MOTT MACDONALD

YEKA WPPs - Environmental and Social Impact Assessment

Additional Receptors Analysis - Noise, Vibration, Visual, Air Quality and Community Health and Safety

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Mott MacDonald
Mesa Koz
Sahrayıcedit District
Atatürk Street No. 69 / 255
34734 Kadıköy
Istanbul
Turkey

T +90 (0) 216 766 3118
mottmac.com

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1 Introduction

This study has been conducted as a supplementary assessment to the existing Environmental and Social Impact Assessment (ESIA) for the 9 YEKA wind power plants (WPP) to identify any potential community health and safety impacts triggered by the Project which may require consideration of physical displacement as a mitigation option.

This document presents an assessment of the noise, vibration, visual, air quality impacts as well as community health and safety risks that will be generated by the construction and operation of Akköy, Armutçuk, Hacıhıdırlar, Harmancık, Ihlamur, Ovacık, Dampınar and Uygar WPPs on the structures within the minimum set back distance in addition to the wider buffer zone of 500 m of the turbines[1]. The project areas will be checked quarterly by CLOs for any potential additions to the receptors, and they will be informed about the risks in line with SEP if there is any. Total of 98 additional assessment points have been determined to be further analysed and modelled. It should be noted that, no structures of interest have been identified within the buffer zone, which includes the minimum set back distance, for Kestanederesi WPP; therefore, Kestanederesi WPP is not within the scope of this assessment.

All of the calculation methods, assessment methods, assumptions, international standards used, calculations methods used are referenced in the main ESIA reports presented for each of the WPPs.

In order to create a complete assessment, baseline measurement results are also used. As such, for additional assessment points, closest representative measurement results are used. While choosing baseline levels to be used for the assessment, it is aimed to choose the lowest levels that could represent the baseline media of the location so that a worst-case scenario could be created.

It is important tomention that, legal frameworks used for these projects consist of national regulations and international guideline documents defining limiting values and assessment dynamics. However, those regulatory limits only apply to receiving bodies that needed to be protected from adverse environmental effects such as, residential areas, industrial areas, commercial areas, schools, hospitals etc. Some of the additional assessment points lack the nature of a sensitive receiver in terms of usage dynamics and function.

This document only aims to generate and present the summary of findings at the additional points requested to be analysed.

[1] Set-back distance X = 1.5 x (H + L); where H: Tower Height (m) and, L: Wing Length (m). Buffer zone is defined as 500 m which is wider than to set-back distance.

2 Assessment Points

Additional assessment points within the minimum set back distance in addition to the buffer zone of 500 m are determined after series of meetings, field trips and remarks from Client and Lender's team. The meetings with the property owners / users have started in May 2024 and have continued as the Project activities progress via continuous consultation conducted by the CLOs. Additional assessment points are requested for Akköy, Armutçuk, Hacıhıdırlar, Harmancık, Ihlamur, Ovacık, Dampınar and Uygar Wind Power Plants (WPPs). Below Table 2-1 through Table 2-8 show the determined traits of the additional assessment points. Satellite images of the additional assessment points are presented in following Figure 2-1 to Figure 2-18. Sample photos from nearby receptors are presented in Appendix C.

Table 2-1: Additional Assessment Points for Akköy WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T1-290	290	Single	Non-residential	An old and unused small building. It is not a living space and is not used for any purpose and is in an idle state.
2	T1-318	318	Single	Non-residential	It is used for one month a year during the olive harvest periods and is located inside the olive grove. It is not a residential space and it is in the form of old and briquette debris. Since it is inside the olive grove, it could not be photographed in detail because the wire fence and the door were locked. The owner could not be reached.
3	T1-440	440	Single	Non-residential	There is no structure. There is a solar panel, a small shed and a wind turbine belonging to another company in the same land, surrounded by a wire fence. There is no living space. It is an olive grove and surrounded by a wire fence.
4	T1-480	480	Single	Non-residential	The structure, which is not accessible and is thought to be unused, is located in the olive grove. The doors are closed and it is not a living space.
5	T1-500	500	Single	Residential	There are 3 structures located within the 500 m border line. 1 person lives there. The living space is small and limited. The owner of the structure located in the olive grove is engaged in olive cultivation. The other two structures located next to it, one is used as a hayloft and the other as a cattle shelter. The owner stated that there are approximately 30 cattle and that they belong to his relative. The person was given contact information. He stated that he has no complaints so far.
6	T2-405	405	Single	Non-residential	It is a single-storey private property located in an olive grove. It could not be photographed in detail

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
					because the garden gate was closed and locked. It is thought to be used seasonally and not a living space.
7	T2-420	420	Single	Non-residential	The small container structure located in the olive grove is not a living space. The owner stated that the structure is only used for 3-4 hours during the day during the olive harvest and maintenance periods. Contact information was shared. He stated that he had no complaints and did not experience any discomfort.
8	T3-287	287	Single	Non-residential	It is a small and idle building located in the olive grove. There is an ETL pole next to it. It is thought that the building has not been used for a long time.
9	T4-325	325	Single	Non-residential	The structure is a small container. It is not a living space. It is located next to the ETL poles. It is not used for any agricultural activity. It is in an idle state. It is thought to have been brought for the use of workers while the ETL was being constructed.
10	T5-244	244	Single	Non-residential	A single-storey prefabricated building within an olive garden surrounded by a wire fence, a solar energy system for a water pump and an additional hut used as an outbuilding, not a primary residence but a structure used for agricultural activities. The user/owner was met during the visit. No complaints were made about the Project activities.
11	T5-365	365	Single	Non-residential	Waste storage facility belonging to Didim Municipality.
12	T5-365	365	Single	Non-residential	Waste storage facility belonging to Didim Municipality.
13	T5-385	385	Single	Residential	It is used as a vineyard house inside the olive grove. It is used during olive harvest and maintenance periods at certain times of the year. It is a 1+1 living space.

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
14	T5-458	458	Single	Residential	It is used as a vineyard house inside the olive grove. It is used during olive harvest and maintenance periods at certain times of the year (mostly a few months during summer period). It is a 1+1 living space. Since it is private property and the wire fence and iron gate is locked, detailed photographs could not be taken.

* Status and description of the properties are based on site observations of Project Company CLOs.

Table 2-2: Additional Assessment Points for Artmutçuk WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T3-275	275	Single	Residential	A shed and a barn were identified close to the turbine under the road. Two families stay here regularly during the summer months. They do livestock farming and have barns. It was learned that they stay in their houses in the Kocaseyit Tekeler neighborhood during the winter months.
2	T5-320	320	Single	Non-residential	A haystack surrounded by tarpaulin was identified.
3	T5-354	345	Single	Non-residential	A shed made of wood and tarpaulin was identified.
4	T5-350	350	Single	Non-residential	2 secondary structures, 2 haylofts, 1 oven and 1 concrete water collection pool were identified.
5	T5-380	380	Single	Residential	A brick-structured secondary house was identified. Two elderly couples stated that they stay in Kocaseyit village during the winter months and they stay in this structure for the rest of their time.
6	T5-396	396	Single	Non-residential	1 shed and 1 haystack were identified.
7	T5-414	414	Single	Residential (secondary use)	A concrete secondary house and a hayloft were identified.
8	T5-486	486	Single	Residential (secondary use)	1 concrete structure and 1 wooden secondary house were identified.
9	T9-460	460	Single	Residential (secondary use)	2 tarpaulin haylofts, 1 concrete water pool, 1 fountain, 1 trough and a secondary structure house were identified.
10	T14-290	290	Single	Non-residential	A tarpaulin tent in which bricks are stored.
11	T14-432	432	Single	Non-residential	Three haylofts were identified side by side.
12	T15-50	50	Single	Residential (secondary use)	The structure consists of brick walls and a tile roof. The structure is surrounded by a wire fence and has an iron gate. It is a secondary structure. The owner

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
					and user are different people. An interview was conducted with the user, and it was understood that it was used during the fruit trees' productive periods and that there was no regular use. The user has agreed to clear the above-ground structure, ESA has offered machinery support for the removal process, however the PAP intended to carry out that on his own. As a result, the PAP has demolished the structure on his own and has no plans to rebuild it.The structure was in the zone of turbine foundation construction.
13	T15-0	0	Single	Residential	The structure is surrounded by a tarpaulin on a wooden frame. It is not the personal title deed of the producer who uses the area. He sold most of his animal assets for a specified period. There are 6 cattles present. Since the unregistered user's structure was within the turbine area, it was removed by estimating the price and making the payment. Transportation support was offered and he wanted to do the transportation himself.
14	T16-440	440	Single	Non-residential	Three containers belonging to the adjacent mine were identified.
15	T19-434	434	Single	Non-residential	There are 13 haylofts made of wood and tarpaulin, 3 wooden toilets and 1 concrete fountain in the forest area. Although no animals are visible living here, there is hay in the haylofts.
16	T17-190	190	Single	Non-residential	Two tarpaulin warehouses were detected side by side.

Table 2-3: Additional Assessment Points for Hacıhıdırlar WPP

No	Assessment Point Name	Distance to the Turbine (m)	Extent	Status	Description*
1	T2-165	165	Single	Residential (secondary use)	The single-storey stone house is thought to have been used for animal husbandry activities. No user/owner was encountered during the visit. Additional visit(s) to be made regarding the uncertainty of the usage status of the structure.
2	T2-82	82	Single	Residential (secondary use)	Single-storey adobe building, garden surrounded by wire fence, not a primary settlement, but a secondary settlement used for gardening and animal husbandry. There is a wooden trough in the garden and a barn next to the building. No user/owner was encountered during the visit. Additional visit(s) to be made regarding the uncertainty of the usage status of the structure.
3	T2-170	170	Single	Residential	Single-storey adobe house, primary residence. A family of four lives there. They make a living from animal husbandry and agriculture. There is an irrigation pool, a barn for animals and a vehicle in the garden. The property owner was interviewed during the visit. Accordingly the family has expressed a positive opinion about the Project stating that the project roads will ease the access to their property by increasing the quality of the roads. CLO contact information was shared.
4	T2-390	390	Single	Non-residential	Rainwater pond.
5	T2-395	395	Single	Residential	A vineyard house constructed of adobe brick, approximately 4x3 meters in size and with a sheet metal roof, is located 395 meters from Turbine Point No. 2. The structure appears to be used seasonally and during agricultural activities. The land contains walnut trees, and the user is actively engaged in agricultural production.
6	T2-250	250	Single	Non-residential	There is an irrigation pond of 500 square meters and an orchard of 69 da. A shed of about 40 square meters is used as an agricultural warehouse. There is

No	Assessment Point Name	Distance to the Turbine (m)	Extent	Status	Description*
					no living space, there is a pond, water well, solar panel and shed used for gardening. The owner could not be reached. The relevant village headman was informed.
7	T9-175	175	Single	Residential (secondary use)	Single storey stone structure, not a primary residence. The house is located within a field and orchard. There is a stone oven on the land. The user/owner was not encountered during the visit. Additional visit(s) to be made regarding the uncertainty of the usage status of the structure.
8	T9-237	237	Single	Residential (secondary use)	Single storey stone structure, not primary residence. House is located in a field. Tractor, water tanker, agricultural machinery and barn are present in the field. Owner/user was not encountered during the visit.
9	T9-227	227	Single	Residential (secondary use)	Single storey stone structure, not primary residence. House is located within field and orchard. There is one new pump on site. Owner/user was not encountered during the visit.
10	T9-270	270	Single	Residential	Masonry structure approximately 45 square meters, with a sheet metal roof. Agricultural purpose observed. On the land, there is a reinforced concrete water tank with a height of 6 meters and a radius of 3 meters. Additionally, there is an area of approximately 4 square meters covered with tarpaulin, used as a storage space (for coal or wood).
11	T9-390	390	Single	Residential (secondary use)	A household located at the receptor. Family sustains its livelihood through agriculture and animal husbandry. The family spends six months of the year at this location.
12	T9-460	460	Single	Residential (secondary use)	There is a masonry house approximately 80 square meters in size. Small-scale livestock farming is carried out in the settlement, with around 10 sheep being raised. The structure is believed to be used during the summer months.

No	Assessment Point Name	Distance to the Turbine (m)	Extent	Status	Description*
13	T6-215	215	Single	Residential (secondary use)	A secondary settlement house consisting of a single-storey stone house and a tent, with a barn for small cattle and seasonal living (May-November). The land user was interviewed; accordingly, the family uses the property almost half of the year while doing animal husbandary activities. CLO contact information was shared.
14	T6-232	232	Single	Residential (secondary use)	A secondary settlement structure consisting of a tent, a barn for small cattle and seasonal living (May-November). There is a vehicle belonging to the user/owner on the land. The land user was interviewed; accordingly, the family use the property almost half of the year while doing animal husbandary activities. CLO contact information was shared..
15	T10-292	292	Single	Residential (secondary use)	The structure consists of 3 different sections. It is thought that a 25 square meter stone-earth structure is used as a living space. There is a 40 square meter stone-earth animal shelter and a 30 square meter animal shelter. In front of the structure, there is an agricultural land with a slope of over 15% and dry farming is done on this land. It is thought that approximately 120 cattle (goats) are kept in the structure and its surroundings. However, since the visit was conducted in December, it is likely that the animals have moved to lower altitude areas in the winter. Since there is generally no life in the surrounding highland houses during the winter months, it is thought that this structure was used for 6-7 months in the spring and summer months, and then the stakeholder moved down to lower altitude areas. The living space resembles a shepherd's house designed for a family of 2. In addition, 1 four-plough and a 50 m² greenhouse were seen in front of the structure. The title deed information will be checked. The land where the structure is located is defined as forest land used as pasture.

No	Assessment Point Name	Distance to the Turbine (m)	Extent	Status	Description*
16	T11-258	258	Single	Residential (secondary use)	The structure is made of stone soil material, approximately 20-25 m² in size, and there is an animal (goat) shelter inside. Dry farming is done around the structure, and there is also a small greenhouse and a 5-ton water tank. The stakeholders probably use temporary tents as living space. This land, located on parcel 137/1, is surrounded by a 37 da dry farming area, wire fence and walnut trees. There is also a 5 m² chicken coop.
17	T11-320	320	Single	Residential (secondary use)	A stone-earth structure located approximately 320 meters southwest of the turbine. This structure consists of three separate sections, each approximately 30 m² in size, totaling 90 m². There is a wire fence approximately 60 meters in length in front. One section of the structure is used as a living space, while the other two sections are used as animal shelters. Two of these sections have roofs covered with soil, while one has no roof and is in ruins. In front of the structure, there is a stone stove used for cooking in the summer months. In addition, in front of the structure, there is an appearance of land suitable for dry farming. The land is stony, sloping, and consists of forest soil and appears suitable for summer use as a plateau. Based on the observation, it was thought that approximately 100 goats are raised in the structure and its surroundings. The altitude is 1450 meters. It is estimated that no one currently lives inside and that those who use the structure go down to lower altitudes during winter months. The structure is approximately 30 meters from the access road, and transportation is provided via the forest road. The information was verified during a follow-up meeting with the mukhtar.
18	T12-428	428	Single	Residential (secondary use)	The structure is a mountain-vineyard house made of stone-clay-soil material, 25 m² in size. It is stated that this house is used in the summer months and that there are animals. Dry farming is done and there are

No	Assessment Point Name	Distance to the Turbine (m)	Extent	Status	Description*
					also walnut trees. Water is brought from the stream with a hose to provide water to the walnut trees. It is learned from the villagers that the animals are staying in another, more remote location.
19	T13-220	220	Single	Residential (secondary use)	A tent with a chimney and a tree house located on a wire fenced area. Since the door was locked and the owner/user was not present during the visit, it was not possible to enter or have an interview. The structure is monitored by a camera system and it is thought that the white tent was a barn built for animal husbandry. During the interviews conducted with the mukhtar in March 2025, it was confirmed that the landowner had passed away and the property was not being used by his children.
20	T13-250	250	Single	Residential	A 30-square-meter stone-earth structure with a sheet metal roof is present on the site. There are two shelters for small livestock—one open and one enclosed with stone and earth—capable of housing approximately 100 animals. Stakeholders practice farming for personal use. The land contains approximately 50–60 trees. Residents use the structure for 7–8 months of the year.
21	T13-310	310	Single	Residential	Two stakeholders reside within a 30-square-meter stone-earth structure for approximately 8–9 months of the year. There is an open shelter for around 100 animals, as well as an additional 80 square meters enclosed shelter. There are approximately 50 trees.
22	T14-204	204	Single	Non-residential	An old greenhouse, faintly visible on the map, has worn out due to disuse and only the iron skeletons of the greenhouse remain.
23	T15-500	500	Single	Non-residential	Mobilization area for another power plant.

Table 2-4: Additional Assessment Points for Harmancık WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T7-50	50	Single	Non-residential	General Directorate of Forestry Building (Not used)
2	T2-354	354	Single	Non-residential	General Directorate of Forestry Building (Not used)

Table 2-5: Additional Assessment Points for Ihlamur WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T9-250	250	Single	Non-residential	The structure is used informally as a barn, built with trapezoidal sheet metal on wooden poles and surrounded by nylon cover. There is no private land title for the area and the land is public property. There are 17 cattle in the barn. The person has been identified.
2	T17-215	215	Single	Residential (secondary use)	A structure was detected on the road. An area survey was conducted with the Expropriation Department. It was determined after the measurements carried out by the Expropriation Department that it would remain in the expropriation corridor. The structure is a 2-room reinforced concrete structure. It is a secondary structure and is used for agricultural production (chestnut trees). There is no individual title deed in the area. Compensation has been provided by the Expropriation Department for the relevant structures.
3	T2-367	367	Single	Residential (secondary use)	A secondary wooden structure and a barn with brick walls covered with metal sheeting were identified. Cattle roam freely in the field.
4	T3-390	390	Single	Non-residential	There is a marble mining operation belonging to Canel Münip Çoker Mining company.
5	T11-288	288	Single	Non-residential	A wooden barn and warehouse were identified. Cattle roam freely near the plot.
6	T14-346	346	Single	Residential (secondary use)	A secondary brick house and two barns were identified.
7	T14-390	390	Multiple	Residential	The houses of Fındıklı settlement start 390 meters from turbine T14.

Table 2-6: Additional Assessment Points for Ovacık WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T5-370	370	-	-	A potential structure was identified in the sattelite imagery; however, when the CLOs visited the actual location no structure was found within 500 meters.
2	T9-365	365	Single	Residential	The brick house is considered a regular residence as there is always a car at its door.
3	T9-374	374	Single	Residential	The concrete house is covered with metal sheeting. There is also a concrete water tank belonging to the village within the parcel.
4	T9-408	408	Single	Non-residential	Two structures with metal sheeting.
5	T11-300	300	Single	Non-residential	There are two structures made of metal and wood side by side. It was observed that the structure is not a living place and no animals are detected.
6	T11-407	407	Single	Non-residential	The metal structure is used as a barn belonging to Veli Yavuz. The person's field was affected by expropriation.
7	T11-453	453	Single	Non-residential	A building made of Bims (Pumice Brick) and a hayloft next to it were detected. There are two buildings side by side. They are separated by a wire fence. The other building is a barn made of wood. There are small cattle inside.
8	T12-300	300	Single	Non-residential	There is an electricity distribution panel and an electricity pole. There is no other building.
9	T12-360	360	Single	Non-residential	Actively used fire watchtower, two-storey concrete structure and a single-storey small building next to it.

Table 2-7: Additional Assessment Points for Dampınar WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent*	Status	Description
1	T2-317*	317	Single	Residential	-**
2	T5-380*	380	Single	Residential	-
3	T5-420*	420	Single	Residential	-
4	T7-360	360	Single	Non-residential	There is an old, unused structure built of brick approximately 25 square meters in size, located 360 meters from Turbine Point No. 7. No active human activity has been observed in relation to the structure. The land is utilized for agricultural and beekeeping purposes.
5	T7-372	372	Single	Non-residential	A brick structure with a canopy, approximately 20 square meters in size, has been identified at a distance of 372 meters from Turbine Point No. 7. This structure is used for storing tools and equipment related to agricultural activities and is located within an actively cultivated area. Nearby, there is also a small greenhouse of approximately 500 square meters, established for seedling cultivation.
6	T9-372	372	Single	Non-residential	A small-scale livestock operation belonging to a local farmer is located 372 meters from Turbine Point No. 9, housing approximately 20 cattle. The area includes a masonry structure of about 20 square meters used for daily operations and is enclosed with an electric wire fence to prevent the entry of wild animals. Although the site is not a permanent residential area, it is regularly used for animal care activities.
7	T9-500	500	Single	Residential (secondary use)	Residential location with partial occupation during year.
8	T10-280	280	Single	Residential (secondary use)	Residential location with partial occupation during year.
9	T10-375	375	Single	Residential (secondary use)	Residential location with partial occupation during year.

No	Assessment Point Name	Distance to the turbine (m)	Extent*	Status	Description
10	T10-425	425	Single	Non-residential	A structure approximately 30 square meters in size, enclosed by a wire fence, has been identified near Turbine Point T10-425. The structure is built of brick and covered with a wooden and tile roof. It is used for agricultural activities and is not utilized as a permanent residence; its use is limited to daily operations. Adjacent to the structure, there is a water tank with a capacity of approximately 1 ton and a greenhouse of 80 square meters. Additionally, a separate area enclosed with wire fencing for five animals and irrigation system pipes have been observed.

*:For marked locations most strict assessment criteria are used in terms of usage status. Information about these locations can not be gathered via field trips or mukhtar/local interviews.

**:For undefined points, checks will be conducted by CLOs to identify the usage in future if possible.

Table 2-8: Additional Assessment Points for Uygar WPP

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
1	T2-221	225	Single	Could not be determined	There is no access road as construction activities have not started in the area. An exploration will be carried out once road safety is ensured There is a brick summer house in the parcel surrounded by a fence. It is close to two turbines but there are slope differences. Irrigation pool is available.
2	T10-184	270	Single	Non-residential	A parcel surrounded by a fence. There are walnut or almond trees (the exact type of tree could not be determined) inside the parcel. There is a single-story building with a tile roof and stone walls inside. It was observed that cement was stored at the entrance of the building. It is estimated that it is used as a seasonal warehouse. The landowner has been contacted; accordingly he works in Aliaga and does not actively use the land. The irrigation pond inside the land might be impacted from the construction activites therefore the landowner is planning to build a new pond. The parcel 101/1 is located within the border of İkizce/Haydar Forest. It is also in the border of Kırcılar and Büyükyenice Forests (according to General Directorate of Land Registry and Cadastredata). This parcel is forest land. There is a high probability that the building owner is an illegal user.
3	T26-178	270	Single	Could not be determined	Despite all alternative routes being tried, full access to the point could not be achieved. There is no vehicle road. Since the surrounding area is fenced, no walking path could be found. Since construction activities have not started in the area, there is no access road. An exploration will be carried out when road safety is ensured.

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
4	T26-182	270	Single	Could not be determined	There is no access road as construction activities have not started in the area. An exploration will be carried out once road safety is ensured.
5	T36-160	225	Single	Residential	A single-storey, tile-roofed, reinforced concrete building located at the intersection of the Project road and the village road. It was understood that it is used as a summer house. The owner lives in Alhatlı.
6	T36-195	225	Single	Could not be determined	A single-storey, brick-built, tile-roofed building with a stone stove outside (presumably used for cooking or baking bread). Surrounded by a fence, with trees inside. Close-up photos could not be taken because the garden gate was closed. The exact number and types of trees could not be determined. However, the locak mukhtar was contacted who stated that the house has not been used for years and noone lives there.
7	T45-272	272	Single	Residential	Single-storey, reinforced concrete building with a tile roof. It was observed that there was a water tank and trees in the garden. It is surrounded by a fence. Since the garden gate was closed, a close-up photo could not be taken. It was understood that it was used as a summer house. It is estimated that the structure is illegal. During road works, the owner of the house moved the garden fence to the road border by about one meter. The contact information of the owner of the house was obtained.
8	T2-250	250	Single	Residential (secondary use)	There is a summer house in the parcel surrounded by a fence. It is close to two turbines but there are slope differences. There is an irrigation pool.
9	T7-301	301	Single	Non-residential	A tarpaulin tent used for agricultural activities in the summer months.

No	Assessment Point Name	Distance to the turbine (m)	Extent	Status*	Description*
10	T7-407	407	Single	Residential (secondary use)	Summer house on the plateau which is not actively used because the landowner moved to Bergama Center. It has an irrigation pool, trees and a masonry house.
11	T26-274	274	Multiple	Non-residential	There is no immovable structure in the area. There are 20 tents belonging to 4 families. It is used for animal husbandry activities in the summer months.
12	T34-302	302	Single	Residential (secondary use)	Both structures belong to the same person. One of the structures is a summer house and the other is a barn. The brick-built structures are not actively used.
13	T34-317	317			
14	T36-268	268	Single	Residential (secondary use)	It is a summer house made of bricks. It is rarely used. The family carries out animal husbandry activities in the relevant area. There is a porch in front of the house. It is surrounded by a fence.
15	T38-318	318	Single	Residential (secondary use)	There is a summer house made of bricks on the parcel. It is used as a resting place for agricultural purposes in the summer months. It is surrounded by a fence. It has a greenhouse and fruit trees. The family is engaged in tobacco farming.
16	T38-370	370	Single	Residential (secondary use)	There is a brick summer house on the parcel. It is used as a resting place for agricultural purposes in the summer months. It is surrounded by a fence. It is used for animal husbandry and tobacco activities.
17	T56-90	90	Single	Residential	There is a 2+1 house, a barn made of sheet metal, an irrigation pool, 6 acres of pepper planted field, a well and trees in the 38-acre parcel. Payments have been made for the barn and the house in the parcel and it has been agreed that the parcel owner will move the house and barn.

Figure 2-1: Akköy WPP Additional Assessment Points

Figure 2-2: Akköy WPP Additional Assessment Points (Cont'd)

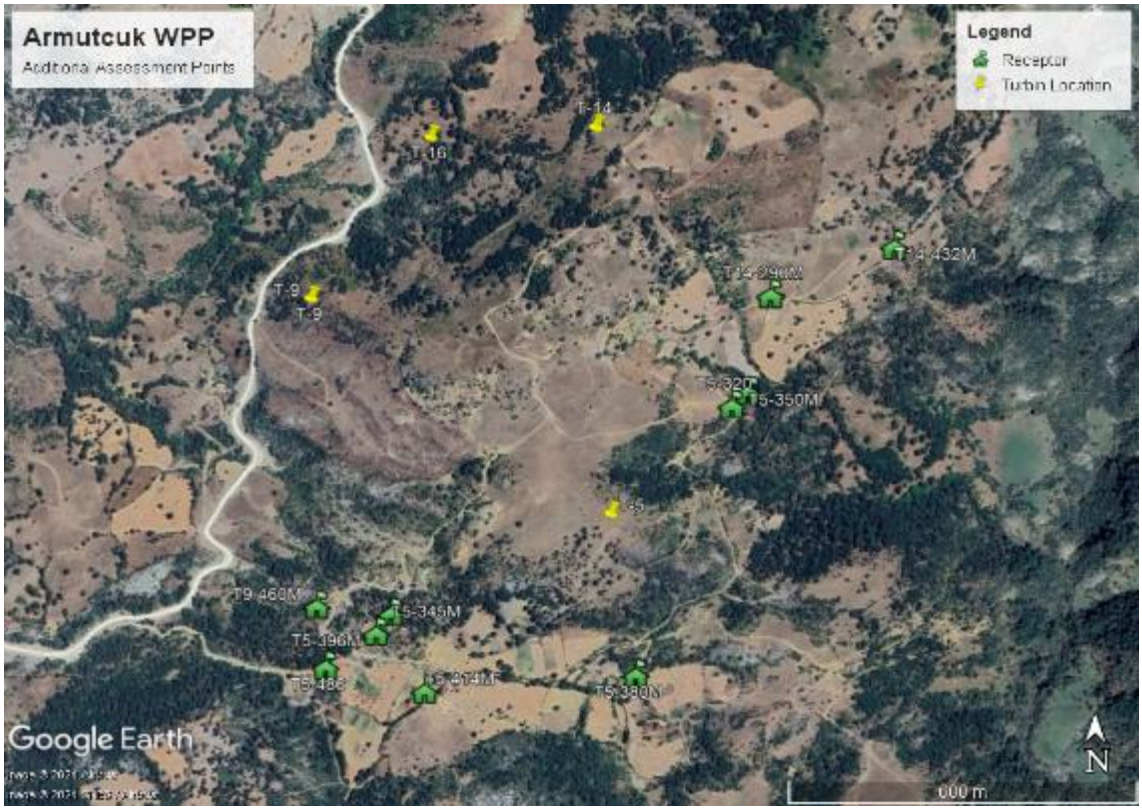

Figure 2-3: Armutçuk WPP Additional Assessment Points

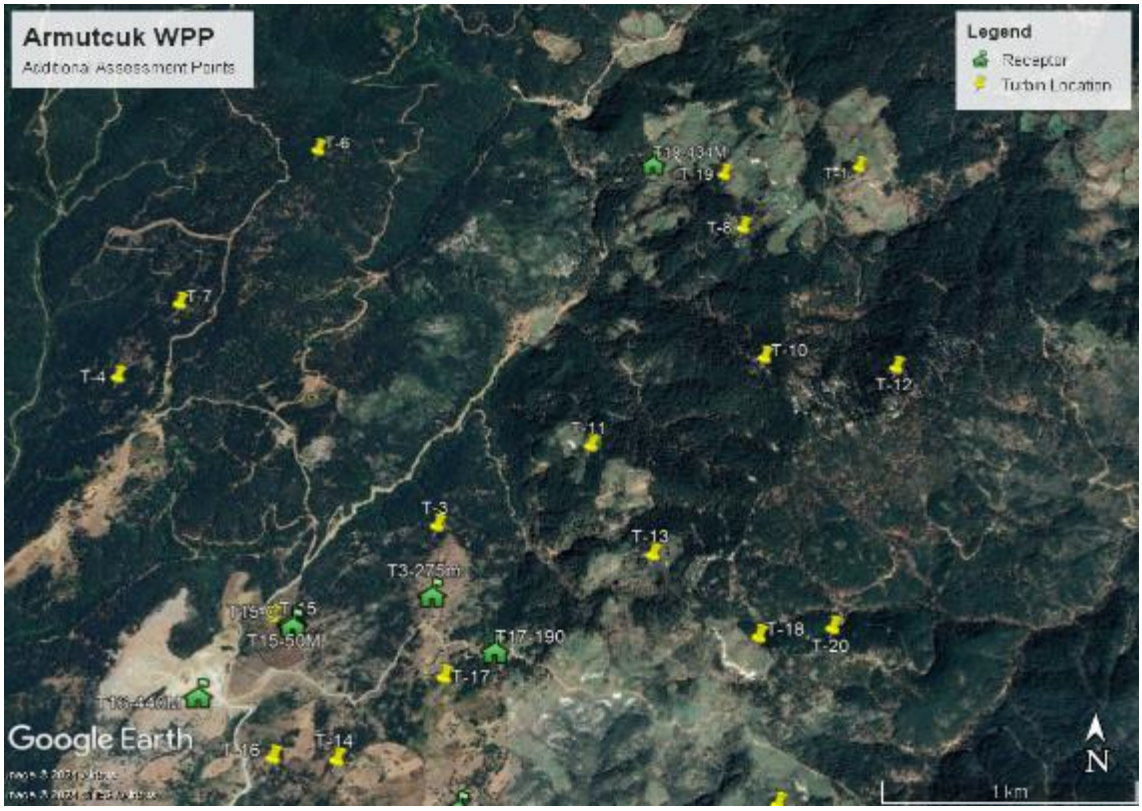

Figure 2-4: Armutçuk WPP Additional Assessment Points (Cont'd)

Figure 2-5: Hacıhıdırlar WPP Additional Assessment Points

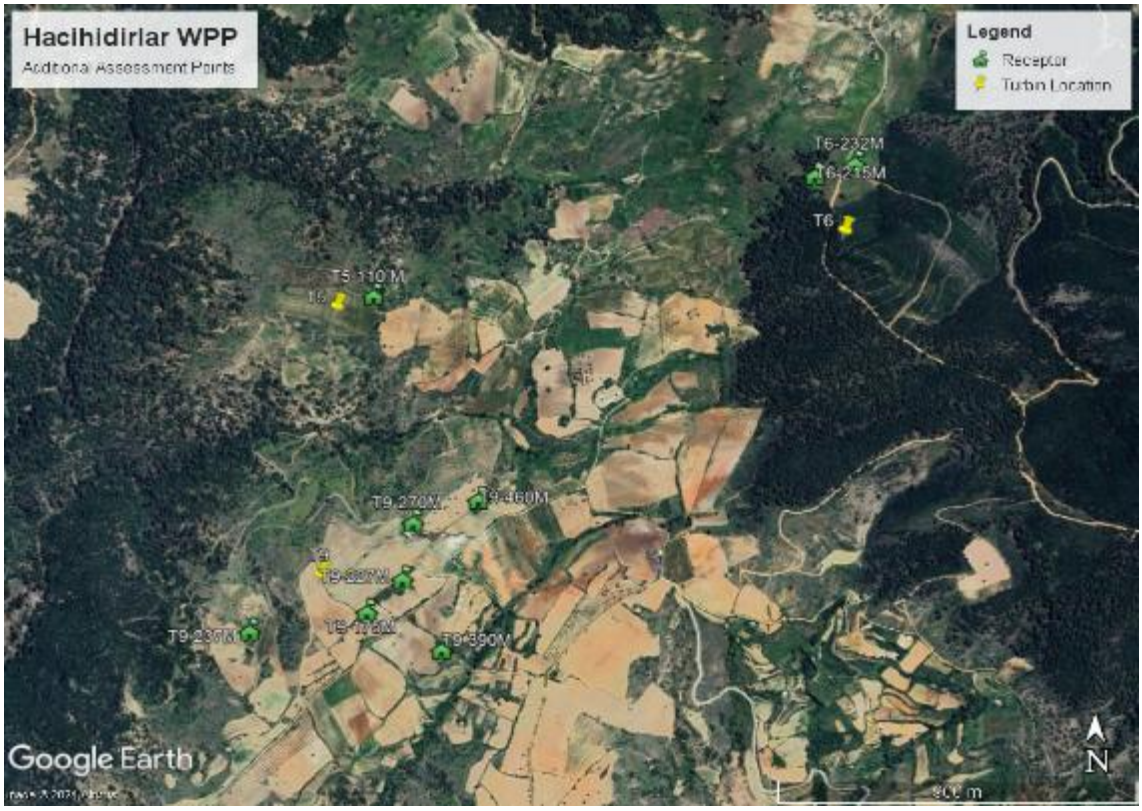

Figure 2-6: Hacıhıdırlar WPP Additional Assessment Points (Cont'd)

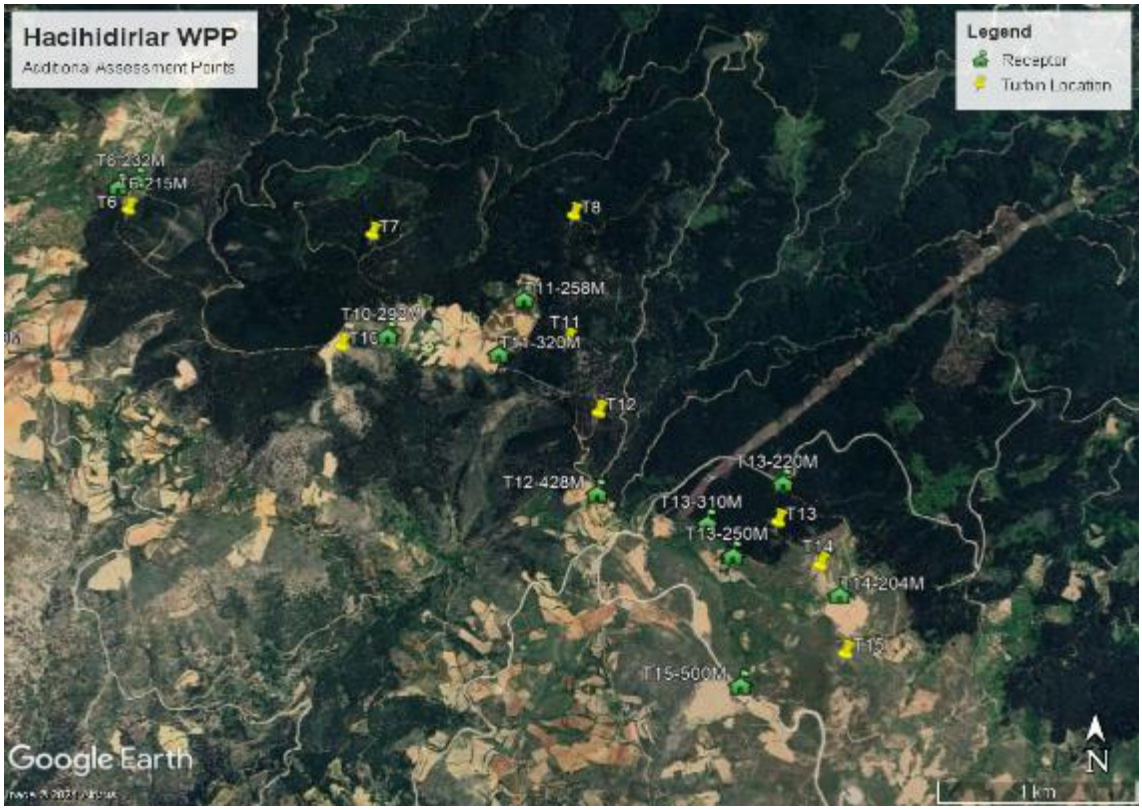

Figure 2-7: Hacıhıdırlar WPP Additional Assessment Points (Cont'd)

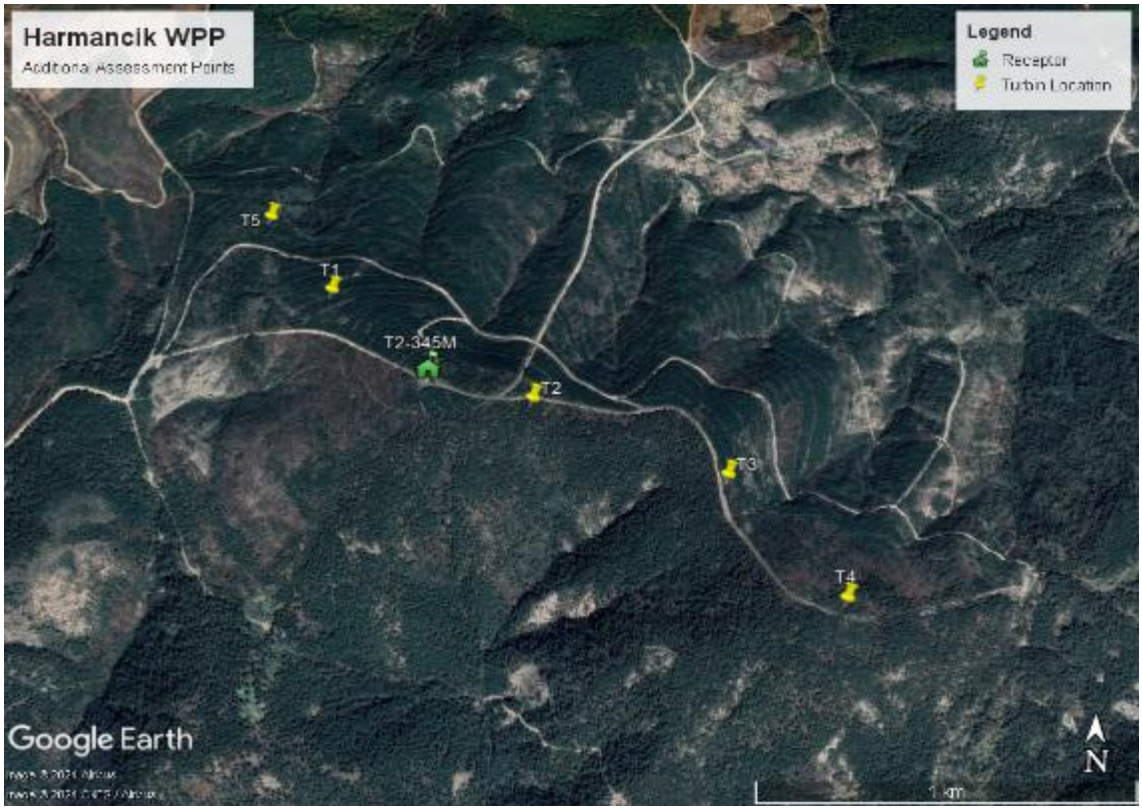

Figure 2-8: Harmancık WPP Additional Assessment Points

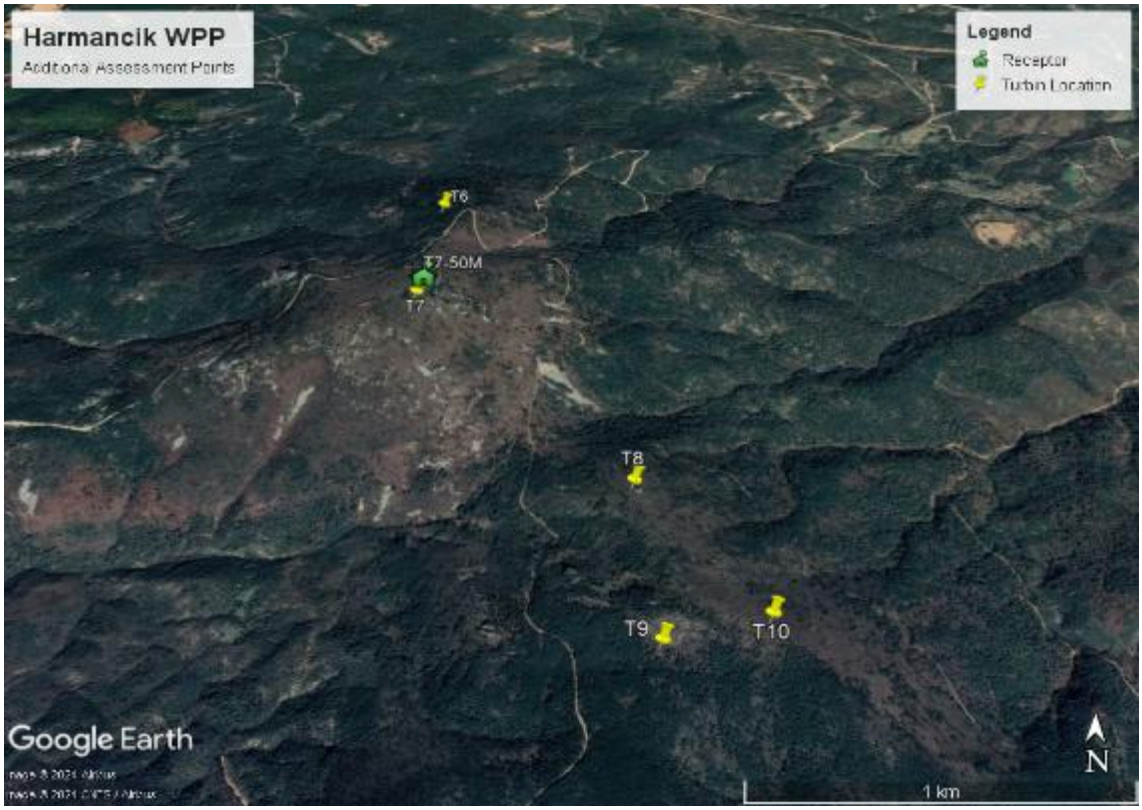

Figure 2-9: Harmancık WPP Additional Assessment Points (Cont'd)

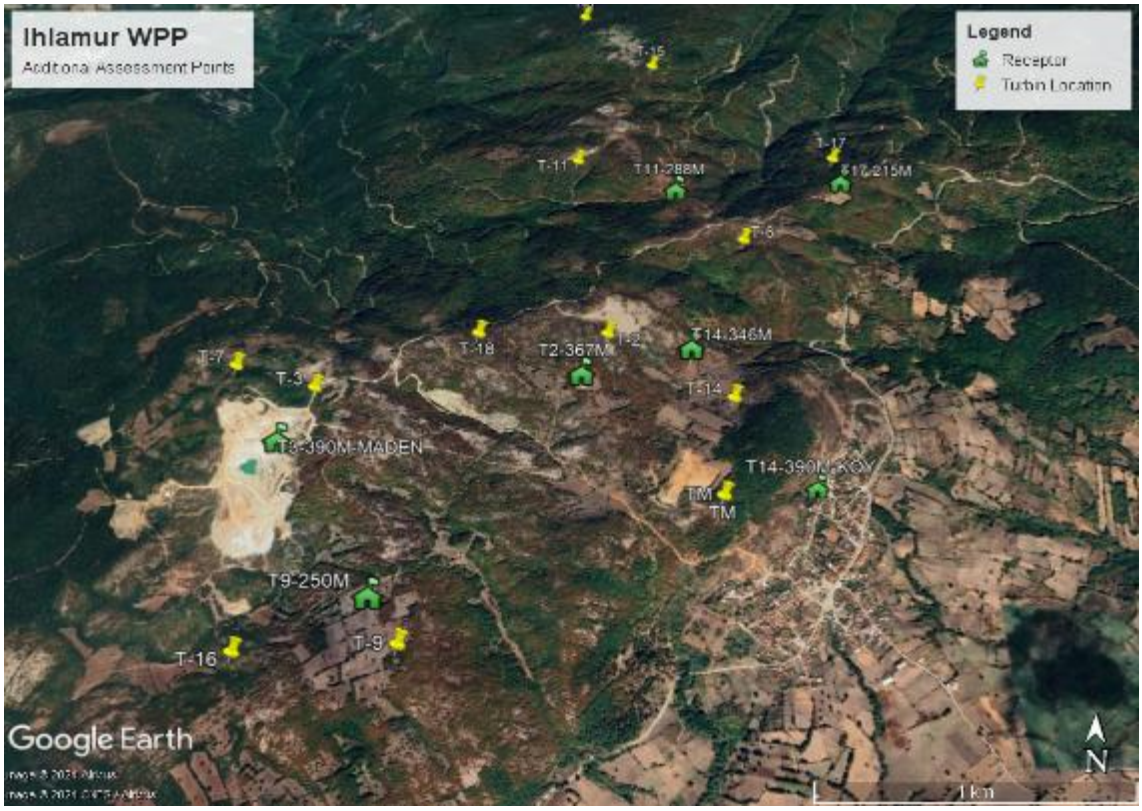

Figure 2-10: Ihlamur WPP Additional Assessment Points

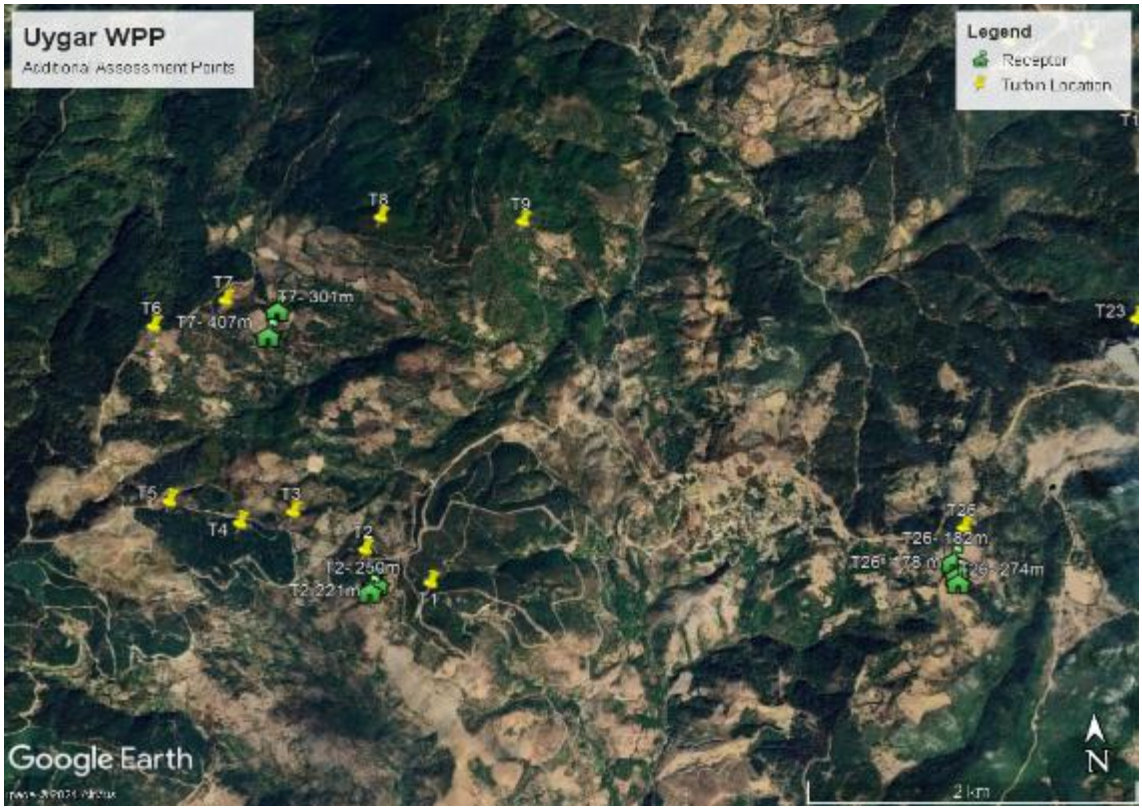

Figure 2-11: Uygar WPP Additional Assessment Points

Figure 2-12: Uygar WPP Additional Assessment Points (Cont'd)

Figure 2-13: Uygar WPP Additional Assessment Points (Cont'd)

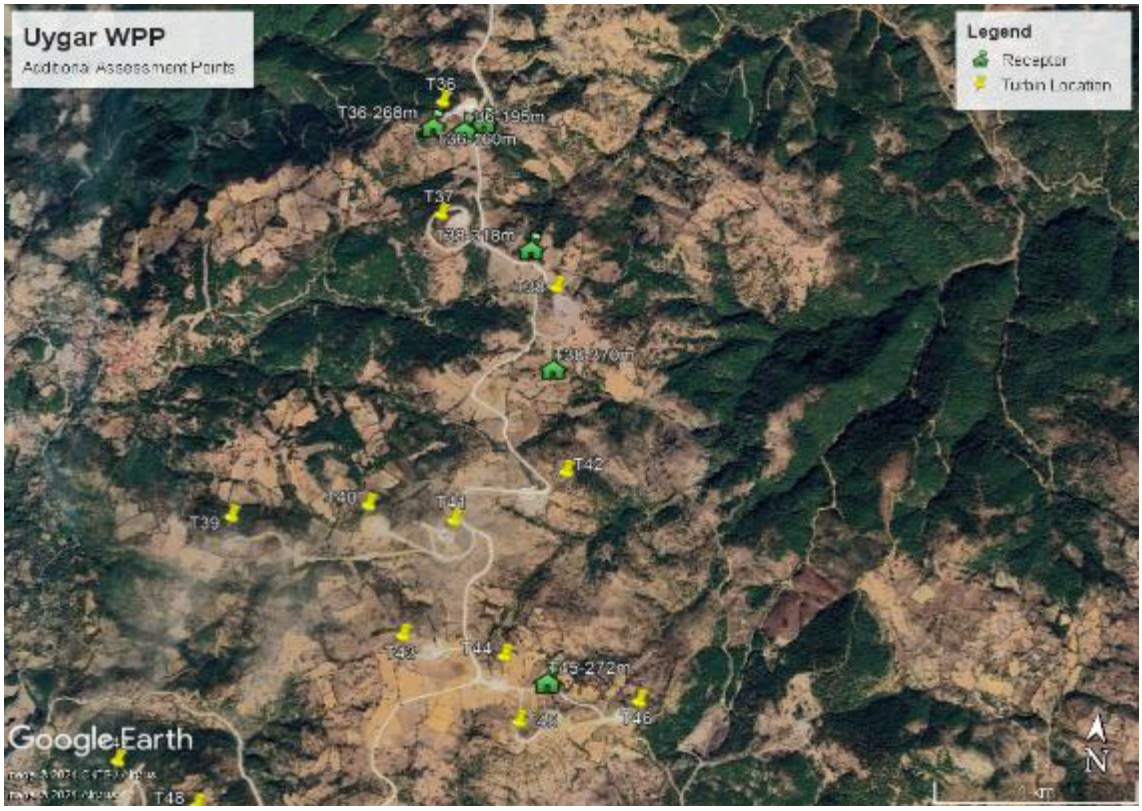

Figure 2-14: Uygar WPP Additional Assessment Points (Cont'd)

Figure 2-15: Ovacık WPP Additional Assessment Points

Figure 2-16: Ovacık WPP Additional Assessment Points (Cont'd)

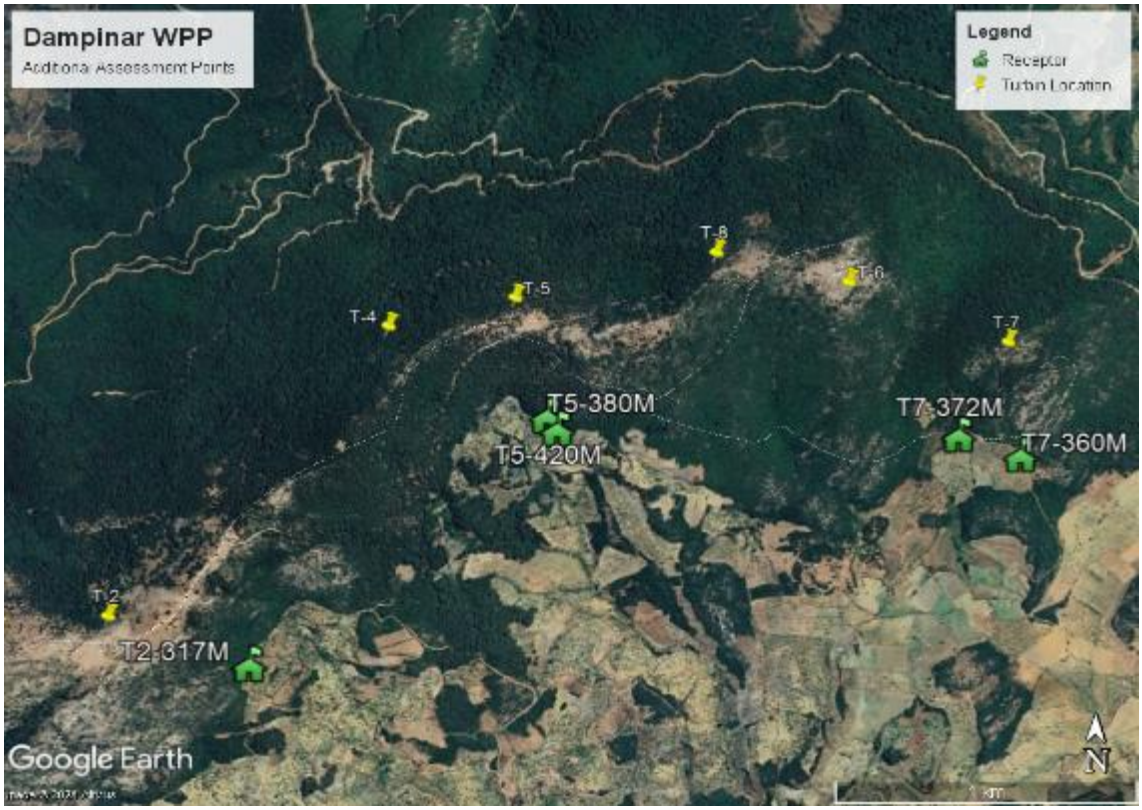

Figure 2-17: Dampınar WPP Additional Assessment Points

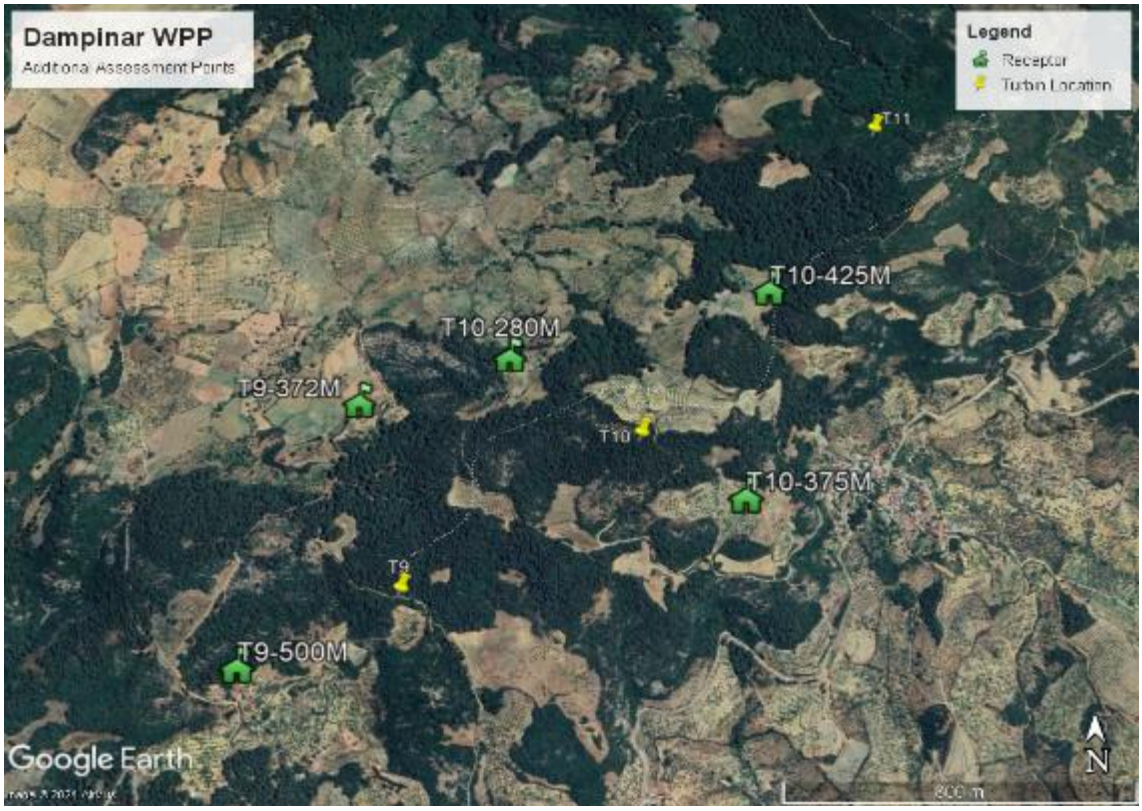

Figure 2-18: Dampınar WPP Additional Assessment Points (Cont'd)

3 Assessment of Impacts

3.1 Environmental Noise Assessment

3.1.1 Methodology

In order to evaluate the significance of impact from the Project, magnitude of impact and responsivity of the receptors need to be identified throughout the Project area.

Magnitude of impact is a parameter defined as characteristics of impact and the Project. On the other hand, responsivity defined as characteristics of receptors.

Significance of Impact

The category of significance is identified based on the combinations of magnitude and responsivity of receptors in accordance with Table 3-1.

Table 3-1: Determination of Impact Significance

Magnitude of Impact	Responsivity of Receptor		
	Low	***Medium***	***High***
No Impact	No Impact		
Negligible	Negligible		Minor
Small	Negligible	Minor	Moderate
Medium	Minor	Moderate	Major
Large	Moderate	Major	

Responsivity of Receptors

The second component in the evaluation of impact significance is the responsivity of a potentially affected receptor.

The term "responsivity" refers to a set of characteristics that include:

- Importance of the receptor and
- Sensitivity of the receptor to the impact.

The category of responsivity is identified based on the combinations of importance and *sensitivity* of receptors in accordance with the responsivity matrix (Table 3-2).

Table 3-2: Determination of Responsivity of Receptors

Importance	Sensitivity		
	Low	*Medium*	*High*
Low	Low	Low	Medium
Medium	Low	Medium	High
High	Medium	High	High

Importance of Receptors

In general, evaluation of importance of the affected receptors is based on the following considerations:

- Protected status
- Policy of the regional government
- Stakeholder opinion
- Economic value
- Special features of ecosystems, such as resistance to change, rarity, adaptability, diversity, fragility and the ability to recover
- Importance of individual components as environmental components

If one of the above considerations is applicable, importance can be subjectively evaluated as medium or high. Otherwise, the importance is considered as low.

Sensitivity of Receptors

Sensitivity of a receptor depends upon the ability to recover for ecological receptors and the type of building use for human receptors are defined in Table 3-3. When different uses are combined in a single structure as a receptor, its sensitivity is defined taking into account the worst case scenario as the most sensitive.

Considering the nature of the impact assessment methodology for environmental noise; being a single standing structure lowers final impact significance level. As a more inclusive approach, residential single rural building tier is added to the sensitivity classification table. This modification aims to reflect the sensitive nature of the rural residential locations.

Structures which have exceedances of some degree and final impact significances are still “Minor” or lower, even with modified sensitivity levels, will be dealt with in accordance with project specific RAPs. Grievance based monitoring studies and alignment with the project specific RAPs will be the key strategies for dealing with remaining impacts.

Table 3-3: Designation of Sensitivity of Receptors

Sensitivity	Receptor
Low	High ability to recover the initial properties and functions, minor changes of spatial and dynamic indicators. Office Buildings, farm buildings, industrial or commercial facilities.
Medium	Limited / low ability to recover the initial properties and functions. Measures to minimize disturbance of ecosystems are required. Residential Buildings, hotels.
High	Lack of ability to recover the initial properties and functions. Irreversible disturbances may be caused by minor impacts. Recreational facilities, educational facilities, health care centres, and rural single structures with residential use.

Magnitude of Impact

The magnitude of impacts is determined from a combination of the extent and the scale of impact as shown in Table 3-4.

Table 3-4: Determination of Impact Magnitude

Extent	Scale				
	No Impact (NI)	*Small (S)*	*Medium (M)*	*Large (L)*	*Very Large (VL)*
Single	*No impact*	Negligible		Small	
Site		Small	Medium		Large
Local		Medium		Large	
Regional		Medium	Large		

Extent of Impact

The impact extent which is detailed in Table 3-5 characterizes the spatial distribution of the impact. Impact assessment points are chosen to represent receptors in the area in which they are located. When it comes to broader regions, the influence becomes more extensive.

Table 3-5: Categories of Impact Extent

Noise impact extent category	Criteria
Single	Possible noise and/or vibration impact on a single building.
Site	Possible noise and/or vibration impact on 5 - 10 buildings.
Local	Possible noise and/or vibration impact on 10 - 100 buildings.
Regional	Possible noise and/or vibration impact on 100 - 1000 buildings

Scale of Impact

The scale of noise impact is the measure of how much noise is cumulated over limiting values at receptor locations. Noise receptors are residential, office, institutional, educational, health centres and commercial buildings.

Criteria for evaluation of the scale of noise impact are based on the RENC and WHO's Guideline's limiting values.

Scale of noise impact is evaluated according to exceedance level from the background. Time based noise metrics will be used for this kind of assessment procedure mainly L_{day} and L_{night}.

Any levels greater than the WBG - IFC's noise level limits will be noted down as exceedance. Criteria to classify the scale of a noise impact during construction and operation are detailed in Table 3-6.

Table 3-6: Scale of Noise Impact

Noise impact scale Category	Exceedance of noise limits WBG - IFC Criteria (Incremental dBA level difference)
No Impact	<1
Small	1-3
Medium	3-5
Large	5-8
Very Large	>8

*Criteria: Day time: 07:00 – 22:00, $L_{day} = 55\ dBA$; Night time: 22:00 – 07:00, $Lnight = 45\ dBA$

3.1.2 Results

Environmental noise has been assessed for requested additional points for construction and operation phases. Modeling studies have been conducted to reflect a stringent worst-case scenario. Under these conditions, it is assumed that all WTGs are operational and functioning at full capacity. Consequently, it is important to note that the presented results represent a strict worst-case scenario.Results are presented in Table 3-7 and Table 3-8.

Table 3-7: Environmental Noise Assessment for Additional Points, Construction

Related Project	#	Assessment Point	Source Leq			Baseline Leq		Cumulative Level		Limit Value*		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
Akköy	1	T5-244	62.7	63.8	Point 1	54.4	47.6	63.3	63.9	55	50.6	8.3	Very Large	Single	Small	Medium	Medium	Medium	Minor
	2	T1-290M	76,8	77,0	Point 3	58,1	50,1	76,9	77,0	61,1	53,1	15,8	Very Large	Single	Small	Low	Medium	Low	Negligible
	3	T1-318M	77,7	77,9	Point 3	58,1	50,1	77,7	77,9	61,1	53,1	16,6	Very Large	Single	Small	Low	Medium	Low	Negligible
	4	T1-440M	76,8	77,1	Point 3	58,1	50,1	76,9	77,1	61,1	53,1	15,8	Very Large	Single	Small	Low	Medium	Low	Negligible
	5	T1-500M	59,2	60,6	Point 3	58,1	50,1	61,7	61,0	61,1	53,1	0,6	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	6	T1-480M	69,0	69,9	Point 3	58,1	50,1	69,3	69,9	61,1	53,1	8,2	Very Large	Single	Small	Low	Medium	Low	Negligible
	7	T2-405M	57,7	58,9	Point 3	58,1	50,1	60,9	59,4	61,1	53,1	0,0	No Impact	Single	No Impact	High	Medium	High	No Impact
	8	T2-420M	74,4	74,6	Point 3	58,1	50,1	74,5	74,6	61,1	53,1	13,4	Very Large	Single	Small	Low	Medium	Low	Negligible
	9	T3-287M	73,5	73,7	Point 3	58,1	50,1	73,6	73,7	61,1	53,1	12,5	Very Large	Single	Small	Low	Medium	Low	Negligible
	10	T4-325M	62,9	64,0	Point 1	54,4	47,6	63,5	64,1	55,0	50,6	8,5	Very Large	Single	Small	Low	Medium	Low	Negligible
	11	T5-365M	73,8	74,3	Point 1	54,4	47,6	73,8	74,3	55,0	50,6	18,8	Very Large	Single	Small	Low	Medium	Low	Negligible
	12	T5-365M	76,7	76,8	Point 1	54,4	47,6	76,7	76,8	55,0	50,6	21,7	Very Large	Single	Small	Low	Medium	Low	Negligible
	13	T5-385M	61,3	62,5	Point 1	54,4	47,6	62,1	62,6	55,0	50,6	7,1	Large	Single	Small	High	Medium	High	Moderate
	14	T5-458M	59,3	60,7	Point 1	54,4	47,6	60,5	60,9	55,0	50,6	5,5	Large	Single	Small	High	Medium	High	Moderate
Armutçuk	1	T15-50	80.4	80.5	Point 2	39.8	32.8	80.4	80.5	55	45	25.4	Very Large	Single	Small	Medium	High	High	Moderate
	2	T3-275M	61,3	62,2	Point 2	39,8	32,8	61,3	62,2	55,0	45,0	6,3	Large	Single	Small	High	Medium	High	Moderate
	3	T5-320	55,6	56,9	Point 3	38,2	33,7	55,7	56,9	55,0	45,0	0,7	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	4	T5-354M	54,7	56,0	Point 3	38,2	33,7	54,8	56,0	55,0	45,0	0,0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	5	T5-350M	55,3	56,5	Point 3	38,2	33,7	55,4	56,5	55,0	45,0	0,4	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	6	T5-380M	47,6	48,9	Point 3	38,2	33,7	48,1	49,0	55,0	45,0	0,0	No Impact	Single	No Impact	High	Medium	High	No Impact
	7	T5-396M	54,5	55,8	Point 3	38,2	33,7	54,6	55,8	55,0	45,0	0,0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	8	T5-414M	53,6	54,9	Point 3	38,2	33,7	53,7	54,9	55,0	45,0	0,0	No Impact	Single	No Impact	High	Medium	High	No Impact
	9	T9-460M	55,2	56,5	Point 3	38,2	33,7	55,3	56,5	55,0	45,0	0,3	No Impact	Single	No Impact	High	Medium	High	No Impact
	10	T5-486	54,3	55,6	Point 3	38,2	33,7	54,4	55,6	55,0	45,0	0,0	No Impact	Single	No Impact	Medium	Medium	Medium	No Impact
	11	T14-290M	56,5	57,8	Point 3	38,2	33,7	56,6	57,8	55,0	45,0	1,6	Small	Single	Negligible	Low	Medium	Low	Negligible
	12	T14-432M	55,6	57,0	Point 3	38,2	33,7	55,7	57,0	55,0	45,0	0,7	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	13	T15-0**	80,0	80,1	Point 2	39,8	32,8	80,0	80,1	55,0	45,0	25,0	Very Large	Single	Small	Medium	Medium	Medium	Minor
	14	T16-440M	60,5	61,6	Point 2	39,8	32,8	60,5	61,6	55,0	45,0	5,5	Large	Single	Small	Low	Medium	Low	Negligible
	15	T17-190	69,4	69,7	Point 2	39,8	32,8	69,4	69,7	55,0	45,0	14,4	Very Large	Single	Small	Low	Medium	Low	Negligible
	16	T19-434M	61,9	62,6	Point 2	39,8	32,8	61,9	62,6	55,0	45,0	6,9	Large	Single	Small	Medium	Medium	Medium	Minor
Hacıhıdırlar	1	T2-165M	78.6	78.7	Point 2	42.4	34.6	78.6	78.7	55	45	23.6	Very Large	Single	Small	Medium	High	High	Moderate
	2	T2-82M	76.2	76.3	Point 2	42.4	34.6	76.2	76.3	55	45	21.2	Very Large	Single	Small	Medium	High	High	Moderate
	3	T2-170M	79.9	80.0	Point 2	42.4	34.6	79.9	80.0	55	45	24.9	Very Large	Single	Small	Medium	High	High	Moderate
	4	T9-175M	72.5	72.6	Point 2	42.4	34.6	72.5	72.6	55	45	17.5	Very Large	Single	Small	Medium	High	High	Moderate
	5	T9-237M	63.2	64.0	Point 2	42.4	34.6	63.2	64.0	55	45	8.2	Very Large	Single	Small	Medium	High	High	Moderate
	6	T9-227M	63.6	64.1	Point 2	42.4	34.6	63.6	64.1	55	45	8.6	Very Large	Single	Small	Medium	High	High	Moderate
	7	T6-215M	66.0	66.7	Point 2	42.4	34.6	66.0	66.7	55	45	11.0	Very Large	Single	Small	Medium	High	High	Moderate

[2] Baseline measurement locations as presented in the ESIA Report of each WPP site.
[3] Baseline measurement locations as presented in the ESIA Report of each WPP site.

Related Project	#	Assessment Point	Source Leq			Baseline Leq		Cumulative Level		Limit Value*		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
	8	T6-232M	69.0	69.5	Point 2	42.4	34.6	69.0	69.5	55	45	14.0	Very Large	Single	Small	Medium	High	High	Moderate
	9	T13-220M	77.9	78.1	Point 2	42.4	34.6	77.9	78.1	55	45	22.9	Very Large	Single	Small	Medium	High	High	Moderate
	10	T14-204M	75.3	75.5	Point 2	42.4	34.6	75.3	75.5	55	45	20.3	Very Large	Single	Small	Medium	Medium	Medium	Minor
	11	T2-390M	58,5	59,7	Point 2	42,4	34,6	58,6	59,7	55,0	45,0	3,6	Medium	Single	Negligible	Low	Medium	Low	Negligible
	12	T2-395M	64,2	65,1	Point 2	42,4	34,6	64,2	65,1	55,0	45,0	9,2	Very Large	Single	Small	Medium	High	High	Moderate
	13	T9-270M	67,2	68,1	Point 2	42,4	34,6	67,2	68,1	55,0	45,0	12,2	Very Large	Single	Small	Medium	High	High	Moderate
	14	T9-460M	58,0	59,3	Point 2	42,4	34,6	58,1	59,3	55,0	45,0	3,1	Medium	Single	Negligible	Medium	High	High	Negligible
	15	T9-390M	56,8	58,0	Point 2	42,4	34,6	57,0	58,0	55,0	45,0	2,0	Small	Single	Negligible	Medium	High	High	Negligible
	16	T10-292M	73,6	73,9	Point 2	42,4	34,6	73,6	73,9	55,0	45,0	18,6	Very Large	Single	Small	High	Medium	High	Moderate
	17	T11-320M	72,5	72,7	Point 2	42,4	34,6	72,5	72,7	55,0	45,0	17,5	Very Large	Single	Small	Low	Medium	Low	Negligible
	18	T11-258M	71,9	72,4	Point 2	42,4	34,6	71,9	72,4	55,0	45,0	16,9	Very Large	Single	Small	Low	Medium	Low	Negligible
	19	T12-428M	66,4	64,7	Point 3	47,5	35,9	66,5	64,7	55,0	45,0	11,5	Very Large	Single	Small	High	Medium	High	Moderate
	20	T13-310M	64,8	65,9	Point 3	47,5	35,9	64,9	65,9	55,0	45,0	9,9	Very Large	Single	Small	Medium	High	High	Moderate
	21	T13-250M	62,8	64,0	Point 3	47,5	35,9	62,9	64,0	55,0	45,0	7,9	Large	Single	Small	Medium	High	High	Moderate
	22	T15-500M	58,8	60,2	Point 3	47,5	35,9	59,1	60,2	55,0	45,0	4,1	Medium	Single	Negligible	High	Medium	High	Negligible
	23	T2-250 M	63,6	64,8	Point 3	47,5	35,9	63,7	64,8	55,0	45,0	8,7	Very Large	Single	Small	Low	Medium	Low	Negligible
Harmancık	1	T7-50	66.4	66.5	Point 3	40.3	33.6	66.4	66.5	55	45	11.4	Very Large	Single	Small	Medium	Medium	Medium	Minor
	2	T2-345	68,0	68,3	Point 3	40,3	33,6	68,0	68,3	55,0	45,0	13,0	Very Large	Single	Small	Low	Medium	Low	Negligible
Ihlamur	1	T17-215	71.5	71.9	Point 2	48.3	40.03	71.5	71.9	55	45	16.5	Very Large	Single	Small	Medium	Medium	Medium	Minor
	2	T9-250	76.3	76.4	Point 3	46.6	38.6	76.3	76.4	55	45	21.3	Very Large	Single	Small	Medium	Medium	Medium	Minor
	3	T2-367M	67,0	68,1	Point 2	48,3	40,3	67,1	68,1	55,0	45,0	12,1	Very Large	Single	Small	Low	Medium	Low	Negligible
	4	T3-390M	58,7	60,0	Point 2	48,3	40,3	59,1	60,0	55,0	45,0	4,1	Medium	Single	Negligible	Low	Medium	Low	Negligible
	5	T11-288M	76,7	76,8	Point 2	48,3	40,3	76,7	76,8	55,0	45,0	21,7	Very Large	Single	Small	Low	Medium	Low	Negligible
	6	T14-346M	77,4	77,6	Point 2	48,3	40,3	77,4	77,6	55,0	45,0	22,4	Very Large	Single	Small	High	Medium	High	Moderate
	7	T14-390M	47,4	48,8	Point 2	48,3	40,3	50,9	49,4	55,0	45,0	0,0	No Impact	Local	No Impact	High	Medium	High	No Impact
Uygar	1	T2-221	72.2	72.6	Point 3	53.6	38.9	72.3	72.6	55	45	17.3	Very Large	Single	Small	Medium	Medium	Medium	Minor
	2	T10-184	70.4	70.7	Point 1	48.3	39.0	70.4	70.7	55	45	15.4	Very Large	Single	Small	Medium	Medium	Medium	Minor
	3	T26-178	61.1	62.2	Point 3	53.6	38.9	61.8	62.2	55	45	6.8	Large	Single	Small	Medium	Medium	Medium	Minor
	4	T26-182	65.4	66.0	Point 3	53.6	38.9	65.7	66.0	55	45	10.7	Very Large	Single	Small	Medium	Medium	Medium	Minor
	5	T36-160	74.0	74.2	Point 5	42.5	35.0	74.0	74.2	55	45	19.0	Very Large	Single	Small	Medium	High	High	Moderate
	6	T36-195	75.4	75.6	Point 5	42.5	35.0	75.4	75.6	55	45	20.4	Very Large	Single	Small	Medium	Medium	Medium	Minor
	7	T45-272	78.6	78.7	Point 6	38.6	36.5	78.6	78.7	55	45	23.6	Very Large	Single	Small	Medium	High	High	Moderate
	8	T2- 250m	68,0	69,0	Point 3	53,6	38,9	68,2	69,0	55,0	45,0	13,2	Very Large	Single	Small	High	Medium	High	Moderate
	9	T7- 301m	61,8	63,1	Point 5	42,5	35,0	61,9	63,1	55,0	45,0	6,9	Large	Single	Small	Low	Medium	Low	Negligible
	10	T7- 407m	56,7	58,1	Point 5	42,5	35,0	56,9	58,1	55,0	45,0	1,9	Small	Single	Negligible	Medium	Medium	Medium	Negligible
	11	T26- 274m	59,9	61,1	Point 3	53,6	38,9	60,8	61,1	55,0	45,0	5,8	Large	Single	Small	Low	Medium	Low	Negligible
	12	T34- 302m	62,6	63,7	Point 4	49,8	39,7	62,8	63,7	55,0	45,0	7,8	Large	Single	Small	High	Medium	High	Moderate
	13	T34- 317m	62,2	63,4	Point 4	49,8	39,7	62,4	63,4	55,0	45,0	7,4	Large	Single	Small	High	Medium	High	Moderate
	14	T36-268m	60,7	61,7	Point 5	42,5	35,0	60,8	61,7	55,0	45,0	5,8	Large	Single	Small	High	Medium	High	Moderate
	15	T38-318m	76,0	76,2	Point 5	42,5	35,0	76,0	76,2	55,0	45,0	21,0	Very Large	Single	Small	High	Medium	High	Moderate
	16	T38-370m	65,9	67,0	Point 5	42,5	35,0	65,9	67,0	55,0	45,0	10,9	Very Large	Single	Small	High	Medium	High	Moderate

Related Project	#	Assessment Point	Source Leq			Baseline Leq		Cumulative Level		Limit Value*		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
	17	T56- 90 m	74,8	74,9	Point 1	48,3	39,0	74,8	74,9	55,0	45,0	19,8	Very Large	Single	Small	High	Medium	High	Moderate
Dampınar	1	T2-317M	53,7	55,0	Point 1	45,9	40,9	54,4	55,2	55,0	45,0	0,0	No Impact	Single	No Impact	High	Medium	High	No Impact
	2	T5-380M	59,5	60,6	Point 1	45,9	40,9	59,7	60,6	55,0	45,0	4,7	Medium	Single	Negligible	High	Medium	High	Negligible
	3	T5-420M	57,2	58,4	Point 1	45,9	40,9	57,5	58,5	55,0	45,0	2,5	Small	Single	Negligible	High	Medium	High	Negligible
	4	T7-360M	75,4	75,7	Point 2	44,7	39,1	75,4	75,7	55,0	45,0	20,4	Very Large	Single	Small	Low	Medium	Low	Negligible
	5	T7-372M	77,0	77,2	Point 2	44,7	39,1	77,0	77,2	55,0	45,0	22,0	Very Large	Single	Small	Low	Medium	Low	Negligible
	6	T9-372M	64,2	65,3	Point 3	39,6	33,4	64,2	65,3	55,0	45,0	9,2	Very Large	Single	Small	Low	Medium	Low	Negligible
	7	T10-280M	80,1	80,2	Point 3	39,6	33,4	80,1	80,2	55,0	45,0	25,1	Very Large	Single	Small	High	Medium	High	Moderate
	8	T9-500M	52,2	53,5	Point 3	39,6	33,4	52,4	53,5	55,0	45,0	0,0	No Impact	Single	No Impact	High	Medium	High	No Impact
	9	T10-425M	75,3	75,5	Point 3	39,6	33,4	75,3	75,5	55,0	45,0	20,3	Very Large	Single	Small	Low	Medium	Low	Negligible
	10	T10-375M	59,3	60,5	Point 3	39,6	33,4	59,3	60,5	55,0	45,0	4,3	Medium	Single	Negligible	High	Medium	High	Negligible
Ovacık	1	T5-370M	55,3	56,6	Point 2	46,3	35,9	55,8	56,6	55,0	45,0	0,8	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	2	T9-374M	55,4	56,7	Point 2	46,3	35,9	55,9	56,7	55,0	45,0	0,9	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	3	T9-408M	54,7	56,0	Point 2	46,3	35,9	55,3	56,0	55,0	45,0	0,3	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	4	T9-365M	56,6	57,9	Point 2	46,3	35,9	57,0	57,9	55,0	45,0	2,0	Small	Single	No Impact	High	Medium	High	Negligible
	5	T11-300M	57,2	58,4	Point 3	49,6	39,5	57,9	58,5	55,0	45,0	2,9	Small	Single	No Impact	Low	Medium	Low	Negligible
	6	T11-407M	62,3	62,8	Point 3	49,6	39,5	62,5	62,8	55,0	45,0	7,5	Large	Single	Small	Low	Medium	Low	Negligible
	7	T11-453M	54,7	56,0	Point 3	49,6	39,5	55,9	56,1	55,0	45,0	0,9	No Impact	Single	No Impact	High	Medium	High	No Impact
	8	T12-300M	51,2	52,5	Point 3	49,6	39,5	53,5	52,7	55,0	45,0	0,0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	9	T12-360M	48,6	49,9	Point 3	49,6	39,5	52,1	50,3	55,0	45,0	0,0	No Impact	Single	No Impact	Low	Medium	Low	No Impact

*:Limit values are baseline dependent. Where baseline values exceeds the 55 dBA and 45 dBA levels for day and night time respectively, they are determined as baseline level +3dB.
**: Armutçuk T15-0 and T15-50 are both dealth with as a part of the RAP implementation and are not subjects of this study anymore.

Table 3-8: Environmental Noise Assessment for Additional Points. Operation

Related Project	#	Assessment Point	Source Leq			Baseline Leq		Cumulative Level		Limit Value		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
Akköy	1	T5-244	45.3	45.3	Point 1	54.4	47.6	54.9	49.6	55	50.6	0.0	No Impact	Single	No Impact	Medium	Medium	Medium	No Impact
	2	T1-290M	44.5	44.5	Point 3	58.1	50.1	58.3	51.2	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	3	T1-318M	43.8	43.8	Point 3	58.1	50.1	58.3	51.0	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	4	T1-440M	40.9	41.0	Point 3	58.1	50.1	58.2	50.6	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	5	T1-500M	41.2	41.2	Point 3	58.1	50.1	58.2	50.6	61.1	53.1	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	6	T1-480M	40.2	40.2	Point 3	58.1	50.1	58.2	50.5	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	7	T2-405M	41.8	41.9	Point 3	58.1	50.1	58.2	50.7	61.1	53.1	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	8	T2-420M	42.4	42.5	Point 3	58.1	50.1	58.2	50.8	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	9	T3-287M	45.6	45.6	Point 3	58.1	50.1	58.3	51.4	61.1	53.1	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	10	T4-325M	44.8	44.8	Point 1	54.4	47.6	54.9	49.4	55.0	50.6	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	11	T5-365M	43.1	43.2	Point 1	54.4	47.6	54.7	48.9	55.0	50.6	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	12	T5-365M	42.9	42.9	Point 1	54.4	47.6	54.7	48.9	55.0	50.6	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	13	T5-385M	41.6	41.6	Point 1	54.4	47.6	54.6	48.6	55.0	50.6	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	14	T5-458M	40.2	40.2	Point 1	54.4	47.6	54.6	48.3	55.0	50.6	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
Armutçuk	1	T15-50	53.8	53.8	Point 2	39.8	32.8	54.0	53.8	55	45	8.8	Very Large	Single	Small	Medium	High	High	Moderate

Related Project	#	Assessment Point	Source Leq		Baseline Leq			Cumulative Level		Limit Value		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
	2	T3-275M	47.9	47.9	Point 2	39.8	32.8	48.5	48.0	55.0	45.0	3.0	Medium	Single	Negligible	High	Medium	High	Negligible
	3	T5-320	46.6	46.6	Point 3	38.2	33.7	47.2	46.8	55.0	45.0	1.8	Small	Single	Negligible	Low	Medium	Low	Negligible
	4	T5-354M	44.7	44.7	Point 3	38.2	33.7	45.6	45.0	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	5	T5-350M	46.2	46.3	Point 3	38.2	33.7	46.8	46.5	55.0	45.0	1.5	Small	Single	Negligible	Low	Medium	Low	Negligible
	6	T5-380M	43.1	43.1	Point 3	38.2	33.7	44.3	43.6	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	7	T5-396M	43.8	43.8	Point 3	38.2	33.7	44.9	44.2	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	8	T5-414M	42.9	42.9	Point 3	38.2	33.7	44.2	43.4	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	9	T9-460M	43.4	43.4	Point 3	38.2	33.7	44.5	43.8	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	10	T5-486	42.2	42.2	Point 3	38.2	33.7	43.7	42.8	55.0	45.0	0.0	No Impact	Single	No Impact	Medium	Medium	Medium	No Impact
	11	T14-290M	46.5	46.5	Point 3	38.2	33.7	47.1	46.7	55.0	45.0	1.7	Small	Single	Negligible	Low	Medium	Low	Negligible
	12	T14-432M	45.2	45.2	Point 3	38.2	33.7	46.0	45.5	55.0	45.0	0.5	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	13	T15-0	54.5	54.5	Point 2	39.8	32.8	54.6	54.5	55.0	45.0	9.5	Very Large	Single	Small	Medium	Medium	Medium	Minor
	14	T16-440M	45.1	45.1	Point 2	39.8	32.8	46.2	45.3	55.0	45.0	0.3	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	15	T17-190	50.5	50.5	Point 2	39.8	32.8	50.9	50.6	55.0	45.0	5.6	Large	Single	Small	Low	Medium	Low	Negligible
	16	T19-434M	42.0	42.0	Point 2	39.8	32.8	44.0	42.5	55.0	45.0	0.0	No Impact	Single	No Impact	Medium	Medium	Medium	No Impact
	1	T2-165M	48.5	48.5	Point 2	42.4	34.6	49.5	48.7	55	45	3.7	Medium	Single	Negligible	Medium	High	High	Moderate
	2	T2-82M	52.3	52.3	Point 2	42.4	34.6	52.7	52.4	55	45	7.4	Large	Single	Small	Medium	High	High	Moderate
	3	T2-170M	47.8	47.8	Point 2	42.4	34.6	48.9	48.0	55	45	3.0	Medium	Single	Negligible	Medium	High	High	Moderate
	4	T9-175M	47.5	47.5	Point 2	42.4	34.6	48.7	47.7	55	45	2.7	Small	Single	Negligible	Medium	High	High	Moderate
	5	T9-237M	45.2	45.2	Point 2	42.4	34.6	47.0	45.6	55	45	0.6	No Impact	Single	No Impact	Medium	High	High	Moderate
	6	T9-227M	46.2	46.2	Point 2	42.4	34.6	47.7	46.5	55	45	1.5	Small	Single	Negligible	Medium	High	High	Moderate
	7	T6-215M	46.3	46.3	Point 2	42.4	34.6	47.8	46.6	55	45	1.6	Small	Single	Negligible	Medium	High	High	Moderate
	8	T6-232M	46.1	46.1	Point 2	42.4	34.6	47.6	46.4	55	45	1.4	Small	Single	Negligible	Medium	High	High	Moderate
	9	T13-220M	47.0	47.0	Point 2	42.4	34.6	48.3	47.2	55	45	2.2	Small	Single	Negligible	Medium	High	High	Moderate
	10	T14-204M	48.9	48.9	Point 2	42.4	34.6	49.8	49.1	55	45	4.1	Medium	Single	Negligible	Medium	Medium	Medium	Negligible
	11	T2-390M	41.4	41.4	Point 2	42.4	34.6	44.9	42.2	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
Hacıhıdırlar	12	T2-395M	41.7	41.7	Point 2	42.4	34.6	45.1	42.5	55.0	45.0	0.0	No Impact	Single	No Impact	Medium	High	High	No Impact
	13	T9-270M	45.2	45.2	Point 2	42.4	34.6	47.0	45.6	55.0	45.0	0.6	No Impact	Single	No Impact	Medium	High	High	No Impact
	14	T9-460M	42.0	42.0	Point 2	42.4	34.6	45.2	42.7	55.0	45.0	0.0	No Impact	Single	No Impact	Medium	High	High	No Impact
	15	T9-390M	42.0	42.1	Point 2	42.4	34.6	45.2	42.8	55.0	45.0	0.0	No Impact	Single	No Impact	Medium	High	High	No Impact
	16	T10-292M	44.9	44.9	Point 2	42.4	34.6	46.8	45.3	55.0	45.0	0.3	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	17	T11-320M	45.4	45.4	Point 2	42.4	34.6	47.2	45.7	55.0	45.0	0.7	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	18	T11-258M	46.2	46.2	Point 2	42.4	34.6	47.7	46.5	55.0	45.0	1.5	Small	Single	Negligible	Low	Medium	Low	Negligible
	19	T12-428M	42.6	42.7	Point 3	47.5	35.9	48.7	43.5	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	20	T13-310M	45.0	45.0	Point 3	47.5	35.9	49.4	45.5	55.0	45.0	0.5	No Impact	Single	No Impact	Medium	High	High	No Impact
	21	T13-250M	46.8	46.8	Point 3	47.5	35.9	50.2	47.1	55.0	45.0	2.1	Small	Single	Negligible	Medium	High	High	Moderate
	22	T15-500M	41.8	41.9	Point 3	47.5	35.9	48.5	42.9	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	23	T2-250 M	41.2	41.3	Point 3	47.5	35.9	48.4	42.4	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
Harmancık	1	T7-50	53.2	53.2	Point 3	40.3	33.6	53.4	53.2	55	45	8.2	Very Large	Single	Small	Medium	Medium	Medium	Minor
	2	T2-345	46.6	46.6	Point 3	40.3	33.6	47.5	46.8	55.0	45.0	1.8	Small	Single	Negligible	Low	Medium	Low	Negligible
Ihlamur	1	T9-250	47.2	47.2	Point 3	46.6	38.6	49.9	47.8	55	45	2.8	Small	Single	Negligible	Medium	Medium	Medium	Negligible

Related Project	#	Assessment Point	Source Leq		Baseline Leq			Cumulative Level		Limit Value		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
	2	T17-215	48.0	48.0	Point 2	48.3	40.3	51.2	48.7	55	45	3.7	Medium	Single	Negligible	Medium	Medium	Medium	Negligible
	3	T2-367	45.3	45.4	Point 2	48.3	40.3	50.1	46.6	55.0	45.0	1.6	Small	Single	Negligible	High	Medium	High	Negligible
	4	T3-390	44.6	44.7	Point 2	48.3	40.3	49.8	46.0	55.0	45.0	1.0	Small	Single	Negligible	Low	Medium	Low	Negligible
	5	T11-288M	46.9	46.9	Point 2	48.3	40.3	50.7	47.8	55.0	45.0	2.8	Small	Single	Negligible	Low	Medium	Low	Negligible
	6	T14-346M	46.0	46.0	Point 2	48.3	40.3	50.3	47.0	55.0	45.0	2.0	Small	Single	N	High	Medium	High	Negligible
	7	T14-390M	41.2	41.2	Point 2	48.3	40.3	49.1	43.8	55.0	45.0	0.0	No Impact	Local	No Impact	High	Medium	High	No Impact
Uygar	1	T2-221	49.2	49.2	Point 3	53.6	38.9	54.9	49.6	55	45	4.6	Medium	Single	Negligible	Medium	Medium	Medium	Negligible
	2	T10-184	50.1	50.1	Point 1	48.3	39.0	52.3	50.4	55	45	5.4	Large	Single	Small	Medium	Medium	Medium	Minor
	3	T26-178	45.6	45.6	Point 3	53.6	38.9	54.2	46.4	55	45	1.4	Small	Single	Negligible	Medium	Medium	Medium	Negligible
	4	T26-182	47.6	47.6	Point 3	53.6	38.9	54.6	48.1	55	45	3.1	Medium	Single	Negligible	Medium	Medium	Medium	Negligible
	5	T36-160	48.6	48.6	Point 5	42.5	35.0	49.6	48.8	55	45	3.8	Medium	Single	Negligible	Medium	High	High	Moderate
	6	T36-195	47.8	47.8	Point 5	42.5	35.0	48.9	48.0	55	45	3.0	Medium	Single	Negligible	Medium	Medium	Medium	Negligible
	7	T45-272	50.4	50.4	Point 6	38.6	36.5	50.7	50.6	55	45	5.6	Large	Single	Small	Medium	High	High	Moderate
	8	T2- 250m	48.4	48.4	Point 3	53.6	38.9	54.7	48.9	55.0	45.0	3.9	Medium	Single	Negligible	High	Medium	High	Negligible
	9	T7- 301m	45.2	45.2	Point 5	42.5	35.0	47.1	45.6	55.0	45.0	0.6	No Impact	Single	No Impact	High	Medium	High	No Impact
	10	T7- 407m	43.8	43.8	Point 5	42.5	35.0	46.2	44.3	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	11	T26- 274m	44.5	44.5	Point 3	53.6	38.9	54.1	45.6	55.0	45.0	0.6	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	12	T34- 302m	44.8	44.8	Point 4	49.8	39.7	51.0	46.0	55.0	45.0	1.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	13	T34- 317m	44.6	44.6	Point 4	49.8	39.7	50.9	45.8	55.0	45.0	0.8	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	14	T36-268m	45.9	45.9	Point 5	42.5	35.0	47.5	46.2	55.0	45.0	1.2	Small	Single	Negligible	Low	Medium	Low	Negligible
	15	T38-318m	45.6	45.6	Point 5	42.5	35.0	47.3	46.0	55.0	45.0	1.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	16	T38-370m	44.5	44.5	Point 5	42.5	35.0	46.6	45.0	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	17	T56- 90 m	52.3	52.3	Point 1	48.3	39.0	53.8	52.5	55.0	45.0	7.5	Large	Single	Small	Low	Medium	Low	Negligible
Dampınar	1	T2-317M	42.2	42.2	Point 1	45.9	40.9	47.4	44.6	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	2	T5-380M	44.4	44.4	Point 1	45.9	40.9	48.2	46.0	55.0	45.0	1.0	Small	Single	Negligible	High	Medium	High	Moderate
	3	T5-420M	43.5	43.5	Point 1	45.9	40.9	47.9	45.4	55.0	45.0	0.4	No Impact	Single	No Impact	High	Medium	High	No Impact
	4	T7-360M	42.9	42.9	Point 2	44.7	39.1	46.9	44.4	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	5	T7-372M	42.8	42.8	Point 2	44.7	39.1	46.9	44.3	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	6	T9-372M	42.6	42.6	Point 3	39.6	33.4	44.4	43.1	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	7	T10-280M	45.1	45.1	Point 3	39.6	33.4	46.2	45.4	55.0	45.0	0.4	No Impact	Single	No Impact	High	Medium	High	No Impact
	8	T9-500M	39.6	39.6	Point 3	39.6	33.4	42.6	40.5	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	9	T10-425M	43.3	43.3	Point 3	39.6	33.4	44.8	43.7	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	10	T10-375M	43.2	43.2	Point 3	39.6	33.4	44.8	43.6	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
Ovacık	1	T5-370M	45.1	45.1	Point 2	46.3	35.9	48.8	45.6	55.0	45.0	0.6	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	2	T9-374M	43.4	43.5	Point 2	46.3	35.9	48.1	44.2	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	3	T9-408M	43.2	43.3	Point 2	46.3	35.9	48.0	44.0	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	4	T9-365M	44.0	44.0	Point 2	46.3	35.9	48.3	44.6	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	5	T11-300M	44.6	44.6	Point 3	49.6	39.5	50.8	45.8	55.0	45.0	0.8	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	6	T11-407M	41.9	42.0	Point 3	49.6	39.5	50.3	43.9	55.0	45.0	0.0	No Impact	Single	No Impact	Low	Medium	Low	No Impact
	7	T11-453M	41.7	41.7	Point 3	49.6	39.5	50.3	43.7	55.0	45.0	0.0	No Impact	Single	No Impact	High	Medium	High	No Impact
	8	T12-300M	46.9	46.9	Point 3	49.6	39.5	51.5	47.6	55.0	45.0	2.6	Small	Single	Negligible	Low	Medium	Low	Negligible

Related Project	#	Assessment Point	Source Leq		Baseline Leq			Cumulative Level		Limit Value		Max Relevant Exceedance	Scale of Impact	Extent	Impact Mag	Importance	Sensitivity	Responsivity	Impact Significance
			Ld (dBA)	Ln (dBA)	Location	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)	Ld (dBA)	Ln (dBA)								
	9	T12-360M	46.6	46.6	Point 3	49.6	39.5	51.4	47.4	55.0	45.0	2.4	Small	Single	Negligible	Low	Medium	Low	Negligible

*:Limit values are baseline dependent. Where baseline values exceeds the 55 dBA and 45 dBA levels for day and night time respectively, they are determined as baseline level +3dB.

3.2 Environmental Vibration Assessment

3.2.1 Methodology

Vibration assessment criteria are presented in Table 3-9.

Table 3-9: Scale of Construction and Operation Vibration Impact

Category of vibration impact scale	PPV (mm/s)
No Impact	<0,14
Negligible	<0,3
Small	<1
Medium	<10
Large	>10

Scale of blasting vibration assessment criteria are presented in Table 3-10.

Table 3-10: Scale of Blasting Vibration Impact

Category of construction vibration impact scale	PPV (mm/s)
No Impact / Small	0-10
Medium / Large	10-15
Very Large	>15

Critical distance values for construction vibration and blasting are calculated for each Project and presented in Chapter 9 of each ESIA Report.

3.2.2 Results

Potential vibration impacts have been assessed for requested additional points. Results are presented in Table 3-11. Distance of a number of points (denoted by a star) to the closest turbine is shorter than the blasting critical distance, thus, if by any possible means, blasting activities will be held, additional precautions should be taken.

Other points whose impacts are denoted as “possible” are in the close vicinity of the internal or site access roads. To avoid any possible adverse vibration impacts, road constructions should be held with extra care and precautions.

Table 3-11: Environmental Vibration Assessment for Additional Points

Project	#	Assessment Point	Distance (m)	Critical Distance, Construction Vibration (m)	Critical Distance, Blasting (m)	Impact
Akköy	1	T5-244	244	30	-	None expected
	2	T1-290M	290	30		None expected
	3	T1-318M	318	30		None expected
	4	T1-440M	440	30		None expected
	5	T1-500M	500	30		None expected
	6	T1-480M	480	30		None expected

	7	T2-405M	405	30		None expected
	8	T2-420M	420	30		None expected
	9	T3-287M	287	30		None expected
	10	T4-325M	325	30		None expected
	11	T5-365M	365	30		None expected
	12	T5-365M	365	30		None expected
	13	T5-385M	385	30		None expected
	14	T5-458M	458	30		None expected
Armutçuk	1	T15-50	50	30	165	Possible Impact*
	2	T3-275M	275	30		None Expected
	3	T5-320	320	30		None Expected
	4	T5-354M	354	30		None Expected
	5	T5-350M	350	30		None Expected
	6	T5-380M	380	30		None Expected
	7	T5-396M	396	30		None Expected
	8	T5-414M	414	30		None Expected
	9	T9-460M	460	30		None Expected
	10	T5-486	486	30		None Expected
	11	T14-290M	290	30		None Expected
	12	T14-432M	432	30		None Expected
	13	T15-0	-	30		Possible Impact
	14	T16-440M	440	30		None Expected
	15	T17-190	190	30		None Expected
	16	T19-434M	434	30		None Expected
Hacıhıdırlar	1	T2-165M	165	30	-	None expected
	2	T2-82M	82	30		None expected
	3	T2-170M	170	30		None expected
	4	T9-175M	175	30		None expected
	5	T9-237M	237	30		None expected
	6	T9-227M	227	30		None expected
	7	T6-215M	215	30		None expected
	8	T6-232M	232	30		None expected
	9	T13-220M	220	30		None expected
	10	T14-204M	204	30		None expected
	11	T2-390M	390	30		None expected
	12	T2-395M	395	30		None expected
	13	T9-270M	270	30		None expected
	14	T9-460M	460	30		None expected
	15	T9-390M	390	30		None expected
	16	T10-292M	292	30		None expected
	17	T11-320M	320	30		None expected
	18	T11-258M	258	30		None expected
	19	T12-428M	428	30		None expected

	20	T13-310M	310	30		None expected
	21	T13-250M	250	30		None expected
	22	T15-500M	500	30		None expected
	23	T2-250 M	250	30		None expected
Harmancık	1	T7-50	50	30	165	Possible Impact* (**)
	2	T2-345	345	30		None expected
Ihlamur	1	T9-250	250	30	165	None expected
	2	T17-215	220	30		None expected
	3	T2-367M	367	30		None expected
	4	T3-390M	390	30		None expected
	5	T11-288M	288	30		None expected
	6	T14-346M	346	30		None expected
	7	T14-390M	390	30		None expected
Uygar	1	T2-221	221	30	122	None expected
	2	T10-184	184	30		None expected
	3	T26-178	178	30		None expected
	4	T26-182	182	30		None expected
	5	T36-160	160	30		None expected
	6	T36-195	195	30		None expected
	7	T45-272	250	30		None expected
	8	T2- 250m	250	30		None expected
	9	T7- 301m	301	30		None expected
	10	T7- 407m	407	30		None expected
	11	T26- 274m	274	30		None expected
	12	T34- 302m	302	30		None expected
	13	T34- 317m	317	30		None expected
	14	T36-268m	268	30		None expected
	15	T38-318m	318	30		None expected
	16	T38-370m	370	30		None expected
	17	T56- 90 m	90	30		Possible Impact
Ovacık	1	T5-370M	370	30	165	None expected
	2	T9-374M	374	30		None expected
	3	T9-408M	408	30		None expected
	4	T9-365M	365	30		None expected
	5	T11-300M	300	30		None expected
	6	T11-407M	407	30		None expected
	7	T11-453M	453	30		None expected
	8	T12-300M	300	30		None expected
	9	T12-360M	360	30		None expected
Dampınar	1	T2-317M	317	30	-	None expected
	2	T5-380M	380	30		None expected
	3	T5-420M	420	30		None expected
	4	T7-360M	360	30		None expected

5	T7-372M	372	30	None expected
6	T9-372M	372	30	None expected
7	T10-280M	280	30	None expected
8	T9-500M	500	30	None expected
9	T10-425M	425	30	None expected
10	T10-375M	375	30	None expected

*Any potential blasting activity at the closest turbine site should be avoided
** Although the structure is located within critical distance for blasting vibration impact, the structure is identified as an abandoned building. Therefore, no additional mitigation measure is proposed specifically to mitigate blasting impact.

3.3 Shadow Flicker and Visual Impact Assessment

3.3.1 Methodology

Shadow Flicker

To assess possible impacts of a shadow flicker, an Area of Influence (AoI) has been identified according to the rotor diameter. The AoI has been determined as 10 X Rotor Diameter distance from turbines, curtailed to 130 degrees either side of North (so 260 degrees in total, leaving 130 degrees south of turbines where shadow effects are not expected).

For shadow flicker given limits (i.e. 30 hr/year and 30 min/day) will be determinant to classify the impact. If the limits defined;

- Is exceeded than it could be said that “Moderate to Major” impact can be expected.
- Is not exceeded however some shadow flicker occurrence present than it could be said that “Negligible to Minor” impact can be expected.
- Is not exceeded moreover no shadow flicker occurrence present than it could be said that “No Impact” is expected

Visual Impacts

Baseline conditions are defined by landscape character and respective sensitivity, together with visual amenity (as represented by views) and the sensitivity of visual receptors (or potential viewers), in accordance with the criteria set out below.

Table 3-12: Definition of Sensitivity

Level of Sensitivity	**Definition of Sensitivity** (Sensitivity considers the value of receptors and their susceptibility to change)
High	**Landscape** Value: Typically, of high importance and rarity, recognised at an international or national scale, with limited potential for substitution (e.g. National Parks). Outstanding or High overall evaluation. *Susceptibility to change: Landscape unlikely to accommodate the change proposed.
	Visual Amenity Value: Typically, internationally or nationally recognised/important. *Susceptibility to change: Appreciation of affected views may be one of the main activities
Medium	**Landscape** Value: Typically, of moderate importance and rarity, recognised at a regional/local scale, with limited potential for substitution. *Susceptibility to change: Landscape has the potential to accommodate the change proposed.
	Visual Amenity Value: Typically, regionally/locally recognised/important and/or expected to be appreciated at least locally. *Susceptibility to change: There may be appreciation of affected views.
Low	**Landscape** Value: Typically, of low importance and rarity, undesignated and may be degraded. *Susceptibility to change: Landscape likely to accommodate the change proposed.

Level of Sensitivity	**Definition of Sensitivity** (Sensitivity considers the value of receptors and their susceptibility to change)
	Visual Amenity Value: Affected views not recognised as having attached value and not expected to be appreciated at a local level or otherwise. *Susceptibility to change: Attention is unlikely to be focussed on affected views.

*The judgement concerning susceptibility to the type of change proposed is made by considering the nature/characteristics of the change and receiving landscape, following evaluation of receptor value and prior to the assessment of effects.

A combined assessment of value and susceptibility to change is undertaken to determine sensitivity:

Table 3-13: Sensitivity Matrix

		Susceptibility to Change		
		Low	**Medium**	**High**
Value	**Low**	Low	Low/Medium	Medium
	Medium	Low/Medium	Medium	Medium/High
	High	Medium	Medium/High	High

Sensitivity is determined by applying professional judgement and is derived as a product of value and susceptibility to change, as set out above. Where more than one sensitivity outcome is possible for a given combination of value and susceptibility to change, professional judgement is applied to determine that which is most appropriate, on a case-by-case basis.

Below table informs the assigning of magnitude of impact, which may be either beneficial or adverse.

Table 3-14: Assigning Magnitude of Impact

Level of Magnitude	**Definition of Magnitude** Impacts may be beneficial or adverse
High	**Landscape** Major beneficial or adverse alteration to key landscape characteristics such that landscape character would be fundamentally changed.
	Visual Amenity Major beneficial or adverse change in existing view.
Medium	**Landscape** Beneficial or adverse alteration to key landscape characteristics such that landscape character would be noticeably changed.
	Visual Amenity Noticeable beneficial or adverse change in existing view.
Low	**Landscape** Minor beneficial or adverse alteration to key landscape characteristics such that landscape character would be similar to the baseline conditions.
	Visual Amenity

Level of Magnitude	Definition of Magnitude Impacts may be beneficial or adverse
	Minor beneficial or adverse change in existing view such that view largely unchanged.
Negligible	**Landscape** Very minor beneficial or adverse alteration to key landscape characteristics such that change in landscape character would be barely distinguishable from the baseline conditions.
	Visual Amenity Barely noticeable beneficial or adverse change in existing view.

In terms of visual impacts if any of the following terms is fulfilled;

- Landscape of the receptor is completely changed after introduction of the turbines,
- Landscape of the receptor is blocked after introduction of the turbines,
- Multiple turbines are visible closer than 100 meters,
- More than 10 visible turbines agglomerated within a 500 meters radius,

Final impact significance can be determined as “Moderate”.

Unless any of the articles fulfilled, final impact significance can be determined as “Negligible/Minor”.

A combined assessment of sensitivity and magnitude is undertaken to determine how significant an effect is, as set out in the table below.

Table 3-15: Significance Matrix

		Sensitivity		
		Low	**Medium**	**High**
Magnitude	**Negligible**	Negligible	Negligible	Negligible
	Low	Minor	Minor/Moderate	Moderate
	Medium	Minor/Moderate	Moderate	Moderate/Major
	High	Moderate	Moderate/Major	Major

3.3.2 Results

Visual impacts have been assessed for requested additional points. Results are presented in Table 3-16 for shadow flicker and in Table 3-17 for visual impacts. Shadow flicker maps are provided in Appendix A.

Table 3-16: Shadow Flicker Assessment for Additional Points, Operation

Related Project	#	Assessment Point	Distance (m)	Worst-case Hour / Year	Limit, Hours	Worst-affected day Hour / Day	Limit, Minutes	Impact	Worst-case Period
Akköy	1	T1-290M	290	6:18	30:00	0:18	00:30	Negligible to Minor	-
	2	T1-318M	318	109:37	30:00	1:30	00:30	Moderate to Major	15 September
	3	T1-440M	440	3:38	30:00	0:14	00:30	Negligible to Minor	-
	4	T1-500M	500	122:54	30:00	1:10	00:30	Moderate to Major	5-11 November

Related Project	#	Assessment Point	Distance (m)	Worst-case Hour / Year	Limit, Hours	Worst-affected day Hour / Day	Limit, Minutes	Impact	Worst-case Period
	5	T1-480M	480	4:06	30:00	0:14	00:30	Negligible to Minor	-
	6	T2-405M	405	51:19	30:00	1:06	00:30	Moderate to Major	1-2 January
	7	T2-420M	420	13:26	30:00	0:28	00:30	Negligible to Minor	-
	8	T3-287M	287	149:04	30:00	1:43	00:30	Moderate to Major	16-19 September
	9	T4-325M	325	155:44	30:00	1:55	00:30	Moderate to Major	5-6 December
	10	T5-365M	365	27:54	30:00	0:54	00:30	Moderate to Major	21-22 December
	11	T5-365M	365	32:09	30:00	0:59	00:30	Moderate to Major	21-23 December
	12	T5-244M	244	0:00	30:00	0:00	00:30	No Impact	-
	13	T5-385M	385	0:00	30:00	0:00	00:30	No Impact	-
	14	T5-458M	458	0:00	30:00	0:00	00:30	No Impact	-
Armutçuk	1	T3-275M	275	264:28	30:00	2:07	00:30	Moderate to Major	10-13 January
	2	T5-320	320	0:00	30:00	0:00	00:30	No Impact	-
	3	T5-354M	345	0:00	30:00	0:00	00:30	No Impact	-
	4	T5-350M	350	0:00	30:00	0:00	00:30	No Impact	-
	5	T5-380M	380	0:00	30:00	0:00	00:30	No Impact	-
	6	T5-396M	396	0:00	30:00	0:00	00:30	No Impact	-
	7	T5-414M	414	0:00	30:00	0:00	00:30	No Impact	-
	8	T9-460M	460	0:00	30:00	0:00	00:30	No Impact	-
	9	T5-486	486	0:00	30:00	0:00	00:30	No Impact	-
	10	T14-290M	290	0:00	30:00	0:00	00:30	No Impact	-
	11	T14-432M	432	0:00	30:00	0:00	00:30	No Impact	-
	12	T15-0**	-	365:22	30:00	3:10	00:30	Moderate to Major	7-8 July
	13	T15-50M**	50	427:18	30:00	3:27	00:30	Moderate to Major	16-27 June
	14	T16-440M	440	110:04	30:00	1:08	00:30	Moderate to Major	7-8 September
	15	T17-190	190	689:30	30:00	4:46	00:30	Moderate to Major	15-16 October
	16	T19-434M	434	42:24	30:00	0:44	00:30	Moderate to Major	14-16 February
Dampinar	1	T2-317M	317	0:00	30:00	0:00	00:30	No Impact	-
	2	T5-380M	380	35:09	30:00	0:39	00:30	Moderate to Major	23-25 March
	3	T5-420M	420	33:13	30:00	0:38	00:30	Moderate to Major	13-14 September
	4	T7-360M	360	0:00	30:00	0:00	00:30	No Impact	-
	5	T7-372M	372	0:00	30:00	0:00	00:30	No Impact	-
	6	T9-372M	372	119:31	30:00	1:21	00:30	Moderate to Major	20-23 December
	7	T10-280M	280	142:42	30:00	1:32	00:30	Moderate to Major	14-20 March
	8	T9-500M	500	0:00	30:00	0:00	00:30	No Impact	-
	9	T10-425M	425	114:33	30:00	1:17	00:30	Moderate to Major	16-18 January

Related Project	#	Assessment Point	Distance (m)	Worst-case Hour / Year	Limit, Hours	Worst-affected day Hour / Day	Limit, Minutes	Impact	Worst-case Period
	10	T10-375M	375	23:15	30:00	0:38	00:30	Moderate to Major	21-22 March
Hacıhıdırlar	1	T2-165M	165	0:00	30:00	0:00	00:30	No Impact	-
	2	T2-82M	82	886:59	30:00	3:52	00:30	Moderate to Major	31 August - 1 September
	3	T2-390M	390	0:00	30:00	0:00	00:30	No Impact	-
	4	T2-395M	395	0:00	30:00	0:00	00:30	No Impact	-
	5	T2-170M	170	0:00	30:00	0:00	00:30	No Impact	-
	6	T9-175M	175	0:00	30:00	0:00	00:30	No Impact	-
	7	T9-270M	270	201:45	30:00	1:45	00:30	Moderate to Major	15-16 October
	8	T9-460M	460	82:46	30:00	1:08	00:30	Moderate to Major	20 October
	9	T9-237M	237	0:00	30:00	0:00	00:30	No Impact	-
	10	T9-390M	390	0:00	30:00	0:00	00:30	No Impact	-
	11	T9-227M	227	77:36	30:00	1:07	00:30	Moderate to Major	29-30 August
	12	T6-215M	215	298:28	30:00	2:07	00:30	Moderate to Major	29 October - 10 November
	13	T6-232M	232	264:52	30:00	2:30	00:30	Moderate to Major	19-25 December
	14	T10-292M	292	163:58	30:00	1:50	00:30	Moderate to Major	1-2 April
	15	T11-320M	320	77:38	30:00	1:00	00:30	Moderate to Major	14 January
	16	T11-258M	258	249:23	30:00	2:07	00:30	Moderate to Major	13-15 October
	17	T12-428M	428	47:27	30:00	0:34	00:30	Moderate to Major	21-24 March
	18	T13-310M	310	127:23	30:00	1:04	00:30	Moderate to Major	25-26 August
	19	T13-250M	250	132:31	30:00	1:12	00:30	Moderate to Major	11-16 April
	20	T13-220M	220	324:01	30:00	2:44	00:30	Moderate to Major	17-25 December
	21	T14-204M	204	69:15	30:00	1:23	00:30	Moderate to Major	22 December
	22	T15-500M	500	0:00	30:00	0:00	00:30	No Impact	-
	23	T2-250 M	250	0:00	30:00	0:00	00:30	No Impact	-
Harmancık	1	T7-50M	50	434:58	30:00	3:29	00:30	Moderate to Major	16-26 June
	2	T2-345M	345	159:40	30:00	1:27	00:30	Moderate to Major	12 March
Ihlamur	1	T17-215	215	115:39	30:00	1.09	00:30	Moderate to Major	17 October
	2	T2-367M	367	53:57	30:00	0:53	00:30	Moderate to Major	5 October
	3	T3-390M	390	2:32	30:00	0:11	00:30	Negligible to Minor	-
	4	T9-250M	250	399:55	30:00	3:34	00:30	Moderate to Major	15 January
	5	T11-288M	288	106:01	30:00	1:19	00:30	Moderate to Major	26-28 September
	6	T14-346M	346	142:14	30:00	1:34	00:30	Moderate to Major	17-19 December

Related Project	#	Assessment Point	Distance (m)	Worst-case Hour / Year	Limit, Hours	Worst-affected day Hour / Day	Limit, Minutes	Impact	Worst-case Period
	7	T14-390M	390	8:20	30:00	0:20	00:30	Negligible to Minor	-
Uygar	1	T2-221m	221	240:32	30:00	1:57	00:30	Moderate to Major	17-21 September
	2	T2- 250m	250	147:40	30:00	1:44	00:30	Moderate to Major	10 September
	3	T7- 301m	301	30:10	30:00	0:42	00:30	Moderate to Major	10-12 September
	4	T7- 407m	407	1:23	30:00	0:06	00:30	Negligible to Minor	-
	5	T10- 184m	184	276:15	30:00	2:14	00:30	Moderate to Major	13-24 January
	6	T26- 178m	178	0:00	30:00	0:00	00:30	No Impact	-
	7	T26- 182m	182	0:00	30:00	0:00	00:30	No Impact	-
	8	T26- 274m	274	0:00	30:00	0:00	00:30	No Impact	-
	9	T34- 302m	302	0:00	30:00	0:00	00:30	No Impact	-
	10	T34- 317m	317	0:00	30:00	0:00	00:30	No Impact	-
	11	T36-160m	160	0:00	30:00	0:00	00:30	No Impact	-
	12	T36-195m	195	0:00	30:00	0:00	00:30	No Impact	-
	13	T36-268m	268	0:00	30:00	0:00	00:30	No Impact	-
	14	T38-318m	318	190:40	30:00	1:35	00:30	Moderate to Major	11-22 November
	15	T38-370m	370	1:15	30:00	0:08	00:30	Negligible to Minor	-
	16	T45-272m	272	652:18	30:00	4:14	00:30	Moderate to Major	23 March
	17	T56- 90 m	90	670:10	30:00	3:26	00:30	Moderate to Major	15-26 April
Ovacık	1	T5-370M	370	128:46	30:00	1:17	00:30	Moderate to Major	9-10 February
	2	T9-374M	374	23:27	30:00	0:36	00:30	Moderate to Major	20-24 October
	3	T9-408M	408	106:32	30:00	1:10	00:30	Moderate to Major	16 April
	4	T9-365M	365	43:56	30:00	0:51	00:30	Moderate to Major	1 March
	5	T11-300M	300	193:11	30:00	1:45	00:30	Moderate to Major	18-28 November
	6	T11-407M	407	110:22	30:00	1:20	00:30	Moderate to Major	15-17 December
	7	T11-453M	453	33:17	30:00	0:54	00:30	Moderate to Major	19-25 December
	8	T12-300M	300	66:50	30:00	1:14	00:30	Moderate to Major	17-26 December
	9	T12-360M	360	123:45	30:00	1:41	00:30	Moderate to Major	17-26 December

* Although Moderate to Major impact is defined for this structure, it is identified as an abandoned building. Therefore, no additional mitigation measure is proposed.

** Both PAPs are dealt with according to RAP implementation and are not subjects of this study anymore.

Table 3-17: Visual Impact Assessment for Additional Points, Operation

Related Project	Assessment Point		Distance (m)	Number of Visible Turbines	Final Impact
Akköy	1	T1-290M	290	4-6	Negligible/Minor

Related Project		Assessment Point	Distance (m)	Number of Visible Turbines	Final Impact
	2	T1-318M	318	4-6	Negligible/Minor
	3	T1-440M	440	4-6	Negligible/Minor
	4	T1-500M	500	4-6	Negligible/Minor
	5	T1-480M	480	4-6	Negligible/Minor
	6	T2-405M	405	2-4	Negligible/Minor
	7	T2-420M	420	4-6	Negligible/Minor
	8	T3-287M	287	4-6	Negligible/Minor
	9	T4-325M	325	4-6	Negligible/Minor
	10	T5-365M	365	4-6	Negligible/Minor
	11	T5-365M	365	4-6	Negligible/Minor
	12	T5-244M	244	2-4	Negligible/Minor
	13	T5-385M	385	2-4	Negligible/Minor
	14	T5-458M	458	2-4	Negligible/Minor
Armutçuk	1	T3-275M	275	15-20	Negligible/Minor
	2	T5-320	320	5-10	Negligible/Minor
	3	T5-354M	345	0-5	Negligible/Minor
	4	T5-350M	350	5-10	Negligible/Minor
	5	T5-380M	380	0-5	Negligible/Minor
	6	T5-396M	396	0-5	Negligible/Minor
	7	T5-414M	414	0-5	Negligible/Minor
	8	T9-460M	460	5-10	Negligible/Minor
	9	T5-486	486	5-10	Negligible/Minor
	10	T14-290M	290	5-10	Negligible/Minor
	11	T14-432M	432	5-10	Negligible/Minor
	12	T15-0*	-	10-15	Negligible/Minor
	13	T15-50M*	50	10-15	Negligible/Minor
	14	T16-440M	440	10-15	Negligible/Minor
	15	T17-190	190	15-20	Negligible/Minor
	16	T19-434M	434	10-15	Negligible/Minor
Dampinar	1	T2-317M	317	8-11	Negligible/Minor
	2	T5-380M	380	4-6	Negligible/Minor
	3	T5-420M	420	8-11	Negligible/Minor
	4	T7-360M	360	8-11	Negligible/Minor
	5	T7-372M	372	6-8	Negligible/Minor
	6	T9-372M	372	8-11	Negligible/Minor
	7	T10-280M	280	8-11	Negligible/Minor
	8	T9-500M	500	6-8	Negligible/Minor
	9	T10-425M	425	8-11	Negligible/Minor
	10	T10-375M	375	2-4	Negligible/Minor
Hacıhıdırlar	1	T2-165M	165	10-15	Negligible/Minor

Related Project		Assessment Point	Distance (m)	Number of Visible Turbines	Final Impact
	2	T2-82M	82	10-15	Negligible/Minor
	3	T2-390M	390	0-5	Negligible/Minor
	4	T2-395M	395	10-15	Negligible/Minor
	5	T2-170M	170	10-15	Negligible/Minor
	6	T9-175M	175	10-15	Negligible/Minor
	7	T9-270M	270	5-10	Negligible/Minor
	8	T9-460M	460	5-10	Negligible/Minor
	9	T9-237M	237	0-10	Negligible/Minor
	10	T9-390M	390	5-10	Negligible/Minor
	11	T9-227M	227	10-15	Negligible/Minor
	12	T6-215M	215	5-10	Negligible/Minor
	13	T6-232M	232	5-10	Negligible/Minor
	14	T10-292M	292	5-10	Negligible/Minor
	15	T11-320M	320	5-10	Negligible/Minor
	16	T11-258M	258	5-10	Negligible/Minor
	17	T12-428M	428	5-10	Negligible/Minor
	18	T13-310M	310	10-15	Negligible/Minor
	19	T13-250M	250	10-15	Negligible/Minor
	20	T13-220M	220	5-10	Negligible/Minor
	21	T14-204M	204	10-15	Negligible/Minor
	22	T15-500M	500	10-15	Negligible/Minor
	23	T2-250 M	250	10-15	Negligible/Minor
Harmancık	1	T7-50M	50	5-10	Negligible/Minor
	2	T2-345M	345	5-10	Negligible/Minor
Ihlamur	1	T17-215	215	5-10	Negligible/Minor
	2	T2-367M	367	0-5	Negligible/Minor
	3	T3-390M	390	10-15	Negligible/Minor
	4	T9-250M	250	15-18	Negligible/Minor
	5	T11-288M	288	10-15	Negligible/Minor
	6	T14-346M	346	5-10	Negligible/Minor
	7	T14-390M	390	5-10	Negligible/Minor
Uygar	1	T2-221m	221	50-55	Negligible/Minor
	2	T2- 250m	250	45-50	Negligible/Minor
	3	T7- 301m	301	55-60	Negligible/Minor
	4	T7- 407m	407	50-55	Negligible/Minor
	5	T10- 184m	184	20-25	Negligible/Minor
	6	T26- 178m	178	40-45	Negligible/Minor
	7	T26- 182m	182	35-40	Negligible/Minor
	8	T26- 274m	274	35-40	Negligible/Minor
	9	T34- 302m	302	30-35	Negligible/Minor

Related Project		Assessment Point	Distance (m)	Number of Visible Turbines	Final Impact
	10	T34- 317m	317	30-35	Negligible/Minor
	11	T36-160m	160	20-25	Negligible/Minor
	12	T36-195m	195	10-15	Negligible/Minor
	13	T36-268m	268	40-45	Negligible/Minor
	14	T38-318m	318	40-45	Negligible/Minor
	15	T38-370m	370	10-15	Negligible/Minor
	16	T45-272m	272	50-55	Negligible/Minor
	17	T56- 90 m	90	5-10	Negligible/Minor
Ovacık	1	T5-370M	370	5-10	Negligible/Minor
	2	T9-374M	374	5-10	Negligible/Minor
	3	T9-408M	408	5-10	Negligible/Minor
	4	T9-365M	365	5-10	Negligible/Minor
	5	T11-300M	300	5-10	Negligible/Minor
	6	T11-407M	407	10-15	Negligible/Minor
	7	T11-453M	453	5-10	Negligible/Minor
	8	T12-300M	300	10-15	Negligible/Minor
	9	T12-360M	360	10-15	Negligible/Minor

* Both PAPs are dealt with according to RAP implementation and are not subjects of this study anymore.

3.4 Community Safety Assessment

3.4.1 Ice Throw Assessment

Methodology

Ice throwing distances are calculated using with hub height and rotor diameter for each wind turbine. Throwing distances at which ice can fall or be thrown from turbine varies between 300m – 400m. As a result of the calculations made for each turbine, the highest throwing distance was accepted as the critical distance.

Considering these distances; impact zone that assumed a circular area from the turbine centres, was examined. Accordingly, the throw distance will be assessed according to the formulation described below.

Critical Throw distance: $B = 1.5\ x\ (H + L)$

B: Distance,

H: Tower Height (m) and,

L: Wing Length (m).

As such, for any distance from the turbine, which is lower than the critical distance, Possible Impact is considered.

Results

The ice throw calculations and related impacts are presented in this section. For the operation phase, ice throw risks were determined by using appropriate methods and presented below.

Although some of the assessment points are marked as "Possible Impact," the seasonal factor further reduces the risk. In this region, the majority of residential properties are used as summer houses or for agricultural purposes, which means that seasonally the risk of ice throw is not anticipated. Furthermore, there is no incident regarding ice throw is reported at operational plants (Akköy, Ovacık). As per literature search about the ice throw risks from wind turbines, according to paper prepared by Seifert et. al. *"Risk Analysis of Ice Throw From Wind Turbines"* from Deutches Windenergie Institut; it is explained that risk is as low as that, if 15000 people passing nearby during 300 years there would be one incident statistically.

Table 3-18: Ice Throw Assessment for Additional Points, Operation

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
Akköy	1	T1-290M	290	352	Possible Impact
	2	T1-318M	318		Possible Impact
	3	T1-440M	440		No Impact
	4	T1-500M	500		No Impact
	5	T1-480M	480		No Impact
	6	T2-405M	405		No Impact
	7	T2-420M	420		No Impact
	8	T3-287M	287		Possible Impact
	9	T4-325M	325		Possible Impact
	10	T5-365M	365		No Impact

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
	11	T5-365M	365		No Impact
	12	T5-244M	244		Possible Impact
	13	T5-385M	385		No Impact
	14	T5-458M	458		No Impact
Armutçuk	1	T3-275M	275	374	Possible Impact
	2	T5-320	320		Possible Impact
	3	T5-354M	345		Possible Impact
	4	T5-350M	350		Possible Impact
	5	T5-380M	380		No Impact
	6	T5-396M	396		No Impact
	7	T5-414M	414		No Impact
	8	T9-460M	460		No Impact
	9	T5-486	486		No Impact
	10	T14-290M	290		Possible Impact
	11	T14-432M	432		No Impact
	12	T15-0	-		Possible Impact
	13	T15-50M	50		Possible Impact
	14	T16-440M	440		No Impact
	15	T17-190	190		Possible Impact
	16	T19-434M	434		No Impact
Dampınar	1	T2-317M	317	329	Possible Impact
	2	T5-380M	380		No Impact
	3	T5-420M	420		No Impact
	4	T7-360M	360		No Impact
	5	T7-372M	372		No Impact
	6	T9-372M	372		No Impact
	7	T10-280M	280		Possible Impact
	8	T9-500M	500		No Impact
	9	T10-425M	425		No Impact
	10	T10-375M	375		No Impact
Hacıhıdırlar	1	T2-165M	165	352	Possible Impact
	2	T2-82M	82		Possible Impact
	3	T2-390M	390		No Impact
	4	T2-395M	395		No Impact
	5	T2-170M	170		Possible Impact
	6	T9-175M	175		Possible Impact
	7	T9-270M	270		Possible Impact
	8	T9-460M	460		No Impact
	9	T9-237M	237		Possible Impact
	10	T9-390M	390		No Impact

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
	11	T9-227M	227		Possible Impact
	12	T6-215M	215		Possible Impact
	13	T6-232M	232		Possible Impact
	14	T10-292M	292		Possible Impact
	15	T11-320M	320		Possible Impact
	16	T11-258M	258		Possible Impact
	17	T12-428M	428		No Impact
	18	T13-310M	310		Possible Impact
	19	T13-250M	250		Possible Impact
	20	T13-220M	220		Possible Impact
	21	T14-204M	204		Possible Impact
	22	T15-500M	500		No Impact
	23	T2-250 M	250		Possible Impact
Harmancık	1	T7-50M	50	374	Possible Impact
	2	T2-345M	345		Possible Impact
Ihlamur	1	T17-215	215	374	Possible Impact
	2	T2-367M	367		Possible Impact
	3	T3-390M	390		No Impact
	4	T9-250M	250		Possible Impact
	5	T11-288M	288		Possible Impact
	6	T14-346M	346		Possible Impact
	7	T14-390M	390		No Impact
Uygar	1	T2-221m	221	374	Possible Impact
	2	T2- 250m	250		Possible Impact
	3	T7- 301m	301		Possible Impact
	4	T7- 407m	407		No Impact
	5	T10- 184m	184		Possible Impact
	6	T26- 178m	178		Possible Impact
	7	T26- 182m	182		Possible Impact
	8	T26- 274m	274		Possible Impact
	9	T34- 302m	302		Possible Impact
	10	T34- 317m	317		Possible Impact
	11	T36-160m	160		Possible Impact
	12	T36-195m	195		Possible Impact
	13	T36-268m	268		Possible Impact
	14	T38-318m	318		Possible Impact
	15	T38-370m	370		Possible Impact
	16	T45-272m	272		Possible Impact
	17	T56- 90 m	90		Possible Impact
Ovacık	1	T5-370M	370	374	Possible Impact

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
	2	T9-374M	374		No Impact
	3	T9-408M	408		No Impact
	4	T9-365M	365		Possible Impact
	5	T11-300M	300		Possible Impact
	6	T11-407M	407		No Impact
	7	T11-453M	453		No Impact
	8	T12-300M	300		Possible Impact
	9	T12-360M	360		Possible Impact

3.4.2 Blade Throw Assessment

Methodology

Wind turbines are known to carry a risk known as "blade throw," in which a blade separates from the rotor and is propelled far off. Even though the blade throw risk can be considered extremely low according to IFC's Environmental, Health, And Safety Guidelines for Wind Energy[4]; this could endanger both the general safety of wind farms and the residents close by. Blade failures in wind turbines can be caused by mechanical stress, exposure to harsh weather, and high-speed rotation. Thus, in this regard, blade throw risk was assessed as well. Table 3-19 shows that, the blade throw risk can occur in different scenarios, and it may have different probabilities.

Table 3-19: Frequencies of occurrence of scenarios relevant for risk analysis. The recommended values correspond to the 95% upper limits[5]

Scenario	Expected value [1/yr]	Recommended value [1/yr]
Loss of entire blade	$6.3 \cdot 10^{-4}$	$8.4 \cdot 10^{-4}$
Loss at rated speed		4.2×10^{-4}
Loss at 1.25*rated speed		4.2×10^{-4}
Loss at 2*rated speed		5.0×10^{-6}
Loss of blade tip	**$1.2 \cdot 10^{-4}$**	**2.6×10^{-4}**
Collapse of entire turbine at tower foot	$2.0 \cdot 10^{-4}$	3.2×10^{-4}
Collapse of rotor and/or nacelle	$5.8 \cdot 10^{-5}$	1.3×10^{-4}
Falling down of small parts from nacelle and hub	$1.2 \cdot 10^{-3}$	1.7×10^{-3}

To be able to assess the blade throw risk, the risk within the setback distance was considered. Moreover, the scenario regarding loss of blade tip scenario was considered so that it can be possible to assess the worst-case scenario (As smaller portion of the blade is expected to be thrown further due to its small volume and mass). With this regard, probability of loss of blade tip is assumed as 2.6×10^{-4} (the recommended value in Table 3-19). Expected value is the value resulted from risk modelling and recommended value is the value to be used to be on the safe side. (safety margin added).

[4] Environmental, Health, And Safety Guidelines For Wind Energy, IFC, 2015

[5] Guidelines on The Environmental Risk of Wind Turbines In The Netherlands, H. Braam, L.W.M.M. Rademakers, ECN Wind Energy. 2004

According to Brouwer et al., there exist a declining trend in blade failure incidents over time, despite the rapid growth in the number of wind turbine generators (WTGs). This improvement is attributed to ongoing advancements in wind turbine safety. Same paper suggests, failure rates for wind turbines with a rated power greater than 1MW located at Germany and Denmark happens as low as $1x10^{-4}$ per year. [6]

Throw distances are calculates as follows:

Critical Throw distance: $B = 1.5\ x\ (H + L)$

B: Distance,

H: Tower Height (m) and,

L: Wing Length (m)

The primary risk to the community from the aforementioned scenarios is the potential for physical or psychological harm resulting from their occurrence which has an even lower risk to happen. Although the likelihood of such risks is extremely low, (actually even lower than the physical damages such as blade loss) potential PAPs have been informed about the main risks associated with the project, including the possibility of blade throw. In that regard, PAPs information efforts are done through regular stakeholder engagement activities including the GLAC roll-out meetings.

Results

The blade throw calculations and related impacts are presented in this section. For the operation phase, blade throw risks were determined by using appropriate methods and presented below.

Table 3-20: Setback Distances for Blade Throw Risk Assessment

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
Akköy	1	T1-290M	290	352	Possible Impact
	2	T1-318M	318		Possible Impact
	3	T1-440M	440		No Impact
	4	T1-500M	500		No Impact
	5	T1-480M	480		No Impact
	6	T2-405M	405		No Impact
	7	T2-420M	420		No Impact
	8	T3-287M	287		Possible Impact
	9	T4-325M	325		Possible Impact
	10	T5-365M	365		No Impact
	11	T5-365M	365		No Impact
	12	T5-244M	244		Possible Impact
	13	T5-385M	385		No Impact
	14	T5-458M	458		No Impact

[6] Towards analysing risks to public safety from wind turbines, Sander R. Brouwer, Saad H.S. Al-Jibouri, Ibsen Chivatá Cárdenas, Johannes I.M. Halman, Reliability Engineering & System Safety, vol. 180, 2018

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
Armutçuk	1	T3-275M	275	374	Possible Impact
	2	T5-320	320		Possible Impact
	3	T5-354M	345		Possible Impact
	4	T5-350M	350		Possible Impact
	5	T5-380M	380		No Impact
	6	T5-396M	396		No Impact
	7	T5-414M	414		No Impact
	8	T9-460M	460		No Impact
	9	T5-486	486		No Impact
	10	T14-290M	290		Possible Impact
	11	T14-432M	432		No Impact
	12	T15-0	-		Possible Impact
	13	T15-50M	50		Possible Impact
	14	T16-440M	440		No Impact
	15	T17-190	190		Possible Impact
	16	T19-434M	434		No Impact
Dampınar	1	T2-317M	317	329	Possible Impact
	2	T5-380M	380		No Impact
	3	T5-420M	420		No Impact
	4	T7-360M	360		No Impact
	5	T7-372M	372		No Impact
	6	T9-372M	372		No Impact
	7	T10-280M	280		Possible Impact
	8	T9-500M	500		No Impact
	9	T10-425M	425		No Impact
	10	T10-375M	375		No Impact
Hacıhıdırlar	1	T2-165M	165	352	Possible Impact
	2	T2-82M	82		Possible Impact
	3	T2-390M	390		No Impact
	4	T2-395M	395		No Impact
	5	T2-170M	170		Possible Impact
	6	T9-175M	175		Possible Impact
	7	T9-270M	270		Possible Impact
	8	T9-460M	460		No Impact
	9	T9-237M	237		Possible Impact
	10	T9-390M	390		No Impact
	11	T9-227M	227		Possible Impact
	12	T6-215M	215		Possible Impact
	13	T6-232M	232		Possible Impact
	14	T10-292M	292		Possible Impact

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
	15	T11-320M	320		Possible Impact
	16	T11-258M	258		Possible Impact
	17	T12-428M	428		No Impact
	18	T13-310M	310		Possible Impact
	19	T13-250M	250		Possible Impact
	20	T13-220M	220		Possible Impact
	21	T14-204M	204		Possible Impact
	22	T15-500M	500		No Impact
	23	T2-250 M	250		Possible Impact
Harmancık	1	T7-50M	50	374	Possible Impact
	2	T2-345M	345		Possible Impact
Ihlamur	1	T17-215	215	374	Possible Impact
	2	T2-367M	367		Possible Impact
	3	T3-390M	390		No Impact
	4	T9-250M	250		Possible Impact
	5	T11-288M	288		Possible Impact
	6	T14-346M	346		Possible Impact
	7	T14-390M	390		No Impact
Uygar	1	T2-221m	221	374	Possible Impact
	2	T2- 250m	250		Possible Impact
	3	T7- 301m	301		Possible Impact
	4	T7- 407m	407		No Impact
	5	T10- 184m	184		Possible Impact
	6	T26- 178m	178		Possible Impact
	7	T26- 182m	182		Possible Impact
	8	T26- 274m	274		Possible Impact
	9	T34- 302m	302		Possible Impact
	10	T34- 317m	317		Possible Impact
	11	T36-160m	160		Possible Impact
	12	T36-195m	195		Possible Impact
	13	T36-268m	268		Possible Impact
	14	T38-318m	318		Possible Impact
	15	T38-370m	370		Possible Impact
	16	T45-272m	272		Possible Impact
	17	T56- 90 m	90		Possible Impact
Ovacık	1	T5-370M	370	374	Possible Impact
	2	T9-374M	374		No Impact
	3	T9-408M	408		No Impact
	4	T9-365M	365		Possible Impact
	5	T11-300M	300		Possible Impact

Related Project	#	Assessment Point	Distance (m)	Critical Distance (m)	Impact
	6	T11-407M	407		No Impact
	7	T11-453M	453		No Impact
	8	T12-300M	300		Possible Impact
	9	T12-360M	360		Possible Impact

To assess the risks regarding blade throw, according to Guidelines on The Environmental Risk of Wind Turbines in The Netherlands, H. Braam, L.W.M.M. Rademakers, ECN Wind Energy. 2004, there are ten main categories of receptors to be considered, which are Houses and buildings, (ii) Roads, (iii) Waterways, (iv) Railways, (v) Industrial areas, (vi) Underground pipelines, (vii) Overhead pipelines, (viii) High tension lines, (ix) Dikes and dams, (x) Paths for communication rays. Accordingly:

Table 3-21: Status of the Receptors regarding Blade Throw Risk

Receptor	Akkoy WPP	Armutcuk WPP	Dampınar WPP	Hacihidirlar WPP	Harmancik WPP	Ihlamur WPP	Uygar WPP	Ovacık WPP
Houses and buildings	T1-290M T1-318M T1-440M T1-500M T1-480M T2-405M T2-420M T3-287M T4-325M T5-365M T5-365M T5-244M T5-385M T5-458M	T3-275M T5-320 T5-354M T5-350M T5-380M T5-396M T5-414M T9-460M T5-486 T14-290M T14-432M T15-0 T15-50M T16-440M T17-190 T19-434M	T2-317M T5-380M T5-420M T7-360M T7-372M T9-372M T10-280M T9-500M T10-425M T10-375M	T2-165M T2-82M T2-390M T2-395M T2-170M T9-175M T9-270M T9-460M T9-237M T9-390M T9-227M T6-215M T6-232M T10-292M T11-320M T11-258M T12-428M T13-310M T13-250M T13-220M T14-204M T15-500M T2-250 M	T7-50M T2-345M	T17-215 T2-367M T3-390M T9-250M T11-288M T14-346M T14-390M	T2-221m T2- 250m T7- 301m T7- 407m T10- 184m T26- 178m T26- 182m T26- 274m T34- 302m T34- 317m T36-160m T36-195m T36-268m T38-318m T38-370m T45-272m T56- 90 m	T5-370M T9-374M T9-408M T9-365M T11-300M T11-407M T11-453M T12-300M T12-360M
Roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads	There are no state roads. There are only some sections of unstabilised roads
Waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways	There are no wet creeks or waterways
Railways	There are no railways	There are no railways	There are no railways	There are no railways	There are no railways	There are no railways	There are no railways	There are no railways
Industrial areas	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines	There are no industrial pipelines
Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines	There are no Underground pipelines
Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines	There are no Overhead pipelines
ETLs	There are no High tension lines	There are no High tension lines	There are no High tension lines	There are no High tension lines	There are no High tension lines	There are no High tension lines	There are no High tension lines	There are no High tension lines
Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams	There are no Dikes and dams
Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays	There are no Paths for communication rays

Thus, it can be assumed that, even during more extreme weather conditions resulting in higher wind speed, the maximum throw distance can be expected to be low. In addition, as stated in Table 3-19, the probability of a blade throw risk is significantly small. As described before, the recommended expected value to observe a loss of a blade tip once a year is 0.026% while recommended expected value to lose the whole blade once a year is 0.084%. This means that probability of this impact is significantly low -furthermore; apart from the blade or blade tip loss, this situation to cause actual damage or impact from a loss is even lower- which results in very low impact and thus the impact magnitude for blade throw is considered to be negligible. Moreover, according to the Project implementation practices, the turbines will be stopped working if the wind speed is 28 m/s to avoid any blade and ice throw risk. In addition to that, Enercon has an automation system to monitor any risk of blade and ice throw in the case of exceeding pre-set speed limits and especially during storms, that enables the turbines to reduce the speed or completely stop the blades. Hence, the maximum wind speed is not a matter of concern during the operation of the WPP. The threshold speed of 28 m/s serves as the operational cut-off to mitigate the risk of blade or ice throw. This specific value has been determined for the turbines utilized in this project. While it cannot be definitively stated that the risk of ice or blade throw is entirely eliminated below this threshold, it can be asserted that the risk is significantly reduced and approaches zero.

3.5 Air Quality Assessment

3.5.1 Methodology

The significance of potential impacts is a function of the presence and sensitivity of receptors, and magnitude of the impact.

While evaluating the contribution of the operational phase effects of the Project to the air quality, the change in the concentrations (process contribution) caused by the Project in sensitive receptors has been taken into account.

Changes in ambient concentrations over 25% of the relevant standards are considered to represent an impact of ‘Major’ magnitude as the WBG General EHS Guidelines note that Projects should: “…prevent or minimize impacts by ensuring that …emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards. As a general rule, this guideline suggests 25 percent of the applicable air quality standards to allow additional future sustainable development in the same airshed.”

The WBG General EHS Guidelines classify ‘poor quality airsheds’ as those where national standards are exceeded significantly. Therefore, receptors experiencing existing ambient pollutant concentrations above the relevant standards are concluded to be of ‘High’ sensitivity.

Impact magnitude and receptor sensitivity criteria are presented in Table 3-22 and Table 3-23. Where a project creates a new exceedance of an air quality standard, the impact is described as significant irrespective of the receptor sensitivity and impact magnitude.

Table 3-22: Determination of Receptor Sensitivity

Ground Level Pollutant Concentrations in Relation to Standard	Receptor Sensitivity
Above Standard	High
75 to 100% of the Standard	Medium
50 to 75% of the Standard	Low
Below 50% of the Standard	Negligible

Table 3-23: Determination of Impact Magnitude

Change in Concentrations as % of Standard	Impact Magnitude
Increase >25%	Major
Increase 15-25%	Moderate
Increase 5-15%	Minor
Increase <5%	Negligible

The significance has been determined by the interaction between the magnitude of impacts and the sensitivity of receptors affected, as depicted in the significance matrix shown below.

Table 3-24: Impact Significant Matrix

	Sensitivity of Receptors			
Magnitude of Impact	**Negligible**	**Low**	**Medium**	**High/Very High**
Negligible	Insignificant	Insignificant	Insignificant	Insignificant
Minor	Insignificant	Minor	Minor	Moderate
Moderate	Insignificant	Minor	Moderate	Major
Major	Insignificant	Moderate	Major	Critical

3.5.2 Results

Construction phase air quality assessment and related impact assessment results are presented in below tables.

Table 3-25: Construction phase air quality modelling results for Akköy WPP

Number	Assessment Point	Parameter	Period	Background Concentration (µg/m^3)	Maximum APCV (µg/m^3)	Cumulative Value (µg/m^3)	Project Standards (µg/m^3)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T5-244M	PM10 (µg/m^3)	Daily	10.24	1.1053	11.3453	45	Below 50% of the Standard	Negligible	11.3453	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.0751	10.3151	15	50 to 75% of the Standard	Low	10.3151	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.24	0.1300	5.3700	15	Below 50% of the Standard	Negligible	5.37	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0089	5.2489	5	Above Standard	High	5.2489	Increase <5%	Negligible	Insignificant
2	T1-290	PM10 (µg/m^3)	Daily	10.17	0.5745	10.7445	45	Below 50% of the Standard	Negligible	10.7445	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0860	10.256	15	50 to 75% of the Standard	Low	10.256	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.44	0.0695	5.5095	15	Below 50% of the Standard	Negligible	5.5095	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0104	5.4504	5	Above Standard	High	5.4504	Increase <5%	Negligible	Insignificant
3	T1-318	PM10 (µg/m^3)	Daily	10.17	0.6048	10.7748	45	Below 50% of the Standard	Negligible	10.7748	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0566	10.2266	15	50 to 75% of the Standard	Low	10.2266	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.44	0.0737	5.5137	15	Below 50% of the Standard	Negligible	5.5137	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0067	5.4467	5	Above Standard	High	5.4467	Increase <5%	Negligible	Insignificant
4	T1-440	PM10 (µg/m^3)	Daily	10.17	0.6014	10.7714	45	Below 50% of the Standard	Negligible	10.7714	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0512	10.2212	15	50 to 75% of the Standard	Low	10.2212	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.44	0.0732	5.5132	15	Below 50% of the Standard	Negligible	5.5132	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0061	5.4461	5	Above Standard	High	5.4461	Increase <5%	Negligible	Insignificant
5	T1-480	PM10 (µg/m^3)	Daily	10.17	0.7111	10.8811	45	Below 50% of the Standard	Negligible	10.8811	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0523	10.2223	15	50 to 75% of the Standard	Low	10.2223	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.44	0.0861	5.5261	15	Below 50% of the Standard	Negligible	5.5261	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0063	5.4463	5	Above Standard	High	5.4463	Increase <5%	Negligible	Insignificant
6	T1-500	PM10 (µg/m^3)	Daily	10.17	0.2603	10.4303	45	Below 50% of the Standard	Negligible	10.4303	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0241	10.1941	15	50 to 75% of the Standard	Low	10.1941	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	5.44	0.0308	5.4708	15	Below 50% of the Standard	Negligible	5.4708	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0029	5.4429	5	Above Standard	High	5.4429	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
7	T2-405	PM10 ($\mu g/m^3$)	Daily	10.17	0.3043	10.4743	45	Below 50% of the Standard	Negligible	10.4743	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.0268	10.1968	15	50 to 75% of the Standard	Low	10.1968	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.44	0.0363	5.4763	15	Below 50% of the Standard	Negligible	5.4763	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0032	5.4432	5	Above Standard	High	5.4432	Increase <5%	Negligible	Insignificant
8	T2-420	PM10 ($\mu g/m^3$)	Daily	10.17	1.1011	11.2711	45	Below 50% of the Standard	Negligible	11.2711	Increase <5%	Negligible	Insignificant
			Annual	10.17	0.2018	10.3718	15	50 to 75% of the Standard	Low	10.3718	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.44	0.1310	5.571	15	Below 50% of the Standard	Negligible	5.571	Increase <5%	Negligible	Insignificant
			Annual	5.44	0.0241	5.4641	5	Above Standard	High	5.4641	Increase <5%	Negligible	Insignificant
9	T3-287	PM10 ($\mu g/m^3$)	Daily	10.24	3.9516	14.1916	45	Below 50% of the Standard	Negligible	14.1916	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.8165	11.0565	15	50 to 75% of the Standard	Low	11.0565	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.4699	5.7099	15	Below 50% of the Standard	Negligible	5.7099	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0972	5.3372	5	Above Standard	High	5.3372	Increase <5%	Negligible	Insignificant
10	T4-325	PM10 ($\mu g/m^3$)	Daily	10.24	0.5938	10.8338	45	Below 50% of the Standard	Negligible	10.8338	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.0742	10.3142	15	50 to 75% of the Standard	Low	10.3142	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.0703	5.3103	15	Below 50% of the Standard	Negligible	5.3103	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0089	5.2489	5	Above Standard	High	5.2489	Increase <5%	Negligible	Insignificant
11	T5-365	PM10 ($\mu g/m^3$)	Daily	10.24	0.6392	10.8792	45	Below 50% of the Standard	Negligible	10.8792	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.0694	10.3094	15	50 to 75% of the Standard	Low	10.3094	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.0749	5.3149	15	Below 50% of the Standard	Negligible	5.3149	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0082	5.2482	5	Above Standard	High	5.2482	Increase <5%	Negligible	Insignificant
12	T5-365	PM10 ($\mu g/m^3$)	Daily	10.24	0.8445	11.0845	45	Below 50% of the Standard	Negligible	11.0845	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.0743	10.3143	15	50 to 75% of the Standard	Low	10.3143	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.0993	5.3393	15	Below 50% of the Standard	Negligible	5.3393	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0088	5.2488	5	Above Standard	High	5.2488	Increase <5%	Negligible	Insignificant
13	T5-385	PM10 ($\mu g/m^3$)	Daily	10.24	1.1144	11.3544	45	Below 50% of the Standard	Negligible	11.3544	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
			Annual	10.24	0.0491	10.2891	15	50 to 75% of the Standard	Low	10.2891	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.1308	5.3708	15	Below 50% of the Standard	Negligible	5.3708	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0058	5.2458	5	Above Standard	High	5.2458	Increase <5%	Negligible	Insignificant
14	T5-458	PM10 ($\mu g/m^3$)	Daily	10.24	0.7303	10.9703	45	Below 50% of the Standard	Negligible	10.9703	Increase <5%	Negligible	Insignificant
			Annual	10.24	0.0479	10.2879	15	50 to 75% of the Standard	Low	10.2879	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.24	0.0859	5.3259	15	Below 50% of the Standard	Negligible	5.3259	Increase <5%	Negligible	Insignificant
			Annual	5.24	0.0056	5.2456	5	Above Standard	High	5.2456	Increase <5%	Negligible	Insignificant

Table 3-26: Construction phase air quality modelling results for Armutcuk WPP

Number	Assessment Point	Parameter	Period	Background Concentration (µg/m^3)	Maximum APCV (µg/m^3)	Cumulative Value (µg/m^3)	Project Standards (µg/m^3)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T15-50	PM10 (µg/m^3)	Daily	14.19	2.7611	16.9511	45	Below 50% of the Standard	Negligible	16.95	Increase <5%	Negligible	Insignificant
			Annual	14.19	0.5634	14.7534	15	75 to 100% of the Standard	Medium	14.75	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12.41	1.2706	13.6806	15	75 to 100% of the Standard	Medium	13.68	Increase <5%	Negligible	Insignificant
			Annual	12.41	0.2953	12.7053	5	Above Standard	High	12.71	Increase <5%	Negligible	Insignificant
2	T3-275	PM10 (µg/m^3)	Daily	14,19	4,07	18,26	45	Below 50% of the Standard	Negligible	18.26	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,71	14,90	15	75 to 100% of the Standard	Medium	14.90	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12,41	1,20	13,61	15	75 to 100% of the Standard	Medium	13.61	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,14	12,55	5	Above Standard	High	12.45	Increase <5%	Negligible	Insignificant
3	T5-320	PM10 (µg/m^3)	Daily	14,19	1,39	15,58	45	Below 50% of the Standard	Negligible	15.58	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,07	14,26	15	75 to 100% of the Standard	Medium	14.26	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12,41	0,63	13,04	15	75 to 100% of the Standard	Medium	13.04	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,03	12,44	5	Above Standard	High	12.44	Increase <5%	Negligible	Insignificant
4	T5-354	PM10 (µg/m^3)	Daily	14,19	1,91	16,10	45	Below 50% of the Standard	Negligible	16.10	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,07	14,26	15	75 to 100% of the Standard	Medium	14.26	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12,41	0,84	13,25	15	75 to 100% of the Standard	Medium	13.25	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,03	12,44	5	Above Standard	High	12.44	Increase <5%	Negligible	Insignificant
5	T5-350	PM10 (µg/m^3)	Daily	14,19	1,41	15,60	45	Below 50% of the Standard	Negligible	15.60	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,07	14,26	15	75 to 100% of the Standard	Medium	14.26	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12,41	0,64	13,05	15	75 to 100% of the Standard	Medium	13.05	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,04	12,45	5	Above Standard	High	12.45	Increase <5%	Negligible	Insignificant
6	T5-380	PM10 (µg/m^3)	Daily	14,19	1,10	15,29	45	Below 50% of the Standard	Negligible	15.29	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,03	14,22	15	75 to 100% of the Standard	Medium	14.22	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	12,41	0,53	12,94	15	75 to 100% of the Standard	Medium	12.94	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,01	12,42	5	Above Standard	High	12.42	Increase <5%	Negligible	Insignificant
7	T5-396	PM10 (µg/m^3)	Daily	14,19	2,09	16,28	45	Below 50% of the Standard	Negligible	16.28	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
			Annual	14,19	0,06	14,25	15	75 to 100% of the Standard	Medium	14.25	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,90	13,31	15	75 to 100% of the Standard	Medium	13.31	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,03	12,44	5	Above Standard	High	12.44	Increase <5%	Negligible	Insignificant
8	T5-414	PM10 ($\mu g/m^3$)	Daily	14,19	1,66	15,85	45	Below 50% of the Standard	Negligible	15.85	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,05	14,24	15	75 to 100% of the Standard	Medium	14.24	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,80	13,21	15	75 to 100% of the Standard	Medium	13.21	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,02	12,43	5	Above Standard	High	12.43	Increase <5%	Negligible	Insignificant
9	T5-486	PM10 ($\mu g/m^3$)	Daily	14,19	2,16	16,35	45	Below 50% of the Standard	Negligible	16.35	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,06	14,25	15	75 to 100% of the Standard	Medium	14.25	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,93	13,34	15	75 to 100% of the Standard	Medium	13.34	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,03	12,44	5	Above Standard	High	12.44	Increase <5%	Negligible	Insignificant
10	T9-460	PM10 ($\mu g/m^3$)	Daily	14,19	2,45	16,64	45	Below 50% of the Standard	Negligible	16.64	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,07	14,26	15	75 to 100% of the Standard	Medium	14.26	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	1,07	13,48	15	75 to 100% of the Standard	Medium	13.48	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,03	12,44	5	Above Standard	High	12.44	Increase <5%	Negligible	Insignificant
11	T14-290	PM10 ($\mu g/m^3$)	Daily	14,19	1,55	15,74	45	Below 50% of the Standard	Negligible	15.74	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,09	14,28	15	75 to 100% of the Standard	Medium	14.28	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,69	13,10	15	75 to 100% of the Standard	Medium	13.10	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,04	12,45	5	Above Standard	High	12.45	Increase <5%	Negligible	Insignificant
12	T14-432	PM10 ($\mu g/m^3$)	Daily	14,19	1,42	15,61	45	Below 50% of the Standard	Negligible	15.61	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,08	14,27	15	75 to 100% of the Standard	Medium	14.27	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,74	13,15	15	75 to 100% of the Standard	Medium	13.15	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,04	12,45	5	Above Standard	High	12.45	Increase <5%	Negligible	Insignificant
13	T15-0	PM10 ($\mu g/m^3$)	Daily	14,19	2,75	16,94	45	Below 50% of the Standard	Negligible	16.94	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,56	14,75	15	75 to 100% of the Standard	Medium	14.75	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
14	T16-440	PM2.5 ($\mu g/m^3$)	Daily	12,41	1,32	13,73	15	75 to 100% of the Standard	Medium	13.73	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,32	12,73	5	Above Standard	High	12.73	Increase <5%	Negligible	Insignificant
		PM10 ($\mu g/m^3$)	Daily	14,19	3,47	17,66	45	Below 50% of the Standard	Negligible	17.66	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,17	14,36	15	75 to 100% of the Standard	Medium	14.36	Increase <5%	Negligible	Insignificant
15	T19-434	PM2.5 ($\mu g/m^3$)	Daily	12,41	1,17	13,58	15	75 to 100% of the Standard	Medium	13.58	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,06	12,47	5	Above Standard	High	12.47	Increase <5%	Negligible	Insignificant
		PM10 ($\mu g/m^3$)	Daily	14,19	1,66	15,85	45	Below 50% of the Standard	Negligible	15.85	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,13	14,32	15	75 to 100% of the Standard	Medium	14.32	Increase <5%	Negligible	Insignificant
16	T17-190	PM2.5 ($\mu g/m^3$)	Daily	12,41	0,61	13,02	15	75 to 100% of the Standard	Medium	13.02	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,05	12,46	5	Above Standard	High	12.46	Increase <5%	Negligible	Insignificant
		PM10 ($\mu g/m^3$)	Daily	14,19	2,46	16,65	45	Below 50% of the Standard	Negligible	16.65	Increase <5%	Negligible	Insignificant
			Annual	14,19	0,35	14,54	15	75 to 100% of the Standard	Medium	14.54	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	12,41	0,92	13,33	15	75 to 100% of the Standard	Medium	13.33	Increase <5%	Negligible	Insignificant
			Annual	12,41	0,15	12,56	5	Above Standard	High	12.56	Increase <5%	Negligible	Insignificant

Table 3-27: Construction phase air quality modelling results for Hacıhıdırlar WPP

Number	Assessment Point	Parameter	Period	Background Concentration (µg/m^3)	Maximum APCV (µg/m^3)	Cumulative Value (µg/m^3)	Project Standards (µg/m^3)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T2-165	PM10 (µg/m^3)	Daily	ND*	0,9487	-	45	-	-	-	-	-	-
			Annual	ND	0,2053	-	15	-	-	-	-	-	-
		PM2.5 (µg/m^3)	Daily	ND	0,1133	-	15	-	-	-	-	-	-
			Annual	ND	0,0243	-	5	-	-	-	-	-	-
2	T2-82	PM10 (µg/m^3)	Daily	ND	1,2806	-	45	-	-	-	-	-	-
			Annual	ND	0,1525	-	15	-	-	-	-	-	-
		PM2.5 (µg/m^3)	Daily	ND	0,1510	-	15	-	-	-	-	-	-
			Annual	ND	0,0181	-	5	-	-	-	-	-	-
3	T2-170	PM10 (µg/m^3)	Daily	ND	1,1539	-	45	-	-	-	-	-	-
			Annual	ND	0,2842	-	15	-	-	-	-	-	-
		PM2.5 (µg/m^3)	Daily	ND	0,1339	-	15	-	-	-	-	-	-
			Annual	ND	0,0336	-	5	-	-	-	-	-	-
4	T9-175	PM10 (µg/m^3)	Daily	12,86	2,1063	14,9663	45	Below 50% of the Standard	Negligible	14.97	Increase <5%	Negligible	Insignificant
			Annual	12,86	0,3795	13,2395	15	75 to 100% of the Standard	Medium	13.24	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7,64	0,2442	7,8842	15	50 to 75% of the Standard	Low	7.88	Increase <5%	Negligible	Insignificant
			Annual	7,64	0,0440	7,684	5	Above Standard	High	7.68	Increase <5%	Negligible	Insignificant
5	T9-237	PM10 (µg/m^3)	Daily	12,86	1,8156	14,6756	45	Below 50% of the Standard	Negligible	14.68	Increase <5%	Negligible	Insignificant
			Annual	12,86	0,2313	13,0913	15	75 to 100% of the Standard	Medium	13.09	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7,64	0,2108	7,8508	15	50 to 75% of the Standard	Low	7.85	Increase <5%	Negligible	Insignificant
			Annual	7,64	0,0269	7,6669	5	Above Standard	High	7.67	Increase <5%	Negligible	Insignificant
6	T9-227	PM10 (µg/m^3)	Daily	12,86	2,5783	15,4383	45	Below 50% of the Standard	Negligible	15.44	Increase <5%	Negligible	Insignificant
			Annual	12,86	0,4938	13,3538	15	75 to 100% of the Standard	Medium	13.35	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7,64	0,2986	7,9386	15	50 to 75% of the Standard	Low	7.94	Increase <5%	Negligible	Insignificant
			Annual	7,64	0,0572	7,6972	5	Above Standard	High	7.70	Increase <5%	Negligible	Insignificant
7	T6-215	PM10 (µg/m^3)	Daily	12,86	2,6609	15,5209	45	Below 50% of the Standard	Negligible	15.52	Increase <5%	Negligible	Insignificant
			Annual	12,86	0,3067	13,1667	15	75 to 100% of the Standard	Medium	13.17	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7,64	0,3085	7,9485	15	50 to 75% of the Standard	Low	7.95	Increase <5%	Negligible	Insignificant
			Annual	7,64	0,0355	7,6755	5	Above Standard	High	7.68	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
8	T6-232	PM10 ($\mu g/m^3$)	Daily	12,86	2,1301	14,9901	45	Below 50% of the Standard	Negligible	14.99	Increase <5%	Negligible	Insignificant
			Annual	12,86	0,2707	13,1307	15	75 to 100% of the Standard	Medium	13.13	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,64	0,2471	7,8871	15	50 to 75% of the Standard	Low	7.89	Increase <5%	Negligible	Insignificant
			Annual	7,64	0,0314	7,6714	5	Above Standard	High	7.67	Increase <5%	Negligible	Insignificant
9	T13-220	PM10 ($\mu g/m^3$)	Daily	14,05	1,3846	15,4346	45	Below 50% of the Standard	Negligible	15.43	Increase <5%	Negligible	Insignificant
			Annual	14,05	0,1368	14,1868	15	75 to 100% of the Standard	Medium	14.19	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11,83	0,1597	11,9897	15	75 to 100% of the Standard	Medium	11.99	Increase <5%	Negligible	Insignificant
			Annual	11,83	0,0158	11,8458	5	Above Standard	High	11.85	Increase <5%	Negligible	Insignificant
10	T14-204	PM10 ($\mu g/m^3$)	Daily	14,05	1,9152	15,9652	45	Below 50% of the Standard	Negligible	15.97	Increase <5%	Negligible	Insignificant
			Annual	14,05	0,2265	14,2765	15	75 to 100% of the Standard	Medium	14.28	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11,83	0,2263	12,0563	15	75 to 100% of the Standard	Medium	12.06	Increase <5%	Negligible	Insignificant
			Annual	11,83	0,0266	11,8566	5	Above Standard	High	11.86	Increase <5%	Negligible	Insignificant
11	T2-390	PM10 ($\mu g/m^3$)	Daily	ND	1.18	-	45	-	-	-	-	-	-
			Annual	ND	0.07	-	15	-	-	-	-	-	-
		PM2.5 ($\mu g/m^3$)	Daily	ND	0.14	-	15	-	-	-	-	-	-
			Annual	ND	0.01	-	5	-	-	-	-	-	-
12	T2-395	PM10 ($\mu g/m^3$)	Daily	ND	0.88	-	45	-	-	-	-	-	-
			Annual	ND	0.09	-	15	-	-	-	-	-	-
		PM2.5 ($\mu g/m^3$)	Daily	ND	0.10	-	15	-	-	-	-	-	-
			Annual	ND	0.01	-	5	-	-	-	-	-	-
13	T2-250	PM10 ($\mu g/m^3$)	Daily	ND	0.95	-	45	-	-	-	-	-	-
			Annual	ND	0.10	-	15	-	-	-	-	-	-
		PM2.5 ($\mu g/m^3$)	Daily	ND	0.14	-	15	-	-	-	-	-	-
			Annual	ND	0.01	-	5	-	-	-	-	-	-
14	T9-270	PM10 ($\mu g/m^3$)	Daily	12.86	4.67	17.53	45	Below 50% of the Standard	Negligible	17.53	Increase <5%	Negligible	Insignificant
			Annual	12.86	0.79	13.65	15	75 to 100% of the Standard	Medium	13.65	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.64	0.54	8.18	15	50 to 75% of the Standard	Low	8.18	Increase <5%	Negligible	Insignificant
			Annual	7.64	0.09	7.73	5	Above Standard	High	7.73	Increase <5%	Negligible	Insignificant
15	T9-390	PM10 ($\mu g/m^3$)	Daily	12.86	1.29	14.15	45	Below 50% of the Standard	Negligible	14.15	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
			Annual	12.86	0.25	13.11	15	75 to 100% of the Standard	Medium	13.11	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.64	0.15	7.79	15	50 to 75% of the Standard	Low	7.79	Increase <5%	Negligible	Insignificant
			Annual	7.64	0.03	7.67	5	Above Standard	High	7.67	Increase <5%	Negligible	Insignificant
16	T9-460	PM10 ($\mu g/m^3$)	Daily	12.86	6.85	19.71	45	Below 50% of the Standard	Negligible	19.71	Increase <5%	Negligible	Insignificant
			Annual	12.86	2.05	14.91	15	75 to 100% of the Standard	Medium	14.91	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.64	0.79	8.43	15	50 to 75% of the Standard	Low	8.43	Increase <5%	Negligible	Insignificant
			Annual	7.64	0.24	7.88	5	Above Standard	High	7.88	Increase <5%	Negligible	Insignificant
17	T10-292	PM10 ($\mu g/m^3$)	Daily	11.25	1.97	13.22	45	Below 50% of the Standard	Negligible	13.22	Increase <5%	Negligible	Insignificant
			Annual	11.25	0.31	11.56	15	75 to 100% of the Standard	Medium	11.56	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.91	0.23	8.14	15	50 to 75% of the Standard	Low	8.14	Increase <5%	Negligible	Insignificant
			Annual	7.91	0.04	7.95	5	Above Standard	High	7.95	Increase <5%	Negligible	Insignificant
18	T11-258	PM10 ($\mu g/m^3$)	Daily	11.25	6.12	17.37	45	Below 50% of the Standard	Negligible	17.37	Increase <5%	Negligible	Insignificant
			Annual	11.25	1.83	13.08	15	75 to 100% of the Standard	Medium	13.08	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.91	0.71	8.62	15	50 to 75% of the Standard	Low	8.62	Increase <5%	Negligible	Insignificant
			Annual	7.91	0.21	8.12	5	Above Standard	High	8.12	Increase <5%	Negligible	Insignificant
19	T11-320	PM10 ($\mu g/m^3$)	Daily	11.25	2.32	13.57	45	Below 50% of the Standard	Negligible	13.57	Increase <5%	Negligible	Insignificant
			Annual	11.25	0.65	11.90	15	75 to 100% of the Standard	Medium	11.90	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7.91	0.27	8.18	15	50 to 75% of the Standard	Low	8.18	Increase <5%	Negligible	Insignificant
			Annual	7.91	0.08	7.99	5	Above Standard	High	7.99	Increase <5%	Negligible	Insignificant
20	T12-428	PM10 ($\mu g/m^3$)	Daily	11.25	4.56	15.81	45	Below 50% of the Standard	Negligible	15.81	Increase <5%	Negligible	Insignificant
			Annual	11.25	0.90	12.15	15	75 to 100% of the Standard	Medium	12.15	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.83	0.53	12.36	15	75 to 100% of the Standard	Medium	12.36	Increase <5%	Negligible	Insignificant
			Annual	11.83	0.10	11.93	5	Above Standard	High	11.93	Increase <5%	Negligible	Insignificant
21	T13-250	PM10 ($\mu g/m^3$)	Daily	14.05	2.75	16.80	45	Below 50% of the Standard	Negligible	16.80	Increase <5%	Negligible	Insignificant
			Annual	14.05	0.44	14.49	15	75 to 100% of the Standard	Medium	14.49	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
		PM2.5 ($\mu g/m^3$)	Daily	11.83	0.32	12.15	15	75 to 100% of the Standard	Medium	12.15	Increase <5%	Negligible	Insignificant
			Annual	11.83	0.05	11.88	5	Above Standard	High	11.88	Increase <5%	Negligible	Insignificant
22	T13-310	PM10 ($\mu g/m^3$)	Daily	14.05	4.04	18.09	45	Below 50% of the Standard	Negligible	18.09	Increase <5%	Negligible	Insignificant
			Annual	14.05	0.98	15.03	15	75 to 100% of the Standard	Medium	15.03	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.83	0.47	12.30	15	75 to 100% of the Standard	Medium	12.30	Increase <5%	Negligible	Insignificant
			Annual	11.83	0.11	11.94	5	Above Standard	High	11.94	Increase <5%	Negligible	Insignificant
23	T15-500	PM10 ($\mu g/m^3$)	Daily	14.05	1.03	15.08	45	Below 50% of the Standard	Negligible	15.08	Increase <5%	Negligible	Insignificant
			Annual	14.05	0.18	14.23	15	75 to 100% of the Standard	Medium	14.23	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.83	0.12	11.95	15	75 to 100% of the Standard	Medium	11.95	Increase <5%	Negligible	Insignificant
			Annual	11.83	0.02	11.85	5	Above Standard	High	11.85	Increase <5%	Negligible	Insignificant

* No data is present. The device located at HH1 location could not be accessed due to road closure caused by adverse meteorological conditions. The device at HH2 location could not be found.

Table 3-28: Construction phase air quality modelling results for Harmancık WPP

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T7-50	PM10 ($\mu g/m^3$)	Daily	10.69	2.78	13.47	45	Below 50% of the Standard	Negligible	13.47	Increase <5%	Negligible	Insignificant
			Annual	10.69	0.41	11.1	15	50 to 75% of the Standard	Low	11.1	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.51	0.22	5.73	15	Below 50% of the Standard	Negligible	5.73	Increase <5%	Negligible	Insignificant
			Annual	5.51	0.05	5.56	5	Above Standard	High	5.56	Increase <5%	Negligible	Insignificant
2	T2-354	PM10 ($\mu g/m^3$)	Daily	7.58	1.10	8.68	45	Below 50% of the Standard	Negligible	8.68	Increase <5%	Negligible	Insignificant
			Annual	7.58	0.09	7.67	15	50 to 75% of the Standard	Low	7.67	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	5.20	0.13	5.33	15	Below 50% of the Standard	Negligible	5.33	Increase <5%	Negligible	Insignificant
			Annual	5.20	0.01	5.21	5	Above Standard	High	5.21	Increase <5%	Negligible	Insignificant

Table 3-29: Construction phase air quality modelling results for Ihlamur WPP

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T9-250	PM10 ($\mu g/m^3$)	Daily	5,27	2,82	8,09	45	Below 50% of the Standard	Negligible	8,09	Increase >25%	Major	Insignificant
			Annual	5,27	0,43	5,7	15	Below 50% of the Standard	Negligible	5,7	Increase 5-15%	Minor	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	3,40	0,33	3,73	15	Below 50% of the Standard	Negligible	3,73	Increase 5-15%	Minor	Insignificant
			Annual	3,40	0,05	3,45	5	Above Standard	High	3,45	Increase <5%	Negligible	Insignificant
2	T17-215	PM10 ($\mu g/m^3$)	Daily	14.09	3.75	17.84	45	Below 50% of the Standard	Negligible	17.84	Increase 5-15%	Minor	Insignificant
			Annual	14.09	0.18	14.27	15	50 to 75% of the Standard	Medium	14.27	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	10.99	0.43	11.42	15	75 to 100% of the Standard	Medium	11.42	Increase <5%	Negligible	Insignificant
			Annual	10.99	0.02	11.01	5	Above Standard	High	11.01	Increase <5%	Negligible	Insignificant
3	T2-367	PM10 ($\mu g/m^3$)	Daily	22,18	4,20	26,38	45	Below 50% of the Standard	Negligible	26,38	Increase 15-25%	Moderate	Insignificant
			Annual	22,18	0,33	22,51	15	Above Standard	High	22,51	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	14,53	0,49	15,02	15	75 to 100% of the Standard	Medium	15,02	Increase <5%	Negligible	Insignificant
			Annual	14,53	0,04	14,57	5	50 to 75% of the Standard	Low	14,57	Increase <5%	Negligible	Insignificant
4	T3-390	PM10 ($\mu g/m^3$)	Daily	5,27	2,88	8,15	45	Below 50% of the Standard	Negligible	8,15	Increase >25%	Major	Insignificant
			Annual	5,27	0,21	5,48	15	Below 50% of the Standard	Negligible	5,48	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	3,40	0,33	3,73	15	Below 50% of the Standard	Negligible	3,73	Increase 5-15%	Minor	Insignificant
			Annual	3,40	0,02	3,42	5	Above Standard	High	3,42	Increase <5%	Negligible	Insignificant
5	T11-288	PM10 ($\mu g/m^3$)	Daily	22,18	3,14	25,32	45	Below 50% of the Standard	Negligible	25,32	Increase 5-15%	Minor	Insignificant
			Annual	22,18	0,41	22,59	15	Above Standard	High	22,59	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	14,53	0,36	14,89	15	75 to 100% of the Standard	Medium	14,89	Increase <5%	Negligible	Insignificant
			Annual	14,53	0,05	14,58	5	Above Standard	High	14,58	Increase <5%	Negligible	Insignificant
6	T14-346	PM10 ($\mu g/m^3$)	Daily	22,18	3,96	26,14	45	Below 50% of the Standard	Negligible	26,14	Increase 15-25%	Moderate	Insignificant
			Annual	22,18	0,56	22,74	15	Above Standard	High	22,74	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	14,53	0,46	14,99	15	75 to 100% of the Standard	Medium	14,99	Increase <5%	Negligible	Insignificant
			Annual	14,53	0,06	14,59	5	Above Standard	High	14,59	Increase <5%	Negligible	Insignificant
7	T14-390	PM10 ($\mu g/m^3$)	Daily	22,18	2,81	24,99	45	Below 50% of the Standard	Negligible	24,99	Increase 5-15%	Minor	Insignificant
			Annual	22,18	0,10	22,28	15	Above Standard	High	22,28	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
		PM2.5 ($\mu g/m^3$)	Daily	14,53	0,32	14,85	15	Below 50% of the Standard	Negligible	14,85	Increase <5%	Negligible	Insignificant
			Annual	14,53	0,01	14,54	5	50 to 75% of the Standard	Low	14,54	Increase <5%	Negligible	Insignificant

Table 3-30: Construction phase air quality modelling results for Dampınar WPP

Number	Assessment Point	Parameter	Period	Background Concentration (µg/m^3)	Maximum APCV (µg/m^3)	Cumulative Value (µg/m^3)	Project Standards (µg/m^3)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T2-317	PM10 (µg/m^3)	Daily	22.39	3.44	25.83	45	Below 50% of the Standard	Negligible	25.83	Increase <5%	Negligible	Insignificant
			Annual	22.39	0.50	22.89	15	Above Standard	High	22.89	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	8.19	1.71	9.9	15	50 to 75% of the Standard	Low	9.9	Increase <5%	Negligible	Insignificant
			Annual	8.19	0.27	8.46	5	Above Standard	High	8.46	Increase <5%	Negligible	Insignificant
2	T5-380	PM10 (µg/m^3)	Daily	22.39	3.45	25.84	45	Below 50% of the Standard	Negligible	25.84	Increase <5%	Negligible	Insignificant
			Annual	22.39	0.63	23.02	15	Above Standard	High	23.02	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	8.19	1.36	9.55	15	50 to 75% of the Standard	Low	9.55	Increase <5%	Negligible	Insignificant
			Annual	8.19	0.25	8.44	5	Above Standard	High	8.44	Increase <5%	Negligible	Insignificant
3	T5-420	PM10 (µg/m^3)	Daily	22.39	3.02	25.41	45	Below 50% of the Standard	Negligible	25.41	Increase <5%	Negligible	Insignificant
			Annual	22.39	0.57	22.96	15	Above Standard	High	22.96	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	8.19	1.25	9.44	15	50 to 75% of the Standard	Low	9.44	Increase <5%	Negligible	Insignificant
			Annual	8.19	0.23	8.42	5	Above Standard	High	8.42	Increase <5%	Negligible	Insignificant
4	T7-360	PM10 (µg/m^3)	Daily	19.64	8.48	28.12	45	Below 50% of the Standard	Negligible	28.12	Increase <5%	Negligible	Insignificant
			Annual	19.64	1.48	21.12	15	Above Standard	High	21.12	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7.49	3.04	10.53	15	Below 50% of the Standard	Negligible	10.53	Increase <5%	Negligible	Insignificant
			Annual	7.49	0.55	8.04	5	Above Standard	High	8.04	Increase <5%	Negligible	Insignificant
5	T7-372	PM10 (µg/m^3)	Daily	19.64	9.12	28.76	45	Below 50% of the Standard	Negligible	28.76	Increase <5%	Negligible	Insignificant
			Annual	19.64	2.49	22.13	15	Above Standard	High	22.13	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	7.49	5.10	12.59	15	Below 50% of the Standard	Negligible	12.59	Increase <5%	Negligible	Insignificant
			Annual	7.49	1.31	8.8	5	Above Standard	High	8.8	Increase <5%	Negligible	Insignificant
6	T9-372	PM10 (µg/m^3)	Daily	19.60	3.32	22.92	45	Below 50% of the Standard	Negligible	22.92	Increase <5%	Negligible	Insignificant
			Annual	19.60	0.29	19.89	15	Above Standard	High	19.89	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	8.87	1.05	9.92	15	50 to 75% of the Standard	Low	9.92	Increase <5%	Negligible	Insignificant
			Annual	8.87	0.11	8.98	5	Above Standard	High	8.98	Increase <5%	Negligible	Insignificant
7	T9-500	PM10 (µg/m^3)	Daily	19.60	1.84	21.44	45	Below 50% of the Standard	Negligible	21.44	Increase <5%	Negligible	Insignificant
			Annual	19.60	0.19	19.79	15	Above Standard	High	19.79	Increase <5%	Negligible	Insignificant
		PM2.5 (µg/m^3)	Daily	8.87	0.79	9.66	15	50 to 75% of the Standard	Low	9.66	Increase <5%	Negligible	Insignificant
			Annual	8.87	0.08	8.95	5	Above Standard	High	8.95	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
8	T10-280	PM10 ($\mu g/m^3$)	Daily	21.04	3.11	24.15	45	Below 50% of the Standard	Negligible	24.15	Increase <5%	Negligible	Insignificant
			Annual	21.04	0.43	21.47	15	Above Standard	High	21.47	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.47	1.50	10.97	15	50 to 75% of the Standard	Low	10.97	Increase <5%	Negligible	Insignificant
			Annual	9.47	0.21	9.68	5	Above Standard	High	9.68	Increase <5%	Negligible	Insignificant
9	T10-375	PM10 ($\mu g/m^3$)	Daily	21.04	3.49	24.53	45	Below 50% of the Standard	Negligible	24.53	Increase <5%	Negligible	Insignificant
			Annual	21.04	0.55	21.59	15	Above Standard	High	21.59	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.47	1.93	11.4	15	50 to 75% of the Standard	Low	11.4	Increase <5%	Negligible	Insignificant
			Annual	9.47	0.25	9.72	5	Above Standard	High	9.72	Increase <5%	Negligible	Insignificant
10	T10-425	PM10 ($\mu g/m^3$)	Daily	21.04	7.27	28.31	45	Below 50% of the Standard	Negligible	28.31	Increase <5%	Negligible	Insignificant
			Annual	21.04	1.11	22.15	15	Above Standard	High	22.15	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.47	4.28	13.75	15	50 to 75% of the Standard	Low	13.75	Increase <5%	Negligible	Insignificant
			Annual	9.47	0.63	10.1	5	Above Standard	High	10.1	Increase <5%	Negligible	Insignificant

Table 3-31: Construction phase air quality modelling results for Uygar WPP

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T2-221	PM10 ($\mu g/m^3$)	Daily	14.74	2.27	17.01	45	Below 50% of the Standard	Negligible	17.01	Increase <5%	Negligible	Insignificant
			Annual	14.74	0.21	14.95	15	50 to 75% of the Standard	Medium	14.95	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.50	0.27	11.77	15	50 to 75% of the Standard	Medium	11.77	Increase <5%	Negligible	Insignificant
			Annual	11.5	0.02	11.52	5	Above Standard	High	11.52	Increase <5%	Negligible	Insignificant
2	T10-184	PM10 ($\mu g/m^3$)	Daily	21.13	2.50	23.63	45	Below 50% of the Standard	Negligible	23.63	Increase <5%	Negligible	Insignificant
			Annual	21.13	0.22	21.35	15	Above Standard	High	21.35	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	10.91	0.31	11.22	15	50 to 75% of the Standard	Medium	11.22	Increase <5%	Negligible	Insignificant
			Annual	10.91	0.06	10.97	5	Above Standard	High	10.97	Increase <5%	Negligible	Insignificant
3	T26-178	PM10 ($\mu g/m^3$)	Daily	16.16	5.09	21.25	45	Below 50% of the Standard	Negligible	21.25	Increase <5%	Negligible	Insignificant
			Annual	16.16	0.24	16.4	15	Above Standard	High	16.4	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8.78	0.58	9.36	15	50 to 75% of the Standard	Medium	11.22	Increase <5%	Negligible	Insignificant
			Annual	8.78	0.03	8.81	5	Above Standard	High	8.81	Increase <5%	Negligible	Insignificant
4	T26-182	PM10 ($\mu g/m^3$)	Daily	16.16	4.97	21.13	45	Below 50% of the Standard	Negligible	21.13	Increase <5%	Negligible	Insignificant
			Annual	16.16	0.30	16.46	15	Above Standard	High	16.46	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8.78	0.59	9.37	15	50 to 75% of the Standard	Medium	9.37	Increase <5%	Negligible	Insignificant
			Annual	8.78	0.03	8.81	5	Above Standard	High	8.81	Increase <5%	Negligible	Insignificant
5	T36-160	PM10 ($\mu g/m^3$)	Daily	11.47	5.91	17.38	45	Below 50% of the Standard	Negligible	17.38	Increase <5%	Negligible	Insignificant
			Annual	11.47	0.40	11.87	15	50 to 75% of the Standard	Medium	11.87	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.78	0.86	10.64	15	50 to 75% of the Standard	Medium	10.64	Increase <5%	Negligible	Insignificant
			Annual	9.78	0.06	9.84	5	Above Standard	High	9.84	Increase <5%	Negligible	Insignificant
6	T36-195	PM10 ($\mu g/m^3$)	Daily	11.47	4.29	15.76	45	Below 50% of the Standard	Negligible	15.76	Increase <5%	Negligible	Insignificant
			Annual	11.47	0.37	11.84	15	50 to 75% of the Standard	Medium	11.84	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.78	0.53	10.31	15	50 to 75% of the Standard	Medium	10.31	Increase <5%	Negligible	Insignificant
			Annual	9.78	0.05	9.83	5	Above Standard	High	9.83	Increase <5%	Negligible	Insignificant
7	T56-90	PM10 ($\mu g/m^3$)	Daily	14.74	2.52	17.26	45	Below 50% of the Standard	Negligible	17.26	Increase <5%	Negligible	Insignificant
			Annual	14.74	0.30	15.04	15	Above Standard	High	15.04	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
		PM2.5 ($\mu g/m^3$)	Daily	10.91	0.29	11.20	15	50 to 75% of the Standard	Medium	11.20	Increase <5%	Negligible	Insignificant
			Annual	10.91	0.03	10.94	5	Above Standard	High	10.94	Increase <5%	Negligible	Insignificant
8	T45-272	PM10 ($\mu g/m^3$)	Daily	13.73	1.52	15.25	45	Below 50% of the Standard	Negligible	15.25	Increase <5%	Negligible	Insignificant
			Annual	13.73	0.20	13.93	15	50 to 75% of the Standard	Medium	13.93	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.86	0.18	10.04	15	50 to 75% of the Standard	Medium	10.04	Increase <5%	Negligible	Insignificant
			Annual	9.86	0.03	9.89	5	Above Standard	High	9.89	Increase <5%	Negligible	Insignificant
9	T2-250	PM10 ($\mu g/m^3$)	Daily	14.74	2.19	16.93	45	Below 50% of the Standard	Negligible	16.93	Increase <5%	Negligible	Insignificant
			Annual	14.74	0.21	14.95	15	50 to 75% of the Standard	Medium	14.95	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.50	0.25	11.75	15	50 to 75% of the Standard	Medium	11.75	Increase <5%	Negligible	Insignificant
			Annual	11.5	0.02	11.52	5	Above Standard	High	11.52	Increase <5%	Negligible	Insignificant
10	T7-301	PM10 ($\mu g/m^3$)	Daily	14.74	1.77	16.51	45	Below 50% of the Standard	Negligible	16.51	Increase <5%	Negligible	Insignificant
			Annual	14.74	0.13	14.87	15	50 to 75% of the Standard	Medium	14.87	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.50	0.21	11.71	15	50 to 75% of the Standard	Medium	11.71	Increase <5%	Negligible	Insignificant
			Annual	11.5	0.02	11.52	5	Above Standard	High	11.52	Increase <5%	Negligible	Insignificant
11	T7-407	PM10 ($\mu g/m^3$)	Daily	14.74	2.33	17.07	45	Below 50% of the Standard	Negligible	17.07	Increase <5%	Negligible	Insignificant
			Annual	14.74	0.19	14.93	15	50 to 75% of the Standard	Medium	14.93	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	11.50	0.27	11.77	15	50 to 75% of the Standard	Medium	11.77	Increase <5%	Negligible	Insignificant
			Annual	11.5	0.02	11.52	5	Above Standard	High	11.52	Increase <5%	Negligible	Insignificant
12	T26-274	PM10 ($\mu g/m^3$)	Daily	16.16	4.76	20.92	45	Below 50% of the Standard	Negligible	20.92	Increase <5%	Negligible	Insignificant
			Annual	16.16	0.22	16.38	15	Above Standard	High	16.38	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8.78	0.59	9.37	15	50 to 75% of the Standard	Medium	9.37	Increase <5%	Negligible	Insignificant
			Annual	8.78	0.03	8.81	5	Above Standard	High	8.81	Increase <5%	Negligible	Insignificant
13	T34-302	PM10 ($\mu g/m^3$)	Daily	16.16	1.85	18.01	45	Below 50% of the Standard	Negligible	18.01	Increase <5%	Negligible	Insignificant
			Annual	16.16	0.07	16.23	15	Above Standard	High	16.23	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8.78	0.21	8.99	15	50 to 75% of the Standard	Medium	8.99	Increase <5%	Negligible	Insignificant
			Annual	8.78	0.01	8.79	5	Above Standard	High	8.79	Increase <5%	Negligible	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
14	T34-317	PM10 ($\mu g/m^3$)	Daily	16.16	1.86	18.02	45	Below 50% of the Standard	Negligible	18.02	Increase <5%	Negligible	Insignificant
			Annual	16.16	0.07	16.23	15	Above Standard	High	16.23	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8.78	0.22	9.00	15	50 to 75% of the Standard	Medium	9.00	Increase <5%	Negligible	Insignificant
			Annual	8.78	0.01	8.79	5	Above Standard	High	8.79	Increase <5%	Negligible	Insignificant
15	T36-268	PM10 ($\mu g/m^3$)	Daily	11.47	2.70	14.17	45	Below 50% of the Standard	Negligible	14.17	Increase <5%	Negligible	Insignificant
			Annual	11.47	0.21	11.68	15	50 to 75% of the Standard	Medium	11.68	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.78	0.31	10.09	15	50 to 75% of the Standard	Medium	10.09	Increase <5%	Negligible	Insignificant
			Annual	9.78	0.02	9.8	5	Above Standard	High	9.8	Increase <5%	Negligible	Insignificant
16	T38-318	PM10 ($\mu g/m^3$)	Daily	11.47	5.23	16.7	45	Below 50% of the Standard	Negligible	16.7	Increase <5%	Negligible	Insignificant
			Annual	11.47	0.88	12.35	15	50 to 75% of the Standard	Medium	12.35	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.78	0.60	10.38	15	50 to 75% of the Standard	Medium	10.38	Increase <5%	Negligible	Insignificant
			Annual	9.78	0.06	9.84	5	Above Standard	High	9.8	Increase <5%	Negligible	Insignificant
17	T38-370	PM10 ($\mu g/m^3$)	Daily	11.47	2.97	14.44	45	Below 50% of the Standard	Negligible	14.44	Increase <5%	Negligible	Insignificant
			Annual	11.47	0.13	11.6	15	50 to 75% of the Standard	Medium	11.60	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	9.86	0.34	10.2	15	50 to 75% of the Standard	Medium	10.2	Increase <5%	Negligible	Insignificant
			Annual	9.86	0.01	9.87	5	Above Standard	High	9.84	Increase <5%	Negligible	Insignificant

Table 3-32: Construction phase air quality modelling results for Ovacık WPP

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
1	T5-370	PM10 ($\mu g/m^3$)	Daily	14,87	17,21	32,08	45	Below 50% of the Standard	Negligible	32,08	Increase >25%	Major	Insignificant
			Annual	14,87	0,04	14,91	15	75 to 100% of the Standard	Medium	14,91	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8,35	0,0995	8,4495	15	50 to 75% of the Standard	Low	8,4495	Increase <5%	Negligible	Insignificant
			Annual	8,35	0,0042	8,3542	5	Above Standard	High	8,3542	Increase <5%	Negligible	Insignificant
2	T9-365	PM10 ($\mu g/m^3$)	Daily	14,87	17,10	31,97	45	Below 50% of the Standard	Negligible	31,97	Increase >25%	Major	Insignificant
			Annual	14,87	0,04	14,91	15	75 to 100% of the Standard	Medium	14,91	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8,35	0,0956	8,4456	15	50 to 75% of the Standard	Low	8,4456	Increase <5%	Negligible	Insignificant
			Annual	8,35	0,0043	8,3543	5	Above Standard	High	8,3543	Increase <5%	Negligible	Insignificant
3	T9-374	PM10 ($\mu g/m^3$)	Daily	14,87	16,04	30,91	45	Below 50% of the Standard	Negligible	30,91	Increase >25%	Major	Insignificant
			Annual	14,87	0,03	14,9	15	75 to 100% of the Standard	Medium	14,9	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8,35	0,1038	8,4538	15	50 to 75% of the Standard	Low	8,4538	Increase <5%	Negligible	Insignificant
			Annual	8,35	0,0028	8,3528	5	Above Standard	High	8,3528	Increase <5%	Negligible	Insignificant
4	T9-408	PM10 ($\mu g/m^3$)	Daily	14,87	10,52	25,39	45	Below 50% of the Standard	Negligible	25,39	Increase >25%	Major	Insignificant
			Annual	14,87	0,03	14,9	15	75 to 100% of the Standard	Medium	14,9	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	8,35	0,0905	8,4405	15	50 to 75% of the Standard	Low	8,4405	Increase <5%	Negligible	Insignificant
			Annual	8,35	0,0027	8,3527	5	Above Standard	High	8,3527	Increase <5%	Negligible	Insignificant
5	T11-300	PM10 ($\mu g/m^3$)	Daily	11,96	7,82	19,78	45	Below 50% of the Standard	Negligible	19,78	Increase >25%	Major	Insignificant
			Annual	11,96	0,04	12	15	75 to 100% of the Standard	Medium	12	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,42	0,0487	7,4687	15	Below 50% of the Standard	Negligible	7,4687	Increase <5%	Negligible	Insignificant
			Annual	7,42	0,0039	7,4239	5	Above Standard	High	7,4239	Increase <5%	Negligible	Insignificant
6	T11-407	PM10 ($\mu g/m^3$)	Daily	11,96	8,37	20,33	45	Below 50% of the Standard	Negligible	20,33	Increase >25%	Major	Insignificant
			Annual	11,96	0,05	12,01	15	75 to 100% of the Standard	Medium	12,01	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,42	0,0649	7,4849	15	Below 50% of the Standard	Negligible	7,4849	Increase <5%	Negligible	Insignificant
			Annual	7,42	0,0056	7,4256	5	Above Standard	High	7,4256	Increase <5%	Negligible	Insignificant
7	T11-453	PM10 ($\mu g/m^3$)	Daily	11,96	8,71	20,67	45	Below 50% of the Standard	Negligible	20,67	Increase >25%	Major	Insignificant

Number	Assessment Point	Parameter	Period	Background Concentration ($\mu g/m^3$)	Maximum APCV ($\mu g/m^3$)	Cumulative Value ($\mu g/m^3$)	Project Standards ($\mu g/m^3$)	Receptor Sensitivity – Relation to Standard	Receptor Sensitivity – Sensitivity Score	Impact Magnitude - Cumulative Emission Values (µg/m3)	Impact Magnitude - Change in Conc. as % of Standard	Impact Magnitude - Magnitude Score	Impact Significance
			Annual	11,96	0,04	12	15	75 to 100% of the Standard	Medium	12	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,42	0,0572	7,4772	15	Below 50% of the Standard	Negligible	7,4772	Increase <5%	Negligible	Insignificant
			Annual	7,42	0,0044	7,4244	5	Above Standard	High	7,4244	Increase <5%	Negligible	Insignificant
8	T12-300	PM10 ($\mu g/m^3$)	Daily	11,96	10,69	22,65	45	Below 50% of the Standard	Negligible	22,65	Increase >25%	Major	Insignificant
			Annual	11,96	0,03	11,99	15	75 to 100% of the Standard	Medium	11,99	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,42	0,0171	7,4371	15	Below 50% of the Standard	Negligible	7,4371	Increase <5%	Negligible	Insignificant
			Annual	7,42	0,0026	7,4226	5	Above Standard	High	7,4221	Increase <5%	Negligible	Insignificant
9	T12-360	PM10 ($\mu g/m^3$)	Daily	11,96	11,91	23,87	45	Below 50% of the Standard	Negligible	23,87	Increase >25%	Major	Insignificant
			Annual	11,96	0,03	11,99	15	75 to 100% of the Standard	Medium	11,99	Increase <5%	Negligible	Insignificant
		PM2.5 ($\mu g/m^3$)	Daily	7,42	0,0154	7,4354	15	Below 50% of the Standard	Negligible	7,4354	Increase <5%	Negligible	Insignificant
			Annual	7,42	0,0021	7,4221	5	Above Standard	High	7,4221	Increase <5%	Negligible	Insignificant

4 Discussion of Impacts and Mitigation Measures

4.1 Discussion of Impacts

In terms of environmental noise, for construction and operation phases, the determined final impact significances range from Negligible to Moderate. On the other hand, for construction phase air quality, all final impact significances were found to be “Insignificant”. It is worth to mention that operation phase air quality impacts are scoped out from the study as not significant.

In terms of environmental vibration, possible risks are explained in Section 3.2. Accordingly, for a number of assessment points possible risk is determined as a result of construction activities including blasting.

In terms of visuals all final impact significances comes out to be “Minor” at worst.

In terms of Shadow Flicker, Blade Throw and Ice Throw possible impacts have been detected at identified receivers. However, the probability of blade throw and ice throw impact are significantly low which results in very low impact and thus the impact magnitude is considered to be negligible (see section 3.4.2 Blade Throw Assessment above for further explanation).

The summary of impact assessment is given in the below table.

Table 4-1: Summary of Impact Assessment

Project	#	Assessment Point Name	Status*	Impact Assessment (Significance)							
				Environmental Noise		Environmental Vibration	Shadow Flicker	Visual	Ice throw	Blade Throw	Air Quality
				Construction	Operation						
Akköy	1	T5-244	Non-residential	Minor	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T1-290M	Non-residential	Negligible	No Impact	None expected	Negligible to Minor	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	3	T1-318M	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	4	T1-440M	Non-residential	Negligible	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
	5	T1-500M	Residential	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	6	T1-480M	Non-residential	Negligible	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
	7	T2-405M	Non-residential	No Impact	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
	8	T2-420M	Non-residential	Negligible	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
	9	T3-287M	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	10	T4-325M	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	11	T5-365M	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	12	T5-365M	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	13	T5-385M	Residential	Moderate	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	14	T5-458M	Residential	Moderate	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
Armutçuk	1	T15-50*	Residential (secondary use)	Moderate	Moderate	Possible Impact	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T3-275	Residential	Moderate	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	3	T5-320	Non-residential	No Impact	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	4	T5-354	Non-residential	No Impact	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	5	T5-350	Non-residential	No Impact	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	6	T5-380	Residential	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	7	T5-396	Non-residential	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	8	T5-414	Residential (secondary use)	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	9	T5-486	Residential (secondary use)	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	10	T9-460	Residential (secondary use)	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	11	T14-290	Non-residential	Negligible	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant

Project	#	Assessment Point Name	Status*	Impact Assessment (Significance)							
				Environmental Noise		Environmental Vibration	Shadow Flicker	Visual	Ice throw	Blade Throw	Air Quality
				Construction	Operation						
	12	T14-432	Non-residential	No Impact	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	13	T15-0*	Residential	Minor	Minor	Possible Impact	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	14	T16-440	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	15	T17-190	Non-residential	Negligible	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	16	T19-434	Non-residential	Minor	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
Hacıhıdırlar	1	T2-165M	Residential (secondary use)	Moderate	Moderate	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	-
	2	T2-82M	Residential (secondary use)	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	-
	3	T2-170M	Residential	Moderate	Moderate	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	-
	4	T9-175M	Residential (secondary use)	Moderate	Moderate	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	5	T9-237M	Residential (secondary use)	Moderate	Moderate	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	6	T9-227M	Residential (secondary use)	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	7	T6-215M	Residential (secondary use)	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	8	T6-232M	Residential (secondary use)	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	9	T13-220M	Residential (secondary use)	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	10	T14-204M	Non-residential	Minor	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	11	T2-390	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	-
	12	T2-395	Residential	Moderate	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	-
	13	T2-250	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	-
	14	T9-270	Residential	Moderate	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	15	T9-390	Residential (secondary use)	Negligible	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	16	T9-460	Residential (secondary use)	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	17	T10-292	Residential (secondary use)	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	18	T11-258	Residential (secondary use)	Negligible	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant

Project	#	Assessment Point Name	Status*	Impact Assessment (Significance)							
				Environmental Noise		Environmental Vibration	Shadow Flicker	Visual	Ice throw	Blade Throw	Air Quality
				Construction	Operation						
	19	T11-320	Residential (secondary use)	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	20	T12-428	Residential (secondary use)	Moderate	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	21	T13-250	Residential	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	22	T13-310	Residential	Moderate	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	23	T15-500	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
Harmancık	1	T7-50	Non-residential	Minor	Minor	Possible Impact	Moderate to Major*	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T2-354	Non-residential	Negligible	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
Ihlamur	1	T9-250	Non-residential	Minor	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T17-215	Residential	Minor	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	3	T2-367	Residential (secondary use)	Negligible	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	4	T3-390	Non-residential	Negligible	Negligible	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
	5	T11-288	Non-residential	Negligible	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	6	T14-346	Residential (secondary use)	Moderate	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	7	T14-390	Residential	No Impact	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant
Uygar	1	T2-221	Could not be determined	Minor	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T10-184	Non-residential	Minor	Minor	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	3	T26-178	Could not be determined	Minor	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	4	T26-182	Could not be determined	Minor	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	5	T36-160	Residential	Moderate	Moderate	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	6	T36-195	Could not be determined	Minor	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	7	T45-272	Residential	Moderate	Moderate	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	8	T2-250	Residential (secondary use)	Moderate	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	9	T7-301	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	10	T7-407	Residential (secondary use)	Negligible	No Impact	None expected	Negligible to Minor	Negligible/Minor	No Impact	No Impact	Insignificant

Project	#	Assessment Point Name	Status*	Impact Assessment (Significance)						
				Environmental Noise		Environmental Vibration	Shadow Flicker	Visual	Ice throw	Blade Throw	Air Quality
				Construction	Operation						
	11	T26-274	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	12	T34-302	Residential (secondary use)	Moderate	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	13	T34-317	Residential (secondary use)	Moderate	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	14	T36-268	Residential (secondary use)	Moderate	Negligible	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	15	T38-318	Residential (secondary use)	Moderate	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	16	T38-370	Residential (secondary use)	Moderate	No Impact	None expected	Negligible to Minor	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	17	T56-90	Residential	Moderate	Negligible	Possible Impact	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
Ovacık	1	T5-370	-	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T9-365	Residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	3	T9-374	Residential	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	4	T9-408	Residential	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	5	T11-300	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	6	T11-407	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	7	T11-453	Non-residential	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	8	T12-300	Non-residential	No Impact	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	9	T12-360	Non-residential	No Impact	Negligible	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
Dampınar	1	T2-317	Residential	No Impact	No Impact	None expected	No Impact	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	2	T5-380	Residential	Negligible	Moderate	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	3	T5-420	Residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	4	T7-360	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	5	T7-372	Non-residential	Negligible	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	6	T9-372	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	7	T9-500	Residential (secondary use)	Moderate	No Impact	None expected	No Impact	Negligible/Minor	No Impact	No Impact	Insignificant
	8	T10-280	Residential (secondary use)	No Impact	No Impact	None expected	Moderate to Major	Negligible/Minor	Possible Impact	Possible Impact	Insignificant
	9	T10-375	Residential (secondary use)	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant
	10	T10-425	Non-residential	Negligible	No Impact	None expected	Moderate to Major	Negligible/Minor	No Impact	No Impact	Insignificant

*:Armutçuk T15-0 and T15-50 are dealth with in line with the RAP and are not subjects of this study anymore.

4.2 Mitigation Measures

It is of great importance that all mitigation measures defined in relevant chapters of ESIA Reports of individual WPPs are considered and taken where necessary for the receptors evaluated in this Report. In addition, provisions of among others, Landscape and Visual Impacts Management Procedure, Noise Management Plan, Air Quality Management Plan and Community Health and Safety Plan are clearly followed throughout the Project lifetime.

In particular, for the nearby receptors identified as primary and secondary residential and for the ones where potential impacts are identified with different significances ranging from Minor to Major, effective and continuous stakeholder engagement activities will be conducted by the Project Company. As such, provisions of SEPs will be undertaken with special attention given to effective implementation of grievance mechanism. Moreover, CLOs will be in close contact with property owners / users, record all grievances and seek for proper action in due time.

PAPs have been informed about; the main risks associated with the project, including the possibility of blade throw, possible mitigations, proposed possible monitoring works, risks and grievance channels. In that regard, PAPs information efforts are done through regular stakeholder engagement activities including the GLAC roll-out meetings.

Proposed potential mitigation measures for different impact topics, in reference to relevant ESIA Chapters, are provided below.

4.2.1 Environmental Noise

Construction phase

- Earth-moving and noisy equipment will be kept as far away from sensitive areas as feasible on the construction site and these equipment will only be operated in daytime.
- Activities that cause noise and vibration will be spread over time as much as possible so that multiple activities that generate noise and vibration do not occur at the same time and their cumulative impacts are mitigated.
- Low baseline noise levels will be taken into account when construction activities are planned. At low baseline noise regions, hours and at the weekends, truck activities will be limited as much as possible and low noise generating activities will be scheduled.
- Construction impacts detected are directly related with truck routes. Truck access routes can be altered at impacted zones.
- Site-specific measures could be implemented. (i.e. extra speed limits at impacted zones).
- Construction workers will be trained on relevant management plans and be aware of the sensitive nature of workplaces they are operating in and advised to limit verbal noise or other forms of noise.
- Noise and vibration will be minimized at the Project area and surrounding areas through instructing construction truck drivers to switch off vehicle engines while offloading materials and to shut down or throttled down to a minimum when not in operation.
- Proper machinery, equipment and vehicles with lower sound power levels and reduced-sound models will be preferred.
- Use of old or damaged machinery with high level of noise emissions that would have a negative impact in the environment will be avoided and it will be ensured that maintenance of equipment is properly done and operation is efficient.
- Maintenance of construction vehicles will be conducted regularly by means of a regular vehicle maintenance and repair program as per the recommendations of the manufacturer to minimize extraneous noises caused by poor performance.

- All generators and heavy-duty equipment will be insulated or placed in enclosures to minimize disrupting ambient noise levels.
- Health and safety of construction workers will be protected from any possible noise impact generated at the construction site. Adequate personal protective equipment (PPE) will be provided to workers.
- Local communities will be engaged to minimize any disturbance and effect on the safety, health of people in the nearby buildings.
- Complaints on noise and vibration disturbances will be recorded, assessed and necessary preventive measures will be taken.
- According to complaints and disturbances, mobile noise barriers will be employed for affected receptors. Noise barriers will be used until completion of the construction activities.

Operation phase

- Routine maintenance and monitoring of turbines will be ensured for efficient operation. Maintenance and repairment of the turbines will be effectively monitored.
- Periodical noise monitoring will be conducted at nearest sensitive receptor locations (confirmed as residential or residential secondary) where modelling indicates exceedance of IFC guidelines. Noise monitoring will be conducted in every quarter for the first year of operation and in case of any complaints from users of the structures.
- Monthly site inspections will be conducted to ensure environmental compliance and effective noise management.
- In case complaints are received from users / owners of nearby receptors or results of monitoring for the first 12 months exceed the Project standards, the Project Company will ensure that these do not remain unresolved and take necessary actions in agreement with the users / owners which may include physical displacement of the structure in line with the Project-specific RAP or installing noise insulators (e.g. insulated windows etc.) or improving façade noise insulation where necessary.

4.2.2 Environmental Vibration

Construction phase

- Activities that cause noise and vibration will be spread over time as much as possible so that multiple activities that generate noise and vibration do not occur at the same time and their cumulative impacts are mitigated.
- Noise and vibration will be minimized at the Project area and surrounding areas through instructing construction truck drivers to switch off vehicle engines while offloading materials and to shut down or throttled down to a minimum when not in operation.
- Any possible structural damages or deviations will be monitored and any possible complaint will be collected and resolved regularly.
- Blasting activities will be conducted with prior notification to users / owners of the structures. For those structures identified with risk in Section 3.2.2, blasting activities will be avoided.

4.2.3 Shadow Flicker

Operation phase

- Wind turbines in proximity to the nearby receptors will be programmed to shut down at times when shadow flicker limits are exceeded:

Shadow flicker shutdown is a function that is integrated in the control system of the wind turbines and is automatically activated where shutdown due to shadow flicker is necessary. The technology is based on software which computes three factors: position of the sun, the distance

of the wind turbine to any potentially affected properties, and the sunlight intensity. The shutdown can also be triggered remotely by the wind farm operator.

In case the CLO receives a complaint about shadow flicker from the nearby settlements, a shutdown protocol will be followed in accordance with the WEC Technical Description Manual of the ENERCON E-138 EP3 E2 wind energy converter. During normal operation, the shadow shutdown will be activated using the pitch control in the feathered position, as specified by the protocol. The wind energy converter control system uses pitch control to shift the rotor blades out of the wind, preventing the rotor blades from generating lift and safely stopping the wind energy converter.

- Periodic site inspections will be carried out by specialists during the first 12-months of operation (sufficient visits to allow for seasonal variations and to include the identified “worst case period”), at times where shadow flicker has the potential to occur, in order to ground-truth actual conditions at nearby receptors.

  The following data, as a minimum, will be collected:

  – The date, time, location (turbine ID) and duration of the measurement;
  – Sunlight intensity and direction;
  – Wind speed and direction/rotor angle; and
  – Time, date and duration of any sensor triggered curtailment.

The need for the regular monitoring will be reviewed following the first 12-months of site visits.

- In case complaints are received from users / owners of nearby receptors or results of monitoring for the first 12 months exceed the Project standards, the Project Company will ensure that these do not remain unresolved and take necessary actions in agreement with the users / owners which may include shadow flicker shutdown protocol or physical displacement of the structure in line with the Project-specific RAP or installing shadow obstractive/inhibiting measures.

4.2.4 Ice and Blade Throw

Operation phase

Advanced technologies and operational controls will be implemented to mitigate risks associated with blade and ice throw incidents. These include real-time tracking of ice accumulation, adjusting operational parameters, and employing de-icing systems. Regular inspections and maintenance of wind turbine blades will also be implemented to detect potential issues that could result in blade (or blade tip) throw.

Prevention measures for ice throw includes the following:

- Adjusting operational parameters during icy conditions and employing technologies like de-icing systems will minimize the risks associated with ice throw incidents.
- Utilizing sensors and monitoring systems will enable real-time tracking of ice accumulation on turbine blades, allowing for timely intervention to prevent ice throw.

Mitigation measures for ice throw and blade throw includes the following:

- Placing fences and warning signs regarding the ice throw risk will increase the awareness of site personnel and the public.
- Ensuring that lightning protection systems are properly installed and maintained for blade throw risk
- Carrying out periodic blade inspections and repairing any defects that could affect blade integrity.

- Utilizing sensors and monitoring systems enables real-time tracking of ice accumulation on turbine blades, allowing for timely intervention to prevent ice throw
- Public will be warned regarding the risk of ice throw during cold seasons, especially for periods having ambient temperatures below the zero.
- If there are ice remains on the turbine structure, accessing the turbine will be restricted.
- Turbines will be stopped working if the wind speed is 28 m/s to decrease blade and ice throw risk. The threshold speed of 28 m/s serves as the operational cut-off to mitigate the risk of blade or ice throw. This specific value has been determined for the turbines utilized in this project. While it cannot be definitively stated that the risk of ice or blade throw is entirely eliminated below this threshold, it can be asserted that the risk is significantly reduced and approaches zero.
- In case concerns/complaints are received from users / owners of nearby receptors, the Project Company will ensure that these do not remain unresolved and take necessary actions in agreement with the users / owners which may include physical displacement of the structure in line with the Project-specific RAP.

4.2.5 Air Quality

Construction phase

- Any unnecessary soil moving/clearing will be avoided to minimize dust.
- All vehicles that generate dust due to transportation or construction works will move within a speed limit of 30 km/h and speed limit signs will be posted on Project area. All vehicles that are loaded with sand, soil, gravel or any other material will be covered to prevent the load from spilling and forming dust. In addition, 20km/h speed limit will be applied on unpaved surfaces close to settlements.
- All vehicles will undergo regular maintenance according to the manufacturer's recommended intervals and individual maintenance schedules will be created for each vehicle.
- Operators will be trained to take appropriate action in case of abnormal events (e.g., black smoke emission).
- Vehicles will be turned off when idling is necessary, provided that the ambient temperature is above 0°C. For ambient temperatures below 0°C, vehicles will be turned off if the idling time exceeds 5 minutes. Exceptions to this rule may apply in emergency situations, for occupational health and safety reasons, or due to traffic conditions. Operators will be informed about these exceptions during their training.
- Drivers will be instructed about the importance of adhering to speed limits and smooth acceleration to minimize fuel consumption and emissions.
- All piling of materials/soils will be stabilized in a manner that minimizes the occurrence of dust by wetting the top layer.
- All excavation activities will be organized according to wind direction.
- Travel route will be dampened using a bowser and dust screens utilized if necessary.
- To reduce fugitive dust emission during vehicle operation on public roads and at construction sites, service roads and material storage sites, dust suppression methods (i.e. watering with water trucks, speed limits for mobile vehicles, using well-maintained vehicles/equipment) will be used.
- Dust generating activities will cease during excessively windy periods. Excessive wind periods and dust generation will be subjectively assessed by field personnel.
- Any loose material that could produce dust when travelling will be covered and/or maintained appropriate freeboard (+0.3m) on trucks or vessels hauling.
- Stockpiles will be inspected regularly.

- Excessive vehicular movement will be avoided.
- If necessary, haul roads and areas of hard standing of excessive dust will be cleaned.
- Covers and/or control equipment can be used to minimize dust from material handling.
- Vehicles will be kept clean, so that no dirt is carried on the vehicles into and out of the area. Wheel washing will be done for all construction vehicles prior to exiting the construction site.
- Stockpiling of stripped surface material, e.g. rock, sand and soil, stockpiling of unwashed materials, will be limited.
- Design of stockpiles will be optimized to maintain a low profile without a sharp change in shapes.
- A 24-hour monitoring study for PM10 and PM2.5 parameters will be conducted once every quarter to determine the impact of the works on air quality and the effectiveness of emission control measures.

5 Appendices

A. Shadow Flicker Assessment Maps

A.1 Appendix-1.1: Akköy Shadow Flicker Assessment Map

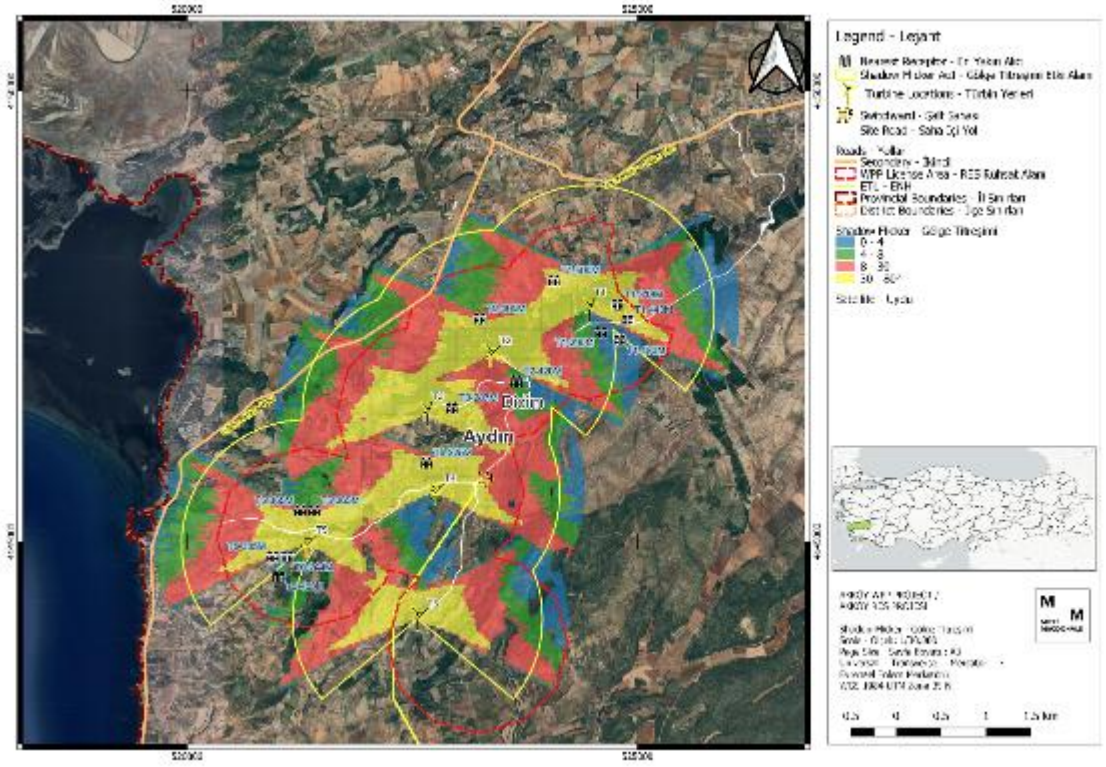

Figure A.1: Akköy Shadow Flicker Assessment Map

A.2 Appendix-1.2: Armutçuk Shadow Flicker Assessment Map

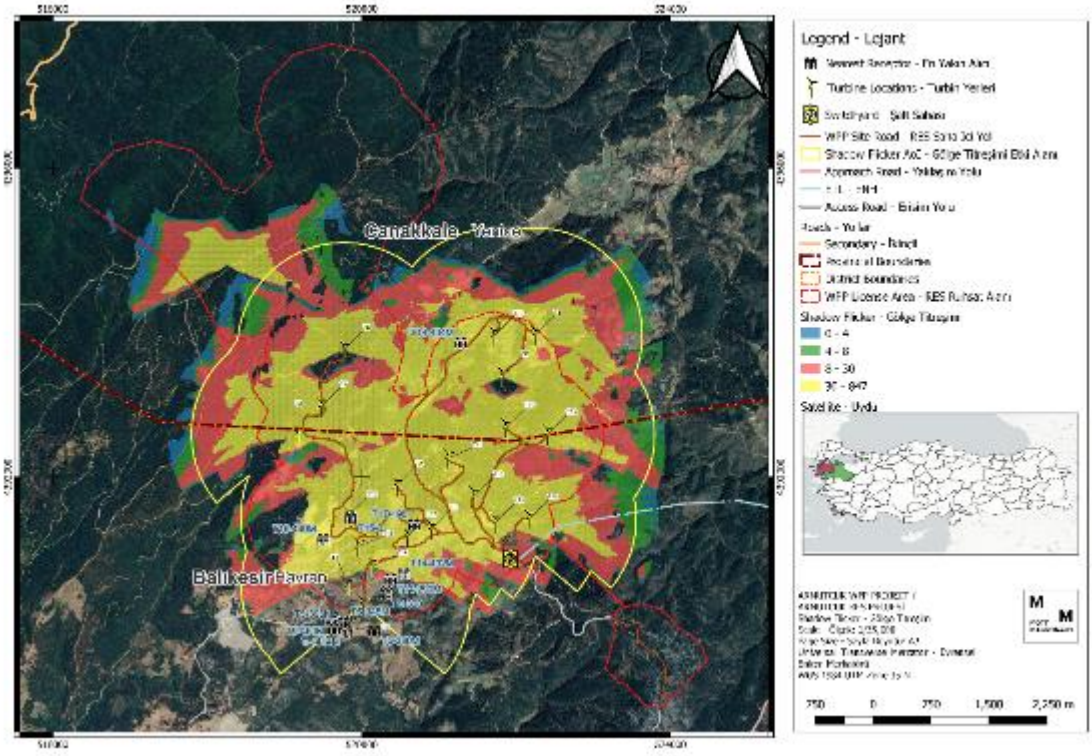

Figure A.2: Armutçuk Shadow Flicker Assessment Map

A.3 Appendix-1.3: Hacıhıdırlar Shadow Flicker Assessment Map

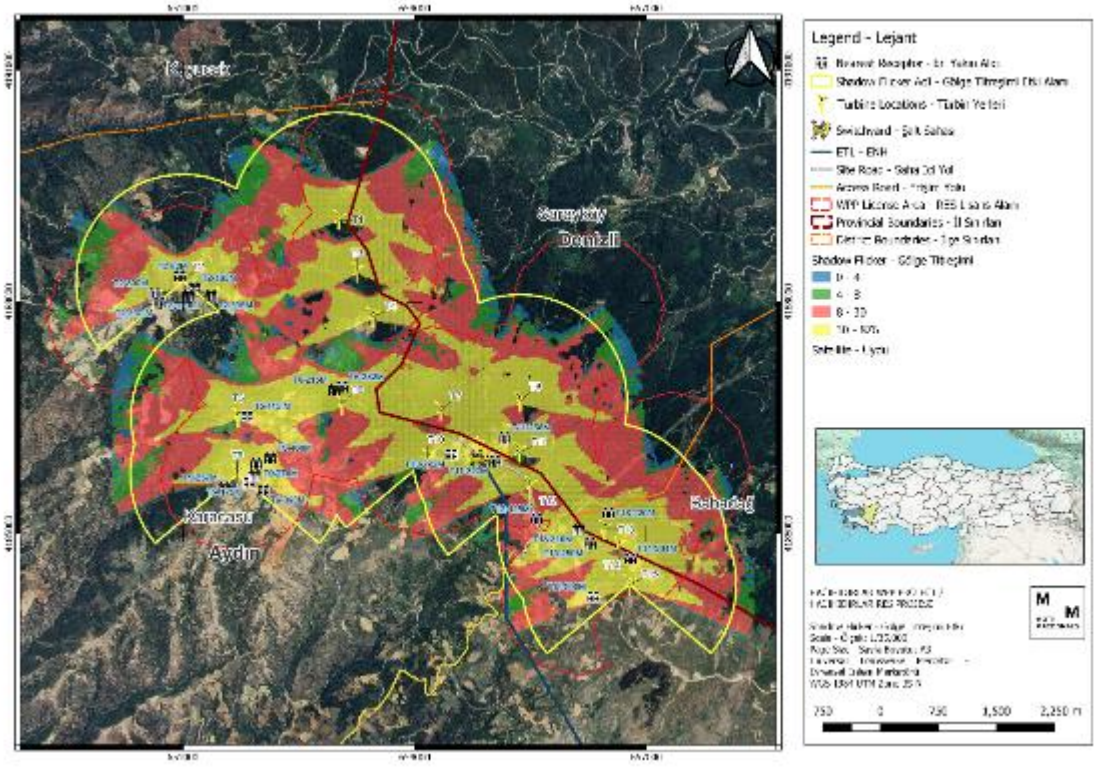

Figure A.3:Hacıhıdırlar Shadow Flicker Assessment Map

A.4 Appendix-1.4: Harmancık Shadow Flicker Assessment Map

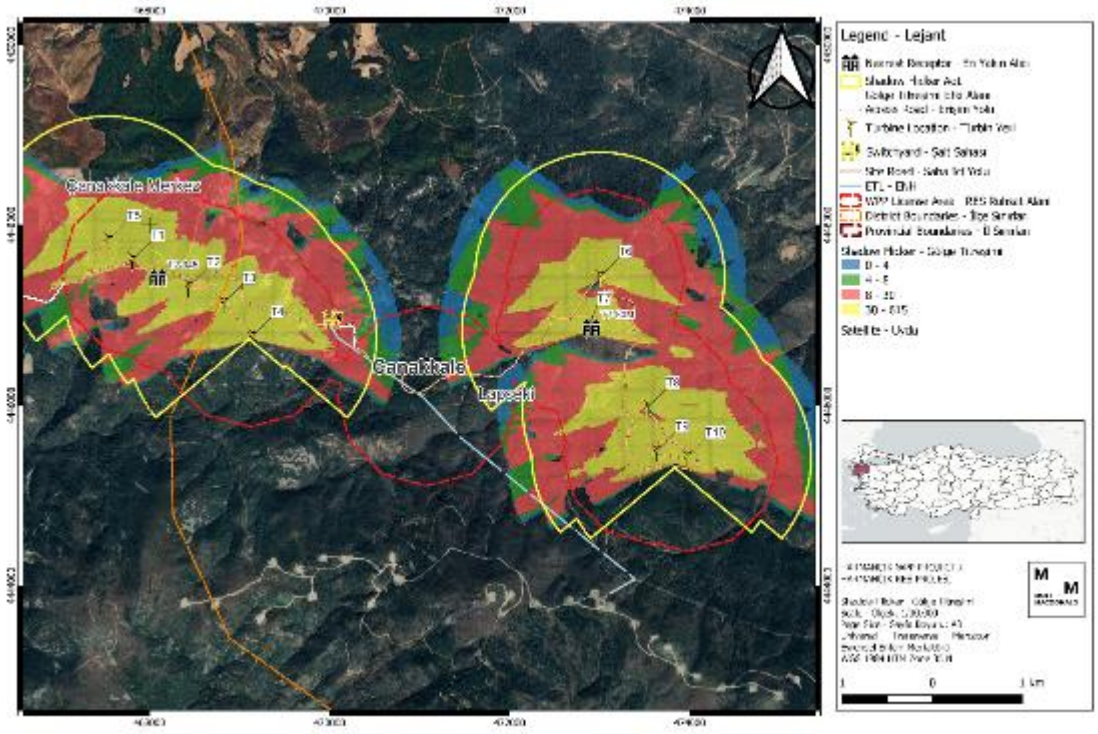

Figure A.4:Harmancık Shadow Flicker Assessment Map

A.5 Appendix-1.5: Ihlamur Shadow Flicker Assessment Map

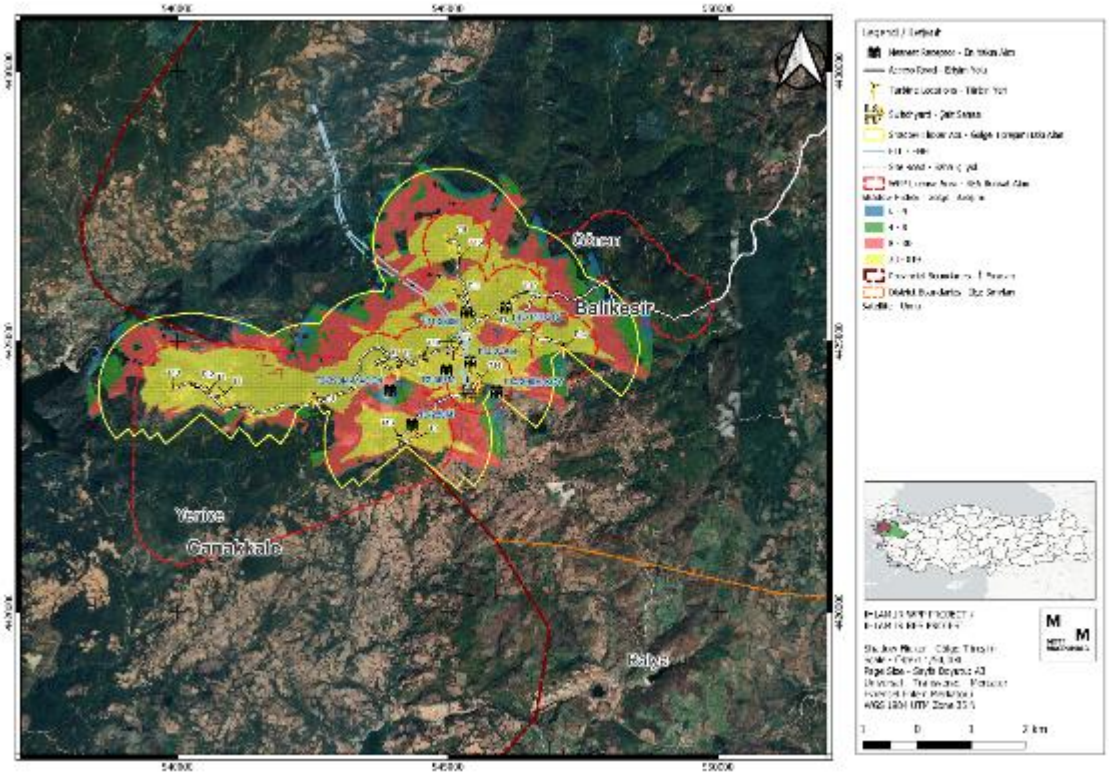

Figure A.5: Ihlamur Shadow Flicker Assessment Map

A.6 Appendix-1.6: Uygar Shadow Flicker Assessment Map

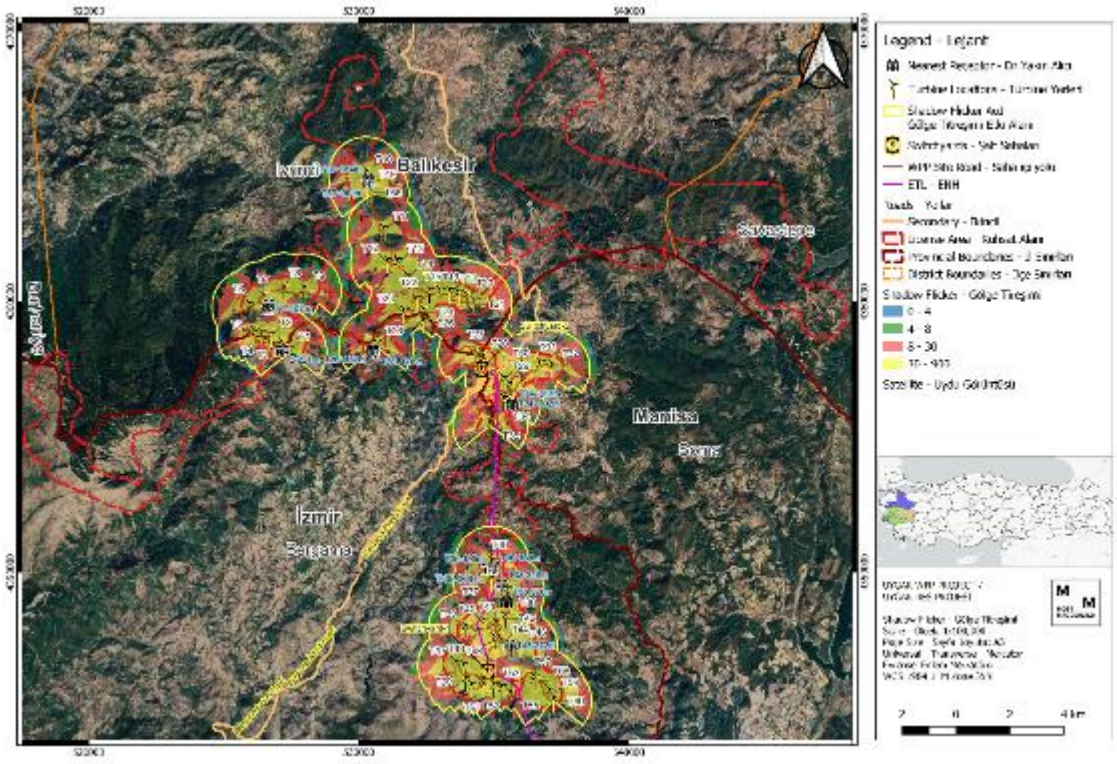

Figure A.6: Uygar Shadow Flicker Assessment Map

A.7 Appendix-1.7: Dampınar Shadow Flicker Assessment Map

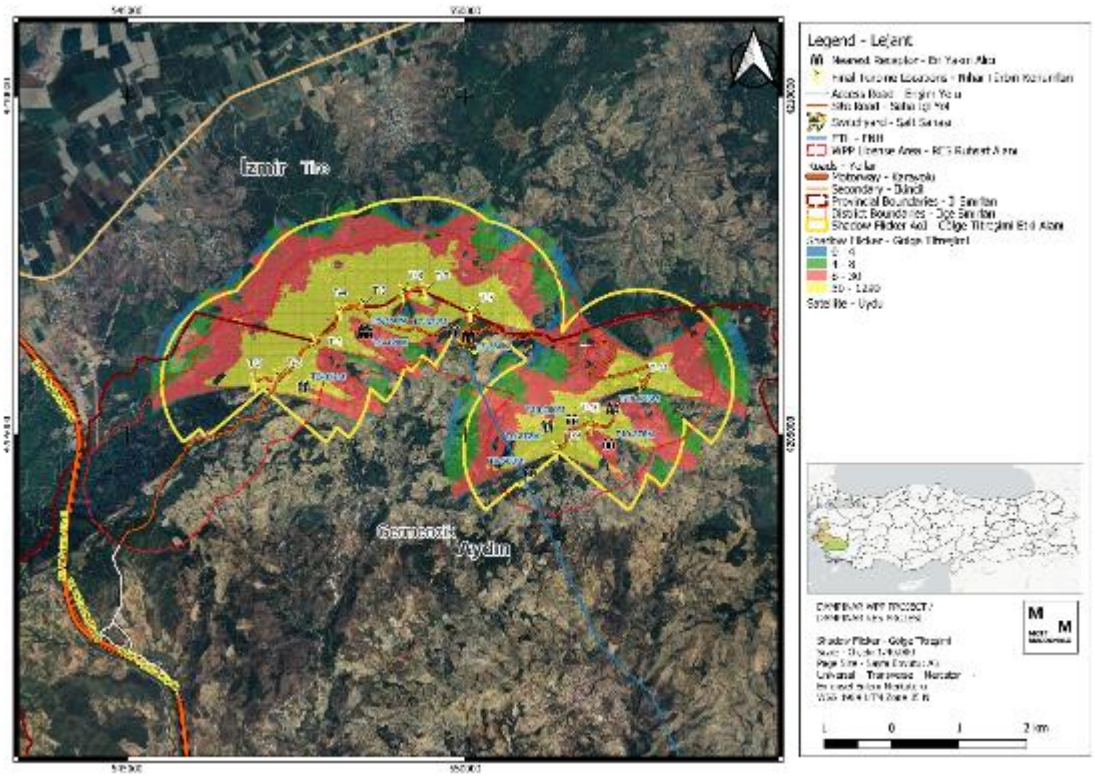

Figure A.7: Dampınar Shadow Flicker Assessment Map

A.8 Appendix-1.8: Ovacık Shadow Flicker Assessment Map

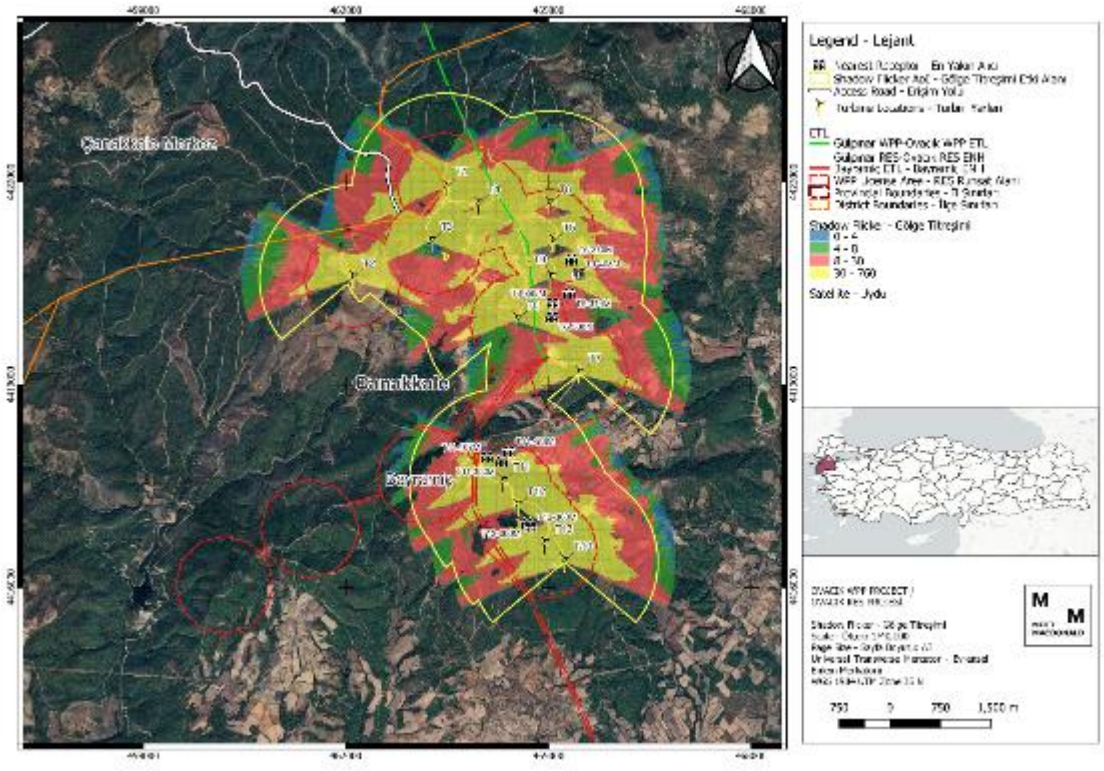

Figure A.8: Ovacık Shadow Flicker Assessment Map

B. Ice/Blade Throw Risk Assessment Maps

B.1 Appendix-2.1: Akköy Ice/Blade Throw Risk Assessment Map

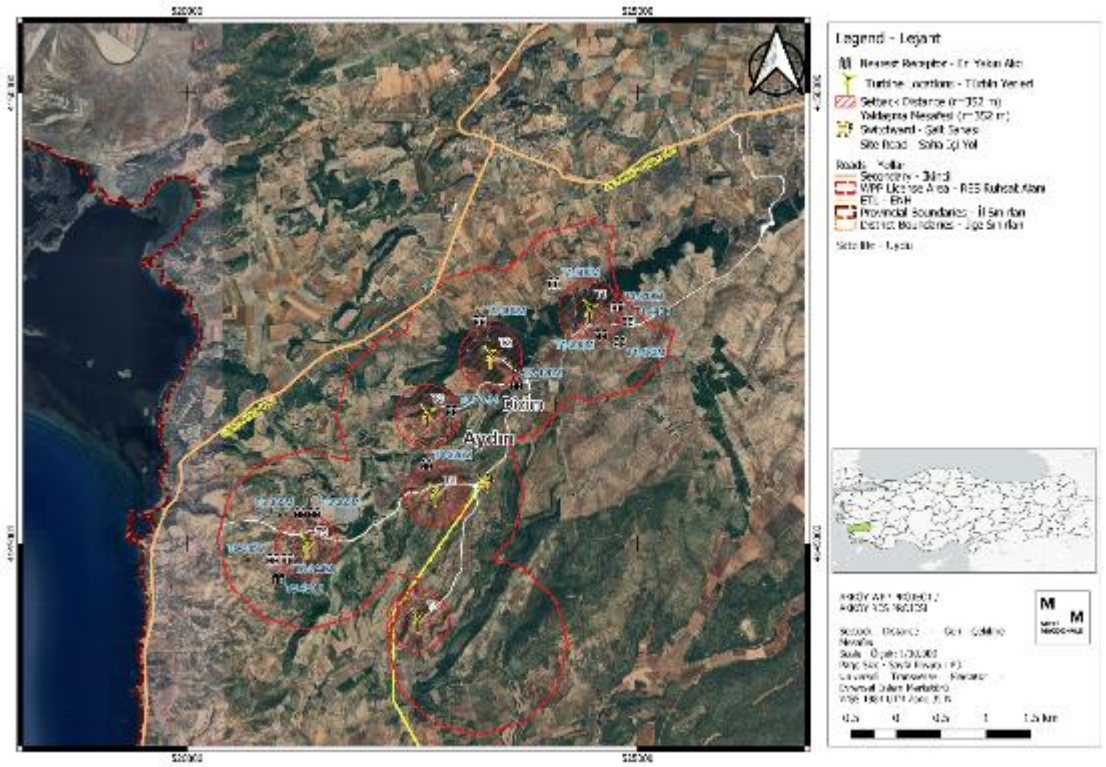

Figure B.1: Akköy Ice/Blade Throw Risk Assessment Map

B.2 Appendix-2.2: Armutçuk Ice/Blade Throw Risk Assessment Map

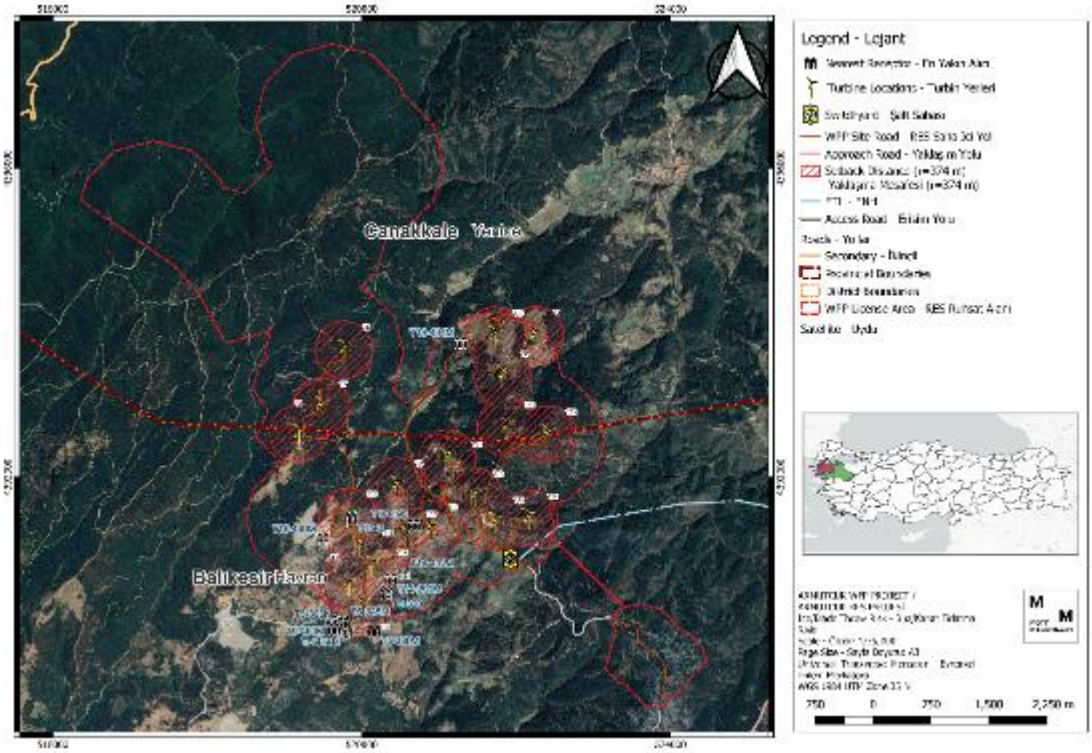

Figure B.2: Armutçuk Ice/Blade Throw Risk Assessment Map

B.3 Appendix-2.3: Hacıhıdırlar Ice/Blade Throw Risk Assessment Map

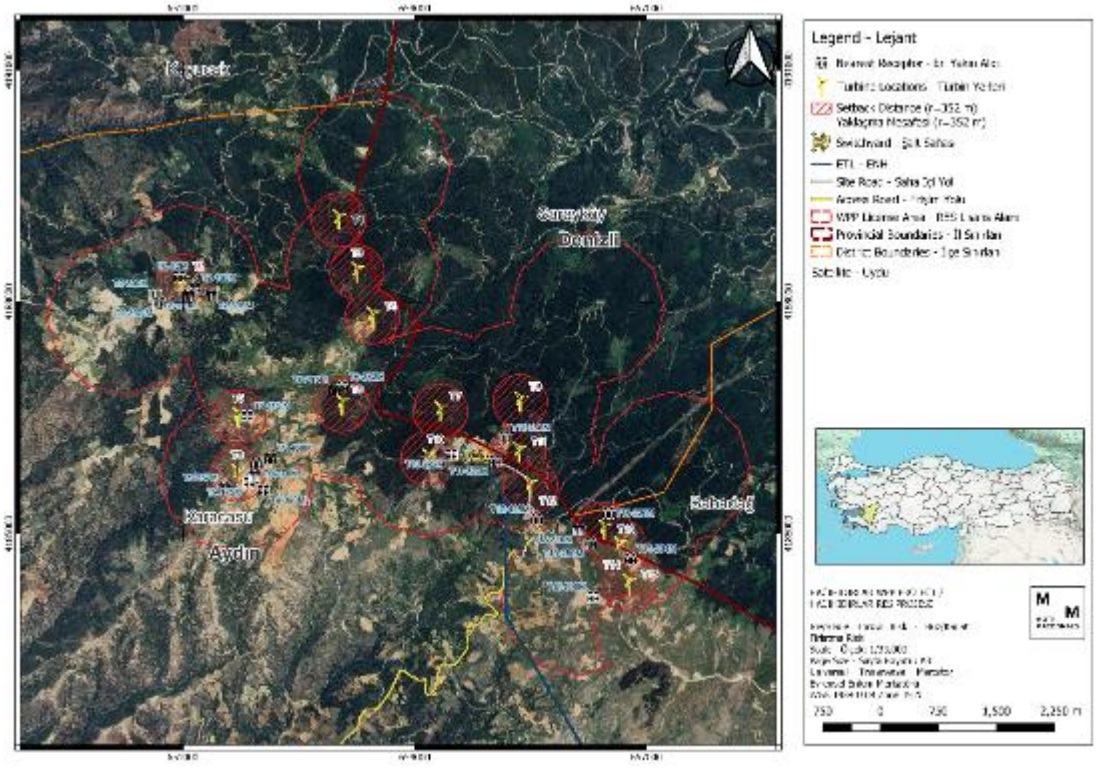

Figure B.3: Hacıhıdırlar Ice/Blade Throw Risk Assessment Map

B.4 Appendix-2.4: Harmancık Ice/Blade Throw Risk Assessment Map

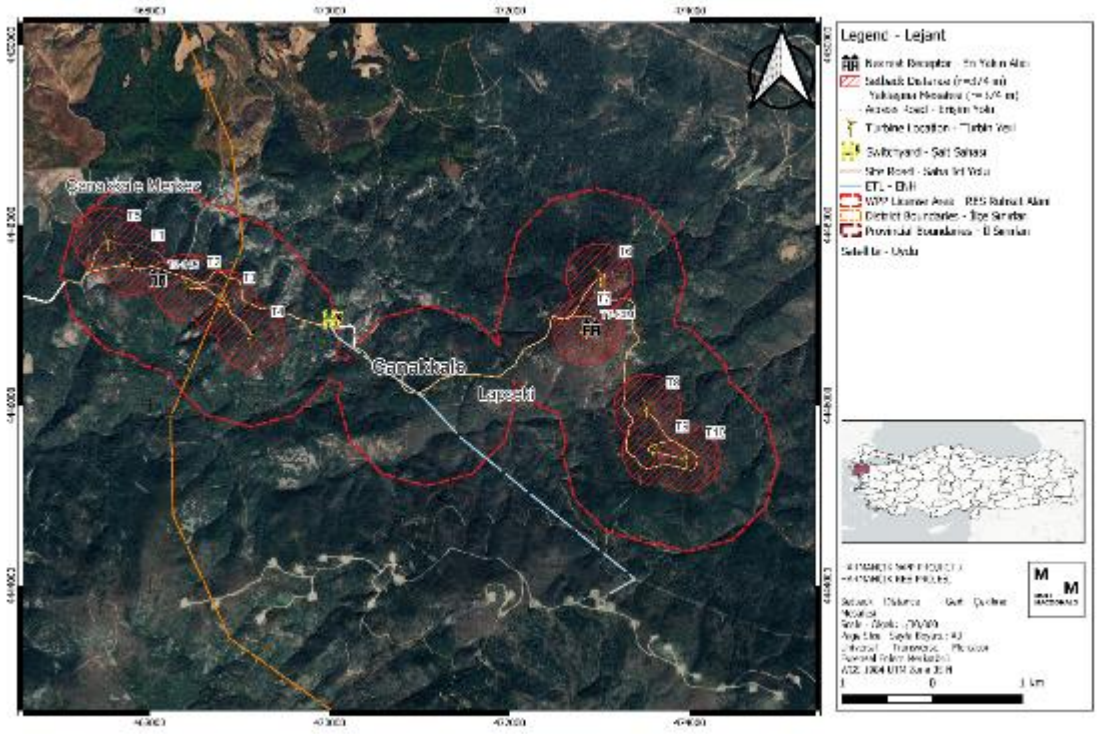

Figure B.4: Harmancık Ice/Blade Throw Risk Assessment Map

B.5 Appendix-2.5: Ihlamur Ice/Blade Throw Risk Assessment Map

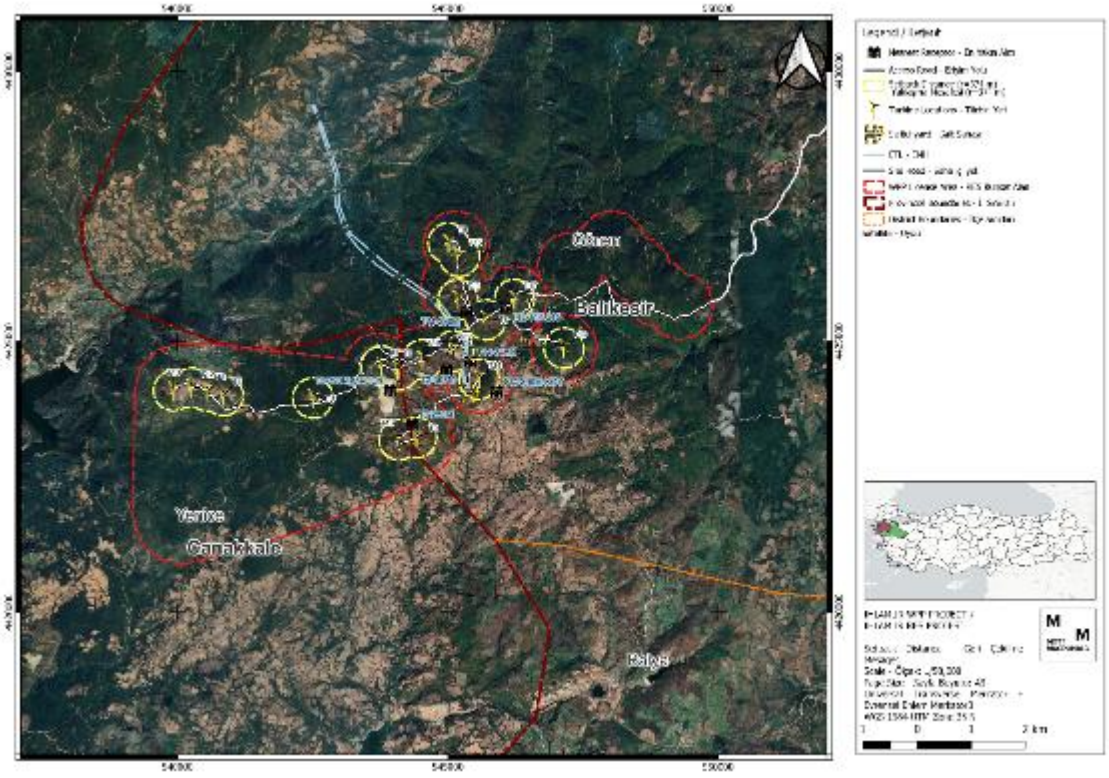

Figure B.5: Ihlamur Ice/Blade Throw Risk Assessment Map

B.6 Appendix-2.6: Uygar Ice/Blade Throw Risk Assessment Map

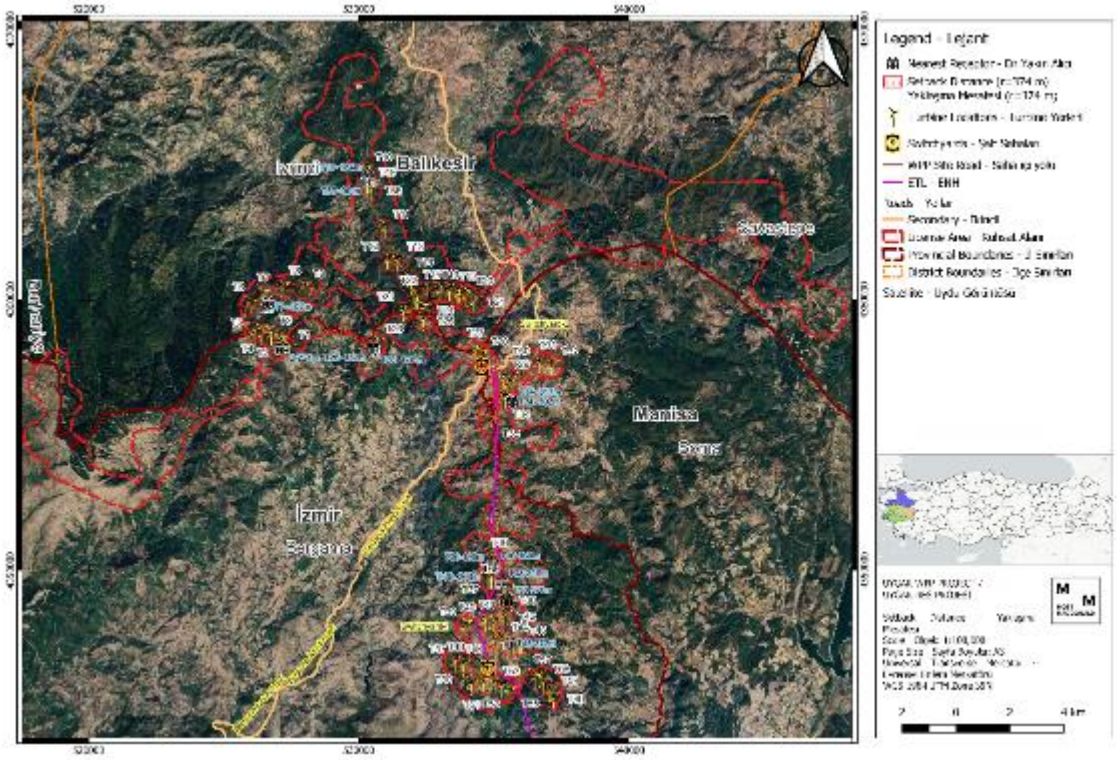

Figure B.6: Uygar Ice/Blade Throw Risk Assessment Map

B.7 Appendix-2.7: Dampınar Ice/Blade Throw Risk Assessment Map

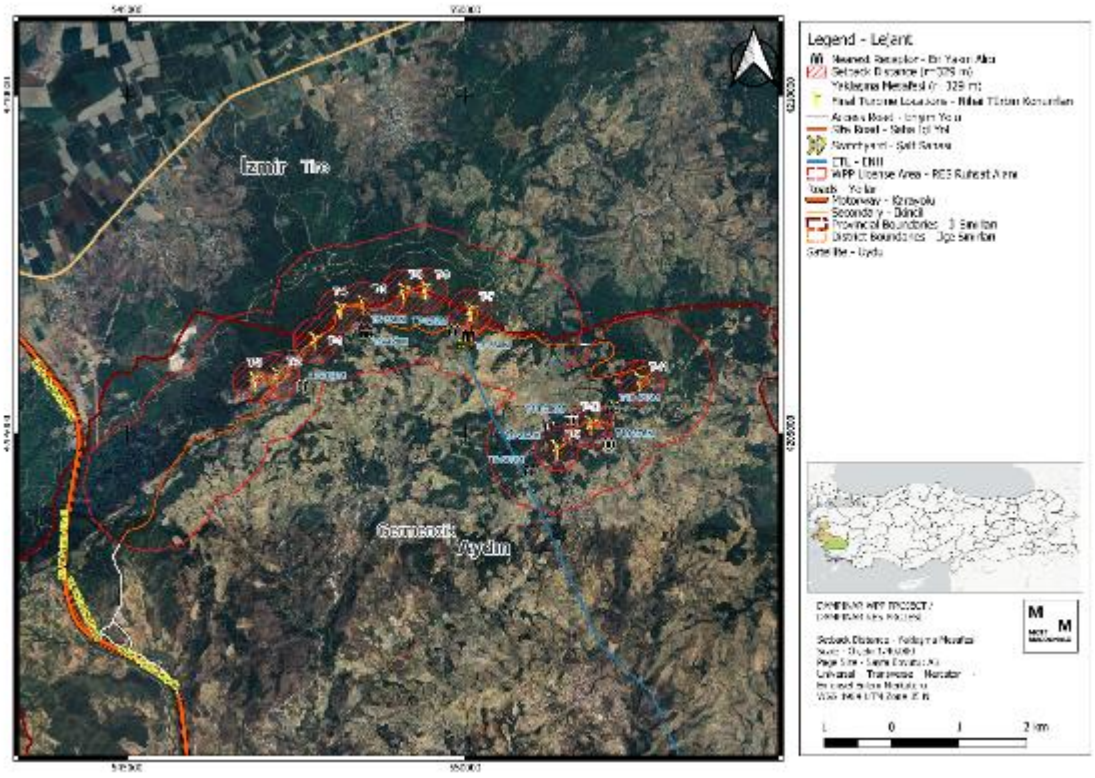

Figure B.7: Dampınar Ice/Blade Throw Risk Assessment Map

B.8 Appendix-2.8: Ovacık Ice/Blade Throw Risk Assessment Map

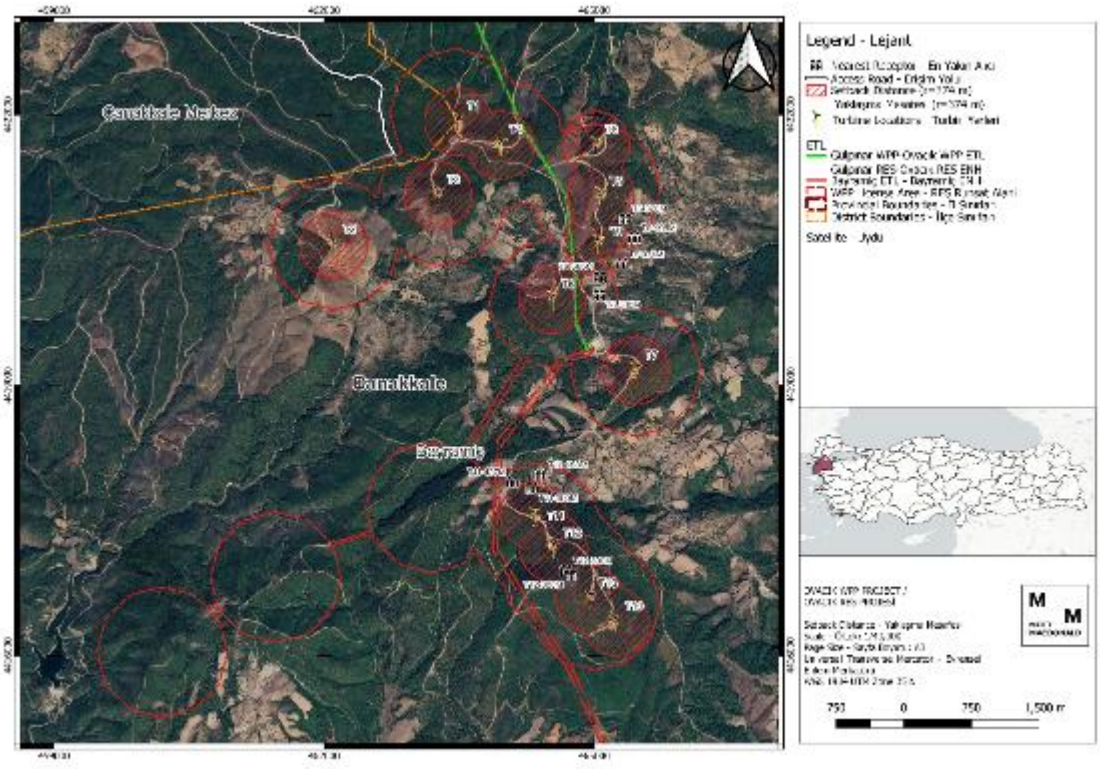

Figure B.8: Ovacık Ice/Blade Throw Risk Assessment Map

C. Sample Photos from Nearby Receptors

Figure C.1: Akköy T5 – 244

Figure C.2: Hacıhıdırlar T6-215

Figure C.3: Harmancık T7 – 50

Figure C.4: Ihlamur T9-250

Figure C.5: Uygar T45-115