



SAGANAK ENERJİ

**SAGANAK ENERJİ YATIRIM
URETİM VE TİCARET A.Ş.**

KANDIRA WIND POWER PLANT

**TRAFFIC
MANAGEMENT PLAN**

DECEMBER 2020

 **encon**

REVISION HISTORY

| Ver | Date of Issue | Issue Reason | Description of Change | Prepared by | Approved by |
|------------|----------------------|--------------------------------|------------------------------|--------------------|--------------------|
| 0 | 06.10.2020 | First submission | - | OO | HC |
| 1 | 30.12.2020 | Incorporation of TKYB comments | Chapter 1 Section 2.2 | OO | HC |
| | | | | | |

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ABBREVIATIONS

| | |
|--|--|
| AIIB | Asian Infrastructure Investment Bank |
| EHS | Environmental, Health, and Safety |
| ESAP | Environmental and Social Action Plan |
| ESF | Environmental and Social Framework |
| ESS | Environmental and Social Standards |
| GIIP | Good International Industry Practices |
| HSE-Q | Health, Safety, and Environment - Quality |
| IFC | International Finance Corporation |
| IFIs | International Finance Institutions |
| OHS | Occupational Health and Safety |
| Plan or TMP | Traffic Management Plan |
| PPF | Project Presentation File |
| Project | Kandira Wind Power Plant |
| PSs | Performance Standards |
| Saganak Owner or Project | Saganak Enerji Yatırım Üretim ve Ticaret A.Ş |
| WPP | Wind Power Plant |

1. PURPOSE AND SCOPE

The Traffic Management Plan (“the Plan” or “TMP”) has been developed in accordance with Saganak Enerji Yatırım Üretim ve Ticaret A.Ş. (hereinafter referred to as “Saganak” or “the Project Owner”) policies, with the commitments undertaken by Saganak in the Environmental and Social Action Plan (ESAP) prepared for the Kandira Wind Power Plant (WPP) Project (“the Project”), with Turkish regulatory framework, with International Finance Corporation (IFC) Performance Standards (PSs) with IFC General and Sector Specific Environment, Health and Safety (EHS) Guidelines and Asian Infrastructure Investment Bank’s (AIIB) Environmental and Social Framework (ESF). Where no national regulation, IFC standard/guideline or AIIB standard applies, the Plan considers the adoption of Good International Industry Practices (GIIP).

1.1 Purpose

The general purpose of this TMP is to describe various measures to avoid adverse impacts arising from traffic and transport related risks on the health and safety of both Project employees and community during the construction and operation phases of the Project.

The main aim is to maintain traffic safety of the road and to prevent risks that may arise due to increase in existing traffic load around the Project site and transportation of turbines from manufacturer to the Project site. The risks related to the latter one are majorly concerns of the construction phase.

1.2 Scope

This Plan provides necessary means and measures to achieve goals of the Project. These assessments/measures are applicable to all Project personnel, contractors, subcontractors and the general public (including any governmental authority or similar site visitors) and cover all phases of the Project.

This Plan will be updated as and when necessary. The scope of the Plan includes the following aspects:

- Legislative requirements and standards
- Roles and responsibilities
- Traffic management
- Monitoring and reporting
- Training
- Review and update

2. LEGISLATIVE REQUIREMENTS and STANDARDS

2.1 National Legislation

Turkish Legislation that the Project will comply with are given below:

- Regulation on Control of Exhaust Gas Emission and Quality of Fuel and Diesel
- Labor Law No. 4857
- Regulation on Decreasing the Ozone Depleting Materials
- Regulation on Reduction of Sulphur Content of Some Fuel Types
- Regulation on Monitoring Green House Gas Emissions
- Regulation on Control of Excavation Soil and Construction Debris
- Regulation on the Transportation of Hazardous Goods by Road
- Regulation on Preparation and Distribution of Material Safety Data Sheets on Hazardous Materials and Aids.
- Regulation on Evaluation and Management of Environmental Noise
- Regulation on Personnel Protective Equipment
- Regulation on Procedures and Principles of Health and Safety Training for Employees
- Regulation on Use of Personnel Protective Equipment in Workplaces
- Regulation on Health and Safety Signs
- Traffic Law
- Regulation on Highway Traffic
- Regulation on Traffic Signs

2.2 International Standards

Applicable International Finance Institutions (IFIs) standards and guideline requirements for the traffic management are provided in the following references:

- IFC PSs
- IFC General Environmental, Health, and Safety (EHS) Guidelines
- IFC General EHS Guidelines: Occupational Health and Safety
- IFC General EHS Guidelines: Community Health and Safety
- IFC General EHS Guidelines: Construction and Decommissioning
- IFC EHS Guidelines for Wind Energy
- AIIB Environmental and Social Framework
- AIIB Environmental and Social Standards (particularly ESS1)

Aforementioned standards and guidelines set a framework to adopt of best guidance for traffic and transport management, and address some aspects of project activities which may have an impact beyond the life of the Project and practices across all aspects of project operations with the goal of preventing infrastructural damages, traffic accidents and minimizing risks on the Project personnel and the community.

3. ROLES AND RESPONSIBILITIES

Managing Director

- Owner and confirmatory of this Plan.
- Ensures sufficient and qualified resources are allocated on an ongoing basis to achieve effective implementation of this Plan.

Project Manager

- Develops, implements, circulates and maintains this Plan.
- Provides sufficient resources to implement the requirements of this Plan.

Administrative Affairs Manager

- Ensures that all employees are aware of, and appropriately trained on the implementation of this Plan.

Construction/Operation Manager

- Complies fully with applicable requirements of this Plan.
- Controls general day-to-day site issues with respect to the movement of “authorized vehicles” within the Project construction area.
- Reports to the Project Manager issues impacting on the implementation of this Plan.

HSE-Q Expert

- Ensures that this Plan is up to date and appropriate to the nature and scale of Saganak.
- Ensures that this Plan is implemented effectively by the contractors and subcontractors.
- Ensures that action/measures and monitoring activities directly under Saganak responsibilities are carried out timely and adequately according to this procedure.
- Proposes to Saganak management, if necessary, amendments and/or updates to this plan and issuing plan revisions.
- Programs and performs inspections and audit activities to ensure the correct implementation of this plan and of the contractors' plans.
- Addresses non-conformities through the definition of preventive/corrective actions.
- Brings major non-conformities immediately to the attention of Saganak management.
- Collects, organizes, and reviews monitoring data and performance monitoring reports and provides summary results of such reports to Saganak management.

Community Liaison Officer

- Logs complaints from members of the public with respect issues covered in the scope of this Plan.

Contractors

- Ensures sufficient and qualified resources are allocated on an ongoing basis to achieve effective implementation of this Plan.

- Ensures the effective implementation of this Plan by issuing its own procedures (e.g. Traffic Management Procedure) addressing, detailing and customizing specific actions, measures and monitoring activities under contractors' responsibility.
- Provides relevant monitoring data and monitoring reports to Saganak as required.
- Stipulates Saganak's policies and standards to any subcontractor for duly implementing requirements.

4. TRAFFIC MANAGEMENT

4.1 General Management Criteria

Project's Project Presentation File (PPF) does not present a thorough assessment on traffic-related risks. This Plan is developed to constitute a systematic and effective Environmental and Social Management System (ESMS) for the Project, while satisfying ESAP requirements and keeping the Project in line with both national and international standards.

All the vehicles used within the scope of the Project will obey the speed limits defined by the Traffic Law No:2918 and Regulation on Highway Traffic. In addition to the national legislation, the Project will also satisfy IFC PSs, AIIB ESSs, and IFC General and Sector-specific EHS Guidelines.

4.2 Site Location and Access

The existing road network around the Project site is presented in Figure 1.

Access to the Project site for all vehicles including abnormal load transport vehicles shall primarily be via Safalı - Hacımazlı Road. All vehicles will enter Safalı - Hacımazlı Road through D020 Kandıra - Sile Road. Construction traffic may pass through Safalı and Hacımazlı villages.

During access to site, care must be taken to ensure that the utilities (e.g. electricity, water, fibre-optic, etc.) is not damaged during the construction period. Necessary correspondences with related authorities and service providers shall be performed prior to construction.

4.3 Upgrade of Local Roads

All programmed upgrade works will be completed in accordance with the *Site & Road Assessment Report* prepared by the turbine provider GE Wind Energy for abnormal load transport needs. Abnormal load is defined as wind turbine blades, nacelles and tower sections. The report is given in the Annex 1 of this Plan. In addition to that, GE Wind "Site Roads and Hardstanding Specifications" will be followed.

Prior to any upgrade works to be performed on local roads, Saganak shall contact relevant municipality and road authorities. The upgrade of local road network might require land acquisition as well as remove and reinstall traffic lights, traffic signs, street furniture, etc. In such case, Saganak shall ensure relevant permits, licenses, title deed and approvals prior to any activity on site. In case of a land acquisition, the guidance of IFC PS5 will be followed in addition to the national legislation.

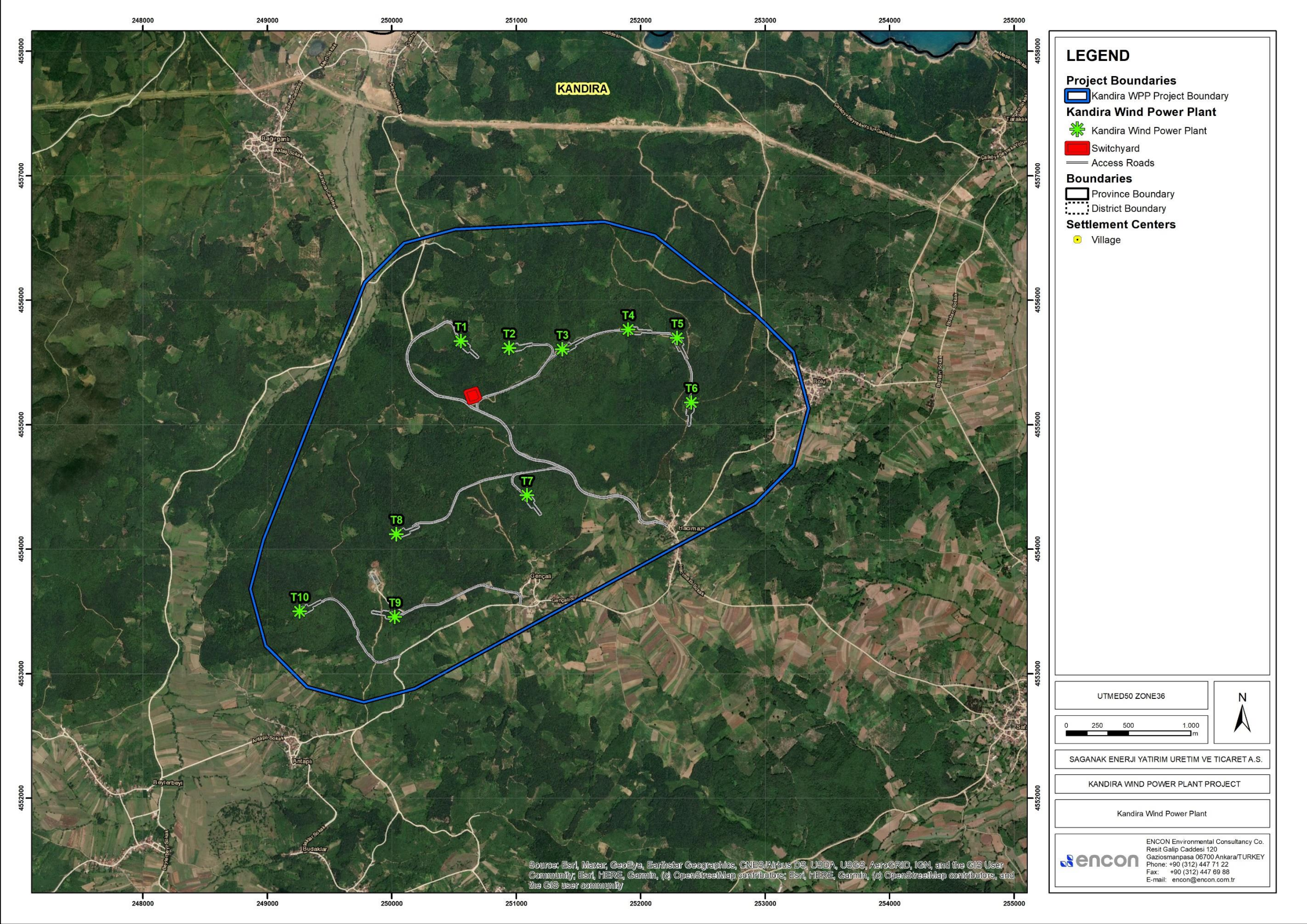


Figure 1 Existing Road Network around the Project Site

4.4 Construction Site Signage

Table 1 shows in detail the traffic management signage that will be erected on the Project construction site.

Table 1 Construction Site Signage

| Typical Signs | Locations |
|---|---|
|  | <p>Warning – Construction Vehicles Installed at site access points</p> |
|  | <p>All visitors must report to site office Installed at site access points</p> |
|  | <p>15 km/h Speed Restriction Sign Installed at construction site access point</p> |
|  | <p>50 km/h Speed Restriction Sign Installed at site access point and along site roadway</p> |
|  | <p>Stop Sign Installed at site road intersections if required</p> |
|  | <p>No Entry Installed at main access</p> |
|  | <p>Parking Sign Installed at entrance to site parking</p> |

4.5 Drivers Code of Conduct

Operators/Drivers needing to access the Project site shall comply the following:

- Access to the Project site for all vehicles shall be via Safalı - Hacımazlı Road.
- Only authorized vehicles are permitted within the Project site. Authorized vehicles are those approved and registered by the Construction/Operation Manager.
- Authorized vehicles parked in the Project site during working hours, must have the keys left in them so that they can be moved if required.
- Vehicles must at all times keep on designated site roads where established. Off-road driving is not permitted other than in emergency situations, or if no roads have been established. Vehicles must not be parked so as to block access roads and tracks.
- Speed limit is 50 km/h in the Project site, 15 km/h in the construction site. Other speed limits as determined by risk assessments to be performed by HSE-Q Expert.
- All persons driving on site shall hold a current driving license for the type of vehicle being driven.
- All drivers shall abide by the rules and regulations in place on the public roads leading to the Project site.
- Limiting/substituting the trips by site personnel carpooling.
- All operators/drivers shall hold the appropriate license/competency to operate/drive.
- Seatbelts must be worn in vehicles and machinery when being operated.
- Use of mobile phones while driving vehicles or machinery is prohibited unless suitable hands free equipment is utilized.
- Vehicles must travel at a safe distance apart with clear visibility.
- Extra care should be taken when driving at dawn or dusk, being particularly watchful for wildlife and livestock.
- Handbrakes must be applied at all times whilst the vehicle is stationary. Where parked on a slope, park across the slope.

4.6 Specific Management Methods and Mitigation Measures

Table 2 details the management methods and mitigation measures/actions identified for traffic management in the construction phase.

For each method and measure/action identified, the table shows:

- The identification code (ID);
- The reference (or source) documents (i.e. EIA, Turkish standard, permits, IFC PSs EHS Guidelines, AIIB ESSs),
- Frequency/timing of the measure/action, as applicable;
- Key Performance Indicator (KPI), if applicable, and related quantitative target or qualitative acceptance criteria; and
- The related responsibility for implementing the measure/action.

For the measures actions where no KPI can be identified will be marked as “N/A” (not applicable). In this case an on/off acceptance criteria will apply; in other words, the acceptance criteria set is a qualitative one, such as “the measure/action has been implemented effectively”.

Table 2 Management Methods and Mitigation Measures

| ID | Reference Doc | Mitigation Action/Measure Description | Freq. or Timing | KPI | Target or Acceptance Criteria | Responsibilities |
|------|---|---|-----------------|-----|---|------------------|
| T-01 | IFC EHS GL IFC PS1 IFC PS2 IFC PS4 AIIB ESS1 | <p>Develop a specific Traffic Management Procedure including, at least the following information:</p> <ul style="list-style-type: none"> Identify in maps and layouts the roads network for the transportation of goods and material to and from Project area to be used. Identify blade lifter transfer points on transportation route. Identify specific areas to be avoided (e.g. because of the presence of sensitive human receptors or residential areas). <p>Implement traffic safety measures for the residents:</p> <ul style="list-style-type: none"> Scheduling of traffic to avoid peak hours on local roads. Adopting best transport safety practices with the goal of preventing traffic accidents and minimizing injuries suffered by project personnel and the public. Emphasizing safety aspects among project drivers; specifically ensure drivers respect speed limits through built areas and urban centres. Regularly maintaining vehicles to minimize potentially serious accidents. | Ongoing | NA | Procedure developed and effectively implemented | Contractor |
| T-02 | IFC EHS GL IFC PS1 IFC PS2 IFC PS4 AIIB ESS1 | <p>The Traffic Management Procedure will include the measures for the minimization of the transportation related safety risks. Nevertheless, following mitigation measures as a minimum will be included in this Management Plan and will be implemented by contractor.</p> <ul style="list-style-type: none"> Community members will be informed and consulted for the location of the crossing points; they will be informed on the health and safety precautions and procedures through consultation meetings. Roads and intersections subject to intense construction traffic will be provided with additional mitigation measures such as traffic control, speed reduction systems, warning signals and informing drivers on such hotspots. Transport during night-time will be avoided to the extent possible in order to prevent road accidents. | Ongoing | NA | Procedure developed and effectively implemented | Contractor |
| T-03 | Official Turkish Reg. Gaz. Num. & Date: 23053, 18/07/1997 | <ul style="list-style-type: none"> Organize staff transportation to reduce the number of vehicles needed to the extent possible. Use traffic control and appropriate signs to highlight warnings and to improve safety especially at intersections and junctions. Use easy-to-read signs to indicate any type of diversion or traffic changes related to Project activities. | Ongoing | NA | Procedure developed and effectively implemented | Contractor |
| T-04 | IFC EHS GL | <p>Ensure that the following measures for industrial vehicle driving and site traffic are in place:</p> <ul style="list-style-type: none"> Ensuring drivers undergo medical surveillance Ensuring moving equipment with restricted rear visibility is outfitted with audible back-up alarms Establishing rights-of-way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks in down position), and control of traffic patterns or direction Restricting the circulation of delivery and private vehicles to defined routes and areas, giving preference to 'one-way' circulation, where appropriate. | Ongoing | NA | All conditions met | Contractor |

| ID | Reference Doc | Mitigation Action/Measure Description | Freq. or Timing | KPI | Target or Acceptance Criteria | Responsibilities |
|-------------|---|---|-----------------|-------------------|---|------------------|
| T-05 | IFC EHS GL IFC PS4 Turkish Reg. Official Gaz. Num. & Date: 23053, 18/07/1997 | <p>Ensure that the following measures for traffic safety are in place:</p> <ul style="list-style-type: none"> Implement safe traffic control measures, such as road signs/flag-persons to warn of dangerous conditions; Emphasizing safety aspects among drivers; Use of speed control devices on trucks, and remote monitoring of driver actions; Minimizing pedestrian interaction with construction vehicles; Collaboration with local communities and responsible authorities to improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present. Collaborating with local communities on education about traffic and pedestrian safety; Using locally sourced materials, whenever possible, to minimize transport distances. Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. | Ongoing | NA | All conditions met | Contractor |
| T-06 | IFC EHS GL IFC PS3 Turkish Reg. Official Gaz. Num. & Date: 27601, 04/06/2010 | <p>Ensure that the following specific noise emission control measures are in place:</p> <ul style="list-style-type: none"> Schedule Project traffic for daylight hours, where possible. Schedule large vehicle (trucks and buses) trips as convoys to reduce the number of times per day a disturbance may occur. Maintain vehicles in good condition to ensure they are no louder than other, similar vehicles on the roadways. Reduce Project traffic routing through community areas wherever possible. | Ongoing | NA | All conditions met | Contractor |
| T-07 | IFC EHS GL IFC PS4 Official Gaz. Num. & Date: 28837, 30/11/2013 Turkish Reg. Official Gaz. Num. & Date: 27368, 06/10/2009 | <p>Ensure that the following specific air pollution control measures are in place:</p> <ul style="list-style-type: none"> Use closed injection systems and low level volatility of diesel fuel to prevent vaporization losses. Minimize dust from open area sources by using control measures such as installing enclosures and covers, and increasing the moisture content. Comply the provisions indicated in Regulation on Control of Exhaust Gas Emissions for the exhaust gas emissions arising from the engine land vehicles. | Ongoing | NA | All conditions met | Contractor |
| T-08 | IFC EHS GL IFC PS4 | <ul style="list-style-type: none"> Require licensing of all drivers and improve driving skills. Train and license industrial vehicle operators in the safe operation of specialized vehicles such as forklifts, including safe loading/unloading, load limits. | Ongoing | Trained Personnel | 90% (i.e. only motivated exceptions allowed) | Contractor |

5. TRAINING

Saganak will provide the necessary funds and scheduling time to ensure effective Traffic and Transportation training/awareness is provided. Both management, contractor and employees will be involved in developing the program. To most effectively carry out their safety responsibilities, all personnel must understand (1) their role in the program, (2) the hazards and potential hazards that need to be prevented or controlled, and (3) the ways to protect themselves and others. Goals will be achieved by:

- Educating everyone on the natural and system consequences of their actions;
- Ensuring that all contractors are aware of traffic and transport management system responsibilities;
- Ensuring that all employees and contractors are trained about the specific hazards and control measures about traffic and transport safety;
- If not, training all employees and contractors on hazard identification, analysis, reporting and control procedures of this plan.
- Training all employees, contractors on safe work procedures and practices.

Training program will focus on traffic and transport safety concerns that determine the best way to deal with a particular hazard. When a hazard is identified, it shall be removed entirely. If that is not feasible, workers shall be trained to protect themselves, if necessary, against the remaining hazard.

6. MONITORING AND REPORTING

In the scope of this TMP, monitoring activities will be carried out in order to assess the level of implementation of the mitigation measures identified for the Project for construction and operation phases.

Based on the monitoring results, necessary corrective and preventive actions will be identified and required changes will be reflected to the Plan. Training program will also be updated accordingly.

In addition to internal monitoring, the experts from related institutions could monitor and audit these activities. The timing and frequency of these audits would be determined by the relevant institutions. Reports will be produced using the findings of the monitoring programs for each issue regarding traffic management.

Evidence and results of the monitoring activities have to be described in detail in monitoring reports. Table 3 details the monitoring activities identified for traffic management.

Reporting activities for this Plan is mainly related to data on incidents and accidents and on their investigation. These data have to be provided to the Project Manager on a monthly basis.

These data together with the results of the inspection and audit activities will be summarized in a Report on a six monthly basis that will be made available to stakeholders which is under the responsibility of Saganak. This report constitutes the basis for the monitoring report to be available for the Lenders.

Grievances records, air and noise emissions and training records are in any case reported to the Project Manager following requirements of other procedures and management plans.

Table 3 Monitoring Actions

| ID | Reference Doc | Monitoring Action/Measure Description | Freq. or Timing | KPI | Target or Acceptance Criteria | Responsibilities |
|------|------------------------------------|---|-----------------|---|---|--|
| T-09 | IFC PS2, IFC PS4 IFC EHS GL | Investigation of the incidents and accidents and use of lessons learned to improve traffic mitigations. | Continuous | No. of Accidents | NA | Contractor Saganak HSE-Q Expert |
| T-10 | IFC PS1 AIIB ESS1 | Driver education monitoring to ensure it takes place. | Monthly | Training Records | NA | Project and contractor managements |
| T-11 | Grievance Mechanism Procedure | Comments and/or complaints received from ongoing consultations or from grievances to improve traffic mitigations. | Monthly | Grievance Records on Project vehicles and drivers | NA | Contractor Saganak Community Liaison Officer |
| T-12 | IFC PS3 IFC EHS GL | Air quality (i.e. PM10) and noise monitoring due to the heavy duty vehicles. | Monthly | Emission Reports | Regulatory Limits | Contractor |
| T-13 | Grievance Mechanism Procedure | Feedback from local stakeholders regarding to any perceived changes in noise impacts and air quality changes linked to heavy traffic. | Monthly | Grievance Records on Project vehicles | NA | Contractor Saganak Community Liaison Officer |
| T-14 | IFC PS2 IFC PS4 IFC EHS GL | Condition of traffic signage | Weekly | Conditions of signage | All are in good condition, no missing signage | Contractor Saganak HSE-Q Expert |
| T-15 | IFC PS2 IFC PS4 IFC EHS GL | Condition of site access roads | Monthly | Condition of road | NA | Contractor Saganak Construction/Operation Manager Saganak HSE-Q Expert |
| T-16 | IFC PS1 IFC EHS GL AIIB ESS1 | Permit/license requirements | Quarterly | Availability and validity of permits | All permits are available and valid | Saganak Administrative Affairs Manager Saganak HSE-Q Expert |

7. REVIEW AND UPDATE

The correct implementation of this Plan is verified through internal and external inspections and audits to be carried out according to the requirements included in TMP.

Internal auditing will address:

- The correct implementation of this Plan;
- The correct development and implementation of Contractor's Traffic Management Procedure;
- The correct and timely implementation of an auditing and review system by the Contractor;
- Each of the point indicated in the tables in Section 4 and Section 6 of this plan.

During the inspections, the audit team will address in particular:

- Inspections for dust emission should be carried out and prolonged dry or windy conditions;
- Inspections for noise emission should be carried out and the inspection frequency should be increased when activities with a high potential to produce noise are being carried;
- Interviews with personnel should be also take place in order to ensure that the personnel are qualified and trained;

Evidences and results of the inspection and audit activities will be kept with the audit reports and "Non-Conformity and Preventive/Corrective actions" records. This plan will be reviewed and updated as needed by HSE-Q Expert.

ANNEX-1: GE WIND KANDIRA SITE ROAD ASSESSMENT REPORT

Site & Road Assessment - REPORT



GE Renewables

Route Survey



Project Information

Project Name:

Kandira

Customer:

Turkerler Insaat Turizm Madencilik Enerji Urt

GE Ref.-No:

1115453

Units:

10

Turbine Type:

5.3

Rotor diameter:

158

Hub Height:

120.9

Site & Road Assessment - REPORT



GE Renewables

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Site & Road Assessment - REPORT



1. General Information

1.1 Participants

Contact, GE Wind Energy:

Aycin Kesler

✉ aycin.kesler@ge.com

Additional attendee(s): ☒ No ☐ Yes

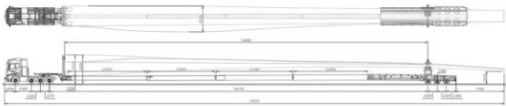
1.2 Dimensions - Transport Vehicles

Vehicle configurations - the drawings below are only for reference!

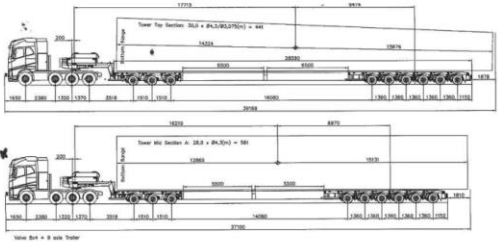
Weights and dimensions could be differ due to component variation!

Transport Vehicles

Blade



Tower



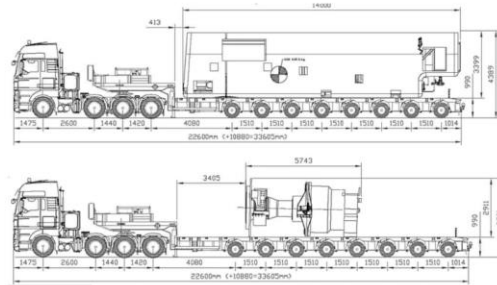
Site & Road Assessment - REPORT



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Transport Vehicles

Nacelle
Hub



Note: The final vehicle configurations are related to the transport approval and its requirements at the time the approval was given by the authority. Possible changes to the transport route and / or additional constructional modifications need to be agreed between the client and GE Wind Energy during the project phase.

1.3 Inspection Criteria

The transport route was inspected according to the following criteria:

| | |
|-------------------|--------|
| Transport Height: | 4.81 m |
| Transport Width: | 4.80 m |
| Transport Length: | 65.4 |

Above are the max dimensions for only components; height, width and length information for trucks are NOT included.

1.4 Definition

| | |
|-------------------------|---|
| Transport Route: | The route described in this report for the delivery of the wind turbine components to the site in its entirety. |
| Handover Point: | The point on the transport route, from which the client is responsible for all required modifications/ actions along the transport route. |
| Accessibility: | Existing roads along the transport route, which must be modified or made to be capable to transport the wind turbine components. |
| Site Roads: | All new roads to be constructed along the transport route. All roads inside the construction site. |

Site & Road Assessment - REPORT



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IMPORTANT NOTE

THIS REPORT IS ONLY INITIAL IN ORDER TO UNDERSTAND PROPOSED ROUTE AND GIVE AN IDEA ON THE POTENTIAL MODIFICATIONS THROUGH OUT THE TRANSPORTATION ROUTE AT EARLY STAGE.

A FINAL ROUTE SURVEY NEEDS TO BE CARRIED OUT ON SITE WITH EXACT DIMENSIONS BASED ON FINAL VEHICLE CONFIGURATIONS.

The purpose of the study is to define a Handover Point from which the Buyer is responsible for the following modifications:

- Permission to use land (public/private),
 - strengthening of roads/embankments,
 - bridge and culvert load bearing capacity checks & any required modifications to it.
 - all widening works on roads and curves,
 - obstacle removal,
 - removal or raising of power and communication lines / poles,
 - removal of road signs,
 - modification of road layouts
- and all other works as required by GE Wind or the Transportation company to deliver the equipment to each unit location.

Secondly it is to find possible & suitable Transportation Routes & Access Roads, starting from designated loading point (port/facility) to the proposed Wind Farm site entrance, based on tools and sources like aerial photos, maps and internet based information platforms. Using these resources generally helps to identify possible routes & possible road modifications & other requirements on those routes at an early stage.

If the coverage of the tools & sources used is high quality, then most issues can be identified, as for example:

- civil works modifications on public roads or private property,
- public or private land take,
- street furniture / obstacle removal.

It also gives a good indication as to how the delivery of the units can be best carried out, considering standard equipment can be used.

It is highly recommended that the Buyer uses this study for initial contacts to the appropriate authorities and private landowners to start investigations / development of any modifications mentioned in this report.

The initial desktop route study is also performed so that both parties have a chance at an early stage to be able to obtain a general impression & understanding as to the delivery possibilities.

1.5 Critical Passages - categorization for required structural measures

| | Category | Description |
|---|-----------|---|
| 1 | normal | Modifications necessary. For example: remove traffic signs |
| 2 | high | Modifications necessary e.g. strengthening traffic island, use of mobile track panels, remove traffic signs etc.. |
| 3 | complex | Modifications are necessary (e.g. remove traffic barriers, roundabout reconstruction with drive through lanes, construction of turning areas, widening roads, tree cutting, remove traffic lights, long period road construction sites etc.). |
| 4 | difficult | Transit not clarified, additional calculations necessary (e.g. Certificates, load capacity study at bridges), rights of use for private properties, rock blasting and removal of electrical infrastructure. |

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2. Survey Report**2.1 Modification Requirements & Responsibility**

This report was prepared based on the Kandira route report performed by Hareket Heavy Lifting Project Transportation in Nov 2019.

The supply of wind turbine components can be ensured on the proposed transport route under consideration that all necessary construction modifications are carried out to the following documentation.

Any change in regards to the site entrance point must be reported to GE Wind. In case of an unsuccessful final approval for the planned transport route by the responsible road authority a new route survey is required.

GE Wind Energy strongly recommend to contact relevant town and road authorities at an early stage to start the project development for all required modifications which are signed out as complex and difficult.

The client is responsible of all required modifications from the agreed Handover Point on to each turbine location of the windfarm. This includes:

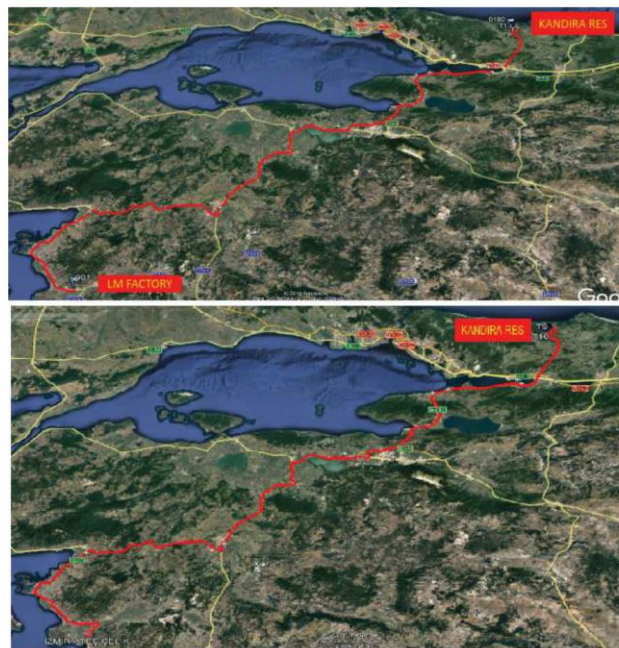
- Authority approvals to remove and reinstall traffic lights, traffic signs, street furniture and any obstacles.
- Land take (private and state owned land).
- All required measures must be carried out as stated in the GE Wind "Site Roads and Hardstanding Specification" as it was not agreed at a later state.

2.2 Conditions

The transport route and its required measures are a snapshot at the time the survey was carried out. Furthermore, the use of the proposed transport route is subject to the granting of the required official approval (transport permit).

If the conditions on the intended transport route change in a relevant manner after its inspection, or if the official driving permit or the approval for the necessary measures are not given, GE Wind will carry out a new survey.

Additional costs and effects to the schedule that are caused by changes on the proposed transport route or any additional measures along the route are in such situations paid by the client.

2.3 Overview planned Transport Route

Site & Road Assessment - REPORT



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2.4 Overview - Required Measures along Transport Route

Please look at point 1.5 "Critical Passages" for more information of the categories 1 to 4!

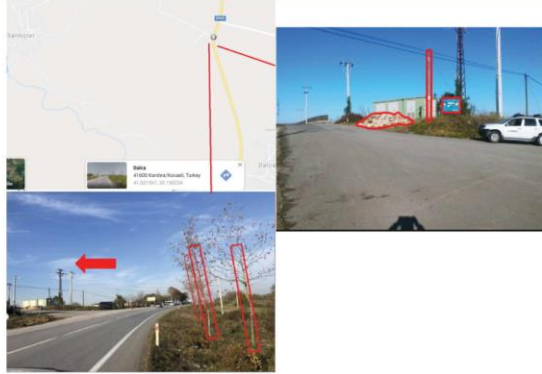
[illegible]

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2.5 Handover Point (HOP)



Handover point is located on Izmit Kandira Rd (D605) at the exit through Sarnıclar village.

All details regarding the modifications at handoverpoint are explained below in Section 2.7 Point C.

Including and from defined Handover point; Point C, all modifications required by GE Wind or the Transportation company to deliver the equipment to each unit location will be under Buyer's responsibility.

2.6 Site Entrance Point



There are multiple potential site entrances to each turbine groups located in east and west.

It is recommended that Buyer shares exact site entrance points once decided to get confirmation from Seller.

Site entrance point need to be widen and constructed on both directions in accordance with Seller's Site Road and Crane Hardstanding Specification.

All site roads including site entrance point should be widen, constructed and strengthened in accordance with Seller's Site Road and Crane Hardstanding Specification.

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2.7 Route Study

Point A



- 1.The concret block to be removed.
- 2.During truck passage road barrier to be removed each time.

Point B



- 1.Right side of road has to be backfilled and compressed (for towers)

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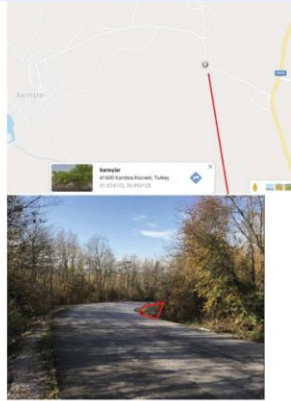
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Point C (HOP)



1. Three trees have to be cut.
2. The signboard on the right side has to be removed.
3. Electricity pole has to be removed.
4. Debris on the right has to be cleared.

Point D



1. The right side of the road has to be widened for 20m x 10m.

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Point E



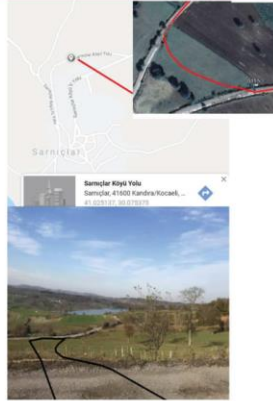
Option1

1.The right side of the road has to be widen for 3m.

Option2

1.Electricity pole has to be removed.

Point F



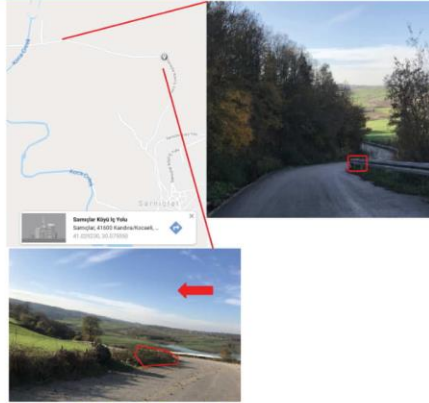
1.Shortcut/bypass road should be built in accordance with Seller's Site Road and Crane Specification.

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Point G1-2



- 1.The left side of the road has to be widen for 40m x 10m (Below pic).
- 2.The barrier has to be removed for 25m (Right pic).

Point H



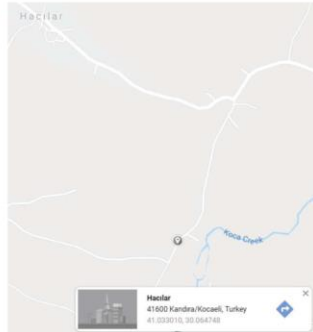
- 1.Maneuver area to be built on parcel on the other side of the road.

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Point I



Option 1

1. Electricity pole has to be removed.

Option 2

1. Trees have to be cut.

Point J



1. Hacilar village is not possible to cross through, bypass road is required to be built in accordance with Seller's Site Road Crane Pad Specification.

Site & Road Assessment - REPORT



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Point K



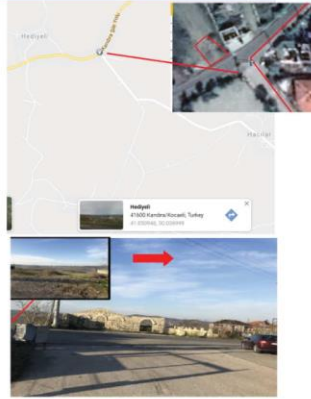
Option 1

1. Electricity pole has to be removed.

Option 2

1. The marked area has to be removed.

Point L



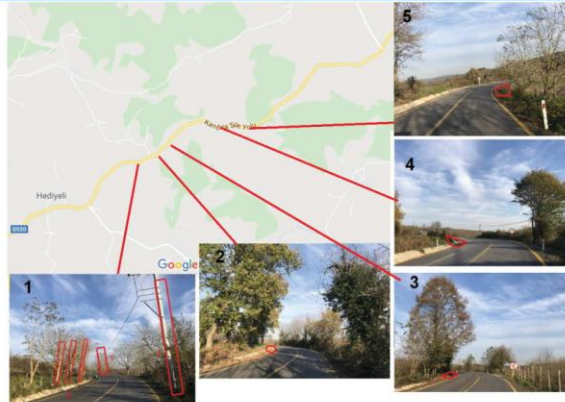
1. Maneuver area is required on the parcel on other side of the road

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Point M1-5



Option 1

1. Electricity pole has to be removed (pic 1).

Option 2

1. Three trees have to be cut (pic 1).

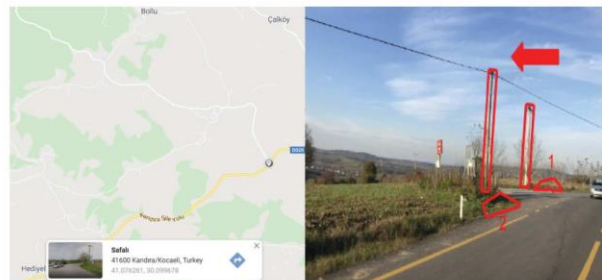
2. The left side of the road has to be widened for 20m x 5m (pic 2).

3. The left side of the road has to be widened for 15m x 3m (pic 3)

4. The left side of the road has to be widened for 30m x 5m (pic 4)

5. The right side of the road has to be widened for 20m x 5m (pic 5)

Point N



Option 1

1. The right side of the road has to be widened for 20m x 5m.

2. Electricity poles have to be removed.

Option 2

1. The left side of the road has to be widened for 20m x 5m.

2. Electricity pole has to be removed.

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Point O1-4



- 1.The left side of the road has to be widen for 20m x 5m (pic1).
- 2.The left side of the road has to be widen for 30m x 5m (pic2).

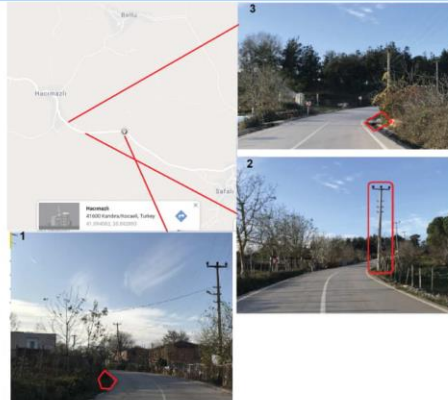
Option1

- 3.The right side of the road has to be widen for 20m x 5m (pic3)

Option 2

3. The left side of the road has to be widen for 20m x 5m (pic3)
- 4.The left side of the road has to be widen for 30m x 5m (pic 4)

Point P1-3



Option 1

- 1.The right side of the has to be widen for 20m x 5m (pic1).

Option 2

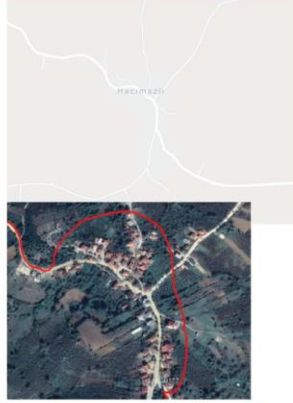
- 1.The left side of the has to be widen for 20m x 5m (pic1).
- 2.Electricity pole may be required, to be decided following test run (pic2).
- 3.The right side of the road has to be widen for 30m x 5m (pic3).

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Point R



1 Bypass is required to avoid Hacimazli village passing, this road to be built in accordance with Seller's Site Road Crane Pad Specification.

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3. Site Report

3.1 Site Map - Turbine Locations



There was no available site layout during site visit.

All turbines are sitting on denuded forestry lands.

It is highly recommended that Buyer shares all available preliminary design and drawings with Seller prior to any permit from authorities to get confirmation regarding transportation or civil purposes.

Max slopes should be studied as referred in Seller's Site Road and Hardstanding Specification.

- Any site infrastructure have to be carried out in accordance with the specification "SITE ROADS AND CRANE HARDSTANDING SPECIFICATION".

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3.2 Site Information

Site information available Yes ☐ No ☒

Site assessment hasn't been carried out! No site specific information!

3.2.1 Site Location

3.2.2 Slope

3.2.3 Pull/Push Assistance

3.2.4 Rotor Assembly

3.2.5 Crane Types

3.2.6 Transport Configuration

3.2.7 Crane / Installation Teams

3.2.8 Areas - Storage / Parking / Movements

3.2.9 Footprint - Site Compound / Office Container

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4. Notes / Appendix

4.0 Revision History

| Revision | Description | Originator | Date |
|----------|--|--------------|-----------|
| 01 | Route survey report prepared following route study performed by Hareket end of Nov 2019. | Aycin Kesler | 2020-01-9 |

4.1 Additional Notes

1.This report does not include any load capacity study on bridges/culverts. Any analyse, load capacity calculation or maintenance in case of requirement on bridges/culverts are under Buyer' scope regardless of HOP(s) locations.

2.Important note; In case of any private land or tree cut requirement even on highways within the areas to secure Buyer is responsible to obtain all permissions and handling the modifications regardless of HOP(s) locations.

IMPORTANT NOTE

3.Villages close by site are not available to pass on standard trailer. It is important that Buyer starts negotiations with landowner at early stage regarding the proposed bypass roads within this report. Without construction of these bypass roads, blades cannot be delivered on standard trailers and blade lifter option may be considered.