BOREY WIND POWER PLANT

NONTECHNICAL SUMMARY

CONTENT

ABBREVIATIONS

CLO	Community Liaison Officer
CSRP	Corporate Social Responsibility Program
EBRD	European Bank for Reconstruction and Development
ESIA	Environmental and Social Impact Assessment
EHS	Environmental Health and Safety
IFC	International Finance Corporation
NGO	Non-Governmental Organization
PS	Performance Standard
WPP	Wind Power Plant

1 PROJECT DESCRIPTION

The Borey Energo (the Company) is in the planning phase for the construction and operation of the 100MW Borey wind power plant (WPP), located near Bulaksay village and Saryoba station in Arshaly District of Akmola Region of Kazakhstan (the Project). The Company also reviews an option to add to this Project in the future 15 turbines to increase the total output to 156MW and develop a one more 10 turbine 50MW WPP east of the road between Saryoba Station and Saryoba village. This development will contribute to the Kazakhstan's implementation of the Green Economy concept by reducing the country input to global warming, dependency on fossil fuel and improving power supply reliability.

Twenty-eight 105m high towers of Mingyang turbines (16 of 3.2MW and 12 of 4.0MW output power) will hold 156m diameter blades that will rotate with the wind from 2 to 25 m/s at a rotational speed range of 10-20 rpm. The turbines will be arranged at 0.4-0.6km away from each other on reinforced concrete 19.6 m wide and 3.9m deep foundations (Figure 1). A 35kV alternate current cable will be laid at 1-2m depth along each group of turbines to the substation with the total length of 16.7km. The substation will be connected with a 42km long overhead powerline to the existing 110kV KEGOC substation Shygys (Figure 3).

1.1 CONSTRUCTION

Up to 70 workers will be involved in construction that will start in May 2022 and will be split into 3 streams: roads, turbines and substation/transmission line. First, the internal roads and temporary facilities and camp will be constructed. As the turbines parts start to arrive, their assembly and installation will begin. Assembly of each turbine is expected to take on average 3 windless days. Movement of vehicles will be allowed only along the gravel enforced internal roads. The Company will ensure that all access roads are maintained in at least the same condition as before the parts transportation andthat trenching for cables do not expose the livestock to the risk of injury.

1.2 OPERATION

The fully automatic operation is planned for 20 years without major repair. It will be carried from the control room at the substation via SCADA. Around 15-17 specialists will be involved in the operation and maintenance: the plant manager, a warehouse manager, a senior engineer, 2 operations engineers, 3 to 4 turbine generator engineers and the same number of technicians. Remote operation monitoring will be conducted by 4 specialists. This staff is expected to work in 12 hour shifts and reside in Nur-Sultan. The non-skilled workers that can be employed locally are 2-4 guards and a cleaner. They are expected to live in Bulaksay or Saryoba.

The WPP will contribute to avoided air pollution (702.4t of SO_2 and 377.54t of NO_x) via replaced fossil fuel grid electricity and thus to the country's contribution to the efforts in combating global warming (333 ktCO_2 avoided annually), in line with Kazakhstan's Nationally Determined Contribution[1] .

[1] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kazakhstan%20First/INDC%20Kz_eng.pdf

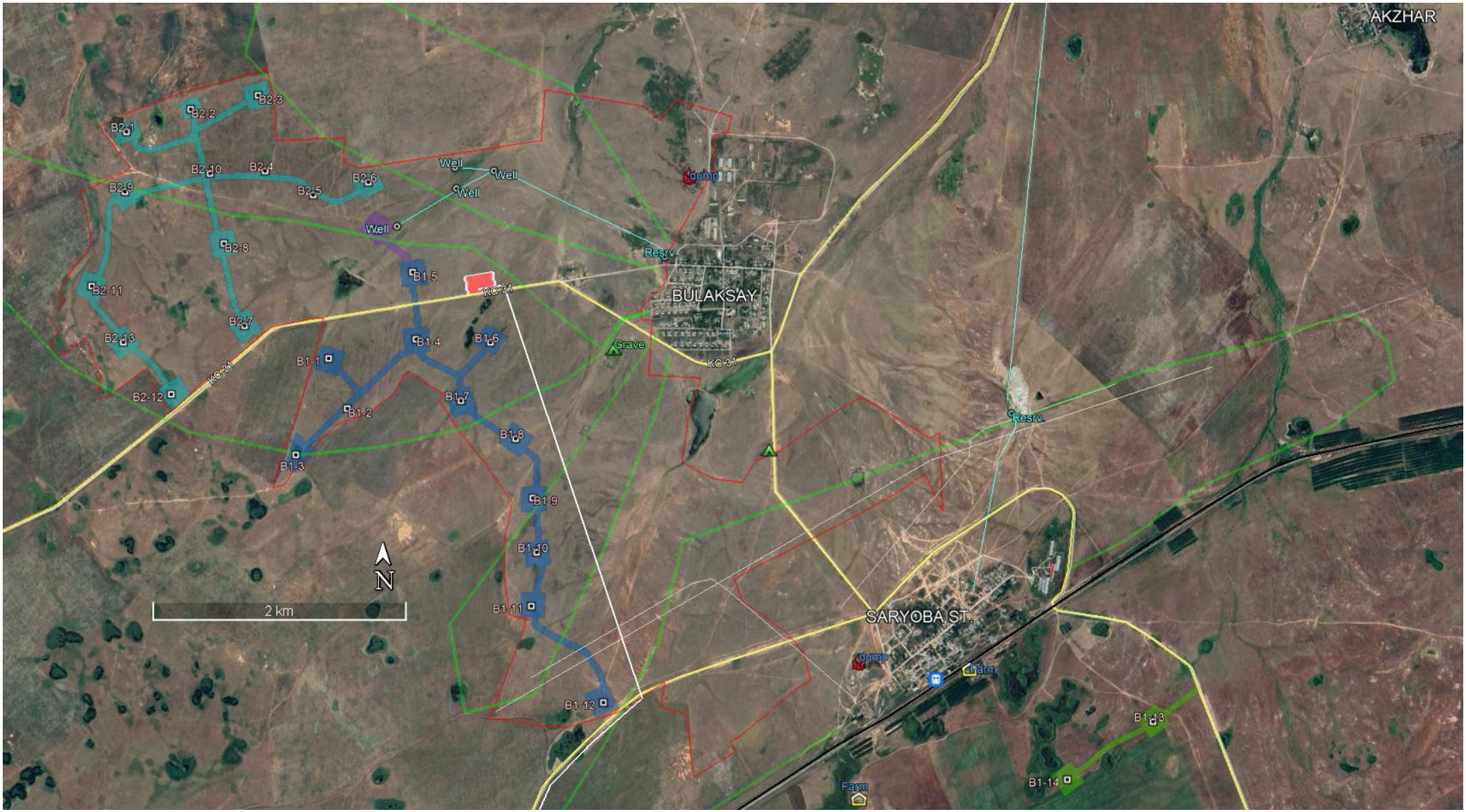

Figure 1 Showing the WPP100MW components: the assigned for the project area (red line), turbines (dots), substation area (pink), transmission line (white). The local objects are groundwater intakes (well), pipelines (blue) and overhead high voltage powerlines (thin white).

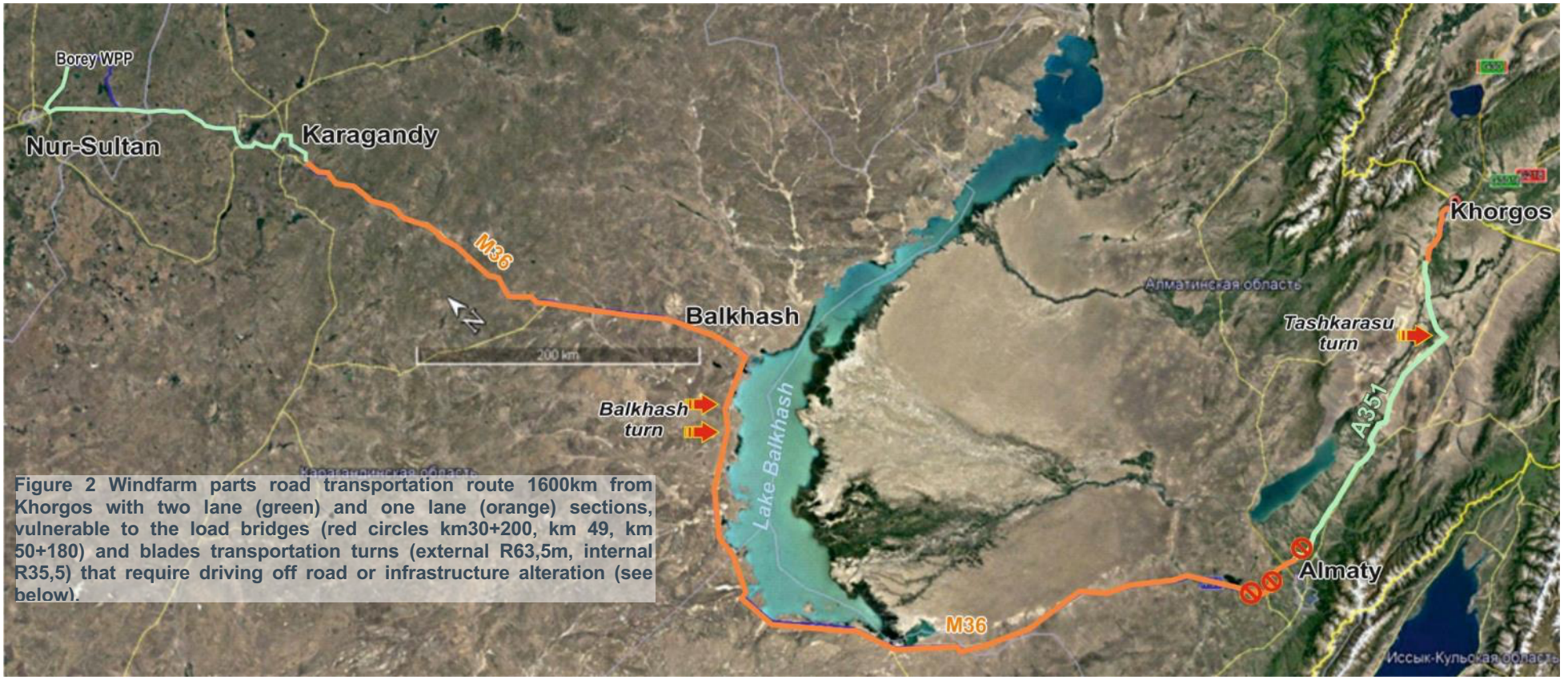

Figure 2 Windfarm parts road transportation route 1600km from Khorgos with two lane (green) and one lane (orange) sections, vulnerable to the load bridges (red circles km30+200, km 49, km 50+180) and blades transportation turns (external R63,5m, internal R35,5) that require driving off road or infrastructure alteration (see below).

Balkhash south turn required driving off road. The northern turn requires removing and reinstalling private fence.

The land on which the trailers need to drive in at the Tashkarsu turn belongs to the State Reserve.

2 SHORT RESUME OF EXPECTED E&S IMPACTS

The Project has been categorized as “B” for environmental and social aspects. This environmental and social impact assessment (ESIA) has not identified any relevant issues that would warrant a review of this categorization. No critical environmental and social risks have been identified and impacts are judged to be site specific with a potential to be brought to acceptable by the Project stakeholders level and in compliance with the recognized environmental and social Performance Requirements such as those of the EBRD with mitigation measures. All elements of the Project will also meet national environmental, social, health and safety laws and regulations, including national obligations under international law that apply to the Project.

To determine the local conditions and area’s vulnerability a survey was carried out from March 16, 2020 to March 3, 2021. The survey included driving throughout the area, walking to the inaccessible at the time areas of possible birds concentration like limans, ponds and shrubs and 3-hour long observations at the two vantage points selected to be on the hills for better coverage. In total, more than 31 site visits were conducted throughout the year. The following observations showed that the WPP area ecological value is considered to be relatively low with the vegetation and animals typical for the waterless areas of the steppe. In accordance with the response dated March 19, 2020 No. 3T-A-00037 of the Republican State Institution "Akmola Regional Territorial Inspection of Forestry and Wildlife", the future WPP area is not located on the lands of the state forest fund and specially protected natural areas. Wild animals, listed in the Red Book of the Republic of Kazakhstan, are not present in this area. The wildlife sensitivities are mainly associated with the lakes and limans located west and south of the wind power plant (WPP) site and the ~60km wide secondary birds migratory corridor Tomsk-Atyrau. The estimated centerline of this 60km wide lies 8km northwest. The open and relatively flat studied area supports limited number and diversity of wildlife.

The diversity of amphibians and mammals at the WPP area were noticed to be low during the whole observation period. The following non-bird animals, such as Bobak marmot rodent. European hare, Siberian roe deer and Corsac fox are the only other animals that were noted using the area. The nearest empty buildings, stables and lofts were checked for potential hibernation and roosting places of bats and none were found. Over the year, 2427 birds of 11 orders have been observed. Out of them, only 92 have noted to enter the blades rotation area (risk window) for total 189 minutes. No protected species were noted in the risk window and out of prey birds only 2 kestrels and 2 Western marsh harriers entered it in May for 15 seconds. This corresponded to the possible death of 0.00135 birds for each MW produced which is well below the industry statistics. The annual mortality per turbine was however higher than recorded for the industry (21 birds and 0.8 prey birds/turbine/year) but the statistics used for comparison is mainly based on much smaller turbines. There are no significant concentrations of migratory birds and the area does not fall

Figure 3 Power transmission line route, VPs and crossed land plots.

under the Critical Habitat criteria. Rare Imperial Eagle may occur along the transmission line, but the numbers will be minimal and critical habitat threshold will not be triggered.

The through the year 31 day-long visits collected information for assessment of impact from habitat loss, displacement and death through collision with the rotating blades. The monitoring methodology was based on the principles the second version of the Recommended Birds Survey Methods to Confirm Impact Assessment of Onshore Windfarms issued by the Scottish Natural Heritage in 2017. The bats were surveyed according to the Guidelines for Consideration of Bats in Wind Farm Projects, revision 2014.

Out of endangered animals only the Red Book protected Whooper Swans and Imperial Eagle were recorded. The swans (category II: catastrophically rapidly depleting population that may lead to disappearance but according to IUCN is least concern worldwide) were observed once in autumn in large numbers. This turned out to be a one-off event. During observation of the autumn migration year later, only one bird was noted at the pond 12km east of the WPP area. A pair of the protected Imperial Eagles (placed by the Kazakhstan Red Book in the category III: reducing population and considered by IUCN as vulnerable) noted near transmission line in autumn 2020 was not recorded a year later when only one bird was seen at Mal. Saryoba Lake 10km southwest of the WPP area. No bats or their roosting places were found. Significant food sources of the animals are located outside of the WPP area at the lakes, limans and agricultural fields. Thus, the animals do not use the area for feeding.

Steppe vegetation is represented by perennial bunchgrass *Stipa capillata* dominating over wormwood *Artemisia austriaca* with few other steppe species. Vegetation, damaged during construction is expected to recover within 1 vegetative season from the seed bank of the top soil that will be scraped and stored at the edge of the construction sites. No protected or medically important plant have been identified but because the ephemers and emphemerids flowering period was missed, their identification was not precise, and chances are that some protected plants have been missed. This will be covered during the next spring survey.

Impact on the socio-economic aspects is also considered to fit into the category B definition. Out of several thousands of hectares of pasture accessible by the Bulaksay residents, just over 45ha will be removed for 20 years of operation. The transmission line passes mainly along the road with existing 10kV powerline crossing undeveloped land and one agricultural field. Two of the 11 undeveloped plots are privately owned, the others are leased for 49 years (Table 1). All of them are restricted with easement.

The grid connection route crossing 6 leased and 3 owned land plots with easement that allows access to the powerline. For the powerline construction, the required permission has been obtained from the plots tenants and owners.

As the impacts and risks associated with the heavy and oversize parts transportation is valued to be high, a proper transportation plan with control over the maximum axel load will be prepared by the Company.

The impact of influx of up to 70 workers to the area with 1437 population is considered to be low. Most of the construction workers will be local. The small number of others: supervisors and specialists involved in turbines assembling are expected to be placed in a container type camp or be driven daily from Nur-Sultan. The available in Saryoba station flats may be rented by some of the in-country subcontractors giving additional income to the local flat owners. The impact on the workers themselves may be of the medium significance if the health safety and labour protection requirements placed on the EPC contractor is transferred onto multiple subcontractors.

The WPP area and transmission line corridor do not have places of specific cultural value but the landscape emptiness and rural appearance are valued by the local population, which became evident from the consultation with Bolaksay and Saryoba rural areas residents.

Communication with the affected parties will be maintained according to the stakeholder engagement plan. To allow for some benefits from the project to be felt by the local community a Corporate Social Responsibility Program (CSRP) that will include both financial as well as other forms of support is to be agreed with the Public Governance councils and the Rural Area councils. Selection of actions will be restricted by the budget commensurable with the size of the project, absence of overlap with the State programs and their sustainability.

The project benefit will be more apparent on the national level allowing the country to fulfill its goals in the energy generation from renewable sources. There will also be sizable reduction in air pollution and the country contribution to the combating of global warming effects. Few jobs will be created for the local unskilled labour but presence of the WPP may lead to knowledge transfer and encouragement of the targeted education among the local school graduates.

3 DETAILED DESCRIPTION OF IDENTIFIED IMPACTS AND PLANNED IMPACT MITIGATION MEASURES

3.1 CONSTRUCTION

3.1.1 Impact on Animals

As there will be no pneumatic hammering for earthwork, ground vibration will be only from vibro-rollers during the internal roads and crane pads compaction. At a particular place, such work is expected to last for 3-4 days. The recorded ground species are tolerant to the human presence and are unlikely to be displaced during construction to the extent of any notable impact on their wellbeing. Isolated burrows of non-colonial rodents like Bobak Marmot were recorded on several occasions throughout the WPP territory. During the reproduction period from March to the end of June the dwellers of the burrow in immediate proximity of the roads and crane pads will be sensitive to ground vibration emanating from the compactors. Impact of abandoning their burrows with immature offspring will be most significant at the beginning of this period when absence of grass cover exposes the rodents to predators and food stock is still sparse. No aggression from their like is envisaged as their numbers and diversity is thought to be limited by food availability and not the territory. As the rodents are expected to return to their burrows soon after the vibration ends and only few burrows are thought to be affected, **the impact on animals is considered to be low**.

By the time the birds start to select places for nesting in mid-May, the Project activities will be well on their way, and the sensitive to human presence birds will settle elsewhere.

The following measures will allow reducing the impact to the negligible level:

Start earthwork as early as possible to avoid animals reproduction period (March-June).

Include in the code of behaviour prohibition of animals chasing and eggs collection.

Strengthen internal road prior to use of heavy vehicles, prohibit driving outside them and dragging poles and towers over the ground, control adherence;

Prohibit picking eggs and chasing animals;

When reinstating the working sites, ensure that the dam-aged vegetation and soil area does not increase from rein-statement.

3.1.2 Impact on Vegetation and Soil

Impact on soil and vegetation is considered to be low because just over 45ha will be removed from several thousands of hectares of the dry steppe pasture land that has low plants diversity and poor soil

development. Based on the given by the developer information and the practice from previous similar projects the average damage around the foundation, the crane pad, storage and assembly area is expected to be within 0.5ha. It should be noted however, that if the internal roads are not reinforced soon after snow melt, damaged by driving area may increase significantly. Reapplication of top soil after construction will allow vegetation recovery from the seed bank in the next vegetative season by this reducing chances of soil wind erosion.

Small areas of vegetation will be damaged around the 42km long transmission line poles and anchor towers in a cross like pattern with 10-15m long and 3-9m wide hands. No significant damage to soil is expected as the poles will be placed in the boreholes and at the anchor towers, the scraped top soil volume will be small.

Excessive dust is not envisaged well into July when all the internal roads are expected to be reinforced but dust may be created by the machinery and trucks driving outside the fixed by chip rock roads and pads. Dust generates the highest impact in the active growth period resulting in the similar to drought stress condition. Yet, the identified on the WPP site vegetation is not sensitive to dust.

The following measures will allow reducing the impact to the non-significant level:

Strengthen internal road with chip rock prior to use of heavy vehicles, prohibit driving outside them and dragging poles and towers over the ground, control adherence;

Include in the code of behaviour prohibition of flowers picking;

When reinstating the working sites, ensure that the damaged vegetation and soil area does not increase from rein-statement.

3.1.3 Transportation Impact on Traffic and Roads Condition

The oversized parts like towers, blades and the main crane will be transported in the fixed horizontal position reducing by this maneuverability of the trailers that will also travel at an average speed of 25km/h in groups of 5 or 6, transporting one turbine at a time. The trucks will start at the Tianjin port, China and enter Kazakhstan at Khorgos custom terminal. The distance from Khorgos to the WPP site is around 1600km. The turbine components will be transported along the A351 motorway to Almaty, then via M36 highway bypassing Balkhash and Karagandy cities and on the outskirts of Nur-Sultan city turning to the local partially surfaced KC31 road to WPP site that does not enter the settlements. The transportation plan will be submitted to the road police for approval. All trailers over 4m wide and 30m long will be escorted by a police car in front.

The trailers can block considerable length of the one lane roads that span for 1156km of the route. Being under construction, driving on M-36 road would slow down the speed of trucks and create obstacles for other vehicles especially at the bridges detours. As the construction of different segments of the M36 road is expected to be completed in 2023, some parts will still be under construction during transportation. Blocking the traffic for a long time is not envisaged as the route does not have steep hills and only 3 narrow turns and two narrow bridges (Figure 2).

Although the turbines supplier recognises the 8t maximum axel load limitation, without due control, trailers with insufficient axel number may be used. The most common 6 axels truck-trailer with own weight being 12t, is suitable only for blades and containers transportation unless the pressure is reduced by doubling the number of wheels on the axels. Carrying the other parts, such trucks are likely to damage the category 2 roads surfaces as was the case with the construction of the TSATEK windfarm 16km west of Bulaksay where 14km of the old tarmac road to Nur-Sultan used by Bulaksay residents on the daily basis was damaged and not repaired. The remaining 20km of the unsurfaced graded road is also likely to be damaged, especially at the parts where it is blocked by the road construction and the traffic is moved to the not enforced field road along it.

The Project traffic around the local roads is not expected to be significant, around 2 cars per hour. The concrete trucks will run along the internal roads between the foundations and the batch plant at the worker camp.

It is considered that after application of the following measures, the residual impact will be low.

Develop oversize and non-standard weight equipment transportation plan and obtain the road police approval.

Request the heavy turbine parts transportation contractor to provide evidence of the trailers compliance with the 8t maximum axel load before transportation starts. To reduce fuel consumption, it is the best practice to have axels that can be lifted on the motorways that can withstand higher load.

Consider arrangement of controlled overtaking the trailers caravans and a minimum distance between the trailers must be maintained to allow safe overtaking. Place the trailer length note on its back in Russian to inform the overtaking cars.

3.1.4 Local Community Health Safety and Livelihood

If the water is taken from the Bulaksay or Saryoba station water supplies, shortages during the peak time usage may arise. To prevent this, the Company will repair the village pipework and pumps.

Visual impact will be less than the impact during operation as not all turbines will be up at a given time and the blades will not rotate.

After studying the Saryoba Station and Bulaksay villages livestock daily travel routes and determining the time when pastures started to be used in spring, it was decided that the construction will not have significant impact on the livestock providing the risk of the livestock falling in the cable trenches is eliminated. All the land will remain available for pasturing. The 3m deep foundation pits and trenching for the cable laying will be the only hazard for the livestock during the construction. The access to the pits will be obstructed by the excavated ground, placed at their edges and a hazard warning tape. However, the height of the excavated ground along the trenches will not be high enough to stop livestock from crossing.

Use of the WPP land in any other way but pasturing and hunting (e.g. ground resources extraction, agriculture, recreational etc.) is not envisaged. The State Reserve and leased land that surrounds the WPP is also unlikely to be used for anything more than non-intensive pasturing.

The air quality will be reduced locally with diesel combustion products, dust and volatile hydrocarbons. Painting will be minimal as most of the components will be galvanized or pre-painted. The turbine parts will be bolted rather than welded. Considering the distance to the residential area and the expected wind turbulence for most of the construction period no discernible impact is expected on the population from air pollution.

The earth moving equipment will generate noise around 90 dB(A). At the nearest house in Bulaksay, which is 1.33km away from the closest turbine, this noise will attenuate below the background level.

These mitigation measures can reduce impact to the low or negligible level:

- Ensure that water availability to the local residents is not hindered by the Project water use by repairing the Bulaksay village water supply system.
- Attempt to complete cable laying before grazing period. If not possible, minimise time the trenches remain open or leave 20m wide gaps in trenches on the live-stock daily route. Compensate the live-stock owners any trenches related live-stock injuries.

3.1.5 Land Requirements and Use

Intrusion of the transmission line into the undeveloped land plots sets the livelihood restoration procedures despite that no impact on the tenant is envisaged. The Company has already signed easement agreements with 7 tenants and is in process of signing the rest of agreements. Considering that all the plots have already been restricted with easement, all but two are undeveloped, the land to be taken for the poles and anchor towers is small, 7 contracts have been signed without coercion and deceit and the remaining contracts are expected to be signed in the same manner, the **land acquisition impact is considered to be low**.

Table 1 The crossed by the transmission line land plots. All plots are restricted with easement. See Figure 3 for location in the order WPP-Shygys substation.

	Land , ha		Payment KZT	Designation	Taken land Condition	Lease until /Private	Contract signed
	Total	Taken					
1	213 000	2,4122	191 046	Agricultural production	Undeveloped, pasture	11.03.2054	Yes
2	225	3,852	305 078	Farming	Undeveloped, pasture	n/d	Yes
3	400	1,785	141 340	Agricultural production	Undeveloped, pasture	n/d	Yes
4	125	1,159	91 777	Agricultural production	Agricultural field	15.04.2052	Yes
5	9 670	12,08	956 696	Agricultural production	Undeveloped, pasture	11.03.2054	Yes
6	100	1,162	92 030	Livestock fodder storage	Undeveloped, pasture	n/d	Yes
7	129	1,210	95 848	Agricultural production	Undeveloped, pasture	13.04.2026	Yes
8	50	Data pending		Farming	Undeveloped, pasture	12.05.2047	No
9	100			Livestock fodder storage	Some hey harvesting	n/d	No
10	11			Agricultural production	Wasteland	Private	No
11	4794			Agricultural production	Wasteland	11.03.2054	No
12	78			Agricultural production	Wasteland	Private	No
13	5			Agricultural production	Shygyz substation	Private	No

3.1.6 Waste Management

The construction waste volume will be small. The contractor will be responsible for waste safe storage at site and final disposal. The closest licensed and properly engineered non-hazardous waste landfill is 65km and the wastewater treatment plant is 90km from the site at Nur-Sultan east and west side respectively. Because of these distances, there is a possibility that the contractor will choose to dispose this waste to the nearest fenced waste dump at Bulaksay Village.

Table 2 Expected construction waste quantity and elimination methods (hazardous waste is highlighted)

Waste name	Quantity, t	Accumulation containers	Elimination method
Used oil	0.15	Drums on sheltered pad	Regeneration by specialized company
Oiled ground	0.39	1.5m^3 container	Removed on worker camp closure to a hazardous waste landfill
Oiled cloth, oil filters	0.01	1.5m^3 container	
Scrap metal	9.74	Open air pad	To metal recycling yard MetizVtormet Astana, Eco-KZ, Kazvtorchermet in Nur-Sultan on worker camp closure
Paint cans	0.24	1.5m^3 container	
Welding rod ends	0.05	0.5m^3 container	
Domestic waste	7.50	1.5m^3 containers	Nur-Sultan landfill - guarded and fenced, fully engineered
Construction waste air filters	77.9	Open air pad at the camp	
Wood and cardboard packaging	3.4		Local workers for utilisation at home
Sewage	935	Septic tank	Nur-Sultan wastewater treatment plant
Food waste		0.5m^3 container	Local workers for utilisation at home

Hazardous waste volume will also be small but there is a risk that it will not be separated from non-hazardous waste and that used oil will not be stored in a way to prevent ground contamination and mixing with rainwater. It is also possible that hazardous waste will be stored at the work camp for over 6 months to be removed with the worker camp at the end of construction. This would breach the time limit for waste storage without a license. Oil stained ground at the turbines may also not be collected but buried under the reapplied top soil at the end of work on site.

The following measures will allow reducing the impact to the negligible level:

If an intermediate between the Nur-Sultan landfill and the Project contractor is used, request waybills that proof disposal at the landfill. Inspect Bulaksay waste dump for the Project specific construction material a month after start of the waste removal.

Do not mix packaging and food waste with the rest of waste and arrange utilization locally.

3.1.7 Workers Influx

Up to 70 people are expected to be present on site in peak time associated with the foundations steel wire frame tying that requires manual labour. Most of them will be local. The small number of others: supervisors and specialists involved in turbines assembling are expected to be placed in a container type camp or be driven daily from Nur-Sultan. As their culture and values are likely to be significantly different from the local population, they are unlikely to use the available in Saryoba station flats that may be rented by some of the in-country subcontractors.

The workers will mainly be largely locals or Kazakhstan nationals. The Company will prohibit the use of Illegal, forced or child labour. The Company will emphasise the principles of the core labor standards including the prohibition on child labor and forced labor as well as compliance with national labor laws in the construction contract and include relevant checks in the internal audits. Considering that the Company will extend its existing practices over contractors control to this project, **this form of impact is thought to be low**. To reduce this impact to negligible level the EPC contractor will develop the code of conduct and control that all the Project workers adhere to it.

The following measures will allow reducing the impact to the negligible level:

- Check workers camps design for compliance with the national legislation and EBRD/IFC worker accommodation guidelines
- Inspect worker camp accommodation regularly

3.1.8 Cultural Heritage

The Department of Culture, Archives and Documentation of the Akmola region reported no presence of historical or cultural objects on the territory of WPP. There is a chance that cultural objects that are not identified by archaeologists as part of the archaeological survey, once excavated under time pressure, will not be retained untouched and reported to the cultural heritage authorities as prescribed by the legislation. To reduce the impact to the negligible level the Company will develop and supervise the earthwork conducting subcontractors on instructing their workers to follow the chance find procedures.

3.1.9 Risk of Accidents

The standard-length vehicles may generate high risk to the other one-lane roads (one each way) users if they move in a train like manner leaving insufficient gaps between for the overtaking cars. These vehicles will not be escorted by the police and transportation company representatives and thus the distance will not be regulated. The probability of head-on collision or overturn from being pushed off the road is higher for drivers of one-lane roads where overtaking involves driving on the opposite direction

lane. This probability increases on more congested and better surfaced segments of the transportation route that allow higher speed.

The oversize freight will be escorted by a police car traveling in front of a caravan from 3-6 vehicles with a transportation company supervising car at the back. Yet, the risk of collision here is higher than for the standard size freight because the queuing behind drivers would not expect such a long trailer and may easily misjudge their cars overtaking capacity.

Significant spills are not expected to occur because there will be no large diesel storage tanks at the site However, the main contractor or subcontractors may decide to store at their worker camp either backup diesel or diesel additives like gas condensate for the cold period. Backup petrol, diesel or oil may also be stored in 5-20L canisters at the working sites on the ground without secondary containment and protection from being driven over by a reversing vehicle. Accidental diesel spills during heavy machinery refueling may be small but fairly frequent. Considering that the equipment will be refuelled by a tank truck driver from a small local fuel supplier, small and medium spills may occur as the driver is not trained for the equipment refuelling and will not have enough preventive equipment.

The soil and ground have low permeability to diesel and oil and high ability to absorb small spills. A medium size spill (~10-20L that would be expected on accidental disconnection of a fueling hose) can be smeared by rain and melt water through the unsaturated zone of the silty clay ground. There is also the risk of cumulative impact from several such spills. This risk at the turbines B2-6 and 14 is somewhat lower but still significant to deserve additional mitigation measures.

Considering diesel properties, risk of diesel fuel ignition while fueling the equipment on site stripped of vegetation is negligible but work of any equipment on the fire prone vegetation in the dry season may result in significant damage to vegetation from ground fire.

Probability of extreme rain (above 20mm/day) and wind storms (over 25m/sec) during dry summer is very unlikely. Therefore the risk of the stored in heaps top soil transfer by the wind is considered to be negligible and not require risk reduction measures.

The following measure will allow reducing the risk to the low level:

- Include in the transportation plan requirement to maintain sufficient distance between the trucks in the caravan. For oversize parts transportation, obtain the road police approval and request a second escort car to arrange controlled overtaking of oversize trailers.
- Fold the main cranes arms and ground the large crane arms for the night;
- Purchase fuel from a reputable supplier and check on site entry that the driver passed spill prevention training and has the required spill containment and collection equipment.
- Develop a spill prevention plan. Stipulate higher groundwater exposure to spills at the turbines B2-6 and 14 and B1-1 and 5. Ensure that contractor controls fuel tank drivers use of trays under refueling couplings
- Develop an emergency response plan. Prohibit grass ignition and cigarette ends dropping on grass. Include ground fire preparedness and response procedures and training for the equipment operators. Inspect availability of adequate firefighting equipment at each machine, which is noted to work on the grass.

3.2 OPERATION

3.2.1 Air and Groundwater

No discernable impact on air and groundwater quality from the WPP is expected. The only sources of air pollution will be few vehicles operating at some distance from the settlements. Possible releases of sulfur hexafluoride during maintenance and repair of the high voltage circuit breakers are covered in the risk assessment Section 3.2.8. Small amount of non-hazardous waste and domestic sewage that may

contaminate groundwater is planned to be contained safely and disposed to Nur-Sultan waste treatment facilities.

3.2.2 Vegetation and Wildlife

The project vehicles will not damage vegetation as they will drive only along the internal roads hardened with gravel. Reptiles and some insects are likely to use the access roads and the turbines body and shade for warming up in the mornings and cooling in the afternoons. This will however have no effect on the site ecology and will not increase reptiles mortality as the transport movement along the roads will not be intensive. Bats are not present in the wind power plant site and do not roost or hibernate over winter anywhere near the site.

Over 31 day-long visits to the site throughout the year, bats were not found. The other non-bird animals are represented mainly Bobak marmot rodent. European hare, Siberian roe deer and Corsac fox are the only other animals that were noted using the area. Over the year, 2427 birds of 11 orders have been observed. Out of them, only 92 have noted to enter the blades rotation area 28-184m above the ground (risk window) for total 189 minutes. No protected species were noted in the risk window and out of prey birds only 2 kestrels and 2 Western marsh harriers entered it in May for 15 seconds. This corresponded to the possible death of 0.001 birds per MW power produced over the year, which is well below the industry statistics of 0.24-1.3 birds/MW/year.

On the other hand, waterfowl collision with the transmission line (TL) wires was considered to have medium significance throughout the TL with the ‘hot spots’ at the Zhakankol Lake, Koykeldy and the Ishim river crossing. The flight intensity was noted to be low and noted only at dawn and dusk but 2 birds species that were noted passing through the TL were protected. Birds electrocution potential is not expected to be significant on the TL line for the absence of bird species that build nests at the poles and anchor towers crossbars.

The following measures will allow reducing the impact to the negligible and low level:

- Keep all the gaps and interstices in the nacelles inaccessible to the birds.
- Fix alloy plates on the transmission line wires. Install balls at the segments near the Zhakankol Lake, Koykeldy village and the Ishim River crossing as some plates may fall off with time.

3.2.3 Waste

During operation the waste generation is expected to be small. Domestic wastewater from control room will be accumulated in the underground tank at a maximum rate of 1.2m^3 per day and removed to the Nur-Sultan wastewater treatment plant by a tank truck. Small amount of office waste will end up in the Nur-Sultan landfill,

3.2.4 Land Requirements and Use

Practically all WPP territory will remain to be open for livestock pasturing. Use of the WPP land in any other way (e.g. ground resources extraction, agriculture, recreational etc.) is not envisaged. A letter from the Committee of Geology of the Ministry of ecology, Geology and natural resources of Kazakhstan "Sevkaznedra" dated 18.12.2019 confirms absence of known valuable extractable resources under the site. The local councils reported no agricultural activity on the selected for WPP area in the past. The State Reserve land and leased land that surrounds the WPP is also unlikely to be used for anything more than non-intensive pasturing and hunting. Therefore, impact on land use during the operation is considered to be **negligible.**

3.2.5 Noise and Electromagnetic Radiation

According to the national health regulations [2], an acceptable level of noise that is not harmful to hearing, even with prolonged exposure, is considered to be 55dB(A) during the day and 45dB(A) at night. The ambient noise measured at the Bulaksay village and Saryoba station houses facades was in the range of 48 and 54dB(A).

The noise at the hub height after the speed of 8m/s does not increase beyond 111.5dB(A) for all frequencies. The blades noise has swishing character with a specific frequency. Mechanical noise will emanate from the components inside the nacelle (gearbox and generator) and will in general will also have specific frequency noise. The WPP surroundings have no sources of significant noise that can add up with the turbines noise and the turbines are set at over 500m from each other to prevent overshadowing so noise from the turbines does not add up. Because in the area the wind is very frequent, the noise generated by the turbines will be masked by wind.

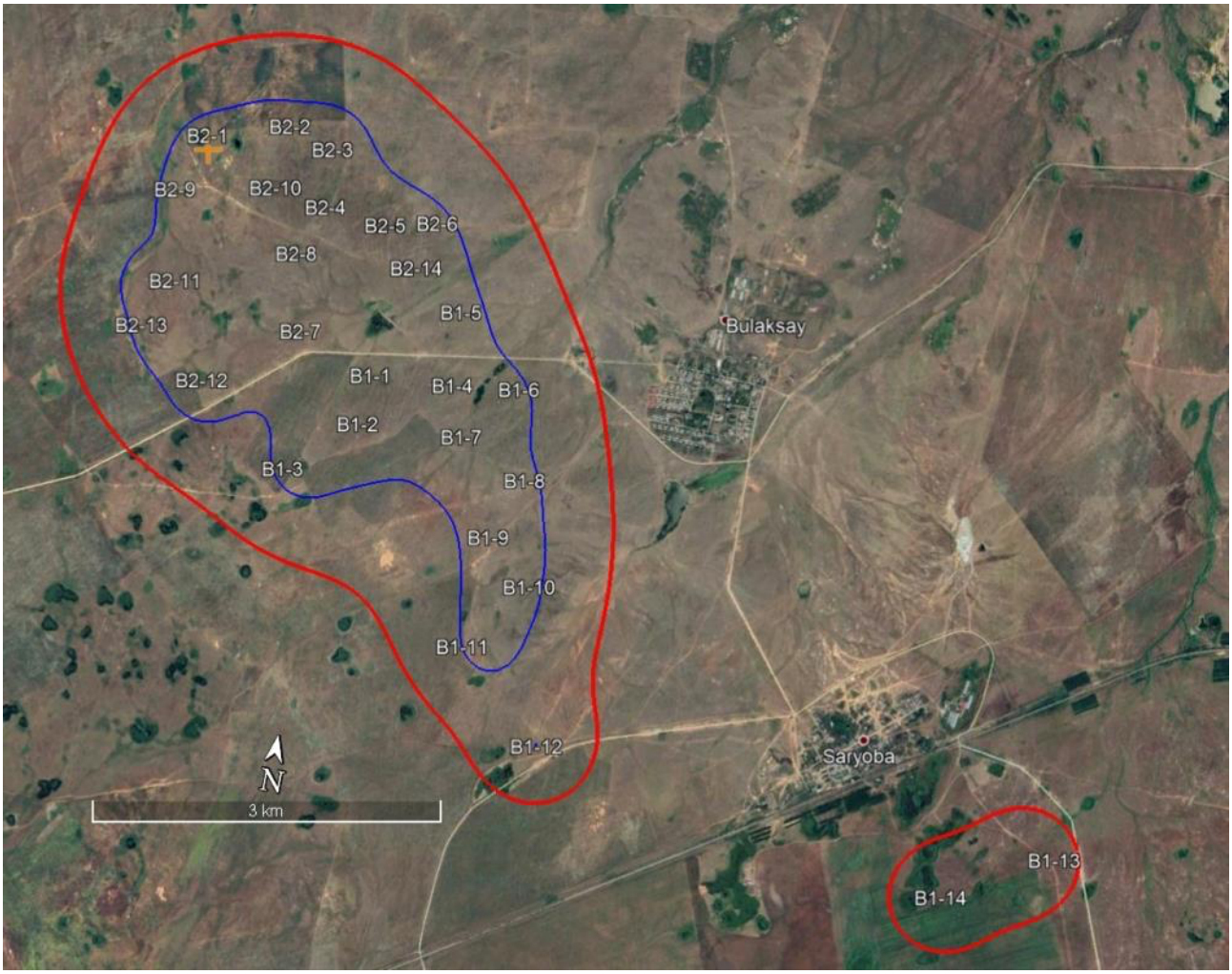

Figure 4 Results of the turbines noise modeling in WinPro® showing that neither the day noise limit (blue contour) not the night noise limit (red contour) approach close to the residential areas. The B1-6 turbine is 200m SE from the tree line that occasionally used for recreational purposes by the locals The maximum noise level there is expected to be 50dB(A). The Bulaksay graveyard is at the edge of the night limit contour.

Noise propagation modeling was made by WindPro®. The results show that after 300m the turbine maximum noise dissipates to 50dB(A). At the Bulaksay houses located 1.3km and further from the WPP, noise from the turbines will be below 45dB(A), which is comparable to a home refrigerator noise.

[2] GOST 12.1.003-83 International Standard for the System of Occupational Safety Standards. Noise. General Safety Requirements 1984.

The farm on the south side of the railway at Saryoba station is 1.1km away from the set of turbines B1-14 and 13. The modeling gave 40dB(A) residual noise at the farmhouse facade. The B1-6 turbine is 200m SE from the tree line that occasionally used for recreational purposes by the locals. The maximum noise level there is expected to be 50dB(A) (Figure 4).

The blades lightning protection in the form of aluminum grounded wire may interfere with the cell phone, radio and TV signal only in immediate proximity of a receiver which is not the case here. The nearest airport with air traffic control and meteorological radars are located in Nur-Sultan 48km away from the WPP and the cell phone mast is in Saryoba village 9.6km south. The turbines are not located on the path between the mast and the local cell phone users. However, to ensure that the relevant impacts do not appear:

During the operation, the Company will monitor disturbances in reception in various weather conditions and if the disturbances are attributed to the turbines, work with the reception providing operators to eliminate such disturbances.

3.2.6 Visual impact

Eighteen locations were selected for assessment of this impact: the closest houses that have direct view to the turbines. The relative position and size of the turbines was determined using WindPro® software, Photomontage tool.

At Bulaksay west and Saryoba st. northwest houses most of the turbines will be observed on a rural landscape with the TSATEK Green Energy WPP on the horizon and a low voltage powerline on 9m high poles in front at various distance from the viewer. The 1.3km distance between the turbines in view and the closest row of houses reduced the impact but the turbines will be 17m above Bulaksay and face the village most of the time due to prevailing wind from the southwest.

The houses on the north and northwest of Saryoba st. will observe most of the turbines (up to 21). Impact on Saryoba st. farm is expected to be low since only two turbines will be observed in the southwest direction. But the impact significance will increase with further expansion of the WPP.

The results of visual impact modelling collages based on the photos taken from 18 ‘worst impact’ locations in Bulaksay, Saryoba st. and Saryoba village have been disclosed. Two sets of collages were made: 1) for the Project turbines and 2) for consideration of cumulative impact the Project turbines with the turbines of the known to date possible Project expansion to 156MW and with an 50MW windfarm planned to be located between Saryoba st. and Saryoba village (See Section 3.4.1). The collages were named according to the postal addresses of the houses they were taken from. They were sent to three WhatsApp chats: Bulaksay, Saryoba st. and Saryoba rural area. The consultant sociologist was added into the 3 chats to register the residents feedback. She recorded 58 out of 60 responses in Saryoba station chart being against the development with one abstained and one placing a condition. Only 18 Bulaksay residents have responded with only one agreeing with the development on condition. No one responded from Saryoba village chat (see Appendix 4 of ESIA). The comments showed that the residents perceived higher and different impacts from the ones predicted by the environmental and social impact assessment indicating the lack of the Project-stakeholders interaction to date.

Irrespective of this opinion, for both Bulaksay and Saryoba st. villages residents the **visual impact is considered to be significant** because the landscape is rural, has no vertical structures and no benefits from the project are perceived by the viewers.

There are no measures that can reduce the visual impact but relocation of the turbines to a different site. However, the impact can be compensated by sustainable improvement of the local community livelihood managed under the Corporate Social Responsibility Program described in Section 4. The program aims to develop a positive attitude to the plant. Implementation of the prepared Stakeholder Engagement Plan will allow monitoring this attitude.

Photo 1 View southwest (240°) from Bulaksay Talina str. House 1 (#1 on Error! Reference source not found.**).**

Photo 2 View southwest (245°) from Bulaksay Abay str., House 1 (#4 on Error! Reference source not found.**).**

Photo 3 View southeast (135°) from the Bulaksay southmost Bogenbay str., house 2 (#10 on Error! Reference source not found.**).**

Photo 4 View west (266°) from Bulaksay northwest house Usheler St. House 1. (#8 on Error! Reference source not found.**).**

Photo 5 View northwest (287°) from Saryoba station. northwest house of Novak (#16 on Error! Reference source not found.**).**

Photo 6 View northwest (259°) from Saryoba station car repair shop in Koktem Passage (#12 on Error! Reference source not found.**).**

Photo 7 View northwest (297°) from the north house of Saryoba station Bogenbay Batyr Street, house 1 (#14 on Error! Reference source not found.**).**

Photo 8 View east (104°) from the farm of the Saryoba station on the other south side of the railway (#17 on Error! Reference source not found.**).**

3.2.7 Shadow flicker

The shadow flicker appears inside the house when rotating turbine blades are closer than 1.5km from the house and are between the sun and the house window. The IFC Environmental, Health and Safety Guidelines for Wind Energy based on the Queensland shadow flicker methodology and DECC Report [3] recommends that the predicted duration of shadow flicker effects experienced at a sensitive receptor shall not exceed 30 hours per year and 30 minutes per day on the worst affected day, based on a worst-case scenario.

The shadow flicker modeled with WindPro® Shadow tool showed exceedance of these guidelines for 3 south and west edge houses in Bulaksay and 7 houses in Saryoba st., that were most exposed to the impact and were representative of the other houses nearby that were screened by either houses or trees [4]. Thus, the selected houses represented the worst case scenario, which accounts for the turbines and houses altitude difference but assumes that the turbines rotors are always rotate and always face the affected windows placed 2m above the ground with no cloudy days in a year. The following conditions significantly reduce the worst case shadow flicker results:

- Clouds that are expected to be present at least 37% of the time (total cover).
- Most frequent facing of the rotors towards the prevailing southwest wind;
- Some windows orientation at sharp angles to the blades and protection by trees especially in summer and most importantly;
- The Doppler Effect that predicts no flicker impact at 10 rotor spans distance (1554m). Only B1-6 and 7 fall into this distance for 7 south west edge houses in Bulaksay, which windows face south while the turbines being southwest of them.

Aerosols, smoke and dust can also reduce flicker impact but their concentration is the air of the area is expected to be very low.

Basing on the above, the shadow flicker impact magnitude (rated 4) on the Bulaksay and Saryoba st. houses that are judged to have low sensitivity (rated 2) is considered to be **medium** (resulted in 8) mainly due to breach of the internationally recognised benchmark. The shadow flicker impact on the rare road users is considered to be **negligible**.

The shadow flicker impact on the houses can be reduced to low or even negligible level by shutting down particular turbines when shadow flicker is expected to occur. But considering that the residents will not be present at home at all times, shutting down can be implemented upon receiving and analysing complaints and then incorporating the findings into the turbines operation.

3.2.8 Risk of Accidents

3.2.8.1 Blades and Nacelle Disintegration and Fire

A combination of high wind and break of blades angle change failure may lead to uncontrolled blade spinning and consequent rupture of the blades and gearbox. Mandatory safety standards in turbine design, manufacturing, and installation as well as more frequent maintenance have made the occurrence of blade throw a rare phenomenon. If occurs, the problem would be noted well before the consequences but once the turbine disintegrates, the fractures can be thrown to a distance of up to

[3] State code 23: Wind farm development by the Department of Infrastructure, Local Government and Planning, Queensland Government, Planning Guideline from July 2017; Department of Energy and Climate Change (DECC). 2011. Update of UK Shadow Flicker Evidence Base: Final Report. Parsons Brinckerhoff, London, UK, p. 5. and Massachusetts Department of Energy Resources (DOER). 2011. Model Amendment to a Zoning Ordinance or By-law: Allowing Conditional Use of Wind Energy Facilities. Available at: http://www.mass.gov/eea/docs/doer/gca/wind-not-byright-bylaw-june13-2011.pdf (Accessed February, 2016)

[4] The WindPro shadow flicker assessment results are available as a separate document on demand.

500m from the turbine in the direction of the spin. The Saryoba st. farm is 1km away from the nearest turbine B1-14 and houses on the southwest of Bulaksay are 1.3km from the nearest turbine B1-6. The sufficient distance will not present any hazard; however, residents should be informed in advance about the risks and safety precautions in the event of nacelle disintegration. Four daily and three non-daily passenger trains pass the station. The nearest turbine B1-12 is 1.2km away from the railways, which would not pose risk for the passing trains. The likelihood of blade debris reaching the railway is very low but in the worst case they can reach the Bulaksay road 120m from the closest turbines. The possible consequences are some damage to the cars that rarely pass by.

In the event of a nacelle fire, best practice is usually to allow burnout, and for firefighting services to establish a safety zone to ensure secondary fires in the area surrounding the turbine is prevented or controlled. In June-August ground fire can be started by sparks. Because the plant operator will have sufficient time before fire starts, the Nur-Sultan fire brigade can be mobilized in time to ensure that this fire does not spread. The local pond southwest from Bulaksay has sufficient volumes of water for fire engines.

Probability of the step-up transformers ignition is thought to be negligible. The most severe consequence is loss of a transformer because the power will be cut and the oil automatically discharged into the secondary containment provided for such circumstances.

Despite that the risk significance is judged to be low, the Company will conduct the following:

- Develop site-specific emergency response plan with regular staff training and drills.
- Install automatic fire detection system linked to automatic shutdown and automatic or remotely engaging firefighting like foam water or powder sprinklers in the nacelles.

3.2.8.2 Ice Throw on Blades Heating Failure

The risk of the blades throwing ice on blades heating failure is considered to be low since all the sensitive objects are located over 800m away from the blades. The EC Guidelines suggest a safety threshold of 200-250m from any turbine, beyond which there is no significant risk from ice fragments [5]. The IFC suggests that 276m is sufficient [6]. The area will not be used by the cattle in the cold part of the year. The WPP operator will be aware of such failure and if any risk of damage by ice is envisaged, stop the blades rotation. With the situation being considered as very unlikely and consequence being minor damage to a passing by vehicle, the impact is considered to be **negligible** to merit mitigation measures.

3.2.8.3 Floods and Ground Fire

For the absence of rivers, **flooding** occurs only in spring on the limans located outside the Project area. Flush rains and prolonged heavy rains are rare in the area but when occur, they may only saturate the ground. The relief is relatively flat to generate sheet runoff over the frozen ground in the event of a sudden warm up in spring. Thus the risk of flooding is considered to be **negligible**.

Ground fire however is a frequent event in summers. They usually start from accidental ignition. Spring fire setting to old grass is not practiced in the area. The ground fire temperature is not sufficient to damage the wind towers and the cable switchbox. At the camp and substation area, the grass will be absent or too low and relatively thin to create any risk to the electric equipment waste oil drums that will be placed away from the grass. Summing up the above, the fire risk is considered to be **low**.

[5] Moregan et al. (1998). *Wind Turbine Icing and Public Safety - A Quantifiable Risk?* Colin Moregan and Ervin Bossanyi Garrad Hassan and Partners Limited: European Commission (DGXII)

[6] Environmental, Health, and Safety Guidelines for Wind Energy. International Finance Corporation, 2015

3.3 IMPACT OF THE ALTERNATIVES CONSIDERED

The do-nothing option was not considered. Alternatives of location, scale, layout, mode of operation and materials used were considered by the Company mainly on the technical, logistical and financial criteria after the through the year wildlife monitoring reported no critical issues. Thus, the turbines layout was designed to minimise effect of wind shadows created by the neighboring turbines in respect of the prevailing wind direction. Three turbines were removed to comply with the IFC requirements to the worst case flickering impact modeling results but some noncompliance still remains.

Selection of the location was constrained by the need to be close or within the corridor in which the required speed and frequency of winds are present, close to the existing road and to the national grid and on the ground that is owned by the State and that would allow excavation of 2.8m deep pits for the turbines foundation without excessive efforts.

Selection of the materials and equipment used is made on the base of the cost and complexity of the delivery logistics. The number of turbines is based on their capacity, considering 28 turbines MingYang 3.2MW and 4.0MW, and 25 turbines Envision 5.0MW.

Overhead 35kV internal powerlines are considered as an alternative to the cables on the plot of the WPP. This alternative would create considerably higher risk of collision with wires, which will also expand to the species that otherwise would not be affected by the development.

Some of the turbine components can be transported by railway but special platforms would be required with the wheels width change at the border as reloading will not be possible for the absence of the required for it special lifting equipment at the terminal. Considering other complexities related to the railway logistics and offloading cranes limitations, the option, although being more environmentally friendlier, is not preferred by the developer.

The operation mode options were reviewed from the point of view of turbines components integrity preservation and cost optimisation. The cut-out and the cut in speed was determined by the turbines supplier. No alternatives are available for the working pattern. The guards, maintenance and control staff has to work round the clock in shifts while the cleaning and office staff can work normal hours.

The top end of the scale was considered in terms of the available capacity of the nearest substation to accept additional load. The bottom end was decided on calculation of profitability as the logistics complexity and construction cost would remain practically the same for a smaller scale plant. The plant substation scale depends on the turbines total output and KEGOC requirements.

3.4 CUMULATIVE IMPACT

Cumulative impact comes in two forms. First, the planned installation of the known Sofievskaya 39MW, Arkalyk 17MW and Energotrust 50MW windfarms nearby by the same developer and second, presence of TSATEK, Ereymentau and in perspective other windfarms in this wind rich region with the grid connection possibilities and the power consumers proximity.

Cumulative impacts on the noted prey birds may come in the form of displacing or reducing their hunting success. At a population level, migratory bird species and those that forage over large ranges may experience significant cumulative mortality as a greater proportion of the population may encounter multiple turbines during their movements.

3.4.1 Cumulative Visual Impact

Visual impact significance depends on the perception of the viewers and does not have an objective value. The Sofievskaya, Arkalyk and Energotrust windfarms is perceived by the sensitive viewers as a

single development now intruding in between the villages with further potential to expand. The impact of this addition was evaluated in the same way as for the 100MW Project by sharing the views from 18 houses in Bulaksay and Saryoba villages and Saryoba station modeled with the WindPro Collage Module with the residents of these nearby settlements.

The minimum distance between the closest turbine and the first house in Bulaksay would also be reduced from 1.3 to 0.8km. The Saryoba village northmost houses will observe most of the Energotrust turbines but the separation distance of 3.7km between the closest Saryoba house and turbine E8 will reduce the impact magnitude. The sensitivity of the view from these houses is reduced by the focus of the residents attention towards the Mal. Saryoba Lake. The Bol. Saryoba Lake swimming and fishing area is 8.3km southwest of the nearest turbine E9. Its 4 cottages are normally rented by the Nur-Sultan residents.

The visual impact on Akzhar village residents will appear with the erection of Sofievskaya, Arkalyk-1, Energotrust and two additional ZB turbines planned as a possible substitute for any of the turbines that may need to be removed as a result of this impact assessment. The distance between the southmost house and the closest ZB2 turbine is 3.4km and E1 turbine is 3.6km away. Although no modeling has been conducted from this village for its remoteness, the change in the landscape is expected to be of the same magnitude as for the Saryoba village residents since the distance and the landscape is the same and the attention focus is also away from the turbines and towards the lake, which was the initial reason for establishing Zarya dairy farm at this place. This view also has high voltage powerline 22m anchor towers that pass 2km south of the village.

Because the cumulative visual impact is considered to be significant with no impact reduction measures available, the Company will attempt to compensate this impact to the sensitive viewers by improvement of their livelihood by further expanding the Corporate Social Responsibility Program agreed for the 100MW plant capacity.

3.4.2 Cumulative Shadow Flicker Impact

The shadow flicker cumulative impact assessment considered the additional Sofievskaya and Arkalyk WPPs, which turbines will be located closer to the sensitive receptors compared to Borey WPP.

The WindPro worst-case scenario modeling showed that the turbines B1-8, S39-1 and S39-2 will breach the IFC EHS Guidelines for Wind Energy 30 hours per year limit[7] with the latter turbine having the greatest impact of 116:16 h/year[8]. The house 9 will be the most affected.

The identification of potential shadow flicker receptors was based on satellite imagery and the site visits undertaken in September 2020. With the sun height and rising and setting place changes, the shadow flicker impact can differ through the year. In the winter solstice (22.12), the houses which windows (1x1m and 1x1.5m) face south may be affected. In the summer solstice (21.06), larger number of houses that face west towards the turbines may be affected. The other houses in the same streets are protected by trees and shrubs but may also be under impact in winter when trees have no foliage.

The most likely orientation of the blades was determined from the wind data from Sofievskaya wind mast installed 17km west of the WPP. The blades are likely to face southwest with only 6% to the south.

[7] State code 23: Wind farm development by the Department of Infrastructure, Local Government and Planning, Queensland Government, Planning Guideline from July 2017

[8] The WindPro shadow flicker assessment results are available as a separate document on demand.

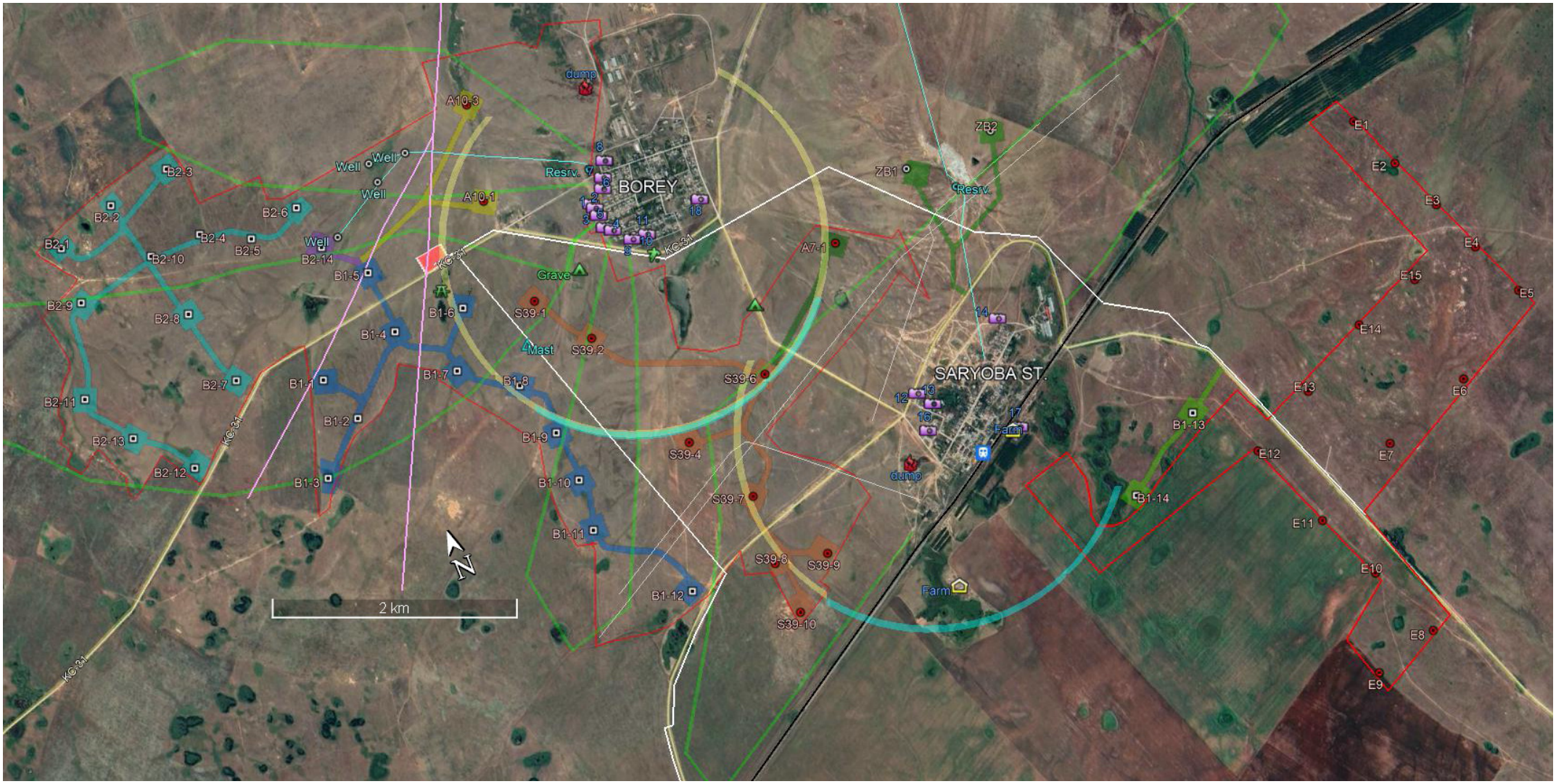

Figure 5 Cumulative impact from the known plans for expansion of the local wind power to 206MW with Sofievskaya (S), Arkalyk (A) and Erementau (E) WPPs; sensitive viewpoints from which visual impact was modeled (cameras); the sun trajectory over the horizon on June 22 (yellow arches) and December 22 (blue arches) at 10 blades rotation diameters distance from the sensitive receptors in Bolaksay (#9) and Saryoba st. (#16); the assigned for the project areas (red lines), turbines (dots), substation area (red), transmission lines (white), cattle routes (green lines) groundwater intakes (well), pipelines (blue) and overhead high voltage powerlines (thin white) and two tectonic faults (pink) cross the studied area.

3.4.3 Other Forms of Cumulative Impact

Cumulative **impact** from the mentioned windfarms **on land use** is considered to be **negligible**. Historic satellite imagery back to the Soviet Union time showed no agricultural activity on the selected for the turbines sighting territory. As there are other undeveloped fields that have been cultivated in the past around, it is likely that they will be brought into cultivation first. Thus, no fragmentation of the field and increase in work load for farmers is expected in the future. Pasturing will be conducted in the same manner without change.

Noise modeling showed that noise at the closest houses would be 45-47dB(A), which is **within the prescribed by the legislation limit** for the night time.

The rest of cumulative impact, **from** appearance of the **turbines that could not be viewed together**, will depend on the overall attitude to the wind power projects locally and in the country.

4 CORPORATE SOCIAL RESPONSIBILITY PROGRAM

Considering that the local residents will not gain from the Project in a long term, their initial negative attitude towards the Project and discrepancy between the actual and perceived by the residents impacts significance, creation of benefits that can be associated with the Project is essential. An instrument known as the Corporate Responsibility Program (CSRP) can help to deliver such benefits in structural and sustainable manner. The Company will agree a budget of the Program during construction and an annual contribution during the operation. A long-term sustainable improvement should be favoured over serving acute needs that may be provided by other financing sources.

The program is to enable Bulaksay and Saryoba st. residents, to improve their wellbeing as a result of the project implementation irrespective whether there is an impact on them or not. The Company will discuss the CSRP and the needs with the Public Governance Councils of two villages and provide them with information on the budget. The Company will use the following criteria for an action to qualify for the CSRP funding:

1. Action cost fits the allocated to the CSRP budget and accounts for other needs;
2. Action does not overlap with the State programs;
3. Action benefit is sustainable;
4. Action benefits the local community and is not biased to a particular group or person unless the group is agreed to be vulnerable and in need of additional to the existing help;
5. Action benefits women, children and girls or reduce burden on women

5 IMPACTS MONITORING

Construction will be monitored through checking adherence to the named above plans and mechanisms and project specific construction management plans. During the operation, monitoring will be conducted monthly. Annual reports on environmental and social performance will reflect the plans implementation progress. The reports will be checked against the legislative and the financing organisations' requirements. Monitoring is to be carried out throughout the project life.

The SEP provides a mechanism for the consideration and response to further comments. It contains a grievance form that can be submitted and the consultation schedule. It describes the Company approach to interacting with the stakeholders, including the general public, and the disclosure of relevant information with respect to the Company operations and the project.

The Community Liaison Officer (CLO) will ensure that the grievance mechanism is available to all stakeholders, involves an appropriate level of management and addresses concerns promptly, using an understandable and transparent process that provides feedback to those concerned without any

retribution. The CLO will register the comments or grievances and control the grievance handling process. Grievances can be left in the mailboxes located on the information boards at council and Community Service Centre or sent by mail or via e-mail to CLO. The Company website will also act as a platform to receive comments. This mechanism does not limit the public's rights to use the conventional routes to place grievances and the available legal system.

Further information can be obtained from the Community Liaison Officer Mr. Alibek Tleubayev Tel.: +77015879188, e-mail: Alibek.T@sungrow-re.com, Address: Kazakhstan, Akmola region, Arshaly district, Bulaksay village, Okzhetpes st, building 4.