de 50 türbin-240 MWm/200 MWe'den, 44 türbin-212 MWm/200 MWe'ye] dönüşmesi şeklindeki kurulu güç revizyonu, ÇED Yönetmeliği'nin 24. Maddesi'nin (d) bendi kapsamında değerlendirilmiş ve Bakanlığımızca uygun görülmüş olup, 30/06/2015 tarihli "ÇED Olumlu" kararı proje revizyonu içinde geçerli olduğundan, söz konusu değişiklik hakkında ÇED Yönetmeliği hükümlerinin uygulanmasına gerek bulunmamaktadır.

Diğer taraftan söz konusu proje değişikliği ile ilgili olarak 5491 sayılı Kanunla Değişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi gerekmektedir.

Bilgilerinizi ve gereğini rica ederim.

e-imzalıdır


Mustafa Kemal Mahallesi Eskişehir Devlet Yolu (Dumlupınar Bulvarı) 9. km
No:278 Çankaya /ANKARA Telefon No: (0312) 410 10 00 Faks:(0312) 419 1 92
Bilgi için:Selcen GÖRDÜK
Kimyager

## 11.4. Annex IV. Scala Used for Visual Impact Assessment and Sample Outcomes

| Sensitivity | Description |
|---|---|
| High | Touristic and recreational areas, and ecologically important and preserved areas as well as educational, cultural areas, healthcare centers, and camping areas |
| Medium | Dwellings, seasonal settlements, public facilities/areas, workplaces, small office buildings and commercial structures |
| Low | Industrial areas, access/main roads, main/major roads |
| Negligible | Landfills, animal shelters, areas for commercial and temporary usage, lodges and temporary settlements (infrastrusture and superstructure construction sites, etc.) |

| Nature of Effect | Sensitivity or Value of Receptor | | | |
|---|---|---|---|---|
| | High | Medium | Low | Negligible |
| High | Very Substantial | Substantial | Moderate | Not Significant |
| Medium | Substantial | Moderate | Slight | Not Significant |
| Low | Moderate | Slight | Slight | Not Significant |
| Negligible | Not Significant | Not Significant | Not Significant | Not Significant |

| Viewpoint Code | Viewpoint | Latitude | Longitude | Elevation (m) | View Angle (Degree) | View Direction | The Nearest Turbine (Planned) | Distance to the Nearest Turbine (m) | Classification of the Receptor | | | | | | | Visibility Rate (0-6) | Visual Sensitivity of Receptor | Nature of Effect | Impact Significance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Settlement | Seasonal Settlement | Main /Major Road | Access/Minor Road | Touristic Area | Outdoor Recreation Areas | Religious/ Cultural | Public Facilities/Areas | | | | |
| VP-0001 | Aydınlar Neighborhood | 41.372021 | 28.205444 | 204 | 30 | N | T12 | 5161 | X | | x | | | | | | 3 | Medium | Medium | Moderate |
| VP-0002 | Fatih Neighborhood | 41.431412 | 28.105508 | 165 | 110 | E | T34 | 4893 | X | | X | | | | | | 0 | Medium | Negligible | Not Significant |
| VP-0003 | Karamandere Neighborhood | 41.377380 | 28.298478 | 45 | 340 | N | T22 | 4834 | X | | | | | | | | 0 | Medium | Negligible | Not Significant |
| VP-0004 | Karacaköy Neighborhood | 41.404803 | 28.375357 | 20 | 275 | W | T1 | 7071 | X | | | | | | | | 0 | Medium | Negligible | Not Significant |


Viewpoint Impact Assessment of Istanbul Wind Power Plant
Viewpoint Information
Viewpoint No/Code : VP-01
Location : Aydınlar Village
Geographic Coordinates : 41.372000 28.205495
Elevation (From Sea Level) : 204 m
View Direction : 10°
Photo Taken Date : 16 September 2021
Proposed Turbines Information
Hub Height : 125 m
Rotor Diameter : 133.2 m
Number of Planned Turbine : 44
Existing Turbines : 0
Predicted Turbine Visibility
Number of Turbine Hubs Visible : 30
Number of Turbine Tips Visible : 35
Nearest Planned Turbine : T12
Nearest Turbine Distance : 5161 m
Camera / Wideframe
Height Above Ground : 1.6 m
Camera Model and Lens : Sony A6000 / 50mm
Panorama Angle : Horizontal 180° x Vertical 75°
Legend
Turbine of Cumulative Projects
Constructed Turbine of Project
Turbines Under Construction
Visual Sensitivity of Receptor
Visibility Rate
At the viewpoint, abundant vegetation and cultivated land is dominant in the region although there are settlements. These settlements represent the sensitive receptors and the general view from the viewpoint.
Magnitude of change
Some of the turbines are already constructed and visible from a distance, but the visibility of some turbines is obstructed by trees. The climatic conditions also affect the visibility of the turbines. As a result, it is expected that the planned turbines will cause slight change in visual perception.
0
1
2
3
4
5
6
Impact Significance Matrix
Nature of Effect
Sensitivity or Value of Receptor
High
Medium
Low
Negligible
High
Very Substantial
Substantial
Moderate
Not Significant
Medium
Substantial
Moderate
Slight
Not Significant
Low
Moderate
Slight
Slight
Not Significant
Negligible
Not Significant
Not Significant
Not Significant
Not Significant
Impact Significance
Visual Sensitivity of Receptor
Magnitude of change
Impact Significance
Medium
Medium
Moderate
MACOM
ENVIRONMENT & ENERGY
www.macom.com.tr
Existing View
T2,T3,T4,T5,T6,T7,T8,T10,T11,T12,T13,T14,T15,T16,T19,T20,T21,T22,T23,T25,T27,T29,T31,T33,T34,T35,T36,T37,T38,T39,T40,T41,T42,T43,T44
Turbines will be visible when construction stage is completed on this viewshed
Photomontage & Zoom View

Riskonet Danışmanlık ve Eğitim Ltd. Şti.
FSM. Mah. Poligon Sok. Buyaka İş Kulesi
Kule 3 D.1, 2, 3, 4 Ümraniye İstanbul
Turkey
Info-tr@riskonet.com