Quadran International

Non-Technical Summary

Rzepin Wind Farm 58 MW, Poland

Special Purpose Vehicle: QWP Rzepin Sp. z o.o.

7 October 2019

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Acronyms and Abbreviations

Name	Description
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
E&S	Environmental & Social
ESDD	Environmental and Social Due Diligence
GHG	Greenhouse Gas
NTS	Non-Technical Summary
PR	Performance Requirements
SEF	Stakeholder Engagement Framework
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle
WF	Wind Farm
WT/WTG	Wind Turbine/ Wind Turbine Generators

1. INTRODUCTION

This Non-Technical Summary (NTS) provides an overview on the potential Environmental and Social (E & S) impacts associated with the operation and decommissioning of the *58 MW Rzepin Wind Farm* Project (hereinafter referred to as *"the Project"*) and the measures considered to keep these at acceptable levels, so that no harmful effects are induced and relevant norms and regulations are met.

The Project was developed by the company Starke Wind Rzepin Sp. z o.o. and is in operation since December 2015. The ownership of the wind farm was changed in 2019, when SPV New Co Sab 37 acquired the Project and Quadran Polska started to manage the operations. The Project is located in the area of Drzensko, Kowalow, Maniszewo, and Lubiechnia Wielka villages, Rzepin Commune, Slubicki County, Lubuskie Voivodeship, western Poland.

An Environmental Impact Assessment (EIA) prepared by a local consultant was completed for the Project in March 2010. The local EIA process for the Project was favorably approved through an Environmental Decision issued on June 25th, 2010 by the Mayor of Rzepin City. Later on April 28th, 2011 Building Permit for the Project was granted. Then the former developer decided to change Building Permit, which required obtaining a new Environmental Decision, therefore a second Environmental Impact Assessment (EIA) prepared by a local consultant was completed for the Project in February 2014. The local EIA process for the Project was favorably approved through an Environmental Decision issued on May 27th, 2014 by the Mayor of Rzepin City. Furthermore, additional biodiversity surveys have been performed during the pre-construction and, in line with Environmental Decision requirements, are still being performed until the fifth year of the Project operations. These biodiversity surveys aim to confirm the results of the completed impact assessment and define any additional mitigation, if necessary.

The above-mentioned EIA identified the environmental and social impacts anticipated to occur as a result of the Project implementation and evaluated their significance. Where significant adverse changes were identified, measures to avoid, reduce or compensate for those changes have been defined and implemented during the course of construction and, furthermore, during the operation of the Project.

The Project Owner is seeking to enter a financial agreement with international lender institutions such as the European Bank for Reconstruction and Development (EBRD), having strict environmental and social requirements (Performance Requirements - PRs) for project financing. In order to assess how the Project meets these standards, ERM was commissioned to undertake a gap analysis of the environmental and social documents prepared for the Project (local EIA and follow up biodiversity surveys) against the EBRD PRs. As part of this process, and to bridge the gaps identified to lender requirements, ERM also developed additional documents such as:

- this NTS;
- a Corporate Stakeholder Engagement Framework (see Section 4).

The above documents will be translated into Polish and together with the local EIA (2014) will form the disclosure package for the Project and will be made publically available. Furthermore, the Corporate Stakeholder Engagement Framework (SEF) will be used by the Project Owner to develop a Stakeholder Engagement Plan (SEP) for the Project.

The disclosure package will be publically available in hard copy at Quadran's office at the following address: 2c Wagonowa Street, 53-609 Wroclaw. Additionally, the electronic form of these documents will be available for consultation on the:

- Project Owner website: www.quadran-international.com; and
- the EBRD website (www.ebrd.com).

There is a mechanism in place to receive and address grievances, questions, comments and suggestions from stakeholders. Such grievances regarding the Project can be submitted through the following channels:

- by regular mail to: Quadran Polska, 2c Wagonowa Street, 53-609 Wroclaw, Poland;
- by e-mail to: biuro@quadran-international.com;
- by contacting Project's Communication Officer, Mr. Mateusz Tylecki, at email m.tylecki@quadran-international.com, phone +48 574 404 211.

2. SUMMARY OF THE PROJECT

2.1 Site selection criteria

The location of the Rzepin wind farm was selected based on a number of criteria. These included:

- the site is located outside any protected and residential areas;
- wind measurements indicated that the site has good wind resources;
- relative proximity to a main energy distribution grid connection (adjacent to the internal electrical substation, i.e. in the southern part of the WF area);
- the site has good access via the existing public roads;
- suitable geotechnical ground conditions;
- land availability;
- limited environmental, health and social predicted impacts (e.g. on noise and shadow flickering, complying with the health protection buffers, area on low-value landscape etc.)

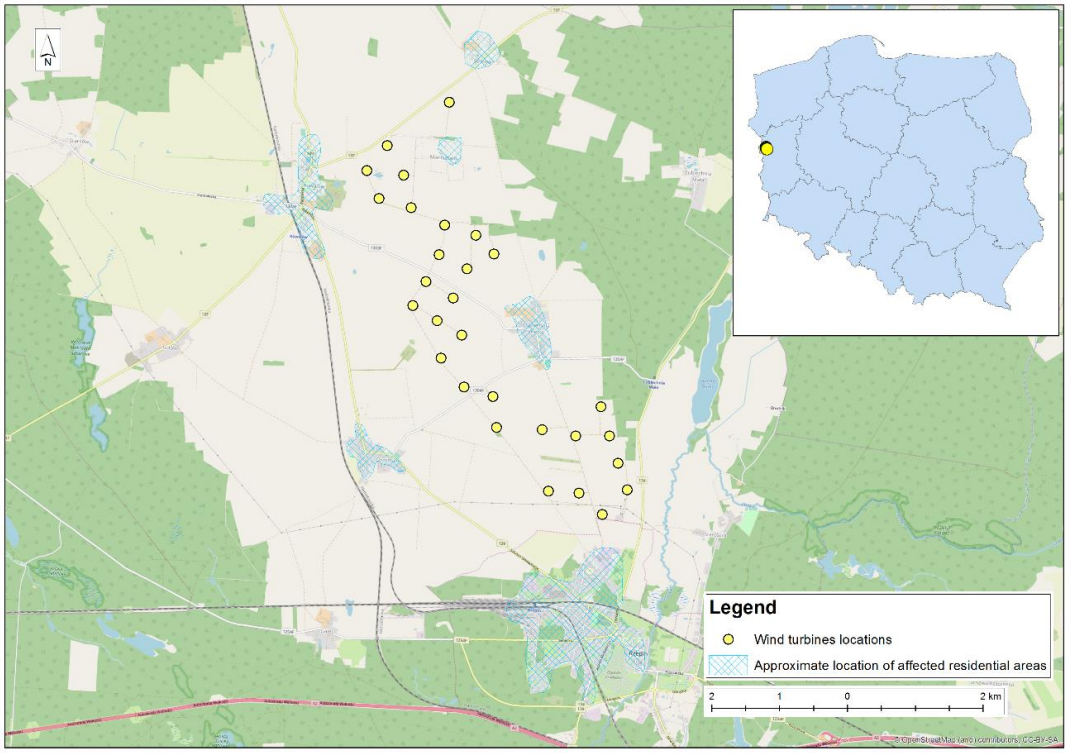
2.2 Project Description

The Project is located on a mostly flat arable land in the area of Drzensko, Kowalow, Maniszewo, and Lubiechnia Wielka villages, Rzepin Commune, slubicki County, lubuskie Voivodeship, western Poland. The nearest surface water body is Busko Lake located approximately 4 km to the north east of the Project site. The nearest residential property is located at approximately 500 m to the south of wind turbine (WT) No.24.

The Project location and layout maps as well as a map presenting the nearest protected areas are illustrated in Figure 2-21, Figure 2-2 respectively.

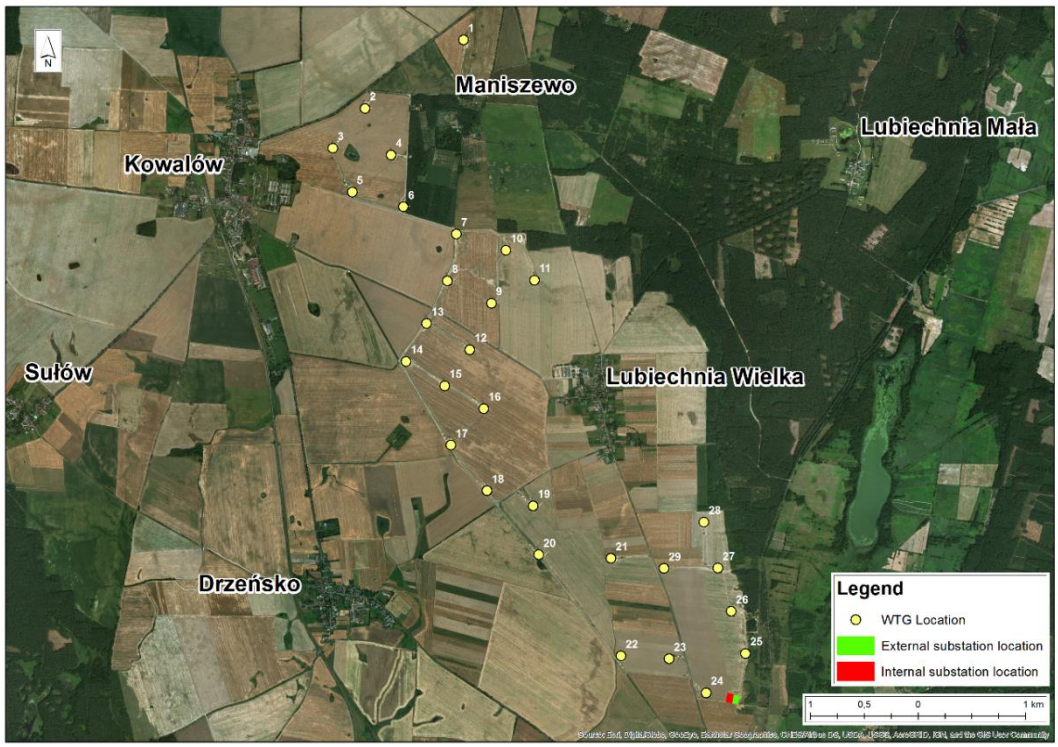
The Project is located outside of any legally protected areas. The nearest nature protection area is Dolina Ilanki (PLH080009) Natura 2000 area, protected under the EU Habitats Directive located approximately 2.7 km to the east of the Project site (see Figure 2-4 below).

Figure 2-1 Project Site Location Map with affected residential areas



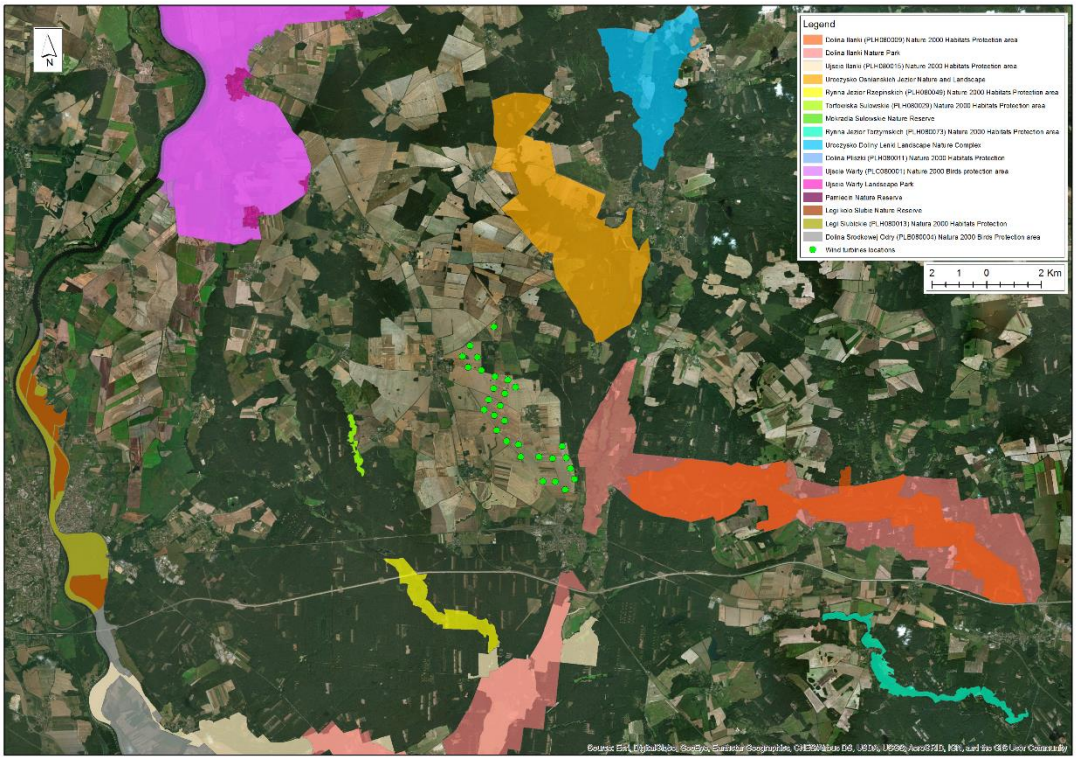
Source: Geoportal, edited by ERM.

Figure 2-2 Project layout map



Source: Google Earth, edited by ERM.

Figure 2-3 The nearest protected areas



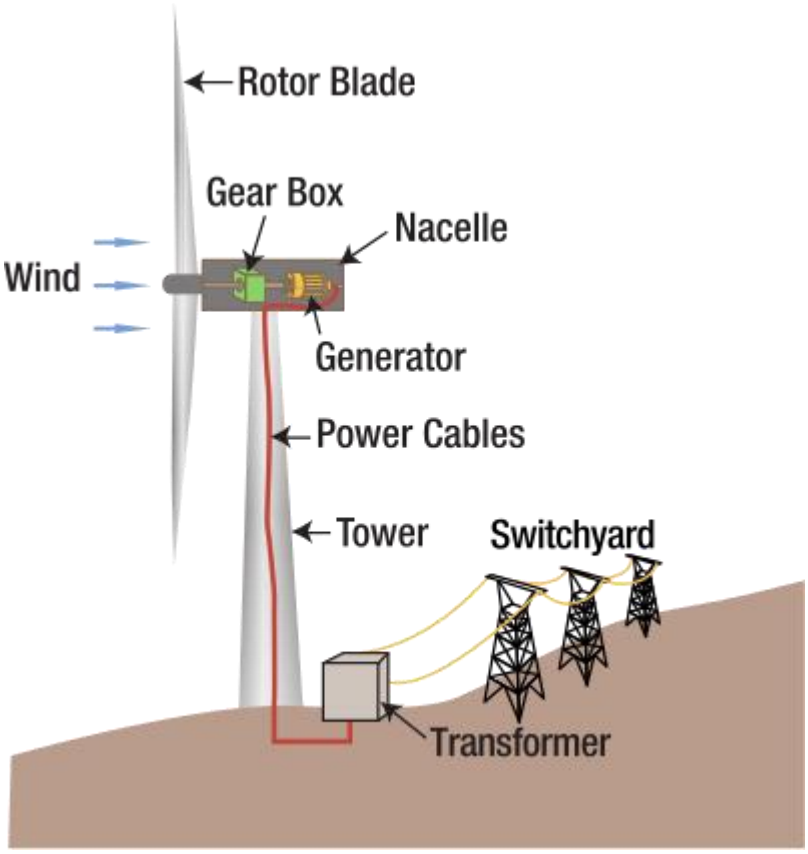
Source: Geoserwis, Google Earth, edited by ERM.

The main Project components include:

- 29 Vestas V100 wind turbine generators (WTG), having a rotor diameter 100 m and hub height of 95 m; each WTG has a capacity of 2 MW, meaning a total Project capacity of 58 MW;
- one 110/20 kV Project electrical substation covering an area of approximately 4430 m^2, located approximately 200 m to the south east of WTG No. 24;
- approximately 40 km of a 30 kV underground power line connecting all 29 WTGs to the 110/20 kV Project electrical substation; the routes of these power lines were established along the route of the internal access roads;
- connection between the Project electrical substation to the existing substation, located adjacent to the eastern side of the Project electrical substation. The external electrical substation is owned and operated by Enea Operator Company.
- Approximately 17 km of internal access roads from the local asphalt roads to the individual turbine locations.

The diagram of a wind turbine is illustrated in Figure 2-4 below.

Figure 2-4 Diagram of a wind turbine



Source: https://en.wikipedia.org/wiki/File:Wind_turbine_diagram.svg

Project Schedule

The civil works related to Rzepin WF were completed in April 2015, the grid was connected in June 2015 and the official commissioning date of the Project was in December 2015. Since the commencement of the operational phase, there were no major accidents (e.g. lightning with severe damages to WTG), which significantly affected the production plans.

Land acquisition

The cession and superficies agreements for the land required for the Project were concluded with land owners on a voluntary basis. No owners were forced to give up their land and no physical resettlement was required for the development of the Project. At the end of the construction period, the land areas not occupied by turbines and other infrastructure were restored to agricultural use.

2.3 Other Wind Farm Projects in the Area

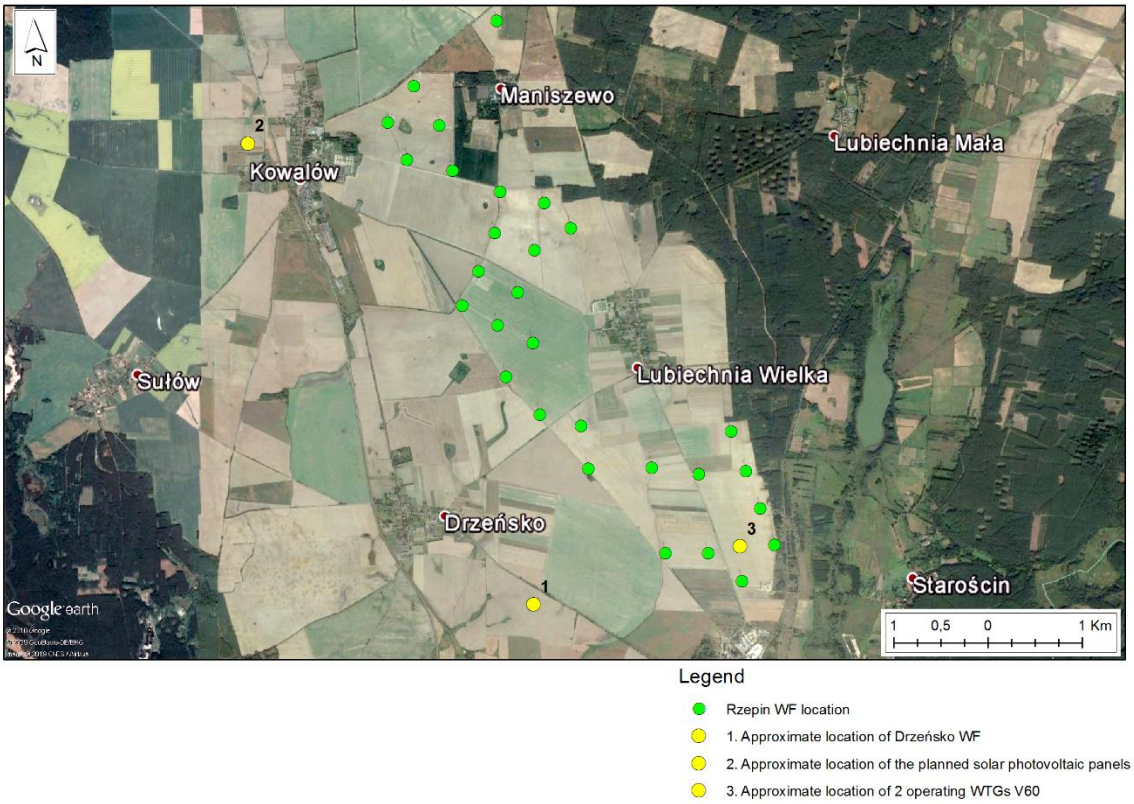
Based on public information and on the data provided by the representatives of the local authorities, the following wind farms and other renewable energy investments are planned in the vicinity of the Project:

- 2 operational WTGs V60 of a capacity of 850 kW and rotor diameter 60 m are located within the Project site in the area, in the vicinity of WTG No. 25; these WTGs belong to a another private developer than the Project's;
- Dzensko wind farm, located approximately 3 km to the west of the Project site, comprising 8 WTGs along with auxiliary infrastructure;

- Wind and photovoltaic project, located approximately 5 km to the north west of the Project site, comprising 1 WTG and solar photovoltaic panels; no additional details were available at this stage;
- photovoltaic project in the area of Kowalow, i.e. approximately 5 km to the north west of the Project site, no additional details were available at this stage.

The location of these projects in relation to the Project site is illustrated below.

Figure 2-5 Approximate location of the existing and planned projects within a buffer of 10 km to the Rzepin WF



Source: Google Earth, edited by ERM.

2.4 Project Environmental Performance

The total annual energy production from the Project was:

- 123 293.9 MWh in 2016;
- 145 418.78 MWh in 2017;
- 136 074.83 MWh in 2018.

As a positive effect, the wind farm operation resulted in a significant reduction of greenhouse gas carbon dioxide (CO_2) emissions, by replacing CO_2 emitting power generation facilities. Therefore, the environmental benefit from Rzepin WF, in the last three years, was the reduction of approximately 86 084.8 tons of Greenhouse Gas (GHG) emissions /year. This is an average value for years 2016 – 2018, calculated based on an emission factor, representative for conventional energy projects, as of 0.638 tCO_2/MWh, for Poland in 2012.

Apart from saving on GHG emissions, the operation of the Project also results in significant 'avoidance' of post – combustion emissions. As an example, the equivalent production of electricity by the largest Polish hard-coal power plant would result with the following emissions (estimations based on emission factors for 2011):

- Particulate matter (PM): approximately 11.9 tons/year (average for years 2016 – 2018);
- Sulphur dioxide (SO_2): approximately 354.9 tons/year (average for years 2016 – 2018);
- Nitrogen oxides (NO_x): approximately 231.3 tons/year (average for years 2016 – 2018).

3. SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

3.1 Soil and Groundwater

Impacts on soil and groundwater from the Project could potentially result from leakage of lubricants from the wind turbine nacelle and the Project electrical substation. However, this is unlikely due to the liquid retention systems integrated into the structure of the wind turbine nacelle and Project electrical substation.

An Environmental Pollution Prevention and Control Plan will be developed for the Project and will include measures that will be implemented on site to avoid potential contamination, for example:

- regular checks and maintenance works are performed in order to keep all equipment in good condition;
- maintenance works are restricted to specially designated platforms with strict control of accidental spills;
- maintenance machinery and vehicles can move only on designated internal roads;
- procedures for responding to emergencies/accidental spills of hazardous materials, fuel storage and handling, and waste management are developed and implemented;
- containers storing hazardous substances at the Project electrical substation area are equipped with secondary containment.

With the above mitigation measures in place, impacts on soil and groundwater are not predicted to be significant.

3.2 Surface Water

The nearest surface water body is Busko Lake located approximately 4 km to the north east of Project site.

The Project site is supplied with water for potable and sanitary purposes from the municipal water supply system. The connection is located in the area of the Project electrical substation. Additionally, a septic tank for wastewater collection is in place in the area of the Project electrical substation. The tank is being emptied on a regular basis by a subcontractor, after receiving notification from the EDF EN Services employees (company contracted for onsite maintenance).

Therefore, the Project does not have an impact on the quality of surface water quality.

3.3 Air Quality

During the Project construction, air emissions sources consisted of dust generated from construction activities (e.g. land clearance and excavation, traffic on local roads) and combustion related emissions from vehicles and construction equipment. These impacts were mitigated by employing good construction practices, including using of well-maintained construction equipment and employing dust abatement measures. Such measures will be included in the Environmental Pollution Prevention and Control Plan to be developed and implemented for the Project.

No significant air quality impacts are associated with the Project operational phase. Operational traffic impacts will be associated with emissions from a limited number of vehicles accessing the site for maintenance or security purposes.

3.4 Biodiversity and Nature Conservation

3.4.1 Site Context

The Project site elevation varies between 53 m above sea level (a.s.l.) and 87 m a.s.l. No legally protected areas are located within the Project site.

3.4.2 Legally Protected Sites

The protected areas identified on a range of 20 km around the Project site are the following:

- Dolina Ilanki Landscape Protection area, located approximately 350 m to the east from the Project site (i.e. WTG 26);
- Dolina Ilanki (PLH080009) Natura 2000 Habitats Protection area, located approximately 2 km east of the Project site;
- Ujscie Ilanki (PLH080015) Natura 2000 Habitats Protection area, located approximately 3.6 km south of the Project site;
- Uroczysko Osnianskich Jezior Nature and Landscape complex located approximately 4.3 km north of the Project site;
- Rynna Jezior Rzepinskich (PLH080049) Natura 2000 Habitats Protection area located approximately 6.5 km south-west of the Project site;
- Torfowiska Sulowskie (PLH080029) Natura 2000 Habitats Protection area located approximately 7 km west of the Project site;
- Mokradla Sulowskie Nature Reserve located approximately 7 km west of the Project site;
- Rynna Jezior Torzymskich (PLH080073) Nature 2000 Habitats Protection area located approximately 9 km west of the Project site;
- Uroczysko Doliny Lenki Landscape Nature Complex located approximately 12 km north of the Project site;
- Dolina Pliszki (PLH080011) Nature 2000 Habitats Protection area located approximately 15 km south-west of the Project site;
- Ujscie Warty (PLC080001) Natura 2000 Birds protection area located approximately 16 km to the north west of the Project site;
- Ujscie Warty Landscape Park located approximately 16 km north-west of the Project site
- Pamiecin Nature Reserve located approximately 16 km north-west of the Project site;
- Legi kolo Slubic Nature Reserve located approximately 19.5 km north and north-west of the Project site;
- Legi Slubickie (PLH080013) Natura 2000 Habitats Protection area located approximately 19.5 km north and north-west of the Project site;
- Dolina Srodkowej Odry (PLB080004) Natura 2000 Birds Protection area located approximately 19.5 km north and north-west of the Project site.

3.4.3 Birds

To determine the Project site's importance to birds, a number of bird surveys were conducted in 2007 and 2009, and supplementary surveys in 2013 and 2014. The bird monitoring conducted in 2013 and 2014 followed the relevant Polish Guidelines for conducting pre-construction bird monitoring[1].

The Environmental Decision issued for the Project requires bird post-construction monitoring during the first, second and fifth years of Project operations. Consequently, post-construction monitoring surveys, following a similar methodology to the one used for the pre-construction surveys, were undertaken in the following periods:

- December 2015 - November 2016 (year 1 of operation);
- December 2016 - November 2017 (year 2 of operation).

The following studies were carried out as part of the post-construction bird monitoring surveys:

- records of bird flight lines with respect to collision risk height around the Project area, using a point-count monitoring methodology during spring and autumn migrations;
- inventory of rare breeding bird species and species of conservation concern in the Project site and its surroundings;

  monitoring of common breeding bird species (on the same areas as during the pre-construction monitoring).

The post-construction monitoring surveys had the following results:

- December 2015 - November 2016 (year 1 of operation):
  - overall 29.888 individuals belonging to 88 species were identified; and
  - 45 species of nesting birds;
  - 3 bird carcasses (two common buzzards and one rough-legged buzzard); the monitoring report concluded that the mortality level caused by the Project, to this group of birds, did not exceed the level of 1% of the population using that area.

Based on the 2015 - 2016 monitoring results it was stated that the Project does not negatively impact the bird species protected under Natura 2000 area PLC080001 Ujście Warty. No mitigation measures were recommended.

- December 2016 - November 2017 (year 2 of operation):
  - overall 28.578 individuals belonging to 96 species were identified; and
  - 62 species of nesting birds;
  - no bird carcasses.

Similarly to the pre-construction monitoring results, breeding and/or feeding areas of common buzzard, common raven, white stork and western marsh harrier were identified within the Rzepin WF site.

According to the Environmental Decision, the negative impact on birds can be considered when the number of carcasses exceeds:

- 4 carcasses of raptors/wind farm/year;

[1] Wytyczne dotyczące ocen oddziaływania elektrowni wiatrowych na ptaki. Projekt. (Chylarecki i in. 2011, Generalna Dyrekcja Ochrony Srodowiska, Warszawa).

- 10 carcasses of large and medium watery birds/wind farm/year;
- 15 carcasses of shorebirds/wind farm/year;
- 30 carcasses of all other bird species in total/turbine/year.

If any exceedance of the above values are identified, appropriate mitigation measures must be implemented in agreement with the Regional Directorate of Environmental Protection in Gorzow Wielkopolski on the project owner cost.

The up to date post construction bird monitoring campaigns did not reveal exceedance of the abovementioned numbers of carcasses. The conclusions of the monitoring survey reports indicate that the Project does not pose a significant threat to protected bird species, their habitats and the objectives of maintaining a proper conservation status. Moreover, the reports conclude that Rzepin WF does not negatively impact the conservation status of birds species protected under Natura 2000 PLC080001 Ujście Warty Site of Community Importance and Special Bird Protection Area.

Additionally, as required by the Environmental Decision issued for the Project, another bird monitoring survey will start at the end of 2019 and will be conducted throughout the fifth year of Rzepin WF operations. The methodology proposed for the further monitoring survey will follow the Polish guidelines and international standards. Depending on the results of the additional monitoring surveys, further mitigation measures and assessment will be proposed.

3.4.4 Bats

Bat monitoring during the pre-construction phase was undertaken for the Project in 2007, then in 2013 and 2014 (implementing recommendations of the relevant Polish Guidelines[2]). The preliminary monitoring in 2007 was conducted during spring, summer and autumn seasons.

Additionally, in 2013 a supplementary monitoring of bats was conducted (August and September) and in 2014 (between March and July).

The bat species identified during the survey campaigns before construction:

- Greater mouse-eared bat (*Myotis myotis*), listed in Annex II of the Habitats Directive;
- Serotine bat (*Eptesicus serotinus*);
- Nathusius's pipistrelle (*Pipistrellus nathusii*);
- Common pipistrelle (*Pipistrellus pipistrellus*);
- Common noctule (*Nyctalus noctula*);
- Western barbastelle (*Barbastella barbastellus*), listed in Annex II of the Habitats Directive.

In Poland, all 25 bats species are protected. Based on the results presented in the EIA report, bats activity was recorded in seven of 29 survey locations. The EIA Report concludes that the Project is not a major feeding area, transit location or a winter shelter and therefore no significant impacts are anticipated on bats.

The Environmental Decision issued for the Project requires bat post construction monitoring during the first, second and fifth years of Project operations. Consequently, post construction monitoring surveys, following a similar methodology to the one used for the pre-construction surveys, were undertaken in the following periods:

- December 2015 - November 2016 (year 1 of operation) with the following results:
  - During spring migration the most frequently registered bats were Common pipistrelle and Nathusius's pipistrelle;

[2] Wytyczne dotyczące ocen oddziaływania elektrowni wiatrowych na nietoperze. Projekt. (Kepel i in. 2011, Generalne Dyrekcja Ochrony Srodowiska, Warszawa.)

- During breeding season the most frequently registered bats were common pipistrelle and Common noctule as well as Serotine bat and Nathusius's pipistrelle;
- During autumn migration the most frequently registered bats were Common pipistrelle, Common noctule, as well as, less frequently, Serotine bat, Nathusius's pipistrelle and Parti-coloured bat;

- December 2016 - November 2017 (year 2 of operation) with the following:
  - During spring migrations season the most frequently registered bats were Common pipistrelle, Nathusius's pipistrelle and Common noctule;
  - During breeding season the most frequently registered bats were Common pipistrelle and Common noctule;
  - During autumn migrations season the most frequently registered bats were Common pipistrelle, Nathusius's pipistrelle and Common noctule;

Additionally, during both post construction monitoring campaigns mortality of bats was recorded. The results from 2015-2016 monitoring revealed mortality of bats at the level of 46 bats/wind farm/year. According to the Environmental Decision, the negative impact on bats can be considered when the number of carcasses exceeds 25 carcasses/wind farm/year. If the threshold is exceeded appropriate mitigation measures must be implemented in agreement with the Regional Directorate of Environmental Protection in Gorzow Wielkopolski. In line with this obligation, the former owner submitted the following mitigation measures proposal:

- WTGs No. 6, 17, 25 and 27 will be switched off between July 15th and September 15th, between 10 pm and 4 am.

The above mentioned proposal was approved by the Regional Directorate of Environmental Protection in Gorzow Wielkopolski. Implementation of periodical switching off mode resulted in the reduction of bat mortality during 2016-2017 monitoring campaign, which was 15 bats/wind farm/year. The recommendations from the 2016-2017 monitoring report clearly state that the above-mentioned mitigation measure should remain in place until the end of the last post construction monitoring campaign.

As required by the Environmental Decision issued for the Project, another bat monitoring survey will start at the end of 2019 and will be conducted throughout the fifth year of Rzepin WF operation. The methodology proposed for the further monitoring survey will follow the Polish guidelines and international standards. Depending on the results of the additional monitoring survey, further mitigation measures and assessment will be proposed.

3.4.5 Other Biodiversity Receptors

3.4.5.1 Habitats and Flora

The total area of land leased for the Project is approximately 0.09 km^2 (land permanently occupied by WTGs, access roads, accompanying infrastructure, e.g. Project electrical substation). The Project site is characterized by agriculture habitats with small-forested patches. However, the latter were not affected by Project activities.

During the Project development, a detailed habitat survey was conducted in April and May 2007. The following results were revealed:

- 30 species of plants were identified in the Project site's area, none of them listed as protected;
- 115 species of plants were identified along the Project area borders, none of them listed as protected;
- small ponds were identified sustaining several plant species, none of them listed as protected.

The EIA report states that flora, which might have been impacted by the construction activities, is mainly of low conservation value. Moreover, Project operations will not negatively affect the above-mentioned habitats and flora.

3.4.5.2 Amphibians and Reptiles

According to the EIA report, the presence of the following amphibians: sand lizard (*Lacerta agilis*), viviparous lizard (*Zootoca viviara*), European fire-bellied toad (*Bombina bombina*), common toad (*Bufo bufo*), common frog (*Rana temporaria*) and edible frog (*Rana esculenta*) were identified in the small-forested areas within the Project site. In Poland, all reptiles (in total 18 species) and all amphibians (in total 9 species) are under legal protection.

Based on the EIA report, the Project operations are not likely to affect herpetofauna. Therefore, no significant impacts on amphibians and reptiles are associated with the Project operation.

3.4.5.3 Mammals

The following mammal species were recorded within the Project area:

- European roe (*Capreolus capreolus*);
- boar (*Sus scrofa*);
- fox (*Vulpes vulpes*);
- badger (*Meles meles*);
- Raccoon dog (*Nyctereutes procyoniodes*) and
- Beech marten (*Martens foina*).

Based on EIA report the identified specie are common to the area and the Project operation is unlikely to affect mammals.

3.5 Landscape and Visual Impacts

The WTGs would dominate the flat landscape and would be visible or partially visible within a radius of about 20 km of the WF area, in particular to people in Kowalow, Maniszewo, Lubiechnia Mala, Lubiechnia Wielka, Drzensko and Sulow villages, as well as in Rzepin City.

A landscape and visual impact assessment was performed as part of the EIA process and concluded that the Project would not generate a significant visual and landscape impact due to the fact that the sensitivity of the receptors is very low.

However, in order to mitigate any potential landscape and visual impacts, the following measures were implemented:

- WTGs were placed in an orderly layout to avoid visual disturbances and perception of chaotic or random clusters;
- smooth cylindrical towers were used, as this type of tower has a simpler configuration, less complex surface characteristics and a lower reflection/ shadow casting potential;
- non-reflective paints and coatings to reduce glare;
- the Project involves only underground power cables at the site in order to minimize distortion of the surface;
- a uniform color was used for painting the tower, nacelle and rotor, in order to reduce visual impacts.

3.6 Cultural Heritage

There are no known archaeological sites within the Project site and none were discovered during the construction of the Project.

The EIA Report indicates there are four archaeological sites in the area of Lubiechnia Wielka village, approximately 100 m from Rzepin WF.

Based on the EIA report, the Project does not generate a direct negative impact on the above-mentioned archaeological sites. No unknown cultural heritage was identified during the construction of the Project. Considering that the Project is now in the operational stage, no impacts to cultural heritage are expected to arise.

3.7 Socioeconomic Impact

Socioeconomic impacts during Project construction were associated with the permanent loss of 18 hectares of arable land required for the Project components (WT, substation and access roads) and with impacts on livelihoods and local economic activities. Moreover, the following direct positive impacts have been identified:

- direct employment opportunities during the Project construction and operation; currently, during operation phase, there are five permanent employees of EDF EN Services who work on site (i.e. technicians, substation operators, periodical maintenance staff).
- increase of the annual income of land leasers for each WTG;
- improvement of local communication routes;
- increasing the commune's income through payment of fees and taxes.

The land for the Project was secured based on land lease agreements signed with the land owners.

On the occasion of the discussions held in June 2019, the representatives of Rzepin City were not aware of grievances having been filed by local community members in relation to damages to their crops during the construction stage of the Project.

The current Project Owner will develop and implement a SEP (see section 4) which will also include a formal grievance management procedure for the Project.

Local farmers are granted access and can continue using the agricultural land around the turbines mainly for farming and occasional cattle grazing activities.

3.8 Community Health, Safety and Security

3.8.1 Environmental Noise

At the stage of preparing the EIA report, the former owner, Starke Wind Rzepin Sp. z o.o., completed a noise analysis to determine whether the Project meets mandatory noise levels defined as 55 dB for daytime and 45 dB for night-time in residential areas. The analysis did not reveal exceedances of regulated noise levels.

The nearest noise receptor is the residential area in Rzepin City, where the closest house is located approximately 500 m west of WTG No. 24.

The Environmental Decision issued for the Project requires post-construction noise measurements during daytime and night-time, during operation of WTGs according to the silencing schedule in the nearest area covered by acoustic protection, after three months since the start of Project operations.

Operational noise monitoring for the Project was undertaken in February 2016 and the results indicated that the Project does not impact the nearest sensitive receptors.

3.8.2 Shadow Flicker

Any moving object that comes between a viewer and a light source can cause a flicker effect. Wind turbines, like other tall structures, will cast a shadow on the neighboring area when the sun is visible.

A detailed assessment of shadow flicker effect has not been conducted as a part of the EIA report, however, it should be also stressed, that there are no regulations in Poland that normalize acceptable duration and frequency of this effect.

According to the recommendations of the World Bank Environmental, Health and Safety Guidelines For Wind Energy[3] the minimum distance between the turbines and the nearest residential areas should be 292.5 m. The closest residential area to any of the Project turbines is 500 m. Consequently, it is anticipated that no shadow flicker effect is likely to occur as a result of the Project.

3.8.3 Ice and Blade Throw

Wind farms operating in cold climates may suffer from icing in certain weather conditions and ice accretion can result in 'throwing' of ice from the wind turbines, which may affect public safety. The average annual temperature in the Rzepin WF area is +9°C, with an average monthly temperature in January of -1.5°C. Icing of the wind turbines is rather unlikely under such climatic conditions.

The Project is located in an agricultural area, with regular farmer car traffic, farmers working the land as well as grazing livestock. In addition, the Project employees regularly work there.

To minimize ice throw risks, the following mitigation measures have been and will be adopted:

- all WTGs are equipped with ice detecting systems to control ice formation on the rotor blades. In case of icing detection, wind turbines are shut down automatically;
- warning signs will be placed at the entrance to every single WTG location not only at the entrance to the WTGs complexes;
- informing the wind farm operational personnel and local farmers about the conditions that could lead to WTG icing, about the risk of ice falling from the wind turbine rotor, as well as the existing risk area; such information will be delivered through continuous engagement with local communities as the Project SEP will outline;
- if a change in WTG operation is detected, which may be associated with the start of rotor blade icing, the turbine will be shut down.

Through the implementation of the above-mentioned mitigation measures, no significant impacts from ice throw are predicted.

3.8.4 Electromagnetic Interference

Wind turbines could potentially cause electromagnetic interference with aviation radar and telecommunication systems (e.g. microwave, television, and radio). As part of the construction permitting procedure, the relevant authorities were consulted and no concerns were raised in relation to the Project.

The nearest airport is located approximately 153 km to the south west of the Project site; therefore, there are no risks associated with aviation radar interferences.

Electromagnetic fields (EMF) are produced by any wiring or equipment carrying electric current. The potential effects of EMF on human health vary depending on the frequency and intensity of the fields. For wind power projects, EMF generation is associated with the overhead transmission lines (which are not present at the Rzepin project) and the substation.

The following measures were adopted to protect employees and the local communities:

[3] Environmental, Health and Safety Guidelines for Wind Energy, August 7, 2015. World Bank Group, IFC, MIGA.

- all works on maintenance and repair of the electrical are carried out in compliance with the safety regulations related to these activities;
- the Project electrical substation is fenced and equipped with adequate warning signs;
- entrance to the Project electrical substation is prohibited except for employees holding adequate permits;
- the substation is regularly inspected for compliance with the relevant safety requirements, constant monitoring is implemented and monthly, quarterly and annual inspections are carried out; and
- access to the transformer substation is restricted, and audible and visible warnings are used.

No significant impacts from electromagnetic interference are expected to arise in association with the Project.

3.8.5 Public Access and Community Health and Safety

Appropriate public communication to allow timely notice of affected residents before major construction operations or traffic movements on public roads was implemented during the construction phase of the Rzepin WF.

Currently, the Rzepin WF area is used for arable farming and occasional grazing. All the access roads to each WTG are adequately marked and all signs clearly prohibit access to the WF area.

The whole Rzepin WF area is monitored, each WTG is equipped with an individual camera, security alarm, additionally, all five employees of EDF EN Services (subcontractor) have access to an electronic system, which requires them to log in every time they enter the Rzepin WF area. This solution prevents unauthorized persons from entering the WF area.

Having the above mitigation measures in place, impacts on community health and safety are not expected to be significant.

3.9 Cumulative Impacts

Projects can generate impacts in isolation or cumulatively with other projects, either existing or planned to be developed in the area. Additional projects identified in the Project area are presented in Section 2.3 above.

According to the EIA, the presence of cumulative impacts is considered unlikely given the distance between the projects.

The Project Owner is committed to exchange information on the results of environmental monitoring for the Project (with focus on bird and bat mortality) with other operators of wind farms identified in the Project area. In case of any increase of the number of carcasses identified in the Project site, the Project Owner will liaise with the developers of the other wind farms in the area to identify and agree proper mitigation measures. Such actions will be carried out upon consultation of relevant stakeholders (e.g. bird protection associations and NGOs, experts, community members, lenders, authorities etc.).

3.10 Transboundary Impacts

The Project is located approximately 14 km from the nearest border with the neighboring country – Germany. Taking into account the nature, scale and location of the Project, as well as the range of potential impacts, transboundary impacts are not expected to arise.

3.11 Impacts During Decommissioning

Impacts caused by decommissioning activities are, in principle, comparable with construction impacts.

The projected operational lifetime of a typical wind farm is 25 years. After this period, there are two options: repowering the site and replacing existing wind turbines or decommissioning the site, removing the wind turbines and other major structures, and restoring the site. At this stage, the Project Owner has not decided which of the two options will be selected for the Project. However, the Project Owner will comply with the relevant mandatory requirements and best practices in force at the time of Project decommissioning.

Prior to decommissioning, a method statement, detailing how the site would be restored is usually prepared and approved by the relevant authorities.

At present, wind turbines are removed by crane and reused elsewhere, if possible. In the case of the foundation works, upper sections are removed and the voids backfilled with appropriate materials to support land use. Underground cables and deep concrete foundations are usually left in place, as removal is likely to cause more disruption than leaving them in-situ. However, if techniques allowing removal of underground cables with limited disruption and impacts are available at the time of decommissioning, these will be considered. Surface Areas affected by decommissioning activities will be restored to the use defined for the respective land plots at that moment in time. As with the turbines, the electrical control building and internal equipment are removed, and reused or recycled, where possible.

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT

The EIA Report performed for the Project identified the potential environmental and social impacts associated with the Project and also defined mitigation measures to be implemented in order to maintain these impacts within acceptable limits. The gap analysis of the EIA Report against EBRD PRs also indicated that a number of actions are still required for the Project to meet the respective standards. These measures were defined within the following documents that will be used during the Project implementation:

- the Environmental and Social Action Plan (ESAP), which represents a roadmap for the implementation of key environmental and social actions required for the Project;
- the Corporate Stakeholder Engagement Framework (SEF), which defines the overall engagement strategy and will be further used by the Project Owner to develop a Project specific Stakeholder Engagement Plan (SEP). The SEP will define the relevant Project stakeholders, planned engagement activities, resources from the Project Owner to deal with stakeholder engagement, community grievance mechanism and management process along with monitoring and evaluation. The Project SEP will aim to lay the foundation for an effective, bilateral communication between the Project and its stakeholders and to build reliable relations between the Project and affected communities. Regular stakeholder engagement will also enable the Project Owner to gain a better understanding of the ways in which communities prefer for receive information about the Project. The Project SEP will be made available to the public on the Project Owner’s website, and as hard copy to local authorities and communities. It will be periodically updated as needed, to reflect engagement undertaken, stakeholder feedback and potential changes in the Project.